

AIR CONDITIONER

**3-unit multi-split type**

## SERVICE MANUAL

### INDOOR



AUXG07-18KVLA



ARXG07-14KSLAP  
ARXG18KSLAP



ARXG07-14KLLAP  
ARXG18KLLAP



ASHG07-14KGTB



ASHG07-14KGTE



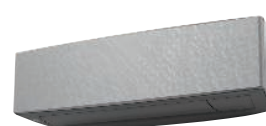
ASHG18KMTB  
ASHG18KMTE



ASHG07-14KMTB  
ASHG07-14KMCC  
ASHG07-14KMCE



ASHG07-14KETA  
ASHG07-14KETE



ASHG07-14KETA-B  
ASHG07-14KETE-B



ABHG18KRTA



AGHG09-14KVCA

### OUTDOOR



AOHG18KBTA3  
AOHG24KBTA3

**FUJITSU GENERAL LIMITED**

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## 1. GENERAL INFORMATION

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## 1. GENERAL INFORMATION

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# 1. Specifications

## 1-1. Indoor unit

### ■ Compact cassette type

Model name				AUXG07KVLA	AUXG09KVLA	AUXG12KVLA	AUXG14KVLA
Power supply				1Ø 230 V ~50 Hz			
Available voltage range				198—264 V			
Capacity			kW class	2.0	2.5	3.5	4.0
Input power			W	18		23	28
Running current			A	0.15		0.19	0.22
Fan	Airflow rate	Cooling	HIGH	m³/h	540	610	680
			MED		490	530	580
			LOW		440	470	490
			QUIET		390	410	410
		Heating	HIGH		540	610	790
			MED		490	530	680
			LOW		440	470	580
			QUIET		390	410	450
	Type × Q'ty			Turbo fan × 1			
	Motor output		W	54			
Sound pressure level *		Cooling	HIGH	dB (A)	33	37	38
			MED		31	34	35
			LOW		29	31	32
			QUIET		27	28	29
		Heating	HIGH		34	37	43
			MED		32	34	38
			LOW		29	31	34
			QUIET		27	29	30
Sound power level		Cooling		dB (A)	46	49	50
		Heating			47	49	55
Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 1,310 × 13.3 Main2: 210 × 1,250 × 13.3		
		Fin pitch		mm	1.2		
		Rows × Stages			Main1: 1 × 10 Main2: 1 × 10		
		Pipe type			Copper tube		
		Fin type			Aluminum		
Dimensions (H × W × D)		Net		mm	245 × 570 × 570		
		Gross			265 × 730 × 625		
Weight		Net		kg	15		
		Gross			19		
Connection pipe		Size	Liquid	mm (in)	Ø6.35 (Ø1/4)		
			Gas		Ø9.52 (Ø3/8)		
		Method		Flare			
Drain hose		Material			PVC		
		Tip diameter		mm	Ø25 (I.D.), Ø32 (O.D.)		
Operation range		Cooling		°C	18 to 32		
				%RH	80 or less		
		Heating		°C	16 to 30		
Cassette grille (Grid type: Option)		Model name			UTG-UFGF-W		
		Material			Polystyrene		
		Color			White Approximate color of Munsell 9PB 9.1/0.2		
		Dimensions (H × W × D)	Net	mm	49 × 620 × 620		
			Gross		120 × 765 × 755		
		Weight	Net	kg	2.3		
Gross	4.5						

#### NOTES:

- The protective function might work when using it outside the operation range.
- \*: Sound pressure level:
  - These are the measured values in the manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Model name					AUXG18KVLA					
Power supply					1Ø 230 V ~50 Hz					
Available voltage range					198—264 V					
Capacity				kW class	5.0					
Input power				W	39					
Running current				A	0.30					
Fan	Airflow rate	Cooling	HIGH	m³/h	680					
			MED		580					
			LOW		490					
			QUIET		410					
		Heating	HIGH		790					
			MED		680					
			LOW		580					
			QUIET		450					
	Type × Q'ty				Turbo fan × 1					
	Motor output				W	54				
Sound pressure level *		Cooling	HIGH	dB (A)	38					
			MED		35					
			LOW		32					
			QUIET		29					
		Heating	HIGH		43					
			MED		38					
			LOW		34					
			QUIET		30					
Sound power level		Cooling		dB (A)	50					
		Heating			55					
Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 1,310 × 13.3					
		Fin pitch			Main2: 210 × 1,250 × 13.3					
		Rows × Stages				1.2				
		Pipe type				Main1: 1 × 10				
		Fin type				Main2: 1 × 10				
Dimensions (H × W × D)		Net		mm	Copper tube					
		Gross			Aluminum					
Weight		Net		kg	245 × 570 × 570					
		Gross			265 × 730 × 625					
Connection pipe		Size	Liquid	mm (in)	15					
			Gas		19					
Drain hose		Method			Ø6.35 (Ø1/4)					
		Material			Ø12.70 (Ø1/2)					
Operation range		Material			Flare					
		Tip diameter			PVC					
Operation range		Cooling		°C	Ø25 (I.D.), Ø32 (O.D.)					
		Heating		%RH	18 to 32					
Cassette grille (Grid type: Option)		Cooling			80 or less					
		Heating			16 to 30					
		Model name			UTG-UFGF-W					
		Material			Polystyrene					
		Color			White					
					Approximate color of Munsell 9PB 9.1/0.2					
		Dimensions (H × W × D)	Net	mm	49 × 620 × 620					
			Gross		120 × 765 × 755					
Weight	Net	kg	2.3							
	Gross		4.5							
NOTES:										
<ul style="list-style-type: none"><li>• The protective function might work when using it outside the operation range.</li><li>• *: Sound pressure level:<ul style="list-style-type: none"><li>— These are the measured values in the manufacturer's anechoic chamber.</li><li>— Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li></ul>										

# ■ Mini duct type

Model name				ARXG07KSLAP	ARXG09KSLAP	ARXG12KSLAP	ARXG14KSLAP	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power	Fan	HIGH	W	33	40	47	72	
		MED		23	23	26	44	
		LOW		20	20	22	30	
		QUIET		18	18	18	18	
Running current			A	0.29	0.33	0.38	0.58	
Fan	Airflow rate	Cooling	HIGH	m³/h	550	600	650	800
			MED		440	450	490	640
			LOW		390	400	430	530
			QUIET		360	360	360	360
		Heating	HIGH		550	600	650	800
			MED		440	450	490	640
			LOW		390	400	430	530
			QUIET		360	360	360	360
	Type × Q'ty			Sirocco fan × 2				
	Motor output			W	75			
Recommended static pressure				Pa	0 to 30		0 to 50	
Sound pressure level *	Cooling	HIGH	dB (A)	29	29	31	35	
		MED		26	26	27	30	
		LOW		24	24	25	27	
		QUIET		23	23	23	23	
	Heating	HIGH		29	29	31	35	
		MED		26	26	27	30	
		LOW		24	24	25	27	
		QUIET		23	23	23	23	
Sound power level		Cooling Heating	dB (A)	52 53	54 56	55 57	60 62	
Heat exchanger type	Dimensions (H × W × D)		mm	336 × 490 × 26.6				
	Fin pitch		mm	1.3				
	Rows × Stages			2 × 16				
	Pipe type			Copper tube				
	Fin type			Aluminum				
Enclosure	Material			Steel sheet				
	Color			—				
Dimensions (H × W × D)	Net		mm	198 × 700 × 450				
	Gross			250 × 930 × 580				
Weight	Net		kg	15.5				
	Gross			19.0				
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)				
		Gas		Ø9.52 (Ø3/8)				
	Method			Flare				
Drain hose	Material			Hard PVC				
	Tip diameter		mm	Ø25 (I.D.), Ø32 (O.D.)				
Operation range	Cooling		°C	18 to 32				
			%RH	80 or less				
	Heating		°C	16 to 30				

## NOTES:

- Values mentioned in the table are based on the following conditions:
  - Static pressure: 07-12 models: 10 Pa, 14 model: 15 Pa
- The protective function might work when using it outside the operation range.
- \*: Sound pressure level:
  - These are the measured values in the manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Model name				ARXG18KSLAP		
Power supply				1Ø 230 V ~ 50 Hz		
Available voltage range				198—264 V		
Capacity			kW class	5.0		
Input power	Fan	HIGH		W	63	
		MED			38	
		LOW			22	
		QUIET			19	
Running current			A	0.49		
Fan	Airflow rate	Cooling	HIGH	m³/h	940	
			MED		750	
			LOW		540	
			QUIET		480	
		Heating	HIGH		940	
			MED		750	
			LOW		540	
			QUIET		480	
	Type × Q'ty			Sirocco fan × 3		
	Motor output		W	80		
Recommended static pressure			Pa	0 to 50		
Sound pressure level *	Cooling	HIGH	dB (A)	33		
		MED		29		
		LOW		26		
		QUIET		23		
	Heating	HIGH		33		
		MED		29		
		LOW		26		
		QUIET		23		
Sound power level	Cooling		dB (A)	58		
	Heating			59		
Heat exchanger type	Dimensions (H × W × D)		mm	336 × 690 × 26.6		
	Fin pitch			1.30		
	Rows × Stages			2 × 16		
	Pipe type			Copper tube		
	Fin type			Aluminum		
Enclosure	Material			Steel sheet		
	Color			—		
Dimensions (H × W × D)	Net		mm	198 × 900 × 450		
	Gross			250 × 1,130 × 580		
Weight	Net		kg	18.5		
	Gross			23.0		
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)		
		Gas		Ø12.7 (Ø1/2)		
Drain hose	Method			Flare		
	Material			PVC		
	Tip diameter		mm	Ø25 (I.D.), Ø32 (O.D.)		
Operation range	Cooling		°C	18 to 32		
			%RH	80 or less		
	Heating		°C	16 to 30		
NOTES:						
<div><div>• Values mentioned in the table are based on the following conditions:</div><div><div>— Static pressure: 15 Pa</div></div><div>• The protective function might work when using it outside the operation range.</div><div>• *: Sound pressure level:</div><div><div>— These are the measured values in the manufacturer's anechoic chamber.</div><div>— Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</div></div></div>						



# ■ Slim duct type

Model name				ARXG07KLLAP	ARXG09KLLAP	ARXG12KLLAP	ARXG14KLLAP	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power			W	33	49	58	76	
Running current			A	0.33	0.30	0.35	0.51	
Fan	Airflow rate	Cooling	HIGH	m³/h	550	600	650	800
			MED		490	550	600	700
			LOW		470	500	550	600
			QUIET		440	450	480	480
		Heating	HIGH		550	600	650	800
			MED		490	550	600	700
			LOW		470	500	550	600
			QUIET		440	450	480	480
	Type × Q'ty			Sirocco fan × 2				
	Motor output		W	80	81			
Recommended static pressure			Pa	0 to 90				
Sound pressure level *	Cooling	HIGH	dB (A)	28	28	29	32	
		MED		26	27	28	30	
		LOW		25	26	27	28	
		QUIET		24	25	26	26	
	Heating	HIGH		28	28	29	32	
		MED		26	26	28	30	
		LOW		25	25	27	28	
		QUIET		24	24	24	25	
Sound power level		Cooling	dB (A)	57	58		60	
Heating		57		58		60		
Heat exchanger type	Dimensions (H × W × D)		mm	294 × 500 × 26.6	294 × 500 × 39.9			
	Fin pitch		mm	1.3				
	Rows × Stages			2 × 14	3 × 14			
	Pipe type			Copper tube				
	Fin type			Aluminum				
Enclosure	Material			Steel sheet				
	Color			—				
Dimensions (H × W × D)	Net		mm	198 × 700 × 620				
	Gross			276 × 968 × 772				
Weight	Net		kg	16	17			
	Gross			21	22			
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)				
		Gas		Ø9.52 (Ø3/8)				
	Method			Flare				
Drain hose	Material			PVC				
	Tip diameter		mm	Ø25 (I.D.), Ø32 (O.D.)				
Operation range		Cooling	°C	18 to 32				
			%RH	80 or less				
		Heating	°C	16 to 30				
<b>NOTES:</b>								
<ul style="list-style-type: none"><li>• Values mentioned in the table are based on the following conditions:<ul style="list-style-type: none"><li>— Static pressure: 25 Pa</li></ul></li><li>• The protective function might work when using it outside the operation range.</li><li>• *: Sound pressure level:<ul style="list-style-type: none"><li>— These are the measured values in the manufacturer's anechoic chamber.</li><li>— Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li></ul>								

Model name				ARXG18KLLAP	
Power supply				1Ø 230 V ~50 Hz	
Available voltage range				198—264 V	
Capacity			kW class	5.0	
Input power			W	73	
Running current			A	0.44	
Fan	Airflow rate	Cooling	HIGH	m³/h	940
			MED		880
			LOW		820
			QUIET		750
		Heating	HIGH		940
			MED		880
			LOW		820
			QUIET		750
	Type × Q'ty			Sirocco fan × 3	
	Motor output		W	81	
Recommended static pressure			Pa	0 to 90	
Sound pressure level *		Cooling	HIGH	dB (A)	32
			MED		30
			LOW		29
			QUIET		27
		Heating	HIGH		32
			MED		30
			LOW		29
			QUIET		27
Sound power level		Cooling		dB (A)	58
		Heating			58
Heat exchanger type		Dimensions (H × W × D)		mm	294 × 700 × 39.9
		Fin pitch		mm	1.3
		Rows × Stages		3 × 14	
		Pipe type		Copper tube	
		Fin type		Aluminum	
				Steel sheet	
Enclosure	Material			Steel sheet	
	Color			—	
Dimensions (H × W × D)	Net		mm	198 × 900 × 620	
	Gross			276 × 1,168 × 772	
Weight	Net		kg	20	
	Gross			26	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)	
		Gas		Ø12.70 (Ø1/2)	
	Method		Flare		
Drain hose	Material			PVC	
	Tip diameter		mm	Ø25 (I.D.), Ø32 (O.D.)	
Operation range		Cooling	°C	18 to 32	
			%RH	80 or less	
		Heating	°C	16 to 30	
NOTES:					
<div><div>• Values mentioned in the table are based on the following conditions:</div><div><div>— Static pressure: 25 Pa</div><div>• The protective function might work when using it outside the operation range.</div><div>• *: Sound pressure level:</div><div><div>— These are the measured values in the manufacturer's anechoic chamber.</div><div>— Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</div></div></div></div>					

# ■ Wall mounted type

Model name				ASHG07KGTB		ASHG09KGTB		ASHG12KGTB		ASHG14KGTB			
Power supply				1Ø 230 V ~50 Hz									
Available voltage range				198—264 V									
Capacity			kW class		2.0		2.5		3.5		4.0		
Input power			W		23		27		27		33		
Running current			A		0.20		0.24		0.24		0.29		
Fan	Airflow rate	Cooling	HIGH	m³/h	650		700		700		770		
			MED		540		560		560		600		
			LOW		430		430		430		450		
			QUIET		270		270		270		280		
		Heating	HIGH		720		750		770		800		
			MED		580		610		640		660		
			LOW		460		470		520		520		
			QUIET		330		330		330		340		
	Type × Q'ty			Crossflow fan × 1									
	Motor output			W		30				49			
Sound pressure level *1		Cooling	HIGH	dB (A)	38		40		40		43		
			MED		33		34		35		36		
			LOW		29		29		30		30		
			QUIET		21		21		21		21		
		Heating	HIGH		41		42		42		44		
			MED		35		36		38		39		
			LOW		31		31		33		33		
			QUIET		22		22		22		24		
Sound power level		Cooling		dB (A)	54		55		56		57		
		Heating			56		57		58		59		
Heat exchanger type		Dimensions (H × W × D)		mm		Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0				Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0 Sub: 84 × 670 × 13.3			
		Fin pitch		mm		Main1: 1.2 Main2: 1.1				Main1: 1.2 Main2: 1.1 Sub: 1.4			
		Rows × Stages				Main1: 2 × 10 Main2: 2 × 7				Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4			
		Pipe type				Copper tube							
		Fin type				Aluminum							
Enclosure		Material				Polystyrene							
		Color				White + Pearl white (painted) Approximate color of Munsell N 9.25/							
Dimensions (H × W × D)		Net		mm	270 × 834 × 215								
		Gross			277 × 914 × 332								
Weight		Net		kg	10.0								
		Gross			12.5				13.0				
Connection pipe		Size		mm (in)	Ø6.35 (Ø1/4)								
		Liquid Gas			Ø9.52 (Ø3/8)								
Drain hose		Method				Flare							
		Material				PP + HDPE							
Operation range		Tip diameter		mm		Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)							
		Cooling		°C		18 to 32							
		%RH				80 or less							
Remote controller type		Heating		°C		16 to 30							
						Wireless (Option: Wired, Mobile app*2 [FGLair™])							

## NOTES:

- The protective function might work when using it outside the operation range.
- \*1: Sound pressure level:
  - These are the measured values in the manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
- \*2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.

Model name				ASHG07KGTE	ASHG09KGTE	ASHG12KGTE	ASHG14KGTE
Power supply				1Ø 230 V ~50 Hz			
Available voltage range				198—264 V			
Capacity			kW class	2.0	2.5	3.5	4.0
Input power			W	23	27	27	33
Running current			A	0.20	0.24	0.24	0.29
Fan	Airflow rate	Cooling	HIGH	650	700	700	770
			MED	540	560	560	600
			LOW	430	430	430	450
			QUIET	270	270	270	280
		Heating	HIGH	720	750	770	800
			MED	580	610	640	660
			LOW	460	470	520	520
			QUIET	330	330	330	340
	Type × Q'ty		Crossflow fan × 1				
	Motor output		W	30		49	
Sound pressure level *1	Cooling	HIGH	dB (A)	38	40	40	43
		MED		33	34	35	36
		LOW		29	29	30	30
		QUIET		21	21	21	21
	Heating	HIGH		41	42	42	44
		MED		35	36	38	39
		LOW		31	31	33	33
		QUIET		22	22	22	24
Sound power level		Cooling	dB (A)	54	55	56	57
Heating		56		57	58	59	
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0		Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0 Sub: 84 × 670 × 13.3	
	Fin pitch		mm	Main1: 1.2 Main2: 1.1		Main1: 1.2 Main2: 1.1 Sub: 1.4	
	Rows × Stages			Main1: 2 × 10 Main2: 2 × 7		Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4	
	Pipe type			Copper tube			
	Fin type			Aluminum			
Enclosure	Material			Polystyrene			
	Color			White + Pearl white (painted) Approximate color of Munsell N 9.25/			
Dimensions (H × W × D)	Net	mm		270 × 834 × 215			
	Gross			277 × 914 × 332			
Weight	Net	kg		10.0			
	Gross			12.5		13.0	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)			
		Gas		Ø9.52 (Ø3/8)			
Drain hose	Method			Flare			
	Material			PP + HDPE			
Operation range	Tip diameter		mm	Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)			
	Cooling		°C	18 to 32			
			%RH	80 or less			
Heating			°C	16 to 30			
Remote controller type				Wireless (Option: Wired, Mobile app*2 [FGLair™])			
NOTES:							
<ul style="list-style-type: none"><li>The protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level:<ul style="list-style-type: none"><li>These are the measured values in the manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>*2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>							

Model name				ASHG18KMTB	
Power supply				1Ø 230 V ~50 Hz	
Available voltage range				198—264 V	
Capacity			kW class	5.0	
Input power			W	37.5	
Running current			A	0.35	
Fan	Airflow rate	Cooling	HIGH	m³/h	980
			MED		810
			LOW		640
			QUIET		510
		Heating	HIGH		1,020
			MED		850
			LOW		640
			QUIET		510
	Type × Q'ty		Crossflow fan × 1		
	Motor output		W	59	
Sound pressure level *1		Cooling	HIGH	dB (A)	45
			MED		40
			LOW		35
			QUIET		29
		Heating	HIGH		46
			MED		40
			LOW		35
			QUIET		29
Sound power level		Cooling	dB (A)	60	
		Heating		61	
Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 798 × 26.6 Main2: 135 × 798 × 20.0 Sub1: 84 × 798 × 13.3 Sub2: 84 × 798 × 13.3
					Fin pitch
		Rows × Stages			
					Pipe type
		Fin type		Aluminum	
		Material		Polystyrene	
Enclosure		Color		White Approximate color of Munsell N 9.25/	
		Dimensions (H × W × D)		mm	280 × 980 × 240
Weight		Net		kg	322 × 1,078 × 346
		Gross			12.5
Connection pipe		Size	Liquid	mm (in)	Ø6.35 (Ø1/4)
			Gas		Ø12.7 (Ø1/2)
		Method		Flare	
		Material		PP + HDPE	
Drain hose		Tip diameter		mm	Ø13.8 (I.D.), Ø15.8 to Ø16.7 (O.D.)
		Cooling		°C	18 to 32
Operation range		Heating		%RH	80 or less
				°C	16 to 30
Remote controller type				Wireless (Option: Wired, Mobile app*2 [FGLair™])	
NOTES:					
<div><div><div><div><div></div><div>The protective function might work when using it outside the operation range.</div></div><div><div>*1: Sound pressure level:</div><div><div><div></div><div>These are the measured values in the manufacturer's anechoic chamber.</div></div><div><div></div><div>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</div></div></div></div><div><div>*2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</div></div></div></div></div>					

Model name					ASHG18KMTE		
Power supply					1Ø 230 V ~50 Hz		
Available voltage range					198—264 V		
Capacity				kW class	5.0		
Input power				W	37.5		
Running current				A	0.35		
Fan	Airflow rate	Cooling	HIGH	m³/h	980		
			MED		810		
			LOW		640		
			QUIET		510		
		Heating	HIGH		1,020		
			MED		850		
			LOW		640		
			QUIET		510		
	Type × Q'ty				Crossflow fan × 1		
	Motor output			W	59		
Sound pressure level *1		Cooling	HIGH	dB (A)	45		
			MED		40		
			LOW		35		
			QUIET		29		
		Heating	HIGH		46		
			MED		40		
			LOW		35		
			QUIET		29		
Sound power level		Cooling	dB (A)	60			
		Heating		61			
Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 798 × 26.6 Main2: 135 × 798 × 20.0 Sub1: 84 × 798 × 13.3 Sub2: 84 × 798 × 13.3		
		Fin pitch		mm	Main1: 1.2 Main2: 1.1 Sub1: 1.4 Sub2: 1.4		
		Rows × Stages			Main1: 2 × 10 Main2: 2 × 8 Sub1: 1 × 4 Sub2: 1 × 4		
		Pipe type			Copper tube		
		Fin type			Aluminum		
Enclosure		Material			Polystyrene		
		Color			White Approximate color of Munsell N 9.25/		
Dimensions (H × W × D)		Net	mm	280 × 980 × 240			
		Gross		322 × 1,078 × 346			
Weight		Net	kg	12.5			
		Gross		18			
Connection pipe		Size	Liquid	mm (in)	Ø6.35 (Ø1/4)		
			Gas		Ø12.7 (Ø1/2)		
		Method			Flare		
Drain hose		Material			PP + HDPE		
		Tip diameter			mm		
Operation range		Cooling	°C		Ø13.8 (I.D.), Ø15.8 to Ø16.7 (O.D.)		
			%RH		18 to 32		
		Heating	°C		80 or less		
Remote controller type					16 to 30		
NOTES:					Wireless (Option: Wired, Mobile app*2 [FGLair™])		
<ul style="list-style-type: none"><li>• The protective function might work when using it outside the operation range.</li><li>• *1: Sound pressure level:<ul style="list-style-type: none"><li>— These are the measured values in the manufacturer's anechoic chamber.</li><li>— Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>• *2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>							

Model name				ASHG07KMTB	ASHG09KMTB	ASHG12KMTB	ASHG14KMTB	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power			W	23	27	27	33	
Running current			A	0.20	0.24	0.24	0.30	
Fan	Airflow rate	Cooling	HIGH	m³/h	650	700	700	770
			MED		540	560	560	600
			LOW		430	430	430	450
			QUIET		270	270	270	280
		Heating	HIGH		720	750	770	800
			MED		580	610	640	660
			LOW		460	470	520	520
			QUIET		330	330	330	340
	Type × Q'ty	Crossflow fan × 1						
	Motor output			W	30			49
Sound pressure level *1	Cooling	HIGH	dB (A)	38	40	40	43	
		MED		33	34	35	36	
		LOW		29	29	30	30	
		QUIET		21	21	21	21	
	Heating	HIGH		41	42	42	44	
		MED		35	36	38	39	
		LOW		31	31	33	33	
		QUIET		22	22	22	24	
Sound power level		Cooling	dB (A)	54	55	55	57	
		Heating		56	57	58	59	
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0			Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0 Sub: 84 × 670 × 13.3	
	Fin pitch		mm	Main1: 1.2 Main2: 1.1			Main1: 1.2 Main2: 1.1 Sub: 1.4	
	Rows × Stages			Main1: 2 × 10 Main2: 2 × 7			Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4	
	Pipe type			Copper tube				
	Fin type			Aluminum				
Enclosure	Material			Polystyrene				
	Color			White + Pearl white (painted) Approximate color of Munsell N 9.25/				
Dimensions (H × W × D)	Net	mm		270 × 834 × 215				
	Gross			277 × 914 × 332				
Weight	Net	kg		10.0				
	Gross			12.5			13.0	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)				
		Gas		Ø9.52 (Ø3/8)				
Drain hose	Method			Flare				
	Material			PP + HDPE				
Operation range	Tip diameter		mm	Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)				
	Cooling		°C	18 to 32				
			%RH	80 or less				
		Heating	°C	16 to 30				
Remote controller type				Wireless (Option: Wired, Mobile app*2 [FGLair™])				
<b>NOTES:</b> <ul style="list-style-type: none"><li>• The protective function might work when using it outside the operation range.</li><li>• *1: Sound pressure level:<ul style="list-style-type: none"><li>— These are the measured values in the manufacturer's anechoic chamber.</li><li>— Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>• *2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>								

Model name				ASHG07KMCC	ASHG09KMCC	ASHG12KMCC	ASHG14KMCC	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power			W	23	27	27	33	
Running current			A	0.20	0.24	0.24	0.30	
Fan	Airflow rate	Cooling	HIGH	m³/h	650	700	700	770
			MED		540	560	560	600
			LOW		430	430	430	450
			QUIET		320	320	320	310
		Heating	HIGH		720	750	780	820
			MED		580	610	640	660
			LOW		460	470	520	520
			QUIET		330	330	330	340
	Type × Q'ty			Crossflow fan × 1				
	Motor output		W	27				
Sound pressure level *1		Cooling	HIGH	dB (A)	38	40	40	43
			MED		33	34	35	36
			LOW		29	29	30	30
			QUIET		21	21	21	21
		Heating	HIGH		41	42	42	44
			MED		35	36	38	39
			LOW		31	31	33	33
			QUIET		22	22	22	24
Sound power level		Cooling	dB (A)	54	55		57	
		Heating		56	57	58	59	
Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20		Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20 Sub: 84 × 670 × 13.3	
		Fin pitch			Man1: 1.2 Main2: 1.1		Man1: 1.2 Main2: 1.1 Sub: 1.4	
		Rows × Stages		Main1: 2 × 10 Main2: 2 × 7		Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4		
		Pipe type		Copper tube				
		Fin type		Aluminum				
Enclosure		Material		Polystyrene				
		Color		White + Pearl white (painted) Approximate color of Munsell N 9.25/				
Dimensions (H × W × D)		Net	mm	270 × 834 × 215				
		Gross		277 × 914 × 332				
Weight		Net	kg	10.0				
		Gross		12.5			13.0	
Connection pipe		Size	mm (in)	Ø6.35 (Ø1/4)				
		Liquid		Ø9.52 (Ø3/8)				
		Gas	Flare					
Drain hose		Material		PP + HDPE				
		Tip diameter		mm				
Operation range		Cooling	°C	Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)				
		Heating	%RH	18 to 32				
			°C	80 or less				
Remote controller type				16 to 30				
				Wireless (Wired, Mobile app*2 [FGLair™] [option])				
NOTES:								
<ul style="list-style-type: none"><li>• The protective function might work when using it outside the operation range.</li><li>• *1: Sound pressure level:<ul style="list-style-type: none"><li>– These are the measured values in the manufacturer's anechoic chamber.</li><li>– Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>• *2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>								



Model name				ASHG07KMCE	ASHG09KMCE	ASHG12KMCE	ASHG14KMCE	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power			W	23	27	27	33	
Running current			A	0.20	0.24	0.24	0.30	
Fan	Airflow rate	Cooling	HIGH	m³/h	650	700	700	770
			MED		540	560	560	600
			LOW		430	430	430	450
			QUIET		320	320	320	310
		Heating	HIGH		720	750	780	820
			MED		580	610	640	660
			LOW		460	470	520	520
			QUIET		330	330	330	340
	Type × Q'ty			Crossflow fan × 1				
	Motor output		W	27				
Sound pressure level *1		Cooling	HIGH	dB (A)	38	40	40	43
			MED		33	34	35	36
			LOW		29	29	30	30
			QUIET		21	21	21	21
		Heating	HIGH		41	42	42	44
			MED		35	36	38	39
			LOW		31	31	33	33
			QUIET		22	22	22	24
Sound power level		Cooling	dB (A)	54	55		57	
		Heating		56	57	58	59	
Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20		Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20 Sub: 84 × 670 × 13.3	
		Fin pitch			Man1: 1.2 Main2: 1.1		Man1: 1.2 Main2: 1.1 Sub: 1.4	
		Rows × Stages		Main1: 2 × 10 Main2: 2 × 7		Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4		
		Pipe type		Copper tube				
		Fin type		Aluminum				
Enclosure		Material		Polystyrene				
		Color		White + Pearl white (painted) Approximate color of Munsell N 9.25/				
Dimensions (H × W × D)		Net	mm	270 × 834 × 215				
		Gross		277 × 914 × 332				
Weight		Net	kg	10.0				
		Gross		12.5			13.0	
Connection pipe		Size	Liquid	mm (in)	Ø6.35 (Ø1/4)			
			Gas		Ø9.52 (Ø3/8)			
		Method		Flare				
Drain hose		Material		PP + HDPE				
		Tip diameter		mm	Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)			
Operation range		Cooling	°C	18 to 32				
			%RH	80 or less				
		Heating	°C	16 to 30				
Remote controller type				Wireless (Wired, Mobile app*2 [FGLair™] [option])				
<b>NOTES:</b> <ul style="list-style-type: none"><li>The protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level:<ul style="list-style-type: none"><li>These are the measured values in the manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>*2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>								

Model name				ASHG07KETA ASHG07KETA-B	ASHG09KETA ASHG09KETA-B	ASHG12KETA ASHG12KETA-B	ASHG14KETA ASHG14KETA-B	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power			W	23	27	27	33	
Running current			A	0.20	0.24	0.24	0.30	
Fan	Airflow rate	Cooling	HIGH	m³/h	650	700	700	770
			MED		540	560	560	600
			LOW		430	430	430	450
			QUIET		270	270	270	280
		Heating	HIGH		720	750	770	800
			MED		580	610	640	660
			LOW		460	470	520	520
			QUIET		330	330	330	340
	Type × Q'ty			Crossflow fan × 1				
	Motor output			W	30			49
Sound pressure level *1	Cooling	HIGH	dB (A)	38	40	40	43	
		MED		33	34	35	36	
		LOW		29	29	30	30	
		QUIET		21	21	21	21	
	Heating	HIGH		41	42	42	44	
		MED		35	36	38	39	
		LOW		31	31	33	33	
		QUIET		22	22	22	24	
Sound power level		Cooling	dB (A)	54	55		57	
		Heating		56	57	58	59	
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0			Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0 Sub: 84 × 670 × 13.3	
	Fin pitch		mm	Main1: 1.2 Main2: 1.1			Main1: 1.2 Main2: 1.1 Sub: 1.4	
	Rows × Stages			Main1: 2 × 10 Main2: 2 × 7			Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4	
	Pipe type			Copper tube				
Fin type			Aluminum					
Enclosure	Material		Polystyrene					
	Color		KETA; White + Pearl white (painted) Approximate color of Munsell N 9.25/					
			KETA-B; Dark Gray + Silver (painted) Approximate color of Munsell 0.5P 3.5/0.2					
Dimensions (H × W × D)		Net	mm	295 × 950 × 230				
		Gross		284 × 1,027 × 357				
Weight		Net	kg	11.0			11.5	
		Gross		14.5			15.0	
Connection pipe		Size	Liquid	Ø6.35 (Ø1/4)				
			Gas	Ø9.52 (Ø3/8)				
		Method			Flare			
Drain hose		Material		PP + HDPE				
		Tip diameter		Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)				
Operation range		Cooling	°C	18 to 32				
			%RH	80 or less				
		Heating	°C	16 to 30				
Remote controller type				Wireless (Option: Wired, Mobile app*2 [FGLair™])				
NOTES:								
<ul style="list-style-type: none"><li>The protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level:<ul style="list-style-type: none"><li>These are the measured values in the manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>*2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>								

Model name				ASHG07KETE ASHG07KETE-B	ASHG09KETE ASHG09KETE-B	ASHG12KETE ASHG12KETE-B	ASHG14KETE ASHG14KETE-B	
Power supply				1Ø 230 V ~50 Hz				
Available voltage range				198—264 V				
Capacity			kW class	2.0	2.5	3.5	4.0	
Input power			W	23	27	27	33	
Running current			A	0.20	0.24	0.24	0.30	
Fan	Airflow rate	Cooling	HIGH	m³/h	650	700	700	770
			MED		540	560	560	600
			LOW		430	430	430	450
			QUIET		270	270	270	280
		Heating	HIGH		720	750	770	800
			MED		580	610	640	660
			LOW		460	470	520	520
			QUIET		330	330	330	340
	Type × Q'ty			Crossflow fan × 1				
	Motor output			W	30		49	
Sound pressure level *1	Cooling	HIGH	dB (A)	38	40	40	43	
		MED		33	34	35	36	
		LOW		29	29	30	30	
		QUIET		21	21	21	21	
	Heating	HIGH		41	42	42	44	
		MED		35	36	38	39	
		LOW		31	31	33	33	
		QUIET		22	22	22	24	
Sound power level		Cooling	dB (A)	54	55		57	
		Heating		56	57	58	59	
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0			Main1: 210 × 670 × 26.6 Main2: 112 × 670 × 20.0 Sub: 84 × 670 × 13.3	
	Fin pitch		mm	Main1: 1.2 Main2: 1.1			Main1: 1.2 Main2: 1.1 Sub: 1.4	
	Rows × Stages			Main1: 2 × 10 Main2: 2 × 7			Main1: 2 × 10 Main2: 2 × 7 Sub: 1 × 4	
	Pipe type			Copper tube				
	Fin type			Aluminum				
	Material			Polystyrene				
Enclosure	Color			KETE; White + Pearl white (painted) Approximate color of Munsell N 9.25/				
				KETE-B; Dark Gray + Silver (painted) Approximate color of Munsell 0.5P 3.5/0.2				
Dimensions (H × W × D)	Net	mm	295 × 950 × 230					
	Gross		284 × 1,027 × 357					
Weight	Net	kg	11.0				11.5	
	Gross		14.5				15.0	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)				
		Gas		Ø9.52 (Ø3/8)				
	Method			Flare				
Drain hose	Material			PP + HDPE				
	Tip diameter		mm	Ø13.8 (I.D.), Ø15.0 to Ø16.8 (O.D.)				
Operation range	Cooling		°C	18 to 32				
			%RH	80 or less				
	Heating		°C	16 to 30				
Remote controller type				Wireless (Option: Wired, Mobile app*2 [FGLair™])				
<b>NOTES:</b> <ul style="list-style-type: none"><li>The protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level:<ul style="list-style-type: none"><li>These are the measured values in the manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li><li>*2: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.</li></ul>								

# ■ Ceiling type

Model name				ABHG18KRTA	
Power supply				1Ø 230 V ~50 Hz	
Available voltage range				198—264 V	
Capacity			kW class	5.0	
Input power			W	37	
Running current			A	0.21	
Fan	Airflow rate	Cooling	HIGH	m³/h	840
			MED		790
			LOW		710
			QUIET		650
		Heating	HIGH		840
			MED		790
			LOW		710
			QUIET		650
	Type × Q'ty			Sirocco × 2	
	Motor output			W	50
Sound pressure level *	Cooling	HIGH	dB (A)	38	
		MED		36	
		LOW		33	
		QUIET		31	
	Heating	HIGH		38	
		MED		36	
		LOW		33	
		QUIET		31	
Sound power level		Cooling	dB (A)	53	
Heating		53			
Heat exchanger type	Dimensions (H × W × D)		mm	294 × 715 × 39.9	
	Fin pitch		mm	1.30	
	Rows × Stages		3 × 14		
	Pipe type		Copper		
	Fin type		Aluminum		
Enclosure	Material			Steel sheet	
	Color			White Approximate color of Munsell N9.25/	
Dimensions (H × W × D)	Net		mm	235 × 1,080 × 705	
	Gross			330 × 1,165 × 825	
Weight	Net		kg	24	
	Gross			33	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)	
		Gas		Ø12.70 (Ø1/2)	
Drain hose	Method			Flare	
	Material			PVC	
	Tip diameter		mm	Ø25 (I.D.), Ø32 (O.D.)	
Operation range		Cooling	°C	18 to 32	
			%RH	80 or less	
		Heating	°C	16 to 30	
Remote controller type				Wired remote controller, Wireless remote controller, Mobile app*3 (FGLair™)	
NOTES:					
• Specifications are based on the following conditions:					
– Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.					
– Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.					
– Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)					
• Protective function might work when using it outside the operation range.					
• *: Sound pressure level:					
– Measured values in manufacturer's anechoic chamber.					
– Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.					

# Floor type

Model name				AGHG09KVCA		AGHG12KVCA		AGHG14KVCA		
Power supply				230 V ~ 50 Hz						
Available voltage range				198—264 V						
Capacity			kW class	2.5		3.5		4.0		
Input power			W	16		20		23		
Running current			A	0.15		0.18		0.20		
Fan	Airflow rate	Cooling	HIGH	m³/h	530		600		650	
			MED		440		490		520	
			LOW		360		380		400	
			QUIET		270		270		270	
		Heating	HIGH		530		600		650	
			MED		460		510		540	
			LOW		380		410		430	
			QUIET		270		270		270	
	Type × Q'ty		Cross flow fan × 2							
	Motor output		W	16 × 2						
Sound pressure level *	Cooling	HIGH	dB (A)	39		42		44		
		MED		34		36		38		
		LOW		28		30		31		
		QUIET		22		22		22		
	Heating	HIGH		39		42		44		
		MED		35		38		39		
		LOW		30		32		33		
		QUIET		22		22		22		
Sound power level		Cooling	dB (A)	52		55		56		
Heating		52		55		56				
Heat exchanger type	Dimensions (H × W × D)		mm	378 × 550 × 26.6						
	Fin pitch			1.2						
	Rows × Stages			2 × 18						
	Pipe type			Copper tube						
	Fin type			Aluminum						
Enclosure	Material			Polystyrene						
	Color			White						
Dimensions (H × W × D)	Net		mm	600 × 740 × 200						
	Gross			700 × 820 × 310						
Weight	Net		kg	14						
	Gross			18						
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4)						
		Gas		Ø9.52 (Ø3/8)						
Drain hose	Method			Flare						
	Material			PP + LLDPE						
Operation range	Tip diameter		mm	Ø13.8 (I.D.), Ø15.8 to Ø16.7 (O.D.)						
	Cooling	°C		18 to 32						
		%RH		80 or less						
Remote controller type	Heating		°C	30 or less						
				Wireless (Wired, Simple mobile app [option])						

## NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

# 1-2. Outdoor unit

Type				Inverter heat pump	
Model name				AOHG18KBT A3	AOHG24KBT A3
Power source				230 V 50 Hz	
Available voltage range				198—264V	
Standard combination of indoor unit				Wall mounted ASHG07KMCC ×3	Wall mounted ASHG07KMCC ASHG09KMCC ×2
Capacity	Cooling	Rated	kW	5.4	6.8
			Btu/h	18,400	23,200
		Min.—Max.	kW	1.8—7	1.8—8.5
			Btu/h	6,100—23,800	6,100—29,000
	Heating	Rated	kW	6.8	8.0
			Btu/h	23,200	27,300
		Min.—Max.	kW	2.0—8.0	2.0—9.2
			Btu/h	6,800—27,300	6,800—31,400
Input power	Cooling	Rated	kW	1.13	1.74
		Max.		1.90	2.65
	Heating	Rated		1.39	1.82
		Max.		1.85	2.35
Current	Cooling	Rated	A	5.1	7.7
	Heating	Rated		6.2	8.1
EER	Cooling		kW/kW	4.78	3.90
COP	Heating			4.89	4.40
Starting current			A	6.2	8.1
Maximum operating current *1			A	12.0	14.5
Fan	Type × Q'ty			Propeller × 1	
	Airflow rate	Cooling	m³/h	2,220	2,270
		Heating		2,160	2,730
Motor output			W	49	49
Sound pressure level *2	Cooling		dB (A)	46	48
	Heating			49	53
Heat exchanger	Dimension (H × W × D)		mm	Main1: 672 × 881 × 18.19 Main2: 672 × 851 × 18.19	
	Fin pitch			1.3	
	Rows × Stages			Main1: 1 × 32 Main2: 1 × 32	
	Pipe type (Material)			Copper tube	
	Fin type (Material)			Aluminum	
Compressor	Type			DC twin rotary	
	Motor output		W	1,200	
Refrigerant	Type			R32 (675)	
	Charge		g	1,800	
Refrigerant oil	Type			RmM68AF	
	Amount		cm³	550	
Enclosure	Material			Steel sheet	
	Color			Beige (Approximate color of Munsell 10YR 7.5/1.0 NN)	
Dimensions (H × W × D)	Net		mm	716 × 820 × 315	
	Gross			890 × 1,027 × 445	
Weight	Net		kg	46	
	Gross			56	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (Ø1/4) × 3	
		Gas		Ø9.52 (Ø3/8) × 3	
				Ø9.52 (Ø3/8) × 2, Ø12.70 (Ø1/2) × 1	
	Method			Flare	
	Pre-charge length (Total)		m	30	
	Maximum length (Total)			50	
	Maximum length (Each)			25	
	Minimum length (Total)			10	
	Minimum length (Each)			2.5	
	Maximum height difference between outdoor unit and each indoor units.			15	
Maximum height difference between indoor units.		10			
Operation range	Cooling		°C	-10 to 46	
	Heating			-15 to 24	
Drain hose	Material			PP	
	Tip diameter		mm	Ø13.0 (I.D.), Ø16.0 to Ø16.8 (O.D.)	

## NOTES:

- Specifications are based on the following conditions:
  - Power source of specifications: 230 V
  - Pipe length: 5 m, Height difference: 0 m [Outdoor unit—Indoor unit]
  - Cooling: Indoor temperature of 27.0 °CDB/19.0 °CWB, and outdoor temperature of 35 °CDB/24.0 °CWB.
  - Heating: Indoor temperature of 20.0 °CDB/15.0 °CWB, and outdoor temperature of 7.0 °CDB/6.0 °CWB.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
- For other combination, refer to the combination table.
- The protective function might work when using it outside the operation range.
- This data is based on EN 14511 standard.

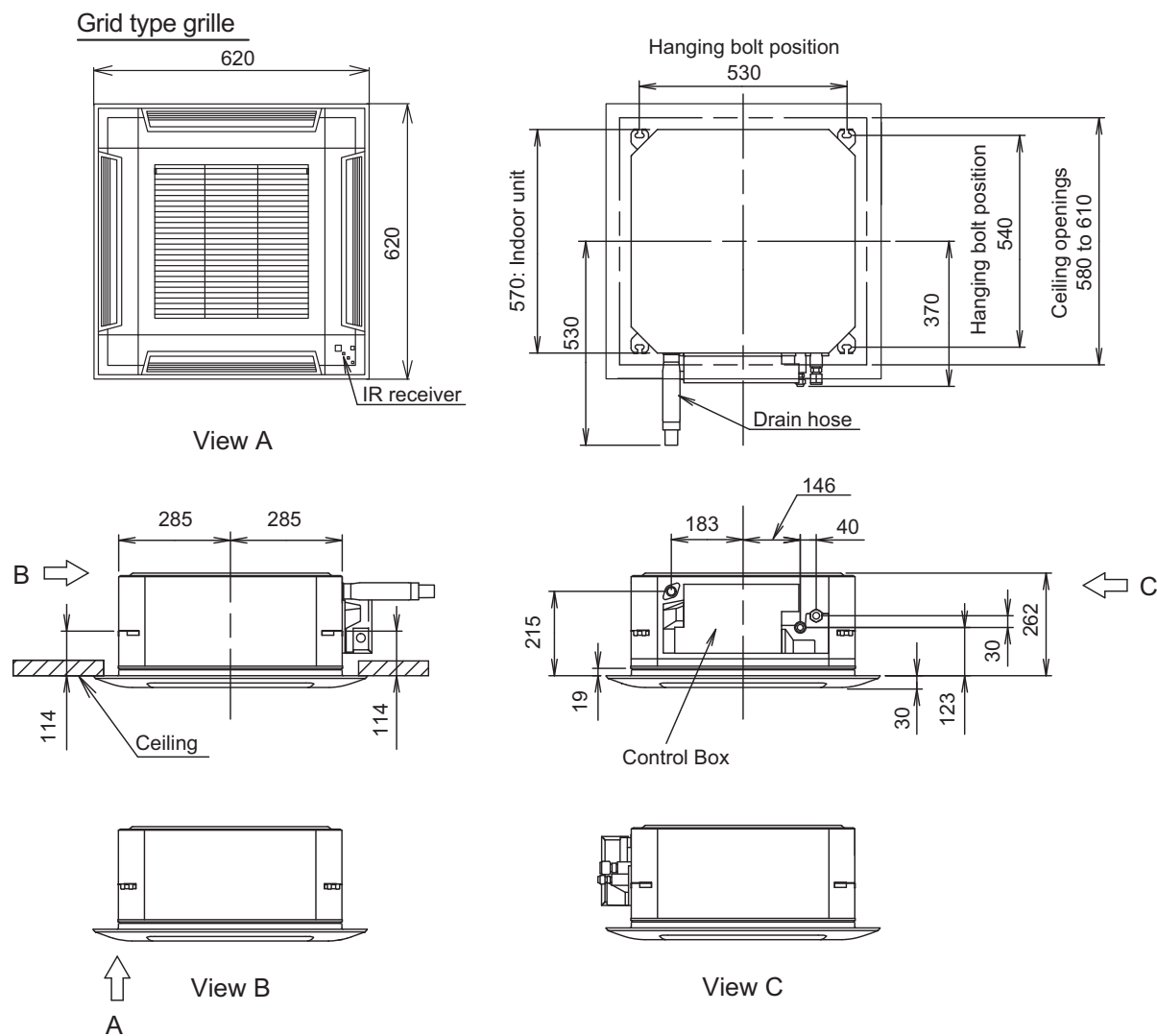
Specifications for ErP Lot10					
Model name			AOHG18KBTA3		AOHG24KBTA3
Energy efficiency class	Cooling		A+++		
	Heating (Average)		A++		
Pdesign	Cooling	kW	5.4 (35 °C)	6.8 (35 °C)	
	Heating (Average)		5.0 (-10 °C)	6.0 (-10 °C)	
SEER	Cooling	kWh/kWh	8.60	8.50	
SCOP	Heating (Average)		4.70	4.60	
Annual energy consumption	QCE	kWh/a	220	280	
	QHE (Average)		1,486	1,826	
Sound power level	Cooling	HIGH	dB (A)	59	61
	Heating			61	67

## 2. Dimensions

### 2-1. Compact cassette type

■ Models: AUXG07KVLA, AUXG09KVLA, AUXG12KVLA, AUXG14KVLA, and AUXG18KVLA

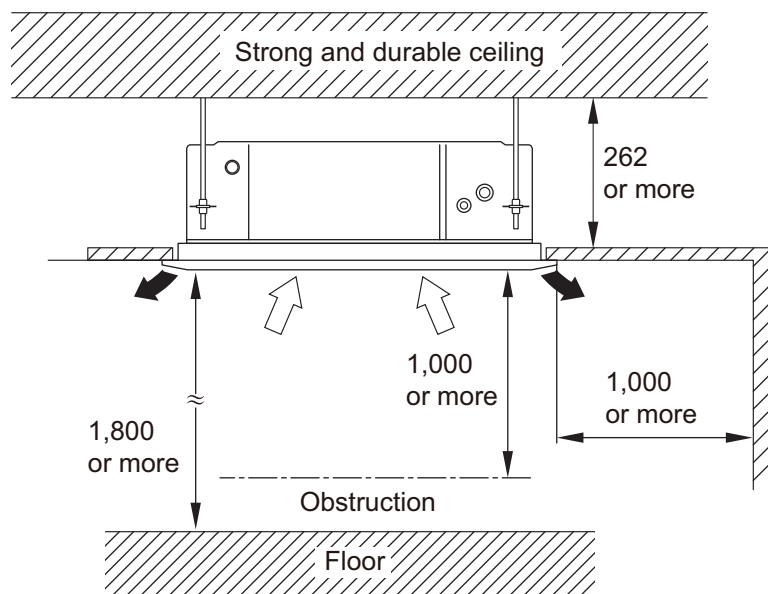
Unit: mm





## ● Installation space requirement

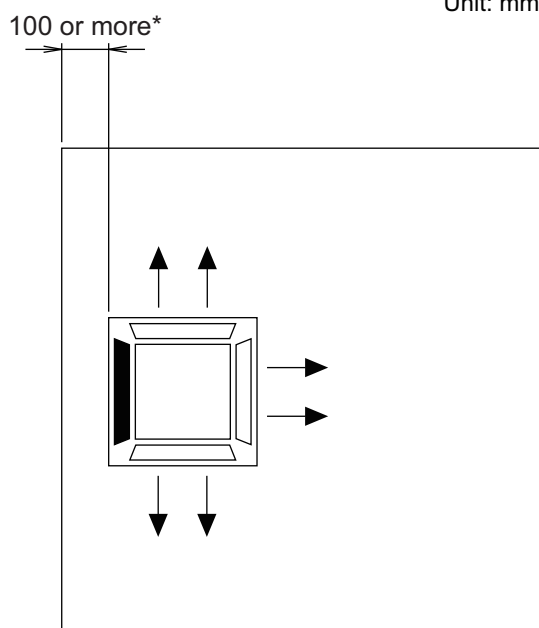
Unit: mm



Maximum height from floor to ceiling (Unit: mm)		
	07 and 09 models	12 or larger models
Standard	2,700	
High ceiling	—	3,000

### 3-way direction setting:

Unit: mm



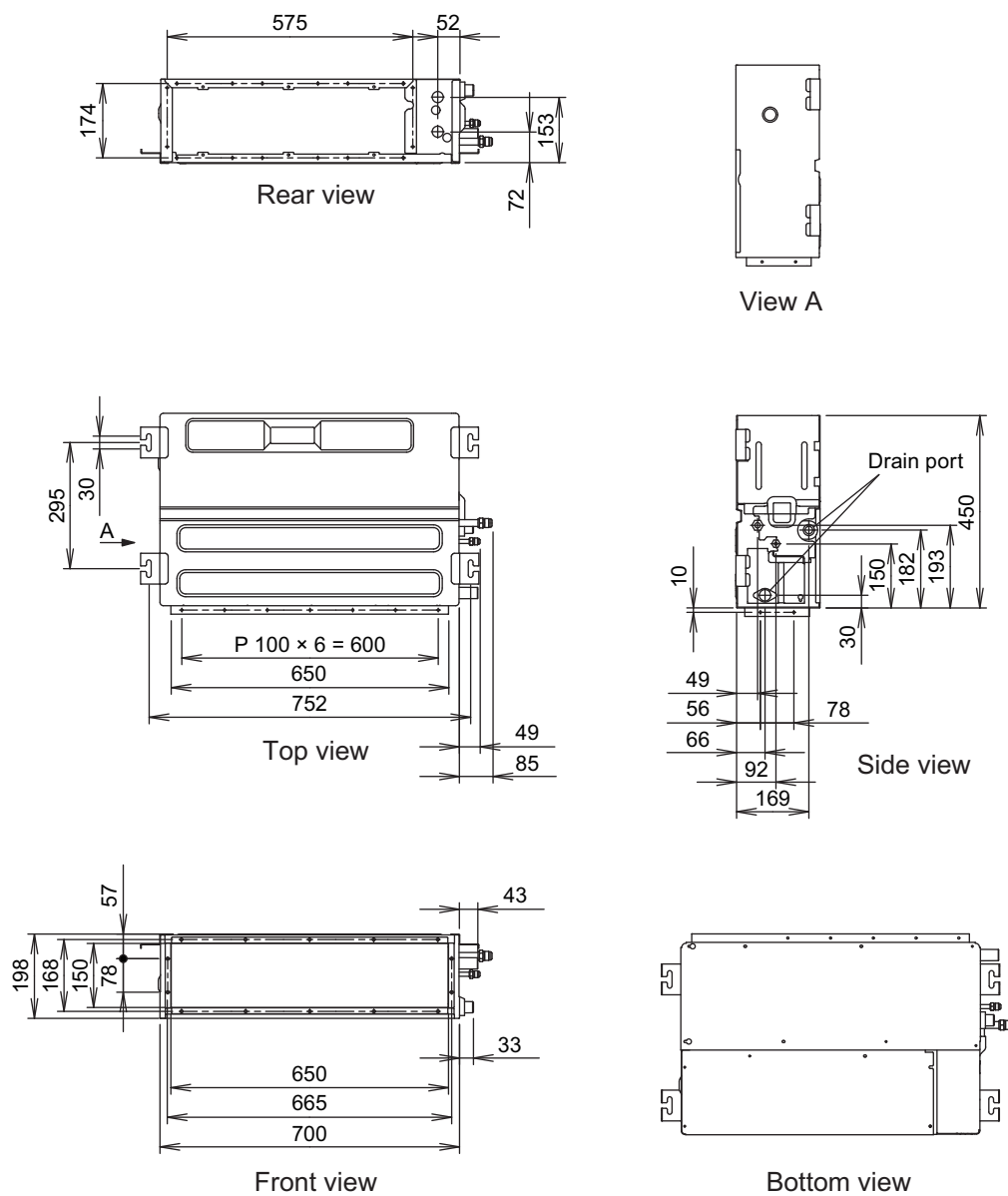
### NOTES:

- To set "3-direction", optional Air Outlet Shutter Plate (UTR-YDZB) must be installed, and the "outlet-direction" need to be switched to "3-way" by remote controller.  
\*When installing the indoor unit, be careful about the maintenance space.
- In 3-way outlet mode, changing of ceiling height setting by function setting 20 is prohibited.  
(Ceiling height setting [function setting 20] is allowed to be changed only in 4-way outlet mode.)

## 2-2. Mini duct type

### ■ Models: ARXG07KSLAP, ARXG09KSLAP, ARXG12KSLAP, and ARXG14KSLAP

Unit: mm

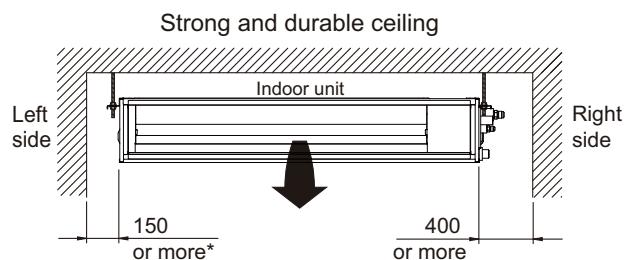




## ● Installation space requirement

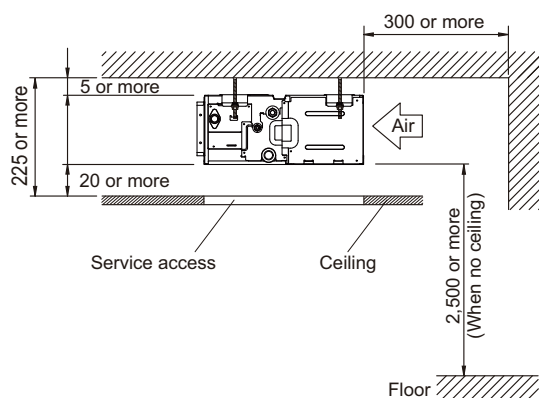
Provide sufficient installation space for product safety.

Unit: mm

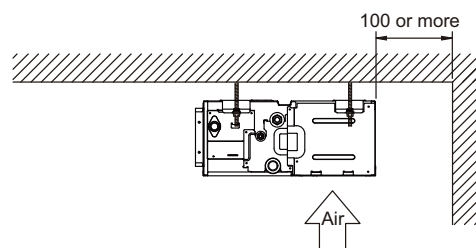


\*: 400 or more when drain from drain pipe

- When intaking air from back:



- When intaking air from bottom:

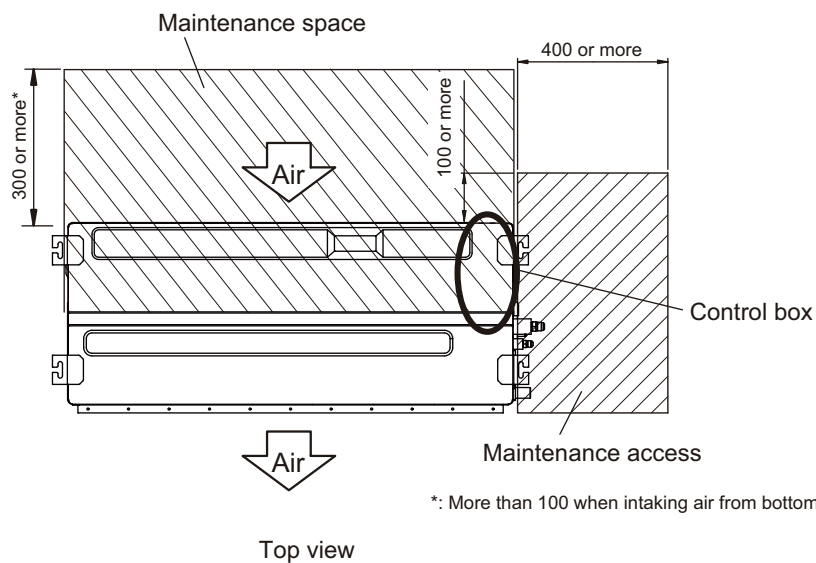


## ● Maintenance space requirement

For future maintenance and maintenance access, provide sufficient maintenance space.

**NOTE:** Do not place any wiring or illumination in the maintenance space, as they will impede service.

Unit: mm

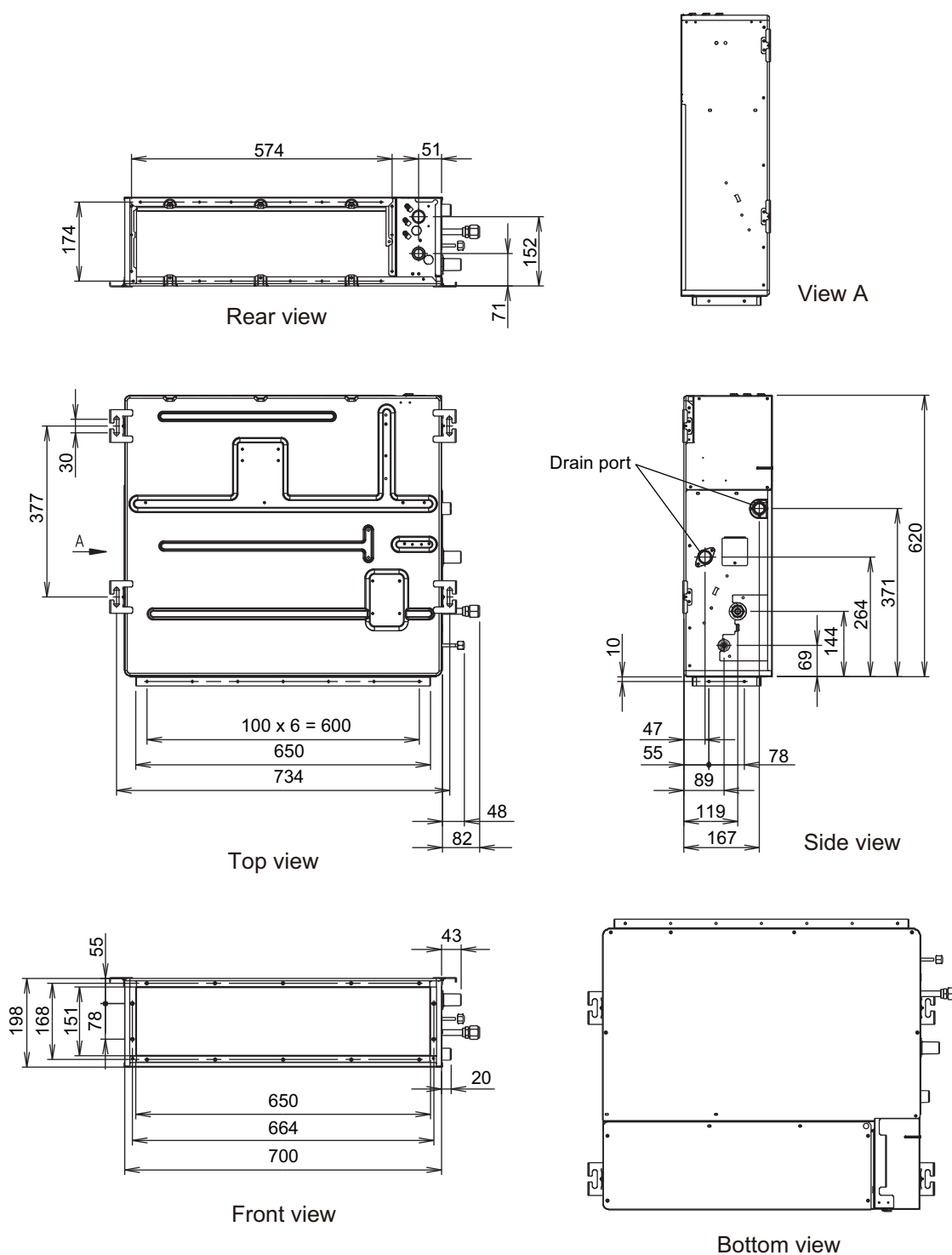


\*: More than 100 when intaking air from bottom

## 2-3. Slim duct type

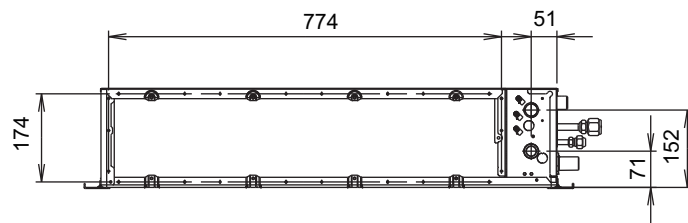
### ■ Models: ARXG07KLLAP, ARXG09KLLAP, ARXG12KLLAP, and ARXG14KLLAP

Unit: mm



# **Model: ARXG18KLLAP**

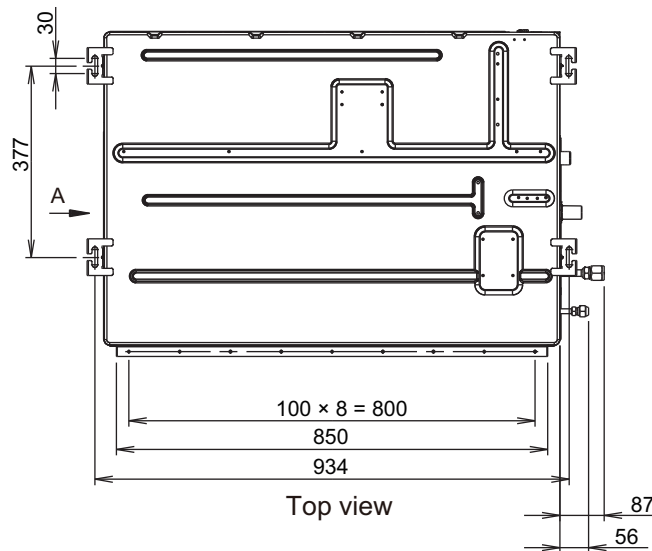
Unit: mm



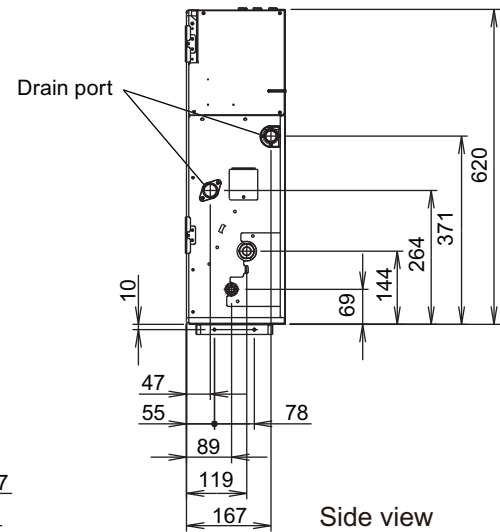
Rear view



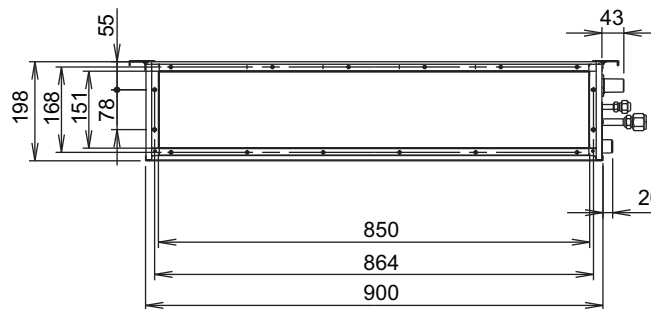
View A



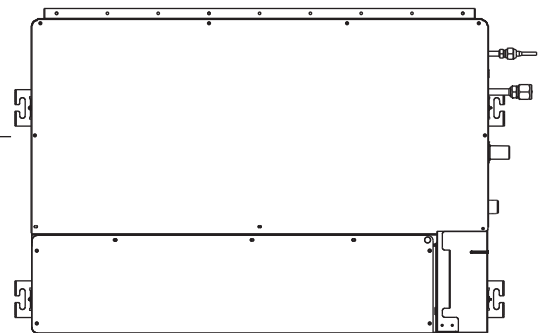
Top view



Side view



Front view

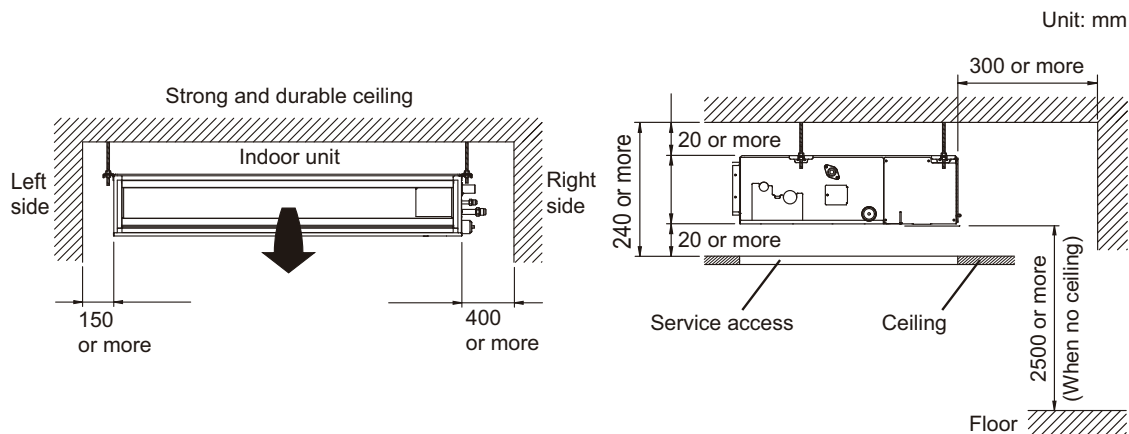


Bottom view

## ● Installation space requirement

Provide sufficient installation space for product safety.

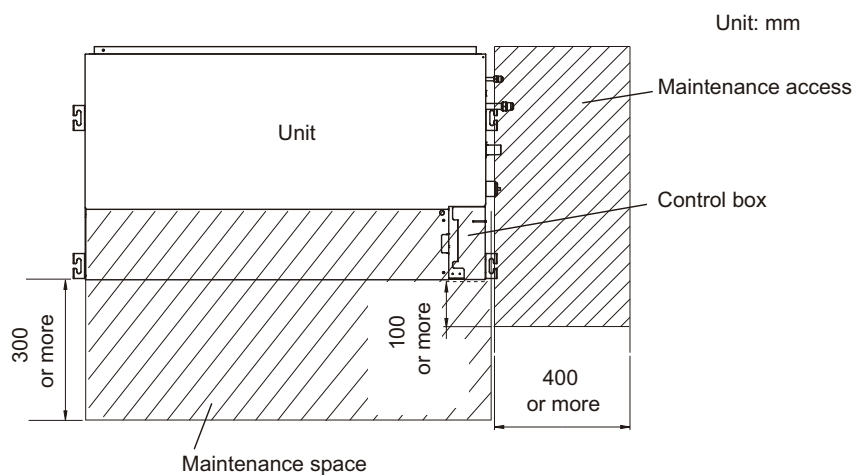
**In ceiling-concealed installations:**



## ● Maintenance space requirement

For future maintenance and maintenance access, provide sufficient maintenance space.

**NOTE:** Do not place any wiring or illumination in the maintenance space, as they will impede service.



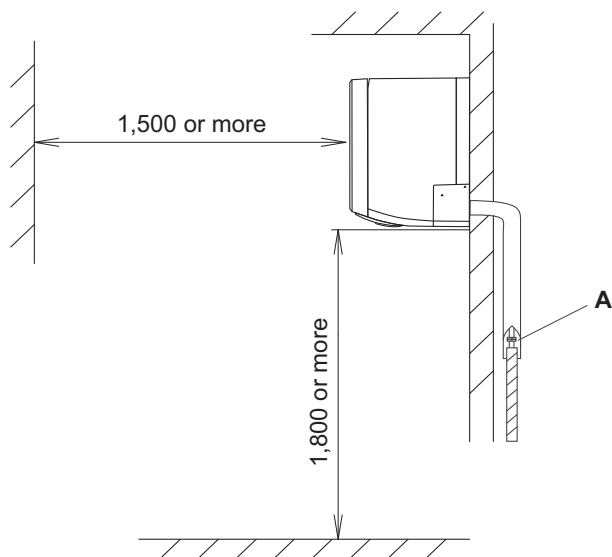
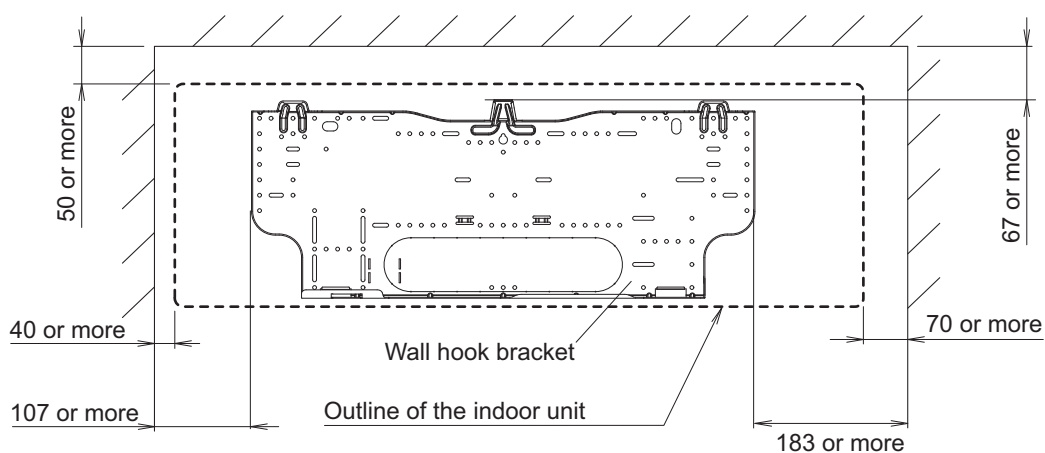




## ● Installation space requirement

Provide sufficient installation space for product safety.

Unit: mm



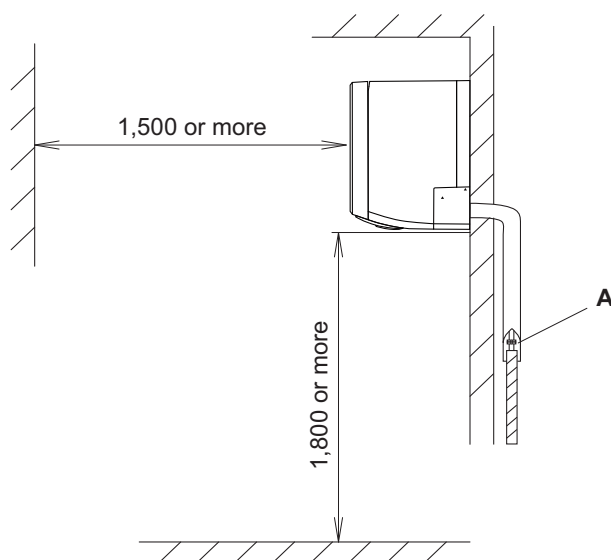
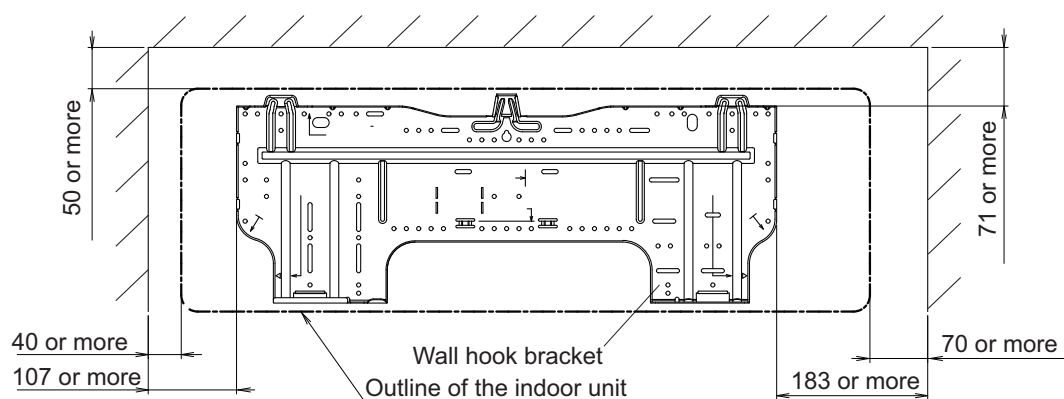
**A:** Install so that the flare connection part is outdoors.



## ● Installation space requirement

Provide sufficient installation space for product safety.

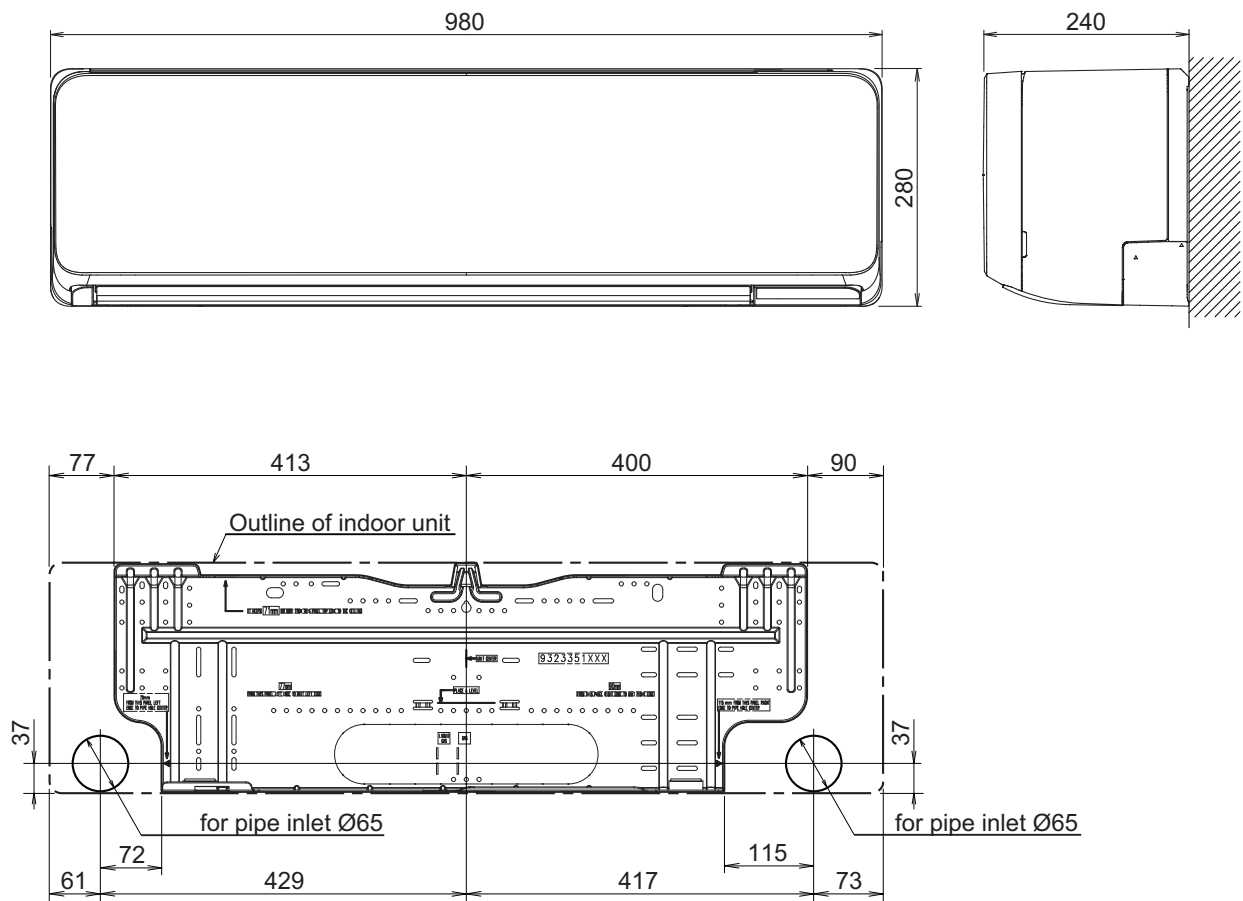
Unit: mm



**A:** Install so that the flare connection part is outdoors.

# ■ Model: ASHG18KMTB

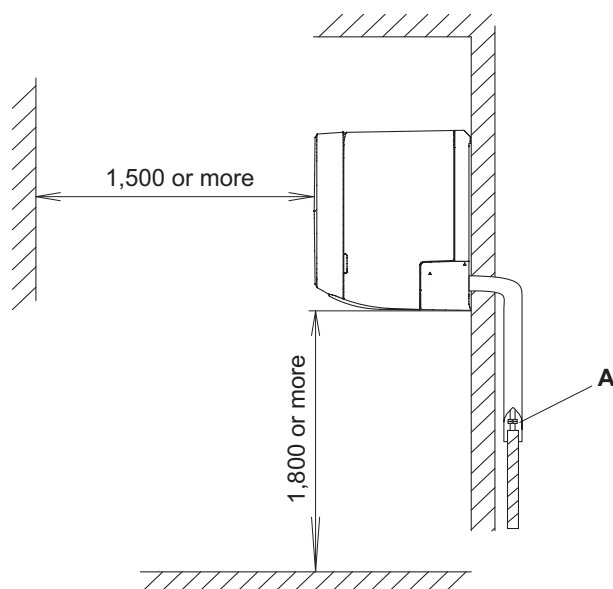
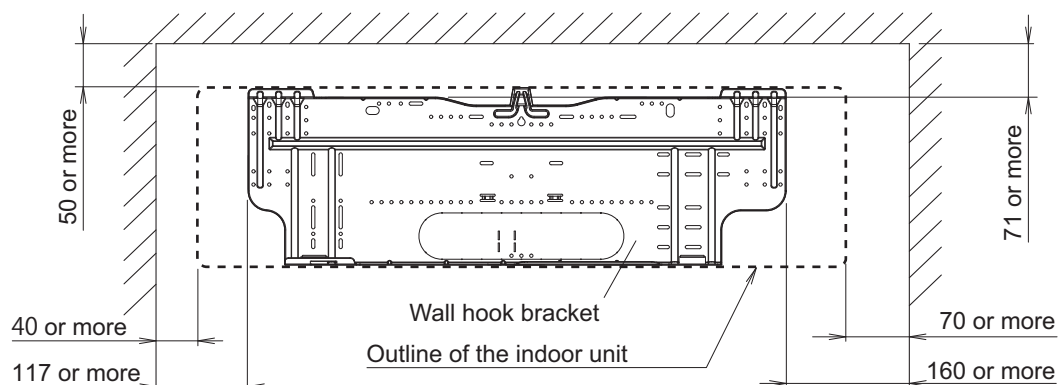
Unit: mm



## ● Installation space requirement

Provide sufficient installation space for product safety.

Unit: mm



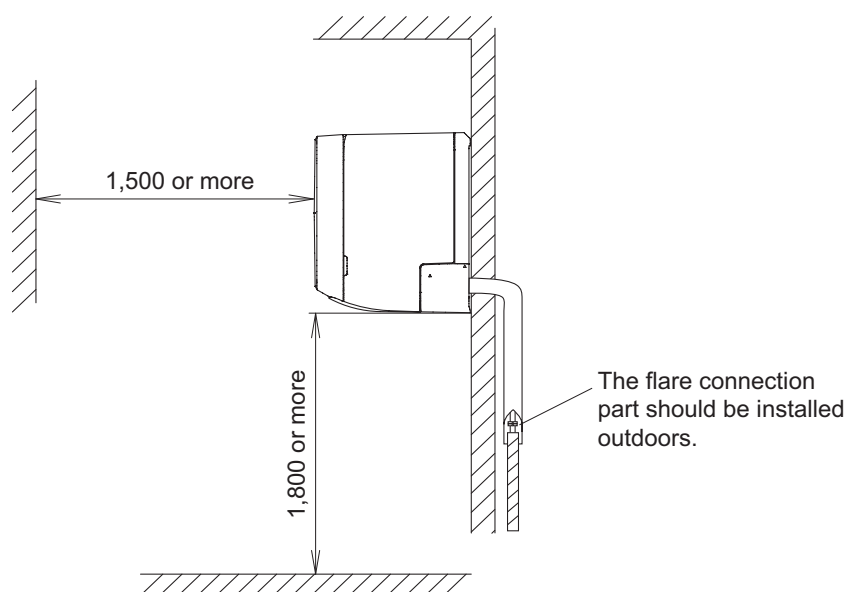
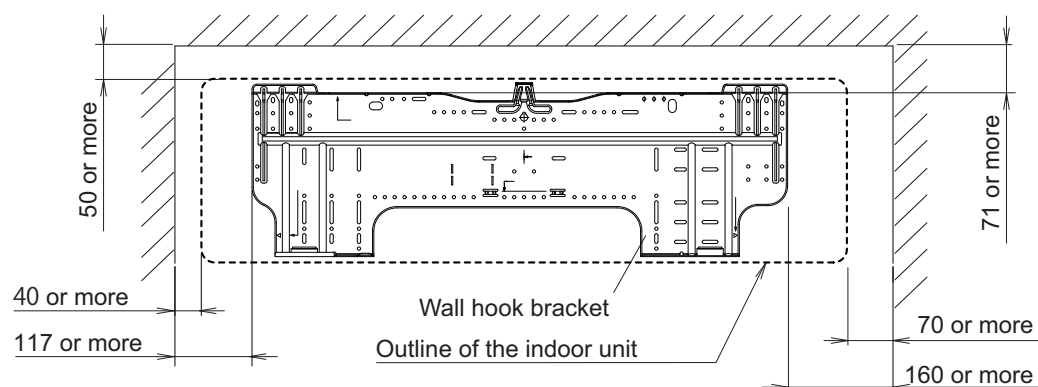
**A:** Install so that the flare connection part is outdoors.



## ● Installation space requirement

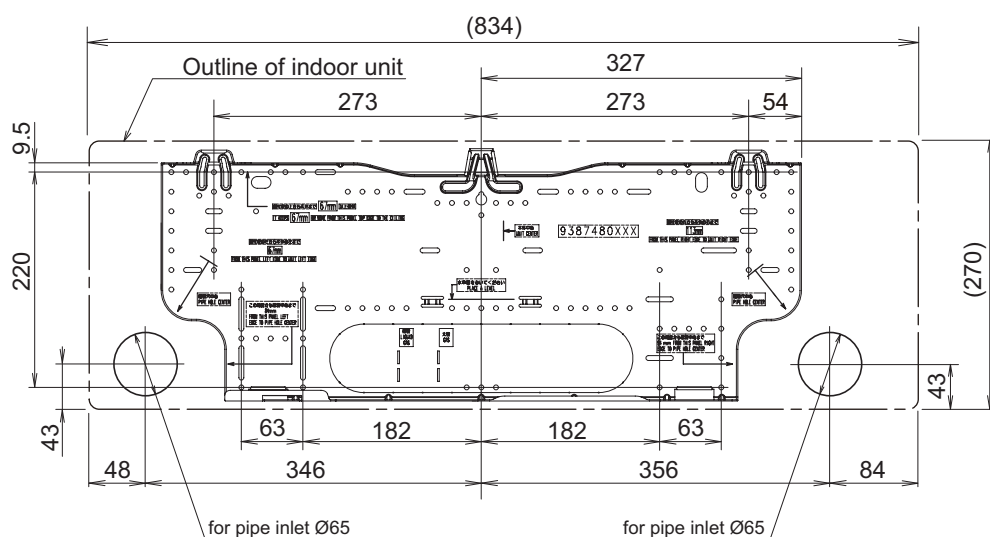
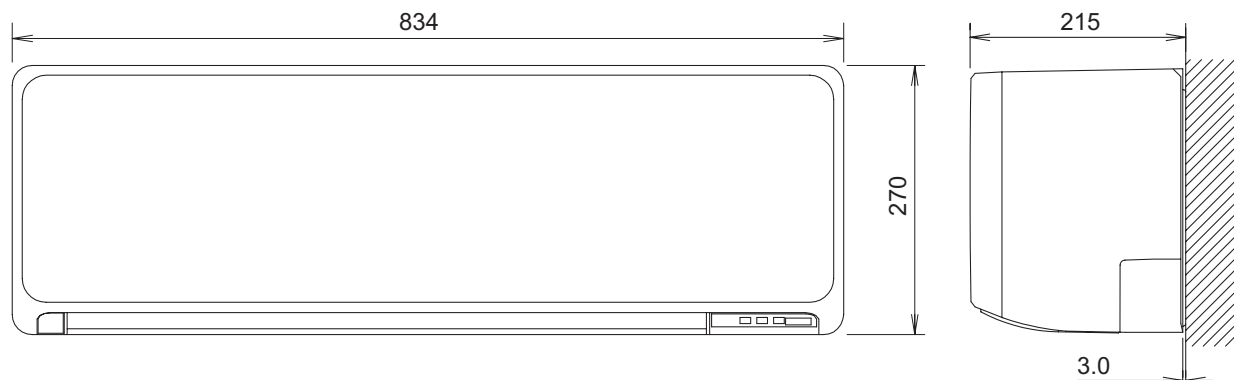
Provide sufficient installation space for product safety.

Unit: mm



■ **Models: ASHG07KMTB, ASHG09KMTB, ASHG12KMTB, ASHG14KMTB, ASHG07KMCC, ASHG09KMCC, ASHG12KMCC, and ASHG14KMCC**

Unit: mm

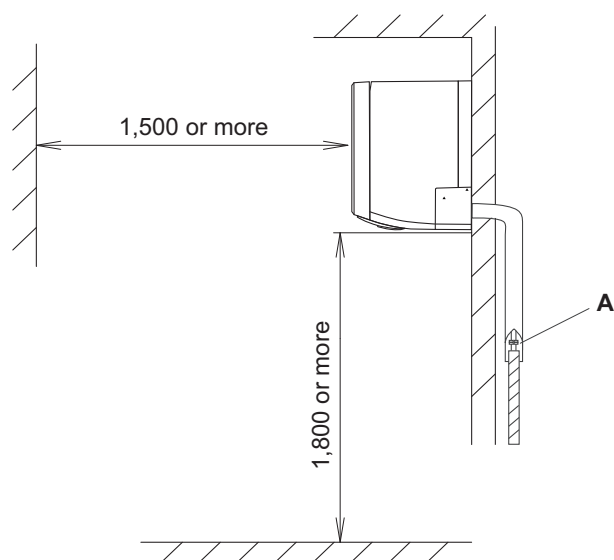
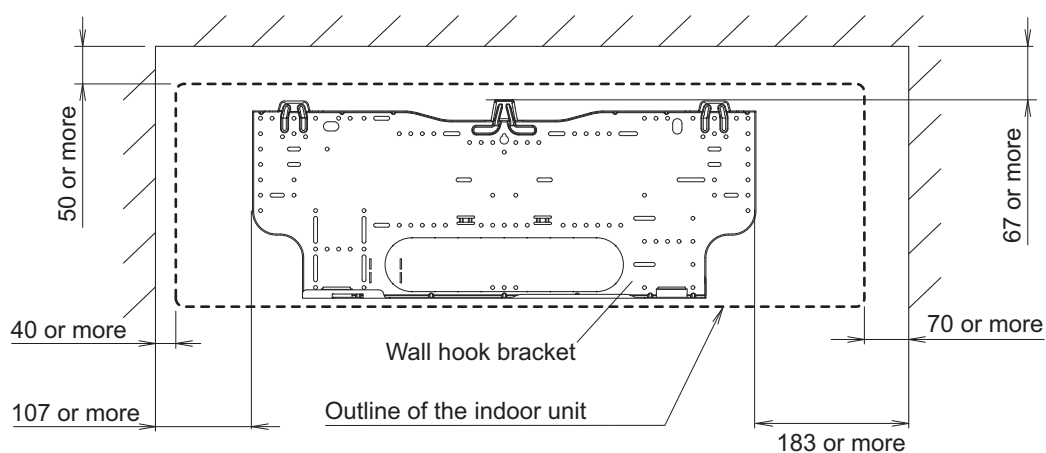




## ● Installation space requirement

Provide sufficient installation space for product safety.

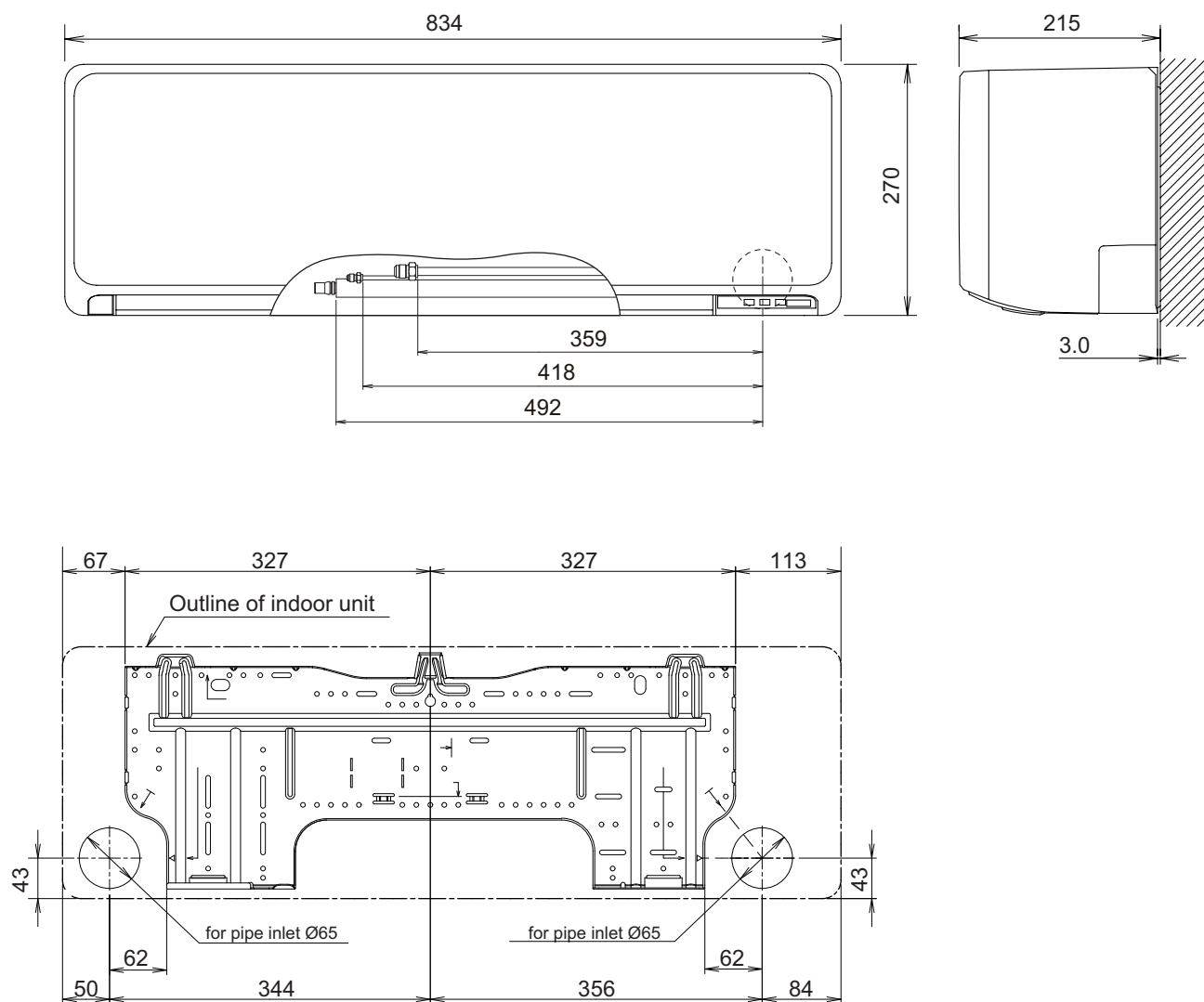
Unit: mm



**A:** Install so that the flare connection part is outdoors.

# ■ Models: ASHG07KMCE, ASHG09KMCE, ASHG12KMCE, and ASHG14KMCE

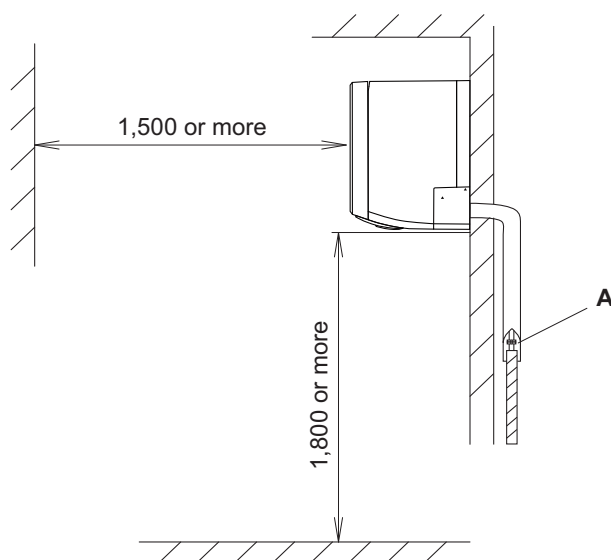
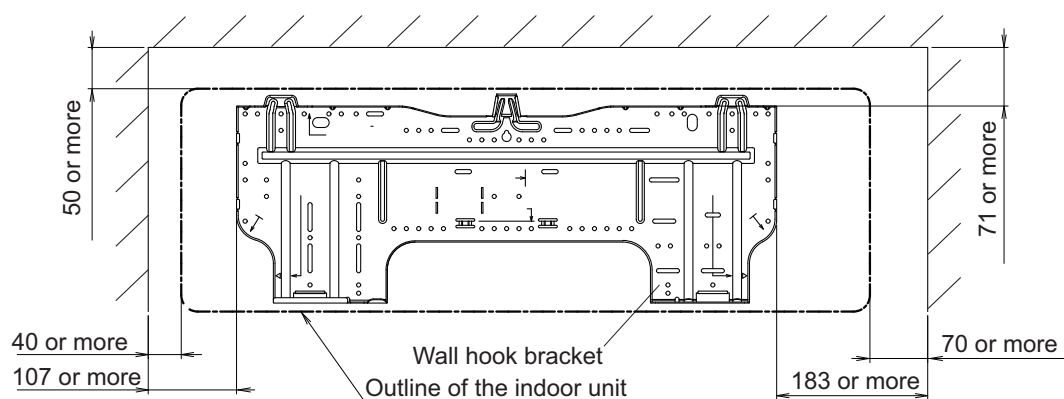
Unit: mm



## ● Installation space requirement

Provide sufficient installation space for product safety.

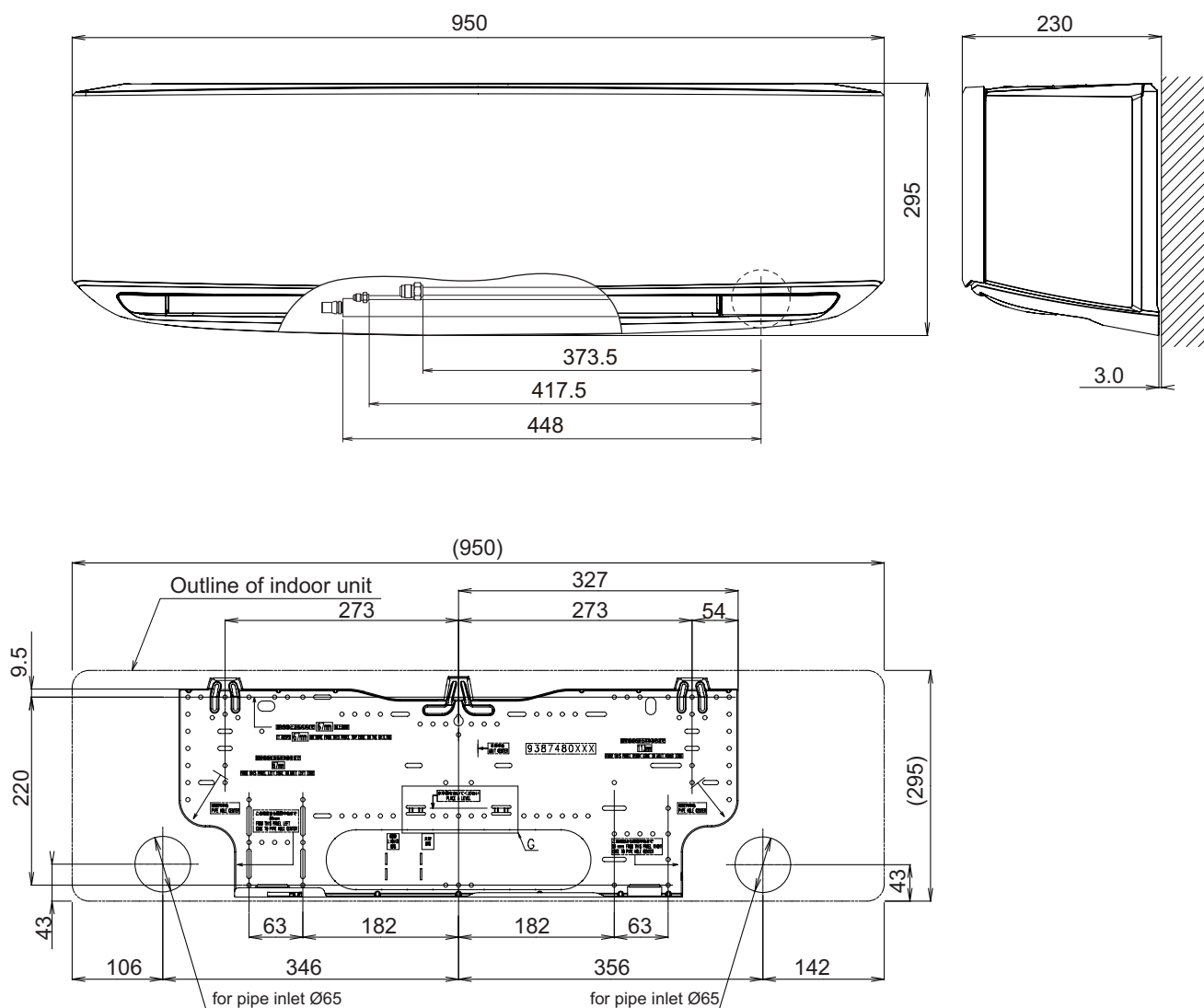
Unit: mm



**A:** Install so that the flare connection part is outdoors.

■ **Models: ASHG07KETA, ASHG09KETA, ASHG12KETA, ASHG14KETA, ASHG07KETA-B, ASHG09KETA-B, ASHG12KETA-B, ASHG14KETA-B, ASHG07KETE, ASHG09KETE, ASHG12KETE, ASHG14KETE, ASHG07KETE-B, ASHG09KETE-B, ASHG12KETE-B, and ASHG14KETE-B**

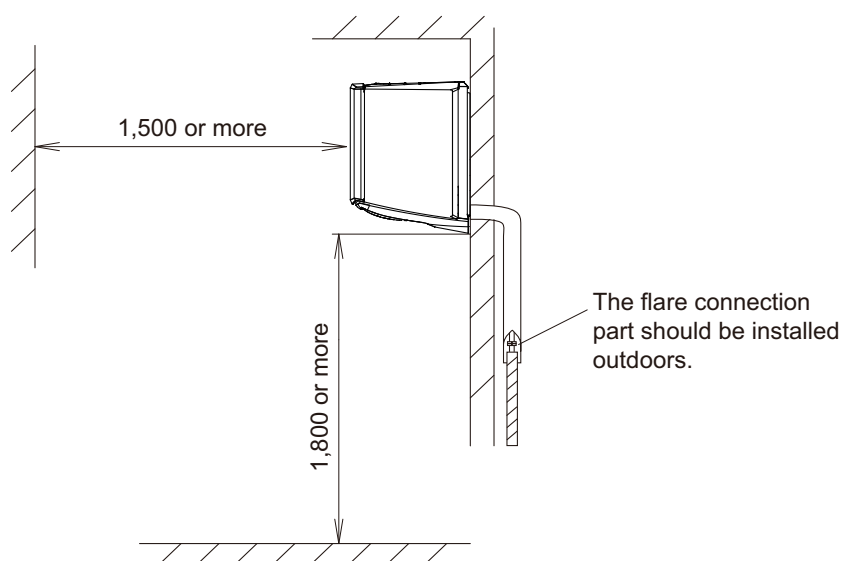
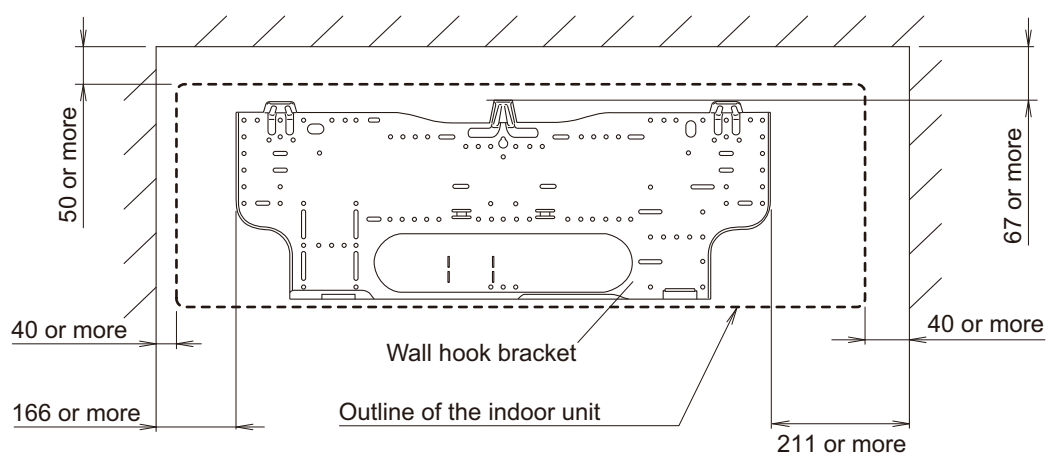
Unit: mm



## ● Installation space requirement

Provide sufficient installation space for product safety.

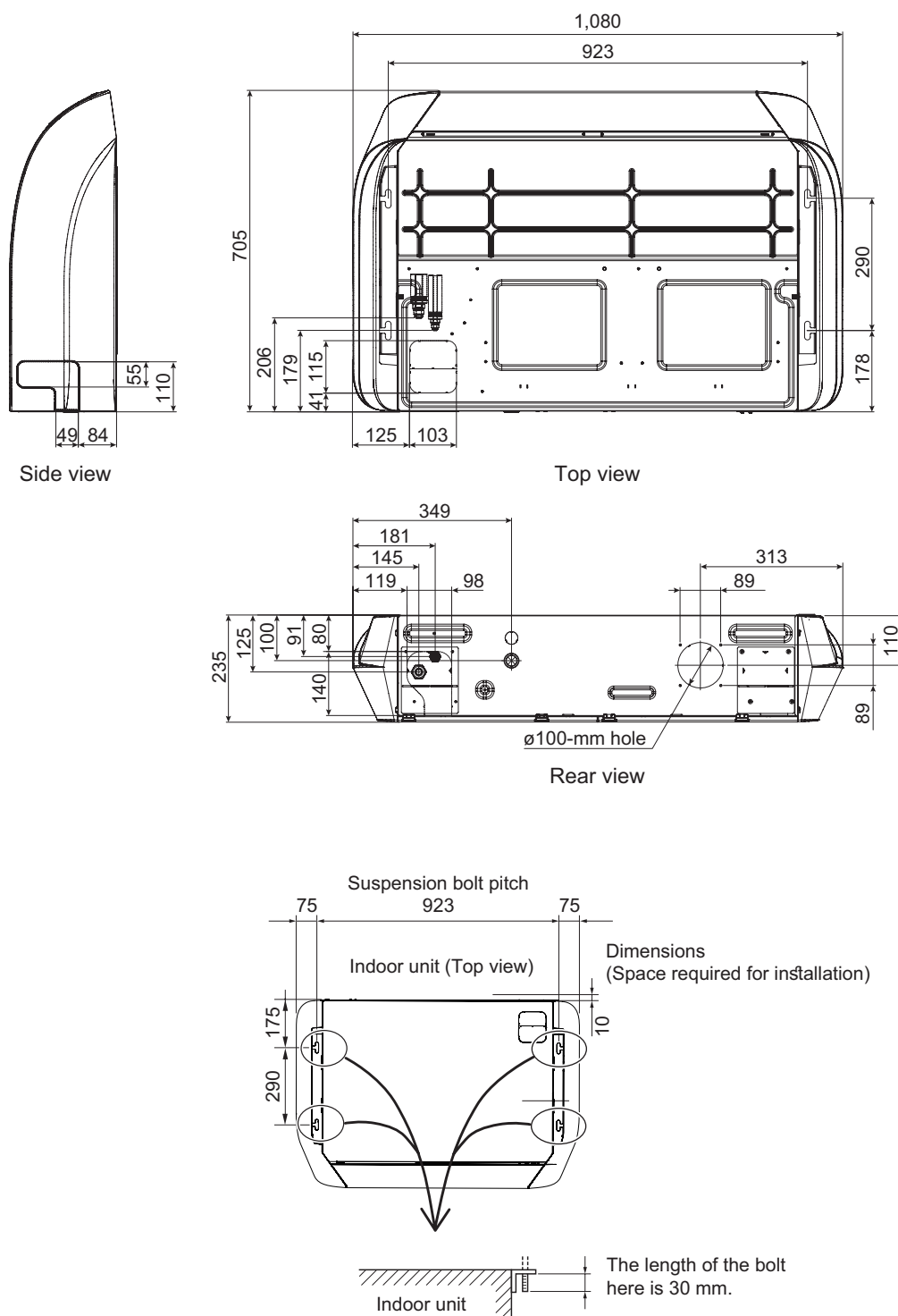
Unit: mm



## 2-5. Ceiling type

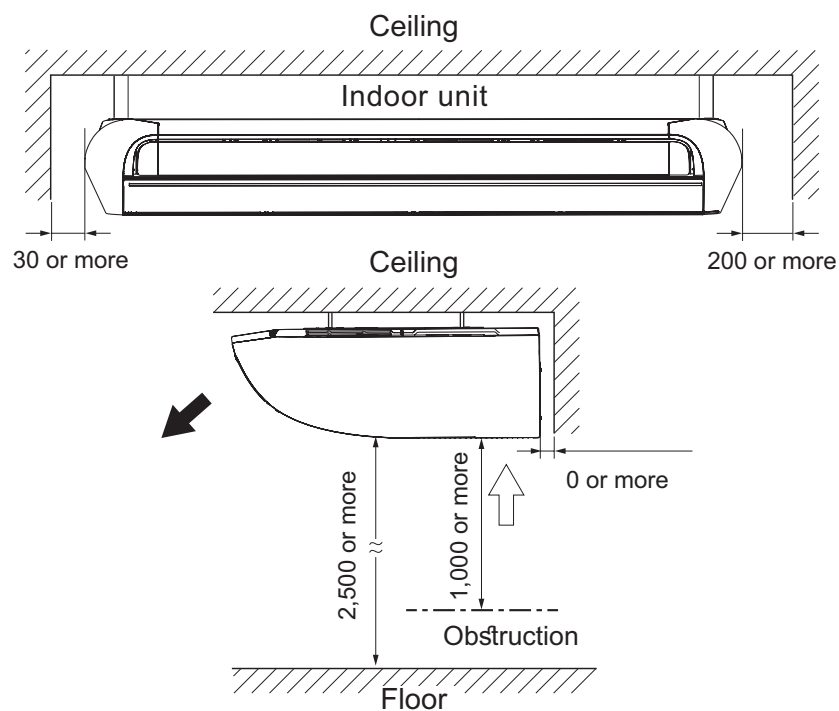
### ■ Model: ABHG18KRTA

Unit: mm



## ■ Installation space requirement

Unit: mm



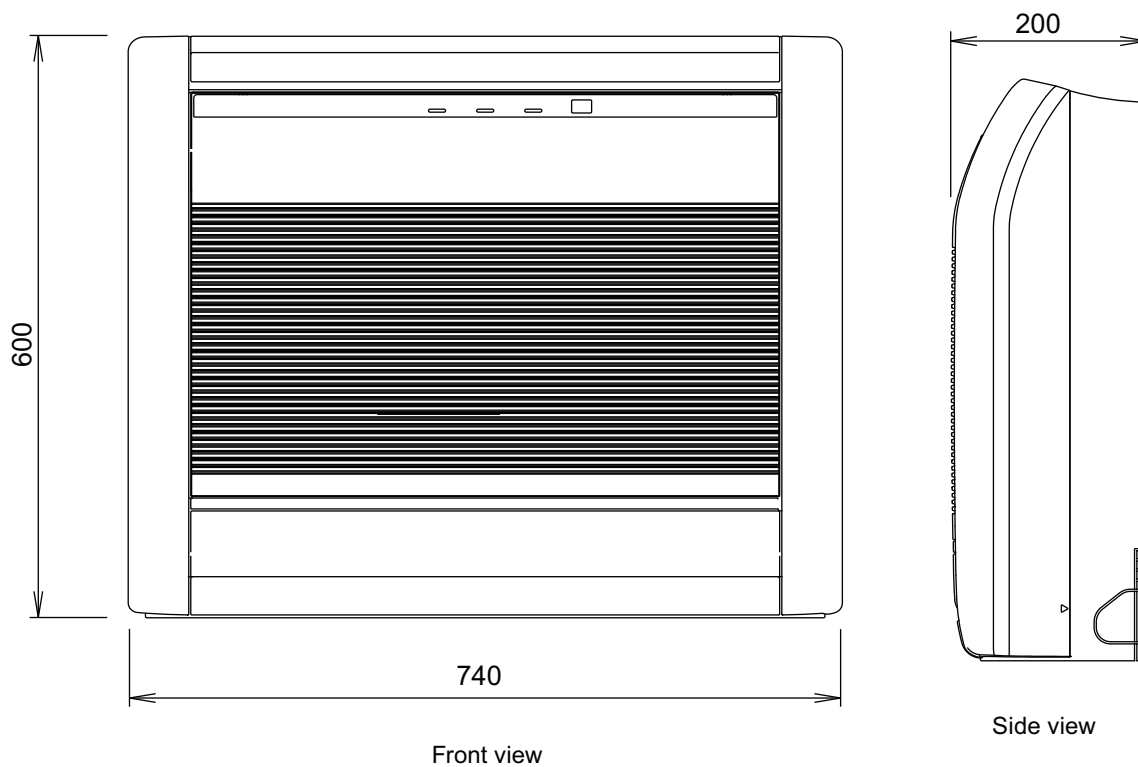
Required ceiling height varies according to the ceiling mode setting of function setting No. 20.

Ceiling height (m)		
Ceiling mode	Standard	High ceiling
18 model	2.7	3.5

## 2-6. Floor type

### ■ Models: AGHG09KVCA, AGHG12KVCA, and AGHG14KVCA

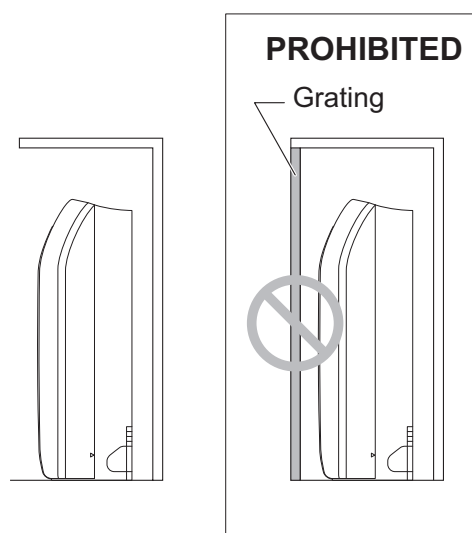
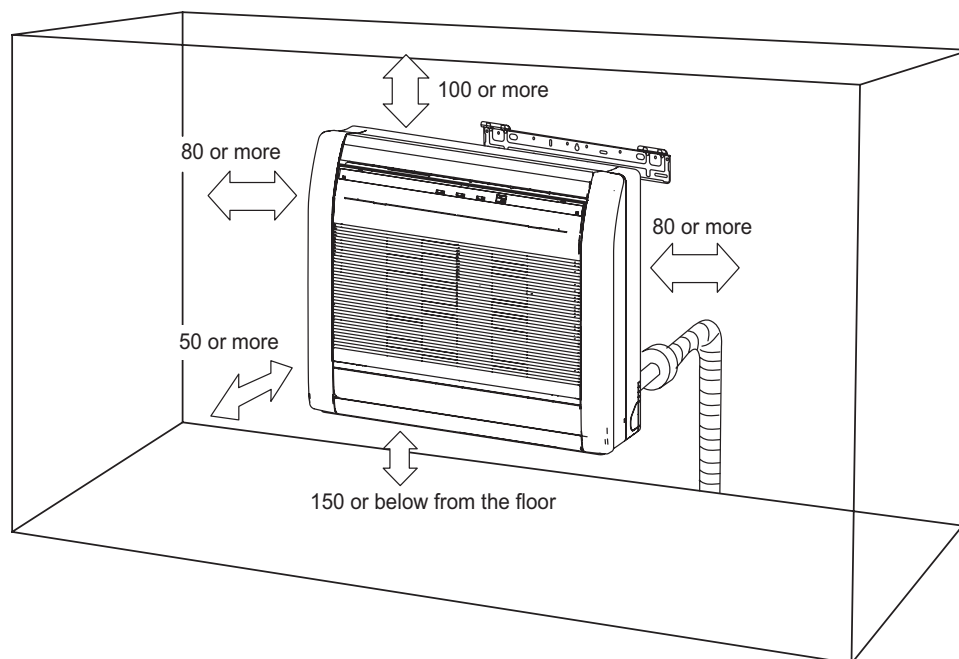
Unit: mm





## ● Installation space

Unit: mm



### ⚠ WARNING

- The appliance shall be installed, operated and stored in a room with a floor area larger than X m<sup>2</sup>.

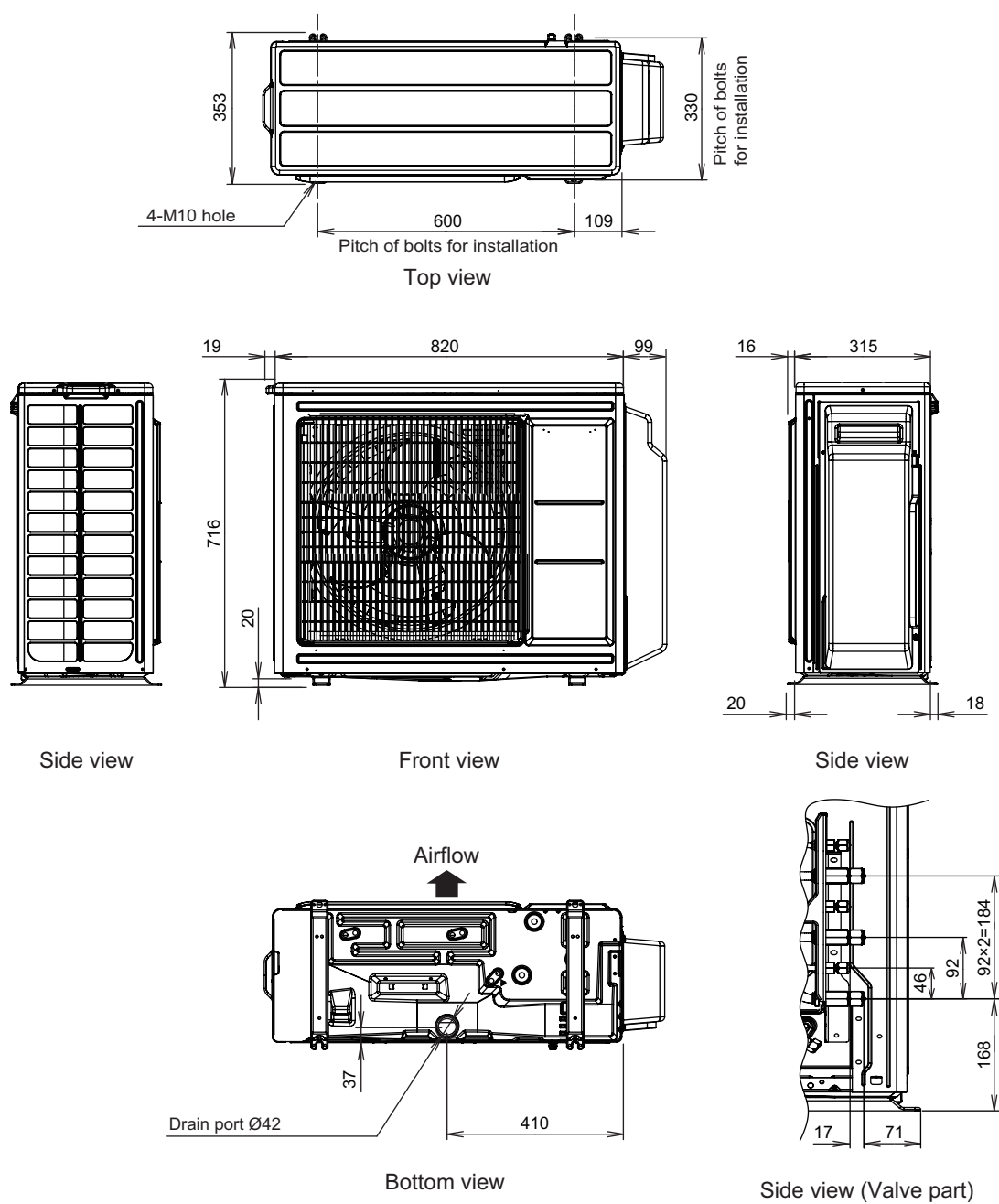
Amount of refrigerant charge M (kg)	Minimum room area X (m <sup>2</sup> )
$M \leq 1.22$	-
$1.22 < M \leq 1.23$	12.99
$1.23 < M \leq 1.50$	19.31
$1.50 < M \leq 1.75$	26.28
$1.75 < M \leq 2.0$	34.33
$2.0 < M \leq 2.5$	53.63
$2.5 < M \leq 3.0$	77.23
$3.0 < M \leq 3.5$	105.12
$3.5 < M \leq 4.0$	137.29

(IEC 60335-2-40)

## 2-7. Outdoor unit

### ■ Models: AOHG18KBTA3 and AOHG24KBTA3

Unit: mm



## **2. TECHNICAL DATA AND PARTS LIST**

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# 1. Precautions

When you start servicing, pay attention to the following points. For detailed precautions, refer to the installation manual of the products.

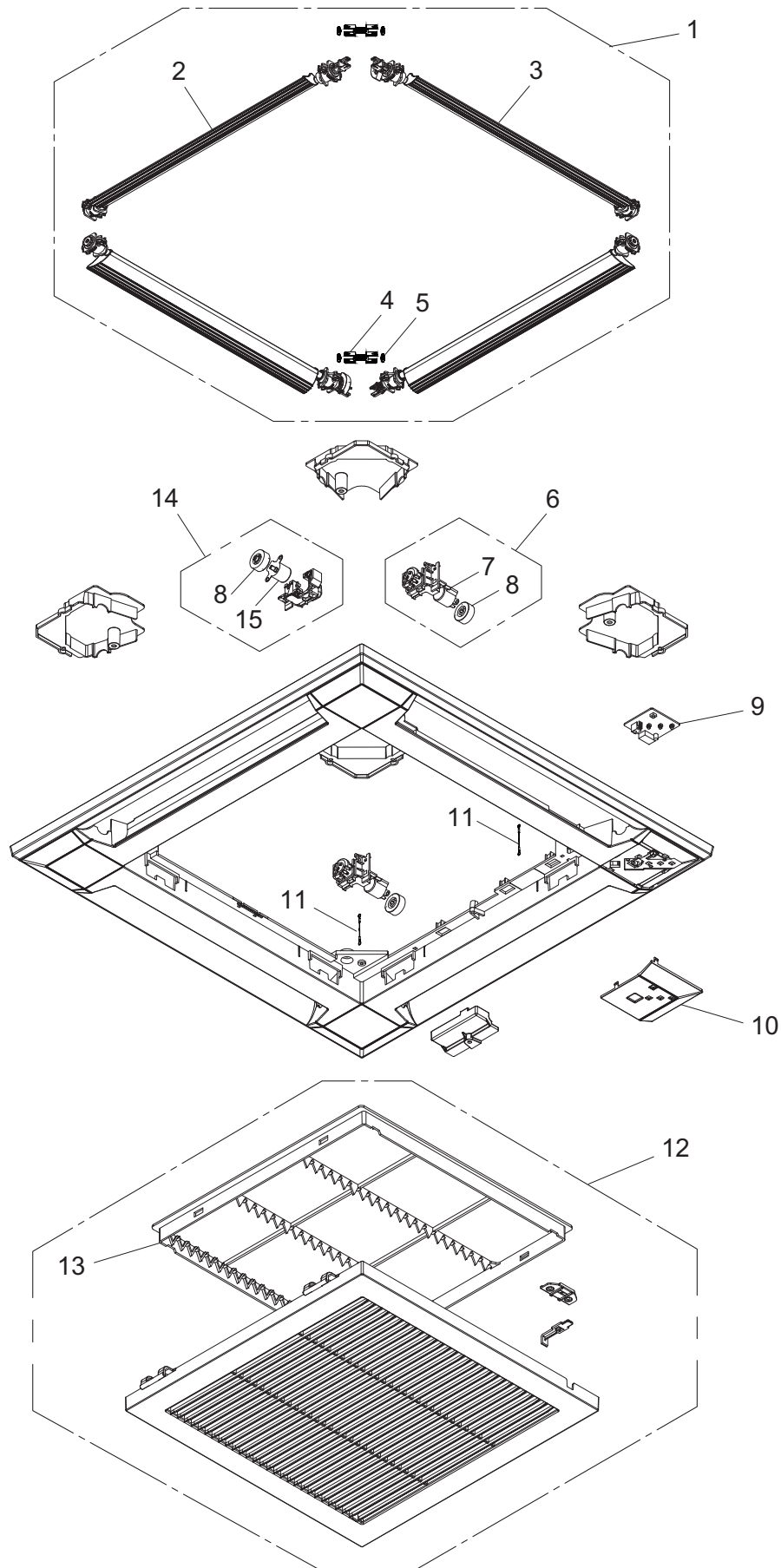
## CAUTION

- 
- Service personnel
    - Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.
    - Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
    - Servicing shall be performed only as recommended by the manufacturer.
  - Work
    - Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. When repairing the refrigerant system, refer to the precautions written in the installation manual of the products before you start servicing.
    - Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.
    - All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out.
    - Work in confined spaces shall be avoided.
    - The area around the workspace shall be sectioned off.
    - Ensure that the conditions within the area have been made safe by control of flammable material.
    - Electric shock may occur. After turning off the power, always wait 5 minutes before touching electrical components.
    - Do not touch the fins of the heat exchanger. Touching the heat exchanger fins could result in damage to the fins or personal injury such as skin rupture.
    - Do not place any other electrical products or household belongings under the product.
    - Condensation dripping from the product might get them wet, and may cause damage or malfunction to the property.
  - Checking for presence of refrigerant
    - The area shall be checked with an appropriate refrigerant leak detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres.
    - Ensure that the leak detector being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.
- 
- Service parts information and design are subject to change without notice for product improvement.
  - For the latest information of the service parts, refer to our Service Portal.  
<https://fujitsu-general.force.com/portal/>
  - Precise figure of the service parts listed in this manual may differ from the actual service parts.

## 2. Cassette grille (optional part) parts list

### 2-1. Model: UTG-UFGF-W

#### ■ Overall



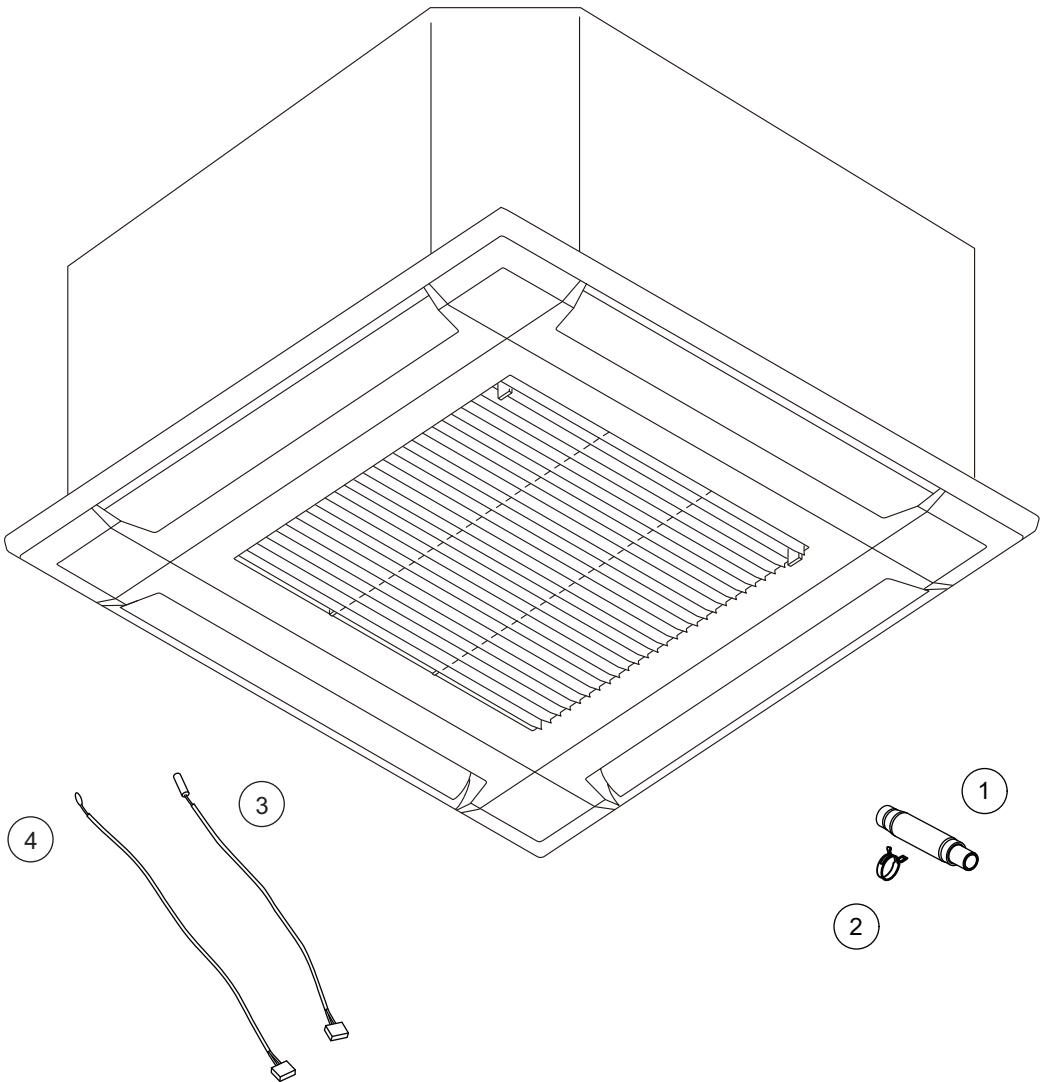


Item no.	Part no.	Part name	Service part
1	9377760043	Flap total assy	◆
2	9377759047	Flap assy B	◆
3	9375727048	Flap assy A	◆
4	9375539016	Joint B	◆
5	9375540012	Joint shaft	◆
6	9375746018	Motor holder assy B	◆
7	9900139087	Step motor (with Red connector)	◆
8	9375536015	Gear A	◆
9	9711310002	Indicator PCB	◆
10	9382864040	Display panel	◆
11	9378597013	Hook wire	◆
12	9382862008	Intake grille assy	◆
13	9375533014	Long-life filter	◆
14	9375745011	Motor holder assy A	◆
15	9900139070	Step motor (with White connector)	◆
—	9711276001	Wire with connector	◆

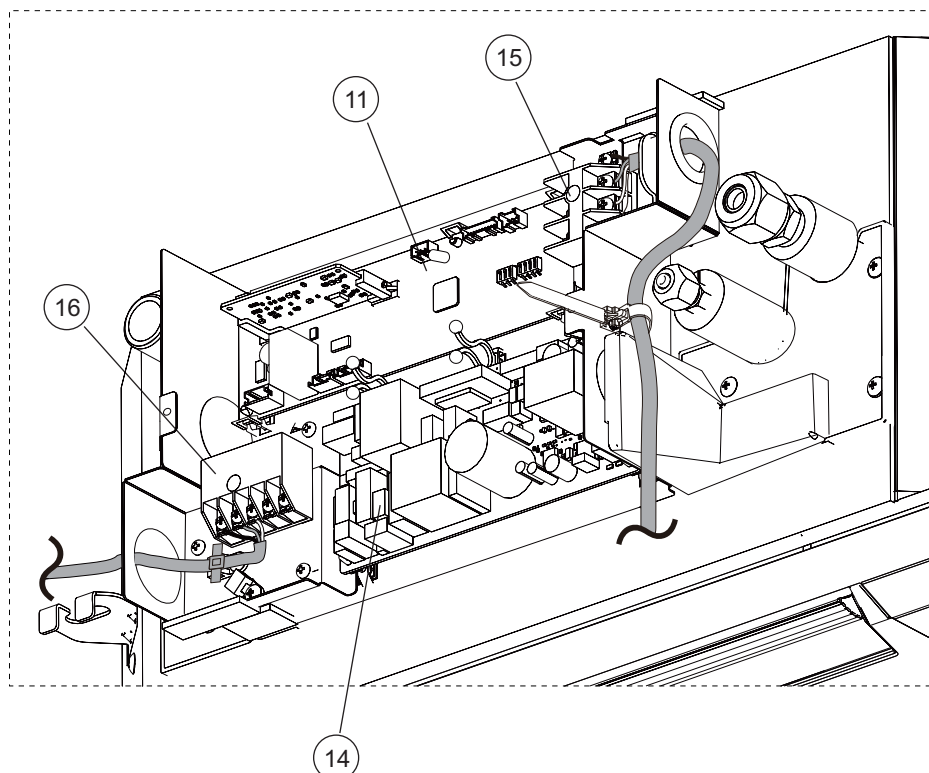
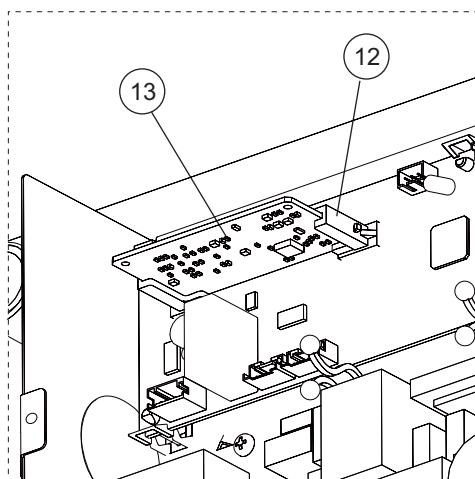
3. Indoor unit parts list

3-1. Compact cassette type

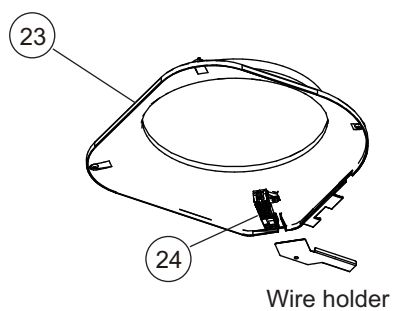
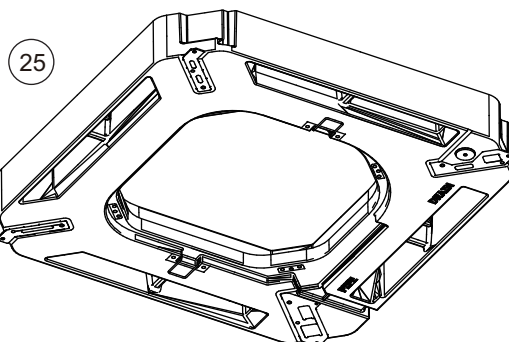
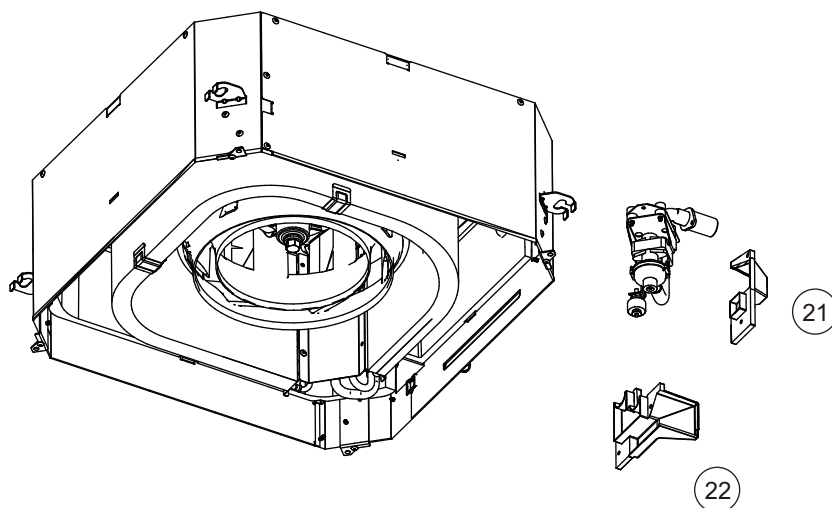
■ Models: AUXG07KVLA, AUXG09KVLA, AUXG12KVLA, AUXG14KVLA, and AUXG18KVLA



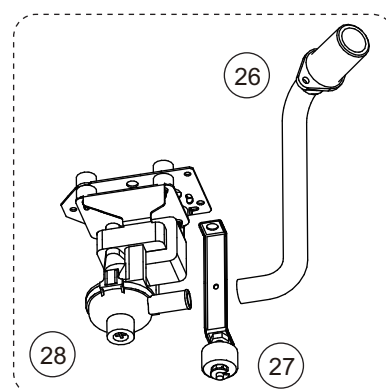
Item no.	Part no.	Part name	Service part
1	9379665001	Drain hose	◆
2	9379757010	Hose band	◆
3	9900942038	Pipe thermistor	◆
4	9900826000	Room thermistor	◆



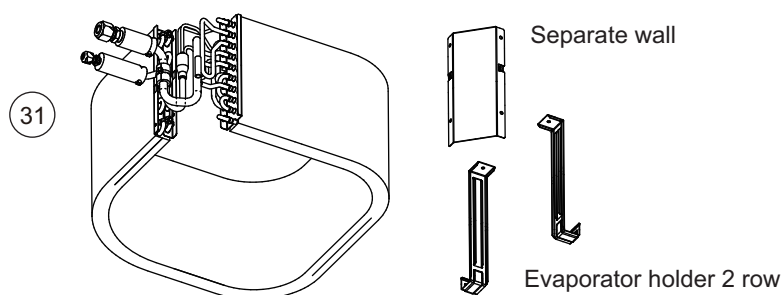
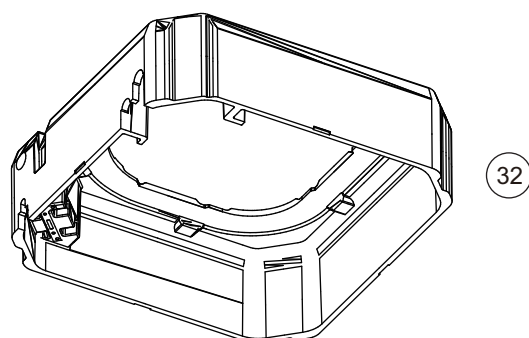
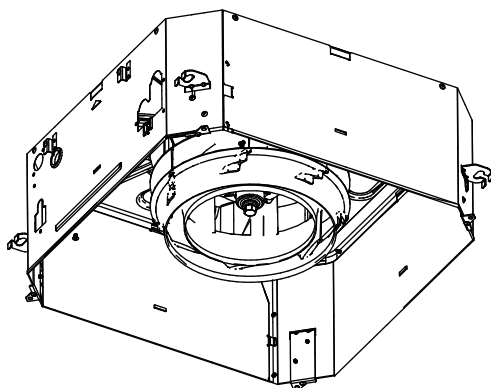
Item no.	Part no.	Part name	Service part
11	9710995965	Main PCB (For 07 model)	◆
	9710995743	Main PCB (For 09 model)	◆
	9710995750	Main PCB (For 12 model)	◆
	9710995705	Main PCB (For 14 model)	◆
	9710995767	Main PCB (For 18 model)	◆
12	0600063023	Holder	◆
13	9710019005	Communication PCB	◆
14	9710661006	Power supply PCB	◆
15	9900568009	Terminal	◆
16	9900896003	Terminal	◆



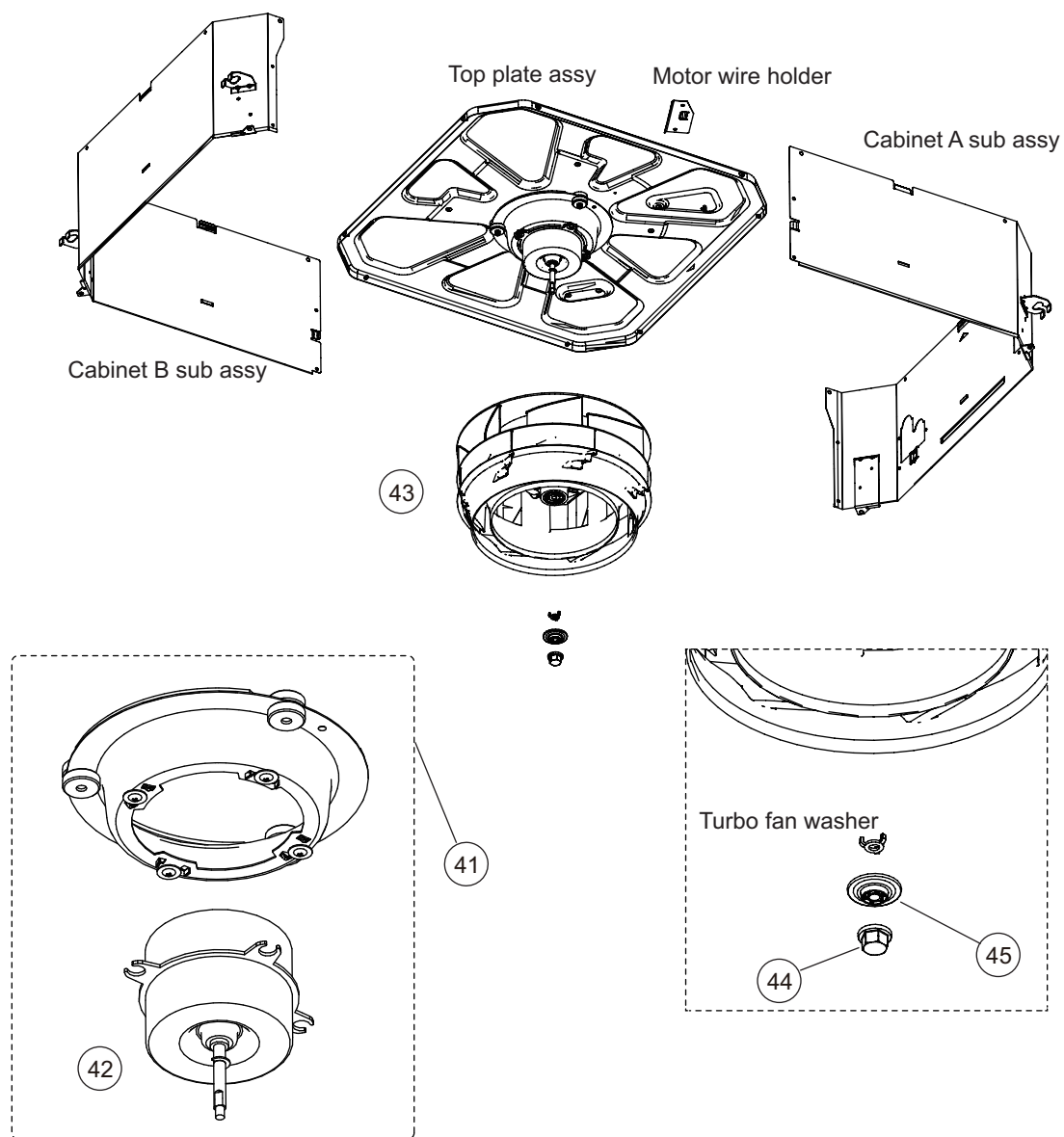
Wire holder



Item no.	Part no.	Part name	Service part
21	9375516017	Wire cover	◆
22	9375515010	Pipe cover	◆
23	9375503017	Bell-mouth hood	◆
24	9375477011	Thermistor holder	◆
25	9377765024	Drain pan sub assy (For 18 model)	◆
26	9375718015	Drain port sub assy	◆
27	9375721046	Float switch sub assy	◆
28	9375717025	Drain pump sub assy	◆



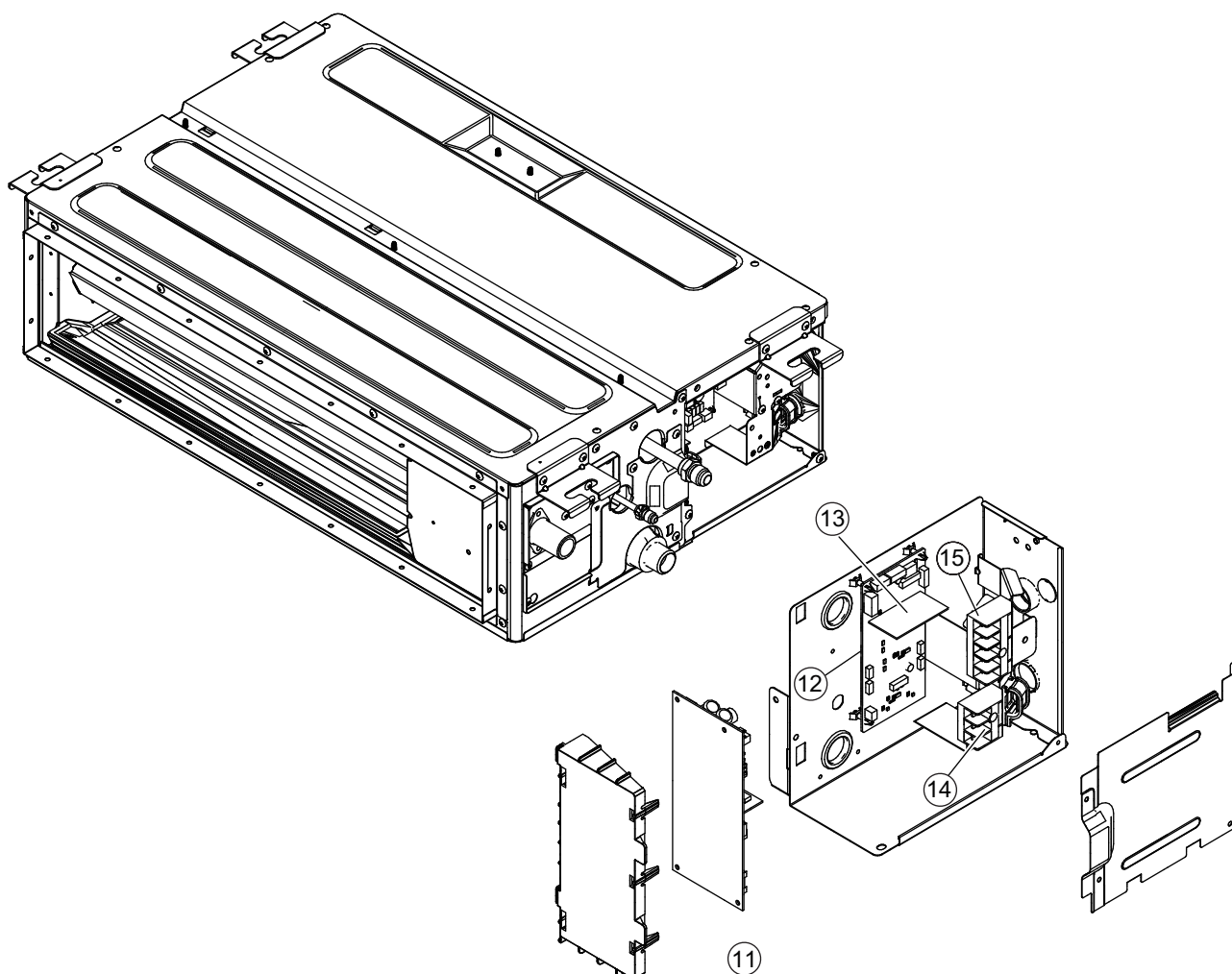
Item no.	Part no.	Part name	Service part
31	9375720254	Evaporator sub assy (For 07 model)	◆
	9375720230	Evaporator sub assy (For 09, 12 model)	◆
	9375720223	Evaporator sub assy (For 14 model)	◆
	9375720247	Evaporator sub assy (For 18 model)	◆
32	9377764065	Insulation box sub assy	◆



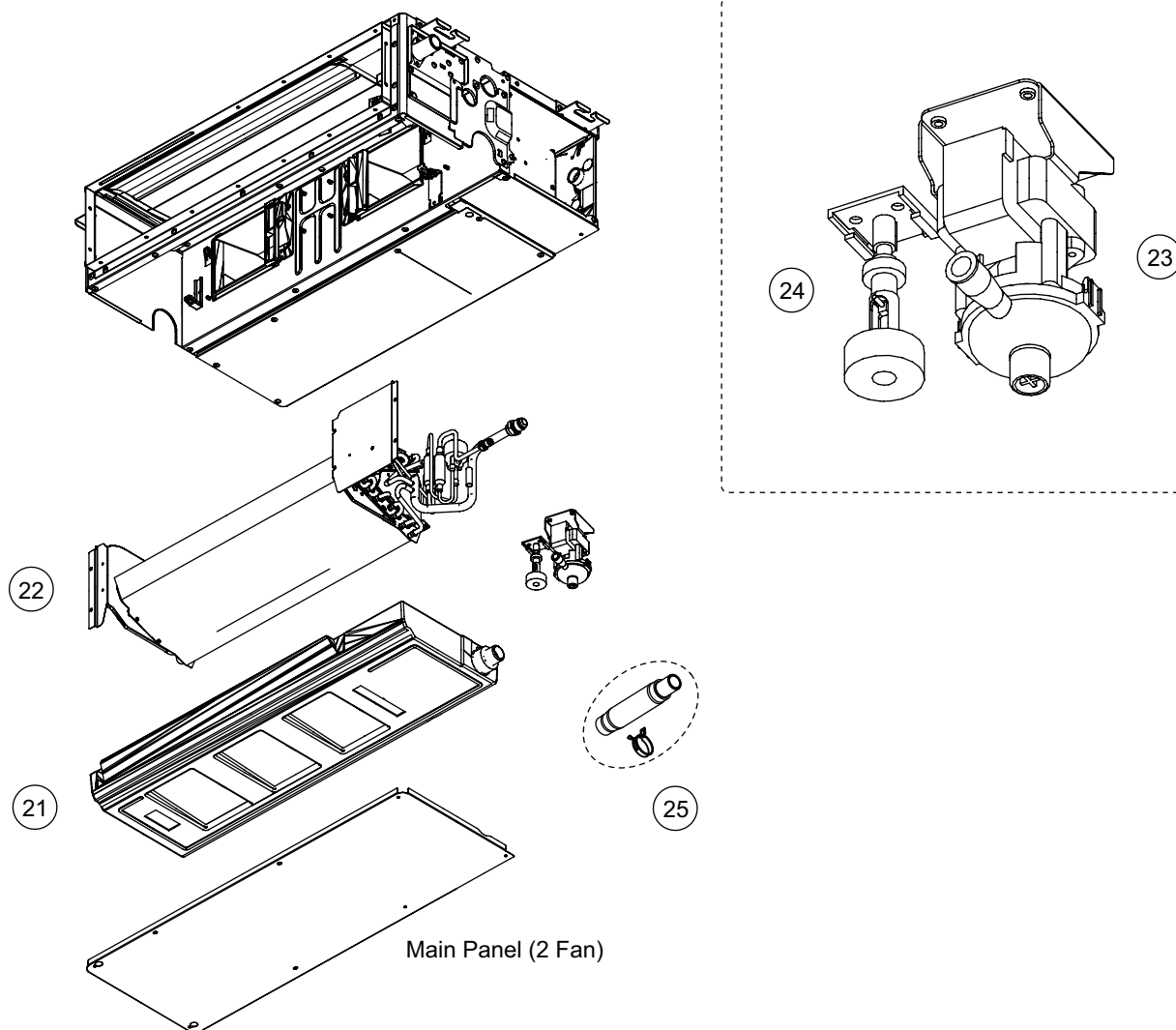
Item no.	Part no.	Part name	Service part
41	9375719012	Fan motor sub Assy	◆
42	9602436019	Fan motor	◆
43	9375480011	2 stage turbo fan Assy	◆
44	9377807014	Shaft cap	◆
45	9377811011	Washer cover	◆

## 3-2. Mini duct type

### ■ Models: ARXG07KSLAP, ARXG09KSLAP, ARXG12KSLAP, and ARXG14KSLAP

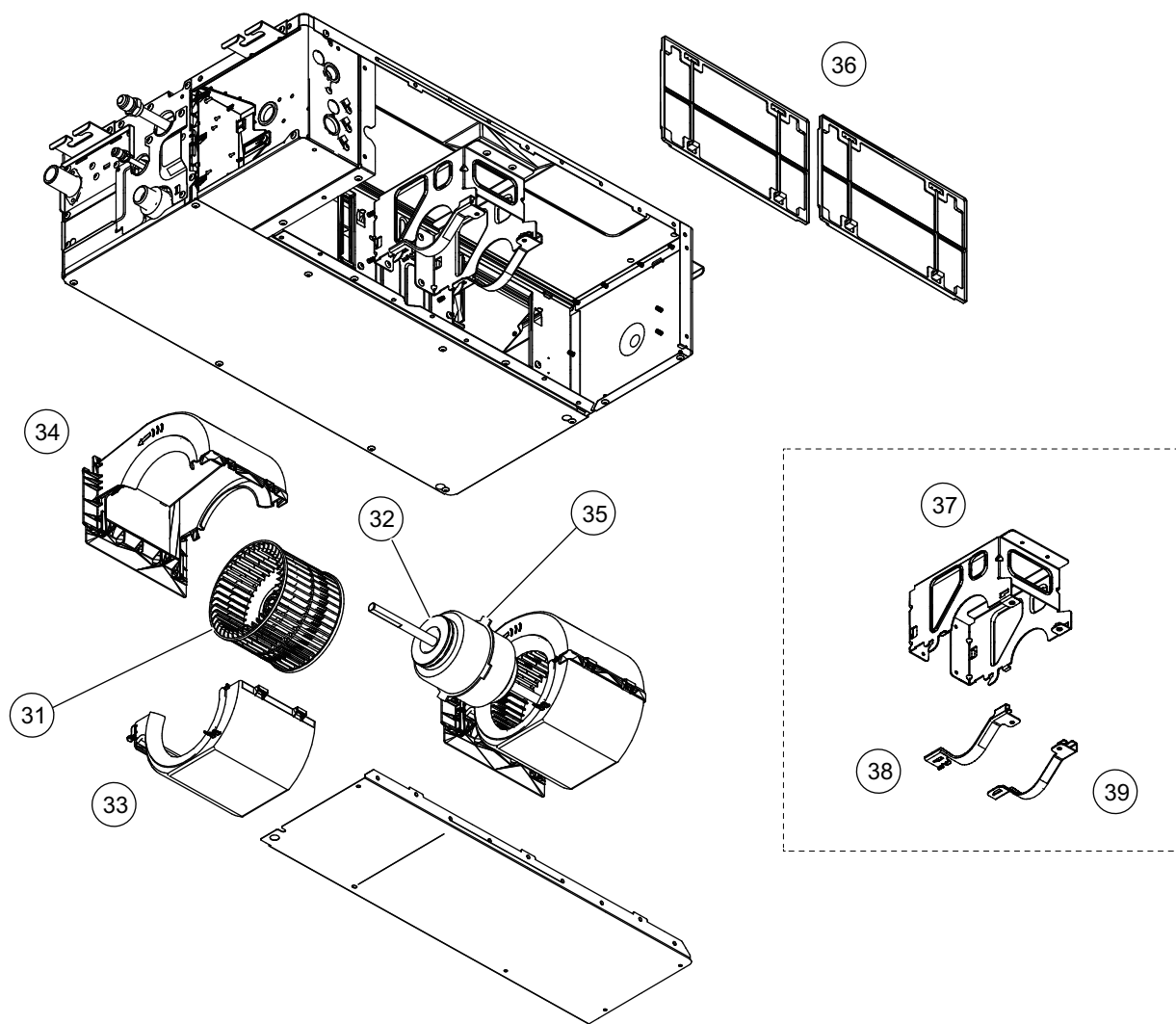


Item no.	Part no.	Part name	Service part
11	9710661020	Power supply PCB	◆
12	9710624261	Main PCB (For 07 model)	◆
	9710624278	Main PCB (For 09 model)	◆
	9710624285	Main PCB (For 12 model)	◆
	9710624292	Main PCB (For 14 model)	◆
			◆
13	9710019005	2-way remote PCB	◆
14	9900568009	Terminal 3P	◆
15	9900896003	Terminal 3P (For wired remote controller)	◆
—	9900653033	Room thermistor	◆
—	9900942021	Pipe thermistor	◆



Item no.	Part no.	Part name	Service part
21	9381930111	Drain pan sub assy	◆
22	9381933440	Evaporator total assy	◆
23	9900472061	Pump assy	◆
24	9900465063	Float switch	◆
25	9378450097	Hose sub assy	◆

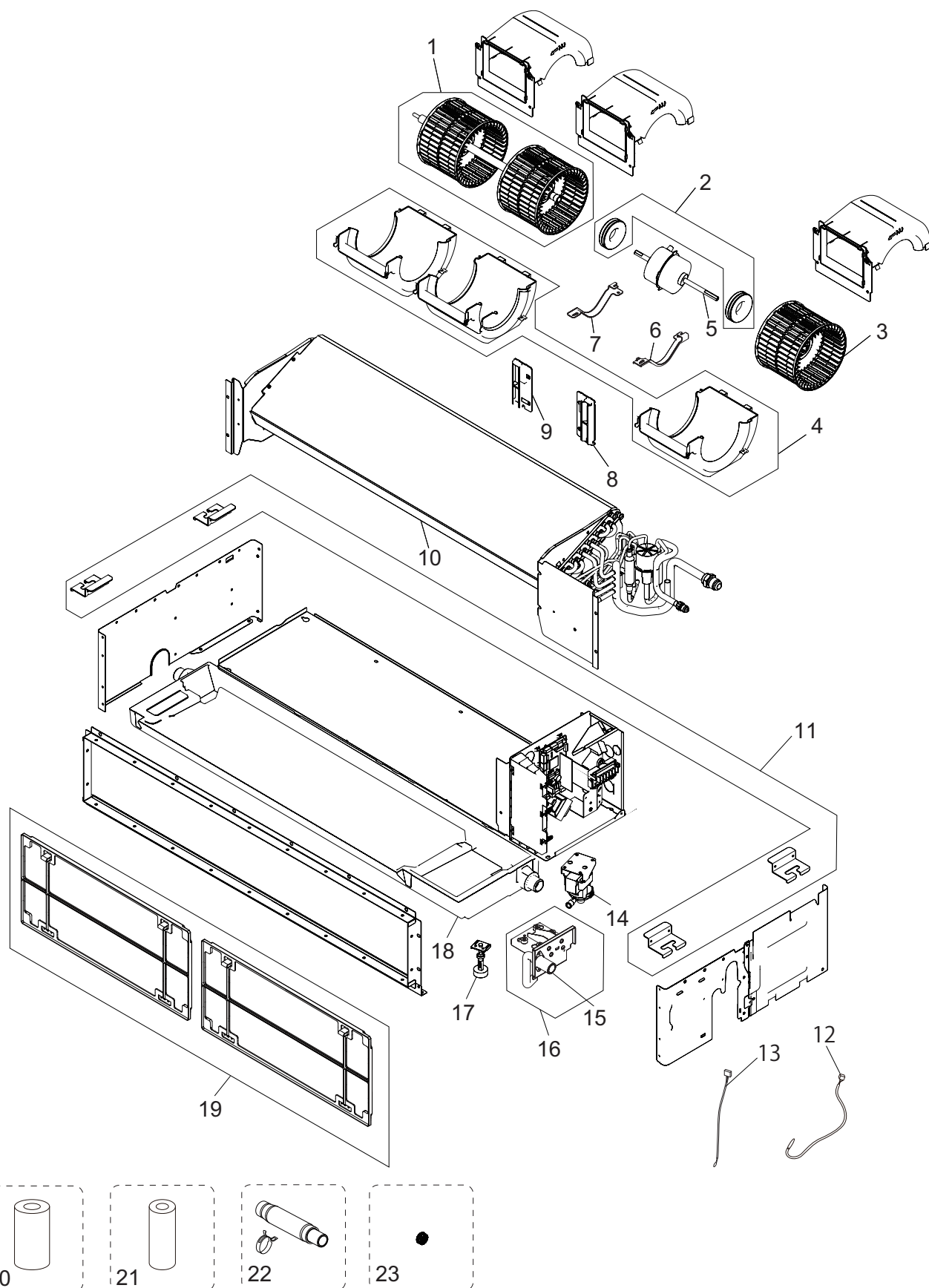




Item no.	Part no.	Part name	Service part
31	9379570015	Sirocco fan assy	◆
32	9381673001	Rubber (Vibration proof)	◆
33	9381676002	Casing B	◆
34	9381677016	Casing U	◆
35	9380636038	Fan motor assy (For 07 model)	◆
36	9379574006	Air filter	◆
37	9381675005	Motor bracket assy	◆
38	9381669004	Motor band L	◆
39	9381670000	Motor band R	◆

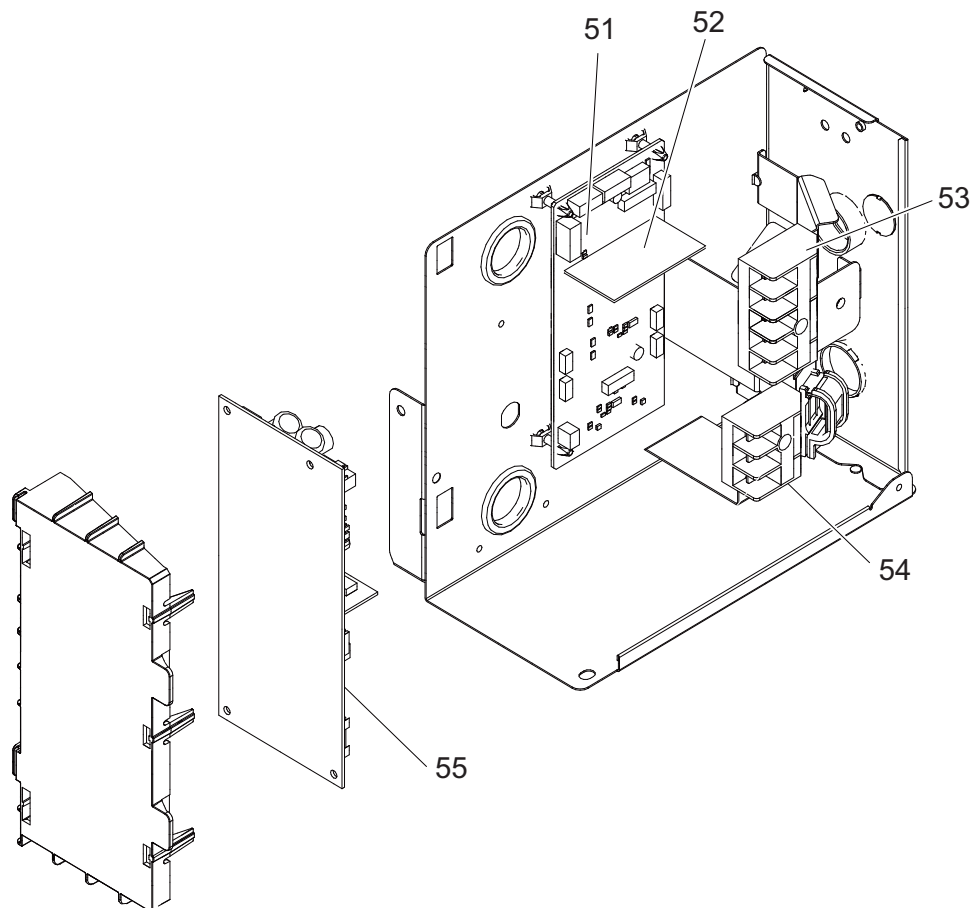
# Model: ARXG18KSLAP

## Chassis



Item no.	Part no.	Part name	Service part
1	9379971065	Sirroco fan sub assy	◆
2	9383443008	Rubber vibration proof assy	◆
3	9379570022	Sirroco fan assy	◆
4	9381676002	Casing B	◆
5	9379047128	Motor band L	◆
6	9381669004	Motor band L	◆
7	9381670000	Motor band R	◆
8	9381831005	Air guide L	◆
9	9381832002	Air guide R	◆
10	9381933624	Evaporator total assy	◆
11	9381659005	Hook metal	◆
12	9900653033	Thermistor (room)	◆
13	9900349011	Thermistor (pipe)	◆
14	9900472061	Pump assy	◆
15	9381928002	Drain hose assy	◆
16	9381927005	Drain pump panel sub assy	◆
17	9900465063	Float switch	◆
18	9381930104	Drain pan sub assy	◆
19	9379575003	Air filter	◆
20	9378173569	Insulation pipe C	◆
21	9378173521	Insulation pipe D	◆
22	9378450097	Hose sub assy	◆
23	9357921006	Bearing B assy	◆

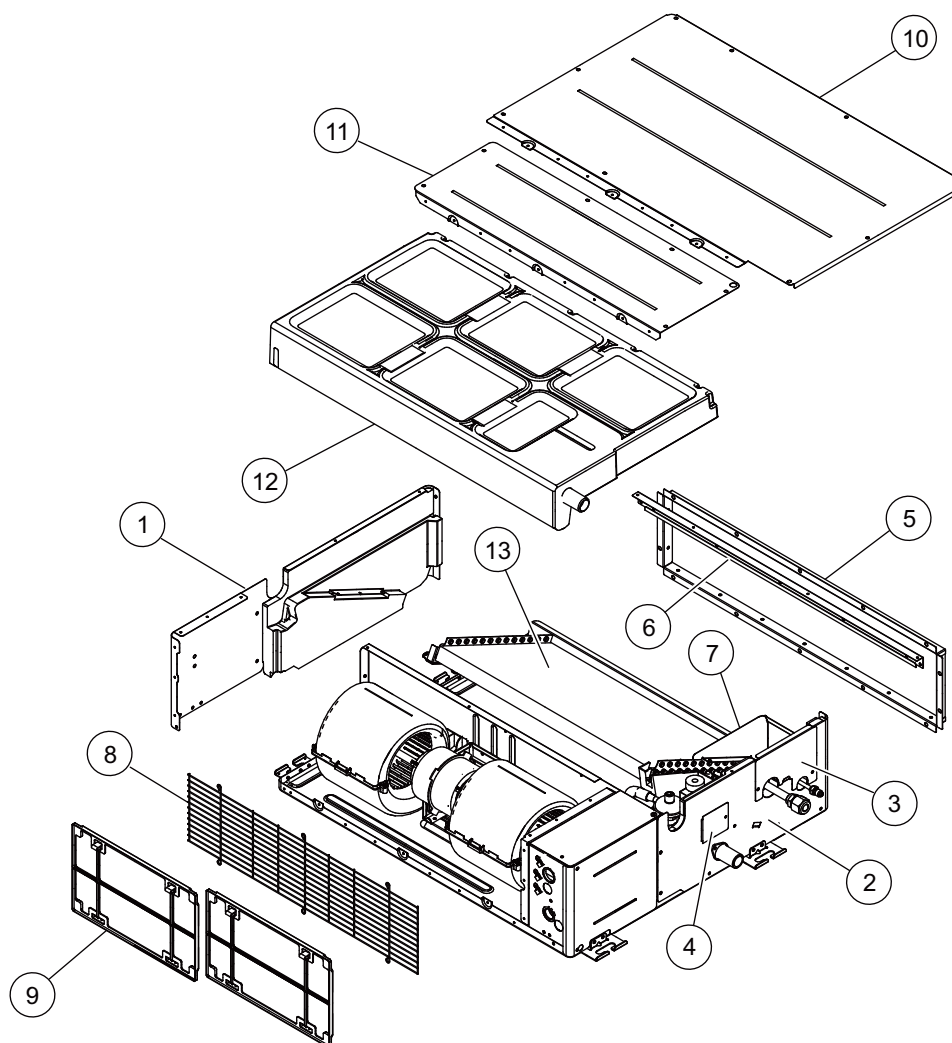
## ● Inverter unit



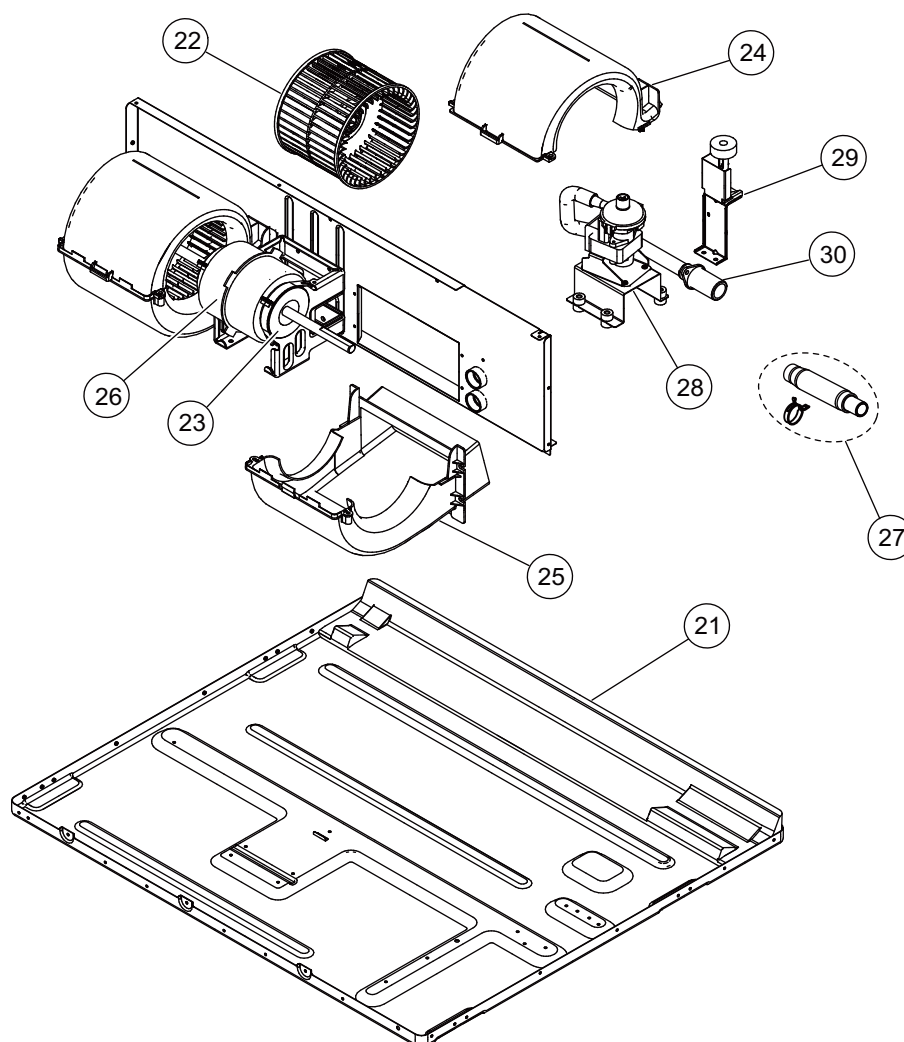
Item no.	Part no.	Part name	Service part
51	9710624315	Main PCB	◆
52	9710019005	2way remote PCB	◆
53	9900896003	Terminal (remote control)	◆
54	9900568009	Terminal (power)	◆
55	9710661020	Power PCB	◆
—	9710177057	Wire with connector (CN46—External input)	◆
—	9710173066	Wire with connector (CN300—Remote terminal)	◆
—	9710703010	Wire with connector (CN205—Power)	◆
—	9710171055	Wire with connector (CN262—CN260)	◆
—	9710206047	Wire with connector (CN263—CN261)	◆

### 3-3. Slim duct type

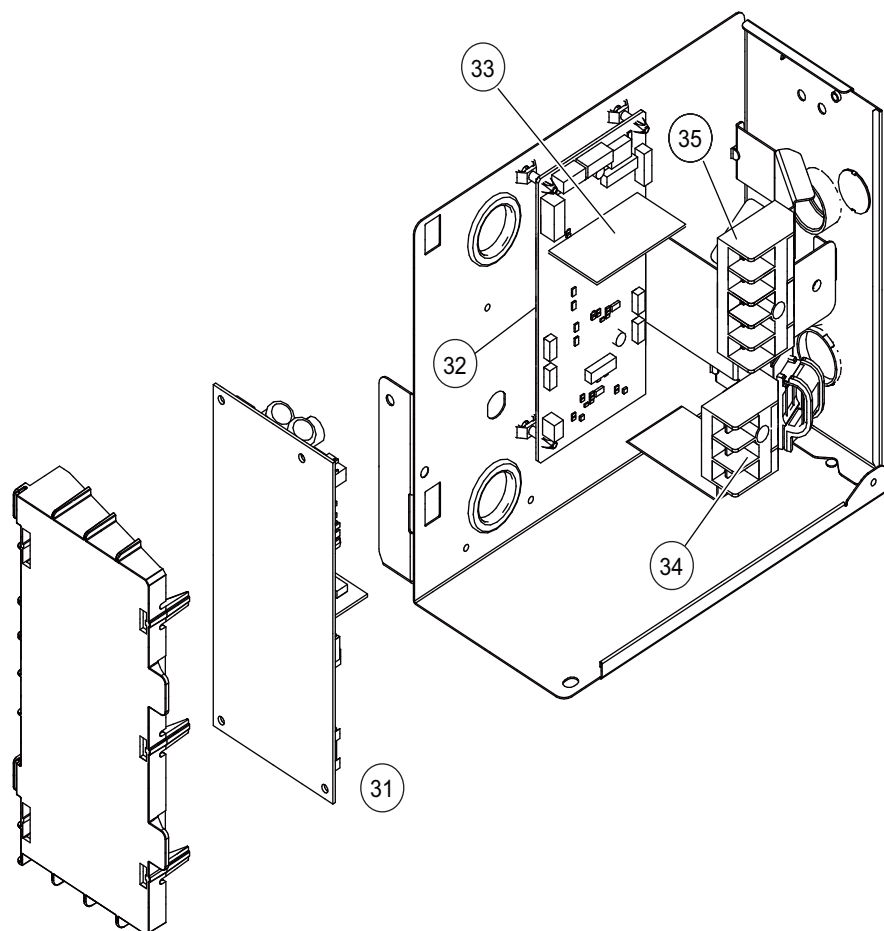
#### ■ Models: ARXG07KLLAP, ARXG09KLLAP, ARXG12KLLAP, and ARXG14KLLAP



Item no.	Part no.	Part name	Service part
1	9379906012	Side panel R sub assy	◆
2	9379907019	Side panel L sub assy	◆
3	9379900003	Pipe panel sub assy	◆
4	9379915007	Panel (Window) sub assy	◆
5	9380042006	Outlet frame assy	◆
6	9380594000	Front panel (2-fan)	◆
7	9379576017	Valve cover sub assy	◆
8	9380589006	Fan guard (2-fan)	◆
9	9379574006	Air filter	◆
10	9380602019	Main panel (2-fan)	◆
11	9380597001	Cabinet panel (2-fan)	◆
12	9381209002	Drain pan sub assy	◆
13	9380682509	Evaporator total assy (For 07 model)	◆
	9380682486	Evaporator total assy (For 09, 12, 14 model)	◆



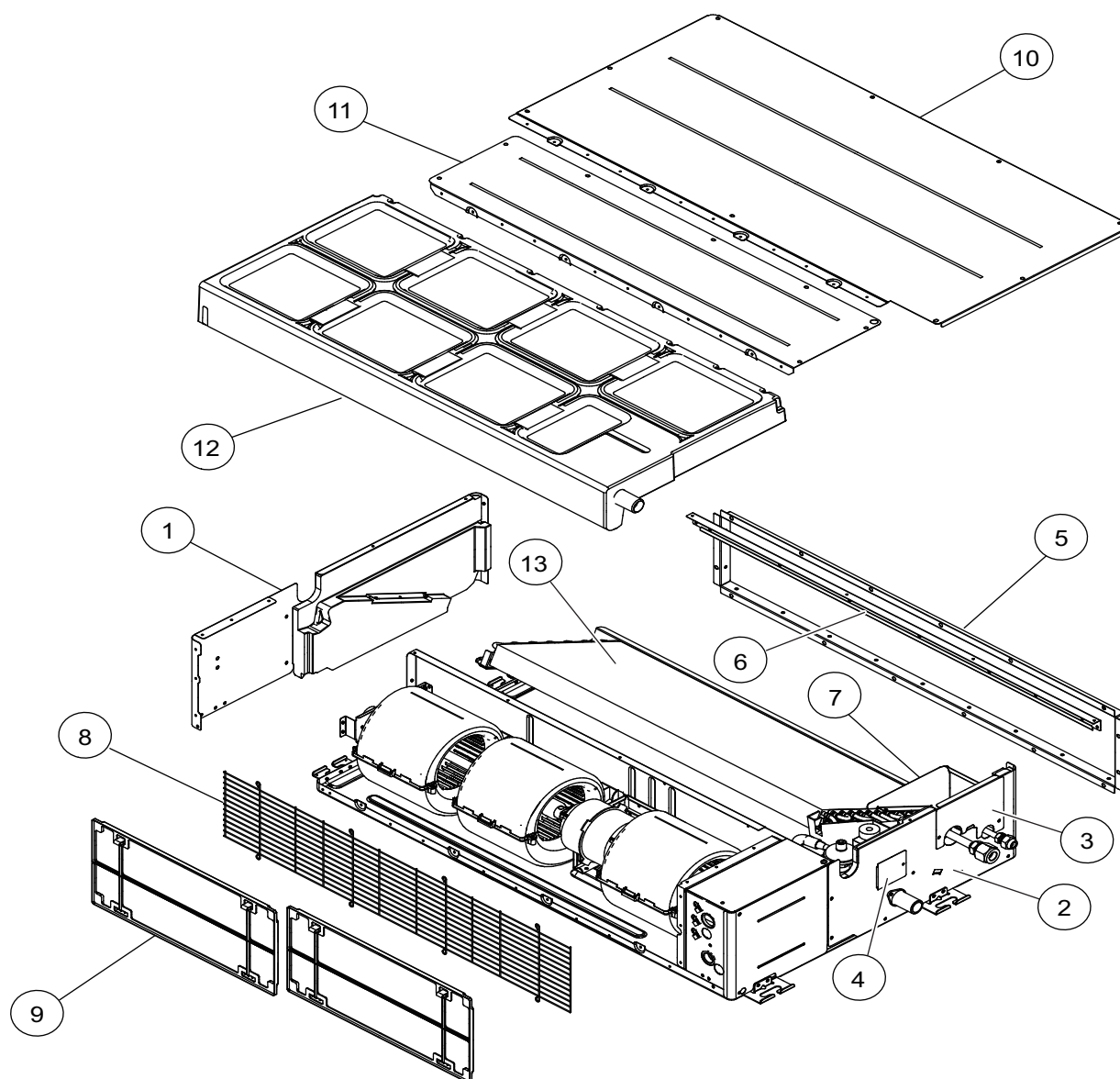
Item no.	Part no.	Part name	Service part
21	9379908030	Total panel sub assy	◆
22	9379570015	Sirocco fan assy	◆
23	9379644006	Rubber (Vibration proof)	◆
24	9379572019	Casing B	◆
25	9379571012	Casing U	◆
26	9379047166	Fan motor assy (For 07 model)	◆
	9379047159	Fan motor assy (For 09, 12, 14 model)	◆
27	9378450097	Hose sub assy	◆
28	9379914062	Drain pump sub assy	◆
29	9378593039	Float switch sub assy	◆
30	9379913003	Drain hose assy	◆



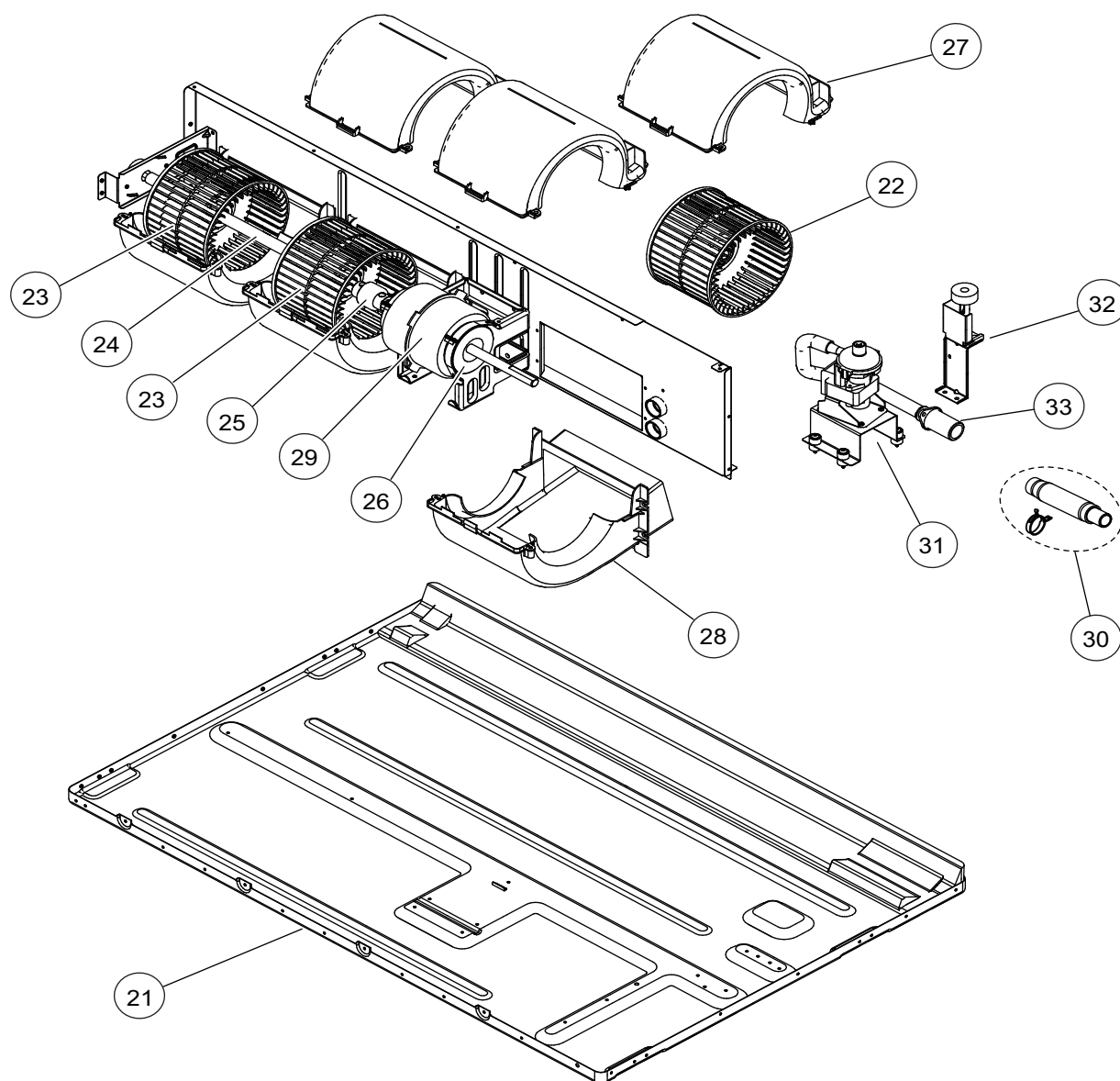
Item no.	Part no.	Part name	Service part
31	9710661006	Power supply PCB	◆
32	9710624308	Main PCB (For 07 model)	◆
	9710624209	Main PCB (For 09 model)	◆
	9710624216	Main PCB (For 12 model)	◆
	9710624148	Main PCB (For 14 model)	◆
33	9710019005	2-way remote PCB	◆
34	9900568009	Terminal 3P	◆
35	9900896003	Terminal 3P (For wired remote controller)	◆
—	9900653019	Room thermistor	◆
—	9900942045	Pipe thermistor	◆



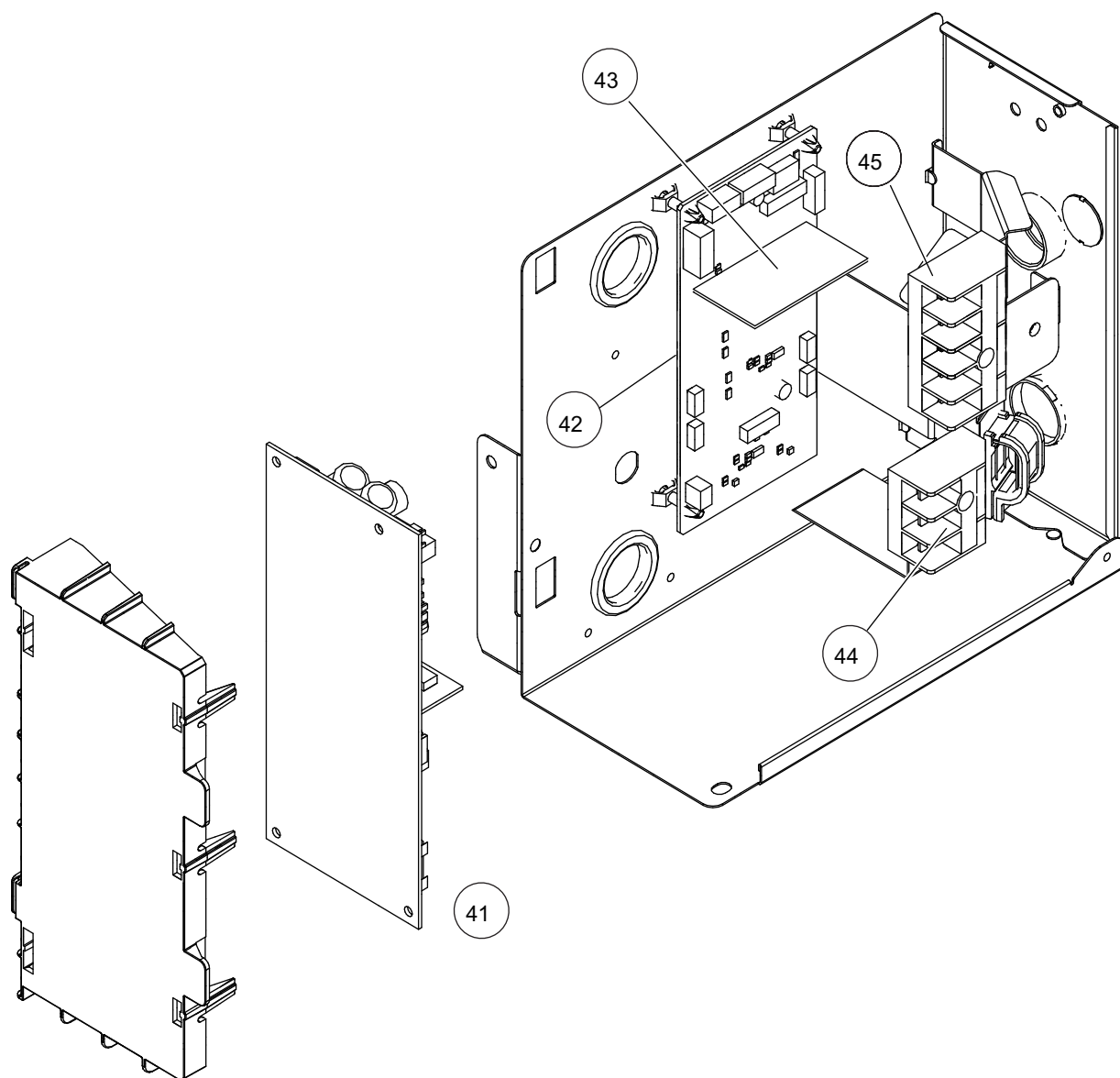
# Model: ARXG18KLLAP



Item no.	Part no.	Part name	Service part
1	9379906012	Side panel R sub assy	◆
2	9379907019	Side panel L sub assy	◆
3	9379900003	Pipe panel sub assy	◆
4	9379915007	Panel (Window) sub assy	◆
5	9380042013	Outlet frame assy	◆
6	9380595007	Front panel (3-fan)	◆
7	9379576017	Valve cover sub assy	◆
8	9380590002	Fan guard (3-fan)	◆
9	9379575003	Air filter	◆
10	9380603016	Main panel (3-fan)	◆
11	9380598008	Cabinet panel (3-fan)	◆
12	9379901178	Drain pan sub assy	◆
13	9380682493	Evaporator total assy	◆



Item no.	Part no.	Part name	Service part
21	9379908047	Total panel sub assy	◆
22	9379570022	Sirocco fan assy	◆
23	9379570039	Sirocco fan assy	◆
24	9381052004	Shaft assy	◆
25	9378038011	Joint assy	◆
26	9379644006	Rubber (Vibration proof)	◆
27	9379572019	Casing B	◆
28	9379571012	Casing U	◆
29	9379047142	Fan motor assy	◆
30	9378450097	Hose sub assy	◆
31	9379914062	Drain pump sub assy	◆
32	9378593039	Float switch sub assy	◆
33	9379913003	Drain hose assy	◆

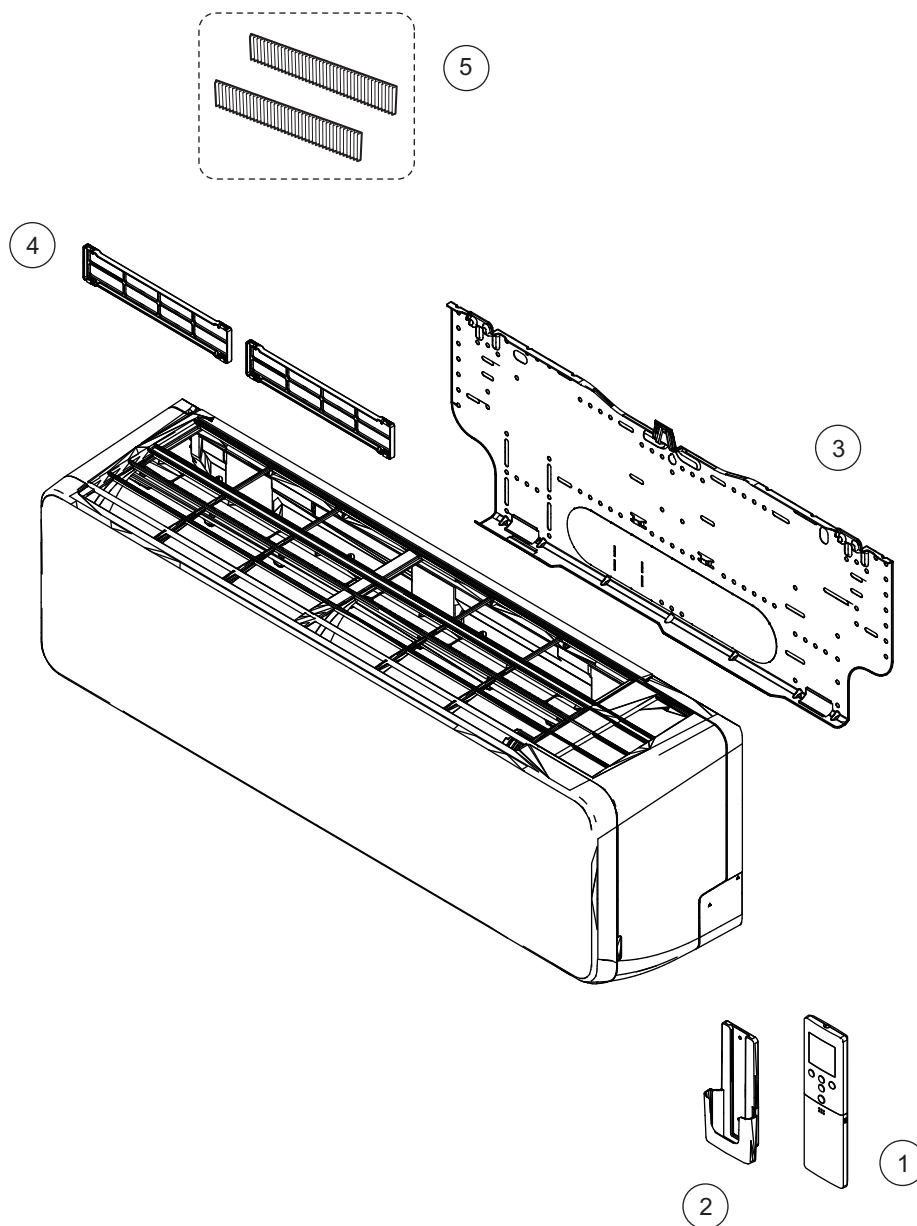


Item no.	Part no.	Part name	Service part
41	9710661006	Power supply PCB	◆
42	9710624131	Main PCB	◆
43	9710019005	2-way remote PCB	◆
44	9900568009	Terminal 3P	◆
45	9900896003	Terminal 3P (For wired remote controller)	◆
—	9900653019	Room thermistor	◆
—	9900942045	Pipe thermistor	◆

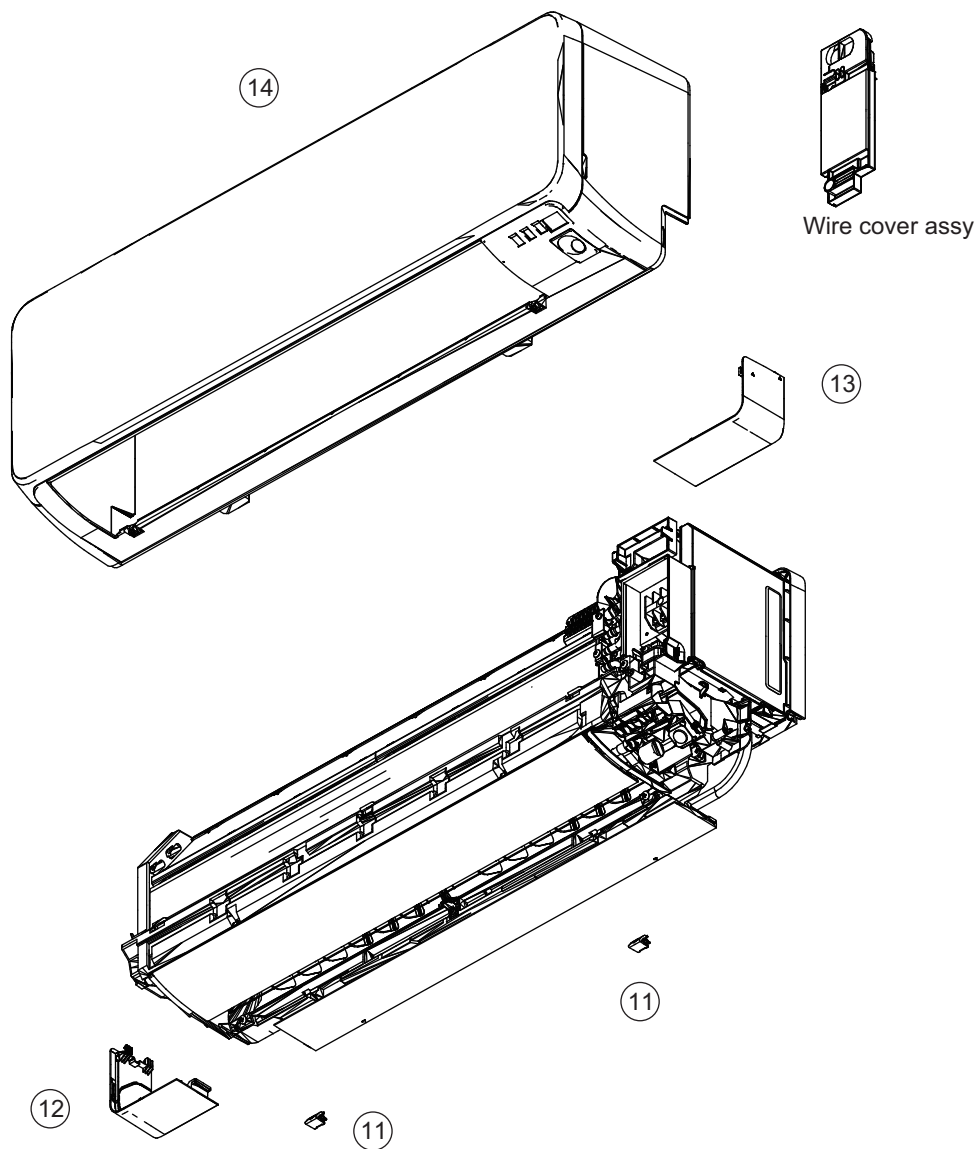
### 3-4. Wall mounted type

#### ■ Models: ASHG07KGTB, ASHG09KGTB, ASHG12KGTB, and ASHG14KGTB

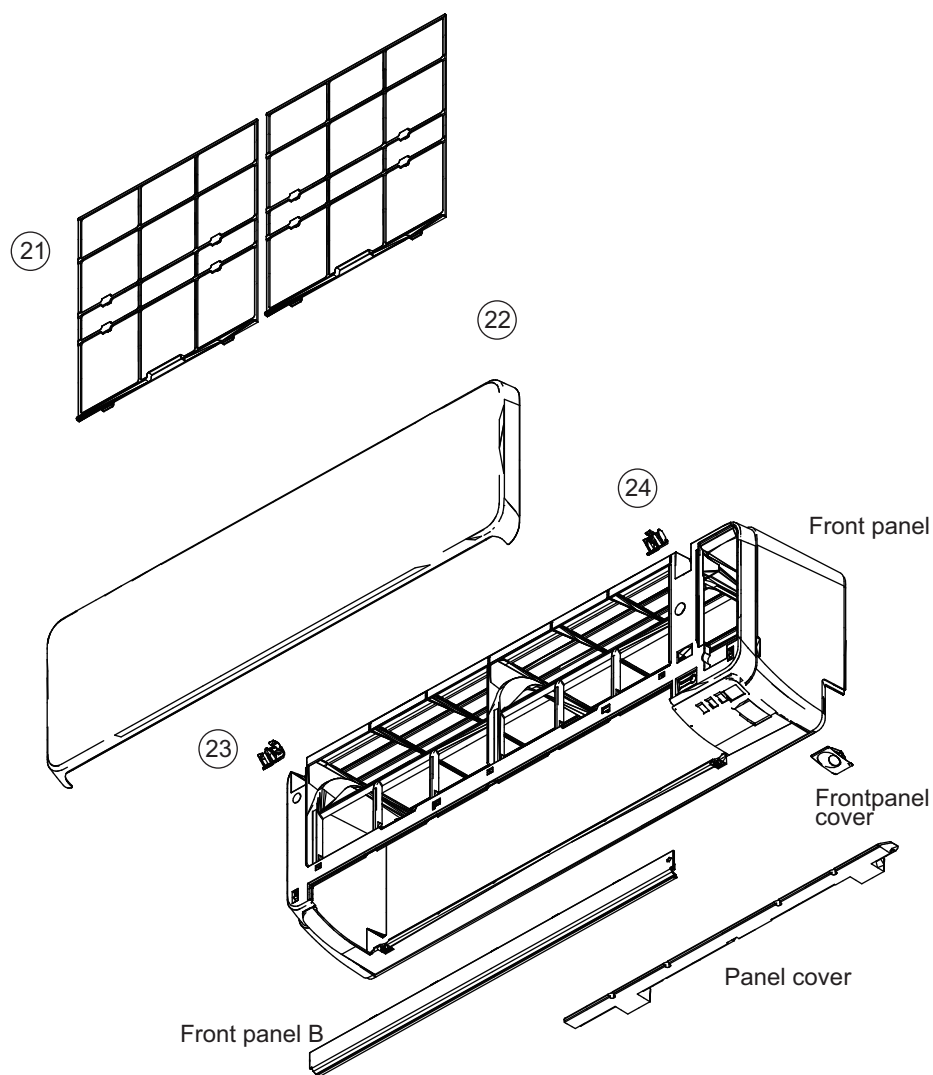
##### ● Exterior parts and chassis



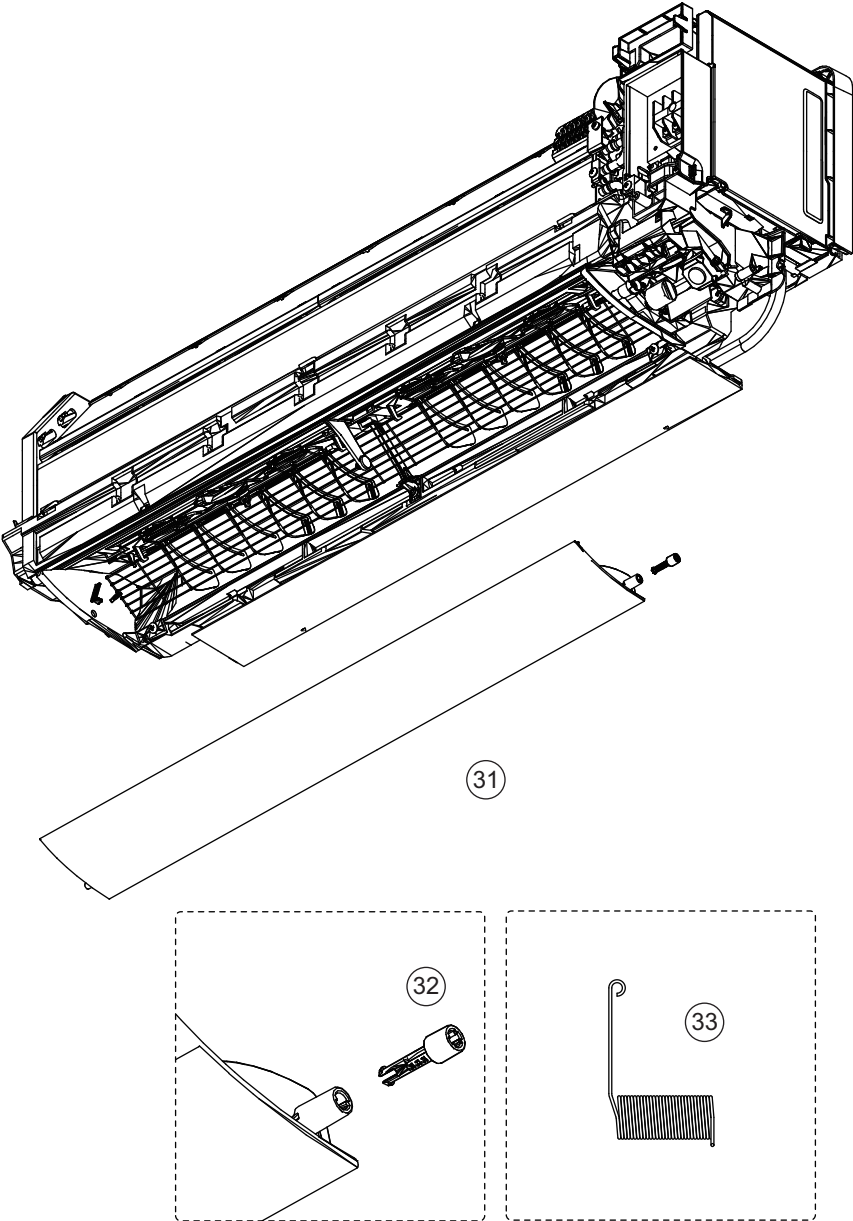
Item no.	Part no.	Part name	Service part
1	9382108045	Remote control	◆
2	9318912005	Remote control holder	◆
3	9387480009	Bracket panel	◆
4	9332911008	Electric filter holder	◆
5	9317250009	Air clean filter assy	◆



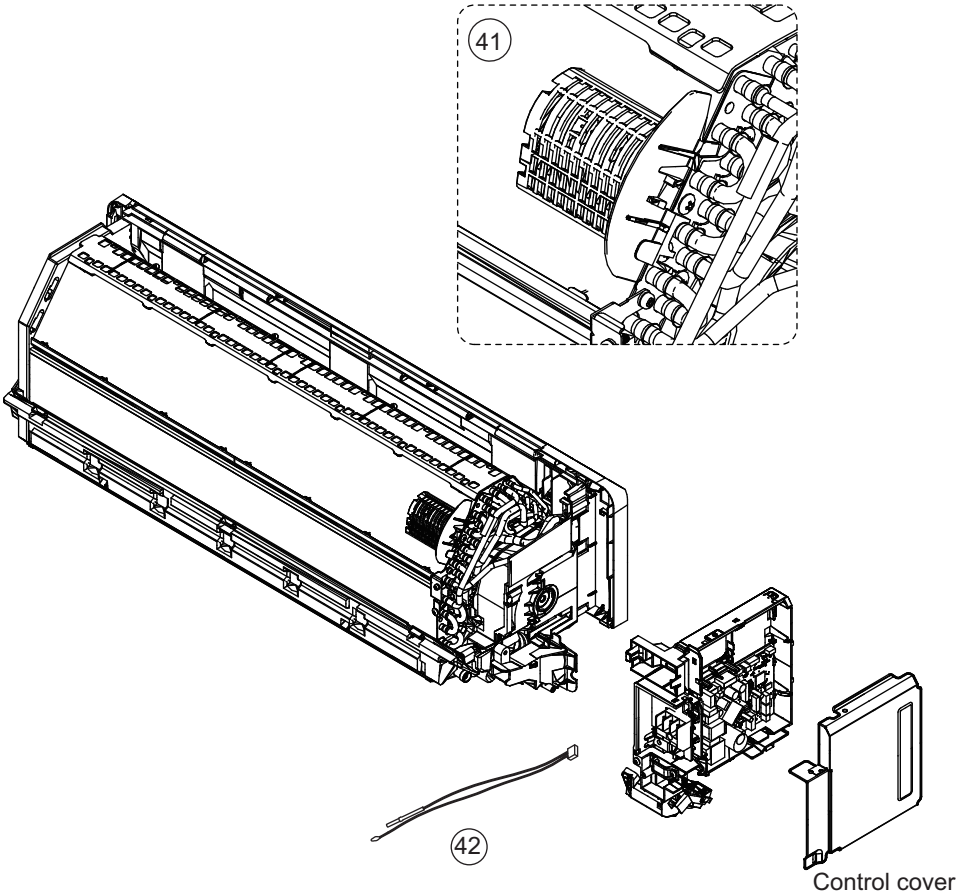
Item no.	Part no.	Part name	Service part
11	9387476002	Screw cover	◆
12	9387477009	Under cover L	◆
13	9387478006	Under cover R	◆
14	9387596007	Front panel total assy	◆



Item no.	Part no.	Part name	Service part
21	9387473001	Air filter	◆
22	9387756005	Intake grille assy	◆
23	9333719009	Grille clamber L	◆
24	9333704005	Grille clamber R	◆



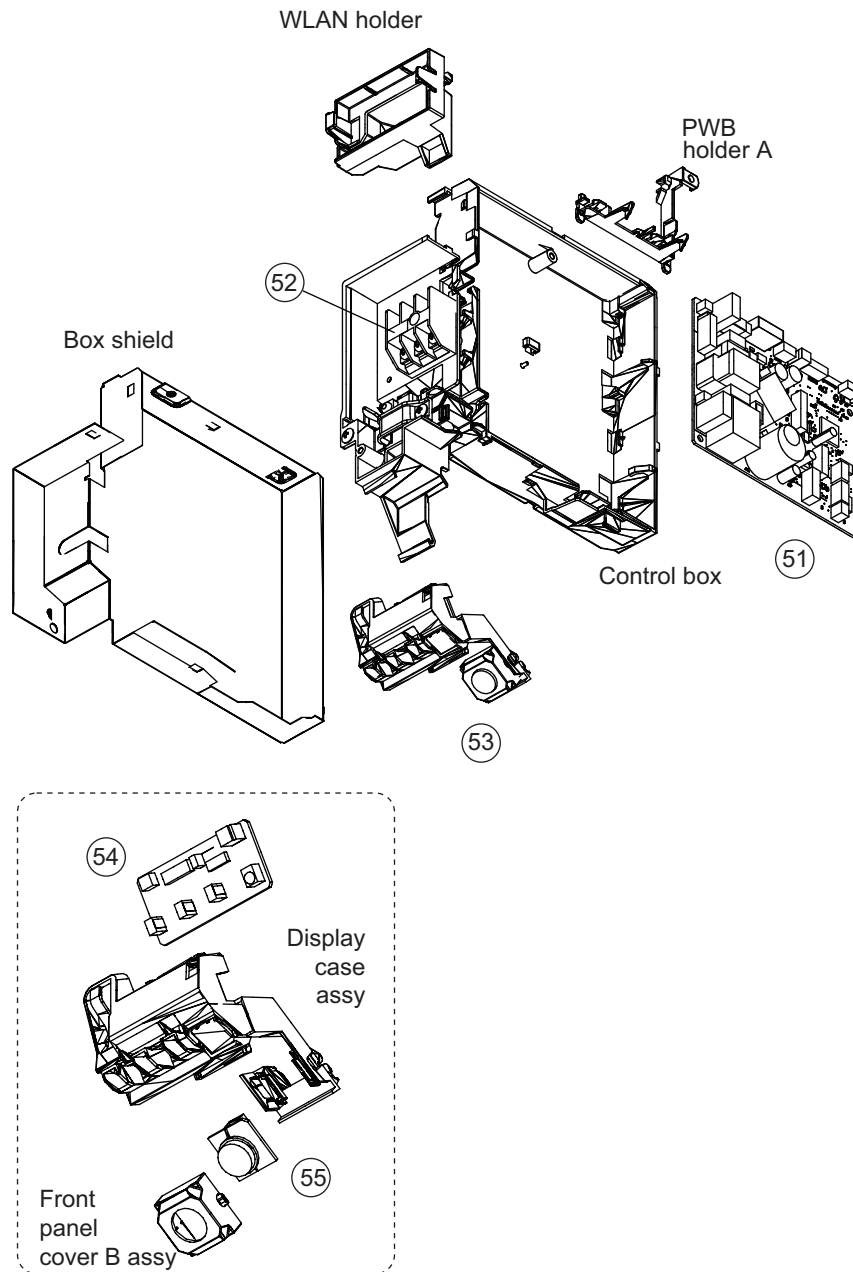
Item no.	Part no.	Part name	Service part
31	9387479003	Horizontal louver assy	◆
32	9332861006	Shaft cover	◆
33	9387471007	Louver spring	◆



Item no.	Part no.	Part name	Service part
41	9387467000	Room Thermistor Holder	◆
42	9900627041	Thermistor Assy	◆

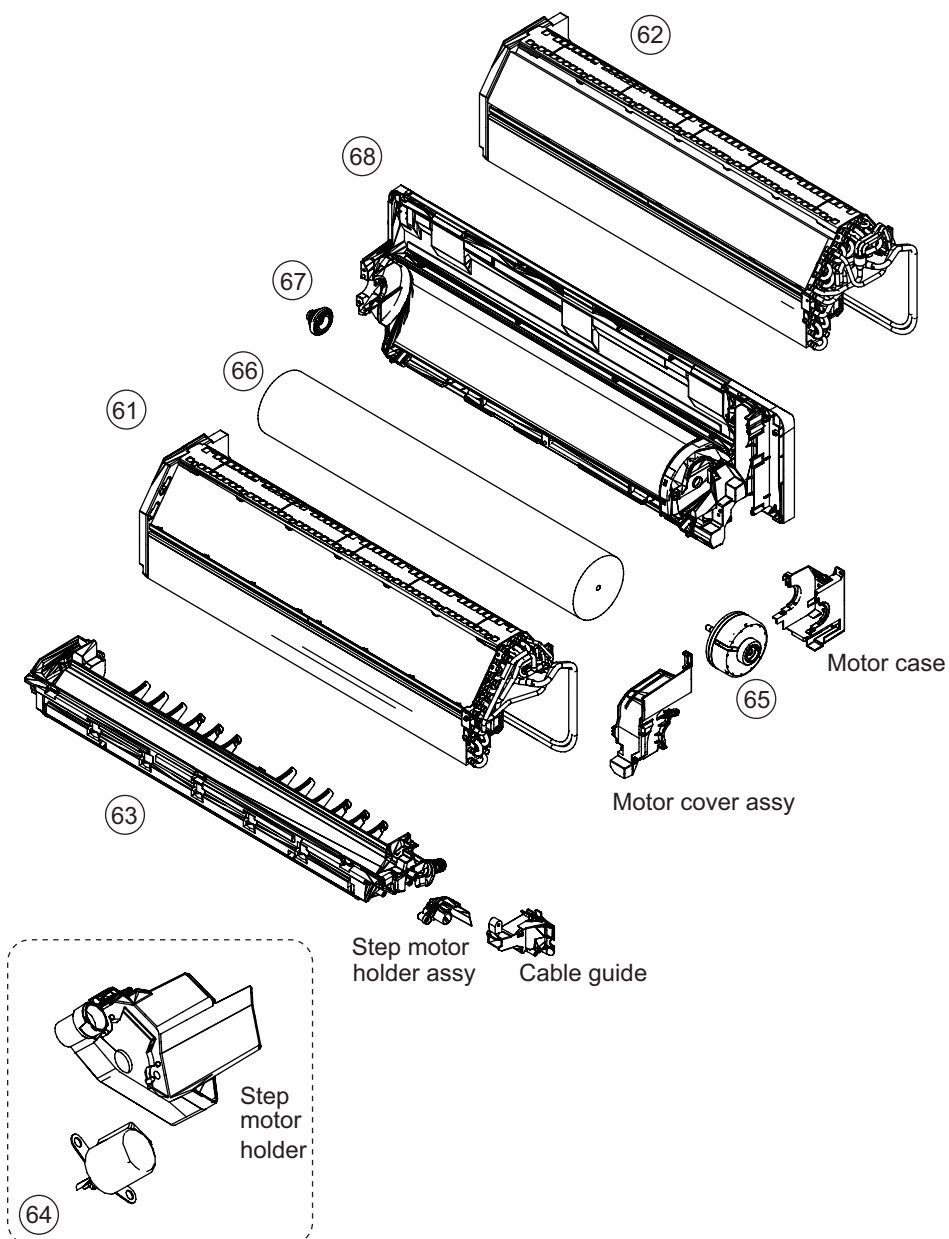


## ● Control box



Item no.	Part no.	Part name	Service part
51	9710782411	Main PCB (for 07 model)	◆
	9710782428	Main PCB (for 09 model)	◆
	9710782435	Main PCB (for 12 model)	◆
	9710782442	Main PCB (for 14 model)	◆
52	9306489045	Terminal	◆
53	9710858017	Display Assy	◆
54	9710786013	Indicator PCB	◆
55	9317755061	Pyroelectric sensor	◆

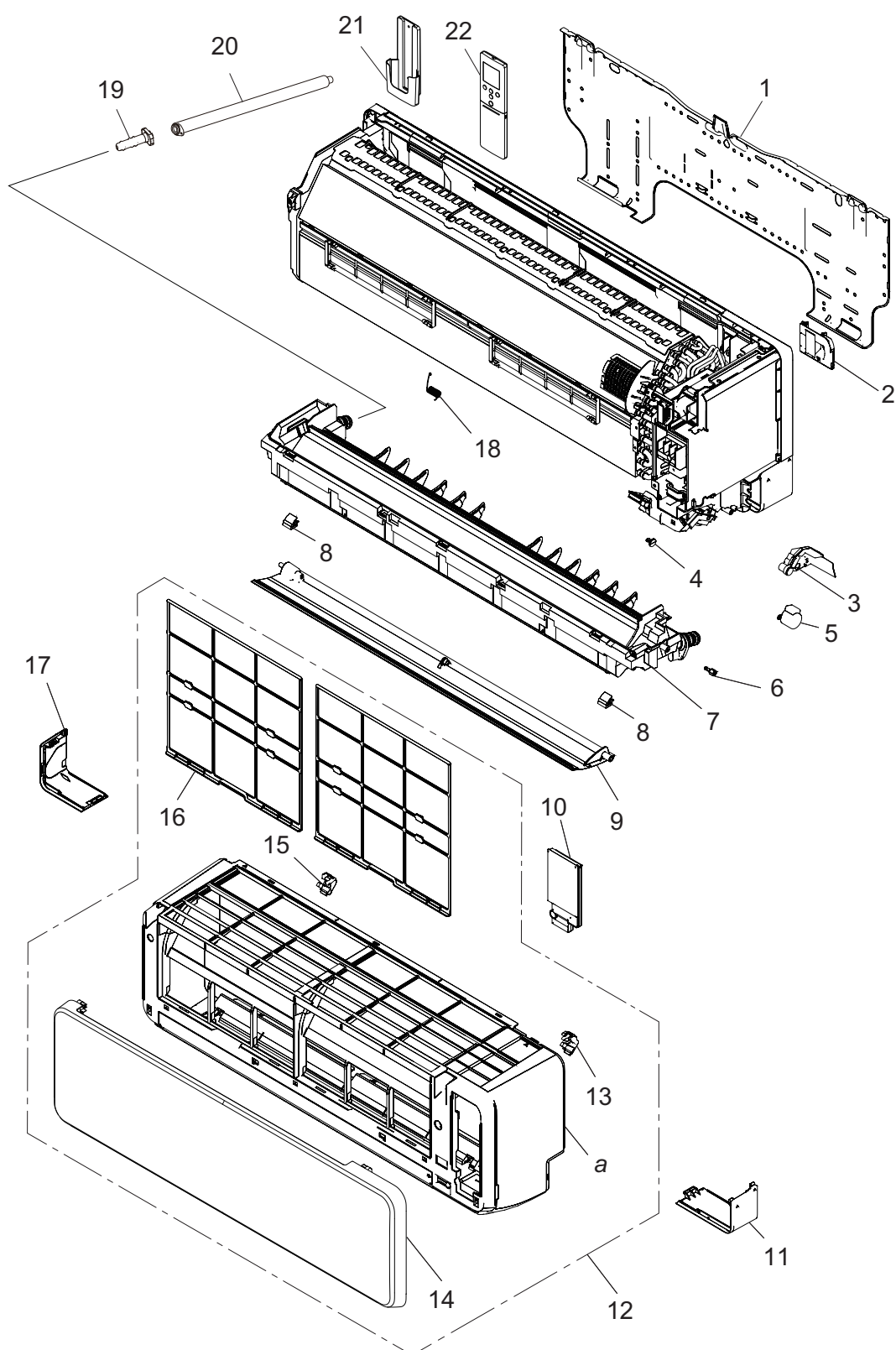
# ● Evaporator



Item no.	Part no.	Part name	Service part
61	9387593143	Evaporator total assy (for 07, 09, 12 model)	◆
62	9387593150	Evaporator total assy (for 14 model)	◆
63	9387590005	Drain pan total assy	◆
64	9387714005	Step motor holder assy	◆
65	9603569013	Brushless motor (for 07, 09, 12 model)	◆
	9603572013	Brushless motor (for 14 model)	◆
66	9387055016	Crossflow fan assy	◆
67	9333628004	Bearing D assy	◆
68	9387587012	Base assy	◆

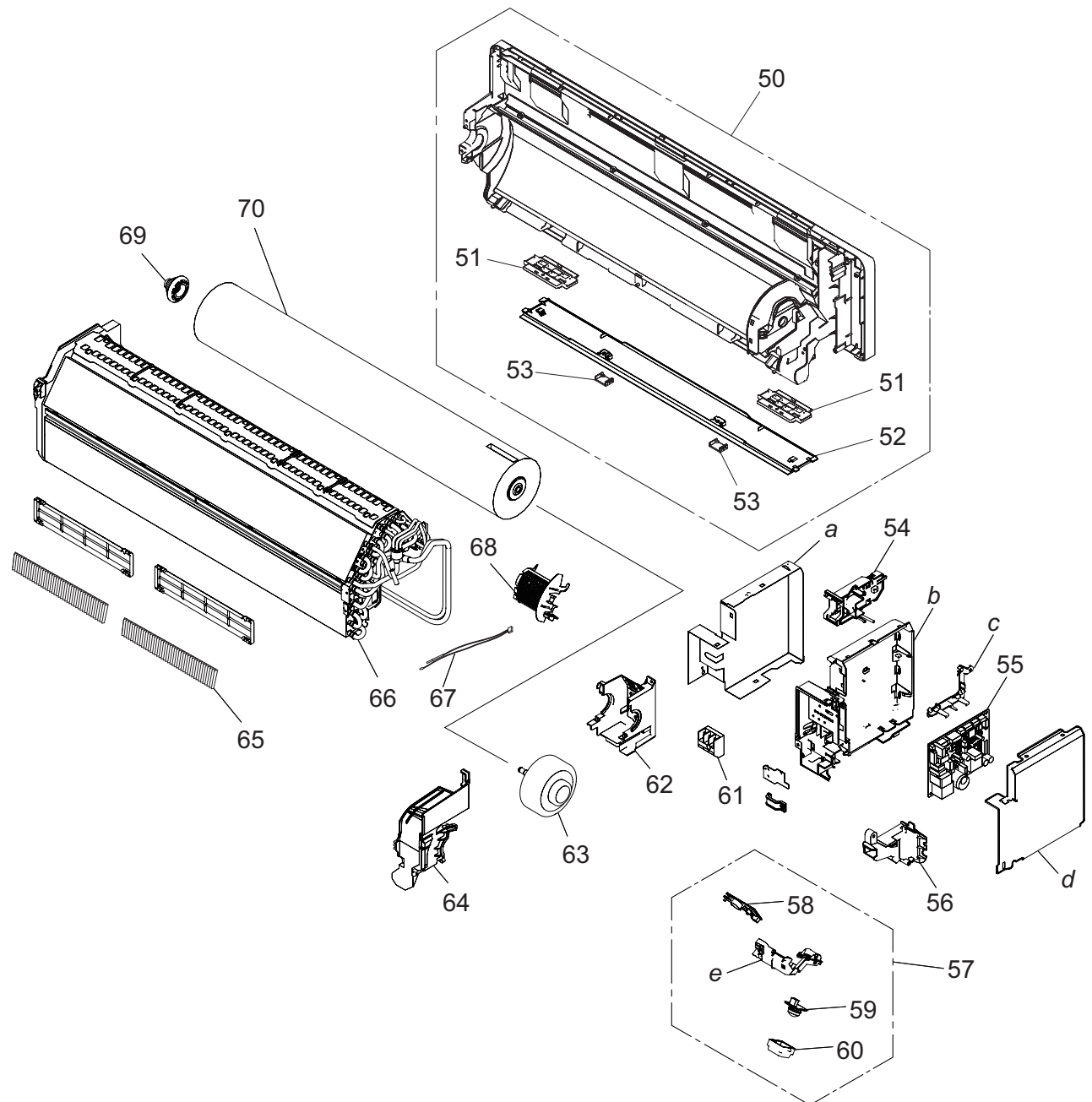
# Models: ASHG07KGTE, ASHG09KGTE, ASHG12KGTE, and ASHG14KGTE

## Exterior parts



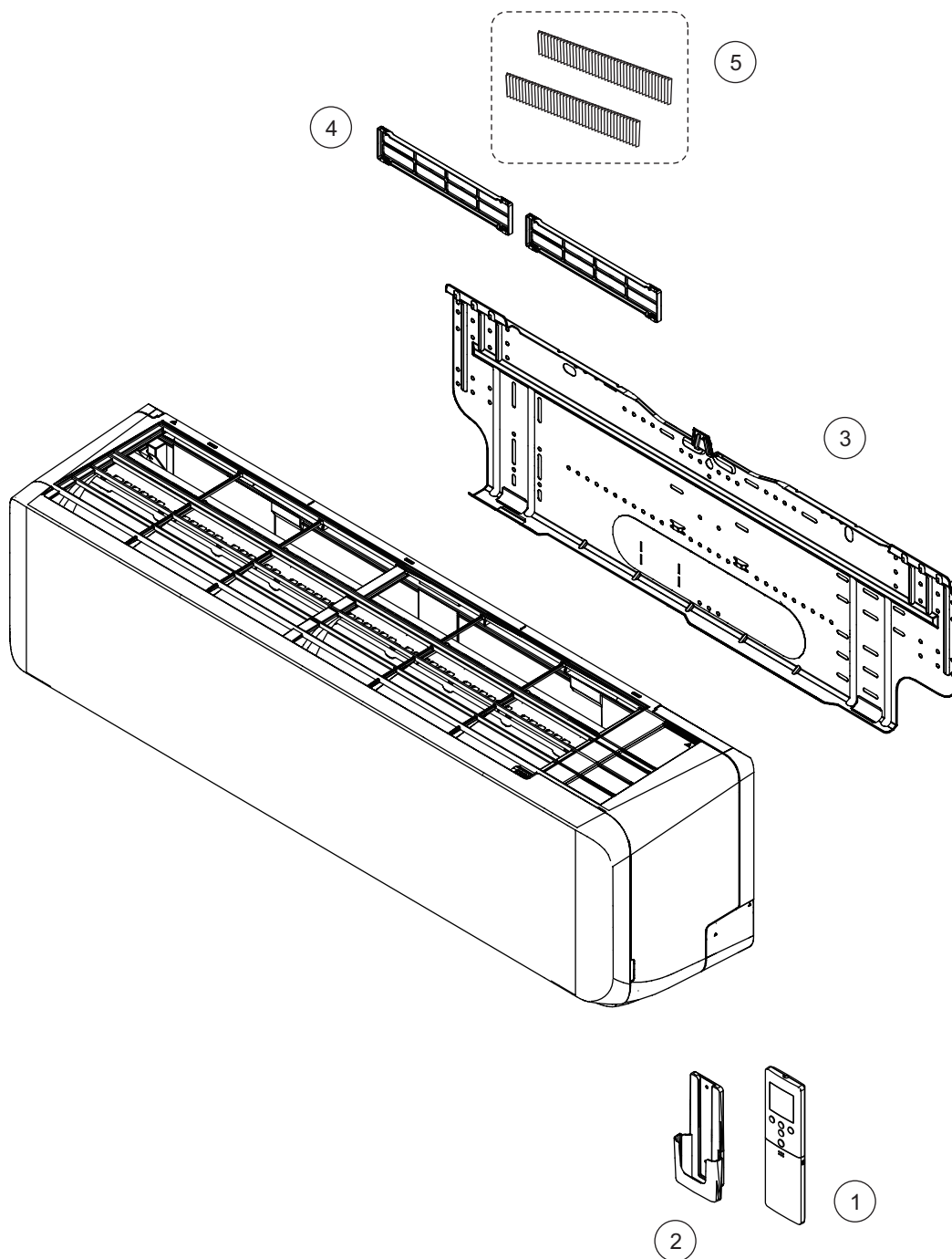
Item no.	Part no.	Part name	Service part
1	9388142005	Bracket panel	◆
2	9383729027	Wire cover B assy	◆
3	9387456004	Step motor holder	◆
4	9333608006	Bush	◆
5	9901011047	Step motor	◆
6	9332861006	Shaft cover	◆
7	9387590241	Drain pan total assy	◆
8	9387476002	Screw cover	◆
9	9387479003	U/D louver assy	◆
10	9387597066	Wire cover assy	◆
11	9387478051	Under cover R	◆
12	9384977113	Front panel total assy	◆
13	9333704005	Grille clamper R	◆
14	9387756029	Intake grill assy	◆
15	9333719009	Grille clamper L	◆
16	9387473001	Air filter	◆
17	9387477054	Under cover L	◆
18	9387471007	Louver spring	◆
19	9316177017	Drain cap	◆
20	9316904002	Drain hose assy	◆
21	9318912005	Remote controller holder	◆
22	9352446108	Remote controller	◆
a	—	Front panel	—

# ● Base, evaporator, and control

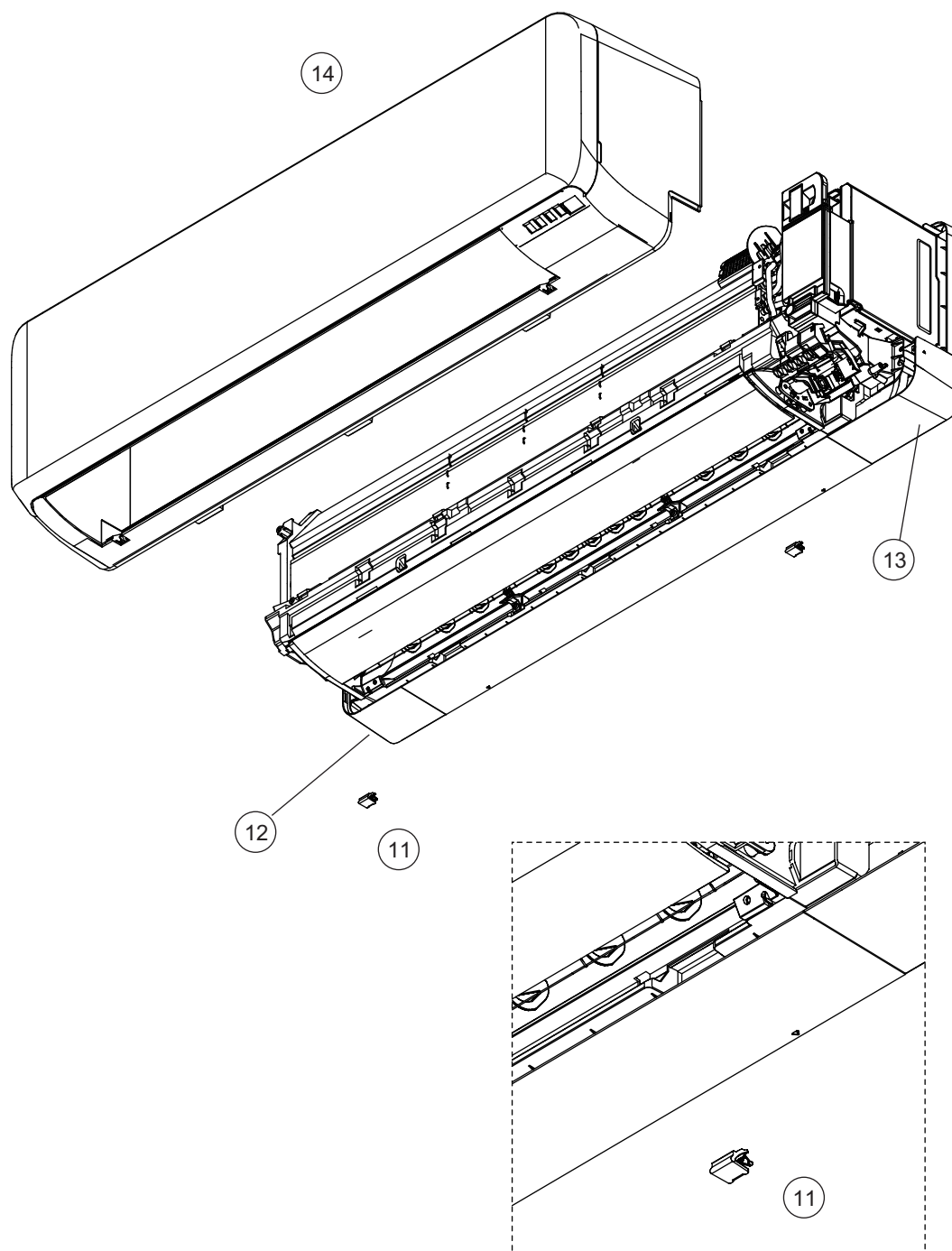


Item no.	Part no.	Part name	Service part
50	9387587128	Base assy	◆
51	9388139005	Pipe bracket A	◆
52	9388138008	Under cover C	◆
53	9388182001	Screw cover	◆
54	9383765056	WLAN adapter holder assy	◆
55	9711732255	Main PCB (For 07 model)	◆
	9711732262	Main PCB (For 09 model)	◆
	9711732279	Main PCB (For 12 model)	◆
	9711732286	Main PCB (For 14 model)	◆
56	9387488012	Cable guide	◆
57	9711146038	Display assy	◆
58	9711147011	Indicator PCB	◆
59	9317755061	Pyroelectric sensor	◆
60	9382134006	Front panel cover B assy	◆
61	9901013010	Terminal	◆
62	9384500014	Motor case sub assy	◆
63	9603768003	DC fan motor (For 07 and 09 model)	◆
	9603631017	DC fan motor (For 12 and 14 model)	◆
64	9387713022	Motor cover assy	◆
65	9317250009	Air clean filter assy	◆
66	9387593334	Evaporator total assy (For 07 and 09 model)	◆
	9387593426	Evaporator total assy (For 12 and 14 model)	◆
67	9900627041	Thermistor assy	◆
68	9387467000	Room thermistor holder	◆
69	9333628004	Bearing D assy	◆
70	9387055047	Crossflow fan assy	◆
—	9709626054	Wire with connector (CN10 on Main PCB—Pyroelectric sensor)	◆
—	9901010071	Wire with connector (USB adapter connection)	◆
<i>a</i>	—	Box shield	—
<i>b</i>	—	Control box	—
<i>c</i>	—	PCB holder A	—
<i>d</i>	—	Control cover	—
<i>e</i>	—	Display case assy	—

# Model: ASHG18KMTB



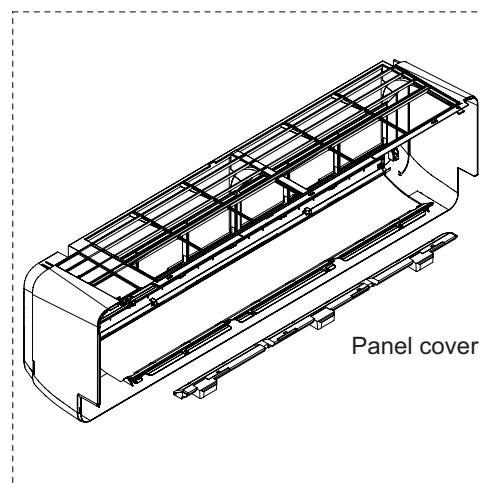
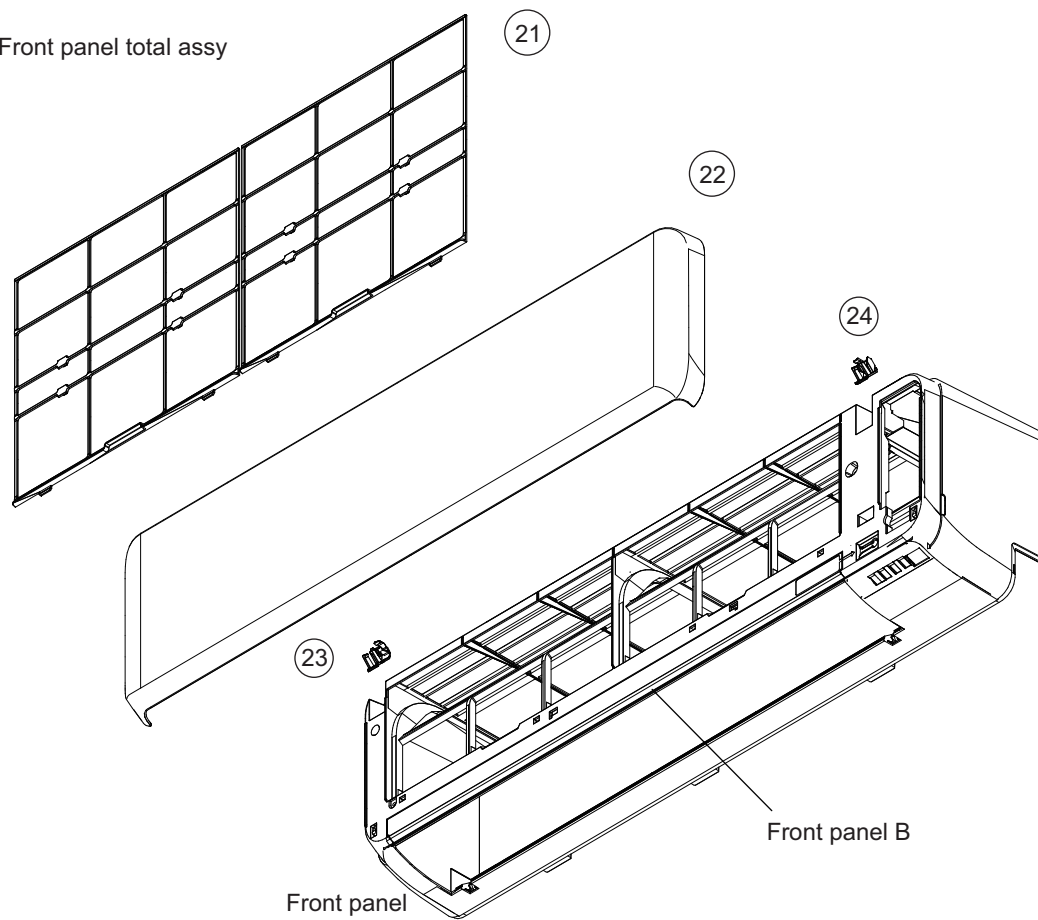
Item no.	Part no.	Part name	Service part
1	9383712012	Remote controller	◆
2	9318912005	Remote controller holder	◆
3	9323351004	Bracket panel	◆
4	9332911008	Electric filter holder	◆
5	9317250009	Air clean filter assy	◆



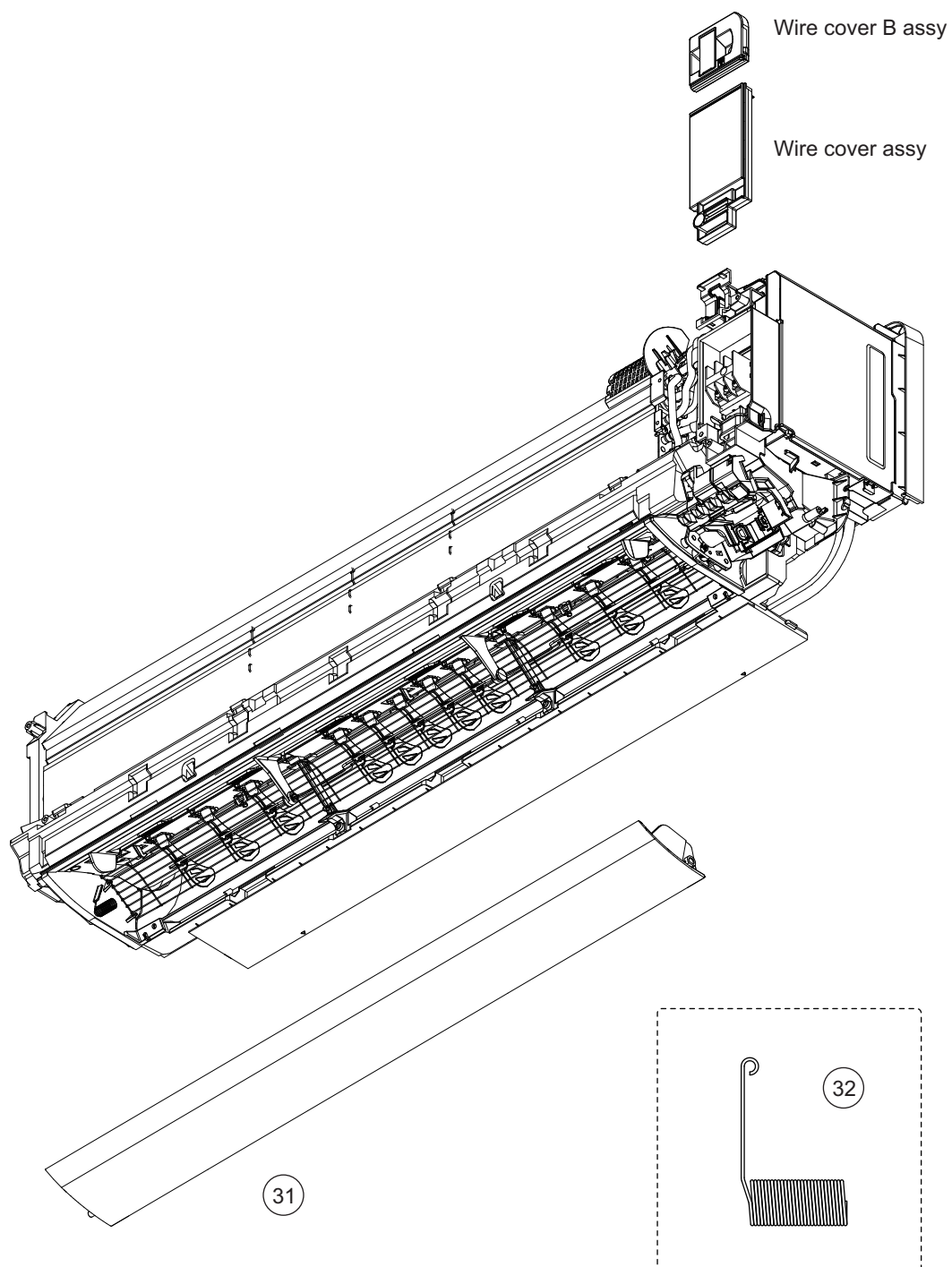
Item no.	Part no.	Part name	Service part
11	9387476002	Screw cover	◆
12	9323341012	Under cover L	◆
13	9323342019	Under cover R	◆
14	9387596625	Front panel total assy	◆



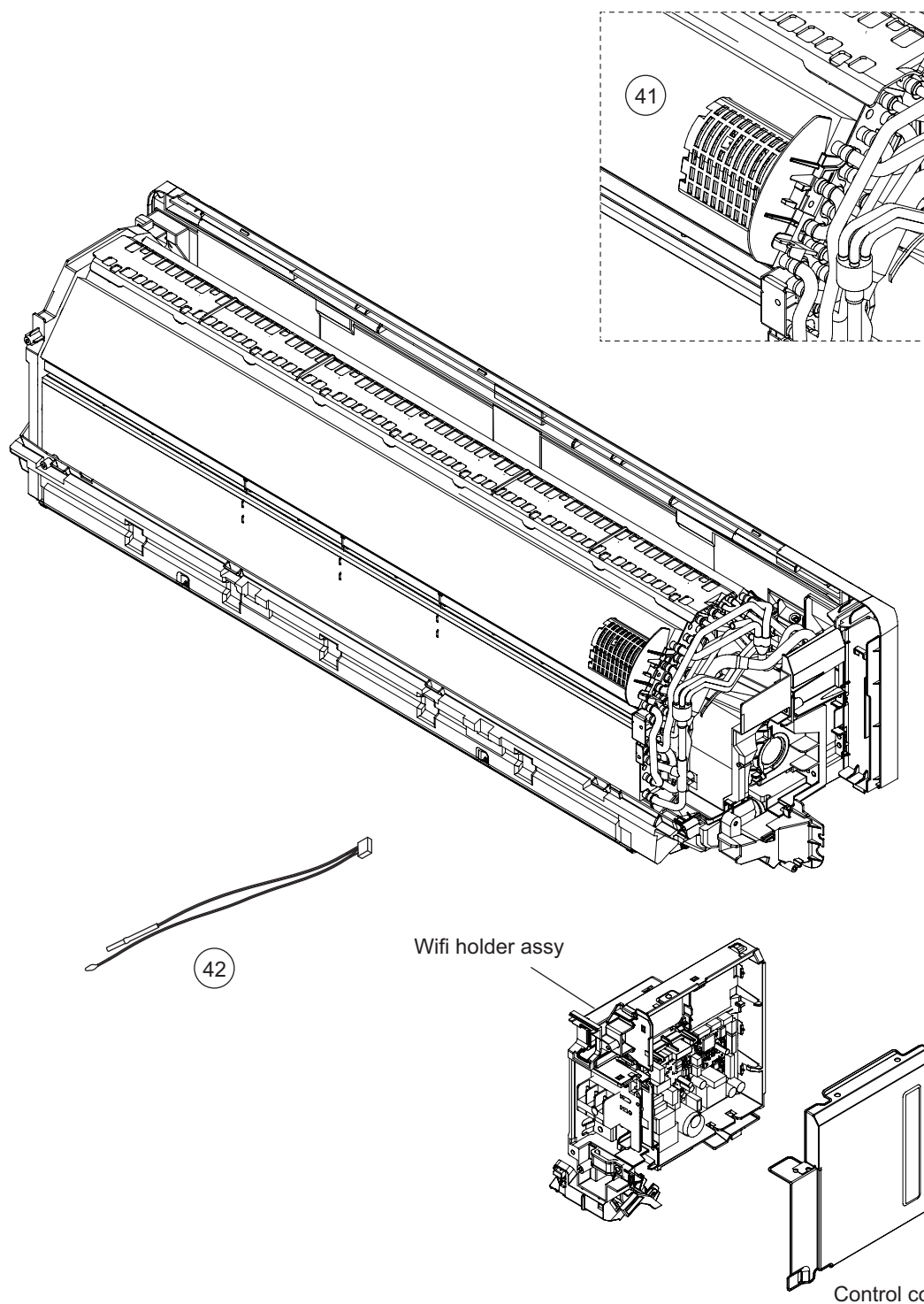
Front panel total assy



Item no.	Part no.	Part name	Service part
21	9323340008	Air filter	◆
22	9387756111	Intake grille assy	◆
23	9333719009	Grille clamber L	◆
24	9333704005	Grille clamber R	◆

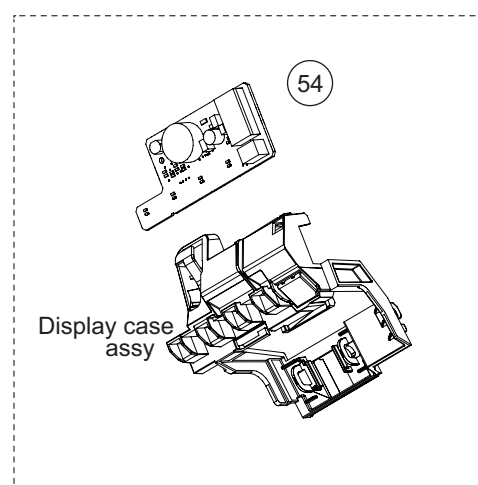
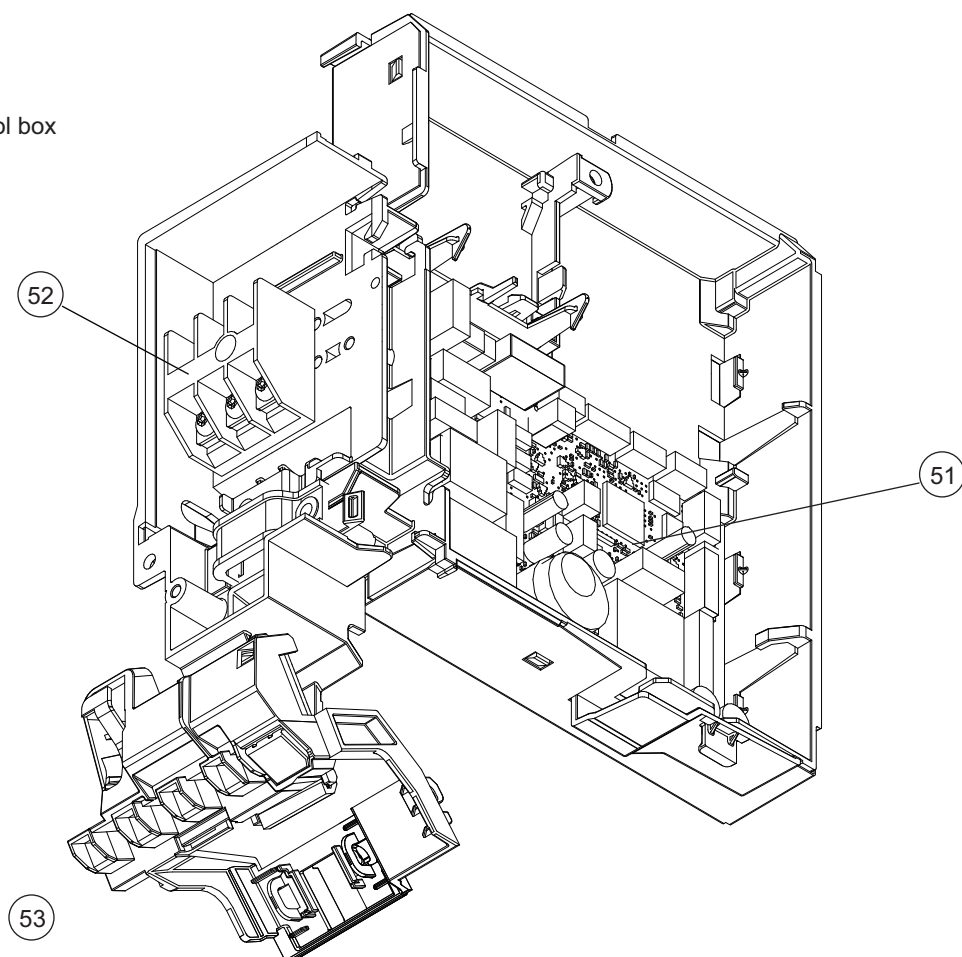


Item no.	Part no.	Part name	Service part
31	9387479010	Horizontal louver assy	◆
32	9383730030	Louver spring	◆

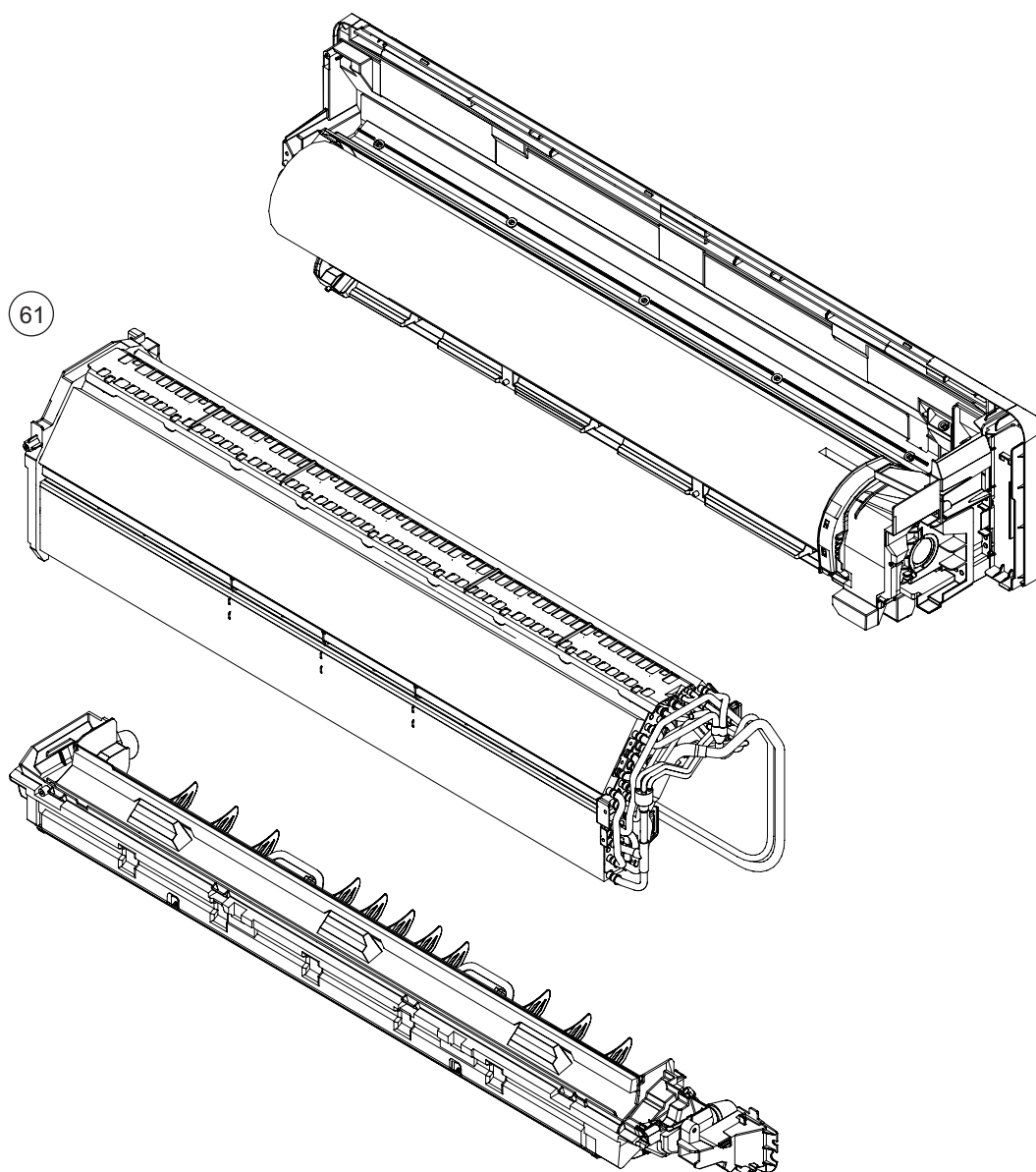


Item no.	Part no.	Part name	Service part
41	9387467000	Room thermistor holder	◆
42	9900627041	Thermistor assy	◆

Control box

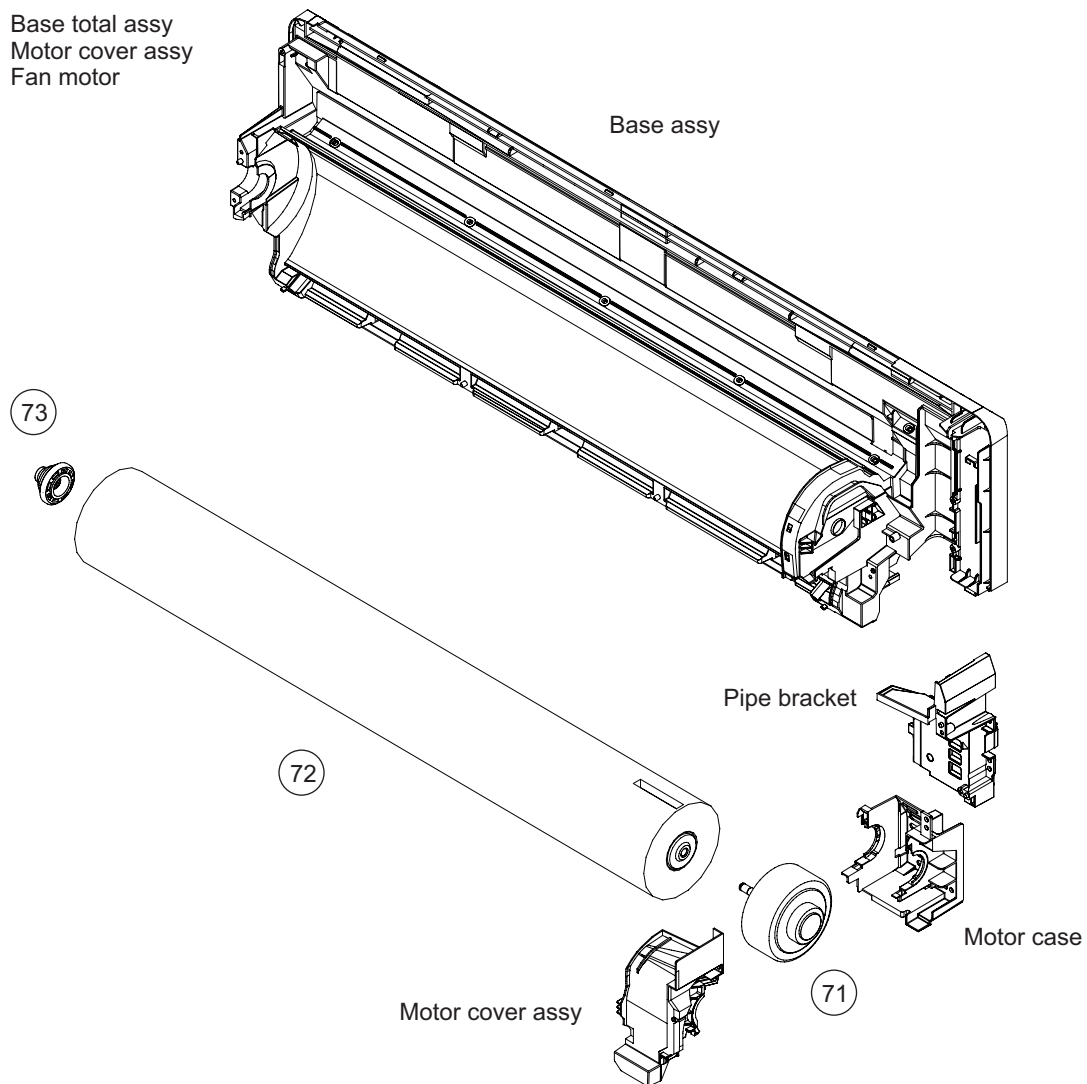


Item no.	Part no.	Part name	Service part
51	9711141538	Main PCB	◆
52	9306489045	Terminal	◆
53	9711146052	Display assy	◆
54	9711147011	Indicator PCB	◆

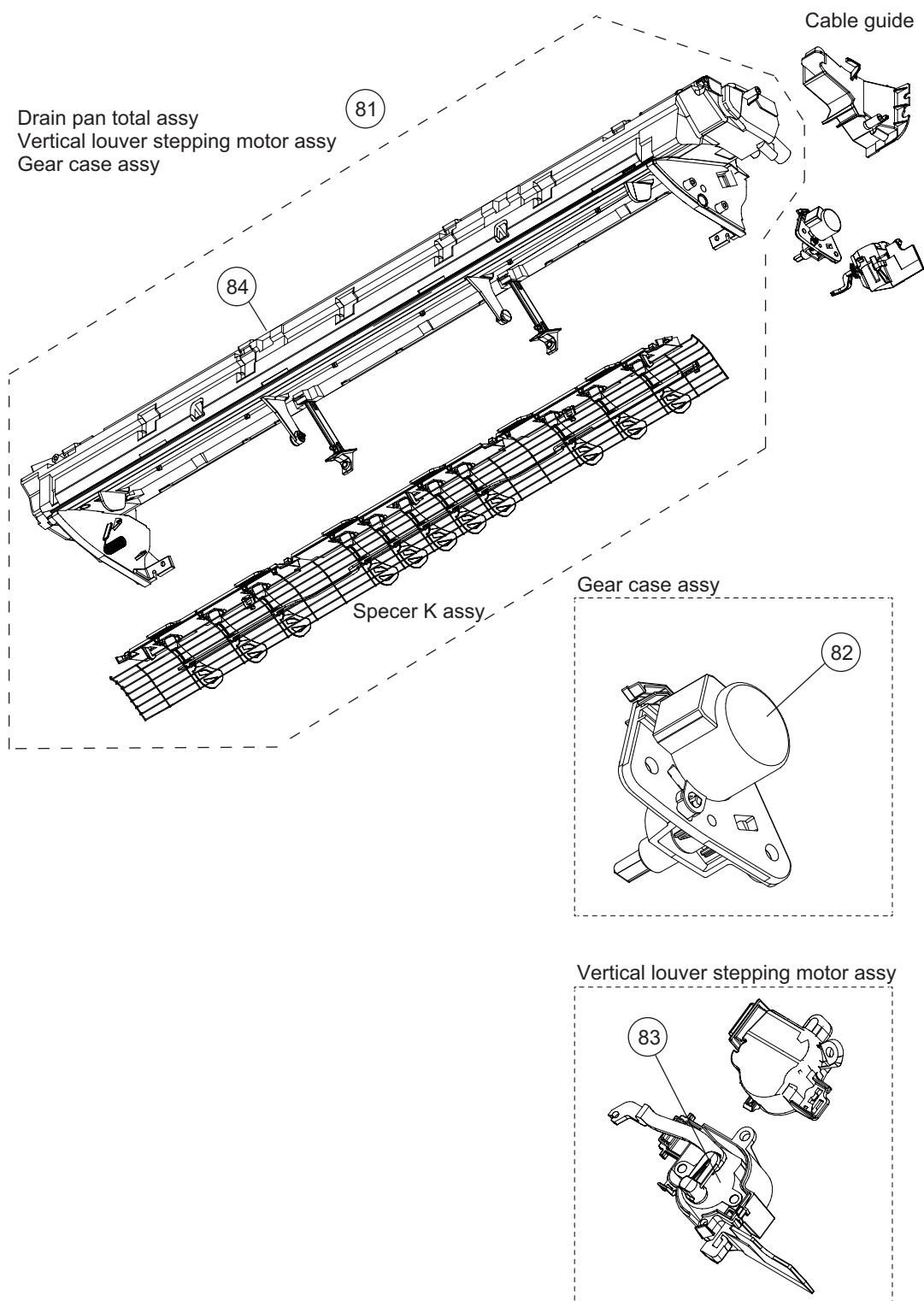


Item no.	Part no.	Part name	Service part
61	9383735011	Evaporator total assy	◆

Base total assy  
Motor cover assy  
Fan motor



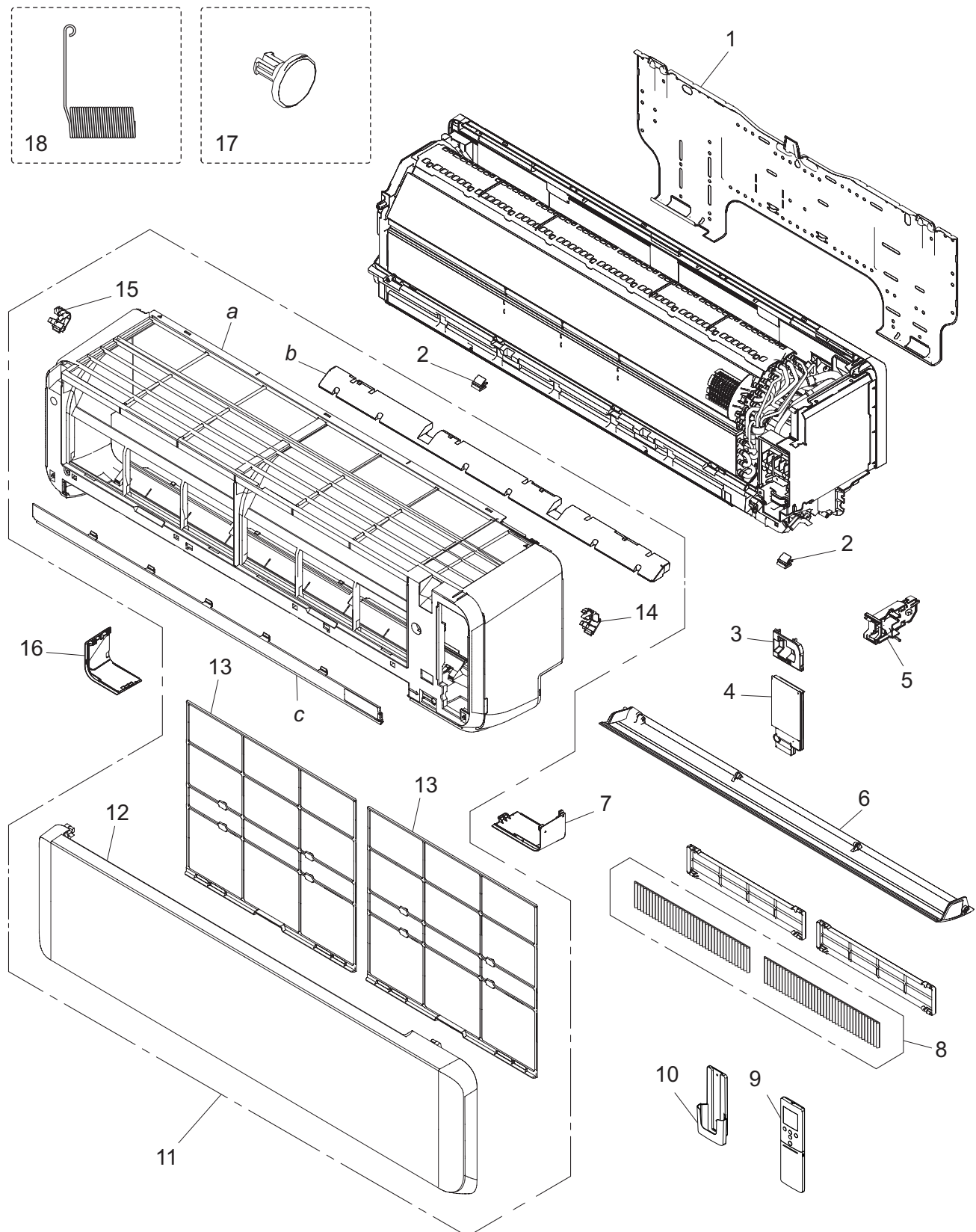
Item no.	Part no.	Part name	Service part
71	9603631000	Brushless motor	◆
72	9387055054	Crossflow fan assy	◆
73	9333628004	Bearing D assy	◆



Item no.	Part no.	Part name	Service part
81	9387590142	Drain pan total assy	◆
82	9901011016	Stepping motor	◆
83	9901011023	Stepping motor	◆
84	9387590142	Drain pan assy	◆

# Model: ASHG18KMTE

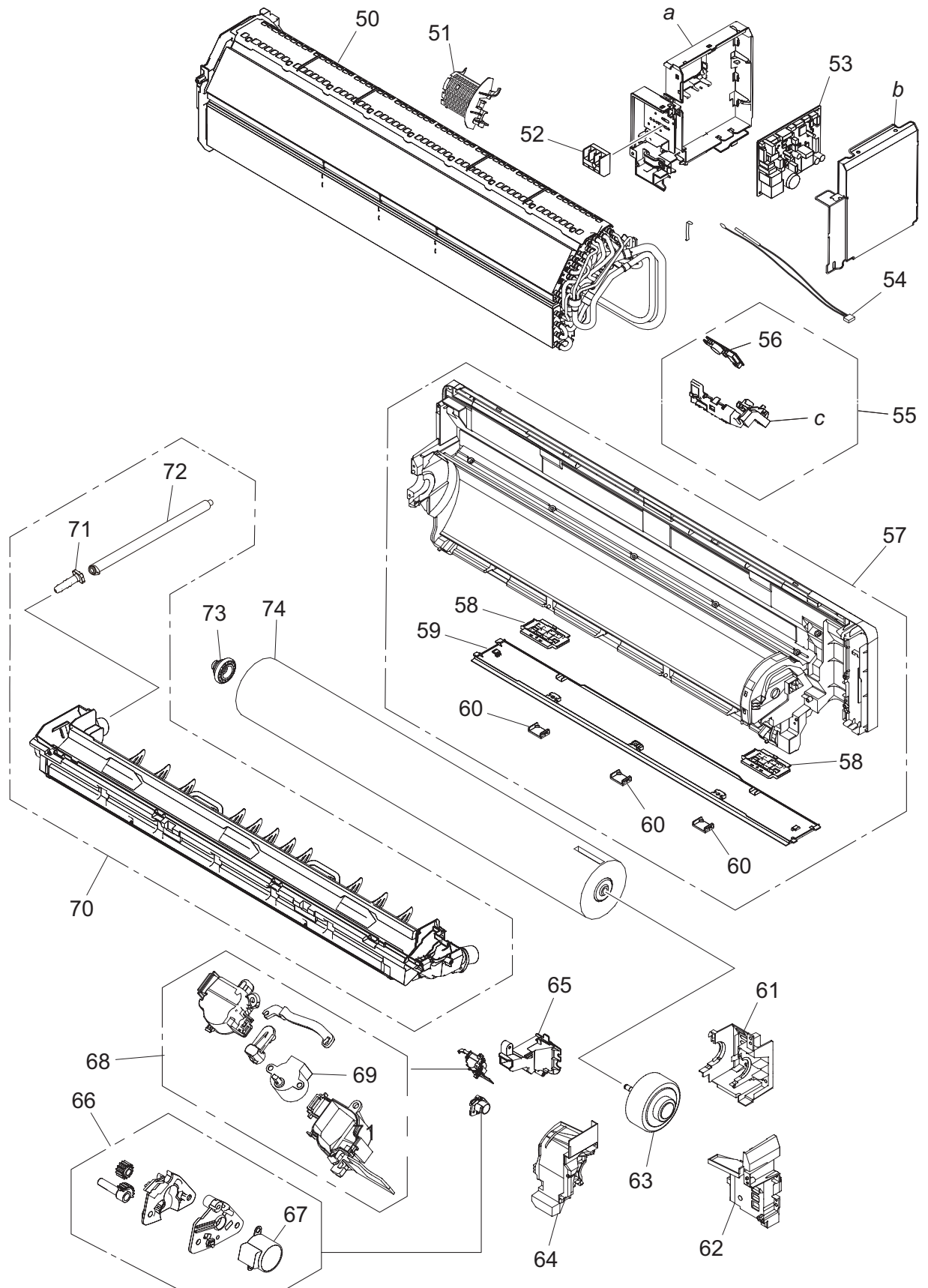
## Exterior parts





Item no.	Part no.	Part name	Service part
1	9388158013	Bracket panel	◆
2	9387476002	Screw cover	◆
3	9383729027	Wire cover assy B	◆
4	9387597066	Wire cover assy	◆
5	9383765056	WLAN adapter holder assy	◆
6	9387479010	Louver assy (Up/Down)	◆
7	9323342040	Under cover R	◆
8	9317250009	Air cleaning filter assy	◆
9	9332438703	Wireless remote controller	◆
10	9318912005	Remote controller holder	◆
11	9384977137	Front panel total assy	◆
12	9387756111	Intake grille assy	◆
13	9323340008	Air filter	◆
14	9333719009	Grille clamper L	◆
15	9333704005	Grille clamper R	◆
16	9323341043	Under cover L	◆
17	9333608006	Bush	◆
18	9383730030	Louver spring	◆
<i>a</i>	—	Front panel	—
<i>b</i>	—	Panel cover	—
<i>c</i>	—	Front panel B	—

# ● Chassis

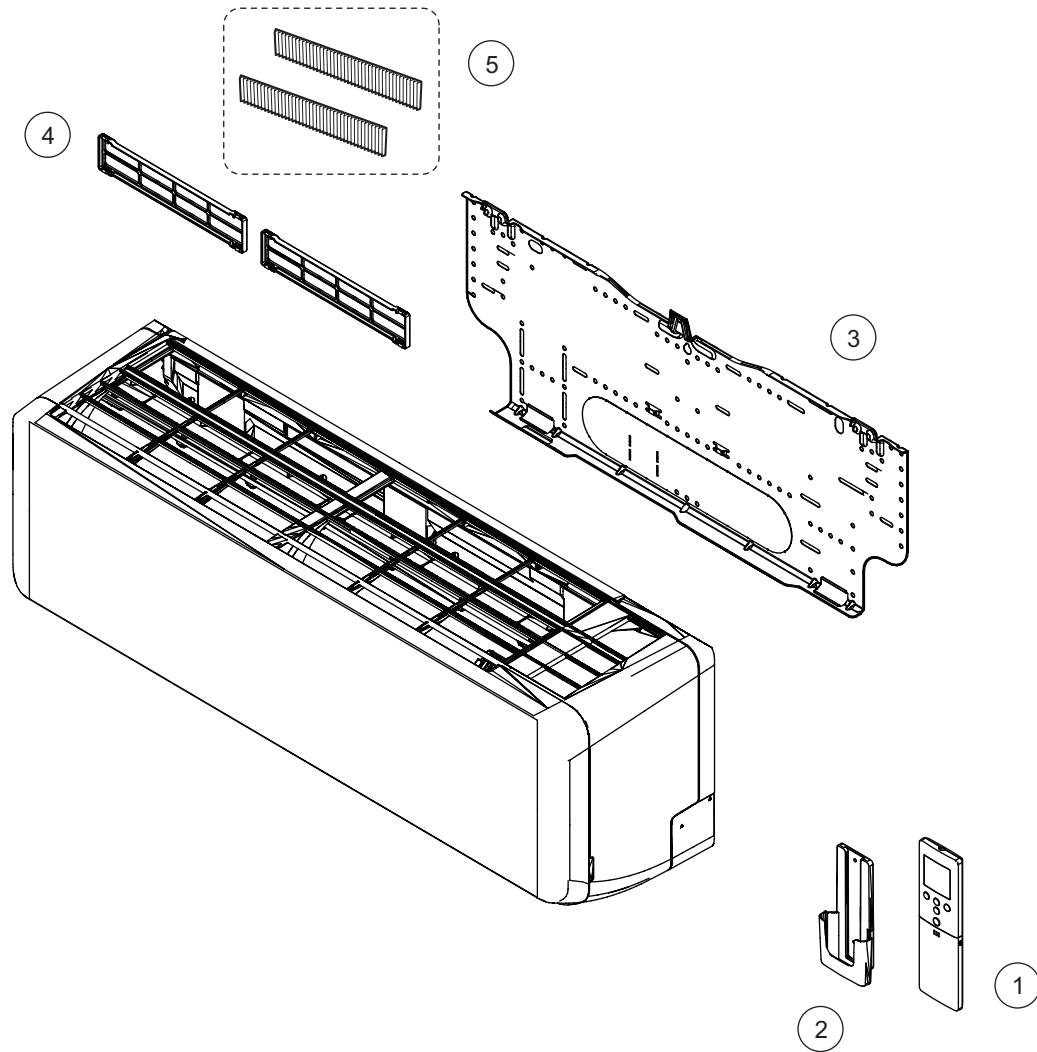


Item no.	Part no.	Part name	Service part
50	9383735196	Evaporator total assy	◆
51	9387467000	Room thermistor holder	◆
52	9901013010	Terminal 3P	◆
53	9711732330	Main PCB (18 model)	◆
54	9900627041	Thermistor assy	◆
55	9711146052	Display assy	◆
56	9711147011	Indicator PCB	◆
57	9387587159	Base assy	◆
58	9388150000	Pipe bracket A	◆
59	9388155005	Under cover C	◆
60	9388182001	Screw cover	◆
61	9384500007	Motor case sub assy	◆
62	9383565007	Pipe bracket	◆
63	9603631000	DC fan motor	◆
64	9387713015	Motor cover assy	◆
65	9387488012	Cable guide	◆
66	9387714012	Gear case assy	◆
67	9901011016	Stepping motor	◆
68	9383728006	R and L louver SPM assy	◆
69	9901011023	Stepping motor	◆
70	9387590142	Drain pan total assy	◆
71	9316177017	Drain cap	◆
72	9316904002	Drain hose assy	◆
73	9333628004	Bearing D assy	◆
74	9387055054	Crossflow fan assy	◆
—	9901010071	Wire with connector (USB adapter connection)	◆
<i>a</i>	—	Control box	—
<i>b</i>	—	Control cover	—
<i>c</i>	—	Display case	—

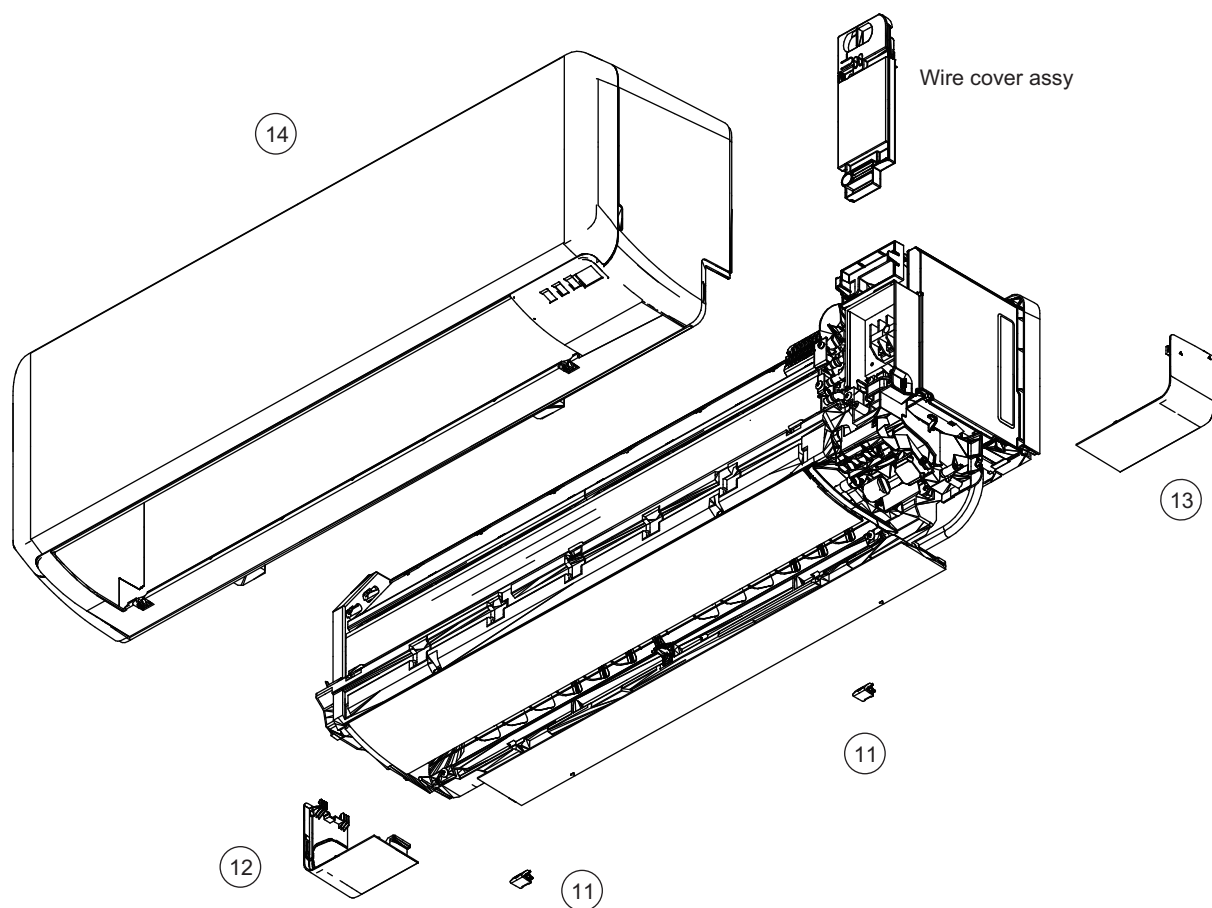
# ■ Models: ASHG07KMTB, ASHG09KMTB, ASHG12KMTB, and ASHG14KMTB

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AND PARTS LIST

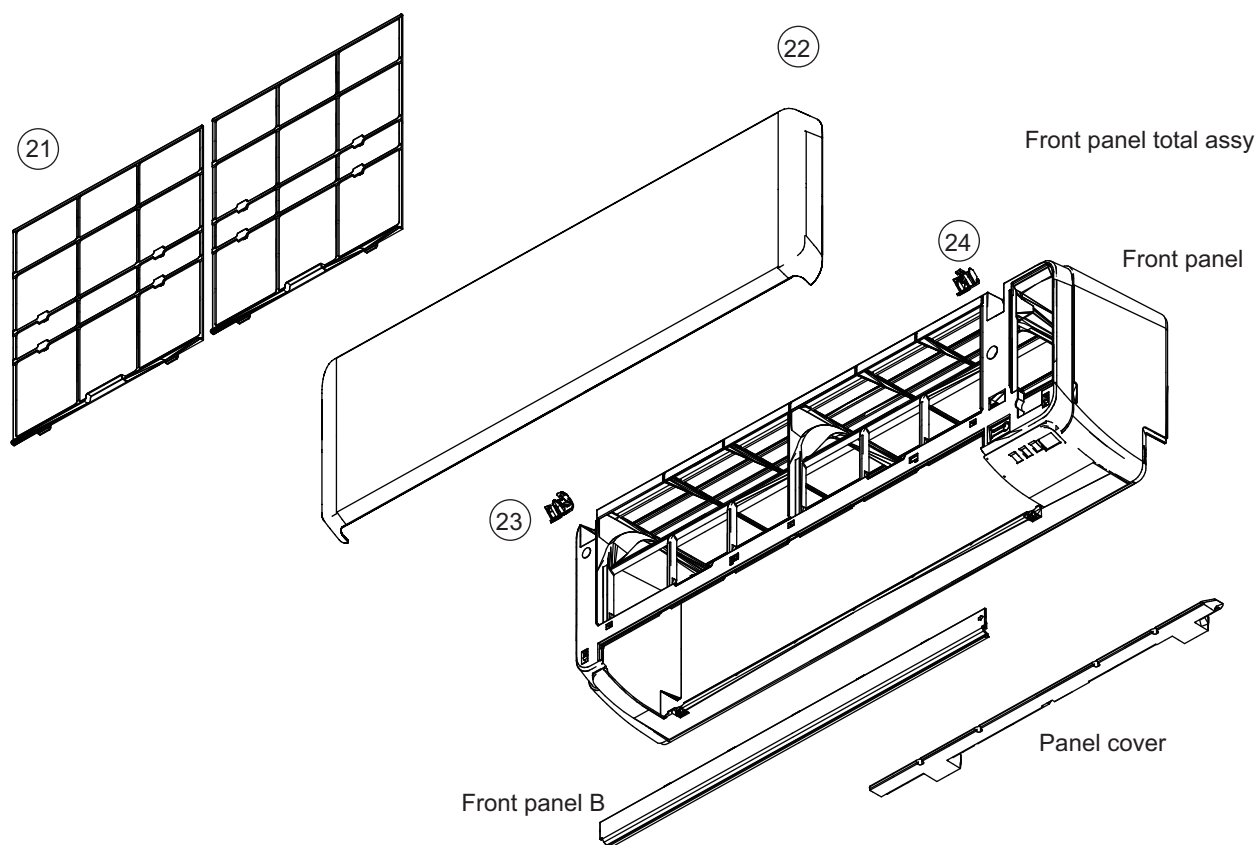
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AND PARTS LIST



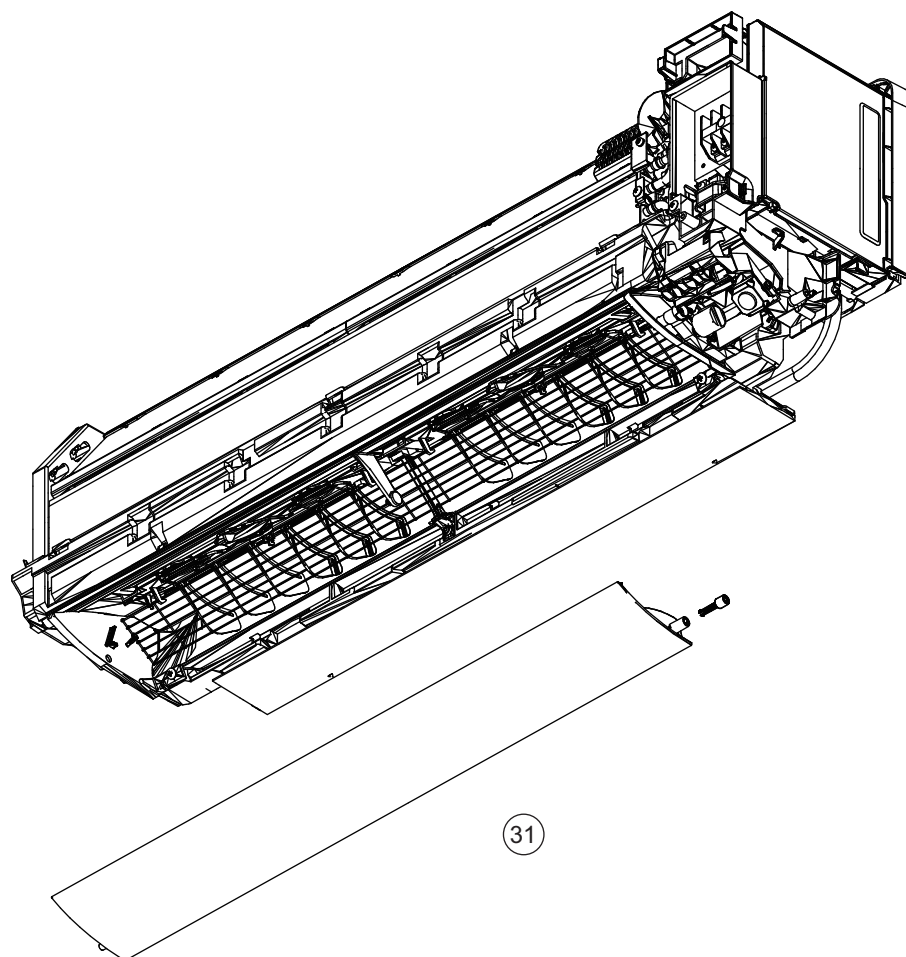
Item no.	Part no.	Part name	Service part
1	9319208008	Remote controller	◆
2	9318912005	Remote controller holder	◆
3	9387480009	Bracket panel	◆
4	9332911008	Electric filter holder	◆
5	9317250009	Air clean filter assy	◆



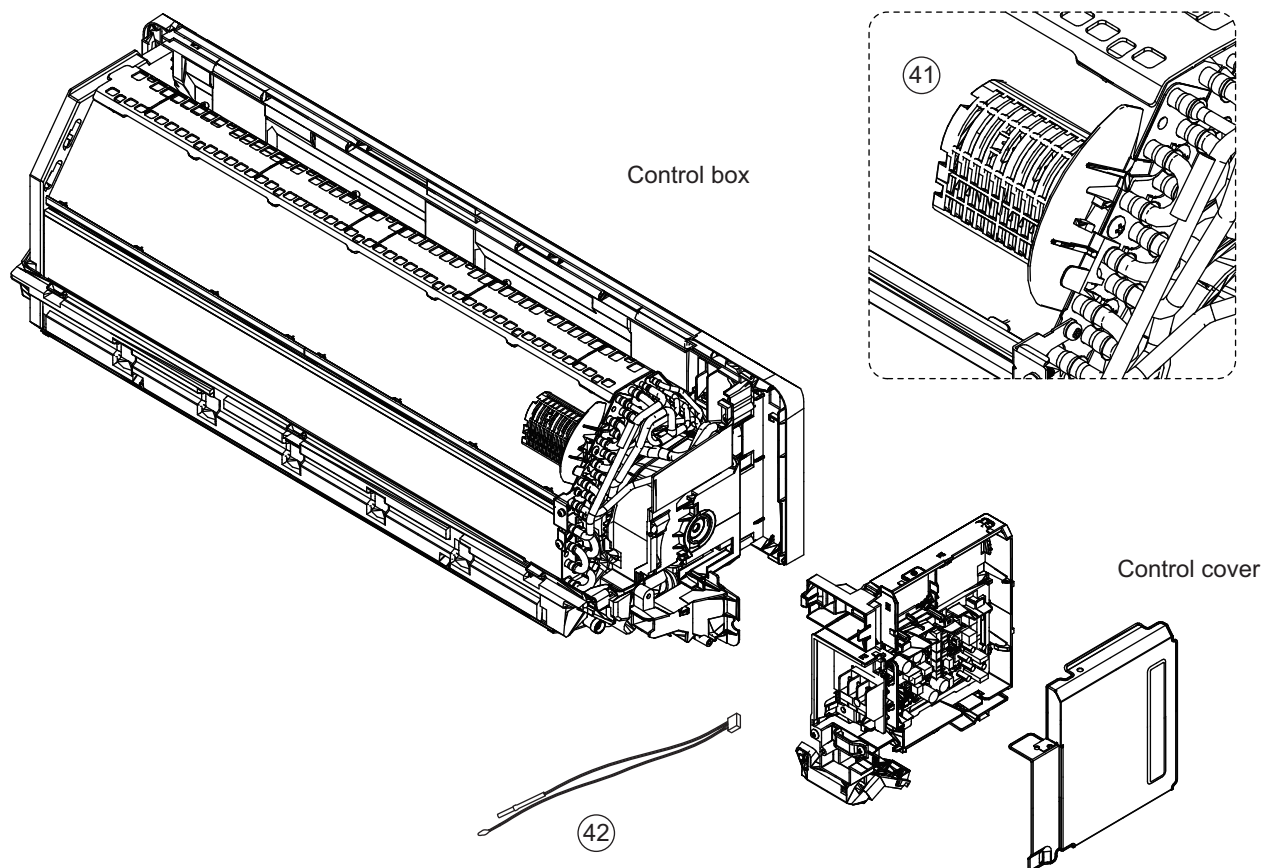
Item no.	Part no.	Part name	Service part
11	9387476002	Screw cover	◆
12	9387477009	Under cover L	◆
13	9387478006	Under cover R	◆
14	9387596748	Front panel total assy	◆



Item no.	Part no.	Part name	Service part
21	9387473018	Air filter	◆
22	9387756029	Intake grille assy	◆
23	9333719009	Grille clasper L	◆
24	9333704005	Grille clasper R	◆

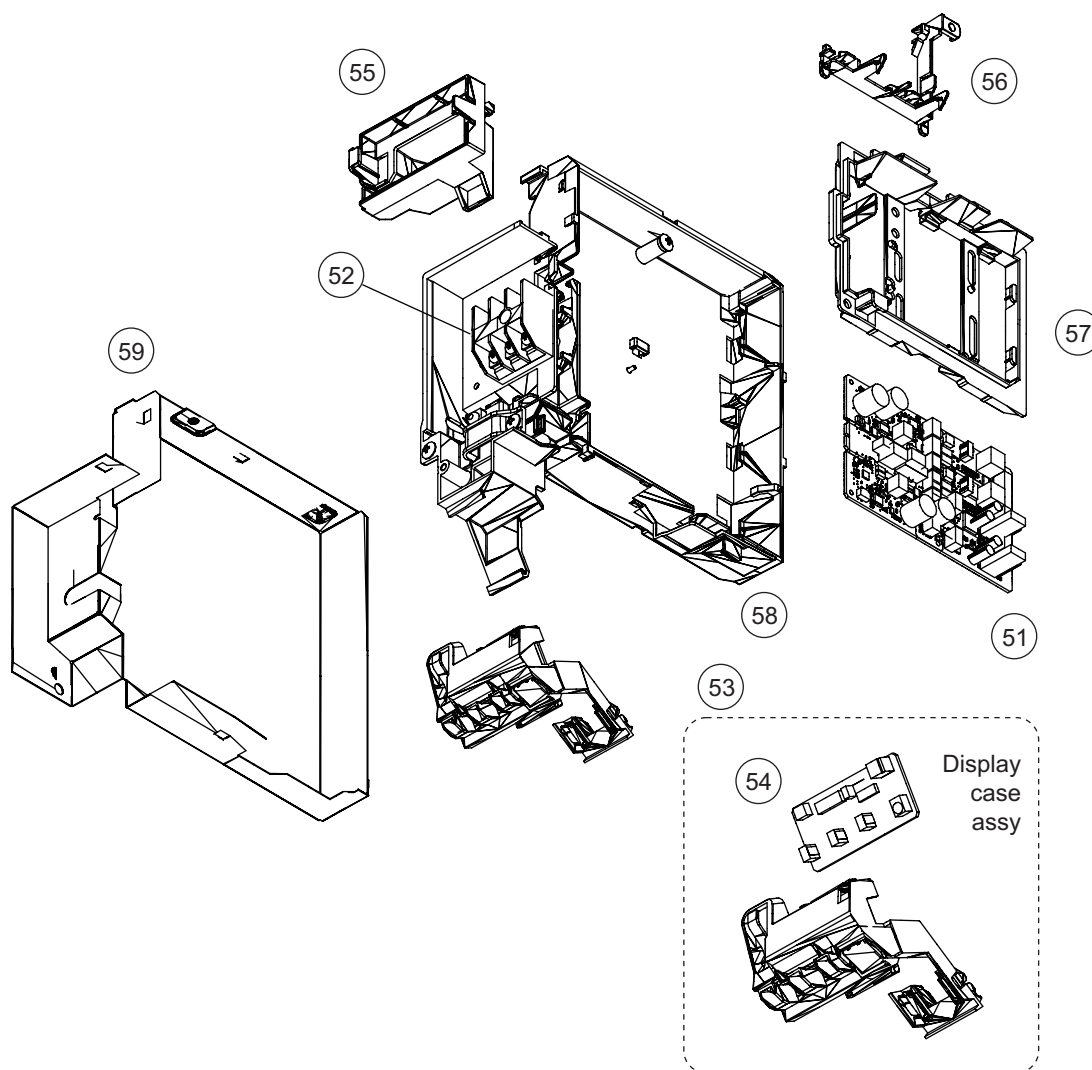


Item no.	Part no.	Part name	Service part
31	9387479003	Horizontal louver assy	◆
32	9332861006	Shaft cover	◆
33	9387471007	Louver spring	◆

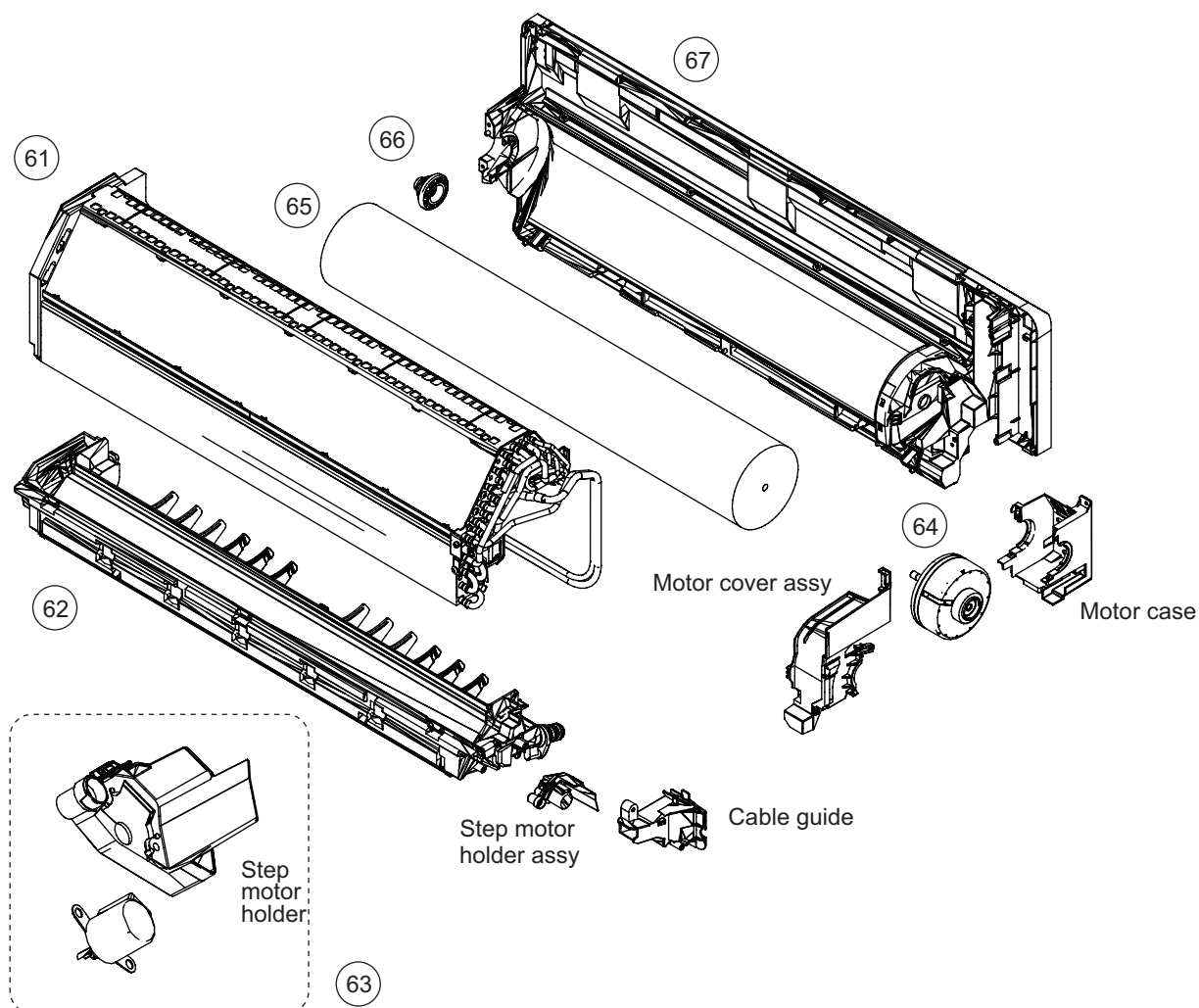


Item no.	Part no.	Part name	Service part
41	9387467000	Room thermistor holder	◆
42	9900627027	Thermistor assy	◆



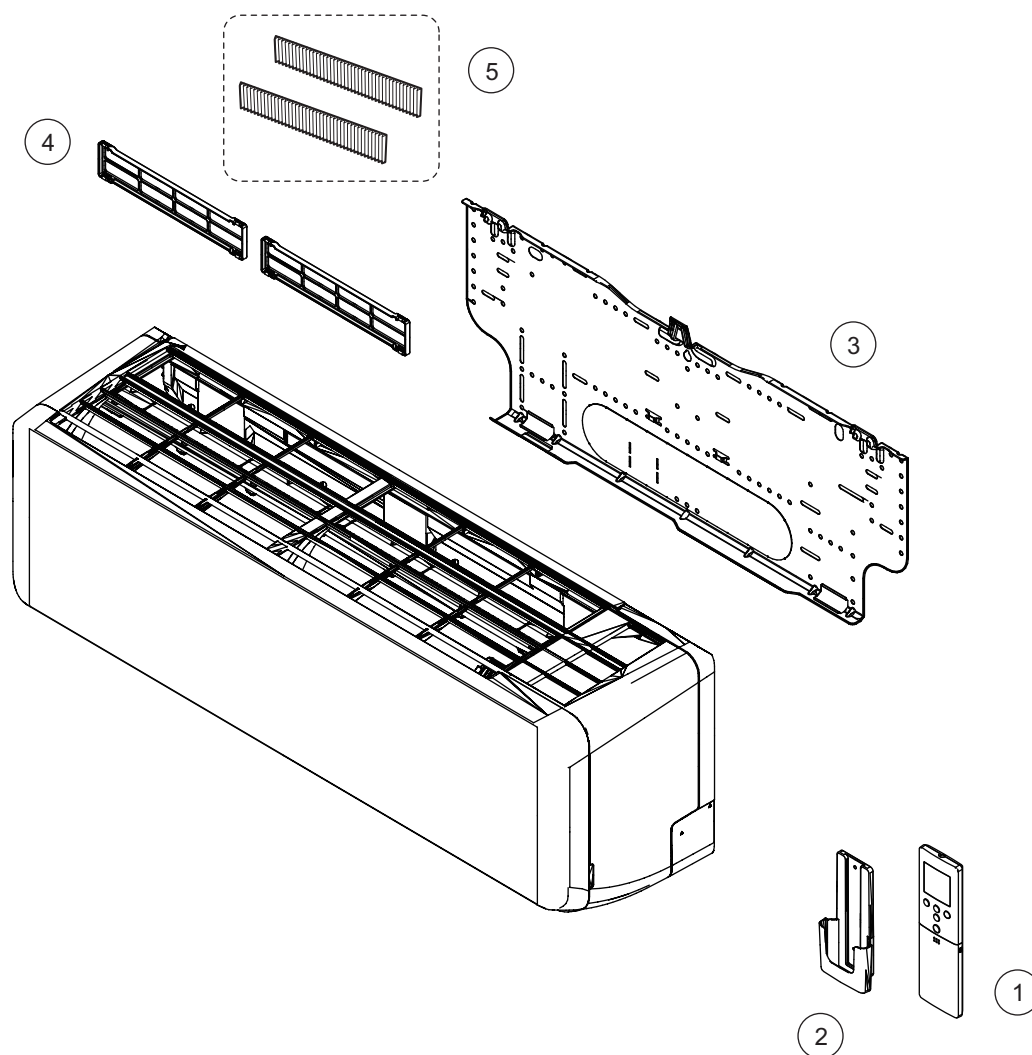


Item no.	Part no.	Part name	Service part
51	9710368295	Main PCB (For 07 model)	◆
	9710368301	Main PCB (For 09 model)	◆
	9710368318	Main PCB (For 12 model)	◆
	9710368325	Main PCB (For 14 model)	◆
52	9900369057	Terminal	◆
53	9710858024	Display assy	◆
54	9710786020	Indicator PCB	◆
55	9387485004	WLAN holder	◆
56	9387464009	PCB holder A	◆
57	9387795011	PCB holder B	◆
58	9387463026	Control box	◆
59	9323537002	Box shield	◆

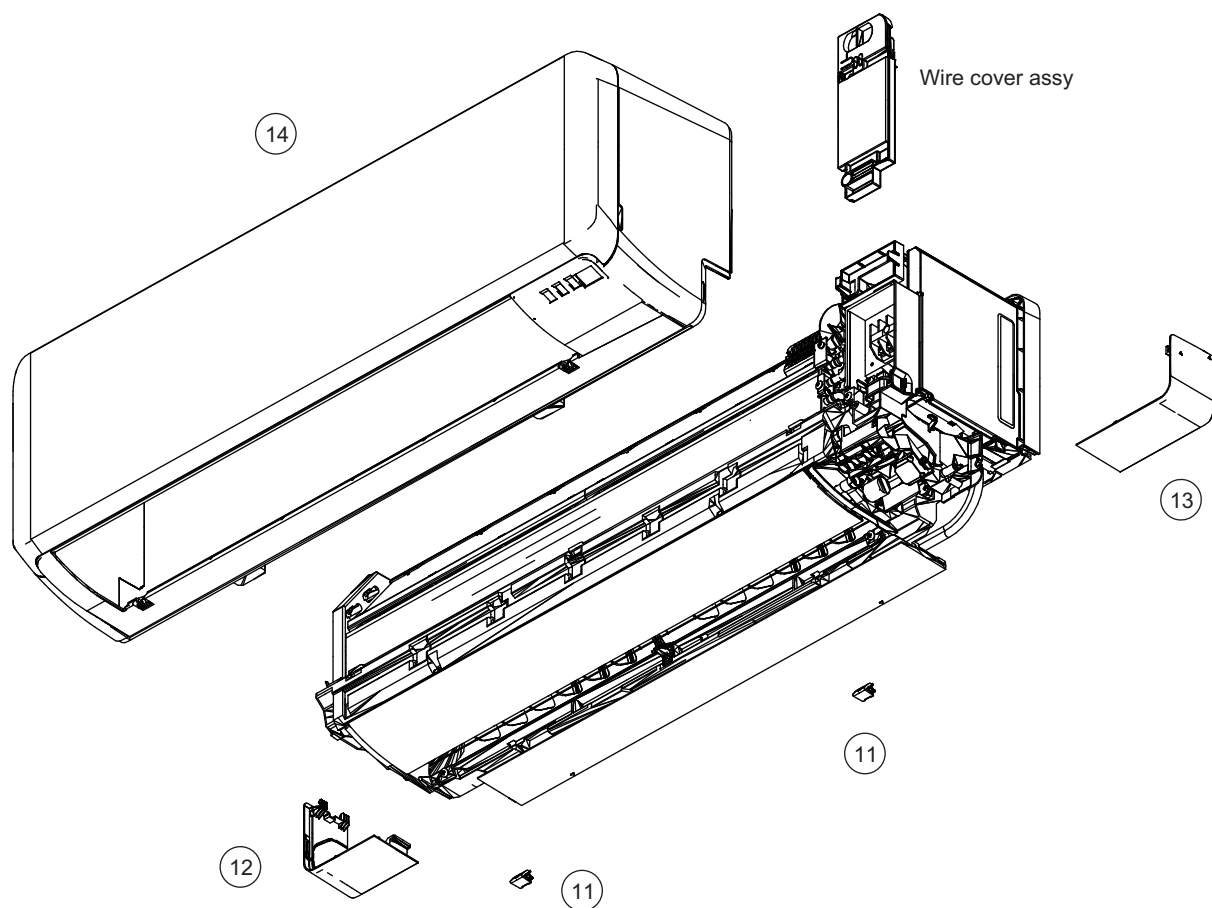


Item no.	Part no.	Part name	Service part
61	9387593143	Evaporator total assy (For 07, 09, 12 model)	◆
	9387593150	Evaporator total assy (For 14 model)	◆
62	9387590166	Drain pan total assy	◆
63	9387714005	Step motor holder assy	◆
64	9603614010	Brushless motor (For 07, 09, 12 model)	◆
	9603572020	Brushless motor (For 14 model)	◆
65	9387055047	Crossflow fan assy	◆
66	9333628004	Bearing D assy	◆
67	9387587098	Base assy	◆

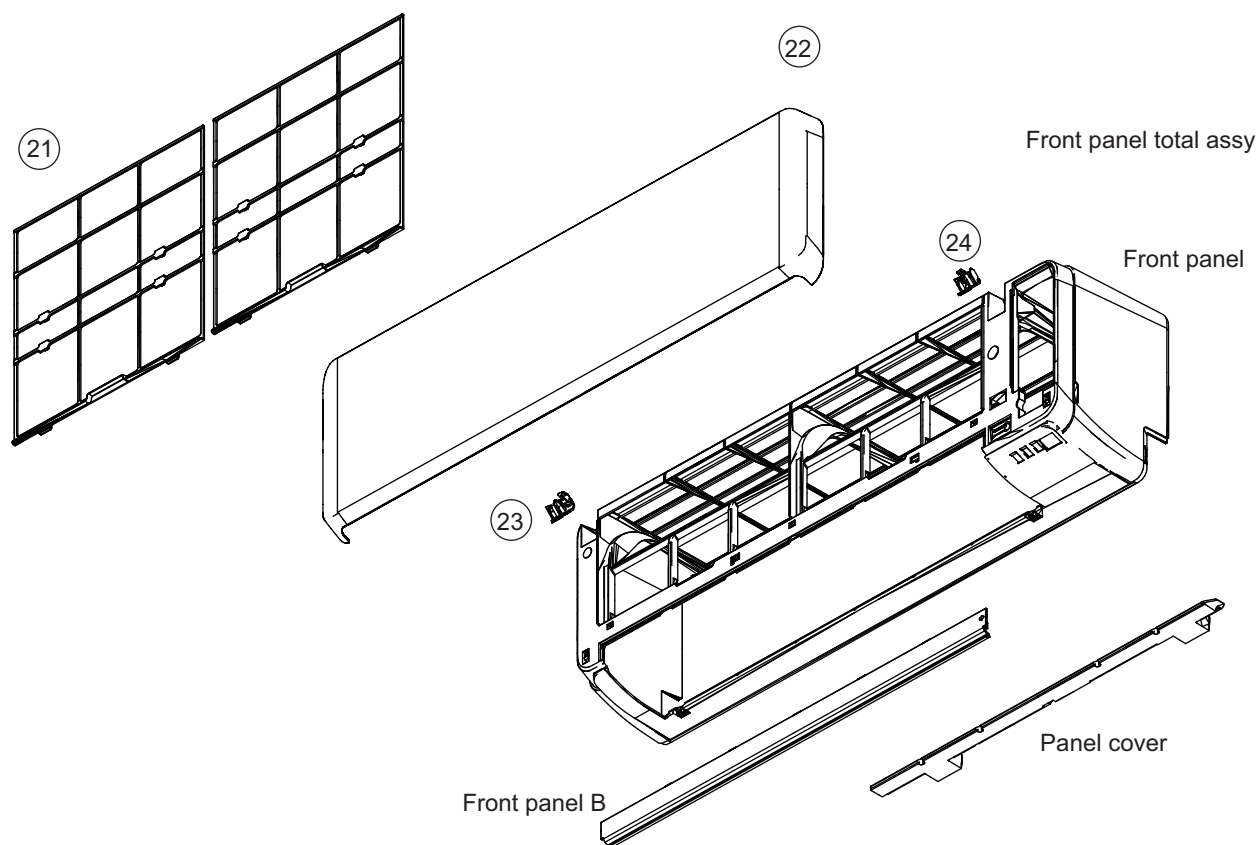
# ■ Models: ASHG07KMCC, ASHG09KMCC, ASHG12KMCC, and ASHG14KMCC

TECHNICAL DATA  
AND PARTS LISTTECHNICAL DATA  
AND PARTS LIST

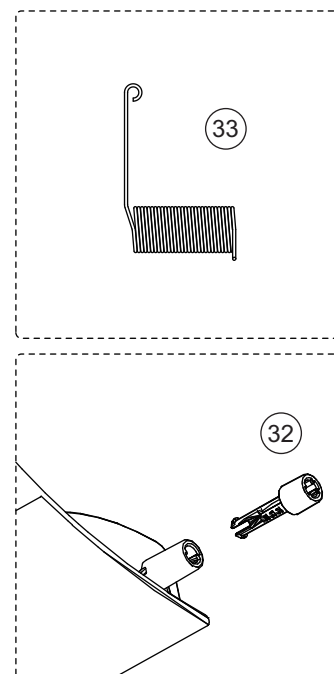
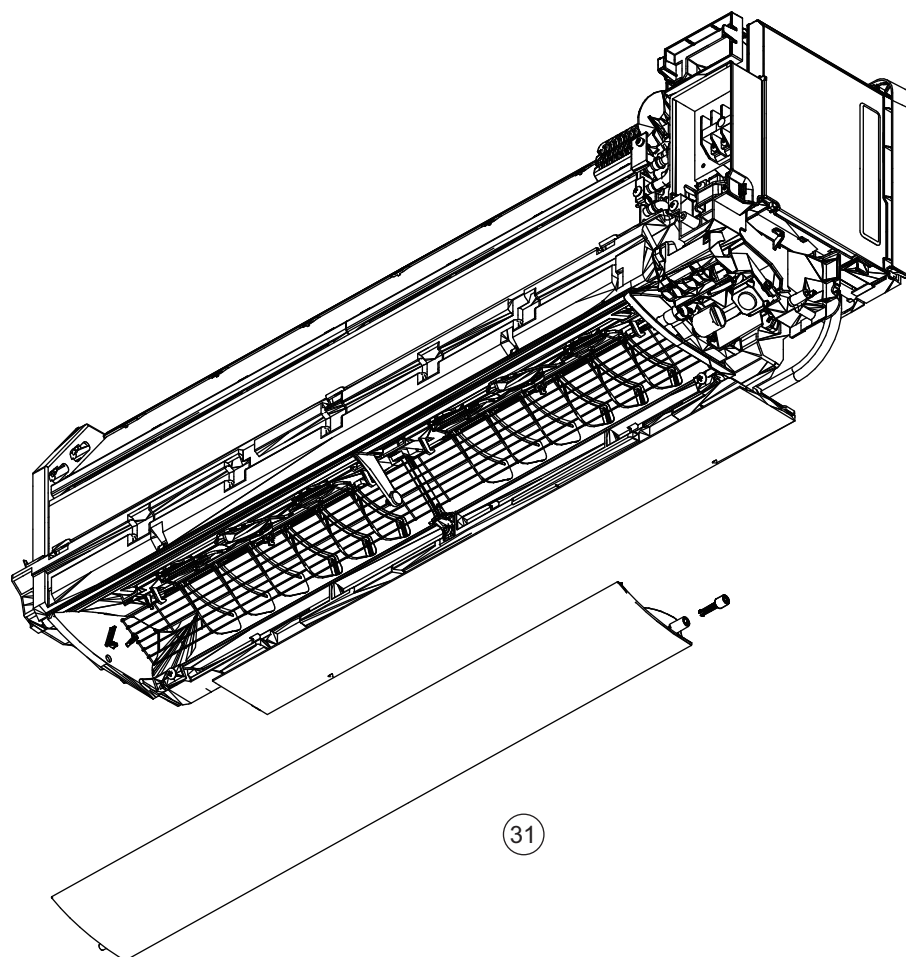
Item no.	Part no.	Part name	Service part
1	9319208008	Remote controller	◆
2	9318912005	Remote controller holder	◆
3	9387480030	Bracket panel	◆
4	9332911008	Electric filter holder	◆
5	9317250009	Air clean filter assy	◆



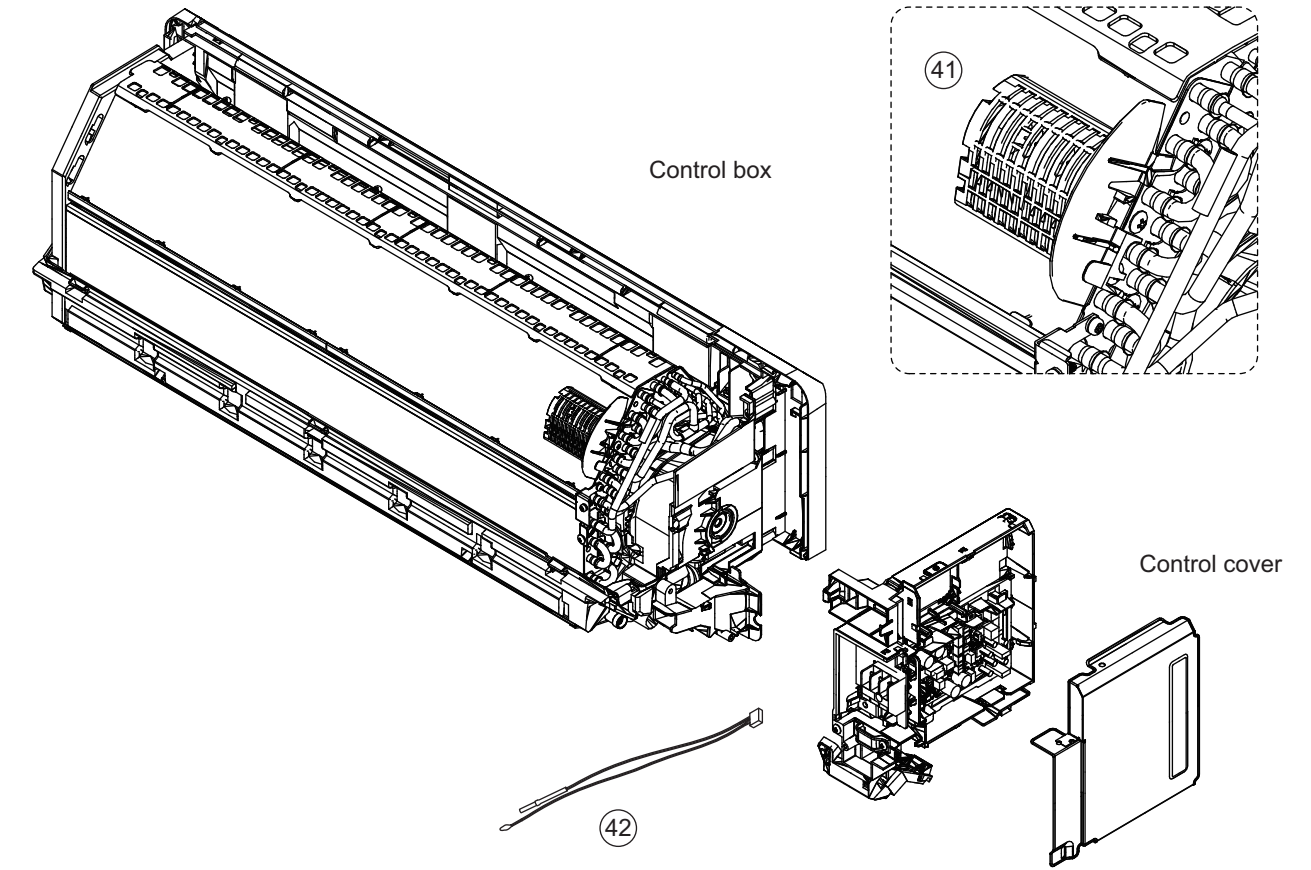
Item no.	Part no.	Part name	Service part
11	9387476002	Screw cover	◆
12	9387477009	Under cover L	◆
13	9387478006	Under cover R	◆
14	9387596427	Front panel total assy	◆



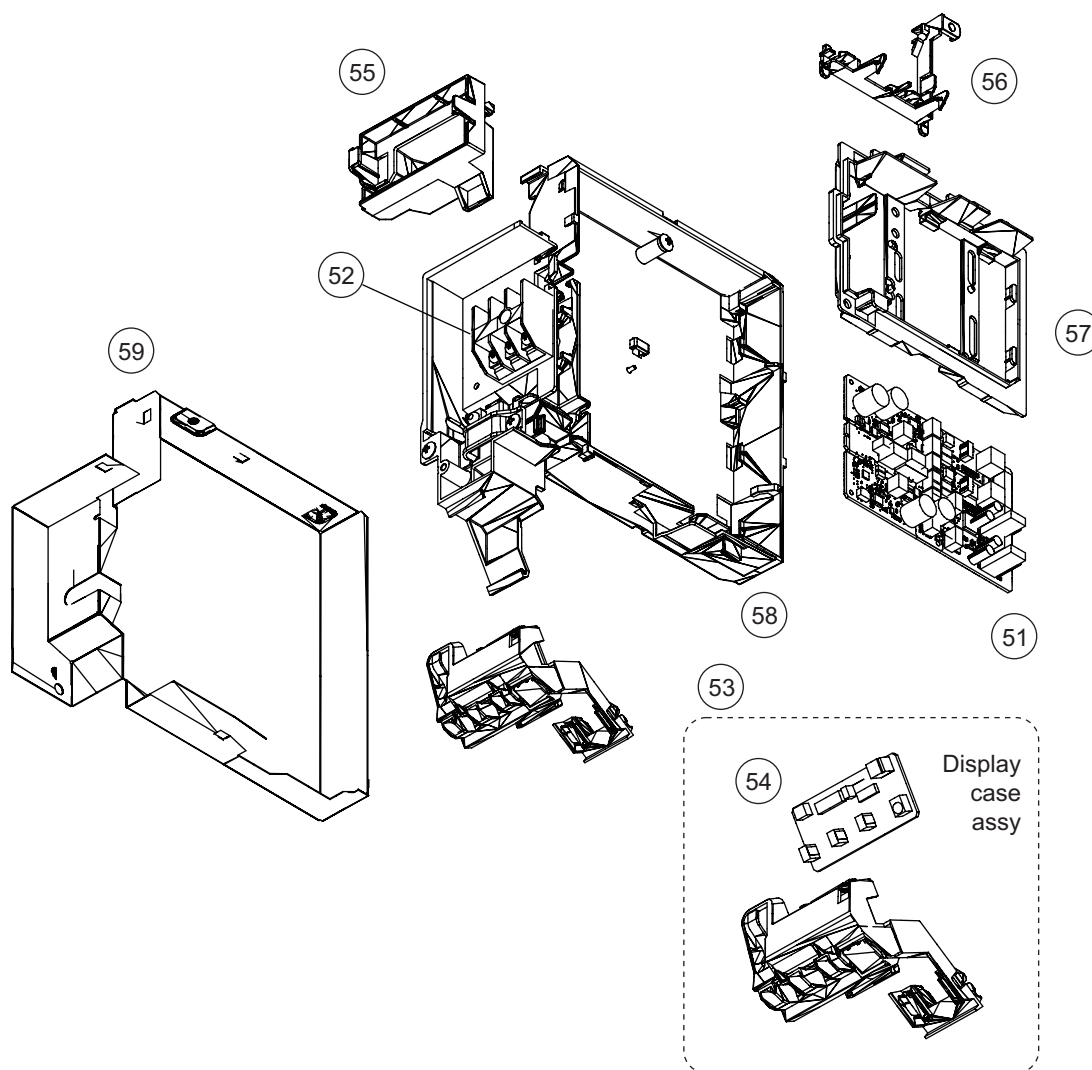
Item no.	Part no.	Part name	Service part
21	9387473018	Air filter	◆
22	9323694019	Intake grille assy	◆
23	9333719009	Grille clasper L	◆
24	9333704005	Grille clasper R	◆



Item no.	Part no.	Part name	Service part
31	9387479041	Horizontal louver assy	◆
32	9332861006	Shaft cover	◆
33	9333951003	Louver spring	◆

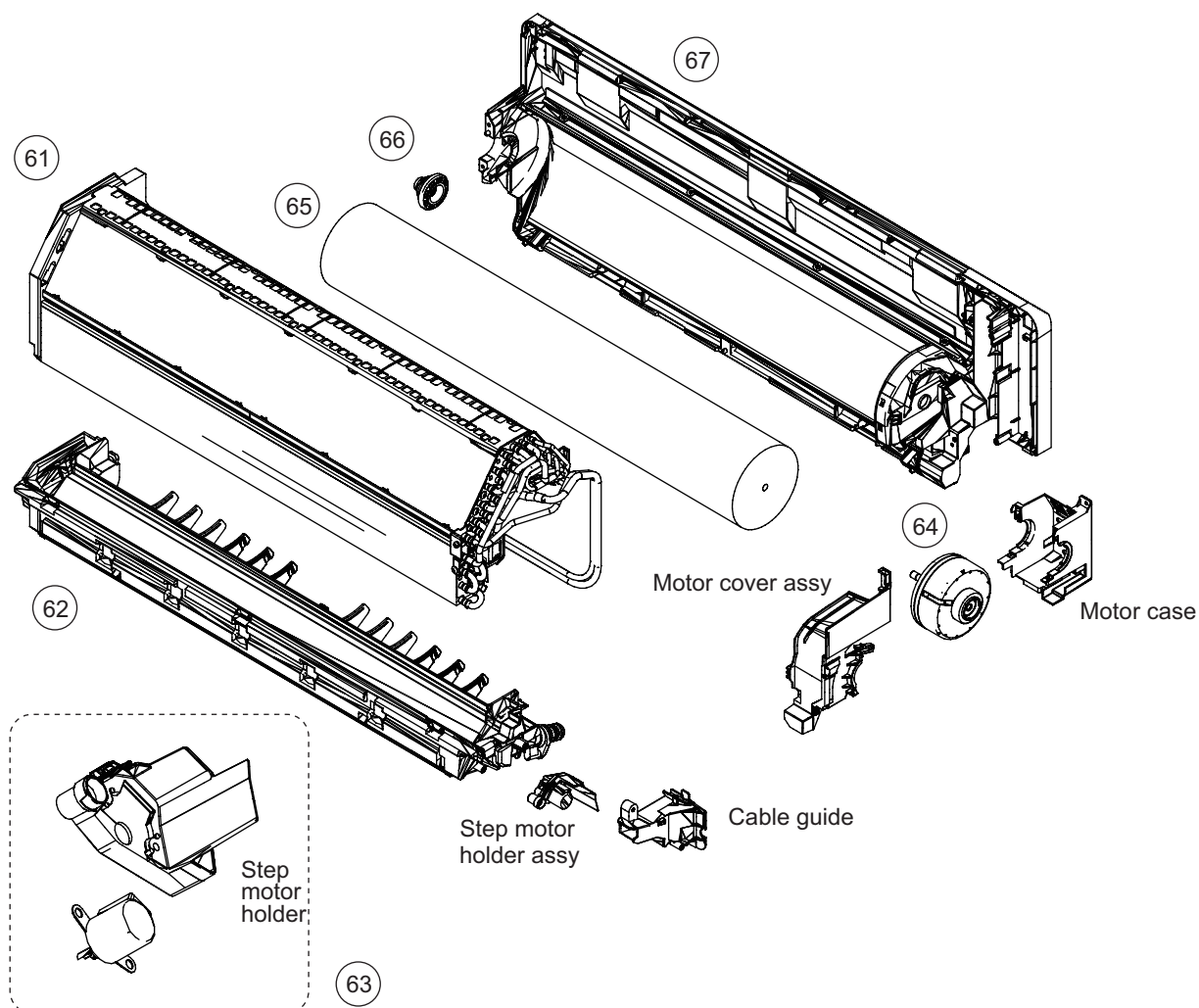


Item no.	Part no.	Part name	Service part
41	9387467017	Room thermistor holder	◆
42	9900627027	Thermistor assy	◆



Item no.	Part no.	Part name	Service part
51	9710368448	Main PCB (For 07 model)	◆
	9710368455	Main PCB (For 09 model)	◆
	9710368462	Main PCB (For 12 model)	◆
	9710368479	Main PCB (For 14 model)	◆
52	9901013027	Terminal	◆
53	9711146069	Display assy	◆
54	9711147042	Indicator PCB	◆
55	9387485004	WLAN holder	◆
56	9387464009	PCB holder A	◆
57	9387795011	PCB holder B	◆
58	9387463026	Control box	◆
59	9323537002	Box shield	◆

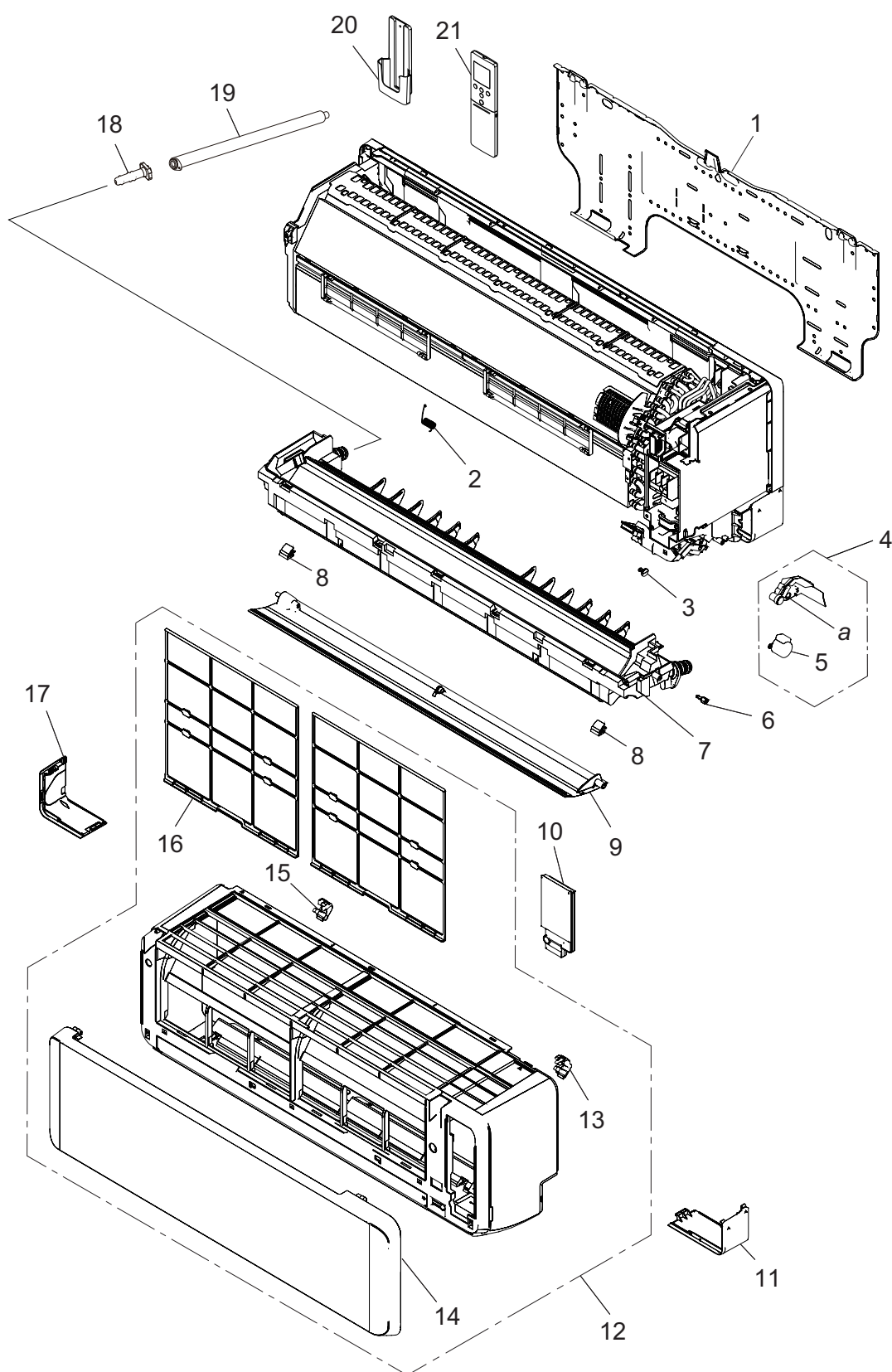




Item no.	Part no.	Part name	Service part
61	9387593211	Evaporator total assy (For 07, 09, 12 model)	◆
	9387593204	Evaporator total assy (For 14 model)	◆
62	9387590104	Drain pan total assy	◆
63	9387714036	Stepping motor holder assy	◆
64	9603688011	Brushless motor (For 07, 09, 12 model)	◆
	9603492014	Brushless motor (For 14 model)	◆
65	9333606033	Crossflow fan assy	◆
66	9333628004	Bearing D assy	◆
67	9387587074	Base assy	◆

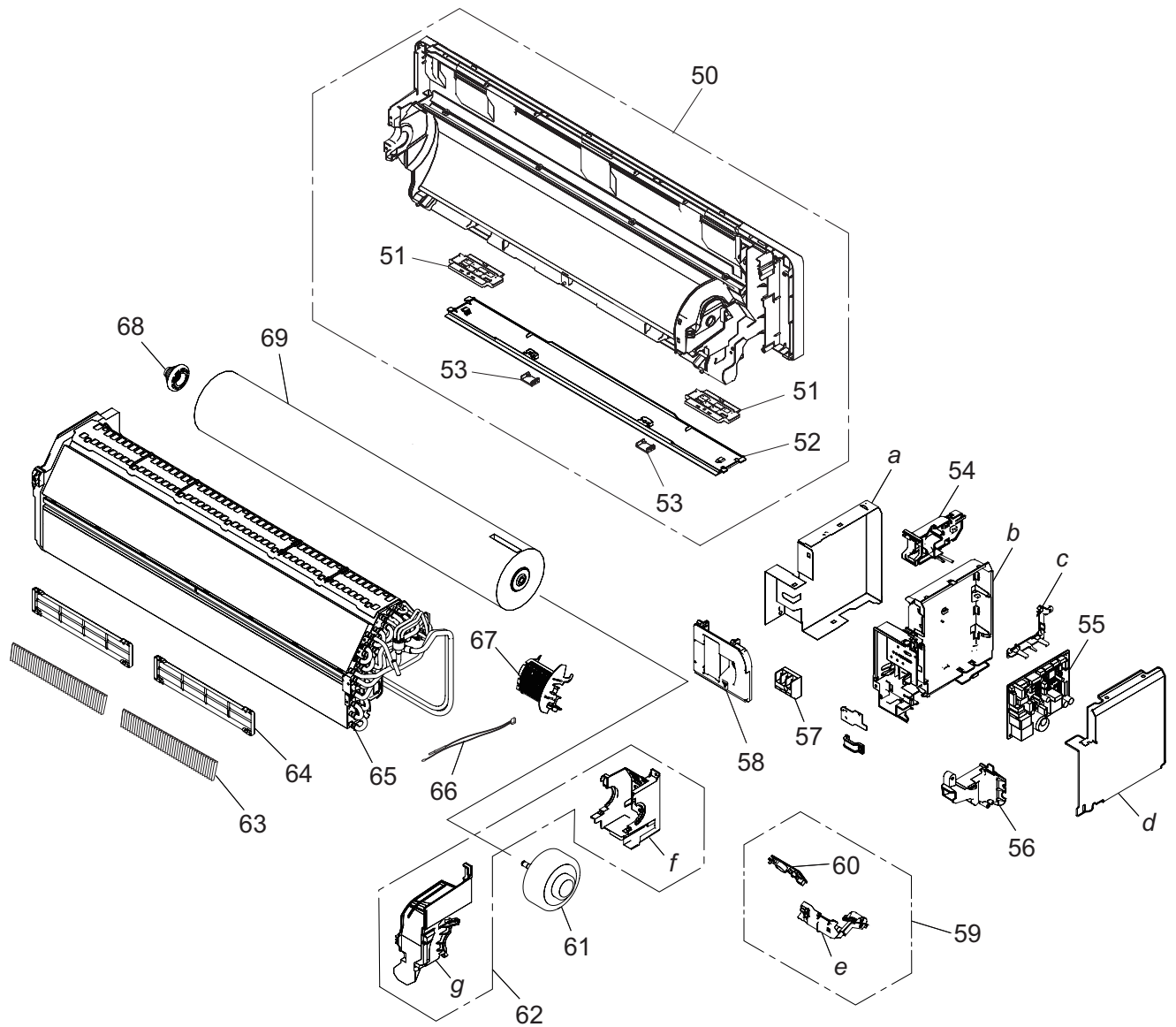
# ■ Models: ASHG07KMCE, ASHG09KMCE, ASHG12KMCE, and ASHG14KMCE

## ● Exterior parts



Item no.	Part no.	Part name	Service part
1	9388142012	Bracket panel	◆
2	9333951003	Louver spring	◆
3	9333608006	Bush	◆
4	9387714050	Step motor holder assy	◆
5	9901011016	Step motor	◆
6	9332861006	Shaft cover	◆
7	9387590104	Drain pan total assy	◆
8	9387476002	Screw cover	◆
9	9387479041	U/D louver assy	◆
10	9387597066	Wire cover assy	◆
11	9387478068	Under cover R	◆
12	9384977069	Front panel total assy	◆
13	9333704005	Grille clamper R	◆
14	9323694019	Intake grill assy	◆
15	9333719009	Grille clamper L	◆
16	9387473018	Air filter	◆
17	9387477061	Under cover L	◆
18	9316177017	Drain cap	◆
19	9316904002	Drain hose assy	◆
20	9318912005	Remote controller holder	◆
21	9352446092	Remote controller	◆
a	—	Step motor holder	—

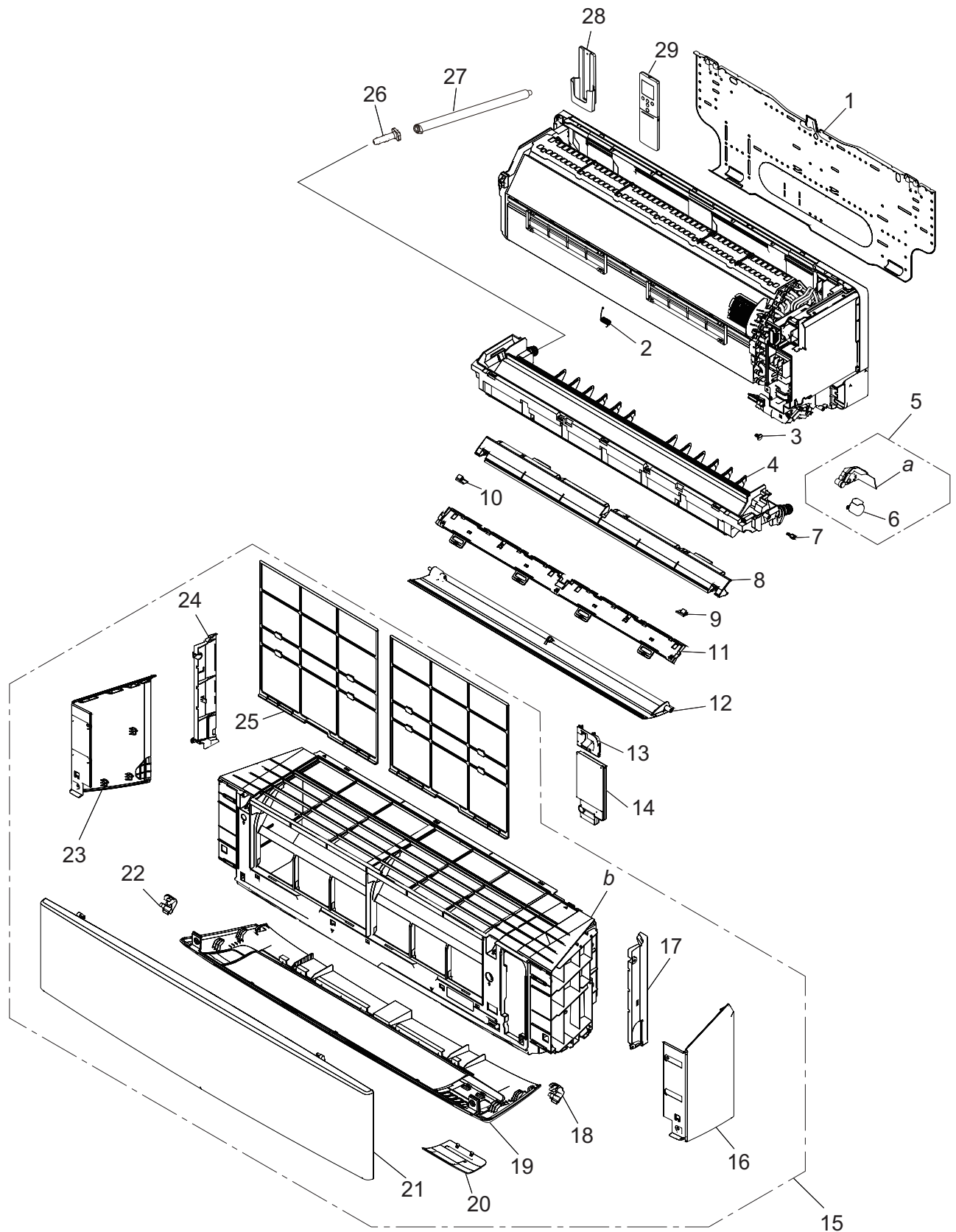
# ● Base, evaporator, and control



Item no.	Part no.	Part name	Service part
50	9387587227	Base assy	◆
51	9388139012	Pipe bracket A	◆
52	9334143001	Under cover C	◆
53	9334137000	Screw cover	◆
54	9383765056	WLAN adapter holder assy	◆
55	9711732217	Main PCB (For 07 model)	◆
	9711732224	Main PCB (For 09 model)	◆
	9711732231	Main PCB (For 12 model)	◆
	9711732248	Main PCB (For 14 model)	◆
56	9387488029	Cable guide	◆
57	9901013010	Terminal	◆
58	9383729041	Wire cover assy	◆
59	9711146021	Display assy	◆
60	9711147028	Indicator PCB	◆
61	9603688028	Brushless motor (For 07—12 models)	◆
	9603492021	Brushless motor (For 14 model)	◆
62	9387589047	Motor case assy	◆
63	9317250009	Air clean filter assy	◆
64	9332911008	Electric filter holder	◆
65	9387593211	Evaporator total assy (For 07—12 models)	◆
	9387593204	Evaporator total assy (For 14 model)	◆
66	9900627065	Thermistor assy	◆
67	9387467017	Room thermistor holder	◆
68	9333628004	Bearing D assy	◆
69	9333606033	Crossflow fan assy	◆
—	9901010071	Wire with connector (CN75 on Main PCB—WLAN adapter [option])	◆
<i>a</i>	—	Box shield	—
<i>b</i>	—	Control box	—
<i>c</i>	—	PCB holder A	—
<i>d</i>	—	Control cover	—
<i>e</i>	—	Display case assy	—
<i>f</i>	—	Motor case	—
<i>g</i>	—	Motor cover	—

■ Models: ASHG07KETA, ASHG09KETA, ASHG12KETA, ASHG14KETA, ASHG07KETA-B, ASHG09KETA-B, ASHG12KETA-B, and ASHG14KETA-B

● Exterior parts

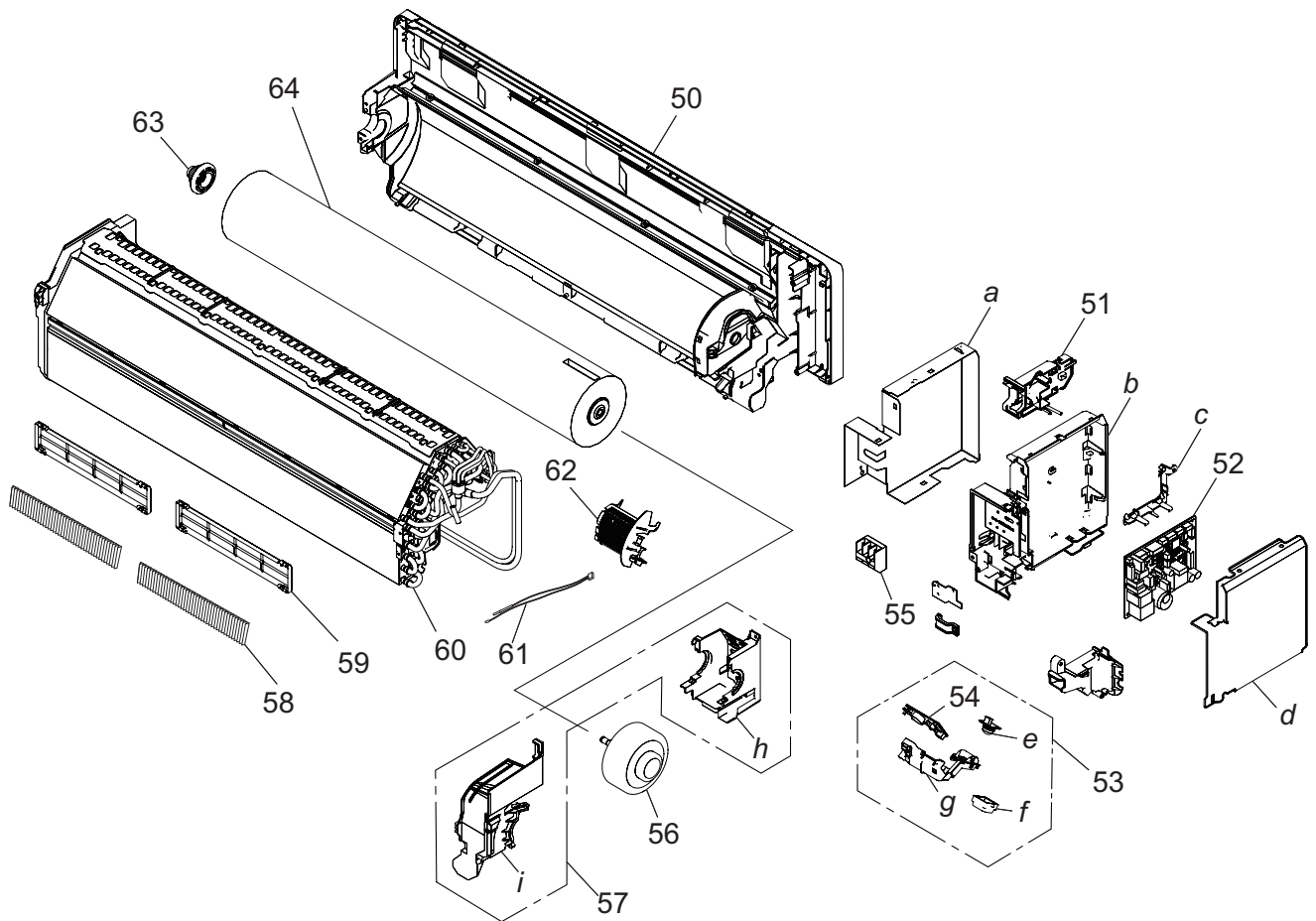


Item no.	Part no.	Part name	Service part
1	9387480023	Bracket panel	◆
2	9387471007	Louver spring	◆
3	9333608006	Bush	◆
4	9387590166	Drain pan total assy	◆
5	9387714036	Step motor holder assy	◆
6	9901011047	Step motor	◆
7	9332861006	Shaft cover (for 07-14KETA model)	◆
	9332861013	Shaft cover (for 07-14KETA-B model)	◆
8	9333766072	Blow panel assy (for 07-14KETA model)	◆
	9333766089	Blow panel assy (for 07-14KETA-B model)	◆
9	9384066008	Screw cover R (for 07-14KETA model)	◆
	9384066015	Screw cover R (for 07-14KETA-B model)	◆
10	9384065001	Screw cover L (for 07-14KETA model)	◆
	9384065018	Screw cover L (for 07-14KETA-B model)	◆
11	9387711028	Spacer H assy	◆
12	9387479003	Horizontal louver assy (for 07-14KETA model)	◆
	9387479034	Horizontal louver assy (for 07-14KETA-B model)	◆
13	9383613036	Wire cover B (for 07-14KETA model)	◆
	9383613043	Wire cover B (for 07-14KETA-B model)	◆
14	9387597066	Wire cover assy (for 07-14KETA model)	◆
	9387597110	Wire cover assy (for 07-14KETA-B model)	◆
15	9387596328	Front panel total assy (for 07-14KETA model)	◆
	9387596335	Front panel total assy (for 07-14KETA-B model)	◆
16	9384059000	Decoration panel R (for 07-14KETA model)	◆
	9384059017	Decoration panel R (for 07-14KETA-B model)	◆
17	9384062000	Side panel R (for 07-14KETA model)	◆
	9384062017	Side panel R (for 07-14KETA-B model)	◆
18	9333704005	Grille clamper R	◆
19	9384140074	Under cover assy (for 07-14KETA model)	◆
	9384140104	Under cover assy (for 07-14KETA-B model)	◆
20	9384067005	Display plate (for 07-14KETA model)	◆
	9384067012	Display plate (for 07-14KETA-B model)	◆
21	9387756159	Intake grille assy (for 07-14KETA model)	◆
	9387756166	Intake grille assy (for 07-14KETA-B model)	◆
22	9333719009	Grille clamper L	◆
23	9384058003	Decoration panel L (for 07-14KETA model)	◆
	9384058010	Decoration panel L (for 07-14KETA-B model)	◆
24	9384061003	Side panel L (for 07-14KETA model)	◆
	9384061010	Side panel L (for 07-14KETA-B model)	◆
25	9387473018	Air filter	◆
26	9316177017	Drain cap	◆
27	9316904002	Drain hose assy	◆
28	9318912005	Remote controller holder	◆
29	9332438741	Remote controller	◆
a	—	Step motor holder	—
b	—	Front panel	—

# ● Base, evaporator, and control

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

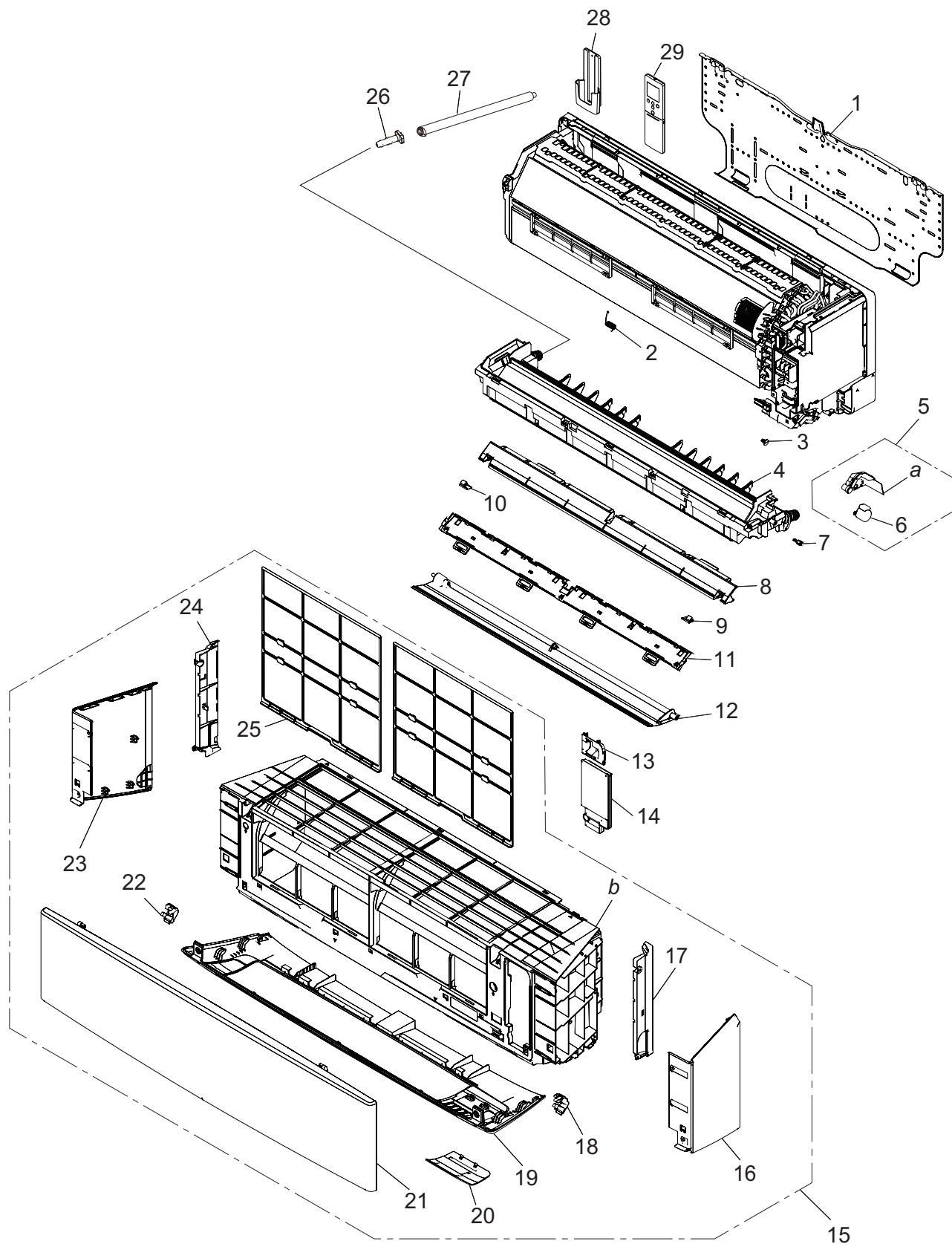




Item no.	Part no.	Part name	Service part
50	9387587098	Base assy (for 07-14KETA model)	◆
	9387587104	Base assy (for 07-14KETA-B model)	◆
51	9383765032	WLAN adapter holder assy	◆
52	9711141590	Main PCB (for 07 model)	◆
	9711141606	Main PCB (for 09 model)	◆
	9711141613	Main PCB (for 12 model)	◆
	9711141620	Main PCB (for 14 model)	◆
53	9711382009	Display assy	◆
54	9711358004	Display PCB	◆
55	9900369057	Terminal	◆
56	9603768003	Brushless motor (for 07-12 model)	◆
	9603631017	Brushless motor (for 14 model)	◆
57	9387589061	Motor case assy	◆
58	9317250009	Air clean filter assy	◆
59	9332911008	Electric filter holder	◆
60	9387593143	Evaporator total assy (for 07-12 model)	◆
	9387593150	Evaporator total assy (for 14 model)	◆
61	9900627041	Thermistor assy	◆
62	9387467000	Room thermistor holder	◆
63	9333628004	Bearing D assy	◆
64	9387055047	Crossflow fan assy	◆
a	—	Box shield	—
b	—	Control box	—
c	—	PCB holder A	—
d	—	Motion sensor	—
e	—	Front panel cover B assy	—
f	—	Display case assy	—
g	—	Control cover	—
h	—	Motor case	—
i	—	Motor cover	—

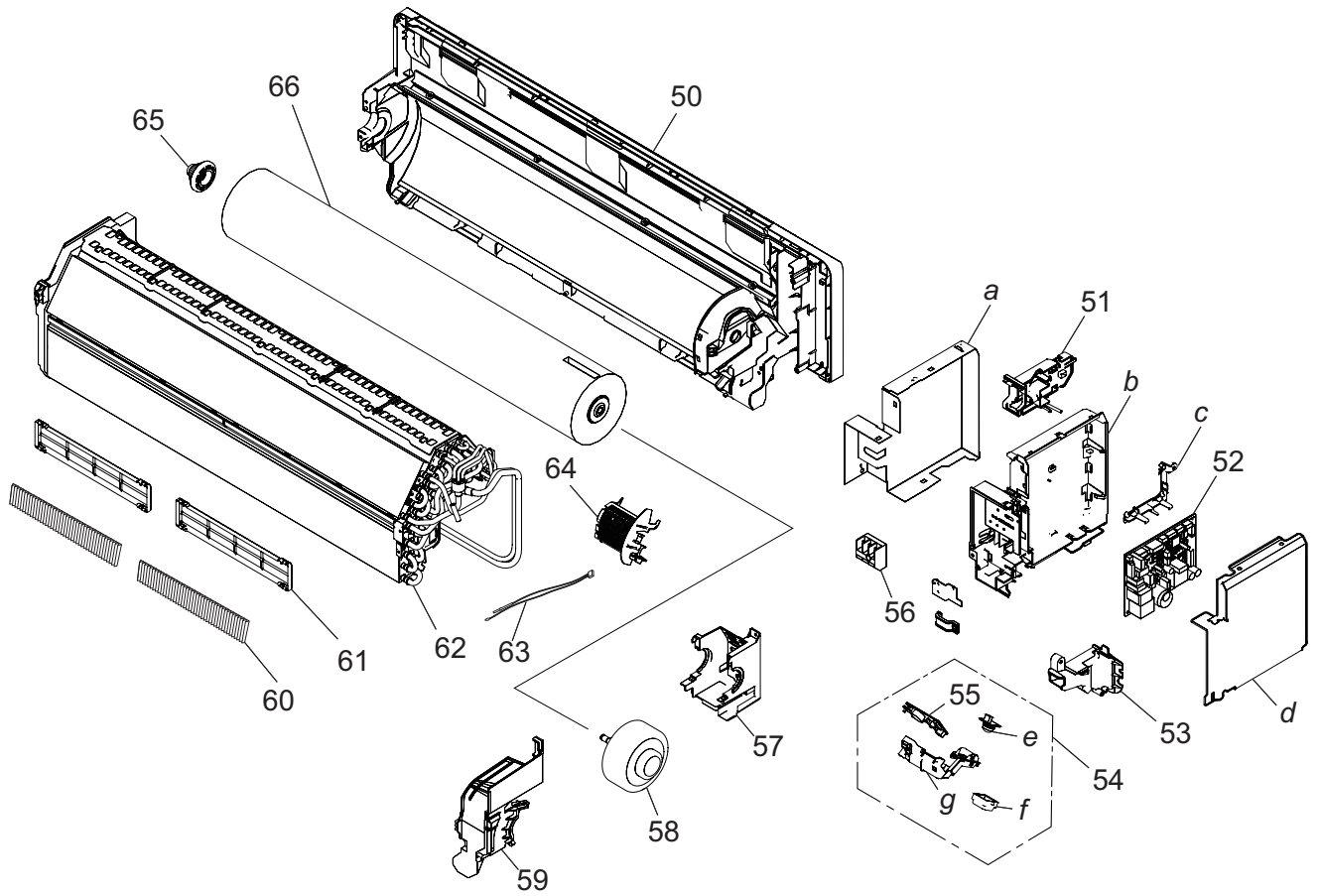
■ Models: ASHG07KETE, ASHG09KETE, ASHG12KETE, ASHG14KETE, ASHG07KETE-B, ASHG09KETE-B, ASHG12KETE-B, and ASHG14KETE-B

● Exterior parts



Item no.	Part no.	Part name	Service part
1	9387480023	Bracket panel	◆
2	9387471007	Louver spring	◆
3	9333608006	Bush	◆
4	9387590166	Drain pan total assy	◆
5	9387714036	Step motor holder assy	◆
6	9901011047	Step motor	◆
7	9332861006	Shaft cover (for 07-14KETA model)	◆
	9332861013	Shaft cover (for 07-14KETA-B model)	◆
8	9333766072	Blow panel assy (for 07-14KETA model)	◆
	9333766089	Blow panel assy (for 07-14KETA-B model)	◆
9	9384066008	Screw cover R (for 07-14KETA model)	◆
	9384066015	Screw cover R (for 07-14KETA-B model)	◆
10	9384065001	Screw cover L (for 07-14KETA model)	◆
	9384065018	Screw cover L (for 07-14KETA-B model)	◆
11	9387711028	Spacer H assy	◆
12	9387479003	U/D louver assy (for 07-14KETA model)	◆
	9387479034	U/D louver assy (for 07-14KETA-B model)	◆
13	9383729027	Wire cover B assy (for 07-14KETA model)	◆
	9387597110	Wire cover B assy (for 07-14KETA-B model)	◆
14	9387597066	Wire cover assy (for 07-14KETA model)	◆
	9383729034	Wire cover assy (for 07-14KETA-B model)	◆
15	9387596328	Front panel total assy (for 07-14KETA model)	◆
	9387596335	Front panel total assy (for 07-14KETA-B model)	◆
16	9384059000	Decoration panel R (for 07-14KETA model)	◆
	9384059017	Decoration panel R (for 07-14KETA-B model)	◆
17	9384062000	Side panel R (for 07-14KETA model)	◆
	9384062017	Side panel R (for 07-14KETA-B model)	◆
18	9333704005	Grille clamper R	◆
19	9384140074	Under cover assy (for 07-14KETA model)	◆
	9384140104	Under cover assy (for 07-14KETA-B model)	◆
20	9384067005	Display plate (for 07-14KETA model)	◆
	9384067012	Display plate (for 07-14KETA-B model)	◆
21	9387756159	Intake grille assy (for 07-14KETA model)	◆
	9387756166	Intake grille assy (for 07-14KETA-B model)	◆
22	9333719009	Grille clamper L	◆
23	9384058003	Decoration panel L (for 07-14KETA model)	◆
	9384058010	Decoration panel L (for 07-14KETA-B model)	◆
24	9384061003	Side panel L (for 07-14KETA model)	◆
	9384061010	Side panel L (for 07-14KETA-B model)	◆
25	9387473018	Air filter	◆
26	9316177017	Drain cap	◆
27	9316904002	Drain hose assy	◆
28	9318912005	Remote controller holder	◆
29	9332438741	Remote controller	◆
—	9901010071	Wire with connector (For USB adapter connection)	◆
a	—	Step motor holder	—
b	—	Front panel	—

# ● Base, evaporator, and control

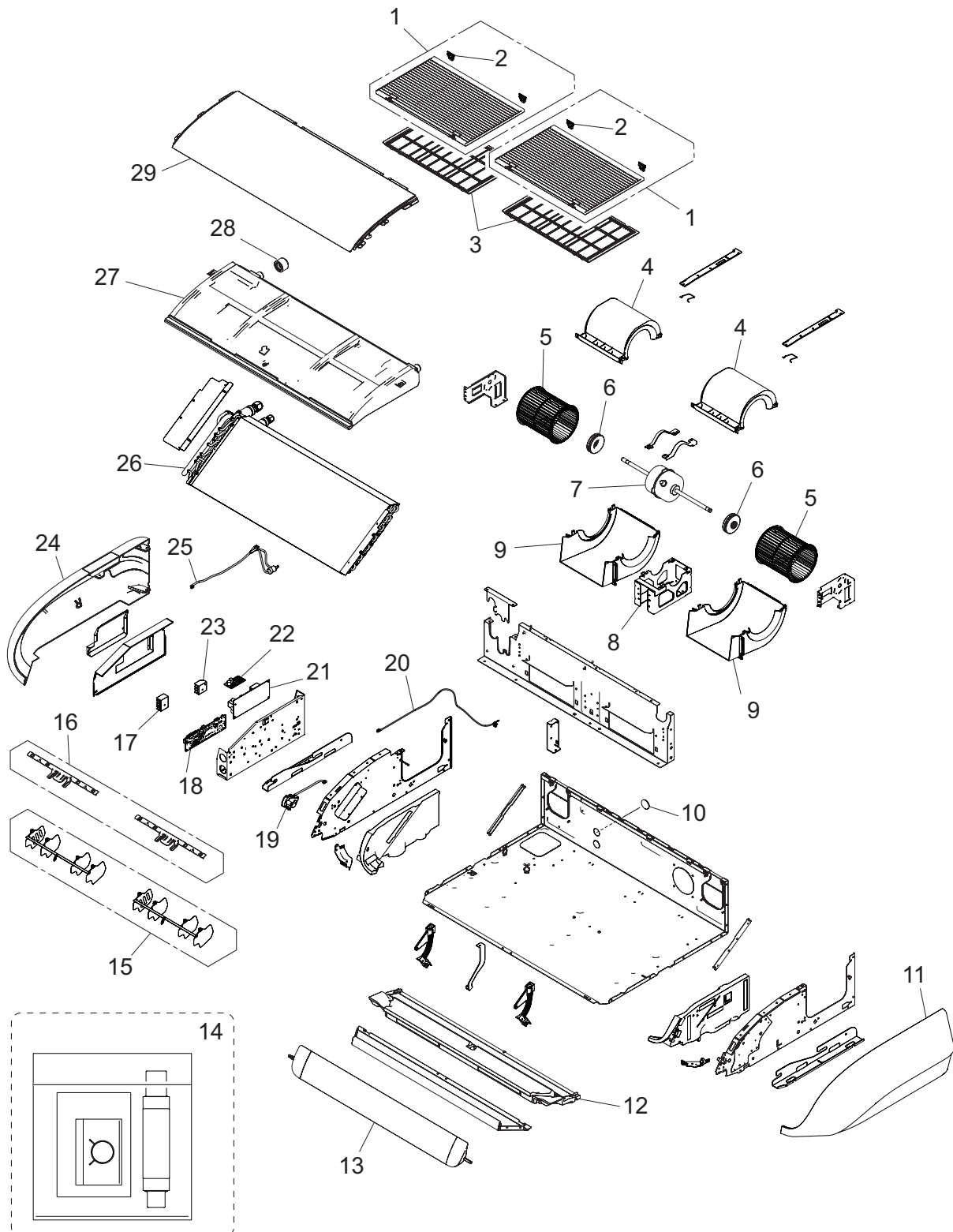


Item no.	Part no.	Part name	Service part
50	9387587098	Base assy (for 07-14KETA model)	◆
	9387587104	Base assy (for 07-14KETA-B model)	◆
51	9383765056	WLAN adapter holder assy	◆
52	9711732293	Main PCB (for 07 model)	◆
	9711732309	Main PCB (for 09 model)	◆
	9711732316	Main PCB (for 12 model)	◆
	9711732323	Main PCB (for 14 model)	◆
53	9387488012	Cable guide	◆
54	9711382009	Display assy	◆
55	9711358004	Display PCB	◆
56	9901013010	Terminal	◆
57	9384500014	Motor case sub assy	◆
58	9603768003	Brushless motor (for 07-12 model)	◆
	9603631017	Brushless motor (for 14 model)	◆
59	9387713022	Motor cover assy	◆
60	9317250009	Air clean filter assy	◆
61	9332911008	Electric filter holder	◆
62	9387593143	Evaporator total assy (for 07-12 model)	◆
	9387593150	Evaporator total assy (for 14 model)	◆
63	9900627041	Thermistor assy	◆
64	9387467000	Room thermistor holder	◆
65	9333628004	Bearing D assy	◆
66	9387055047	Crossflow fan assy	◆
a	—	Box shield	—
b	—	Control box	—
c	—	PCB holder A	—
d	—	Motion sensor	—
e	—	Front panel cover B assy	—
f	—	Display case assy	—
g	—	Control cover	—

## 3-5. Ceiling type

### ■ Model: ABHG18KRTA

#### ● Chassis

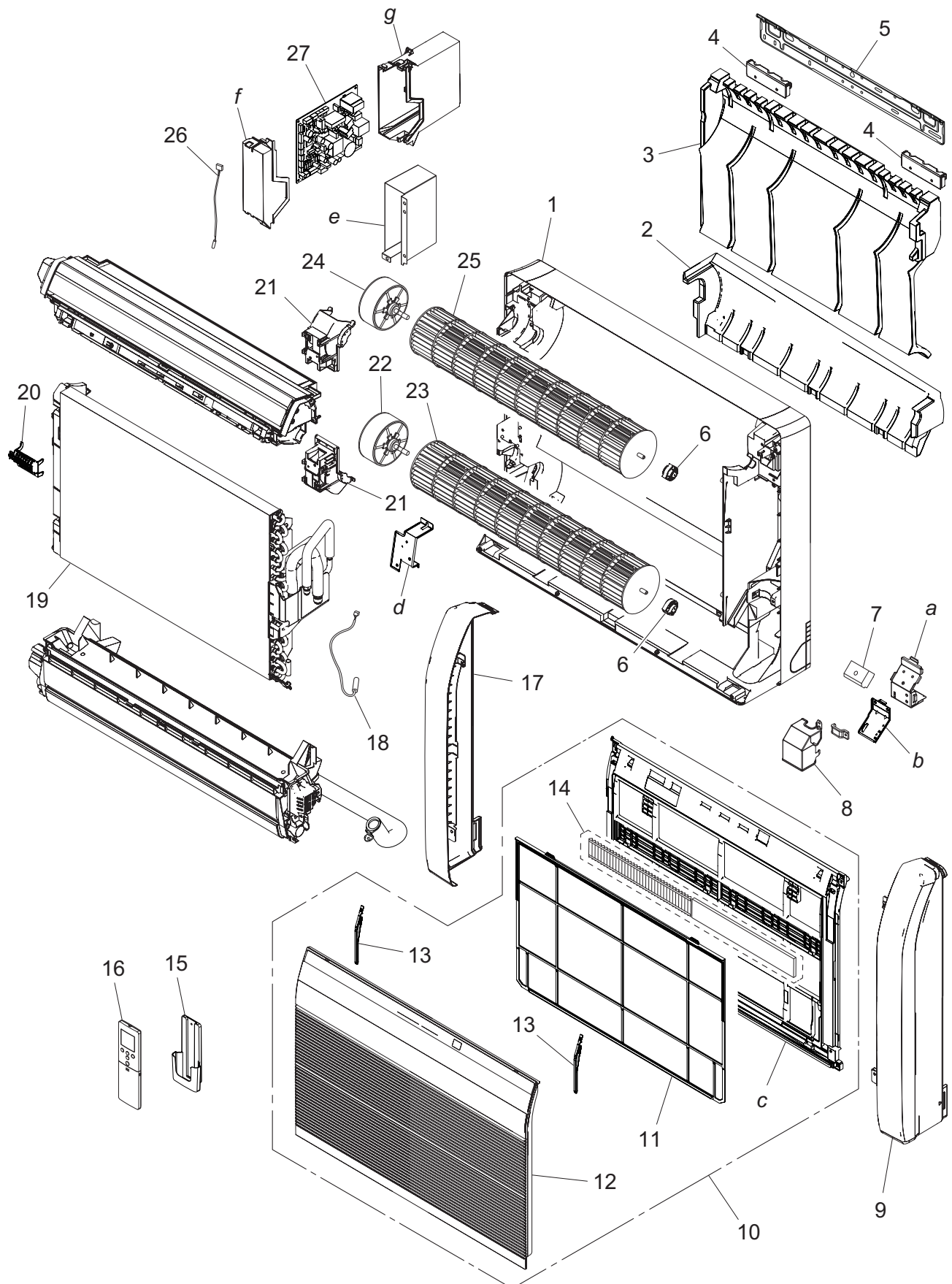


Item no.	Part no.	Part name	Service part
1	9384321015	Intake grille B sub assy	◆
2	9383344008	Grille hinge (2 pcs.)	◆
3	9383342011	Air filter B	◆
4	9384307002	Casing U assy	◆
5	9384110015	Sirocco fan assy	◆
6	9383443008	Rubber (Vibration proof)	◆
7	9603817008	DC fan motor	◆
8	9384236005	Motor mount assy	◆
9	9384311009	Casing B assy	◆
10	9352173011	Cap (Power)	◆
11	9383406003	Side panel L	◆
12	9384308023	Top panel cover assy (2-fan)	◆
13	9384144027	Flap assy (2-fan)	◆
14	9384324009	Hose sub assy	◆
15	9383384004	L and R louver	◆
16	9383385001	Base (Louver)	◆
17	9900896027	Terminal (5P)	◆
18	9710995972	Main PCB	◆
19	9384312013	Gearbox sub assy (including stepping motor)	◆
20	9900960049	Thermistor (Room)	◆
21	9710661006	Power supply PCB	◆
22	9710019005	2-way remote PCB	◆
23	9306489045	Terminal (3P)	◆
24	9384320001	Side panel R sub assy	◆
25	9900892029	Thermistor (Pipe)	◆
26	9384287021	Evaporator total assy	◆
27	9384364029	Drain pan total assy (2-fan)	◆
28	9358746004	Drain cap	◆
29	9384241023	Front panel (2-fan) assy	◆

## 3-6. Floor type

### ■ Models: AGHG09KVCA, AGHG12KVCA, and AGHG14KVCA

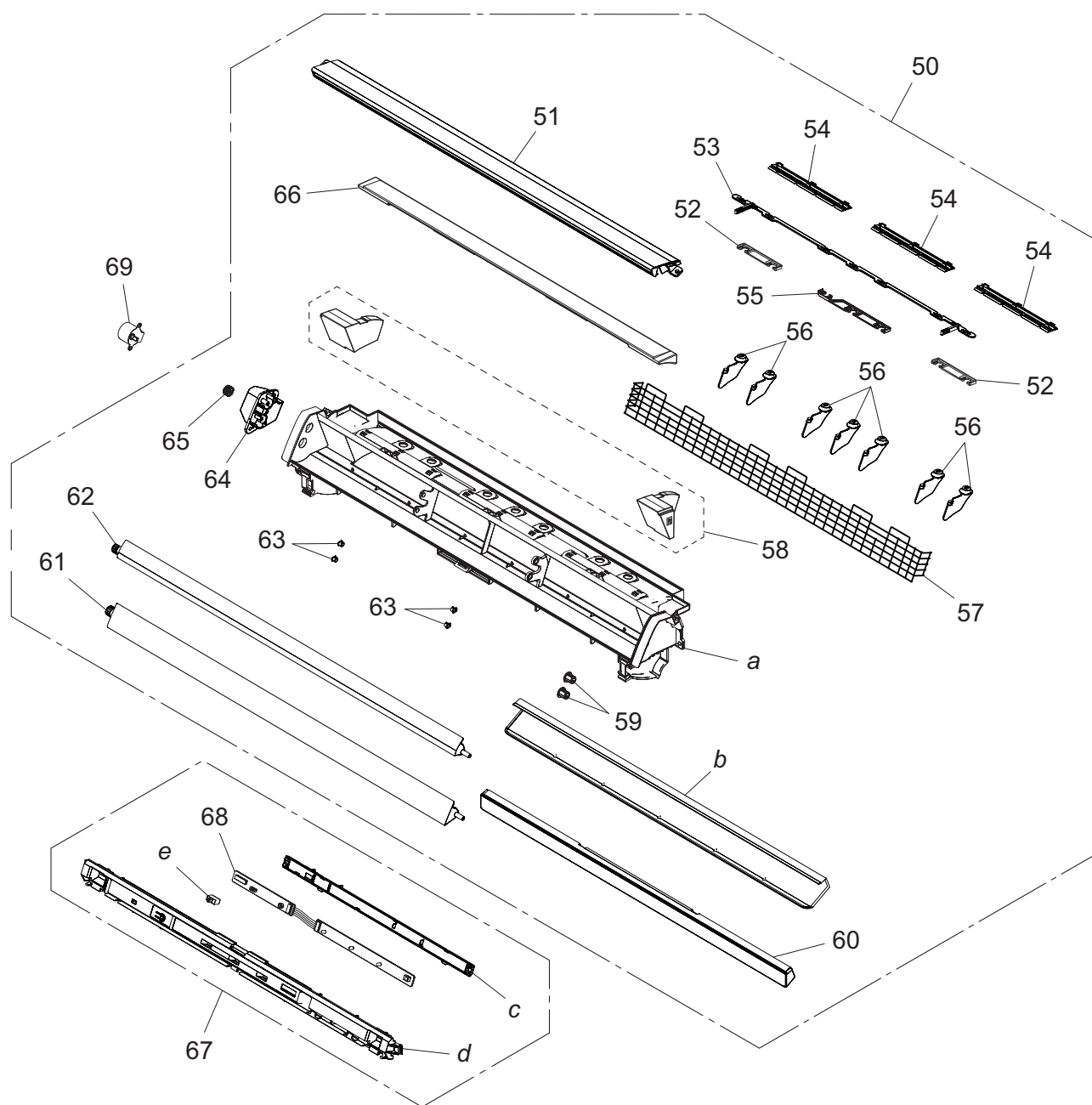
#### ● Exterior parts and chassis





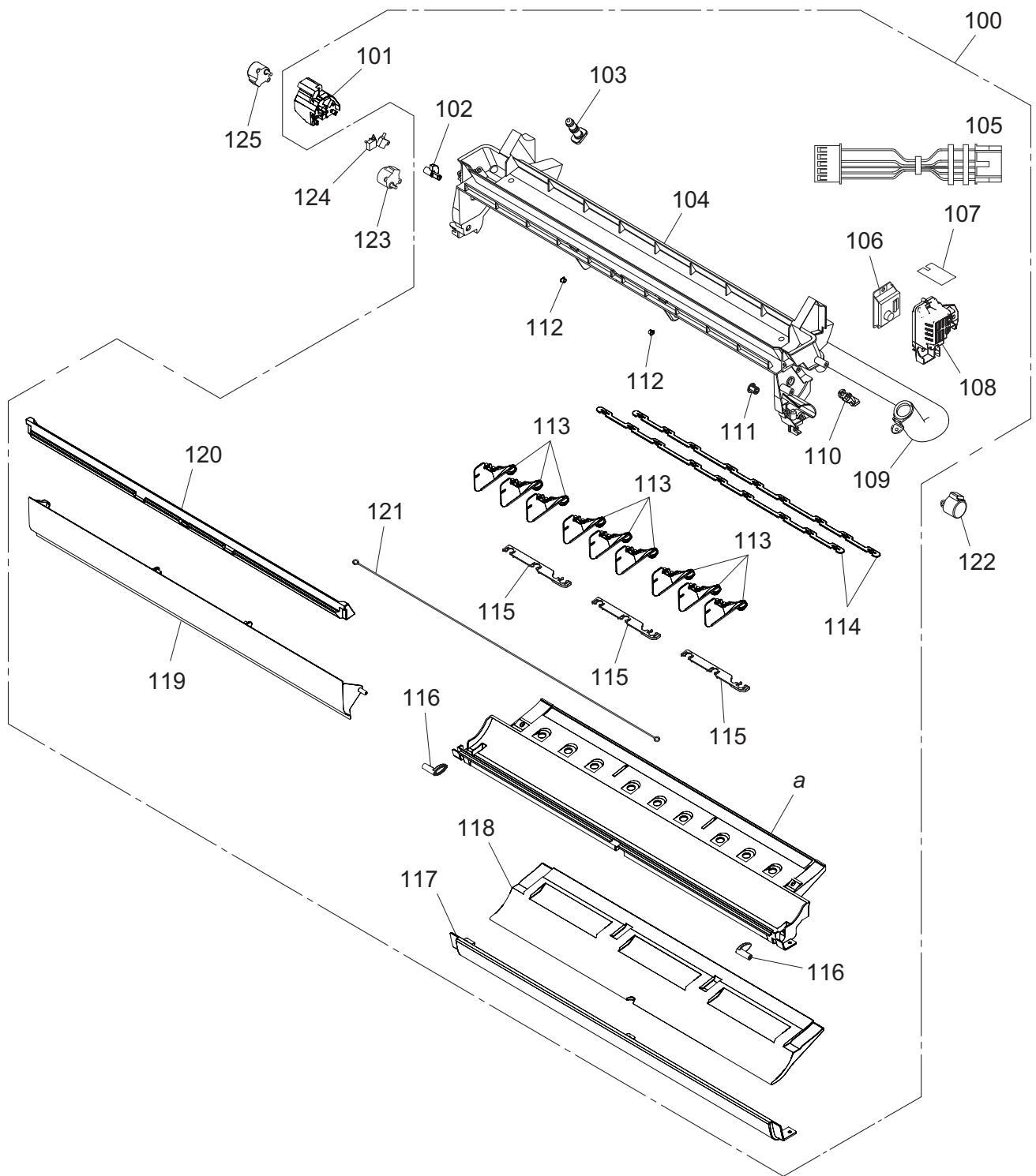
Item no.	Part no.	Part name	Service part
1	9316193024	Base	◆
2	9316197015	Base cover A	◆
3	9316373013	Base cover B	◆
4	9316405011	Base bracket	◆
5	9316272019	Bracket panel	◆
6	9306628024	Bearing C assy	◆
7	9900720087	Terminal (3P)	◆
8	9316307025	Terminal cover	◆
9	9316186019	Front panel R	◆
10	9316415171	Front panel total assy	◆
11	9316189027	Air filter	◆
12	9316418066	Intake grille assy	◆
13	9316458017	Rope assy	◆
14	9316474017	Air clean filter assy	◆
15	9318912005	Remote controller holder	◆
16	9332438871	Remote controller	◆
17	9316187016	Front panel L	◆
18	9900991005	Pipe thermistor	◆
19	9316091269	Evaporator total assy	◆
20	9316192027	Thermistor holder	◆
21	9316195011	Motor holder	◆
22	9602851003	Fan motor (MFD-14SXN)	◆
23	9316309012	Crossflow fan B assy	◆
24	9602850006	Fan motor (MFD-14TXN)	◆
25	9312004034	Crossflow fan assy	◆
26	9900975067	Room thermistor	◆
27	9711694065	Main PCB (09 model)	◆
	9711694072	Main PCB (12 model)	◆
	9711694089	Main PCB (14 model)	◆
—	9711684004	Wire with terminal (Main PCB—Earth)	◆
<i>a</i>	—	Terminal bracket	—
<i>b</i>	—	Cable bracket	—
<i>c</i>	—	Front panel	—
<i>d</i>	—	Terminal bracket (COM)	—
<i>e</i>	—	Control box shield	—
<i>f</i>	—	Control box cover	—
<i>g</i>	—	Control box	—

# ● Casing



Item no.	Part no.	Part name	Service part
50	9316411012	Casing assy	◆
51	9316207011	Top cover	◆
52	9315281012	Spacer C	◆
53	9316209015	Joint U	◆
54	9316210011	Guard holder	◆
55	9315282019	Spacer D	◆
56	9316208018	L and R louver U	◆
57	9316211018	Fan guard	◆
58	9316310018	Casing cover L and R	◆
59	9312156016	Bushing B	◆
60	9316308015	Casing cover F	◆
61	9316206014	Louver Z	◆
62	9316205017	Louver U	◆
63	9303529010	Bushing A	◆
64	9316213012	Gear case	◆
65	9309994003	Gear A	◆
66	9316273016	Casing cover B	◆
67	9711714008	Display assy	◆
68	9711696007	Indicator PCB	◆
69	9900384043	Step motor (Up/Down)	◆
<i>a</i>	—	Casing	—
<i>b</i>	—	Casing reinforcement	—
<i>c</i>	—	Display cover	—
<i>d</i>	—	Display case	—
<i>e</i>	—	Switch cover	—

# ● Drain pan

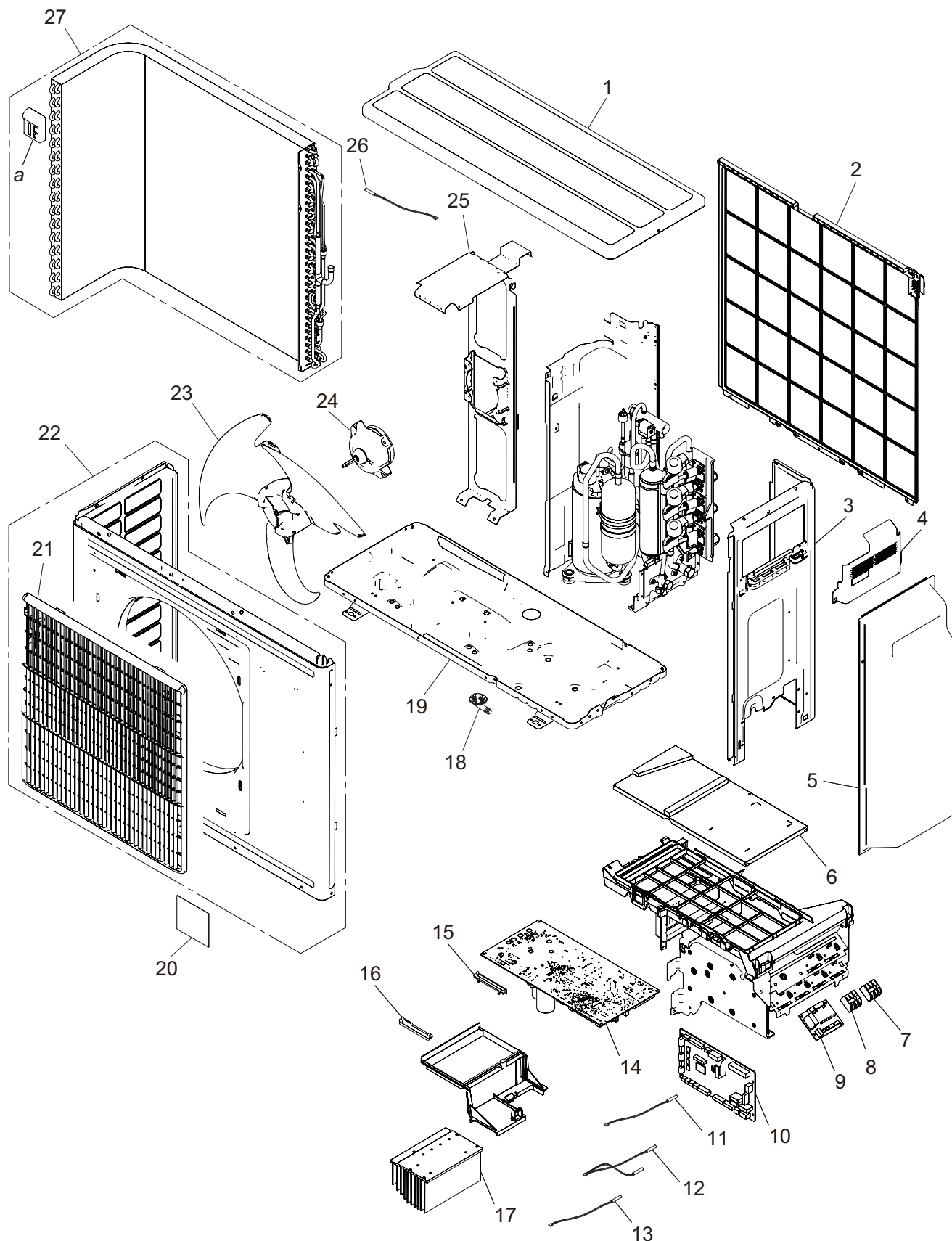


Item no.	Part no.	Part name	Service part
100	9316412057	Drain pan assy	◆
101	9316217010	Limit switch cover	◆
102	9316218017	Key top	◆
103	9316177017	Drain cap	◆
104	9316214026	Drain pan U	◆
105	9711683007	Wire with connector (Refrigerant leak detect sensor—P410 on Main PCB)	◆
106	9901089008	Refrigerant leak detect sensor	◆
107	9384838001	Sensor cover seal	◆
108	9384709004	Sensor cover	◆
109	9314147029	Drain hose assy	◆
110	9316384019	Drain hose holder	◆
111	9312156016	Bushing B	◆
112	9303529010	Bushing A	◆
113	9316334014	L and R louver Z	◆
114	9316335011	Joint Z	◆
115	9315282019	Spacer D	◆
116	9316219014	Stopper	◆
117	9316374010	Lower cover	◆
118	9316386013	Drain pan cover B	◆
119	9316216013	Damper	◆
120	9316274013	Drain pan cover F	◆
121	9316918009	Fan guard Z	◆
122	9900384074	Step motor (Damper lock R)	◆
123	9900384067	Step motor (Damper lock L)	◆
124	9900424015	Micro switch (Limit)	◆
125	9900384050	Step motor (Damper)	◆
<i>a</i>	—	Drain pan Z	—

## 4. Outdoor unit parts list

### 4-1. Models: AOHG18KBTA3 and AOHG24KBTA3

#### ■ Exterior parts and Chassis

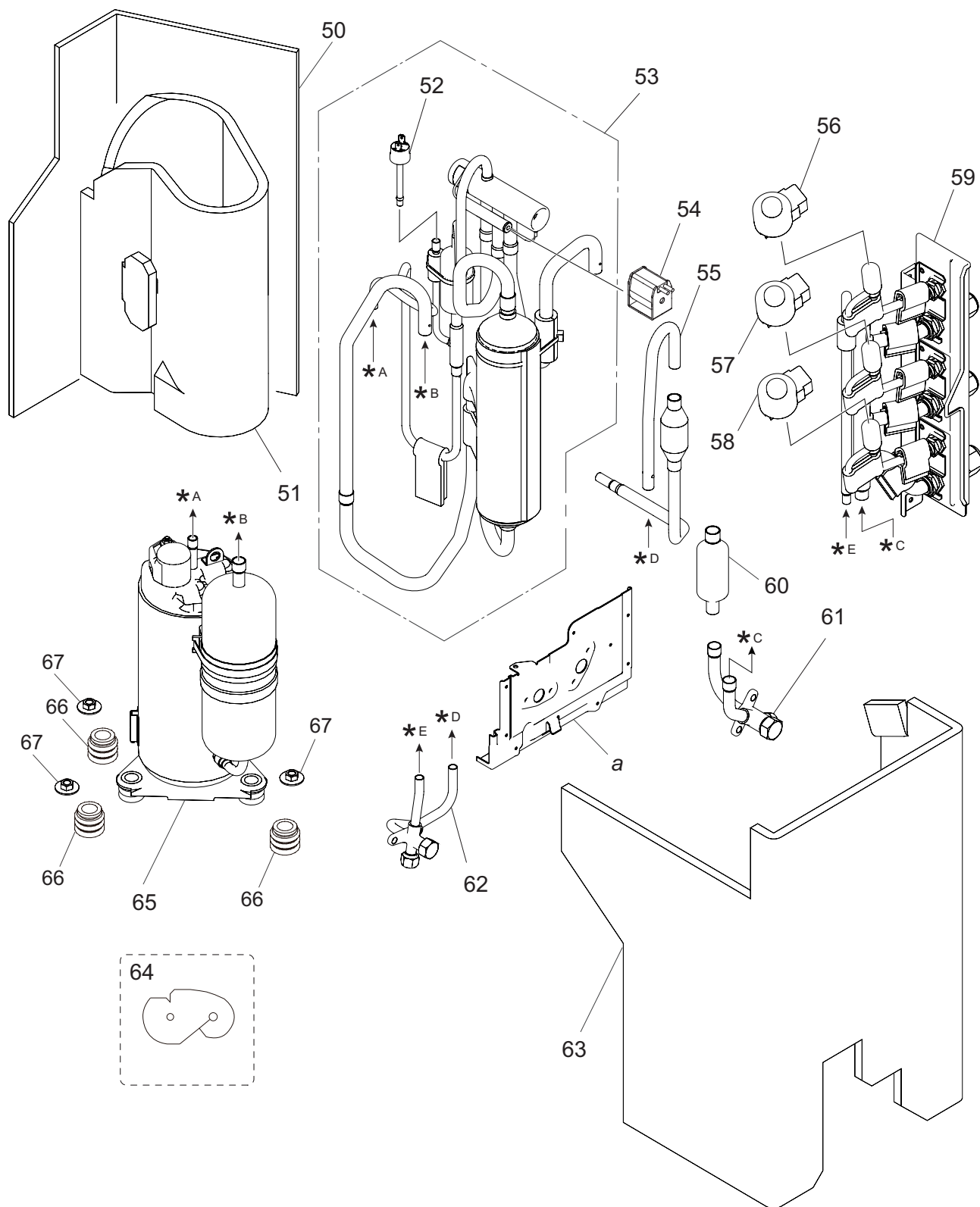


Item no.	Part no.	Part name	Service part
1	9322556073	Top panel assy	◆
2	9322811042	Protective net	◆
3	9322552266	Cabinet right assy	◆
4	9322554031	Terminal cover assy	◆
5	9322570079	Switch cover assy	◆
6	9322267016	Shield panel	◆
7	9900369088	Terminal (Power)	◆
8	9900369071	Terminal (Inner)	◆
9	9711609007	Indicator PCB	◆
10	9711432315	Main PCB (For 18 model)	◆
	9711432322	Main PCB (For 24 model)	◆
11	9900565008	Thermistor assy (Outdoor temp.)	◆
12	9900727048	Thermistor assy	◆
13	9900985035	Compressor thermistor	◆
14	9709685778	Inverter PCB	◆
15	9322379009	IPM spacer R	◆
16	9322250001	IPM spacer L	◆
17	9322421043	Heat sink	◆
18	9322144003	Drain pipe	◆
19	9322322050	Base assy	◆
20	9319157009	Emblem	◆
21	9322149008	Blow grille	◆
22	9322555373	Front panel assy	◆
23	9322150004	Propeller fan	◆
24	9603601003	DC fan motor	◆
25	9322553034	Motor bracket assy	◆
26	9900984045	Thermistor (Heat exchanger)	◆
27	9323834644	Heat exchanger unit	◆
a	—	Hair pin cushion	—

# Compressor

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST




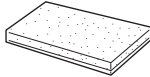
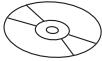


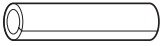
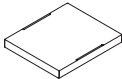
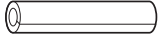




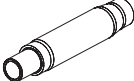


Item no.	Part no.	Part name	Service part
50	9384904003	S-insulator K	◆
51	9384901002	S-insulator B	◆
52	9900186029	Pressure switch	◆
53	9384894007	4-way valve assy	◆
54	9970194016	Solenoid	◆
55	9384580009	Pipe (Condenser outlet) B	◆
56	9970186073	Expansion valve coil C (L=1160)	◆
57	9970187049	Expansion valve coil B (L=1040)	◆
58	9970186066	Expansion valve coil A (L=920)	◆
59	9384881045	Valve unit (For 18 model)	◆
	9384881052	Valve unit (For 24 model)	◆
60	9322436009	Muffler	◆
61	9322477040	3-way valve assy (Ø12.70)	◆
62	9381055029	3-way valve assy (Ø9.52)	◆
63	9384902009	S-insulator F	◆
64	9384903006	S-insulator H	◆
65	9810520005	Compressor	◆
66	9322386007	Cushion rubber	◆
67	9313437008	Special nut	◆
—	9901025020	Thermistor (Valve temperature) A, B	◆
—	9901093012	Thermistor (Valve temperature) C	◆
—	9711839008	Wire with connector (P131 on Main PCB—P133 on Indicator PCB)	◆
—	9711840004	Wire with connector (P130 on Main PCB—P132 on Indicator PCB)	◆
—	9711203021	Wire with connector (P660 on Main PCB—P662 on Inverter PCB)	◆
—	9711841001	Wire with connector (P100 on Main PCB—P101 on Inverter PCB)	◆
—	9710542015	Wire assy (P20 on Inverter PCB—Pressure switch)	◆
—	9711747006	Wire with connector (P70 on Main PCB—Terminal 3 on indoor unit)	◆
—	9707310016	Wire with terminal (For Terminal 1 [L] on indoor unit)	◆
—	9707310023	Wire with terminal (For Terminal 2 [N] on indoor unit)	◆
<i>a</i>	—	Valve bracket	—

## 5. Accessories


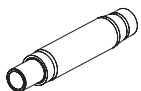
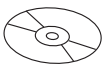





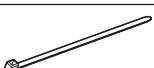
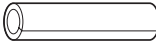
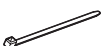
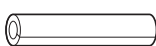
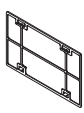
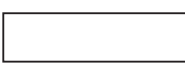
### 5-1. Compact cassette type

■ Models: AUXG07KVLA, AUXG09KVLA, AUXG12KVLA, AUXG14KVLA, and AUXG18KVLA


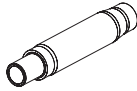
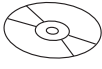






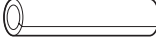

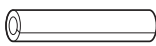

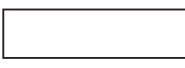
Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Drain hose insulation		1
Operating manual (CD-ROM)		1	Hose band		1
Installation manual		1	Coupler heat insulation (large)		1
Template (Carton top)		1	Coupler heat insulation (small)		1
M10 nut A (with flange)		4	Cable tie		2
M10 nut B (with spring lock washer)		4	Wire crimper		1
Drain hose		1			

## 5-2. Mini duct type

### ■ Models: ARXG07KSLAP, ARXG09KSLAP, ARXG12KSLAP, and ARXG14KSLAP





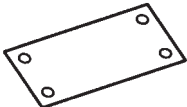
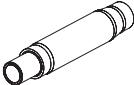





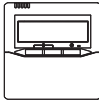
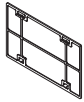



Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Drain hose		1
Operating manual (CD-ROM)		1	Hose band		1
Installation manual		1	Drain hose insulation B		1
Installation template (Carton top)		1	Washer		8
Cable tie (large)		4	Coupler heat insulation (large)		1
Cable tie (medium)		3	Coupler heat insulation (small)		1
Filter (small)		2	Insulation (For electrical wiring)		2

## Model: ARXG18KSLAP

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Drain hose		1
Operating manual (CD-ROM)		1	Hose band		1
Installation manual		1	Drain hose insulation B		1
Installation template (Carton top)		1	Washer		8
Cable tie (large)		4	Coupler heat insulation (large)		1
Cable tie (medium)		3	Coupler heat insulation (small)		1
Filter (large)		2	Insulation (For electrical wiring)		2







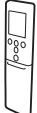
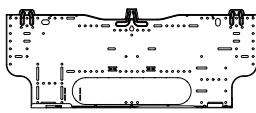
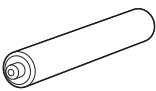


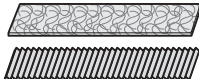
## 5-3. Slim duct type

### ■ Models: ARXG07KLLAP, ARXG09KLLAP, ARXG12KLLAP, ARXG14KLLAP, and ARXG18KLLAP

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cable tie (Large)		4
Installation manual		1	Cable tie (Small)		3
Installation template		1	Drain hose		1
Washer		8	Hose band		1
Coupler heat insulation (Large)		1	Drain hose insulation B		1
Coupler heat insulation (Small)		1	Remote controller		1
Filter (Small) (For 9/12 models)		2	Remote controller cable		1
Filter (Large) (For 18 models)		2	Tapping screw		2

## 5-4. Wall mounted type



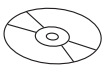



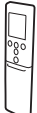
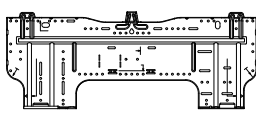
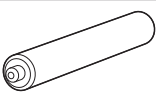

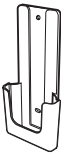
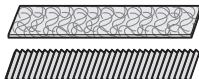
### ■ Models: ASHG07-14KGTB, ASHG07-14KMTB, and ASHG07-14KMCC

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cloth tape		1
Operating manual (CD-ROM)		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Wall hook bracket		1
Battery		2	Filter holder		2
Remote controller holder		1	Air cleaning filters		1


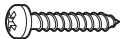







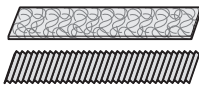
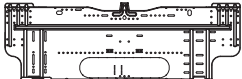
# ■ Models: ASHG07KGTE, ASHG09KGTE, ASHG12KGTE, and ASHG14KGTE

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cloth tape		1
Operating manual (CD-ROM)		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Wall hook bracket		1
Battery		2	Filter holder		2
Remote controller holder		1	Air cleaning filters		1

■ Model: ASHG18KMTB


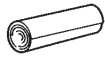
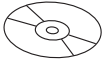
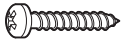



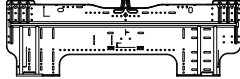


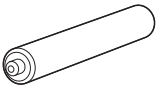
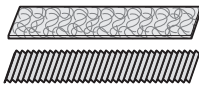
Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Battery		2
Remote controller holder		1	Filter holder		2
Cloth tape		1	Air cleaning filters		1
Wall hook bracket		1			

TECHNICAL DATA  
AND PARTS LIST



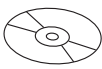



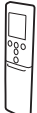
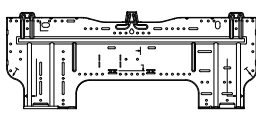
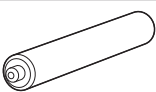

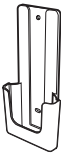
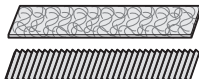
TECHNICAL DATA  
AND PARTS LIST




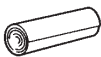
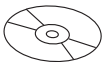




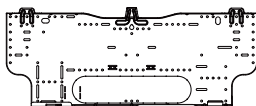



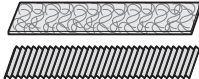
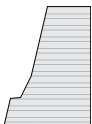
## Model: ASHG18KMTE

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cloth tape		1
Operating manual (CD-ROM)		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Wall hook bracket		1
Remote controller holder		2	Filter holder		2
Battery		2	Air cleaning filters		1

## ■ Models: ASHG07KMCE, ASHG09KMCE, ASHG12KMCE, and ASHG14KMCE


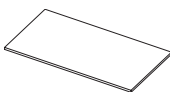
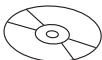
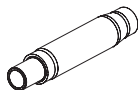


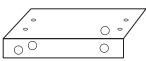







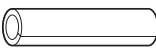

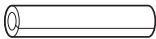
Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cloth tape		1
Operating manual (CD-ROM)		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Wall hook bracket		1
Battery		2	Filter holder		2
Remote controller holder		1	Air cleaning filters		1

■ **Models: ASHG07KETA, ASHG09KETA, ASHG12KETA, ASHG14KETA, ASHG07KETA-B, ASHG09KETA-B, ASHG12KETA-B, ASHG14KETA-B, ASHG07KETE, ASHG09KETE, ASHG12KETE, ASHG14KETE, ASHG07KETE-B, ASHG09KETE-B, ASHG12KETE-B, and ASHG14KETE-B**

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cloth tape		1
Operating manual (CD-ROM)		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Wall hook bracket		1
Battery		2	Filter holder		2
Remote controller holder		1	Air cleaning filters		1
Template (for pipe cover cutting)		1			


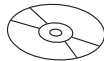

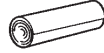
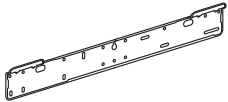




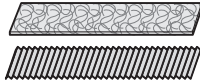

## 5-5. Ceiling type

### ■ Model: ABHG18KRTA

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Insulation		1
Operating manual (CD-ROM)		1	Drain hose		1
Installation manual		1	Hose band		1
Template		1	Cable tie (large)		4
M10 nut A (with flange)		4	Cable tie (small)		1
M10 nut B (with spring lock washer)		4	Remote controller cable hole cap		1
Washer		8	Tapping screw (White)		6
Coupler heat insulation (large)		1	Tapping screw		3
Coupler heat insulation (small)		1			


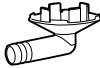
## 5-6. Floor type

### ■ Models: AGHG09KVCA, AGHG12KVCA, and AGHG14KVCA


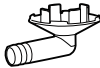
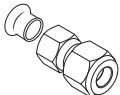
Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Operating manual (CD-ROM)		1
Installation manual		1	Cloth tape		1
Wall hook bracket		1	Tapping screws (large)		9
Remote controller		1	Tapping screws (small)		2
Battery		2	Air cleaning filters		1
Remote controller holder		1			

## 5-7. Outdoor unit

### ■ Model: AOHG18KBTA3

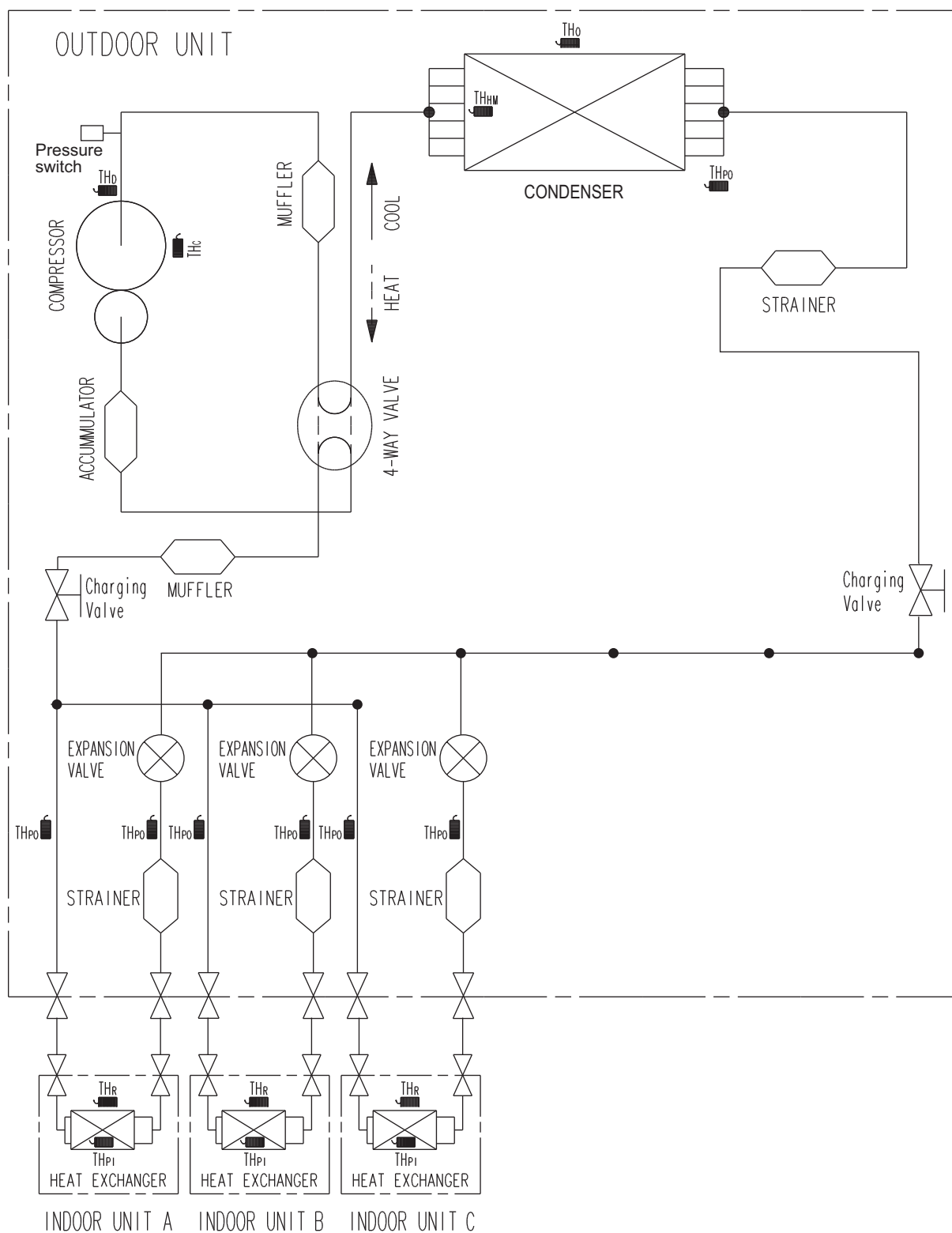
Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain pipe		1

### ■ Model: AOHG24KBTA3

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain pipe		1
Adapter K: mm (in) 12.70 (1/2) to 9.52 (3/8)		1			

## 6. Refrigerant system diagrams

### 6-1. Models: AOHG18KBTA3 and AOHG24KBTA3

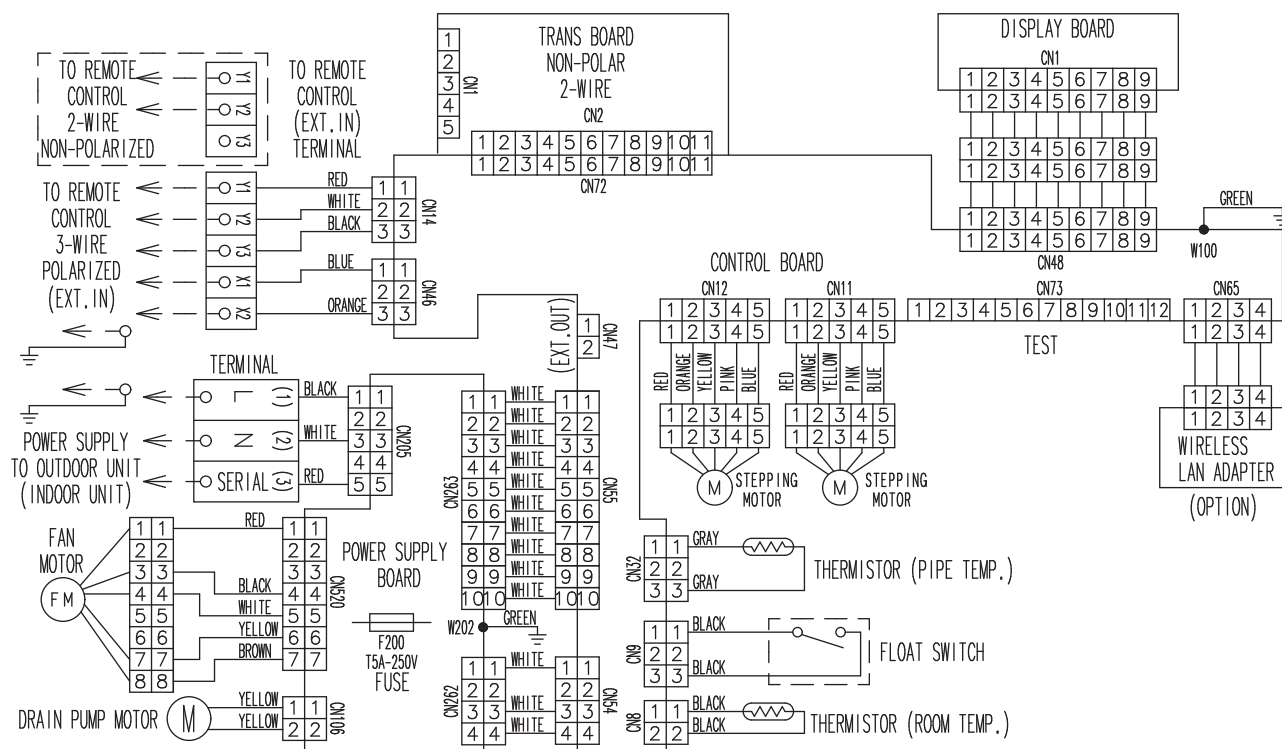


$TH_o$  : THERMISTOR(DISCHARGE TEMP.)  
 $TH_o$  : THERMISTOR(OUTDOOR TEMP.)  
 $TH_{p1}$  : THERMISTOR(PIPE TEMP.)  
 $TH_c$  : THERMISTOR(COMPRESSOR TEMP.)

$TH_r$  : THERMISTOR(ROOM TEMP.)  
 $TH_{p2}$  : THERMISTOR(PIPE TEMP.)  
 $TH_m$  : THERMISTOR(HEAT EXCHANGER MIDDLE TEMP.)

## TECHNICAL DATA AND PARTS LIST

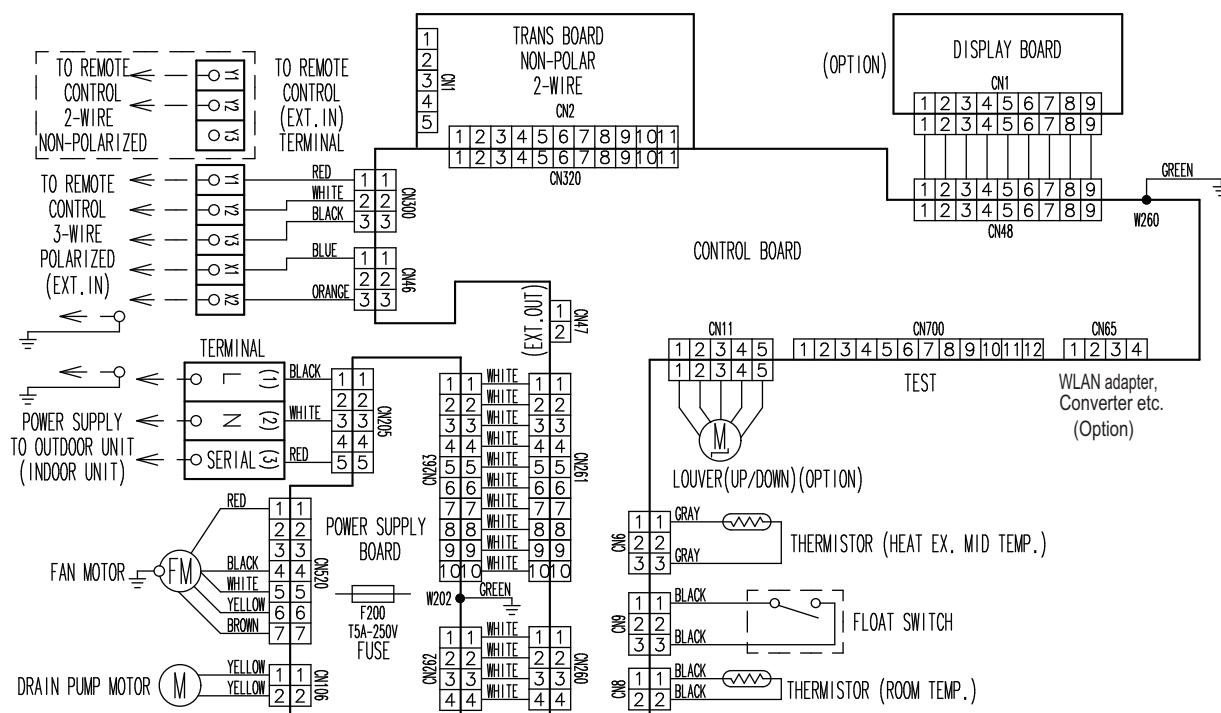
■ **Models: AUXG07KVLA, AUXG09KVLA, AUXG12KVLA, AUXG14KVLA, and AUXG18KVLA**





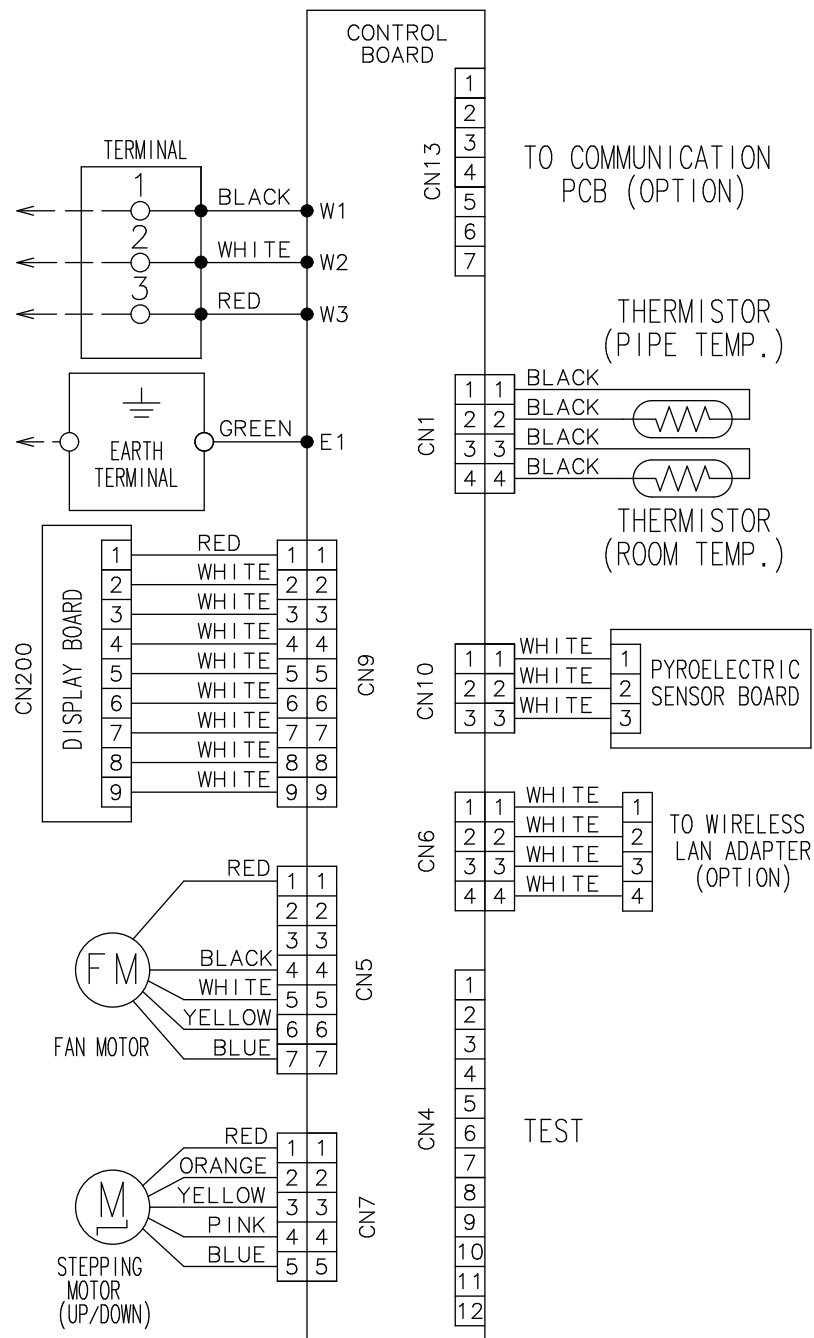
## 7-2. Mini duct type and Slim duct type

■ **Models: ARXG07KSLAP, ARXG09KSLAP, ARXG12KSLAP, ARXG14KSLAP, ARXG18KSLAP, ARXG07KLLAP, ARXG09KLLAP, ARXG12KLLAP, ARXG14KLLAP, and ARXG18KLLAP**

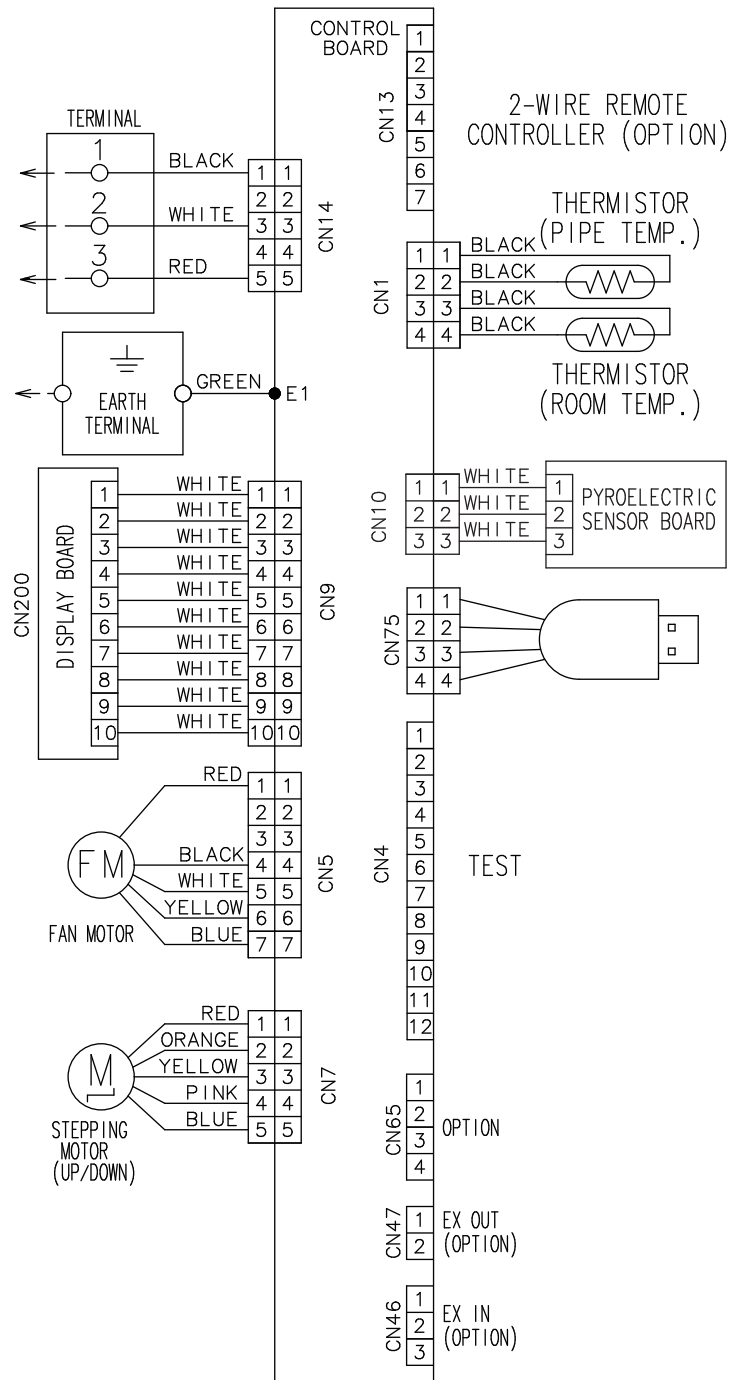


## 7-3. Wall mounted type

### ■ Models: ASHG07KGTB, ASHG09KGTB, ASHG12KGTB, and ASHG14KGTB



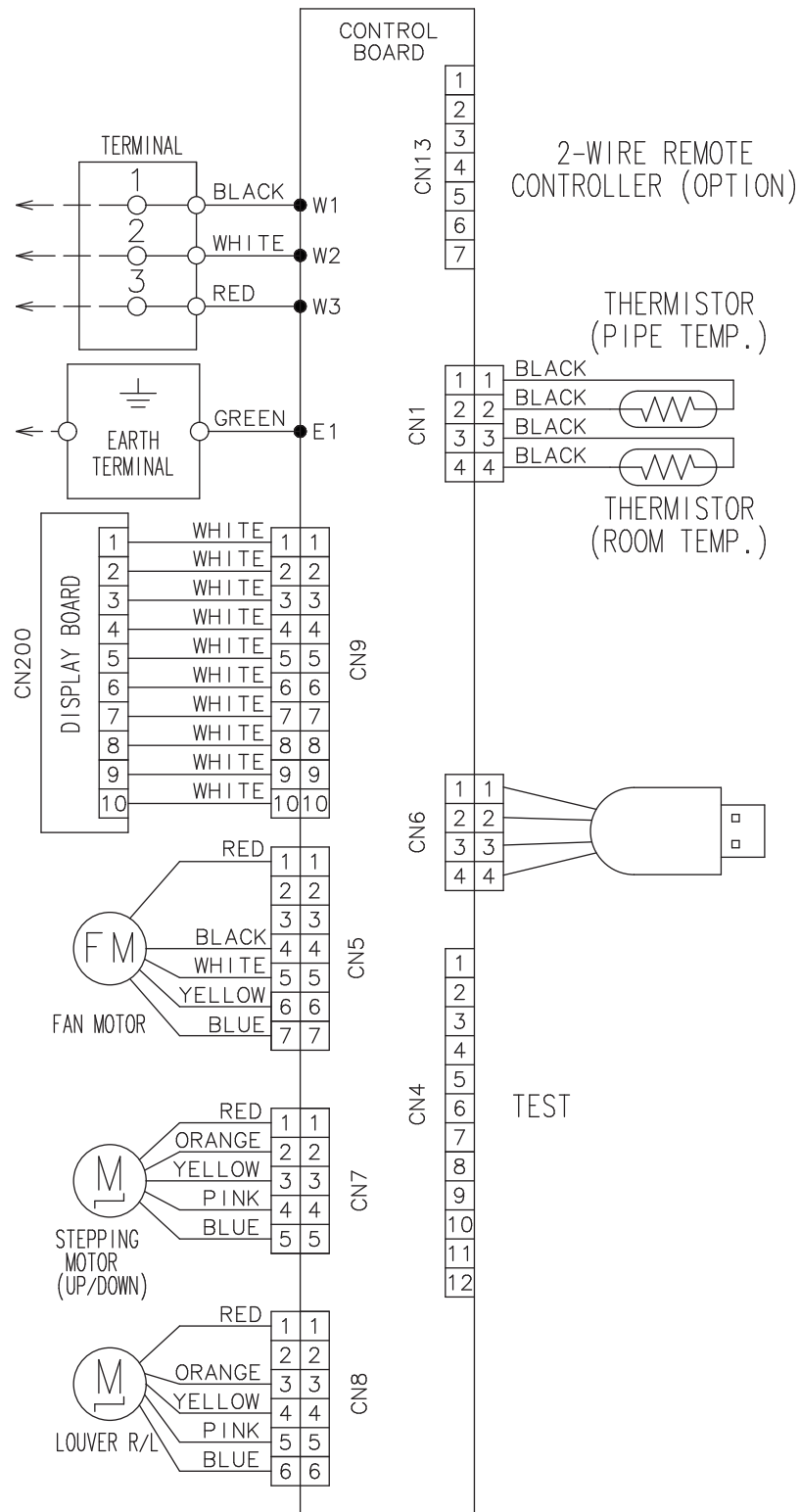
# Models: ASHG07KGTE, ASHG09KGTE, ASHG12KGTE, and ASHG14KGTE



# Model: ASHG18KMTB

TECHNICAL DATA  
AND PARTS LIST

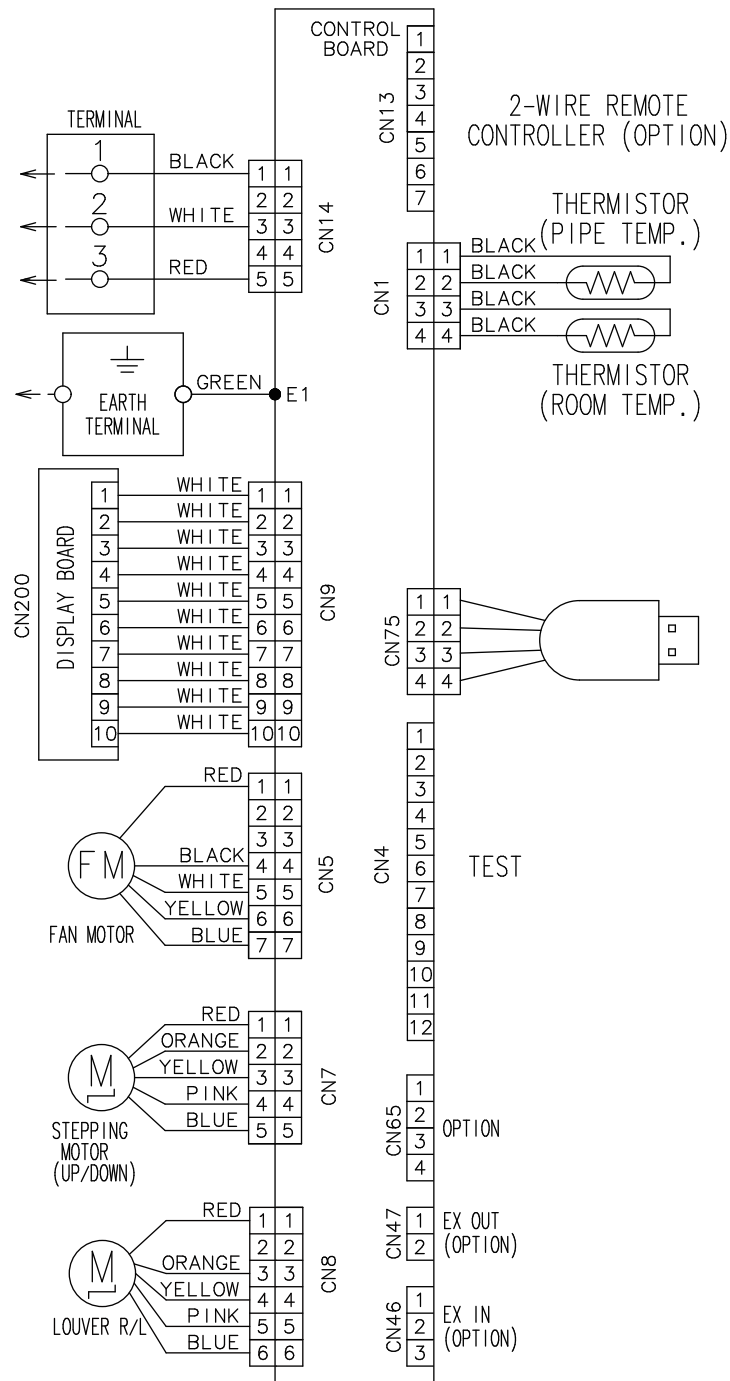
TECHNICAL DATA  
AND PARTS LIST



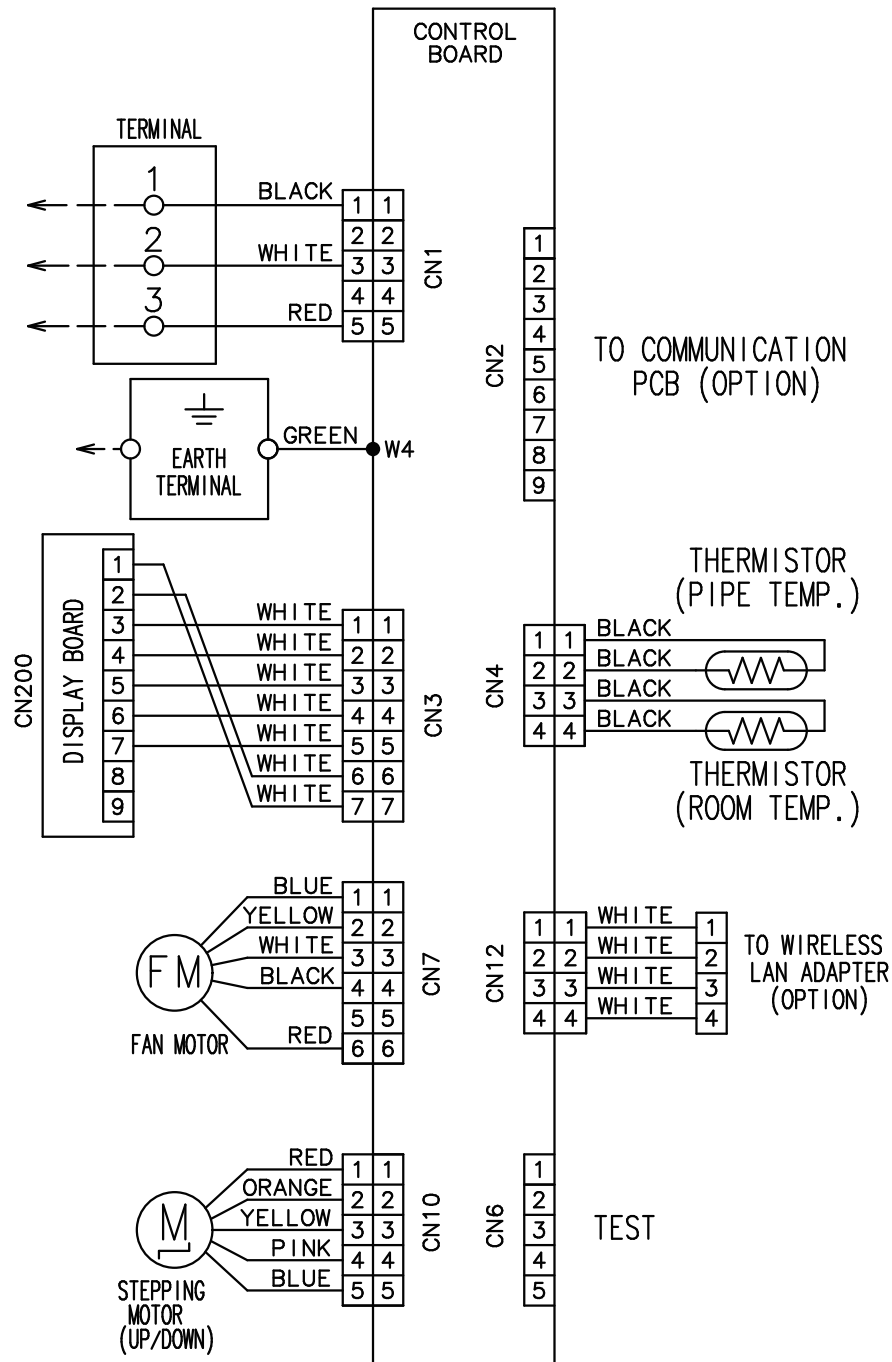
# Model: ASHG18KMTE

TECHNICAL DATA  
AND PARTS LIST

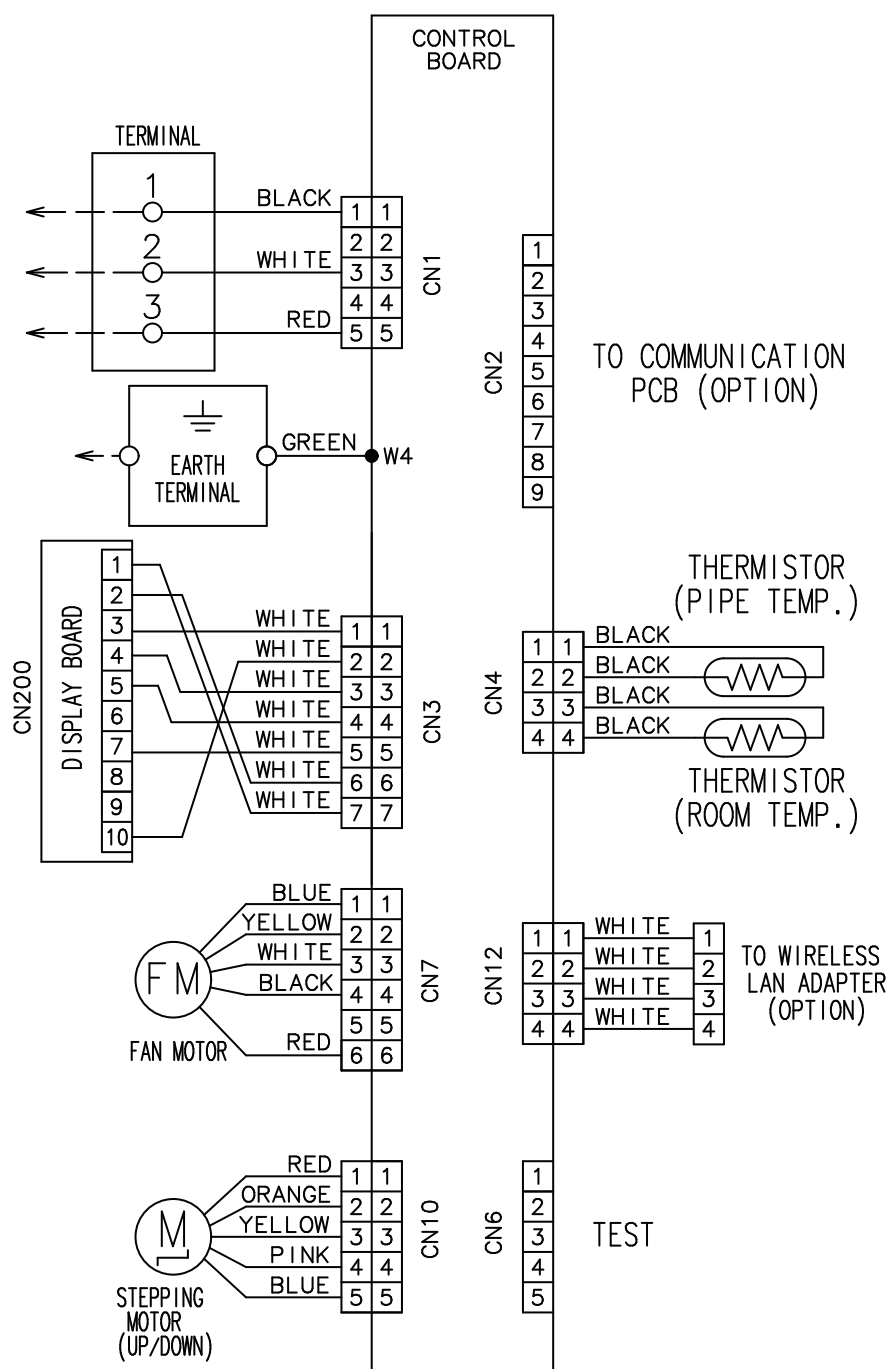
TECHNICAL DATA  
AND PARTS LIST



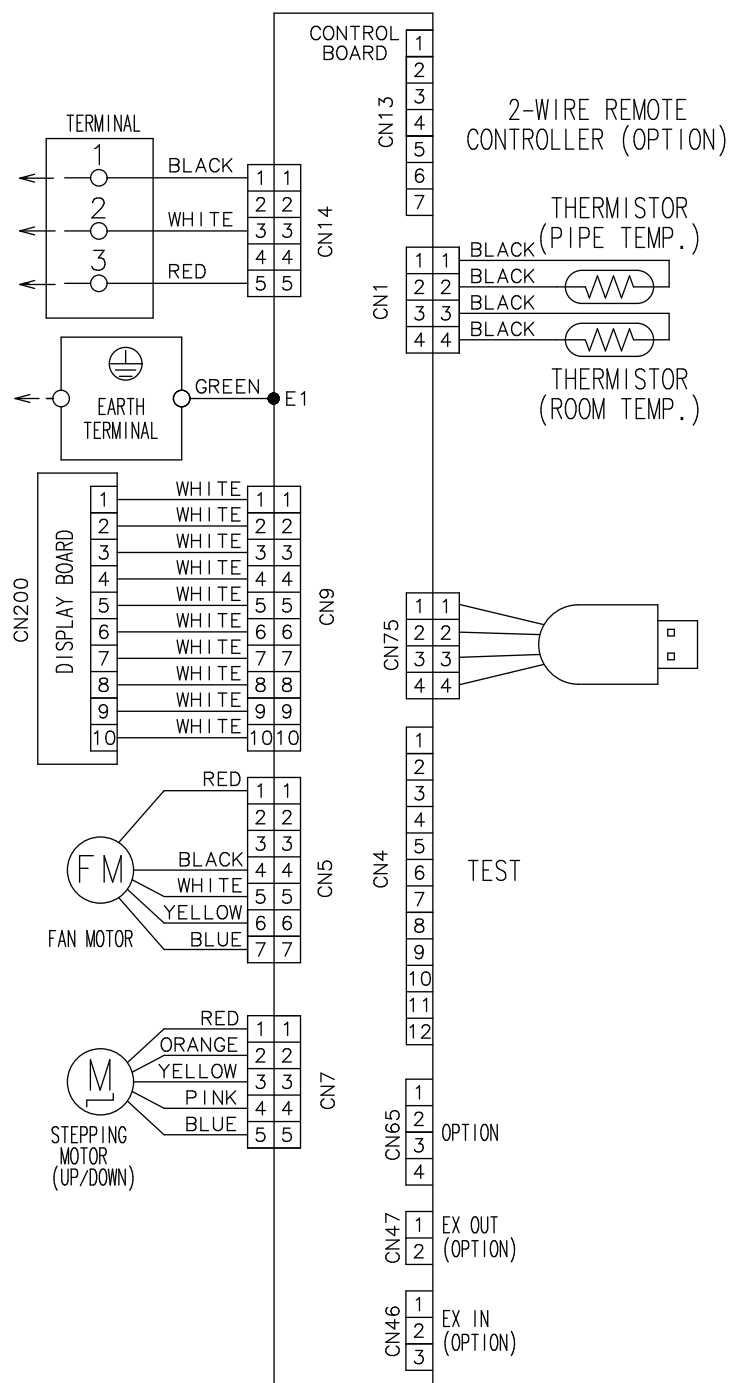
# ■ Models: ASHG07KMTB, ASHG09KMTB, ASHG12KMTB, and ASHG14KMTB



# ■ Models: ASHG07KMCC, ASHG09KMCC, ASHG12KMCC, and ASHG14KMCC

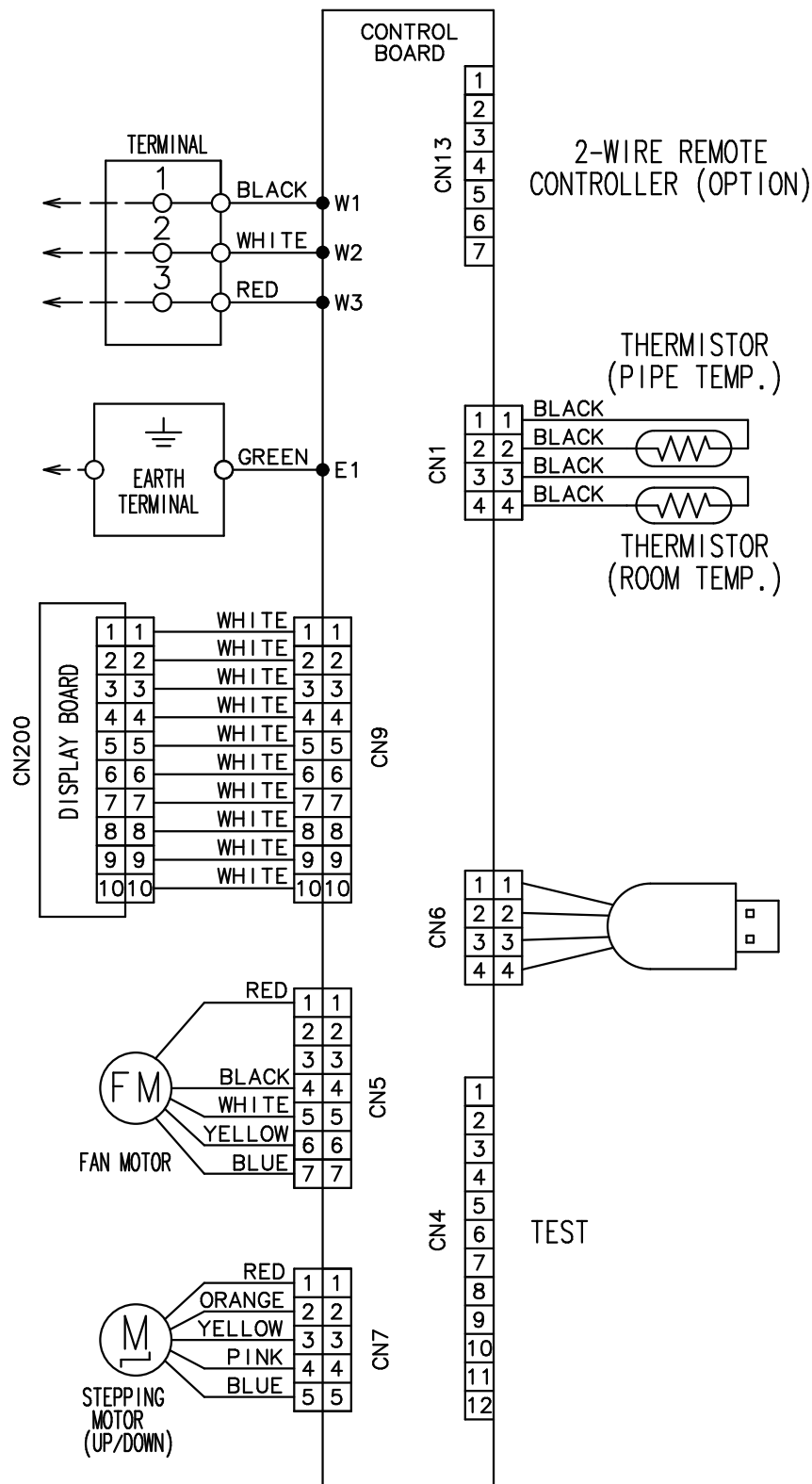


# Models: ASHG07KMCE, ASHG09KMCE, ASHG12KMCE, and ASHG14KMCE

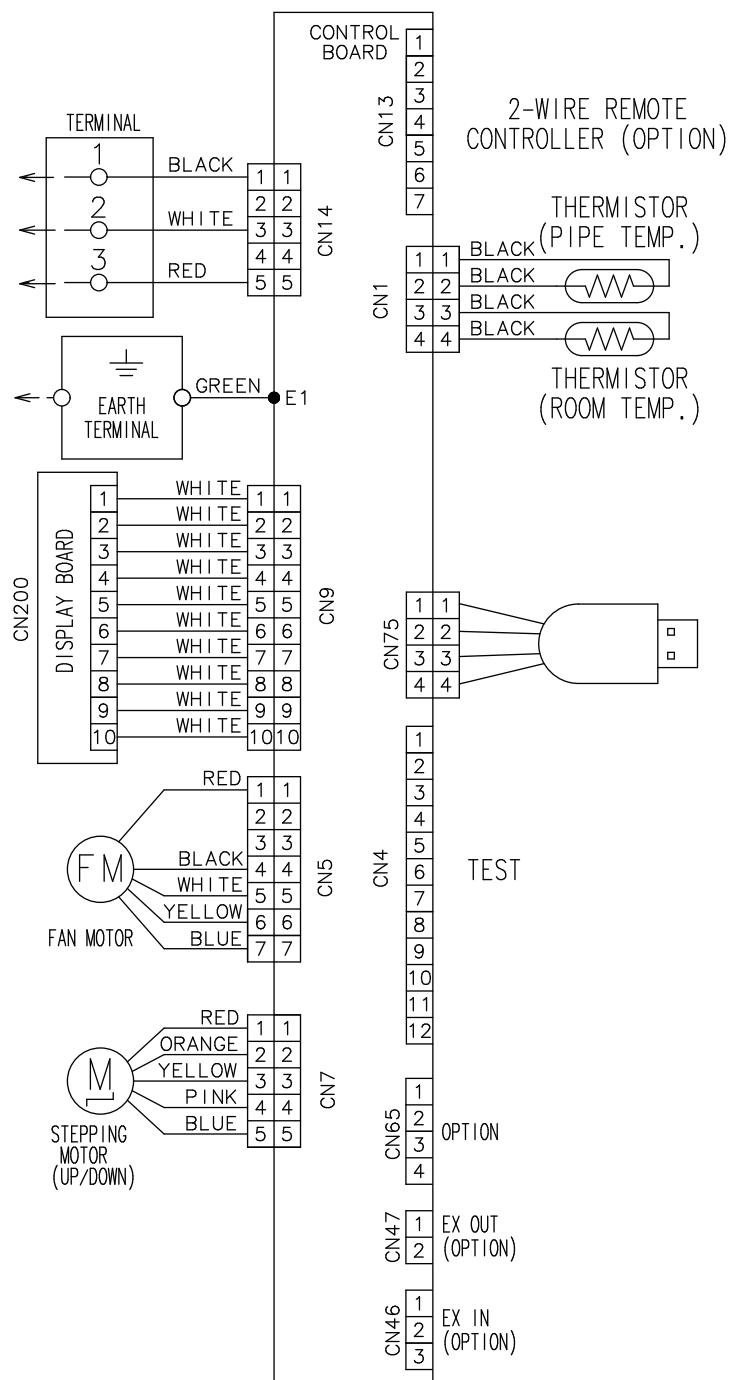




■ **Models: ASHG07KETA, ASHG09KETA, ASHG12KETA, ASHG14KETA, ASHG07KETA-B, ASHG09KETA-B, ASHG12KETA-B, and ASHG14KETA-B**

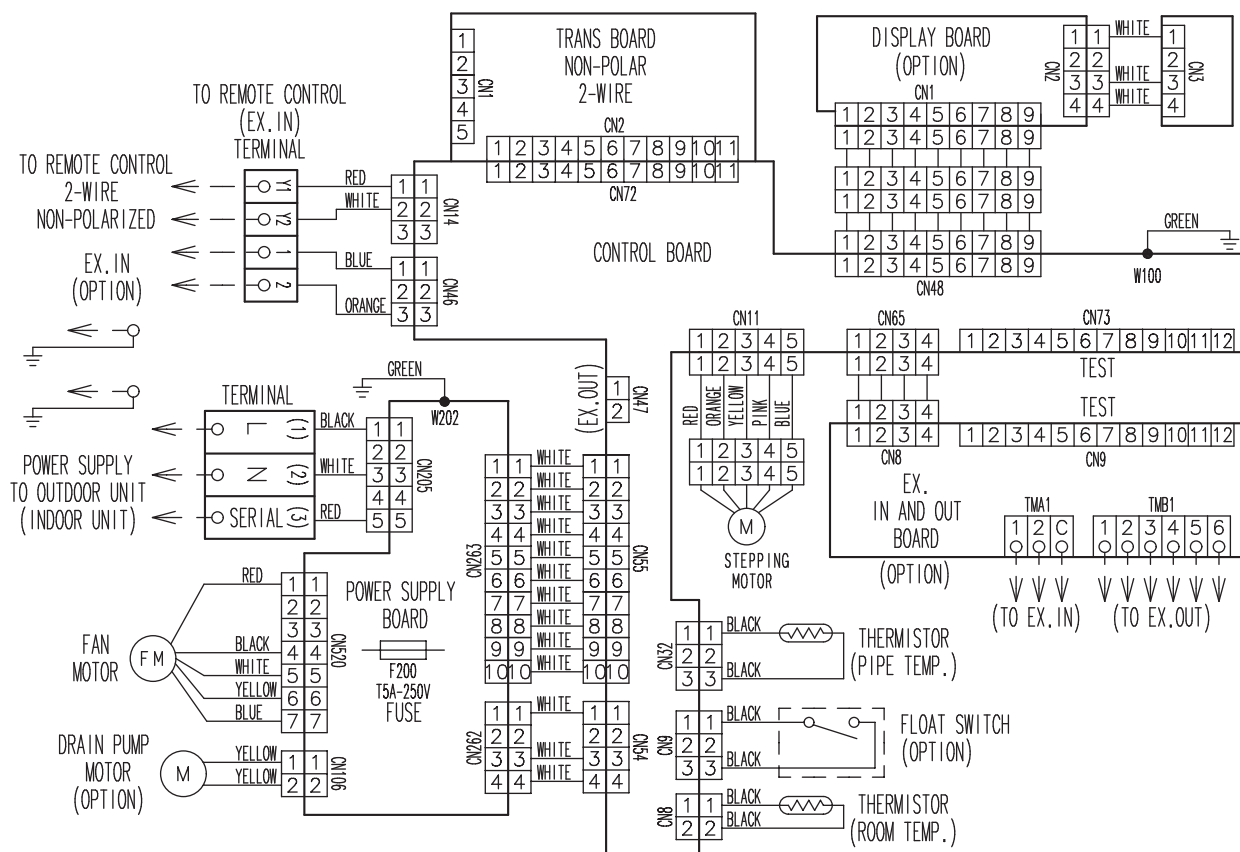


■ **Models: ASHG07KETE, ASHG09KETE, ASHG12KETE, ASHG14KETE, ASHG07KETE-B, ASHG09KETE-B, ASHG12KETE-B, and ASHG14KETE-B**



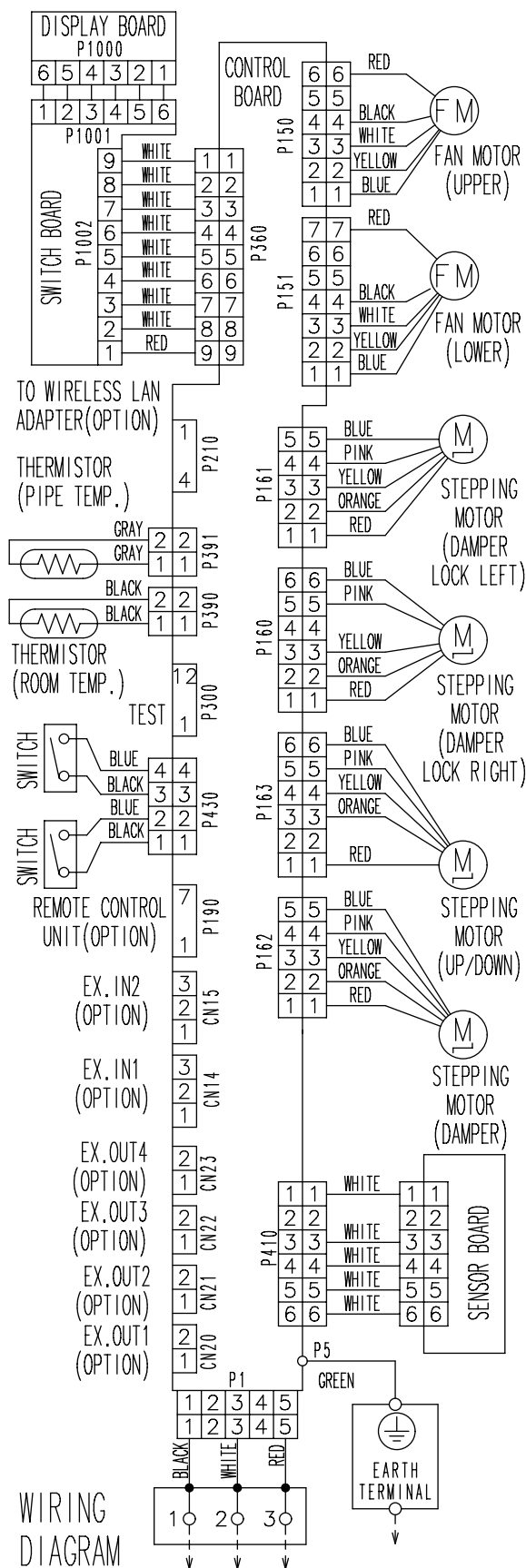
## 7-4. Ceiling type

### Model: ABHG18KRTA



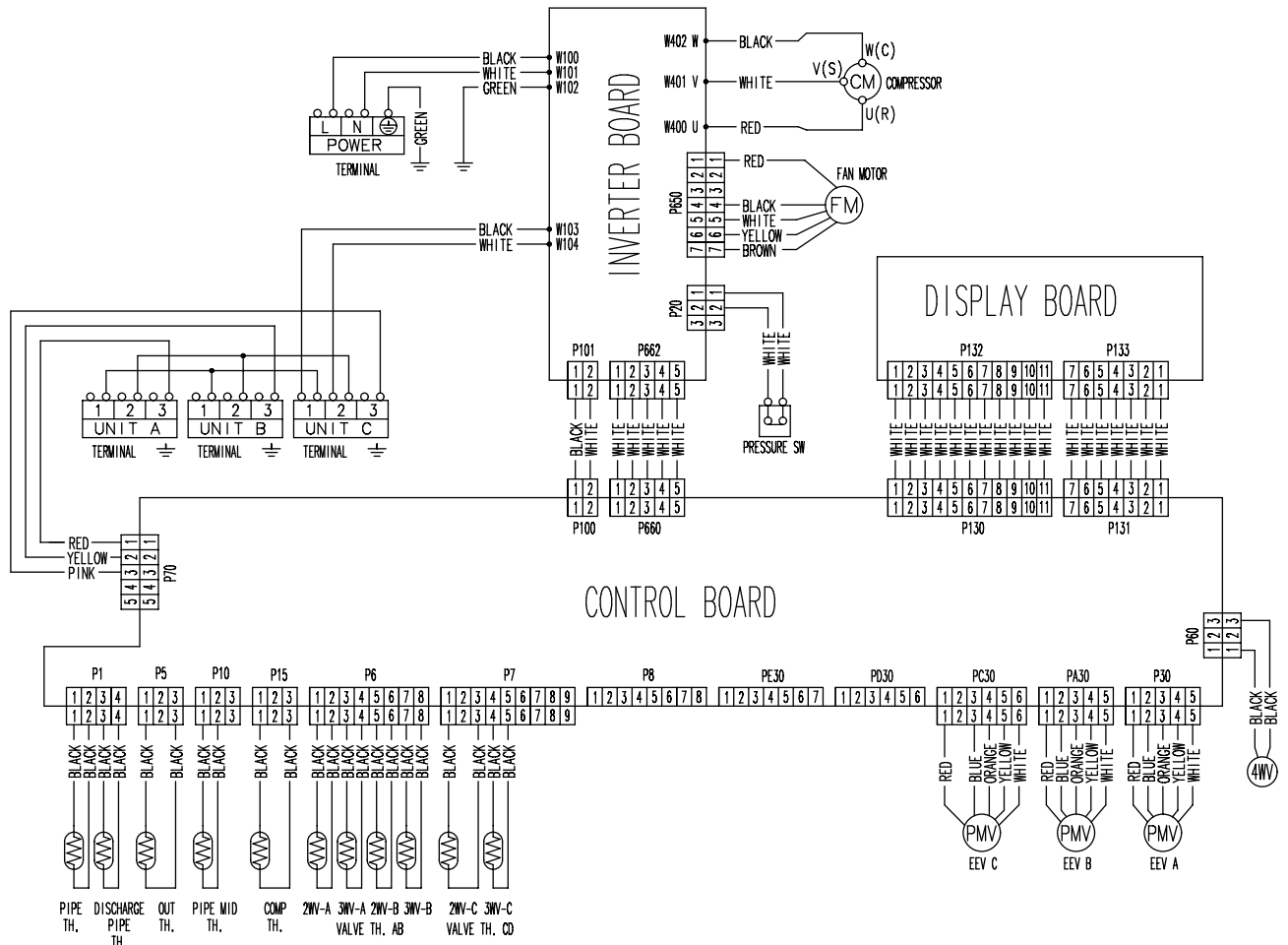
## 7-5. Floor type

### Models: AGHG09KVCA, AGHG12KVCA, and AGHG14KVCA

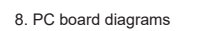


## 7-6. Outdoor unit

### Models: AOHG18KBT A3 and AOHG24KBT A3



## 8-1. Models: AUXG07KVLA, AUXG09KVLA, AUXG12KVLA, AUXG14KVLA, and AUXG18KVLA

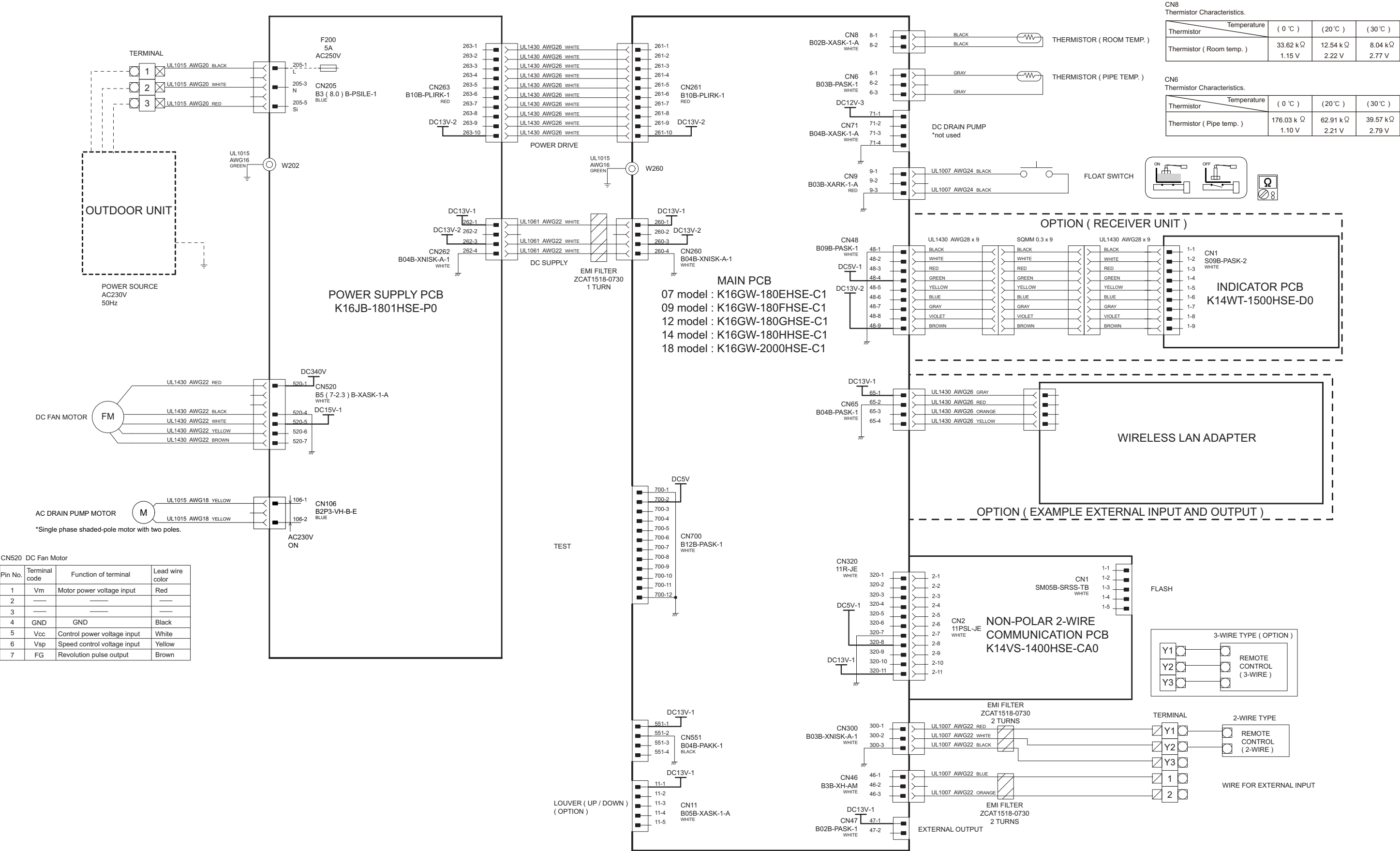


8-2. Models: ARXG07KSLAP, ARXG09KSLAP, ARXG12KSLAP, ARXG14KSLAP, and ARXG18KSLAP

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

CONTROL UNIT  
07 model : EZ-01830HSE  
09 model : EZ-01831HSE  
12 model : EZ-01832HSE  
14 model : EZ-01833HSE  
18 model : EZ-02003HSE

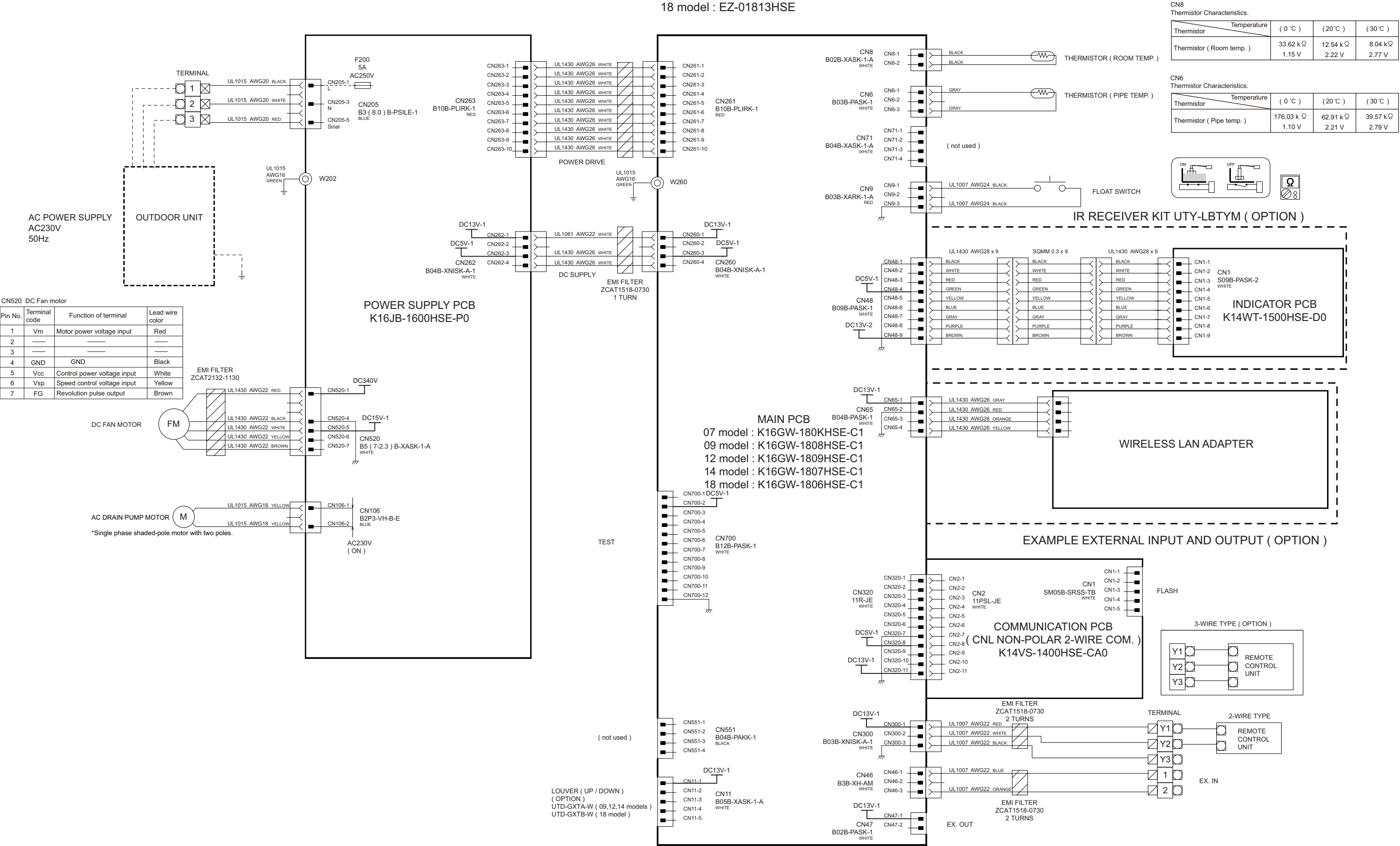


8-3. Models: ARXG07KLLAP, ARXG09KLLAP, ARXG12KLLAP, ARXG14KLLAP, and ARXG18KLLAP

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

CONTROL UNIT  
07 model : EZ-01834HSE  
09 model : EZ-0181YHSE  
12 model : EZ-01820HSE  
14 model : EZ-01814HSE  
18 model : EZ-01813HSE

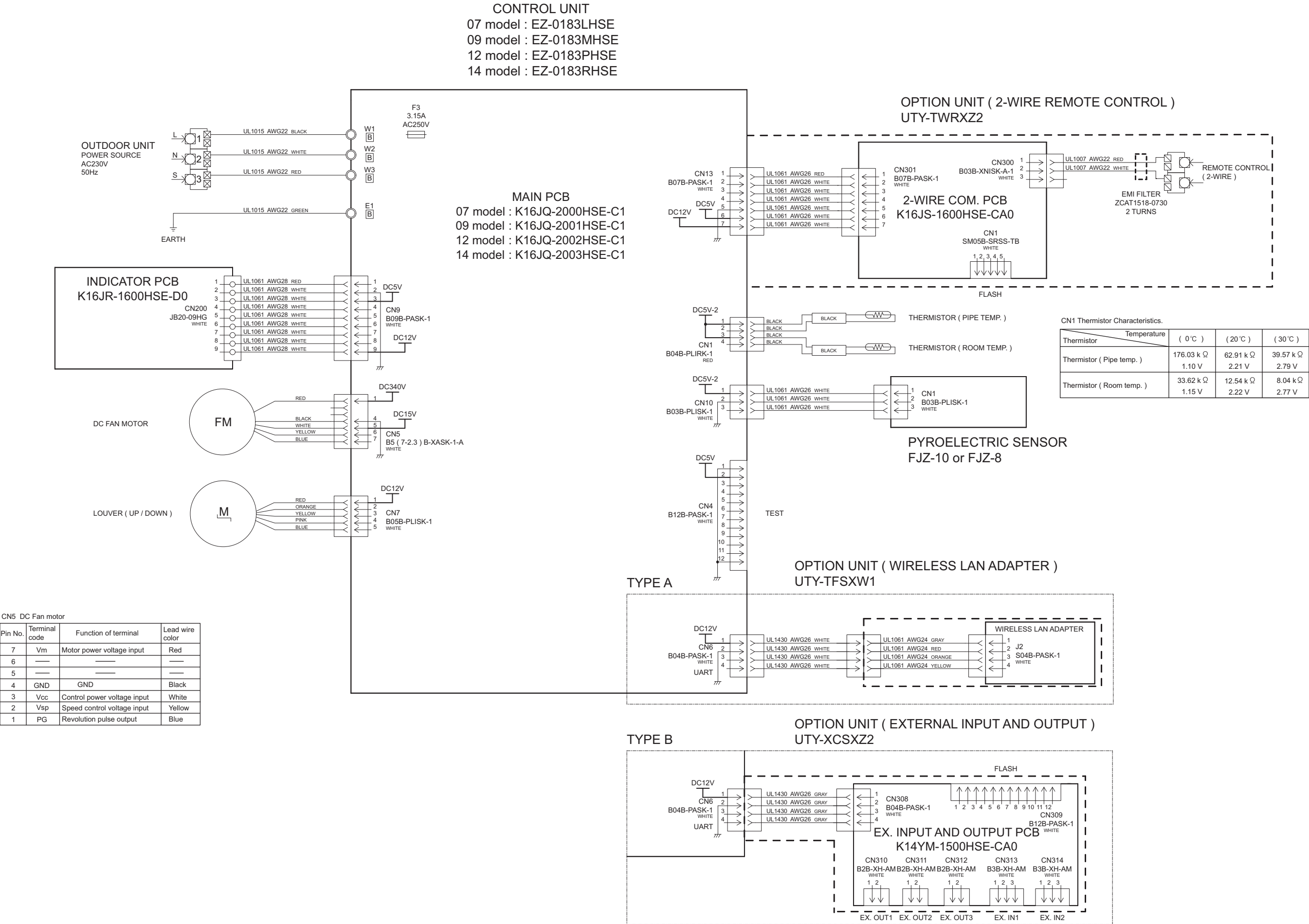




8-4. Models: ASHG07KGTB, ASHG09KGTB, ASHG12KGTB, and ASHG14KGTB

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST





8-6. Model: ASHG18KMTB

TECHNICAL DATA  
AND PARTS LIST

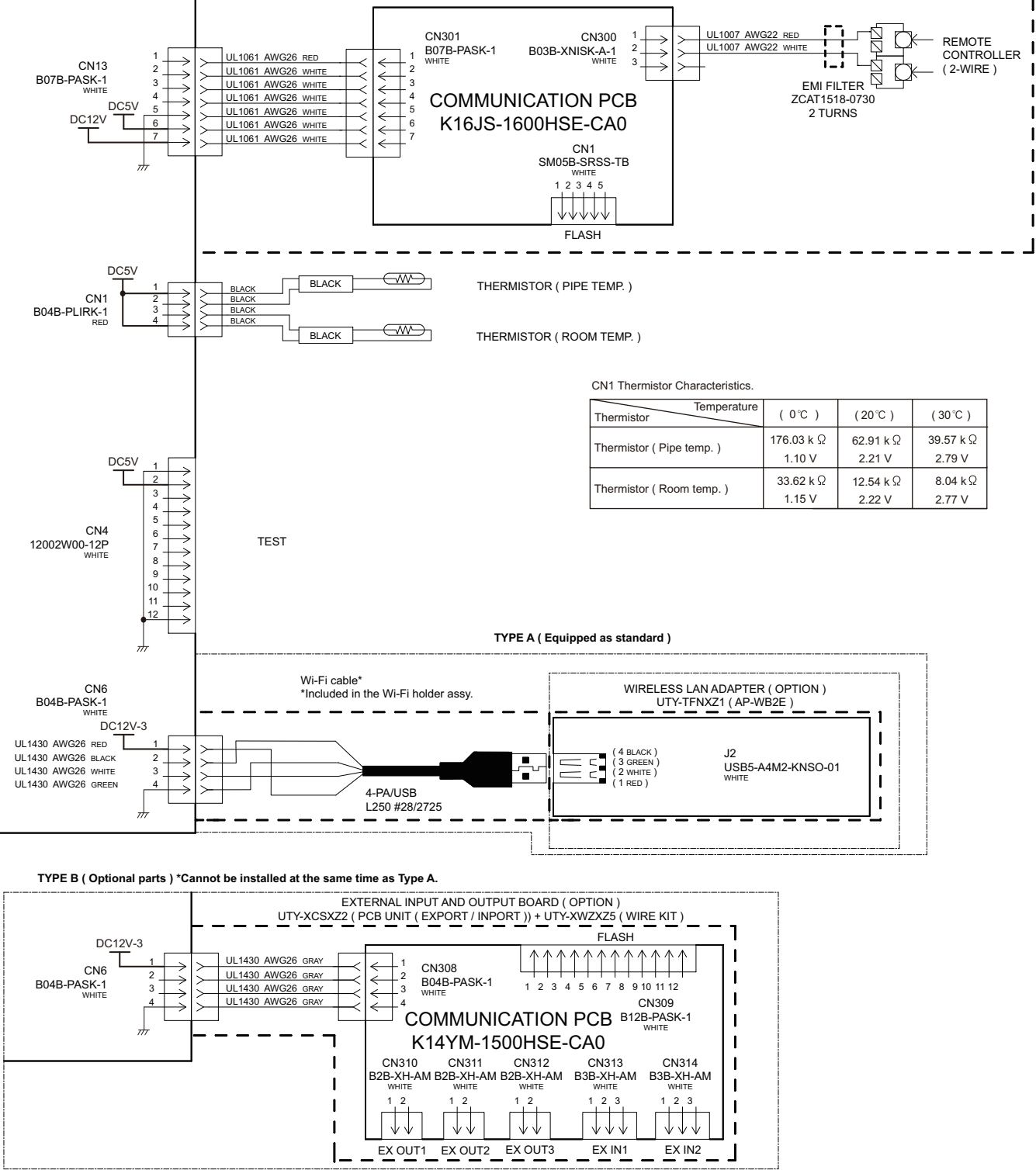
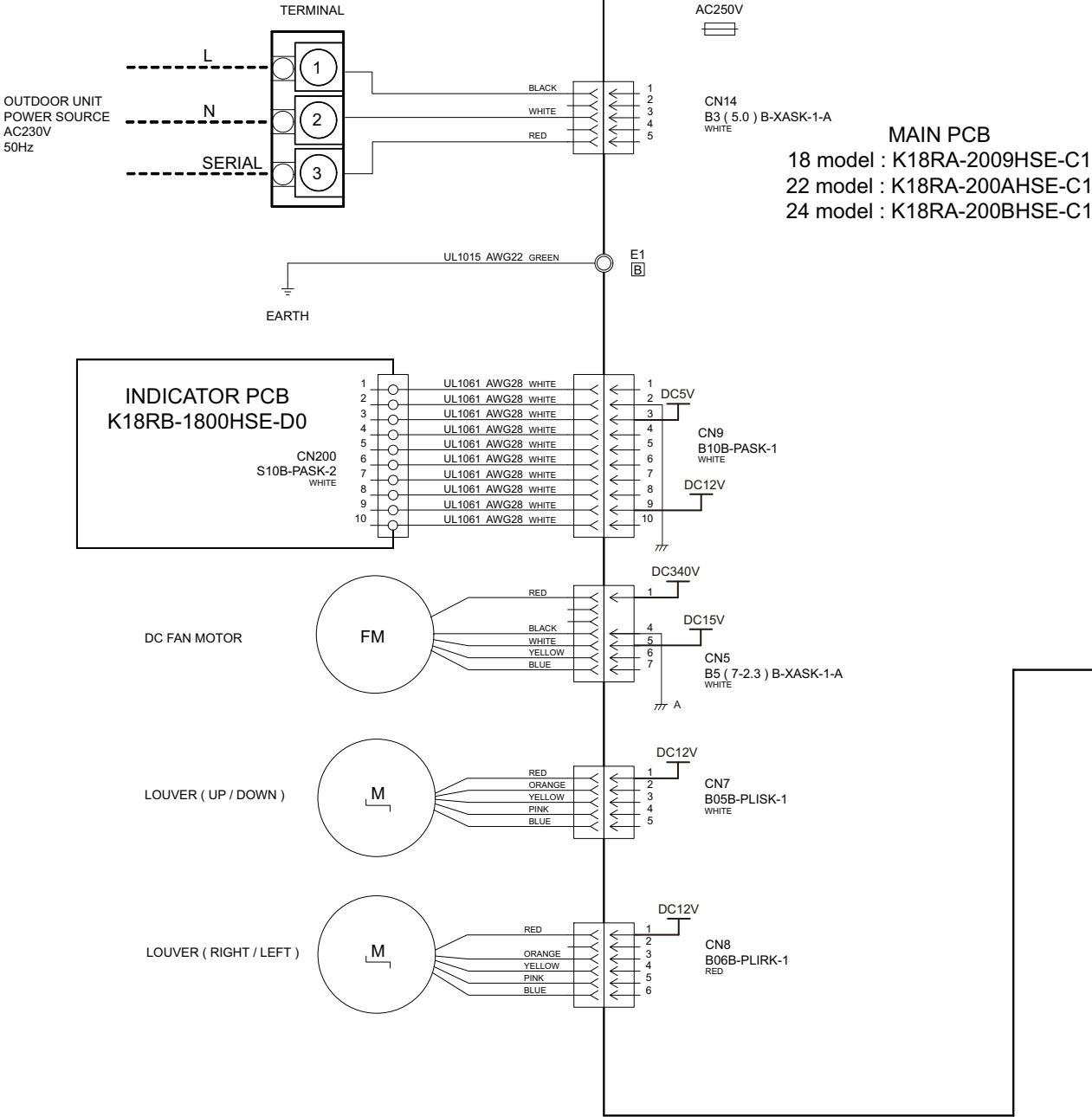
TECHNICAL DATA  
AND PARTS LIST

CONTROL UNIT  
18 model : EZ-02006HSE  
22 model : EZ-02007HSE  
24 model : EZ-02008HSE

2-WIRE REMOTE CONTROLLER UNIT ( OPTION )  
UTY-TWRXZ2

CN5 DC Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2	—	—	—
3	—	—	—
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Blue



## TECHNICAL DATA AND PARTS LIST

\*Only type B can be connected.

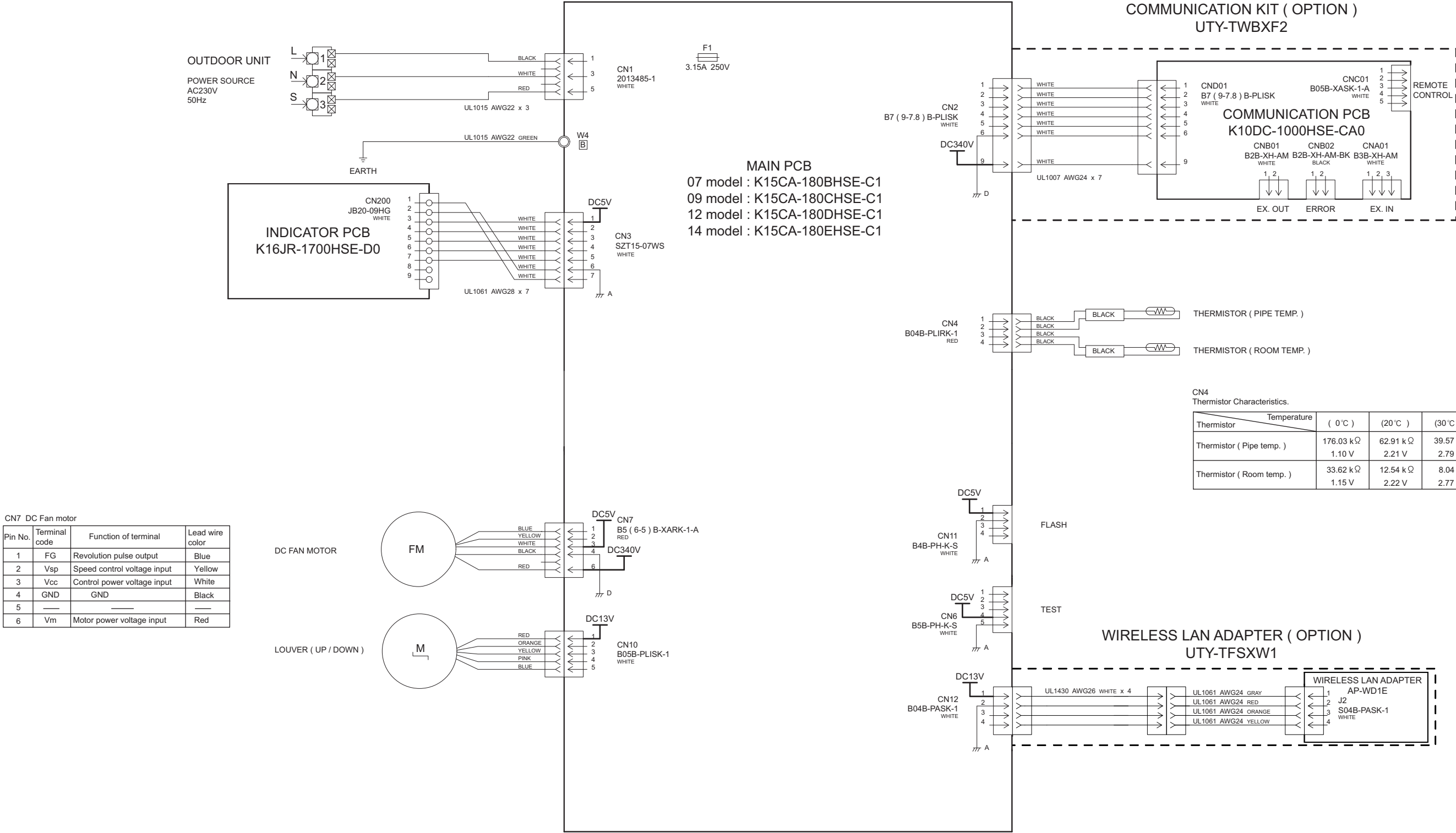
8-8. Models: ASHG07KMTB, ASHG09KMTB, ASHG12KMTB, and ASHG14KMTB

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

CONTROL UNIT

- 07 model : EZ-0183EHSE
- 09 model : EZ-0183FHSE
- 12 model : EZ-0183DHSE
- 14 model : EZ-0183HHSE

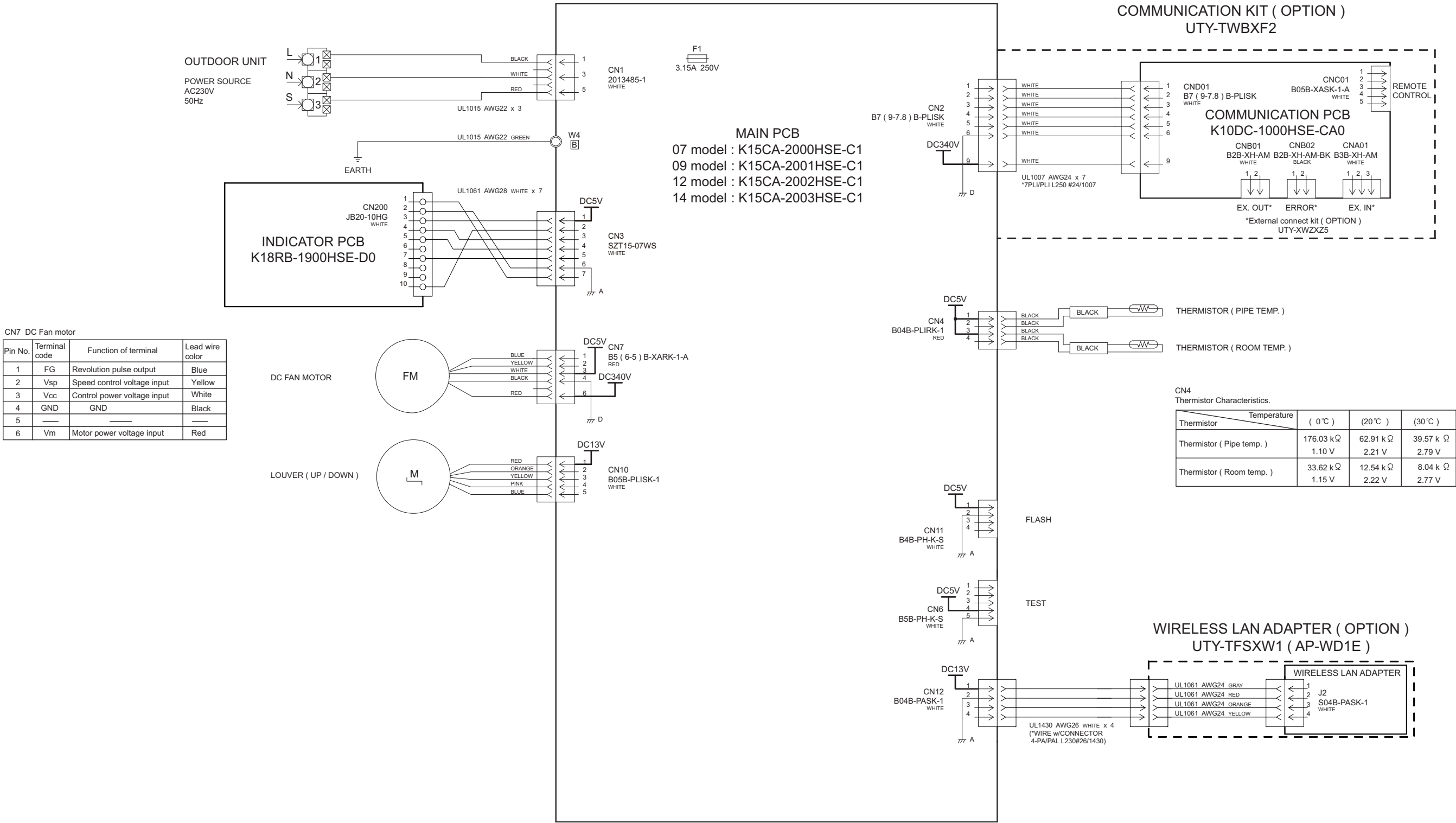


8-9. Models: ASHG07KMCC, ASHG09KMCC, ASHG12KMCC, and ASHG14KMCC

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

CONTROL UNIT  
07 model : EZ-019CHSE  
09 model : EZ-019DHSE  
12 model : EZ-019EHSE  
14 model : EZ-019FHSE

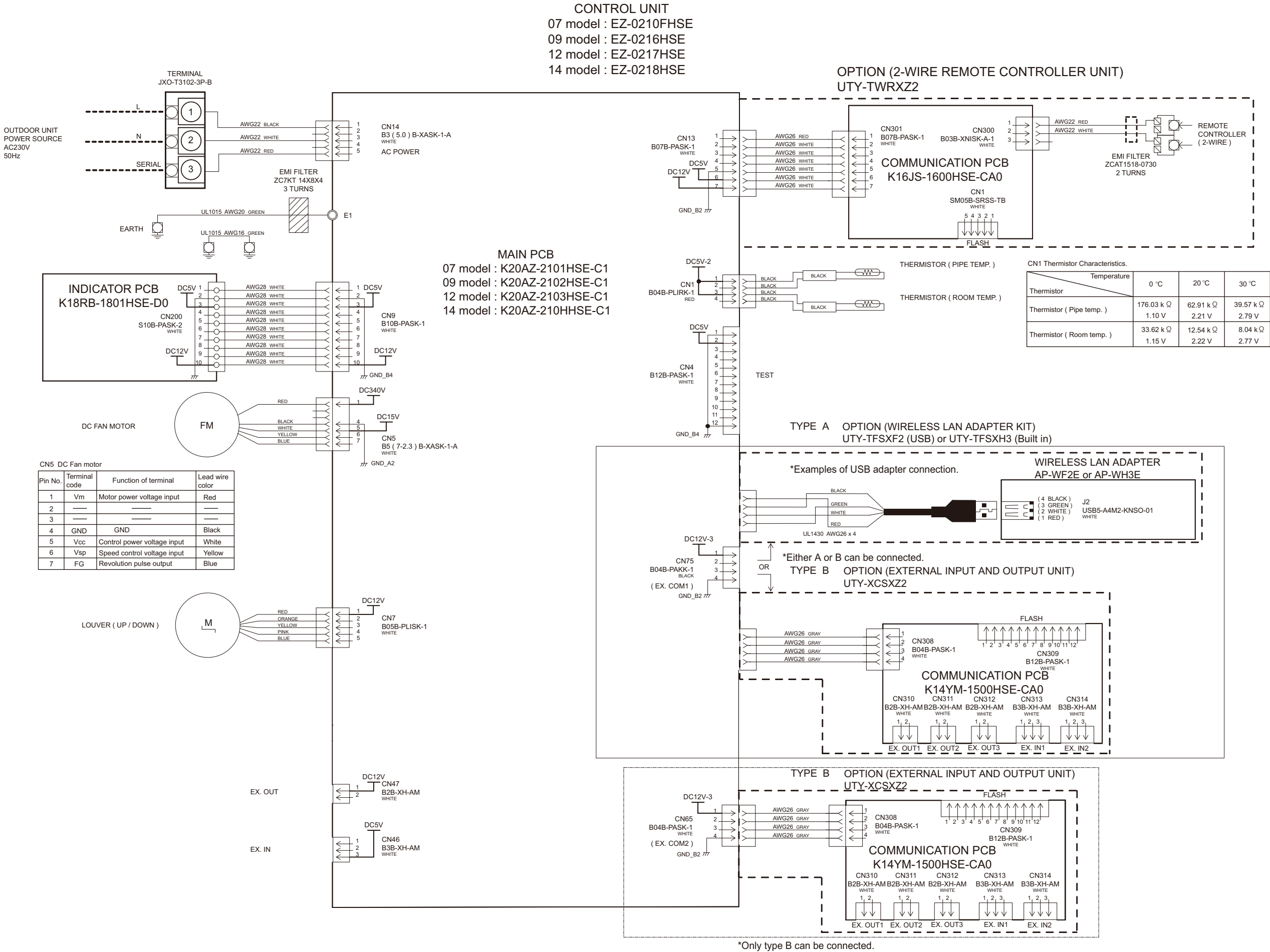




8-10. Models: ASHG07KMCE, ASHG09KMCE, ASHG12KMCE, and ASHG14KMCE

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST



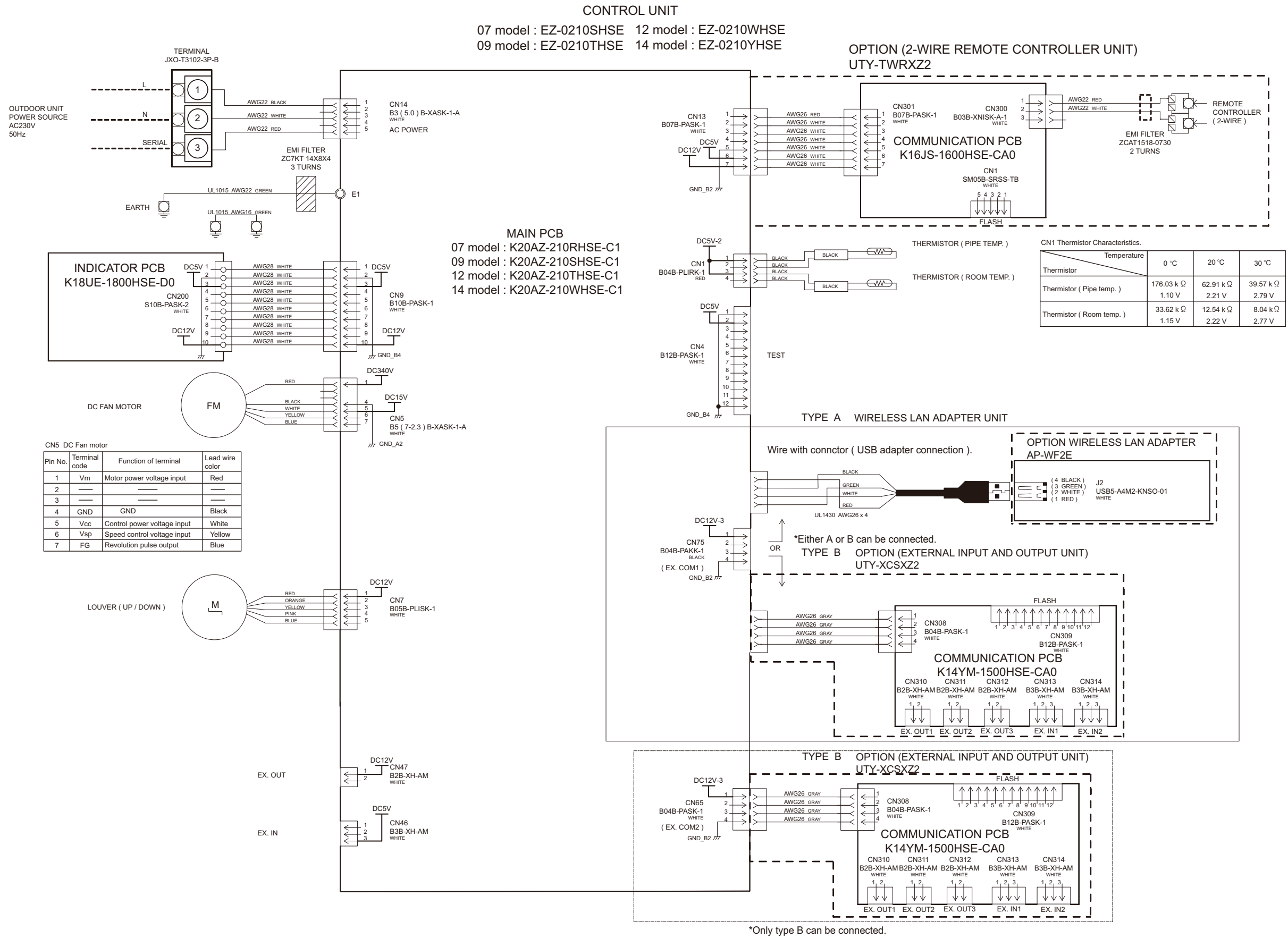




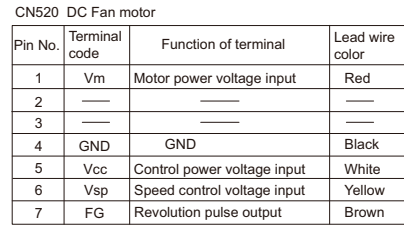
8-12. Models: ASHG07KETE, ASHG09KETE, ASHG12KETE, ASHG14KETE, ASHG07KETE-B, ASHG09KETE-B, ASHG12KETE-B, and ASHG14KETE-B

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST



CONTROL UNIT  
18 model : EZ-019GHSE

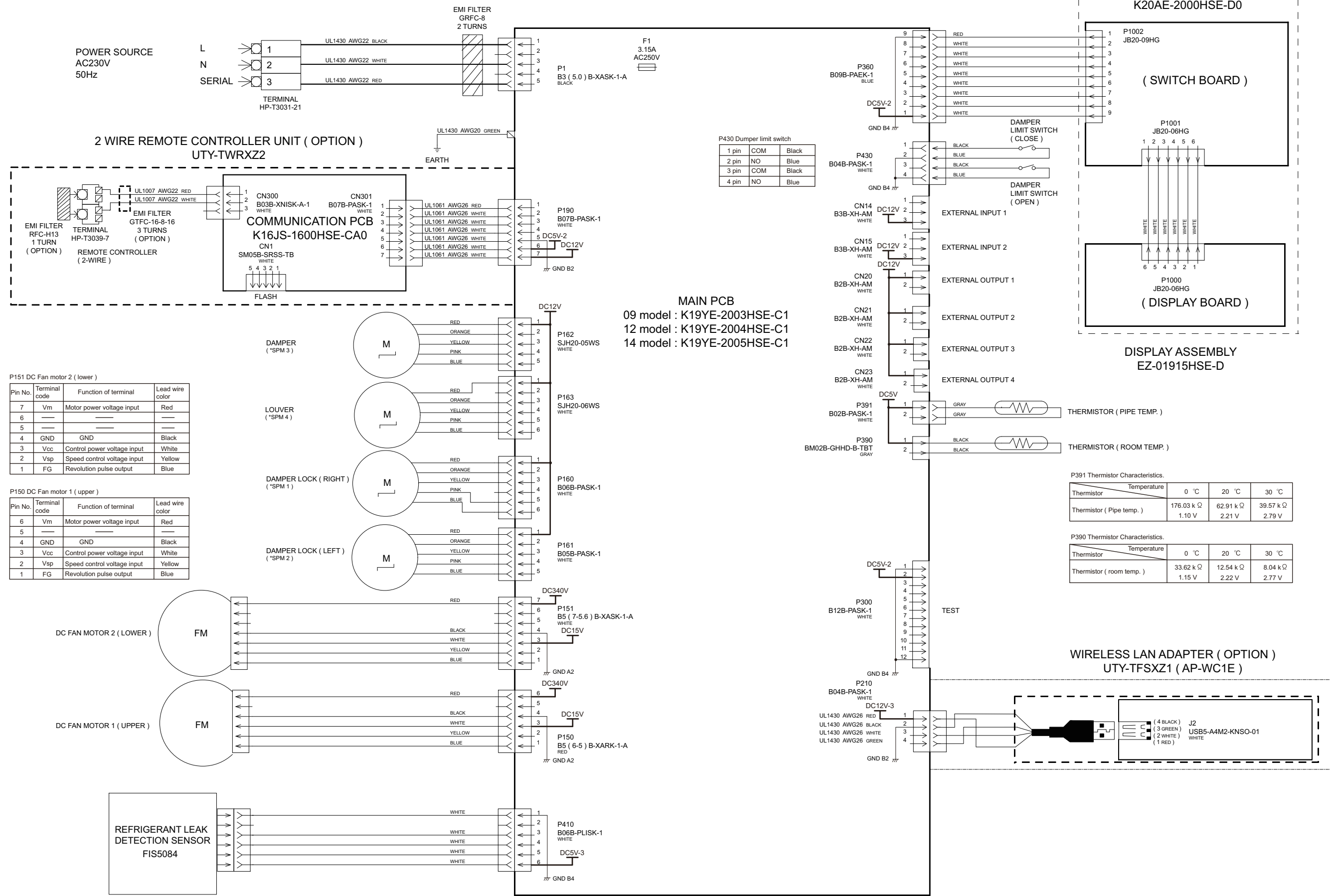


8-14. Models: AGHG09KVCA, AGHG12KVCA, and AGHG14KVCA

TECHNICAL DATA  
AND PARTS LIST

TECHNICAL DATA  
AND PARTS LIST

CONTROL UNIT  
09 model : EZ-01915HSE  
12 model : EZ-01916HSE  
14 model : EZ-01917HSE

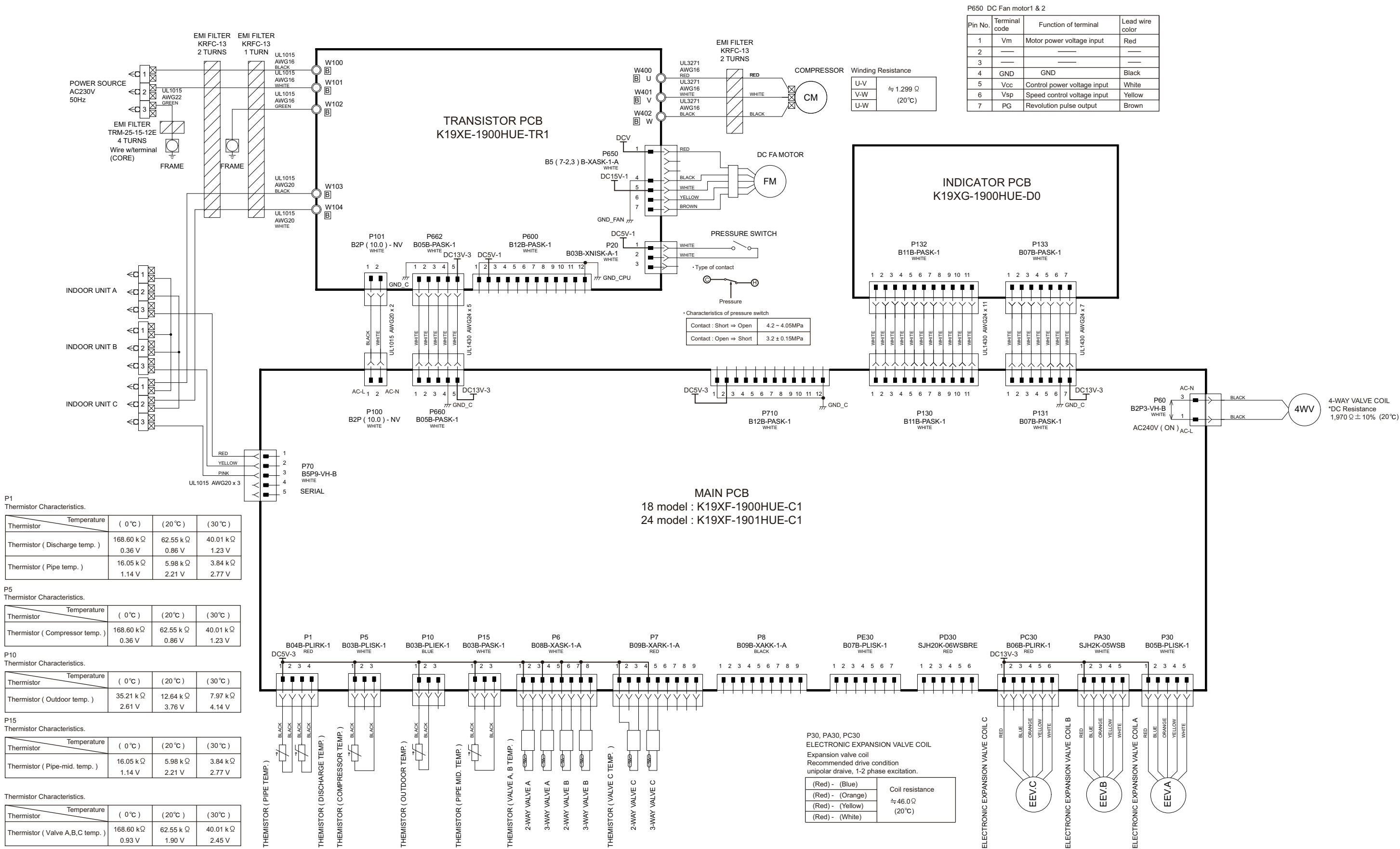


8-15. Models: AOHG18KBTA3 and AOHG24KBTA3

TECHNICAL DATA  
AND PARTS LIST

INVERTER ASSEMBLY  
18 model : EZ-0193LHUE  
24 model : EZ-020RHUE

TECHNICAL DATA  
AND PARTS LIST



### 3. TROUBLESHOOTING

# CONTENTS

## 3. TROUBLESHOOTING

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# 1. Error code

When a problem occurs in the system or the connected device, the error content is notified by displaying the code.

**NOTE:** This function is only available in a system with indoor or IR receiver units equipped with indicator lamps to show the error content.

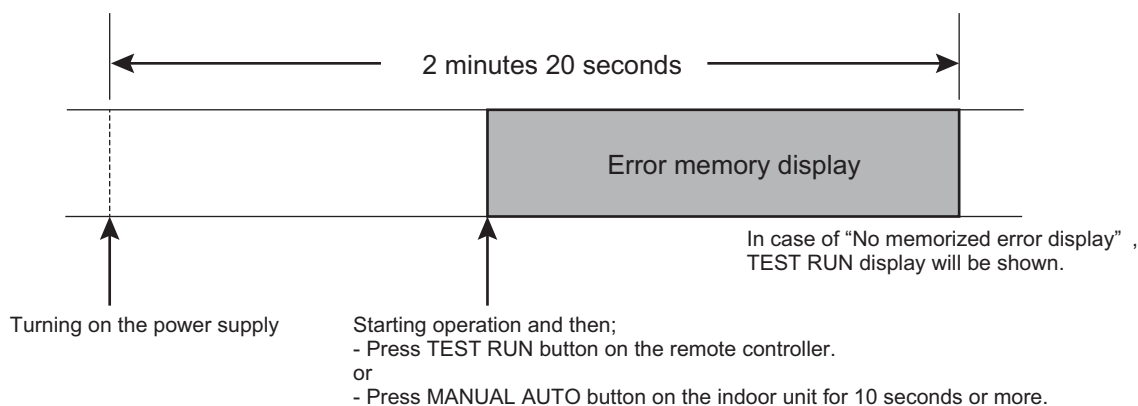
Errors, once displayed, will be automatically stored in the PC board of the indoor unit. Even if the power is disconnected, the memory containing the error history will not be erased.

If another error occurs later, the stored error memory will be updated automatically and replaced with the new one. (Previous error will be erased.)

## 1-1. How to check the error memory

When an error occurs, the operation lamp (Green) and the timer lamp (Orange) indicate the error content by blinking. To check the error memory, follow the procedures below.

1. Stop the operation of the air conditioner, and then disconnect the power supply.
2. Reconnect the power supply.
3. In one of the following two methods, the memorized error is only displayed during the “3 minutes ST”<sup>\*</sup> state period.
  - Start the operation and then press the TEST RUN button on the remote controller.
  - Press the MANUAL AUTO button on the indoor unit for 10 seconds or more.



<sup>\*</sup>: The “3 minutes ST” period lasts 2 minutes and 20 seconds after turning on the power supply.

## 1-2. How to erase the error memory

The error memory can be erased in one of the following two methods.

- Manual erase: Pressing the MANUAL AUTO button on the indoor unit while the “Error memory display” is being shown. (Short beep emits for about 3 seconds.)
- Automatic erase: After continuing the normal operation of the air conditioner without error for 2 hours or longer after displaying the error memory as described in [How to check the error memory](#). (Except FAN operation mode.)

# 1-3. Error code table (Indoor unit and wired remote controller)

The operation, timer, and economy indicators operate according to the error contents.

For confirmation of the error contents, refer the flashing pattern as follows.

Error contents	Indoor unit display			Wired remote controller display
	Operation [I] (Green)	Timer [⌚] (Orange)	Economy [E] (Green)	
E: 11. Serial communication error (Serial reverse transfer error) (Outdoor unit)	1 times	1 times	Continuous	11
E: 11. Serial communication error (Serial forward transfer error) (Indoor unit)	1 times	1 times	Continuous	11
E: 12. Wired remote controller communication error (Indoor unit)	1 times	2 times	Continuous	12
E: 18. External communication error (Indoor unit)	1 times	8 times	Continuous	18
E: 22. Indoor unit capacity error (Indoor unit)	2 times	2 times	Continuous	22
E: 23. Combination error (Outdoor unit)	2 times	3 times	Continuous	23
E: 26. Address setting error in wired remote controller (Indoor unit)	2 times	6 times	Continuous	26
E: 29. Connected unit number error (Indoor unit)	2 times	9 times	Continuous	29
E: 32. Indoor unit main PCB error (Indoor unit)	3 times	2 times	Continuous	32
E: 33. Indoor unit motor electricity consumption detection error (Indoor unit)	3 times	3 times	Continuous	33
E: 35. MANUAL AUTO button error (Indoor unit)	3 times	5 times	Continuous	35
E: 39. Indoor unit power supply error for fan motor (Indoor unit)	3 times	9 times	Continuous	39
E: 3A. Indoor unit communication circuit (wired remote controller) error	3 times	10 times	Continuous	3A
E: 41. Room temperature sensor error (Indoor unit)	4 times	1 times	Continuous	41
E: 42. Indoor unit heat exchanger sensor error (Indoor unit)	4 times	2 times	Continuous	42
E: 45. Refrigerant leakage sensor error (Indoor unit)	4 times	5 times	Continuous	45
E: 45. Refrigerant leakage sensor deterioration (Indoor unit)	4 times	5 times	Continuous	45
E: 51. Indoor unit fan motor error (Indoor unit)	5 times	1 times	Continuous	51
E: 53. Drain pump error (Indoor unit)	5 times	3 times	Continuous	53
E: 57. Damper (Open/Close) detection limit switch error	5 times	7 times	Continuous	57
E: 57. Damper (Open/Close) simultaneous detection limit switch error (Indoor unit)	5 times	7 times	Continuous	57
E: 58. Intake grille error (Indoor unit)	5 times	8 times	Continuous	58
E: 5U. Indoor unit error	5 times	15 times	Continuous	5U
E: 62. Outdoor unit model information error (Outdoor unit)	6 times	2 times	Continuous	62
E: 64. Active filter voltage error (Outdoor unit)	6 times	4 times	Continuous	64
E: 65. IPM error (Outdoor unit)	6 times	5 times	Continuous	65
E: 71. Discharge thermistor error (Outdoor unit)	7 times	1 times	Continuous	71
E: 72. Compressor thermistor error (Outdoor unit)	7 times	2 times	Continuous	72

Error contents	Indoor unit display			Wired remote controller display
	Operation [I] (Green)	Timer [⌚] (Orange)	Economy [E] (Green)	
E: 73. Outdoor unit heat exchanger thermistor error (Outdoor unit)	7 times	3 times	Continuous	73
E: 74. Outdoor temperature thermistor error (Outdoor unit)	7 times	4 times	Continuous	74
E: 76. 2-way valve thermistor error (Outdoor unit)	7 times	6 times	Continuous	76
E: 76. 3-way valve thermistor error (Outdoor unit)	7 times	6 times	Continuous	76
E: 77. Heat sink thermistor error (Outdoor unit)	7 times	7 times	Continuous	77
E: 86. High pressure switch error (Outdoor unit)	8 times	6 times	Continuous	86
E: 94. Over current error (Outdoor unit)	9 times	4 times	Continuous	94
E: 95. Compressor motor control error (Outdoor unit)	9 times	5 times	Continuous	95
E: 97. Outdoor unit fan motor error (Outdoor unit)	9 times	7 times	Continuous	97
E: 99. 4-way valve error (Outdoor unit)	9 times	9 times	Continuous	99
E: 9A. Coil 1 (expansion valve 1) error	9 times	10 times	Continuous	9A
E: A1. Discharge temperature error (Outdoor unit)	10 times	1 times	Continuous	A1
E: A3. Compressor temperature error (Outdoor unit)	10 times	3 times	Continuous	A3
E: A8. Refrigerant leakage sensor error (Indoor unit)	10 times	8 times	Continuous	A8

## 1-4. Error code table (Outdoor unit)

The operation status is determined by the lighting up and blinking of the LED lamp.  
After check that ERROR LED lamp blinks, press the ENTER button once.

**NOTE:** For the positions of LED lamp and buttons, refer to "Function settings (for outdoor unit)" in Chapter 5. FIELD WORKING on page 05-52.

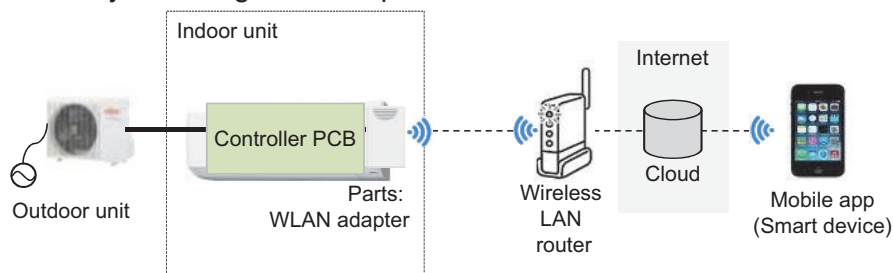
Error contents	POWER/ MODE	ERROR	MONITOR					
			A	B	C	D	E	F
E: 11. Serial communication error (Serial forward transfer error) (Indoor unit) (Occurs immediately after starting operation)	●	■	■ 1	■ 1	○	○	●	●
E: 11. Serial communication error (Serial forward transfer error) (Indoor unit) (Occurs during operation)	●	■	■ 1	■ 1	○	●	○	○
E: 12. Wired remote controller communication error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 18. External communication error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 22. Indoor unit capacity error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 23. Combination error (Outdoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 26. Address setting error in wired remote controller (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 29. Connected unit number error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 32. Indoor unit main PCB error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 33. Indoor unit motor electricity consumption detection error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 35. MANUAL AUTO button error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 3A. Indoor unit communication circuit (wired remote controller) error	●	■	■ 5	■ 15	○	○	○	●
E: 41. Room temperature sensor error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 42. Indoor unit heat exchanger sensor error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 51. Indoor unit fan motor error (Indoor unit)	●	■	■ 5	■ 15	○	○	○	●
E: 62. Outdoor unit model information error (Outdoor unit)	●	■	■ 6	■ 2	○	○	●	●
E: 64. Active filter voltage error (Outdoor unit)	●	■	■ 6	■ 4	○	○	○	●
E: 65. IPM error (Outdoor unit)	●	■	■ 6	■ 5	○	○	●	●
E: 71. Discharge thermistor error (Outdoor unit)	●	■	■ 7	■ 1	○	○	○	●
E: 72. Compressor thermistor error (Outdoor unit)	●	■	■ 7	■ 2	○	○	○	●
E: 73. Outdoor unit heat exchanger thermistor error (Outdoor unit)	●	■	■ 7	■ 3	○	○	●	○
E: 74. Outdoor temperature thermistor error (Outdoor unit)	●	■	■ 7	■ 4	○	○	○	●
E: 76. 2-way valve thermistor error (Outdoor unit)	●	■	■ 7	■ 6	○	○	○	●
E: 76. 3-way valve thermistor error (Outdoor unit)	●	■	■ 7	■ 6	○	○	●	○

Error contents	POWER/ MODE	ERROR	MONITOR					
			A	B	C	D	E	F
E: 77. Heat sink thermistor error (Outdoor unit)	●	■	■ 7	■ 7	○	○	○	●
E: 86. High pressure switch error (Outdoor unit)	●	■	■ 8	■ 6	○	○	○	●
E: 86. High pressure switch error (Outdoor unit)	●	■	■ 8	■ 6	○	●	○	○
E: 94. Over current error (Outdoor unit)	●	■	■ 9	■ 4	○	○	○	●
E: 95. Compressor motor control error (Outdoor unit)	●	■	■ 9	■ 5	○	○	○	●
E: 97. Outdoor unit fan motor error (Outdoor unit)	●	■	■ 9	■ 7	○	○	●	●
E: 99. 4-way valve error (Outdoor unit)	●	■	■ 9	■ 9	○	○	○	●
E: 9A. Coil 1 (expansion valve 1) error	●	■	■ 9	■ 10	○	○	○	●
E: A1. Discharge temperature error (Outdoor unit)	●	■	■ 10	■ 1	○	○	○	●
E: A3. Compressor temperature error (Outdoor unit)	●	■	■ 10	■ 3	○	○	○	●

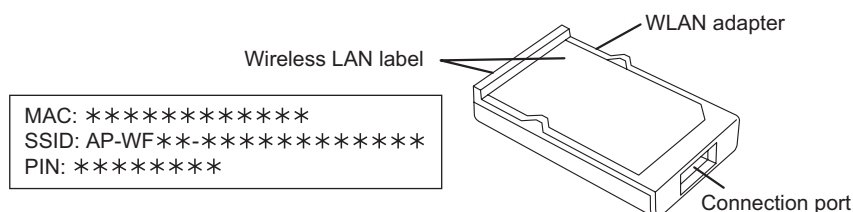
● : Light on    ○ : Light off    ■ (n) : n Times blinking

## 1-5. Error code table (Wireless LAN indicator)

- Wireless LAN control system diagram example



- Name of parts



- Wireless LAN indicator

For confirmation of the error contents, refer to the following flashing patterns.

Wireless LAN indicator lamp (orange) on the indoor unit operate according to the error contents.

Error contents	Wireless LAN LED (orange)	Error code
E: 18. External communication error between indoor unit and WLAN adapter	On: Connection information with router is available Off: Connection information with router is unavailable	18
Wireless LAN adapter error	Flashing slow	No error
Network communication error between wireless LAN router and WLAN adapter	On	No error
E: 18. Communication error	Flashing slow	18
E: 18. Wireless LAN adapter non-energized	Off	18

Flashing slowly: Repeating 7 seconds on/2 seconds off

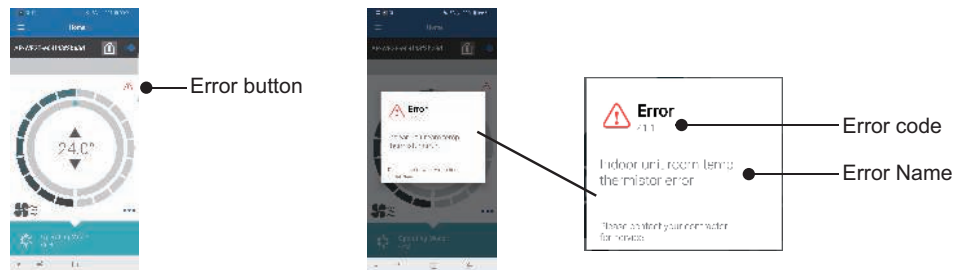
## 1-6. Error code table (Mobile App)

- Error display

If there is an abnormality on the air conditioning, refer to ⚠ as follows.

When the ⚠ (error button) on the home screen is tapped, error code and error name is displayed.

– For Android



– For iOS



- Error code

Error message	Error contents	Error code
Serial communication error (Serial Reverse Transfer Error)	E: 11. Serial communication error (Serial reverse transfer error) (Outdoor unit)	11.1
		11.2
Serial communication error (Serial Forward Transfer Error)	E: 11. Serial communication error (Serial forward transfer error) (Indoor unit)	11.3
		11.4
Wired remote controller communication error	E: 12. Wired remote controller communication error (Indoor unit)	12.1
Combination error	E: 18. External communication error (Indoor unit)	18.1
Indoor unit capacity error	E: 22. Indoor unit capacity error (Indoor unit)	22.1
Address setting error in wired remote controller	E: 26. Address setting error in wired remote controller (Indoor unit)	26.4
		26.5
Connected unit number error	E: 29. Connected unit number error (Indoor unit)	29.1
Indoor unit PCB model information error	E: 32. Indoor unit main PCB error (Indoor unit)	32.1
Manual auto switch error	E: 35. MANUAL AUTO button error (Indoor unit)	35.1
Indoor unit communication circuit error	E: 3A. Indoor unit communication circuit (wired remote controller) error	3A.1
Room temperature sensor error	E: 41. Room temperature sensor error (Indoor unit)	41.1
Indoor unit heat exchanger sensor error	E: 42. Indoor unit heat exchanger sensor error (Indoor unit)	42.2
Indoor unit fan motor error	E: 51. Indoor unit fan motor error (Indoor unit)	51.1
		51.2
Drain pump error	E: 51. Indoor unit fan motor error (Indoor unit)	53.1
Damper error	E: 57. Damper (Open/Close) detection limit switch error E: 57. Damper (Open/Close) simultaneous detection limit switch error (Indoor unit)	57.1
		57.2
Intake grille error	E: 58. Intake grille error (Indoor unit)	57.3
Outdoor Unit Model Information error	E: 62. Outdoor unit model information error (Outdoor unit)	58.1
		62.1
		62.2
		62.3
PC circuit error	E: 64. Active filter voltage error (Outdoor unit)	62.8
		64.1
		64.3
		64.4
IPM error	E: 65. IPM error (Outdoor unit)	64.8
Discharge thermistor error	E: 71. Discharge thermistor error (Outdoor unit)	65.3
Compressor thermistor error	E: 72. Compressor thermistor error (Outdoor unit)	71.1
Outdoor unit heat exchanger thermistor error	E: 73. Outdoor unit heat exchanger thermistor error (Outdoor unit)	72.1
Outdoor temperature thermistor error	E: 74. Outdoor temperature thermistor error (Outdoor unit)	73.3
Outdoor unit operating valve thermistor error	E: 76. 2-way valve thermistor error (Outdoor unit) E: 76. 3-way valve thermistor error (Outdoor unit)	74.1
		76.1
Heat sink thermistor error	E: 77. Heat sink thermistor error (Outdoor unit)	76.2
		77.1



Error message	Error contents	Error code
High pressure switch error	E: 86. High pressure switch error (Outdoor unit)	86.1
Trip detection	E: 94. Over current error (Outdoor unit)	94.1
Compressor rotor position detection error	E: 95. Compressor motor control error (Outdoor unit)	95.1
		95.3
Outdoor unit fan motor error	E: 97. Outdoor unit fan motor error (Outdoor unit)	97.3
4-way valve error	E: 99. 4-way valve error (Outdoor unit)	99.1
Outdoor unit discharge temperature error	E: A1. Discharge temperature error (Outdoor unit)	A1.1
Outdoor unit compressor temperature error	E: A3. Compressor temperature error (Outdoor unit)	A3.1

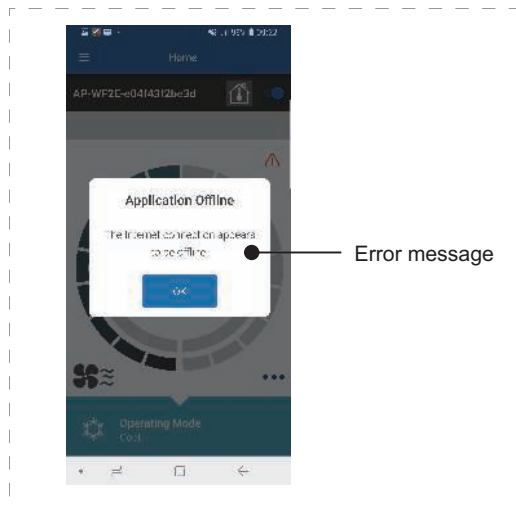
## 1-7. Error message for wireless LAN control (Mobile App)

- Error display

If there is an abnormality on the wireless control system, refer to error messages as follows.

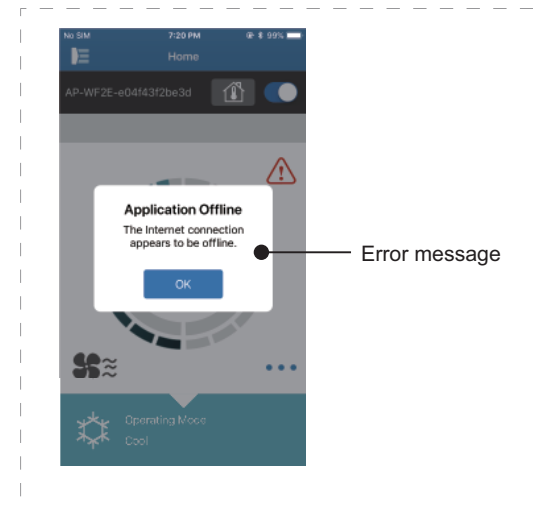
The error message disappears after 5 seconds and the normal screen is displayed.

For Android



Error message

For iOS



Error message

- Error message list
  - For Android

Registration error		
Error message	Cause	Solution
Wi-Fi must be enabled to set up new device	The user has disabled the wireless LAN connection on the smart device.	Enable the wireless LAN connection on the smart device.
We weren't able to sign you onto null. Please goto the Wi-Fi settings and join the network from there. Return to the app when you're done.	The smart device and the air conditioner are connected to difference wireless LAN networks when attempting to register.	Connect the mobile device to the same network as the air conditioner, then retry the registration.
Could not connect to the device at this time. Please reset the device and try again.	The air conditioner is not connected to the wireless LAN.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the smart device to the router, then opening the website.) If there is no access, connect the router to the Internet.
	Smart device is not connected to the same network as the air conditioner.	Connect the mobile device to the same network as the air conditioner, then retry the registration.
The device failed to connect with service.	Your Internet access may be down or a firewall may be blocking requests to the service.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the smart device to the router, then opening the website.) If there is no access, connect the router to the Internet.
Could not register the device. Make sure the device is ready for registration.	The air conditioner is not connected to the router.	Enter the wireless LAN setting on the smart device, then check if the SSID of the air conditioner (AC-UTY-***** ) is connected. If the air conditioner is connected, retry the registration.
	The router the air conditioner is connected to, has no Internet access.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the smart device to the router, then opening the website.) If there is no access, connect the router to the Internet.
	The air conditioner is already registered.	If there is a smart device that has already been registered to the air conditioner, unregister by using the registered smart device. Retry the registration with the smart device you wish to register. If you do not own the smart device registered to the air conditioner (lost, property of previous owner, etc.), ask your manufacturer service to unregister the smart device. Inform them the MAC address of the WLAN adapter as written on the Wireless LAN label.
	If the problem persists even if the all of the above is conducted, contact your dealer or authorized service personnel. When asking for advice, inform them the MAC address of the WLAN Adapter as written on the Wireless LAN label.	

General error		
Error message	Cause	Solution
No connectivity to Wi-Fi or the cloud. Please check your network connection.	The smart device has no Internet access.	Connect the mobile device to the Internet.
An error occurred while trying to update your profile. Please try again later.		
Device is off-line and cannot be modified.	The router the air conditioner is connected to, has no Internet access.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the mobile device to the router, then opening the website.) If there is no access, connect the router to the Internet.
	The air conditioner is not connected to the router.	Check the wireless LAN indicator lamps on the air conditioner. If the indicator lamp is flashing or off, refer to <a href="#">Error code table (Wireless LAN indicator)</a>

Sign in error		
Error message	Cause	Solution
Could not reach service.	The smart device has no Internet access.	Connect the smart device to the Internet.

– For iOS

Registration error		
Error message	Cause	Solution
You need an Internet connection to add new devices.	The user has disabled the wireless LAN connection on their smart device.	Enable the wireless LAN connection from the iOS setting.
Could not register same LAN device. Make sure both devices are in the same LAN and try again to register.	The smart device and the air conditioner are connected to different wireless LAN networks when attempting to register.	Connect the smart device to the same network as the air conditioner, then retry the registration.
No registrable device was found. Make sure Wi-Fi setup was successful. This method only works if the Wi-Fi was recently performed.	The air conditioner is not connected to the wireless LAN.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the smart device to the router, then opening the website.) If there is no access, connect the router to the Internet.
	Smart device is not connected to the same network as the air conditioner.	Connect the mobile device to the same network as the air conditioner, then tap register button.
Could not register the device. Make sure the device is ready for registration.	The air conditioner is not connected to the router.	Enter the wireless LAN setting on the smart device, then check if the SSID of the air conditioner (AC-UTY-***** ) is connected. If the air conditioner is connected, retry the registration.

Registration error		
Error message	Cause	Solution
Could not register the device. Make sure the device is ready for registration.	The router the air conditioner is connected to, has no Internet access.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the smart device to the router, then opening the website.) If there is no access, connect the router to the Internet, then retry the registration.
	The air conditioner is already registered.	If there is a smart device that has already been registered to the air conditioner, unregister by using the registered smart device. Retry the registration with the smart device you wish to register. If you do not own the smart device registered to the air conditioner (lost, property of previous owner, etc.), ask your manufacturer service to unregister the smart device. Notify the MAC address of the WLAN Adapter as written on the Wireless LAN label.
	If the problem persists even if the all of the above is conducted, contact your dealer or authorized service personnel. When asking for advice, inform them the MAC address of the WLAN Adapter as written on the Wireless LAN label.	

General error		
Error message	Cause	Solution
Failed to change password. Cloud not determine service reachability. Failed to update property. Could not retrieve schedules. The operation couldn't be completed. Operation timed out.	The smart device has no Internet access.	Connect the mobile device to the Internet.
"Device name" is off-line. (Device name varies depending on the air conditioner)	The router the air conditioner is connected to has no Internet access.	Check if the router connected to the air conditioner has Internet access. (You can check by connecting the mobile device to the router, then opening the website to check access.) If there is no access, connect the router to the Internet.
	The air conditioner is not connected to the router.	Check the wireless LAN indicator lamps on the air conditioner. If the indicator lamp is flashing or off, refer to <a href="#">Error code table (Wireless LAN indicator)</a>

Sign in error		
Error message	Cause	Solution
Could not reach service.	The smart device has no Internet access.	Connect the smart device to the Internet.

## 2. Troubleshooting with error code

### 2-1. E: 11. Serial communication error (Serial reverse transfer error) (Outdoor unit)

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	1 time flash
		Economy indicator	Continuous flash
		Error code	E: 11
Detective actuator	Outdoor unit	Main PCB	When the indoor unit cannot receive the serial signal from outdoor unit more than 2 minutes after power on, or the indoor unit cannot receive the serial signal more than 15 seconds during normal operation.
		Fan motor	
Forecast of cause			Connection failure
			External cause
			Main PCB failure
			Active filter module failure
			Filter PCB failure
			Outdoor unit fan motor failure

Check point 1. Reset the power and operate

Does error indication show again?

→ If no, go to "Check point 1-2".



Check point 2. Check connection

Check any loose or removed connection line of indoor unit and outdoor unit.

Check connection condition is control unit. (If there is loose connector, open cable or mis-wiring.)

→ If there is an abnormal condition, correct it by referring to the installation manual or the "DESIGN & TECHNICAL MANUAL".



Check point 3. Check the voltage of power supply

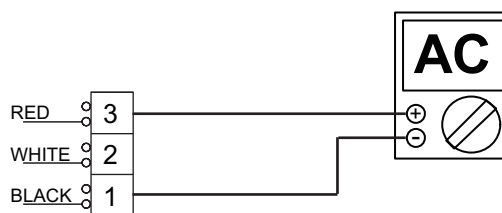
Check the voltage of power supply

Check if AC 198 V (AC 220 V -10%) to AC 264 V (AC 240 V +10%) appears at outdoor unit terminal L—N.



## Check point 4. Check serial signal (Reverse transfer signal)

## Check serial signal (Reverse transfer signal)



- Check if indicated value swings between AC 90 V and AC 270 V at the outdoor unit terminal 1—3.
- If it is abnormal, check the parts below.
  - Outdoor unit fan motor in "[Service parts information](#)" on page 03-83
  - Active filter module in "[Service parts information](#)"
- If outdoor fan motor is abnormal, replace outdoor unit fan motor and main PCB.
- If active filter module is abnormal, replace it.
- If the checked parts are normal, replace the main PCB.



**End**

## Check point 1-2. Check external cause such as noise

- Check the complete insulation of the grounding.
- Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave).



**End**

## 2-2. E: 11. Serial communication error (Serial forward transfer error) (Indoor unit)

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	1 time flash
		Economy indicator	Continuous flash
		Error code	E: 11
Detective actuator	Indoor unit	Main PCB	When the outdoor unit cannot properly receive the serial signal from indoor unit for 10 seconds or more.
		Fan motor	
	Outdoor unit	Main PCB	
Forecast of cause			Connection failure
			External cause
			Main PCB failure

### Check point 1. Reset the power and operate

Does error indication show again?

→ If no, go to "Check point 1-2".



### Check point 2. Check connection

Check any loose or removed connection line of indoor unit and outdoor unit.

→ If there is an abnormal condition, correct it by referring to the installation manual or the "DESIGN & TECHNICAL MANUAL".

Check connection condition is control unit. (If there is loose connector, open cable or mis-wiring.)



### Check point 3. Check the voltage of power supply

Check the voltage of power supply

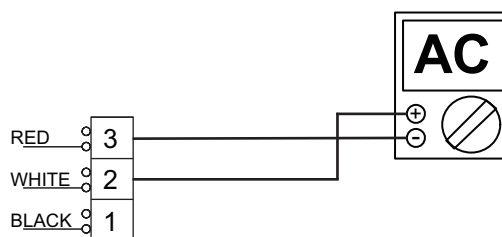
Check if AC 198 V (AC 220 V -10%) to AC 264 V (AC 240 V +10%) appears at outdoor unit terminal L—N.





## Check point 4. Check serial signal (Forward transfer signal)

## Check serial signal (Forward transfer signal)



- Check if indicated value swings between AC 30 V and AC 130 V at outdoor unit terminal 2—3.
- If it is abnormal, replace main PCB.



**End**

## Check point 1-2. Check external cause such as noise

- Check if the ground connection is proper.
- Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave).



**End**

## 2-3. E: 12. Wired remote controller communication error (Indoor unit)

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	2 time flash
		Economy indicator	Continuous flash
		Error code	E: 12
Detective actuator	Indoor unit	Main PCB	When the indoor unit cannot receive the signal from wired remote controller more than 1 minute during normal operation.
	Wired remote control		
Forecast of cause			Terminal connection abnormal
			Wired remote control failure
			Main PCB failure

### Check point 1. Check the connection of terminal

After turning off the power, check & correct the followings.

- Check the connection of terminal between wired remote controller and indoor unit, and check if there is a disconnection of the cable.



### Check Point 1-2. Check the wired remote controller and main PCB

[Compact cassette, slim duct, floor, and ceiling types]

Check voltage at CN14 (terminal 1—3) of main PCB or communication PCB. (Power supply to the remote controller)

- If it is DC 12 V, the remote controller is failure. (Main PCB is normal)
  - Replace the remote control
- If it is DC 0 V, the main PCB is failure. (Check remote controller once again)
  - Replace the main PCB

[Wall mount type for KGTB, KGTE, 18KMTB, KMTE, KMCE, KETA, KETE(-B)]

Check voltage at CN300 (terminal 1—2) of main PCB or communication PCB. (Power supply to the remote controller)

- If it is DC 12 V, the remote controller is failure. (Main PCB is normal)
  - Replace the remote control
- If it is DC 0 V, the main PCB is failure. (Check remote controller once again)
  - Replace the main PCB

[Wall mount type for 07-14KMTB, KMCC]

Check voltage at CNC01 (terminal 1—3) of main PCB or communication PCB. (Power supply to the remote controller)

- If it is DC 13 V, the remote controller is failure. (Main PCB is normal)
  - Replace the remote control
- If it is DC 0 V, the main PCB is failure. (Check remote controller once again)
  - Replace the main PCB

[Mini duct type]

Check voltage at CN300 (terminal 1—3, terminal 1—2) of main PCB. (3-wire remote controller, 2-wire remote controller) (Power supply to the remote controller)

- If it is DC 12 V, the remote controller is failure. (Main PCB is normal)
  - Replace the remote control
- If it is DC 0 V, the main PCB is failure. (Check remote controller once again)
  - Replace the main PCB

**End****Check Point 2. Wire installation wrong remote controller group setting**

- Wrong wire connection in remote controller group (Please refer to the installation manual)
- The number of connecting indoor unit and remote controller in one remote controller group were less than 16 units.

**Check Point 2-1. Check Indoor unit main PCB**

- Check if main PCB damage
- Change main PCB and check the error after setting remote controller address

**End**

## 2-4. E: 18. External communication error (Indoor unit)

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	8 time flash
		Economy indicator	Continuous flash
		Error code	E: 18
Detective actuator	Indoor unit	External communication error	After receiving a signal from the external input and output PCB, the same signal has not been received for 15 seconds.
Forecast of cause			Connection failure
			WLAN adapter failure
			Main PCB

### Check point 1. Check the connection

- Check any loose or removed connection between the main PCB to the WAN adapter.  
-> If there is an abnormal condition, correct it by refer to the installation manual or the "DESIGN & TECHNICAL MANUAL".
- Check the connection condition on the WLAN adapter and the main PCB (If there is loose connector, open cable or mis-wiring.)



### Check point 2. Replace the WLAN adapter

If check point 1 do not improve the symptom, change WLAN adapter.



### Check point 3. Replace the main PCB

If check point 2 do not improve the symptom, replace the main PCB.



**End**

## 2-5. E: 22. Indoor unit capacity error (Indoor unit)

Indicator	Indoor unit	Operation indicator	2 time flash
		Timer indicator	2 time flash
		Economy indicator	Continuous flash
		Error code	E: 22
Detective actuator	Indoor unit main PCB		When the total capacity of the indoor units does not match outdoor unit capacity while 3 minutes after power on.
Forecast of cause			Indoor unit selection is incorrect.
			Main PCB failure

### Check point 1. Check the total capacity of indoor units

Check the total capacity of the indoor units.

→ If abnormal condition is found, correct it referring to the installation manual or DESIGN & TECHNICAL MANUAL.



### Check point 2. Replace the main PCB

If check point 1 does not improve the symptom, replace the main PCB.



**End**

## 2-6. E: 23. Combination error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	2 time flash
		Timer indicator	3 time flash
		Economy indicator	Continuous flash
		Error code	E: 23
Detective actuator	Indoor unit	The outdoor unit receives the serial signal of applied refrigerant information from indoor unit.	
Forecast of cause		Incorrect indoor unit is selected.	

### Check point 1. Check the type of indoor unit

- Check the type of the connected indoor unit.  
-> If there is an abnormal condition, correct it by refer to the installation manual or the "DESIGN & TECHNICAL MANAL".



### Check point 2. Replace the main PCB

If check point 1 do not improve the symptom, replace the main PCB of the outdoor unit.



**End**

## 2-7. E: 26. Address setting error in wired remote controller (Indoor unit)

Indicator	Indoor unit	Operation indicator	2 time flash
		Timer indicator	6 time flash
		Economy indicator	Continuous flash
		Error code	E: 26
Detective actuator	Wired remote controller (2-wire)	<ul style="list-style-type: none"> <li>When the address number set by auto setting and manual setting are mixed in one remote controller group</li> <li>When the duplicated address number exists in one remote controller group</li> </ul>	
	Indoor unit controller PCB		
Forecast of cause		Wrong wiring of remote controller group	
		Wrong remote controller address setting	
		Indoor unit main PCB failure	
		Remote controller failure	

### Check point 1. Wire installation

- Check the wire connection in the remote controller group (For installation method, refer to installation manual)  
-> If there is an abnormal condition, correct it by refer to the installation manual or the "DESIGN & TECHNICAL MANUAL".



### Check point 2. Wrong remote controller group setting

- The given address number by auto setting (00) and the manual set number (except 00) are not existing in one remote controller group.
- The remote controller address setting by UI is not existing same address.
- The duplicate address number is not existing in one remote controller group.



### Check point 3. Check indoor unit main PCB

- Check if main PCB is damaged.
- Change main PCB and check the error after setting remote controller address.



**End**

## 2-8. E: 29. Connected unit number error (Indoor unit)

Indicator	Indoor unit	Operation indicator	2 time flash
		Timer indicator	9 time flash
		Economy indicator	Continuous flash
		Error code	E: 29
Detective actuator	Wired remote controller (2-wire)	When the number of the connected indoor unit exceeds the limitation.	
	Indoor unit main PCB		
Forecast of cause		Wrong wiring of indoor unit or remote controller	
		Number of indoor unit or remote controller in remote controller group	
		Indoor unit main PCB failure	

### Check point 1. Wire installation

- Wrong number of connected indoor unit  
-> If there is an abnormal condition, correct it by refer to the installation manual or the "DESIGN & TECHNICAL MANUAL".



### Check point 2. Check indoor unit main PCB

- Check if main PCB is damaged.
- Change main PCB and check the error after setting remote controller address.



**End**



## 2-9. E: 32. Indoor unit main PCB error (Indoor unit)

Indicator	Indoor unit	Operation indicator	3 time flash
		Timer indicator	2 time flash
		Economy indicator	Continuous flash
		Error code	E: 32
Detective actuator	Indoor unit	main PCB	When power is on and there is some below case. 1. When model information of EEPROM is incorrect. 2. When the access to EEPROM failed.
Forecast of cause			External cause
			Defective connection of electrical components
			Main PCB failure

Check point 1. Reset power supply and operate

Does error indication show again?

→ If no, go to "Check point 1-2".



Check point 2. Check Indoor unit electrical components

- Check all connectors. (loose connector or incorrect wiring)
- Check any shortage or corrosion on PCB.



Check point 3. Replace the main PCB

Replace the main PCB.



**End**

Check point 1-2. Check external cause such as noise

- Check if the ground connection is proper.
- Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave).



**End**

### NOTE: EEPROM

EEPROM (Electrically Erasable and Programmable Read Only Memory) is a non-volatile memory which keeps memorized information even if the power is turned off. It can change the contents electronically. To change the contents, it uses higher voltage than normal, and it cannot change a partial contents. (Rewriting shall be done upon erasing the all contents.) There is a limit in a number of rewriting.

## 2-10. E: 33. Indoor unit motor electricity consumption detection error (Indoor unit)

Indicator	Indoor unit	Operation indicator	3 time flash
		Timer indicator	3 time flash
		Economy indicator	Continuous flash
		Error code	E: 33
Detective actuator	Indoor unit motor electricity consumption detection		When the voltage value or the current value of the motor go beyond the limits
Forecast of cause			Fan motor failure
			Main PCB failure

### Check point 1. Check the rotation of fan

Rotate the fan by hand when the operation is off. (Check if fan is caught, drop off or locked motor)  
→ If fan or bearing is abnormal, replace it.



### Check point 2. Check ambient temperature around the motor

Check excessively high temperature around the motor. (If there is any surrounding equipment that causes heat.)  
→ Upon the temperature coming down, restart operation.



### Check point 3. Check indoor unit fan motor

Check indoor unit fan motor. (Refer to indoor unit fan motor in "[Service parts information](#)" on page 03-83.)  
→ If indoor unit fan motor is abnormal, replace it.



### Check point 4. Replace the main PCB

If check point 1-3 does not improve the symptom, replace the main PCB.



**End**

## 2-11. E: 35. MANUAL AUTO button error (Indoor unit)

Indicator	Indoor unit	Operation indicator	3 time flash
		Timer indicator	5 time flash
		Economy indicator	Continuous flash
		Error code	E: 35
Detective actuator	Indoor unit controller PCB		When the MANUAL AUTO button becomes on for consecutive 60 or more seconds.
	Indicator PCB		
	Manual auto switch		
Forecast of cause			MANUAL AUTO button failure
			Controller PCB and indicator PCB failure

Check point 1. Check the MANUAL AUTO button

- Check if MANUAL AUTO button is kept pressed.
- Check ON/OFF switching operation by using a meter.



If MANUAL AUTO button is disabled (ON/OFF switching), replace it.



Check point 2. Replace the main PCB and indicator PCB

If Check Point 1 does not improve the symptom, replace the main PCB and indicator PCB.



**End**

## 2-12. E: 39. Indoor unit power supply error for fan motor (Indoor unit)

Indicator	Indoor unit	Operation indicator	3 time flash
		Timer indicator	9 time flash
		Economy indicator	Continuous flash
		Error code	E: 39
Detective actuator	Indoor unit main PCB		<ul style="list-style-type: none"> <li>When a momentary power cut off</li> <li>When do not start fan motor</li> </ul>
Forecast of cause		External cause	
		Connector connection failure	
		Main PCB failure	

### Check point 1. Check external cause at indoor and outdoor (Voltage drop or Noise)

- Instant drop: Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure: Check if there is a defective contact or leak current in the power supply circuit.
- Noise: Check if there is any equipment causing harmonic wave near electric line. (Neon bulb or electric equipment that may cause harmonic wave)  
Check the complete insulation of grounding.



### Check point 2. Check connection of Connector

- Check if connector is removed.
- Check erroneous connection.
- Check if cable is open.

→ Upon correcting the removed connector or mis-wiring, reset the power.



### Check point 3. Replace the main PCB

If check point 1 to 2 do not improve the symptom, replace the main PCB.



**End**

## 2-13. E: 3A. Indoor unit communication circuit (wired remote controller) error

Indicator	Indoor unit	Operation indicator	3 time flash
		Timer indicator	10 time flash
		Economy indicator	Continuous flash
		Error code	E: 3A
Detective actuator	Wired remote controller (2-wire)	Detect the communication error of microcomputer and communication PCB.	
	Indoor unit controller PCB circuit		
Forecast of cause		Communication PCB defective	
		Indoor unit main PCB defective	

Check point 1. Check the connection of terminal

- After turning off the power supply, check and correct the followings  
Indoor unit - Check the connection the communication PCB and the main PCB



Check Point 2 : Replace the communication PCB

If the Check point 1 is ok, replace the communication PCB



Check Point 3 : Replace the main PCB

If condition is doesn't change, replace the main PCB



**End**

## 2-14. E: 41. Room temperature sensor error (Indoor unit)

Indicator	Indoor unit	Operation indicator	4 time flash
		Timer indicator	1 time flash
		Economy indicator	Continuous flash
		Error code	E: 41
Detective actuator	Indoor unit main PCB	Room temperature thermistor is open or short is detected always.	
	Room temperature thermistor		
Forecast of cause		Connector failure	
		Thermistor failure	
		Main PCB failure	

### Check point 1. Check connection of connector

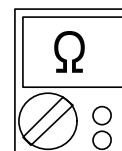
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the room thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of each indoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



If the voltage does not appear, replace main PCB.



**End**

## 2-15. E: 42. Indoor unit heat exchanger sensor error (Indoor unit)

Indicator	Indoor unit	Operation indicator	4 time flash	
		Timer indicator	2 time flash	
		Economy indicator	Continuous flash	
		Error code	E: 42	
Detective actuator	Indoor unit main PCB		When heat exchanger temperature thermistor open or short circuit is detected.	
	Heat exchanger temperature thermistor			
Forecast of cause				Connector connection failure
				Thermistor failure
				Main PCB failure

### Check point 1. Check connection of connector

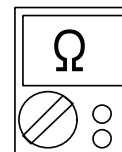
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the heat exchanger thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of each indoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



If the voltage does not appear, replace main PCB.



**End**

## 2-16. E: 45. Refrigerant leakage sensor error (Indoor unit)

Indicator	Indoor unit	Operation indicator	4 time flash
		Timer indicator	5 time flash
		Economy indicator	Continuous flash
		Error code	E: 45
Detective actuator	Refrigerant leakage sensor	When refrigerant leakage sensor open, short circuit, or abnormal voltage of drive circuits detected.	
Forecast of cause		Connector connection failure	
		Harness disconnection	
		Refrigerant leakage sensor deterioration	

System is down.

### Check point 1. Check connection of connector

- Check if connector is loose or removed.
- Check erroneous connection.
- Check if refrigerant leakage sensor cable is open.

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Replace refrigerant leakage sensor

- If an abnormality (failure) occurs, the refrigerant leakage sensor needs to be replaced.



**End**



## 2-17. E: 45. Refrigerant leakage sensor deterioration (Indoor unit)

Indicator	Indoor unit	Operation indicator	4 time flash
		Timer indicator	5 time flash
		Economy indicator	Continuous flash
		Error code	E: 45
Detective actuator	Refrigerant leakage sensor		When refrigerant leakage sensor open, short circuit, or abnormal voltage of drive circuits detected.
Forecast of cause		Connector connection failure	
		Harness disconnection	
		Refrigerant leakage sensor deterioration	

Continuous operation for a certain period is possible.

### Check point 1. Replace refrigerant leakage sensor

- Replace due to expiration of refrigerant leakage sensor.
- Refrigerant leakage sensor needs to be replaced regularly.



**End**

## 2-18. E: 51. Indoor unit fan motor error (Indoor unit)

Indicator	Indoor unit	Operation indicator	5 time flash
		Timer indicator	1 time flash
		Economy indicator	Continuous flash
		Error code	E: 51
Detective actuator	Indoor unit	main PCB	When the actual rotation number of the indoor unit fan motor is below 1/3 of the target rotation number continuously for more than 56 seconds.
		Fan motor	
Forecast of cause			Fan rotation failure
			Fan motor winding open
			Motor protection by surrounding temperature rise
			Control PCB failure
			Indoor unit fan motor failure

### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off. (Check if fan is caught, dropped off or locked motor)  
→ If fan or bearing is abnormal, replace it.



### Check point 2. Check ambient temperature around motor

Check excessively high temperature around the motor. (If there is any surrounding equipment that causes heat)  
→ Upon the temperature coming down, restart operation.



### Check point 3. Check indoor unit fan motor

Check Indoor unit fan motor. (Refer to indoor unit fan motor in ["Service parts information"](#) on page 03-83.)  
→ If Indoor unit fan motor is abnormal, replace Indoor unit fan motor.



### Check point 4. Replace the main PCB

If Check Point 1 to 3 do not improve the symptom, replace the main PCB.



**End**

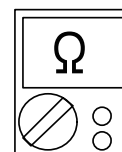
## 2-19. E: 53. Drain pump error (Indoor unit)

Indicator	Indoor unit	Operation indicator	5 time flash
		Timer indicator	3 time flash
		Economy indicator	Continuous flash
		Error code	E: 53
Detective actuator	Indoor unit main PCB	When Float switch is ON for more than 3 minutes.	
	Float switch		
Forecast of cause		Float switch failure	
		Shorted connector/wire failure	
		Main PCB failure	
		Drain pump failure	
		Hose clogging	

### Check point 1. Check float switch

- Check operation of float switch. (any blocking by dust, etc.)
- Remove float switch and check ON/OFF switching operation by using a meter.

-> If float switch is abnormal, replace it.



### Check point 2. Check connector and wire

Check loose contact of CN9 and shorted wire (pinched wire).

-> Replace float switch if the wire is abnormal



### Check point 3. Check drain hose

Check drain hose.

-> If there is hose clogging. Please clear the clog.



### Check point 4. Replace the main PCB

If check point 1 to 3 do not improve the symptom, replace the main PCB and execute the check operation again.



**End**

### Attention

Wall mount type does not have a float switch. In this case, replace main PCB and set up the original address.

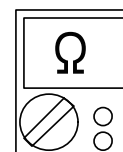
## 2-20. E: 57. Damper (Open/Close) detection limit switch error

Indicator	Indoor unit	Operation indicator	5 time flash
		Timer indicator	7 time flash
		Economy indicator	Continuous flash
		Error code	E: 57
Detective actuator	Indoor unit main PCB	<ul style="list-style-type: none"> <li>When limit switch were not able to detect the close though the damper close.(Upper air flow)</li> <li>When limit switch were not able to detect the open though the damper open.(Upper &amp; Lower air flow)</li> </ul>	
	Limit switch		
	Damper		
Forecast of cause		Limit switch failure	
		Shorted connector/wire	
		Damper faulure	
		Controller PCB failure	

### Check point 1. Check limit switch

- Check operation of limit switch. (any blocking by dust, etc.)
- Remove limit switch and check ON/OFF switching operation by using a meter.

-> If limit switch is detective, replace it.



### Check point 2. Check connector (CN18)/wire

Check loose contact of CN18/shorted wire (pinched wire).

-> Replace limit switch if the wire is abnormal



### Check point 3. Check Damper

- Check the obstruction of damper movement.
- Check the damper movement.

-> Replace damper if the damper is abnormal



### Check point 4. Replace the main PCB

If Check Point 1 and 3 do not improve the symptom, replace the main PCB.



**End**

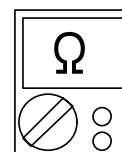
## 2-21. E: 57. Damper (Open/Close) simultaneous detection limit switch error (Indoor unit)

Indicator	Indoor unit	Operation indicator	5 time flash
		Timer indicator	7 time flash
		Economy indicator	Continuous flash
		Error code	E: 57
Detective actuator	Indoor unit main PCB		When the limit switch detects open and close at the simultaneous.
	Limit switch		
Forecast of cause			Limit switch failure
			Shorted connector/wire
			Controller PCB failure

### Check point 1. Check limit switch

- Check operation of limit switch. (any blocking by dust, etc.)
- Remove limit switch and check ON/OFF switching operation by using a meter.

-> If limit switch is detective, replace it.



### Check point 2. Check connector (CN18)/wire

Check loose contact of CN18/shorted wire (pinched wire).

-> Replace limit switch if the wire is abnormal



### Check point 3. Replace the main PCB

If Check Point 1, 2 do not improve the symptom, replace the main PCB.



**End**

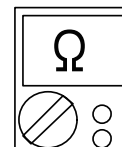
## 2-22. E: 58. Intake grille error (Indoor unit)

Indicator	Indoor unit	Operation indicator	5 time flash
		Timer indicator	8 time flash
		Economy indicator	Continuous flash
		Error code	E: 58
Detective actuator	Indoor unit main PCB	When the Micro switch is detected open while running the compressor.	
	Micro switch		
Forecast of cause			Micro switch failure
			Shorted connector/wire
			Main PCB failure

### Check point 1. Check limit switch

- Check operation of Micro switch. (any blocking by dust, etc.)
- Remove Micro switch and check ON/OFF switching operation by using a meter.

-> If micro switch is detective, replace it.



### Check point 2. Check connector (CN11)/wire

Check loose contact of CN11/shorted wire (pinched wire).

-> Replace micro switch if the wire is abnormal



### Check point 3. Replace the main PCB

If Check Point 1 and 2 do not improve the symptom, replace the main PCB.



**End**

## 2-23. E: 5U. Indoor unit error

Indicator	Indoor unit	Operation indicator	5 time flash
		Timer indicator	15 time flash
		Economy indicator	Continuous flash
		Error code	E: 5U

Check point. Check following error code.

E: 11. Serial communication error (Serial reverse transfer error) (Outdoor unit)

E: 11. Serial communication error (Serial forward transfer error) (Indoor unit)

E: 12. Wired remote controller communication error (Indoor unit)

E: 18. External communication error (Indoor unit)

E: 18. External communication error between indoor unit and WLAN adapter

E: 18. Communication error

E: 18. Wireless LAN adapter non-energized

E: 22. Indoor unit capacity error (Indoor unit)

E: 23. Combination error (Outdoor unit)

E: 26. Address setting error in wired remote controller (Indoor unit)

E: 29. Connected unit number error (Indoor unit)

E: 32. Indoor unit main PCB error (Indoor unit)

E: 33. Indoor unit motor electricity consumption detection error (Indoor unit)

E: 35. MANUAL AUTO button error (Indoor unit)

E: 3A. Indoor unit communication circuit (wired remote controller) error

E: 41. Room temperature sensor error (Indoor unit)

E: 42. Indoor unit heat exchanger sensor error (Indoor unit)

E: 51. Indoor unit fan motor error (Indoor unit)



**End**

## 2-24. E: 62. Outdoor unit model information error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	6 time flash
		Timer indicator	2 time flash
		Economy indicator	Continuous flash
		Error code	E: 62
Detective actuator	Outdoor unit	main PCB	When power is on and there is some below case. 1. When model information of EEPROM is incorrect. 2. When the access to EEPROM failed.
Forecast of cause			External cause
			Defective connection of electrical components
			Main PCB failure

Check point 1. Reset power supply and operate

Does error indication show again?

→ If no, go to "Check point 1-2".



Check point 2. Check Indoor unit electrical components

- Check all connectors. (loose connector or incorrect wiring)
- Check any shortage or corrosion on PCB.



Check point 3. Replace the main PCB

If Check Point 1,2 do not improve the symptom, replace the main PCB.



**End**

Check point 1-2. Check external cause such as noise

- Check if the ground connection is proper.
- Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave).



**End**

### NOTE: EEPROM

EEPROM (Electrically Erasable and Programmable Read Only Memory) is a non-volatile memory which keeps memorized information even if the power is turned off. It can change the contents electronically. To change the contents, it uses higher voltage than normal, and it cannot change a partial contents. (Rewriting shall be done upon erasing the all contents.) There is a limit in a number of rewriting.



## 2-25. E: 64. Active filter voltage error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	6 time flash
		Timer indicator	4 time flash
		Economy indicator	Continuous flash
		Error code	E: 64
Detective actuator	Outdoor unit	Main PCB	<ul style="list-style-type: none"><li>When inverter input DC voltage is higher than 425 V or lower than 80 V.</li></ul>
		Air filter module	<ul style="list-style-type: none"><li>When a momentary power cut off occurred on low voltage</li></ul>
Forecast of cause			External cause
			Connector connection failure
			Main PCB failure
			Active filter module failure

### Check point 1. Check external cause at indoor and outdoor (Voltage drop or Noise)

- Instant drop: Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure: Check if there is a defective contact or leak current in the power supply circuit.
- Noise: Check if there is any equipment causing harmonic wave near electric line. (Neon bulb or electric equipment that may cause harmonic wave)  
Check the complete insulation of grounding.



### Check point 2. Check connection of Connector

- Check if connector is removed.
- Check erroneous connection.
- Check if cable is open.

Upon correcting the removed connector or miswiring, reset the power.



### Check point 3. Check active filter module

Check active filter module. (Refer to active filter module in ["Service parts information"](#) on page 03-83.)

→ If active filter module is abnormal, replace it



### Check point 4. Replace the main PCB

If check point 1 to 3 do not improve the symptom, replace the main PCB.



**End**

## 2-26. E: 65. IPM error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	6 time flash
		Timer indicator	5 time flash
		Economy indicator	Continuous flash
		Error code	E: 65
Detective actuator	Outdoor unit	Main PCB	When the signal from FO terminal terminal of IPM is "L" (0 V) during the compressor stopping.
Forecast of cause			Main PCB failure

Check point 1. Replace the main PCB

Replace the main PCB.



**End**

## 2-27. E: 71. Discharge thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	1 time flash
		Economy indicator	Continuous flash
		Error code	E: 71
Detective actuator	Outdoor unit main PCB	When discharge pipe temperature thermistor open or short circuit is detected at power on or while running the compressor	
	Discharge pipe temperature thermistor		
Forecast of cause		Connector failure	
		Thermistor failure	
		Main PCB failure	

### Check point 1. Check connection of connector

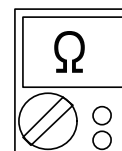
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

→ Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the discharge temperature thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



If the voltage does not appear, replace main PCB.



**End**

## 2-28. E: 72. Compressor thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	2 time flash
		Economy indicator	Continuous flash
		Error code	E: 72
Detective actuator	Outdoor unit main PCB	When compressor temperature thermistor open or short circuit is detected at power on or while running the compressor	
	Compressor temperature thermistor		
Forecast of cause		Connector failure	
		Thermistor failure	
		Main PCB failure	

### Check point 1. Check connection of connector

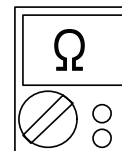
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

→ Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the compressor thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



If the voltage does not appear, replace main PCB.



**End**

## 2-29. E: 73. Outdoor unit heat exchanger thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	3 time flash
		Economy indicator	Continuous flash
		Error code	E: 73
Detective actuator	Outdoor unit main PCB		When heat exchanger temperature thermistor open or short circuit is detected at power on or while running the compressor
	Heat exchanger temperature thermistor		
Forecast of cause			Connector failure
			Thermistor failure
			Main PCB failure

### Check point 1. Check connection of connector

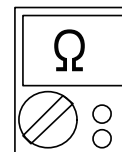
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

→ Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the outdoor unit heat exchanger thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.

If the voltage does not appear, replace main PCB.



**End**

## 2-30. E: 74. Outdoor temperature thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	4 time flash
		Economy indicator	Continuous flash
		Error code	E: 74
Detective actuator	Outdoor unit main PCB	When outdoor temperature thermistor open or short circuit is detected at power on or while running the compressor	
	Outdoor temperature thermistor		
Forecast of cause		Connector failure	
		Thermistor failure	
		Main PCB failure	

### Check point 1. Check connection of connector

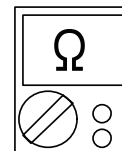
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the outdoor temperature thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



If the voltage does not appear, replace main PCB.



**End**

## 2-31. E: 76. 2-way valve thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	6 time flash
		Economy indicator	Continuous flash
		Error code	E: 76
Detective actuator	Outdoor unit main PCB	When 2-way valve temperature thermistor open or short circuit is detected at power on or while running the compressor.	
	2-way valve temperature thermistor		
Forecast of cause		Connector failure	
		Thermistor failure	
		Main PCB failure	

### Check point 1. Check connection of connector

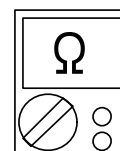
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the outdoor temperature thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.

If the voltage does not appear, replace main PCB.



**End**

## 2-32. E: 76. 3-way valve thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	6 time flash
		Economy indicator	Continuous flash
		Error code	E: 76
Detective actuator	Outdoor unit main PCB	When 3-way valve temperature thermistor open or short circuit is detected at power on or while running the compressor.	
	3-way valve temperature thermistor		
Forecast of cause			Connector failure
			Thermistor failure
			Main PCB failure

### Check point 1. Check connection of connector

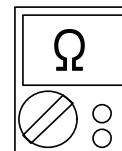
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the outdoor temperature thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.

If the voltage does not appear, replace main PCB.



**End**



## 2-33. E: 77. Heat sink thermistor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	7 time flash
		Timer indicator	7 time flash
		Economy indicator	Continuous flash
		Error code	E: 77
Detective actuator	Heat sink temperature thermistor	Heat sink temperature thermistor short or open detected	
Forecast of cause		Connector failure	
		Thermistor failure	
		Inverter PCB failure	

### Check point 1. Check connection of connector

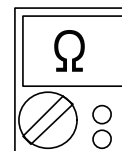
- Check if connector is loose or removed.
- Check erroneous connection.
- Check if thermistor cable is open

-> Reset power when reinstalling due to removed connector or incorrect wiring.



### Check point 2. Remove connector and check thermistor resistance value

- For the Heat sink thermistor resistance value, refer to "[Thermistor resistance values](#)" on page 03-94.
- If thermistor is either open or shorted, replace it and reset the power.



### Check point 3. Check voltage of inverter PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V).

**NOTE:** For details of thermistor connector, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



If the voltage does not appear, replace inverter PCB.



**End**

## 2-34. E: 86. High pressure switch error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	8 time flash
		Timer indicator	6 time flash
		Economy indicator	Continuous flash
		Error code	E: 86
Detective actuator	Outdoor unit main PCB	When pressure switch open is detected in 10 seconds after the power is turned on.	
	High pressure switch		
Forecast of cause		Connector connection failure	
		Pressure sensor failure	
		Main PCB failure	

Check point 1. Reset power supply and operate

Does abnormal LED indication show again?

If no, go to "Check point 3".



Check point 2. Check output voltage of main PCB

Make sure circuit diagram of outdoor unit and check terminal voltage at thermistor (DC 5.0 V  $\pm$  5%).

**NOTE:** For details of thermistor connector, refer to "Wiring diagrams" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.

If the voltage is not correct, replace main PCB.



Check point 3. Check pressure switch

Check if connector is loose or cable is open.  
-> If no abnormal connection is found, replace pressure switch.

After replacing pressure switch, check operating condition and pressure in operation.



**End**

- Characteristics of pressure switch

Pressure switch 1	
Contact: Short → Open	4.2 $\pm$ 0.1 MPa
Contact: Open → Short	3.2 $\pm$ 0.15 MPa

CN37

Pressure switch 2	
Contact: Short → Open	37 $^{+0}_{-0.2}$ MPa
Contact: Open → Short	2.9 $\pm$ 0.2 MPa

CN36

## 2-35. E: 94. Over current error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	9 time flash
		Timer indicator	4 time flash
		Economy indicator	Continuous flash
		Error code	E: 94
Detective actuator	Outdoor unit	Main PCB	<div>1. When more than normal operating current to IPM in main PCB flows, the compressor stops.</div> <div>2. After the compressor restarts, if the same operation is repeated within 40 seconds, the compressor stops again.</div> <div>3. If 1. and 2. repeats 5 times, the compressor stops permanently.</div>
		Compressor	
Forecast of cause			Defective connection of electrical components
			Outdoor fan operation failure
			Outdoor heat exchanger clogged
			Compressor failure
			Main PCB failure

### Check point 1. Check connections of outdoor unit electrical components

- Check if the terminal connection is loose.
- Check if connector is removed.
- Check erroneous connection.
- Check if cable is open.

→ Upon correcting the removed connector or mis-wiring, reset the power.



### Check point 2. Check outdoor fan and heat exchanger

- Is there anything obstructing the air distribution circuit?
- Is there any clogging of outdoor heat exchanger?
- Is the fan rotating by hand when operation is off?

→ If the fan motor is locked, replace it.



### Check point 3. Check outdoor fan

Check outdoor fan motor.

Refer to "[E: 97. Outdoor unit fan motor error \(Outdoor unit\)](#)" on page 03-54.

→ If the fan motor is failure, replace it.



Check point 4. Check compressor

Check compressor. (Refer to inverter compressor in ["Service parts information"](#).)



Check point 5. Replace the main PCB

If Check point 1 to 4 do not improve the symptom, replace the main PCB.



**End**

## 2-36. E: 95. Compressor motor control error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	9 time flash
		Timer indicator	5 time flash
		Economy indicator	Continuous flash
		Error code	E: 95
Detective actuator	Outdoor unit	Main PCB	<div>1. When running the compressor, if the detected rotor location is out of phase with actual rotor location more than 90°, the compressor stops.</div> <div>2. After the compressor restarts, if the same operation is repeated within 40 seconds, the compressor stops again.</div> <div>3. If 1. and 2. repeats 5 times, the compressor stops permanently.</div>
		Compressor	
Forecast of cause			Defective connection of electrical components
			Main PCB failure
			Compressor failure

### Check point 1. Check Noise from Compressor

Turn on Power and check operation noise.  
→ If an abnormal noise show, replace compressor.



### Check point 2. Check connection of around the compressor components

For compressor terminal, main PCB

- Check if connector is removed.
- Check erroneous connection.
- Check if cable is open. (Refer to inverter compressor in ["Service parts information"](#) on page 03-83.)

→ Upon correcting the removed connector or mis-wiring, reset the power.



### Check point 3. Replace the main PCB

If Check point 1, 2 do not improve the symptom, replace the main PCB.



### Check point 4. Replace compressor

If Check point 3 do not improve the symptom, change compressor.



**End**

## 2-37. E: 97. Outdoor unit fan motor error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	9 time flash
		Timer indicator	7 time flash
		Economy indicator	Continuous flash
		Error code	E: 97
Detective actuator	Outdoor unit	Main PCB	<div>1. When outdoor fan rotation speed is less than 100 rpm in 20 seconds after fan motor starts, fan motor stops.</div> <div>2. After fan motor restarts, if the same operation within 60 seconds is repeated 3 times in a row, compressor and fan motor stops.</div> <div>3. If 1. and 2. repeats 5 times in a row, compressor and fan motor stops permanently.</div>
		Fan motor	
Forecast of cause			Fan rotation failure
			Motor protection by surrounding temperature rise
			Main PCB failure
			Outdoor unit fan motor

### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off. (Check if fan is caught, dropped off or locked motor)  
→ If fan or bearing is abnormal, replace it.



### Check point 2. Check ambient temperature around motor

Check excessively high temperature around the motor. (If there is any surrounding equipment that causes heat)  
→ Upon the temperature coming down, restart operation.



### Check point 3. Check outdoor unit fan motor

Check outdoor unit fan motor. (Refer to outdoor unit fan motor in "[Service parts information](#)" on page 03-83.)  
→ If outdoor unit fan motor is abnormal, replace outdoor unit fan motor and main PCB.



### Check point 4. Check output voltage of main PCB

Check outdoor unit circuit diagram and the voltage. (Measure at main PCB side connector)

**NOTE:** For details of wiring diagram, refer to "[Wiring diagrams](#)" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.



Read wire	DC voltage
Red—Black	280 V (AC 220 V -10%) to 373 V (AC 240 V +10%)
White—Black	15 ±1.5 V

→ If the voltage is not correct, replace Main PCB.



**End**

## 2-38. E: 99. 4-way valve error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	9 time flash
		Timer indicator	9 time flash
		Economy indicator	Continuous flash
		Error code	E: 99
Detective actuator	Indoor unit	main PCB	When the indoor heat exchanger temperature is compared with the room temperature, and either following condition is detected continuously two times, the compressor stops. Indoor heat exchanger temp. - Room temp. > 10°C (Cooling or Dry operation) Indoor heat exchanger temp. - Room temp. < -10°C (Heating operation) If the same operation is repeated 5 times, the compressor stops permanently.
	Heat exchanger temperature thermistor		
	Room temperature thermistor		
	4-way valve		
Forecast of cause			Connector connection failure
			Thermistor failure
			Coil failure
			4-way valve failure
			Main PCB failure
			Controller PCB failure

### Check point 1. Check connection of connector

- Check if connector is removed.
- Check erroneous connection.
- Check if thermistor cable is open.

→ Upon correcting the removed connector or mis-wiring, reset the power.



### Check point 2. Check thermistor of Indoor unit

- Isn't it fallen off the holder?
- Is there a cable pinched?

Check characteristics of thermistor, refer to "[E: 41. Room temperature sensor error \(Indoor unit\)](#)" on page 03-30 and "[E: 42. Indoor unit heat exchanger sensor error \(Indoor unit\)](#)" on page 03-31.

→ If defective, replace the thermistor.



### Check point 3. Check the solenoid coil and 4-way valve

- **Solenoid coil**  
Remove CN30 from PCB and check the resistance value of coil. Resistance value is about 1.4 kΩ.  
→ If it is open or abnormal resistance value, replace solenoid coil.
- **4-way valve**  
Check each piping temperature, and the location of the valve by the temperature difference.  
If the value location is not proper, replace 4-way valve.



### Check point 4. Check the voltage of 4-way valve

Check the voltage CN30 of Main PCB.

→ Check if AC 198 V (AC 220 V -10%) to AC 264 V (AC 240 V +10%) appears at CN30 of Main PCB.

- **Heating operation**  
→ If it is not voltage, replace the main PCB.
- **Cooling operation**  
→ If it is voltage, replace the main PCB.



### Check point 5. Replace the main PCB

If Check Point 1 to 4 do not improve the symptom, replace the main PCB.



**End**



## 2-39. E: 9A. Coil 1 (expansion valve 1) error

Indicator	Indoor unit	Operation indicator	9 time flash
		Timer indicator	10 time flash
		Economy indicator	Continuous flash
		Error code	E: 9A
Detective actuator	EEV coil	Coil (Expansion valve) driver circuit open detected.	
	Main PCB		
Forecast of cause		EEV coil loose connection	
		EEV wires cut or pinched	
		Defective EEV coil	
		Main PCB (DC 13 V) output abnormal	

Check point 1. Check the connection of EEV connector

Check if the connector is loose connection or not.



Check point 2. Check the EEV wire

Check if the wire of EEV has damage or not. (Slash, Braking of wire, Pinching, etc.)

→ If it is abnormal, replace EEV coil.



Check point 3. Check the EEV coil

Check if the circuit of EEV coil winding is good or not. (Refer to ["Service parts information"](#) on page 03-83.)

→ If it is abnormal, replace EEV coil.



Check point 4. Check the output of EEV on the main PCB

Check if the DC 13 V is on between the Pin No.1 of P30, PA30, PC30, PD30 and PE30 and GND Pin. (Disconnect the wire of EEV when you check the output of EEV.)

→ If it is abnormal, replace the main PCB.



Check point 5. Noise, momentary open, voltage drop

- Check if temporary voltage drop was not generated.
- Check if momentary open was not generated.
- Check if ground is connection correctly or there are no related cables near the power line.



**End**

## 2-40. E: A1. Discharge temperature error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	10 time flash
		Timer indicator	1 time flash
		Economy indicator	Continuous flash
		Error code	E: A1
Detective actuator	Outdoor unit main PCB	Protection stop by discharge temperature $\geq 110^{\circ}\text{C}$ during compressor operation generated 2 times within 24 hours.	
	Discharge temperature thermistor		
Forecast of cause		3-way valve not opened	
		EEV or capillary tube defective, strainer clogged	
		Outdoor unit operation failure, foreign matter on heat exchanger	
		Discharge temperature thermistor failure	
		Insufficient refrigerant	
		Main PCB failure	

### Check point 1. Check if 3-way valve is open

If the 3-way valve is closed, open the 3-way valve and check operation.

**NOTE:** For cooling operation, check gas side of the 3-way valve.  
For heating operation, check liquid side of the 3-way valve.



### Check point 2. Check any of the electronic expansion valve (EEV), capillary tube, or strainer, or all

- Check if EEV open or there is a capillary tube defect.  
Refer to outdoor unit Electronic Expansion Valve (EEV) or Capillary tube in "[Service parts information](#)" on page 03-83.
- Check the strainer clogging.



### Check point 3. Check the outdoor unit fan and heat exchanger

- Check for foreign object at heat exchanger
- Check if fan can be rotated by hand.
- Check the motor. (Refer to outdoor unit fan motor in "[Service parts information](#)" on page 03-83.)



### Check point 4. Check the discharge thermistor

The discharge temperature thermistor characteristics check. (Check by disconnecting thermistor from PCB.)

**NOTE:** For the characteristics of the thermistor, refer to "[Thermistor resistance values](#)" on page 03-94.



Check point 5. Check the refrigerant amount

Check the refrigerant leakage.



Check point 6. Replace the main PCB

If check point 1 to 5 do not improve the symptom, replace the main PCB.



**End**

## 2-41. E: A3. Compressor temperature error (Outdoor unit)

Indicator	Indoor unit	Operation indicator	10 time flash
		Timer indicator	3 time flash
		Economy indicator	Continuous flash
		Error code	E: A3
Detective actuator	Outdoor unit main PCB	Protection stop by compressor temperature $\geq 110^{\circ}\text{C}$ during compressor operation generated 2 times within 24 hours.	
	Compressor temperature thermistor		
Forecast of cause		3-way valve not opened	
		EEV defective, strainer clogged	
		Outdoor unit operation failure, foreign matter on heat exchanger	
		Compressor temperature thermistor failure	
		Insufficient refrigerant	
		Main PCB failure	

### Check point 1. Check if 3-way valve is open

If the 3-way valve is closed, open the 3-way valve and check operation.

**NOTE:** For cooling operation, check gas side of the 3-way valve.  
For heating operation, check liquid side of the 3-way valve.



### Check point 2. Check the electronic expansion valve (EEV) and strainer

- Check if EEV open.  
Refer to outdoor unit Electronic Expansion Valve (EEV) in "[Service parts information](#)" on page 03-83.
- Check the strainer clogging.



### Check point 3. Check the outdoor unit fan and heat exchanger

- Check for foreign object at heat exchanger
- Check if fan can be rotated by hand.
- Check the motor. (Refer to outdoor unit fan motor in "[Service parts information](#)" on page 03-83.)



### Check point 4. Check the compressor thermistor

The compressor temperature thermistor characteristics check. (Check by disconnecting thermistor from PCB.)

**NOTE:** For the characteristics of the thermistor, refer to "[Thermistor resistance values](#)" on page 03-94.



Check point 5. Check the refrigerant amount

Check the refrigerant leakage.



Check point 6. Replace the main PCB

If check point 1 to 5 do not improve the symptom, replace the main PCB.



**End**

## 2-42. E: A8. Refrigerant leakage sensor error (Indoor unit)

Indicator	Indoor unit	Operation indicator	10 time flash
		Timer indicator	8 time flash
		Economy indicator	Continuous flash
		Error code	E: A8
Detective actuator			Refrigerant leakage sensor
Forecast of cause			Refrigerant leakage

### Check point 1. Refrigerant Leak Detection conditions

- When the refrigerant leakage sensor detects refrigerant.
- System stop -> Cooling/heating cannot be operated.
- Stir operation by fan -> Safety is important, and fan operation cannot be stopped.

-> Check for refrigerant leaks and take corrective action.



### Check point 2. Error release condition

Power on again.

- If the power is not turned on again, the error will not be cleared even if the gas concentration drops.
- If the refrigerant leakage is detected again after the power is turned on again, an error will occur again.
- Replace the refrigerant leakage sensor as it will not recover if exposed to a high concentration of gas or if exposed multiple times even if the concentration is not high.



**End**

## 3. Troubleshooting without error code

### 3-1. Indoor unit—No power

Forecast of cause	Power supply failure
	External cause
	Electrical components defective

#### Check point 1. Check installation condition

- Isn't the breaker down?
- Check loose or removed connection cable.

-> If abnormal condition is found, correct it by referring to the installation manual or the "DESIGN & TECHNICAL MANUAL".



#### Check point 2. Check external cause at indoor and outdoor (voltage drop or noise)

- Instant drop: Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure: Check if there is a defective contact or leak current in the power supply circuit.
- Noise: Check if there is any equipment causing harmonic wave near electric line. (Neon bulb or electric equipment that may cause harmonic wave)  
Check the complete insulation of grounding.

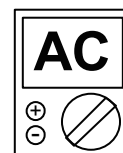


#### Check point 3. Check electrical components

Check the voltage of power supply.

Check if AC 198 to 264 V appears at outdoor unit terminal L—N.

-> If no, go to "Check point 1" and "Check point 2".



- Check fuse in filter PCB.  
If fuse is open, check if the wiring between terminal and filter PCB is loose, and replace fuse.
- Check varistor in filter PCB.  
If varistor is defective, there is a possibility of an abnormal power supply.  
Check the correct power supply and replace varistor.  
Upon checking the normal power supply, replace varistor.



**End**

## 3-2. Outdoor unit—No power

Forecast of cause	Power supply failure
	External cause
	Electrical components defective

### Check point 1. Check installation condition

- Is the circuit breaker on or off?
- Check loose or removed connection cable.

→ If abnormal condition is found, correct it by referring to the installation manual or the "DESIGN & TECHNICAL MANUAL".



### Check point 2. Check external cause at indoor and outdoor (voltage drop or noise)

- Instant drop: Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure: Check if there is a defective contact or leak current in the power supply circuit.
- Noise: Check if there is any equipment causing harmonic wave near electric line. (Neon bulb or electric equipment that may cause harmonic wave)  
Check the complete insulation of grounding.



### Check point 3. Check electrical components

Check the voltage of power supply.

Check if AC 198 to 264 V appears at outdoor unit terminal L—N

→ If no, go to "[Check point 1](#)" and "[Check point 2](#)".



- Check fuse in main PCB.  
If fuse is open, check if the wiring between terminal and main PCB is loose, and replace fuse.
- Check active filter module and in IPM.  
If active filter module or IPM is abnormal, replace it. (Refer to transistor PCB in "[Service parts information](#)" on page 03-83.)



### Check point 4. Replace the main PCB

If check point 1 to 3 do not improve the symptom, replace the main PCB.



**End**



### 3-3. No operation (Power is on)

Forecast of cause	Setting/Connection failure
	External cause
	Electrical components defective

#### Check point 1. Check the indoor and outdoor installation condition

- Indoor unit:
  - Check incorrect wiring between the indoor unit and remote controller.
  - Check if there is an open cable connection.
- Are these indoor unit, outdoor unit, and remote controller suitable model names to connect?

-> If there is some abnormal condition, correct it by referring to the installation manual and "DESIGN & TECHNICAL MANUAL".



Turn off the power and check correct followings.

- Is there loose or removed communication line of indoor unit and outdoor unit?



#### Check point 2. Check external cause at indoor and outdoor (Voltage drop or Noise)

- Instant drop: Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure: Check if there is a defective contact or leak current in the power supply circuit.
- Noise: Check if there is any equipment causing harmonic wave near electric line. (Neon bulb or electric equipment that may cause harmonic wave)  
Check the complete insulation of grounding.



### Check point 3. Check the wired remote controller and controller PCB

[Compact cassette, slim duct, floor, ceiling type]

Check voltage at CN14 (terminal 1—3) of main PCB or communication PCB.

(Power supply to remote controller)



- If it is DC 12 V, the remote controller is failure. (The controller PCB is normal)  
-> Replace the remote controller.
- If it is DC 0 V, the controller PCB is failure. (Check the remote controller once again)  
-> Replace the controller PCB.

[Wall mount type for KGTB, KGTE, 18KMTB, KMTE, KMCE, KETA, KETE(-B)]

Check voltage at CN300 (terminal 1—2) of main PCB or communication PCB.

(Power supply to remote controller)

- If it is DC 12 V, the remote controller is failure. (The controller PCB is normal)  
-> Replace the remote controller.
- If it is DC 0 V, the controller PCB is failure. (Check the remote controller once again)  
-> Replace the controller PCB.

[Wall mount type for 07-14KMTB, KMCC]

Check voltage at CNC01 (terminal 1—3) of main PCB or communication PCB.

(Power supply to remote controller)

- If it is DC 13 V, the remote controller is failure. (The controller PCB is normal)  
-> Replace the remote controller.
- If it is DC 0 V, the controller PCB is failure. (Check the remote controller once again)  
-> Replace the controller PCB.

[Mini duct type]

Check voltage at CN300 (terminal 1—3, terminal 1—2) of main PCB. (3-wire remote controller, 2-wire remote controller)

(Power supply to remote controller)

- If it is DC 12 V, the remote controller is failure. (The controller PCB is normal)  
-> Replace the remote controller.
- If it is DC 0 V, the controller PCB is failure. (Check the remote controller once again)  
-> Replace the controller PCB.



### Check point 4. Replace the main PCB

If check point 1 to 3 do not improve the symptom, replace the main PCB.



**End**

## 3-4. No cooling/No heating

Forecast of cause	Indoor unit error
	Outdoor unit error
	Effect by surrounding environment
	Connection pipe/Connection wire failure
	Refrigeration cycle failure

### Check point 1. Check Indoor unit

- Does Indoor unit fan run in the HIGH mode?
- Is air filter dirty?
- Is heat exchanger clogged?
- Check if energy save function is operated.



### Check point 2. Check outdoor unit operation

- Check if outdoor unit is operating.
- Check any objects that obstruct the air flow route.
- Check if heat exchanger is clogged.
- Is the valve open?



### Check point 3. Check site condition

- Is capacity of Indoor unit fitted to the room size?
- Any windows open or direct sunlight?



### Check point 4. Check indoor/outdoor installation condition

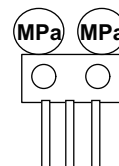
- Check connection pipe (specified pipe length and pipe diameter?)
- Check any loose or removed communication line.

→ If there is an abnormal condition, correct it by referring to the installation manual or the "DESIGN & TECHNICAL MANUAL".



### Check point 5. Check Refrigeration cycle

- Check if strainer is clogged (Refer to the figure below).
- Measure gas pressure, and if there is a leakage, correct it.
- Check if EEV open or there is a capillary tube defect.  
Refer to outdoor unit Electronic Expansion Valve (EEV) or Capillary tube in ["Service parts information"](#) on page 03-83.
- Check compressor.  
Refer to compressor in ["Service parts information"](#) on page 03-83.  
Refer to inverter compressor in ["Service parts information"](#) on page 03-83.



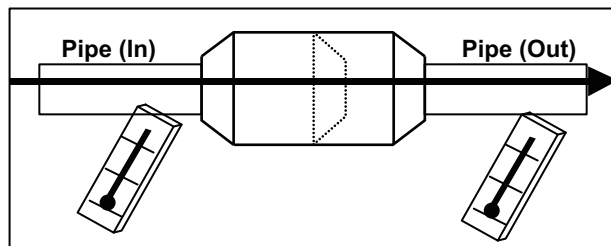
**NOTE:** When recharging the refrigerant, make sure to perform vacuuming, and recharge the specified amount.



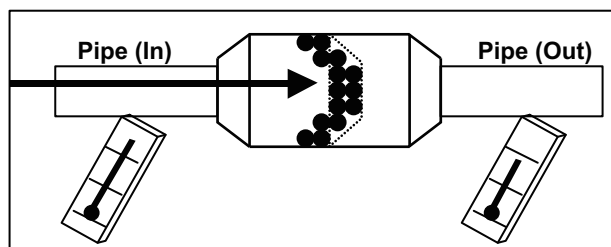
**End**

**NOTES:**

- Strainer normally does not have temperature difference between inlet and outlet as shown below.



- If there is a difference like shown below, there is a possibility of inside clogged. In this case, replace the strainer.



## 3-5. Abnormal noise

Forecast of cause	Abnormal installation (indoor unit/outdoor unit)
	Fan failure (indoor unit/outdoor unit)
	Compressor failure (outdoor)

### Diagnosis method when abnormal noise is occurred

Abnormal noise is coming from Indoor unit.  
(Check and correct followings)



- Is main unit installed in stable condition?
- Is the installation of air suction grille and front panel normal?



- Is fan broken or deformed?
- Is the screw of fan loose?
- Is there any object which obstruct the fan rotation?



**End**

Abnormal noise is coming from Outdoor unit.  
(Check and correct followings)



- Is main unit installed in stable condition?
- Is fan guard installed normally?



- Is fan broken or deformed?
- Is the screw of fan loose?
- Is there any object which obstruct the fan rotation?



Check if vibration noise by loose bolt or contact noise of piping is happening.



Is compressor locked?

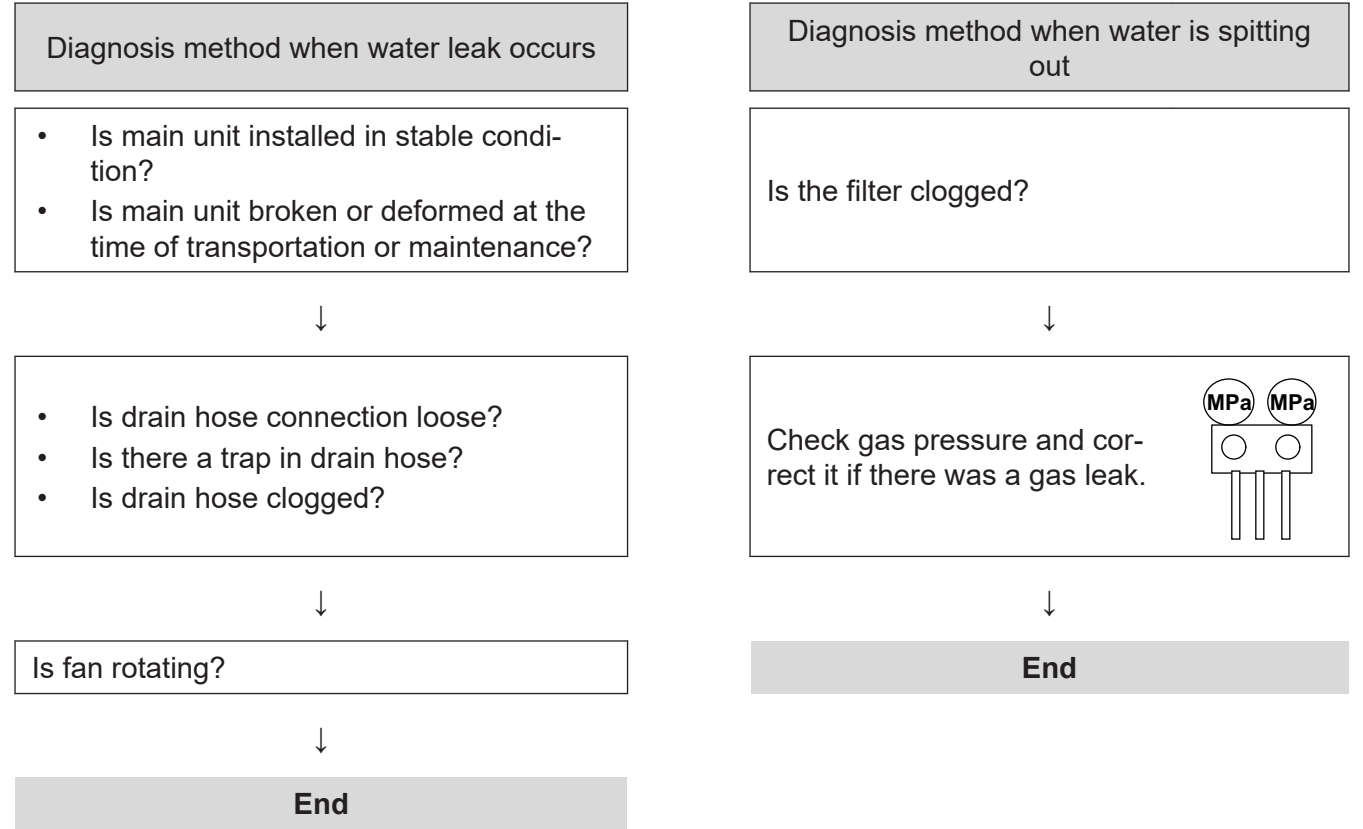
- Check Compressor  
Refer to compressor and inverter compressor in "[Service parts information](#)" on page 03-83.



**End**

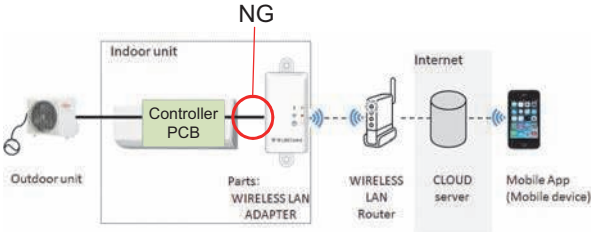
### 3-6. Water leaking

Forecast of cause	Erroneous installation
	Drain hose failure



## 4. Troubleshooting with error code (For wireless LAN adapter)

### 4-1. E: 18. External communication error between indoor unit and WLAN adapter

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	8 time flash
		Economy indicator	Continuous flash
		Error code	E: 18
	Wireless LAN adapter	LED1 (green)	Flashing fast
LED2 (orange)		On	
Detective actuator	Wireless LAN adapter PCB		After receiving a signal from the wireless LAN adapter, the same signal has not been received for 15 seconds.
	Controller PCB		
			
Forecast of cause			Connection between indoor unit and wireless LAN adapter failure
			Wireless LAN adapter PCB failure
			Controller PCB failure

#### Check point 1. Check the connection

- Check any loose or removed connection of between the wireless LAN adapter PCB and controller PCB.  
-> If there is abnormal condition, correct it.
- Check the connection condition on the controller PCB.  
-> If there is loose connector, open cable or mis-wiring, correct it.



#### Check point 2. Replace wireless LAN adapter.

If check point 1 do not improve the symptom, replace the wireless LAN adapter and cancel the registration of air conditioner on the mobile app.

After replacing the adapter, perform the pairing on the mobile app.

For the method of the mobile app, refer to ["Mobile app setting method"](#) on page 03-78.



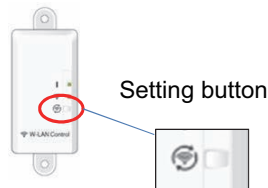
#### Check point 3. Replace controller PCB

If check point 1 to 2 do not improve the symptom, replace the controller PCB.



**End**

## 4-2. Wireless LAN adapter error

Indicator	Indoor unit	Operation indicator	No indication
		Timer indicator	No indication
		Economy indicator	No indication
		Error code	—
	Wireless LAN adapter	LED1 (green)	Flashing fast
		LED2 (orange)	Flashing fast
Detective actuator	Wireless LAN adapter setting button	When the setting button becomes on for consecutive 60 seconds or more. 	
	Wireless LAN adapter PCB		
Forecast of cause		Wireless LAN adapter setting button failure	
		Wireless LAN adapter PCB failure	

### Check point 1. Check the setting button

Check if setting button is kept pressed.

-> If the setting button is held down by the foreign matter, remove the foreign matter or remove the cause of the button press.



### Check point 2. Replace wireless LAN adapter.

If check point 1 do not improve the symptom, replace the wireless LAN adapter and cancel the registration of air conditioner on the mobile app.

After replacing the adapter, perform the pairing on the mobile app.

For the method of the mobile app, refer to ["Mobile app setting method"](#) on page 03-78.



### Check point 3. Replace controller PCB

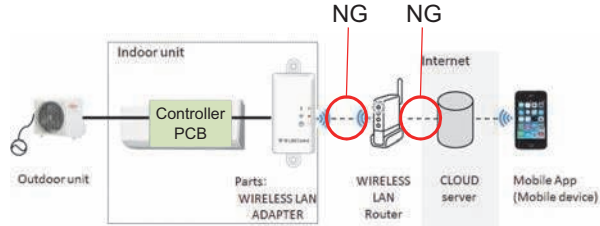
If check point 1 to 2 do not improve the symptom, replace the Wireless LAN adapter.



**End**



## 4-3. Network communication error between wireless LAN router and WLAN adapter

Indicator	Indoor unit	Operation indicator	No indication
		Timer indicator	No indication
		Economy indicator	No indication
		Error code	—
	Wireless LAN adapter	LED1 (green)	On
		LED2 (orange)	Flashing fast
Detective actuator	Wireless LAN router	When the not connection between wireless LAN adapter and wireless LAN router.	
	Wireless LAN adapter PCB		
Forecast of cause			
		Connection cable failure of wireless LAN router	
		Connection between wireless LAN adapter and wireless LAN router failure	
		Wireless LAN router failure	
		Wireless LAN adapter PCB failure	

### Check point 1. Check the connection cable

Check the connection cable on the wireless LAN router.

-> If there is loose connector, open cable or mis-wiring, correct it.



### Check point 2. Check the connection status.

Check the connection status to the internet and wireless LAN router.

-> If the wireless LAN router is not connected to the internet, check the transmission between wireless LAN products (ex. PC or game console, etc.) other than air conditioner and wireless LAN router.

If no, go to ["Check point 2-2"](#).



### Check point 3. Turn on the power again of air conditioner.

If check point 1 to 2 do not improve the symptom, turn on the power of the air conditioner again and wait for 60 seconds.



**Check point 4. Replace wireless LAN adapter.**

If check point 3 do not improve the symptom, replace the wireless LAN adapter and cancel the registration of air conditioner on the mobile app.

After replacing the adapter, perform the pairing on the mobile app.

For the method of the mobile app, refer to "[Mobile app setting method](#)" on page 03-78.

**End****Check point 2-2. Check the transmission state**

Check the wireless transmission state of the wireless LAN router (LED status).

-> If the wireless transmission from the wireless LAN router has not been outgoing, inquire to the wireless LAN router maker.

**End**

## 4-4. E: 18. Communication error

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	8 time flash
		Economy indicator	Continuous flash
		Error code	E: 18
	Wireless LAN adapter	LED1 (green)	Flashing fast
		LED2 (orange)	Flashing fast
Detective actuator	Wireless LAN router	When the external communication error between indoor unit and WLAN adapter and network communication error between wireless LAN router and WLAN adapter has occurred simultaneously.	
	Wireless LAN adapter PCB		
	Indoor unit controller PCB		
Forecast of cause		Connection cable failure of wireless LAN router	
		Wireless LAN router failure	
		Connection between indoor unit and wireless LAN adapter failure	
		Connection between wireless LAN adapter and wireless LAN router failure	
		Wireless LAN adapter PCB failure	
		Controller PCB failure	

### Check point 1. Check the connection cable

Check the connection cable on the wireless LAN router.

-> If there is loose connector, open cable or mis-wiring, correct it.



### Check point 2. Check the connection status and transmission state

- Check the connection status to the internet and wireless LAN router.  
-> If the wireless LAN router is not connected to the internet, check the transmission between wireless LAN products (ex. PC or game console, etc.) other than air conditioner and wireless LAN router.  
If no, go to ["Check point 4"](#).
- Check the wireless transmission state of wireless LAN router (LED status).  
-> If the wireless transmission from the wireless LAN router has not been outgoing, inquire to wireless LAN router maker.

If the display pattern is changed as follows, go to ["Check point 3-2"](#).

- LED 1 (green): flashing fast
- LED 2 (orange): on

If no, go to ["Check point 3-1"](#).



**Check point 3-1. Turn on the power again of air conditioner.**

If check point 1 to 2 do not improve the symptom, turn on the power of the air conditioner again and wait for 60 seconds.

-> When the flashing pattern of the LED 2 (orange) is on, go to ["Check point 3-2"](#).

-> When the flashing pattern of the LED 2 (orange) is flashing fast, go to ["Check point 4"](#).

**Check point 3-2. Check the connection.**

- Check any loose or removed connection of between the wireless LAN adapter PCB and controller PCB.  
-> If there is abnormal condition, correct it.
- Check the connection condition on the controller PCB.  
-> If there is loose connector, open cable or mis-wiring, correct it.

**Check point 4. Replace wireless LAN adapter.**

If check point 2 to 3 do not improve the symptom, replace the wireless LAN adapter and cancel the registration of air conditioner on the mobile app.

After replacing the adapter, perform the pairing on the mobile app.

For the method of the mobile app, refer to ["Mobile app setting method"](#) on page 03-78.

**Check point 5. Replace controller PCB**

If check point 4 do not improve the symptom, replace the controller PCB.

**End**

## 4-5. E: 18. Wireless LAN adapter non-energized

Indicator	Indoor unit	Operation indicator	1 time flash
		Timer indicator	8 time flash
		Economy indicator	Continuous flash
		Error code	E: 18
	Wireless LAN adapter	LED1 (green)	Off
		LED2 (orange)	Off
Detective actuator	Indoor unit controller PCB		When the voltage (DC 12 V) does not output from the controller PCB.
	Wireless LAN adapter PCB		
Forecast of cause			Indoor unit controller PCB failure
			Wireless LAN adapter PCB failure
			Wiring connection failure

### Check point 1. Check the connection.

- Check any loose or removed connection of between the wireless LAN adapter PCB and controller PCB.  
-> If there is abnormal condition, correct it.
- Check the connection condition on the controller PCB.  
-> If there is loose connector, open cable or mis-wiring, correct it.



### Check point 2. Check the wireless LAN adapter PCB and the controller PCB

Check voltage at CN12 (terminal 1—2) of main PCB.

(Power supply to remote controller)

- If it is DC 0 V, controller PCB is failure.  
-> Replace controller PCB.
- If it is DC 12 V, wireless LAN adapter PCB is failure.  
-> Replace the wireless LAN adapter and cancel the registration of air conditioner on the mobile app.

After replacing the adapter, perform the pairing on the mobile app.

For the method of the mobile app, refer to ["Mobile app setting method"](#) on page 03-78.



**End**

## 4-6. Mobile app setting method

### ■ Air conditioner deregistration method

When the wireless LAN adapter is replaced, deregistration of all air conditioner is necessary on the mobile app.

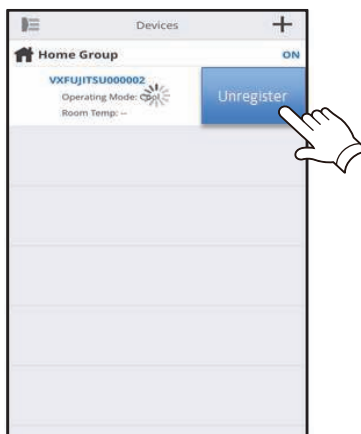
1. Launch the mobile app.



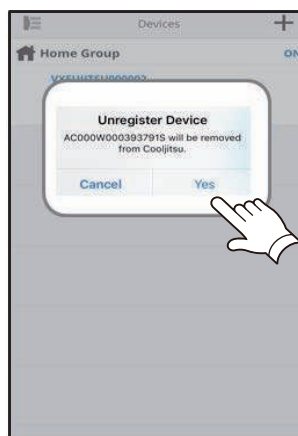
2. Press and hold the registered device name of the air conditioner.



3. If the Unregister button is displayed, tap the button.



4. Tap the Yes button.



5. Deregistration of the air conditioner is completed.

## ■ Air conditioner registration pairing method

Choose the following modes to connect the air conditioner to the wireless LAN router.

### NOTES:

- Before starting this setting, wait for 60 seconds or more after the power supply is connected to the air conditioner (via breaker or plug).
- Check that the smartphone or tablet PC is linked to the wireless router to be connected to the air conditioner.  
The setting does not work if the same wireless LAN router is not connected.
- The displayed screen design may differ depending on the version of the mobile app.
- To control 2 or more air conditioners with the same smartphone or tablet PC, repeat the setup of the chosen mode.

Light pattern:

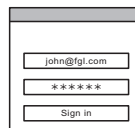
○ Off ● On ☼ Flashing

### ● Button mode

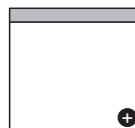
1. Launch the mobile app.



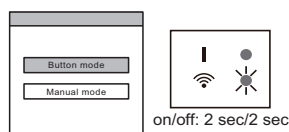
2. Sign in with your e-mail address and password following the screen on the mobile app.



3. Press the + button to add a new air conditioner.



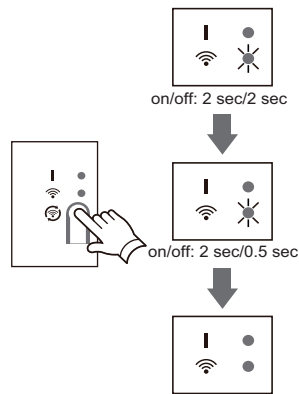
4. Confirm that the LED 2 blinks (on/off at 2 seconds intervals). Then select Button mode on the screen. If the LED 1 and 2 are off, push the setting button once.



5. Press the WPS button on the wireless LAN router to be connected.  
For the button location of the wireless LAN router and how to press it, refer to the operation manual of the wireless LAN router.

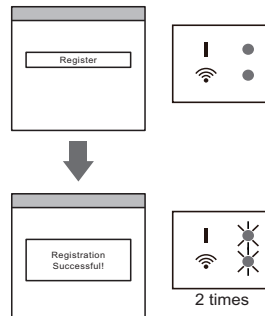


6. Confirm that the LED 2 blinks (on/off at 2 seconds intervals). Then press and hold the setting button on the WLAN Adapter for 3 seconds.



The light pattern of the LED 2 changes. (On/off: 2 sec./2 sec. → 2 sec./0.5 sec.)  
Confirm both of the LED 1 and 2 are on to proceed.

7. Press Register button to start the connection with the wireless LAN router.



Both of the LED 1 and 2 flash 2 times and a message appear when the setup is completed.

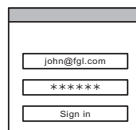


## ● Manual mode (For Android)

1. Launch the mobile app.



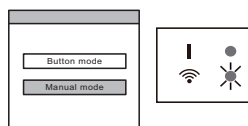
2. Sign in with your e-mail address and password following the screen on the mobile app.



3. Press the + button to add a new air conditioner.

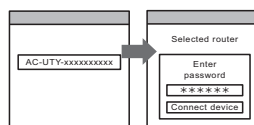


4. Select manual mode.



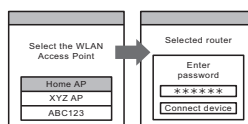
If both of the LED 1 and 2 are off, push the setting button once.

5. Select the SSID of the air conditioner to be connected.



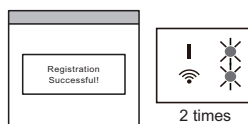
Input the PIN code written on the wireless LAN label.

6. Select the SSID of the wireless LAN router to be connected.



Input the wireless LAN router (wireless LAN access point) password then press Connect device button.

7. When setup is completed, both of the LED 1 and 2 flash 2 times, and a message appear.

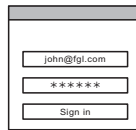


## ● Manual mode (For iOS)

1. Launch the mobile app.



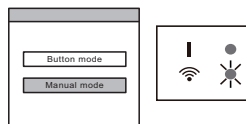
2. Sign in with your e-mail address and password following the screen on the mobile app.



3. Press the + button to add a new air conditioner.

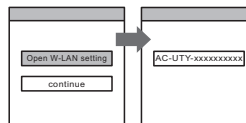


4. Select manual mode.



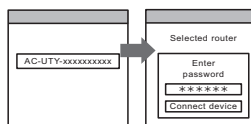
If both of the LED 1 and 2 are off, push the setting button once.

5. Select Open W-LAN setting button or activate the wireless LAN by pressing the Home button → Setting button → Wi-Fi button.

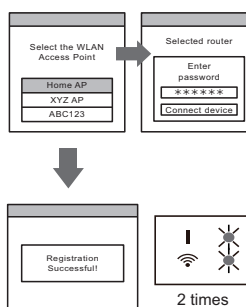


Select the SSID of the air conditioner to be connected.

6. Input the PIN code written on the wireless LAN label.



7. Select the SSID of the wireless LAN router to be connected.  
Input the wireless LAN router (wireless LAN access point) password then press Connective device button.

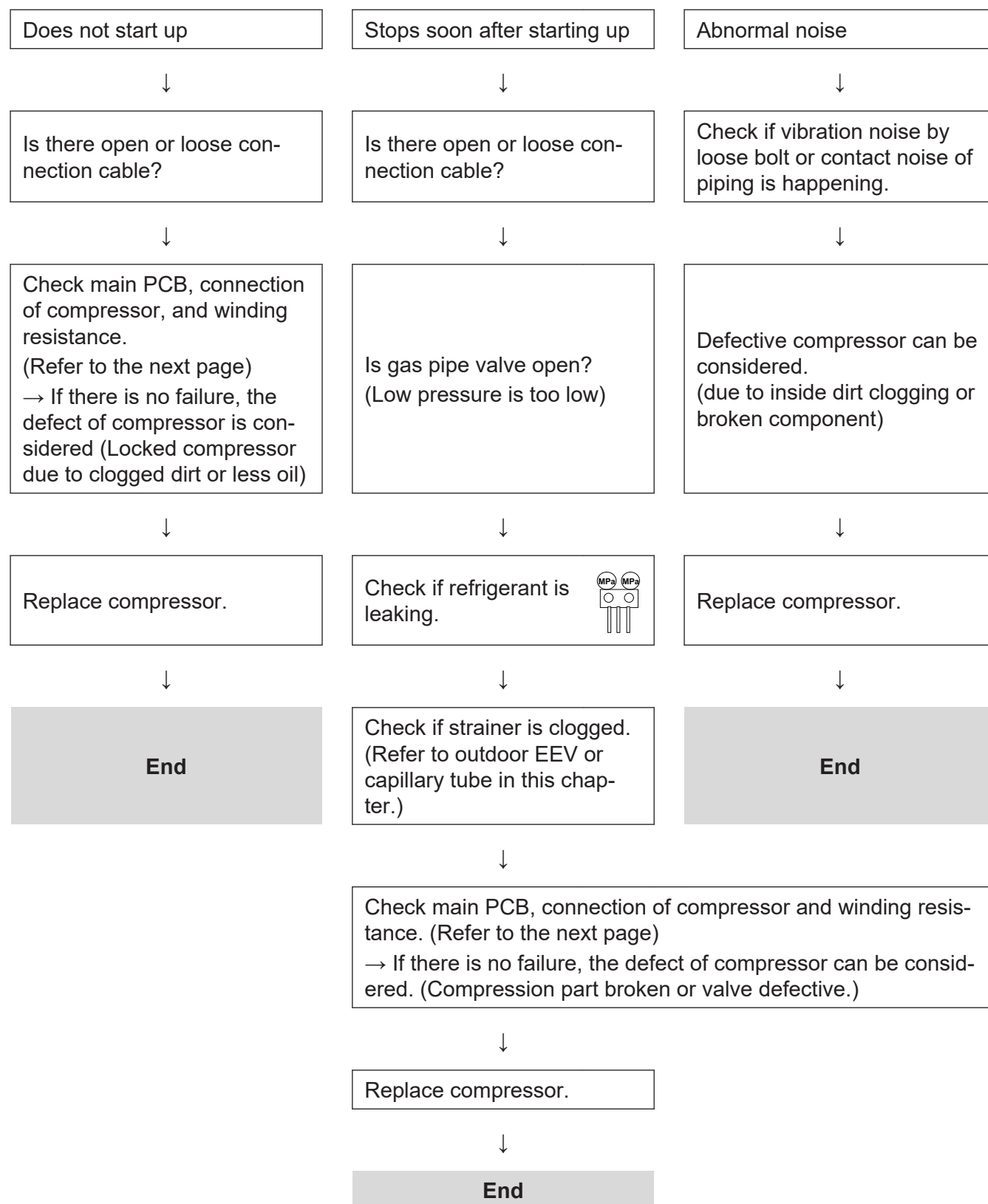


When setup is completed, both of the LED 1 and 2 flash 2 times and a message appear.

## 5. Service parts information

### 5-1. Compressor

Diagnosis method of compressor (If outdoor unit LED displays error, refer to troubleshooting)

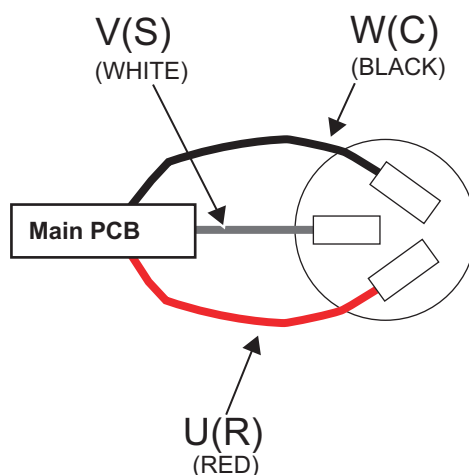


## 5-2. Inverter compressor

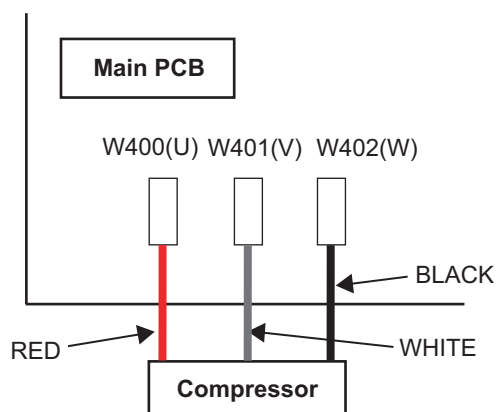
### ■ Models: AOHG18KBTA3 and AOHG24KBTA3

#### Check point 1. Check connection

- Check terminal connection of compressor (loose or incorrect wiring)



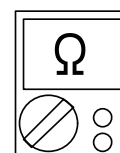
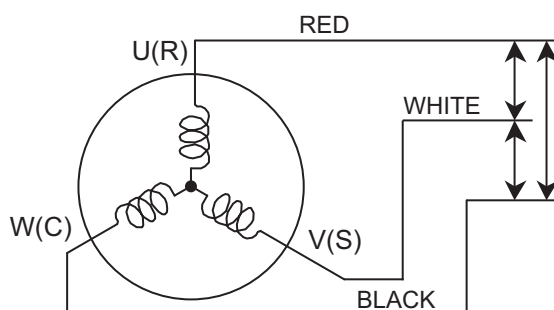
- Check terminal connection of main PCB (loose or incorrect wiring)



#### Check point 2. Check winding resistance

Check winding resistance of each terminal.

Resistance value: 1.299  $\Omega$  at 20°C



→ If the resistance value is 0  $\Omega$  or infinite, replace compressor.



Check point 3. Replace inverter PCB
If check point 1 to 2 do not improve the symptom, replace main PCB.

## 5-3. Outdoor unit Electronic Expansion Valve (EEV)

### ■ Models: AOHG18KBTA3 and AOHG24KBTA3

#### Check point 1. Check connections

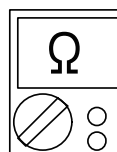
Check connection of connector. (Loose connector or open cable)

**NOTE:** For details of wiring diagram, refer to "Wiring diagrams" in Chapter 2. TECHNICAL DATA AND PARTS LIST on page 02-98.

#### Check point 2. Check coil of EEV

Remove connector, check each winding resistance of coil.

Read wire	Resistance value
White - Red	$46 \, \Omega \pm 4 \, \Omega$ at 20°C
Yellow - Red	
Orange - Red	
Blue - Red	



→ If Resistance value is abnormal, replace EEV.

#### Check point 3. Check voltage from main PCB

Remove connector and check voltage (DC 12 V)

→ If it does not appear, replace main PCB.



#### Check point 4. Check noise at start up

Turn on the power and check the operation noise.

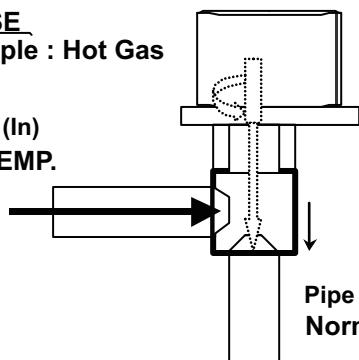
→ If an abnormal noise does not show, replace main PCB.

#### Check point 5. Check opening and closing operation of valve

When valve is closed, it has a temp. difference between inlet and outlet

**CLOSE**  
Example : Hot Gas

Pipe (In)  
Hi TEMP.

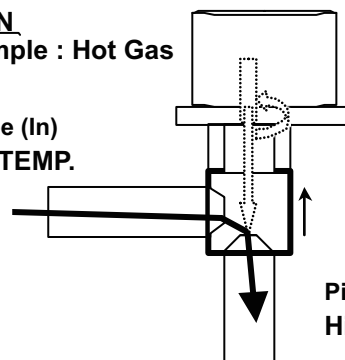


Pipe (Out)  
Normal TEMP.

If it is open, it has no temp. difference between inlet and outlet

**OPEN**  
Example : Hot Gas

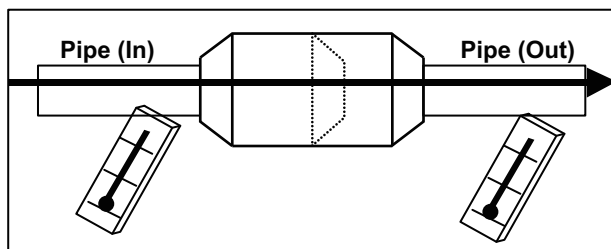
Pipe (In)  
Hi TEMP.



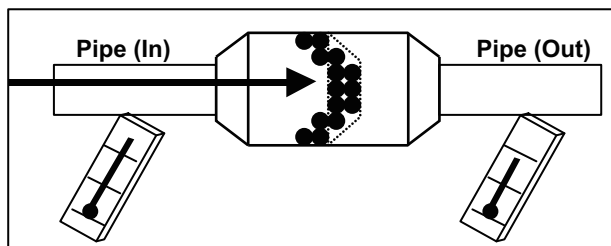
Pipe (Out)  
Hi TEMP.

## Check point 6. Check strainer

- Strainer normally does not have temperature difference between inlet and outlet as shown below.



- If there is a difference like shown below, there is a possibility of inside clogged. In this case, replace the strainer.



## 5-4. Indoor unit fan motor

### ■ Models: AUXG07KVLA, AUXG09KVLA, AUXG12KVLA, AUXG14KVLA, and AUXG18KVLA

#### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off.

(Check if fan is caught, dropped off or locked motor)

→ If fan or bearing is abnormal, replace it.

#### Check point 2. Check resistance of indoor fan motor

Refer to below. Circuit-test “Vm” and “GND” terminal

**NOTE:** Vm: DC voltage, GND: Earth terminal

→ If they are short-circuited (below 300 kΩ), replace indoor fan motor and controller PCB.

Pin number (wire color)	Terminal function (symbol)
1 (Red)	DC voltage (Vm)
2	No function
3 (Black)	Ground terminal (GND)
4 (White)	Control voltage (Vcc)
5	No function
6	No function
7 (Yellow)	Speed command (Vsp)
8 (Blue)	Feed back (FG)



■ **Models: ARXG07KSLAP, ARXG09KSLAP, ARXG12KSLAP, ARXG14KSLAP, ARXG18KSLAP, ARXG07KLLAP, ARXG09KLLAP, ARXG12KLLAP, ARXG14KLLAP, ARXG18KLLAP, ASHG12KGTB, ASHG14KGTB, ASHG12KGTE, ASHG14KGTE, ASHG18KMTB, ASHG18KMTE, ASHG07KMCE, ASHG09KMCE, ASHG12KMCE, ASHG14KMCE, ASHG14KETA, ASHG14KETA-B, ASHG14KETE, ASHG14KETE-B, and ABHG18KRTA**

#### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off.  
(Check if fan is caught, dropped off or locked motor)  
→ If fan or bearing is abnormal, replace it.

#### Check point 2. Check resistance of indoor fan motor

Refer to below. Circuit-test “Vm” and “GND” terminal

**NOTE:** Vm: DC voltage, GND: Earth terminal

→ If they are short-circuited (below 300 kΩ), replace indoor fan motor and controller PCB.

Pin number (wire color)	Terminal function (symbol)
1 (Red)	DC voltage (Vm)
2	No function
3	No function
4 (Black)	Ground terminal (GND)
5 (White)	Control voltage (Vcc)
6 (Yellow)	Speed command (Vsp)
7 (Blue)	Feed back (FG)

- **Models: ASHG07KGTB, ASHG09KGTB, ASHG07KGTE, ASHG09KGTE, ASHG07KETA, ASHG09KETA, ASHG12KETA, ASHG07KETA-B, ASHG09KETA-B, ASHG12KETA-B, ASHG07KETE, ASHG09KETE, ASHG12KETE, ASHG07KETE-B, ASHG09KETE-B, and ASHG12KETE-B**

#### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off.  
(Check if fan is caught, dropped off or locked motor)  
→ If fan or bearing is abnormal, replace it.

#### Check point 2. Check resistance of indoor fan motor

Refer to below. Circuit-test “Vm” and “GND” terminal

**NOTE:** Vm: DC voltage, GND: Earth terminal

→ If they are short-circuited (below 300 kΩ), replace indoor fan motor and controller PCB.

Pin number (wire color)	Terminal function (symbol)
1 (Red)	DC voltage (Vm)
2	No function
3	No function
4 (Black)	Ground terminal (GND)
5 (White)	Control voltage (Vcc)
6 (Yellow)	Speed command (Vsp)
7 (Blue)	Revolution pulse (PG)

## ■ Models: ASHG07KMTB, ASHG09KMTB, ASHG12KMTB, ASHG14KMTB, ASHG07KMCC, ASHG09KMCC, ASHG12KMCC, and ASHG14KMCC

### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off.  
(Check if fan is caught, dropped off or locked motor)  
→ If fan or bearing is abnormal, replace it.

### Check point 2. Check resistance of indoor fan motor

Refer to below. Circuit-test “Vm” and “GND” terminal

**NOTE:** Vm: DC voltage, GND: Earth terminal

→ If they are short-circuited (below 300 kΩ), replace indoor fan motor and controller PCB.

Pin number (wire color)	Terminal function (symbol)
1 (Blue)	Feed back (FG)
2 (Yellow)	Speed command (Vsp)
3 (White)	Control voltage (Vcc)
4 (Black)	Ground terminal (GND)
5	No function
6 (Red)	DC voltage (Vm)

## ■ Models: AGHG09KVCA, AGHG12KVCA, and AGHG14KVCA

### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off.

(Check if fan is caught, dropped off or locked motor)

→ If fan or bearing is abnormal, replace it.

### Check point 2. Check resistance of indoor fan motor

Refer to below. Circuit-test “Vm” and “GND” terminal

**NOTE:** Vm: DC voltage, GND: Earth terminal

→ If they are short-circuited (below 300 kΩ), replace indoor fan motor and controller PCB.

Upper fan motor

Pin number (wire color)	Terminal function (symbol)
1 (Blue)	Revolution pulse (PG)
2 (Yellow)	Speed command (Vsp)
3 (White)	Control voltage (Vcc)
4 (Black)	Earth terminal (GND)
5	No function
6 (Red)	DC voltage (Vm)

Lower fan motor

Pin number (wire color)	Terminal function (symbol)
1 (Blue)	Revolution pulse (PG)
2 (Yellow)	Speed command (Vsp)
3 (White)	Control voltage (Vcc)
4 (Black)	Earth terminal (GND)
5	No function
6	No function
7 (Red)	DC voltage (Vm)

## 5-5. Outdoor unit fan motor

### ■ Models: AOHG18KBTA3 and AOHG24KBTA3

#### Check point 1. Check rotation of fan

Rotate the fan by hand when operation is off.  
(Check if fan is caught, dropped off or locked motor)  
→ If fan or bearing is abnormal, replace it.

#### Check point 2. Check resistance of outdoor fan motor

Refer to below. Circuit-test “Vm” and “GND” terminal

**NOTE:** Vm: DC voltage, GND: Earth terminal

→ If they are short-circuited (below 300 kΩ), replace outdoor fan motor and controller PCB.

Pin number (wire color)	Terminal function (symbol)
1 (Red)	DC voltage (Vm)
2	No function
3	No function
4 (Black)	Ground terminal (GND)
5 (White)	Control voltage (Vcc)
6 (Yellow)	Speed command (Vsp)
7 (Blue)	Feed back (FG)

## 6. Thermistor resistance values

### 6-1. Indoor unit

#### ■ Room temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-10.0	58.25	0.73
-5.0	44.03	0.93
0.0	33.62	1.15
5.0	25.93	1.39
10.0	20.18	1.66
15.0	15.84	1.94
20.0	12.54	2.22
25.0	10.00	2.50
30.0	8.04	2.77
35.0	6.51	3.03
40.0	5.30	3.27
45.0	4.35	3.49

#### ■ Heat exchanger temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	1,131.91	0.21
-25.0	804.52	0.29
-20.0	579.59	0.40
-15.0	422.89	0.53
-10.0	312.27	0.69
-5.0	233.21	0.88
0.0	176.03	1.10
5.0	134.23	1.36
10.0	103.34	1.63
15.0	80.28	1.92
20.0	62.91	2.21
25.0	49.70	2.51
30.0	39.57	2.79
35.0	31.74	3.06
40.0	25.64	3.30
45.0	20.85	3.53
50.0	17.06	3.73
55.0	14.05	3.90
60.0	11.64	4.02
65.0	9.69	4.19

## 6-2. Outdoor unit

### ■ Discharge temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	1,013.11	0.06
-25.0	729.09	0.09
-20.0	531.56	0.12
-15.0	392.31	0.16
-10.0	292.91	0.21
-5.0	221.09	0.28
0.0	168.60	0.36
5.0	129.84	0.46
10.0	100.91	0.57
15.0	79.12	0.71
20.0	62.55	0.86
25.0	49.84	1.03
30.0	40.01	1.23
35.0	32.35	1.43
40.0	26.34	1.65
45.0	21.58	1.88
50.0	17.79	2.11
55.0	14.75	2.34
60.0	12.30	2.57
65.0	10.32	2.79
70.0	8.70	3.00
75.0	7.36	3.19
80.0	6.27	3.37
85.0	5.36	3.54
90.0	4.60	3.69
95.0	3.96	3.83
100.0	3.43	3.96
105.0	2.98	4.07
110.0	2.60	4.17
115.0	2.27	4.26
120.0	2.00	4.33

## ■ Compressor temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	1,013.11	0.06
-25.0	729.09	0.09
-20.0	531.56	0.12
-15.0	392.31	0.16
-10.0	292.91	0.21
-5.0	221.09	0.28
0.0	168.60	0.36
5.0	129.84	0.46
10.0	100.91	0.57
15.0	79.12	0.71
20.0	62.55	0.86
25.0	49.84	1.03
30.0	40.01	1.23
35.0	32.35	1.43
40.0	26.34	1.65
45.0	21.58	1.88
50.0	17.79	2.11
55.0	14.75	2.34
60.0	12.30	2.57
65.0	10.32	2.79
70.0	8.70	3.00
75.0	7.36	3.19
80.0	6.27	3.37
85.0	5.36	3.54
90.0	4.60	3.69
95.0	3.96	3.83
100.0	3.43	3.96
105.0	2.98	4.07
110.0	2.60	4.17
115.0	2.27	4.26
120.0	2.00	4.33



## ■ Heat exchanger temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	95.57	0.24
-25.0	68.89	0.32
-20.0	50.31	0.43
-15.0	37.19	0.57
-10.0	27.81	0.73
-5.0	21.02	0.92
0.0	16.05	1.14
5.0	12.38	1.39
10.0	9.63	1.65
15.0	7.56	1.93
20.0	5.98	2.21
25.0	4.77	2.49
30.0	3.84	2.77
35.0	3.11	3.02
40.0	2.53	3.26
45.0	2.08	3.48
50.0	1.71	3.67
55.0	1.42	3.85
60.0	1.19	4.00
65.0	1.00	4.13
70.0	0.84	4.25
75.0	0.71	4.35
80.0	0.61	4.43

## ■ Heat exchanger (Middle) temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	95.57	0.24
-25.0	68.89	0.32
-20.0	50.31	0.43
-15.0	37.19	0.57
-10.0	27.81	0.73
-5.0	21.02	0.92
0.0	16.05	1.14
5.0	12.38	1.39
10.0	9.63	1.65
15.0	7.56	1.93
20.0	5.98	2.21
25.0	4.77	2.49
30.0	3.84	2.77
35.0	3.11	3.02
40.0	2.53	3.26
45.0	2.08	3.48
50.0	1.71	3.67
55.0	1.42	3.85
60.0	1.19	4.00
65.0	1.00	4.13
70.0	0.84	4.25
75.0	0.71	4.35
80.0	0.61	4.43

## ■ Outdoor temperature thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	224.3	0.73
-25.0	159.7	0.97
-20.0	115.2	1.25
-15.0	84.2	1.56
-10.0	62.3	1.90
-5.0	46.6	2.26
0.0	35.2	2.61
5.0	26.9	2.94
10.0	20.7	3.25
15.0	16.1	3.52
20.0	12.6	3.76
25.0	10.0	3.97
30.0	8.0	4.14
35.0	6.4	4.28
40.0	5.2	4.41
45.0	4.2	4.51
50.0	3.5	4.59
55.0	2.8	4.65

## ■ 2-way valve thermistor, 3-way valve thermistor

Temperature (°C)	Resistance (kΩ)	Voltage (V)
-30.0	1,013.11	0.18
-25.0	729.09	0.25
-20.0	531.56	0.34
-15.0	392.31	0.44
-10.0	292.91	0.58
-5.0	221.09	0.74
0.0	168.60	0.93
5.0	129.84	1.14
10.0	100.91	1.38
15.0	79.12	1.63
20.0	62.55	1.90
25.0	49.84	2.17
30.0	40.01	2.45
35.0	32.35	2.71
40.0	26.34	2.96
45.0	21.58	3.20
50.0	17.79	3.41
55.0	14.75	3.61
60.0	12.30	3.78
65.0	10.32	3.94
70.0	8.69	4.07
75.0	7.36	4.19
80.0	6.27	4.30
85.0	5.36	4.39
90.0	4.60	4.46
95.0	3.96	4.53
100.0	3.43	4.59
105.0	2.98	4.64
110.0	2.60	4.68
115.0	2.27	4.72
120.0	2.00	4.75



## **4. CONTROL AND FUNCTIONS**

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## 4. CONTROL AND FUNCTIONS

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# 1. Rotation number control of compressor

## 1-1. Cooling operation

A sensor (room temperature thermistor) built in the indoor unit body will usually perceive difference or variation between a set temperature and present room temperature, and controls the operation rotation number of the compressor.

- If the room temperature is 6.0°C higher than a set temperature, the operation rotation number of the compressor will attain to maximum performance.
- If the room temperature is 1.0°C lower than a set temperature, the compressor will be stopped.
- When the room temperature is within the range of +6.0°C to -1.0°C of the setting temperature, the rotation number of the compressor is controlled within the range shown in the table below. However, the maximum rotation number is limited in the range shown in the figure below based on the indoor fan mode and the outdoor temperature.

### ■ Compact cassette type

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
AUXG07KVLA	A zone	111	74	63	54
AUXG09KVLA	B zone	120	87	74	63
AUXG12KVLA	C zone	130	111	94	80
	D zone	130	130	130	130
AUXG14KVLA	A zone	111	74	63	46
	B zone	120	87	74	54
	C zone	130	111	94	68
	D zone	130	130	130	130

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
AUXG07KVLA	A zone	111	74	63	54
AUXG09KVLA	B zone	120	87	74	63
AUXG12KVLA	C zone	130	111	94	80
	D zone	130	130	130	130
AUXG14KVLA AUXG18KVLA	A zone	111	74	63	46
	B zone	120	87	74	54
	C zone	130	111	94	68
	D zone	130	130	130	130

## ■ Mini duct type

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ARXG07KSLAP	A zone	111	74	63	54
ARXG09KSLAP	B zone	120	87	74	63
ARXG12KSLAP	C zone	130	111	94	80
ARXG14KSLAP	D zone	130	130	130	130

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ARXG07KSLAP	A zone	111	74	63	54
ARXG09KSLAP	B zone	120	87	74	63
ARXG12KSLAP	C zone	130	111	94	80
ARXG14KSLAP ARXG18KSLAP	D zone	130	130	130	130

## ■ Slim duct type

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ARXG07KLLAP	A zone	111	74	63	54
ARXG09KLLAP	B zone	120	87	74	63
ARXG12KLLAP	C zone	130	111	94	80
ARXG14KLLAP	D zone	130	130	130	130

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ARXG07KLLAP	A zone	111	74	63	54
ARXG09KLLAP	B zone	120	87	74	63
ARXG12KLLAP	C zone	130	111	94	80
ARXG14KLLAP ARXG18KLLAP	D zone	130	130	130	130

## ■ Wall mounted type (For KGTB and KGTE)

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Models: AOHG18KBTA3 and AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ASHG07KGTB ASHG09KGTB	A zone	102	74	63	54
ASHG12KGTB ASHG14KGTB	B zone	102	87	74	63
ASHG07KGTE ASHG09KGTE	C zone	130	111	94	80
ASHG12KGTE ASHG14KGTE	D zone	130	130	130	130

## ■ Wall mounted type (For KMTB, KMTE, KMCC, and KMCE)

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ASHG07KMCC ASHG09KMCC ASHG12KMCC ASHG14KMCC	A zone	102	74	63	54
ASHG07KMCE ASHG09KMCE ASHG12KMCE ASHG14KMCE	B zone	102	87	74	63
ASHG07KMTB ASHG09KMTB ASHG12KMTB ASHG14KMTB	C zone	130	111	94	80
	D zone	130	130	130	130

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ASHG07KMCC ASHG09KMCC ASHG12KMCC ASHG14KMCC	A zone	102	74	63	54
ASHG07KMCE ASHG09KMCE ASHG12KMCE ASHG14KMCE	B zone	102	87	74	63
ASHG07KMTB ASHG18KMTE ASHG09KMTB ASHG12KMTB ASHG14KMTB ASHG18KMTB	C zone	130	111	94	80
	D zone	130	130	130	130

## ■ Wall mounted type (For KETA and KETE)

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Models: AOHG18KBTA3 and AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ASHG07KETA ASHG07KETA-B ASHG09KETA ASHG09KETA-B ASHG12KETA ASHG12KETA-B ASHG14KETA ASHG14KETA-B	A zone	102	74	63	54
ASHG07KETE ASHG07KETE-B ASHG09KETE ASHG09KETE-B ASHG12KETE ASHG12KETE-B ASHG14KETE ASHG14KETE-B	B zone	102	87	74	63
	C zone	130	111	94	80
	D zone	130	130	130	130

## ■ Ceiling type

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
ABHG18KRTA	A zone	111	74	63	46
	B zone	120	87	74	54
	C zone	130	111	94	80
	D zone	130	130	130	130



## ■ Floor type

- Rotation number range of compressor

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

- Limit of maximum speed based on outdoor temperature

26°C	A zone
23°C	B zone
20°C	C zone
	D zone

Unit: rps

- Models: AOHG18KBTA3 and AOHG24KBTA3

Model name	Outdoor temperature zone	Indoor unit fan mode			
		HIGH	MED	LOW	QUIET
AGHG09KVCA AGHG12KVCA AGHG14KVCA	A zone	102	74	63	54
	B zone	102	87	74	63
	C zone	130	111	94	80
	D zone	130	130	130	130

## 1-2. Heating operation

A sensor (room temperature thermistor) built in indoor unit body will usually perceive difference or variation between setting temperature and present room temperature, and controls operation rotation number of compressor.

- If the room temperature is 6.0 °C lower than a set temperature, the operation rotation number of compressor will attain to maximum performance.
- If the room temperature is 1.0 °C higher than a set temperature, the compressor will be stopped.
- When the room temperature is within the range of +1.0°C to -6.0°C of the setting temperature, the rotation number of compressor is controlled within the range shown below.

- **Rotation number range of compressor**

Unit: rps

Connected model name	Minimum rotation number	Maximum rotation number
AOHG18KBTA3 AOHG24KBTA3	10	130

## 1-3. Dry operation

The rotation number of the compressor shall change according to the temperature, set temperature, and room temperature variation which the room temperature sensor of the indoor unit has detected as shown in the table below.

Zone is defined by set temperature and room temperature.

### ■ Compact cassette type

- Rotation number range of compressor

Unit: rps

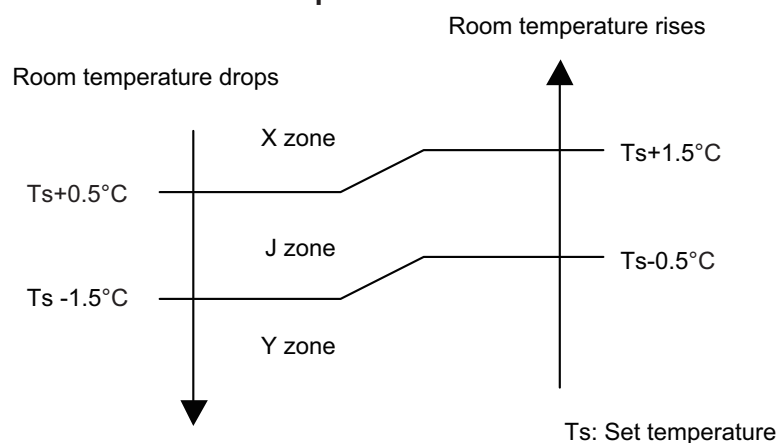
- Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Operating rotation number
AUXG07KVLA	X zone	54
AUXG09KVLA	J zone	54
AUXG12KVLA	Y zone	0
AUXG14KVLA	X zone	46
	J zone	46
	Y zone	0

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
AUXG07KVLA	X zone	54
AUXG09KVLA	J zone	54
AUXG12KVLA	Y zone	0
AUXG14KVLA AUXG18KVLA	X zone	46
	J zone	46
	Y zone	0

- Compressor control based on room temperature



## ■ Mini duct type

- Rotation number range of compressor

Unit: rps

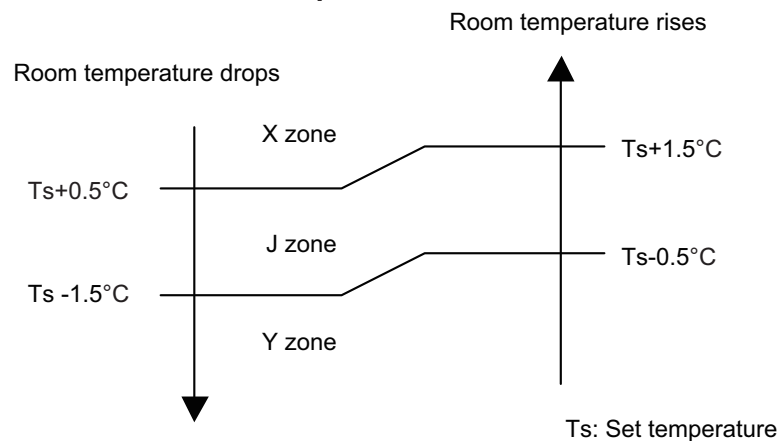
– Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ARXG07KSLAP	X zone	54
ARXG09KSLAP	J zone	54
ARXG12KSLAP	Y zone	0
ARXG14KSLAP		

– Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ARXG07KSLAP	X zone	54
ARXG09KSLAP	J zone	54
ARXG12KSLAP		
ARXG14KSLAP	Y zone	0
ARXG18KSLAP		

- Compressor control based on room temperature



## ■ Slim duct type

- Rotation number range of compressor

Unit: rps

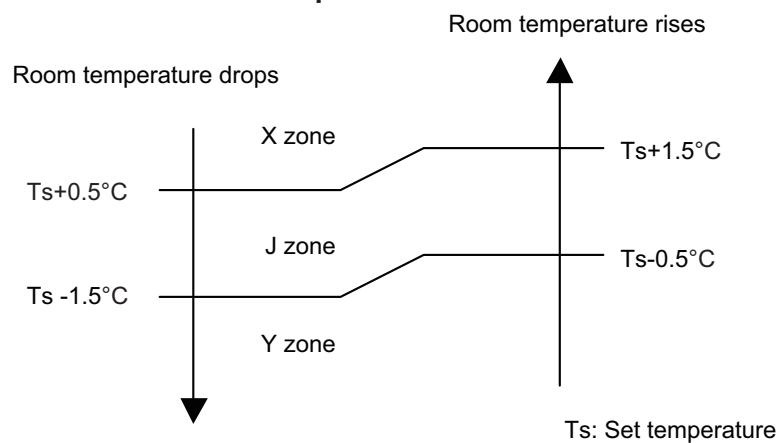
– Model: AOHG18KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ARXG07KLLAP	X zone	54
ARXG09KLLAP	J zone	54
ARXG12KLLAP	Y zone	0
ARXG14KLLAP		

– Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ARXG07KLLAP	X zone	54
ARXG09KLLAP	J zone	54
ARXG12KLLAP		
ARXG14KLLAP	Y zone	0
ARXG18KLLAP		

- Compressor control based on room temperature



## ■ Wall mounted type (For KGTB and KGTE)

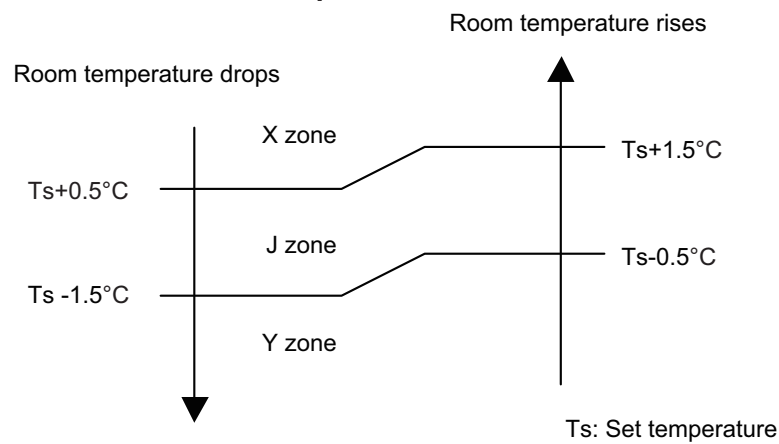
- Rotation number range of compressor

Unit: rps

- Models: AOHG18KBTA3 and AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ASHG07KGTB	X zone	54
ASHG09KGTB		
ASHG12KGTB		
ASHG14KGTB		
ASHG07KGTE	J zone	54
ASHG09KGTE		
ASHG12KGTE		
ASHG14KGTE		
	Y zone	0

- Compressor control based on room temperature



## CONTROL AND FUNCTIONS

- Unit: rps

- Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ASHG07KMCC	X zone	54
ASHG09KMCC		
ASHG12KMCC		
ASHG14KMCC		
ASHG07KMCE	J zone	54
ASHG09KMCE		
ASHG12KMCE		
ASHG14KMCE		
ASHG07KMTB	Y zone	0
ASHG09KMTB		
ASHG12KMTB		
ASHG14KMTB		
ASHG18KMTB		
ASHG18KMTE		

- 
- Room temperature drops
- Room temperature rises
- X zone
- J zone
- Y zone
- $T_s + 0.5^\circ\text{C}$
- $T_s$
- $T_s - 1.5^\circ\text{C}$
- $T_s + 1.5^\circ\text{C}$
- $T_s - 0.5^\circ\text{C}$
- $T_s$ : Set temperature

## ■ Wall mounted type (For KETA and KETE)

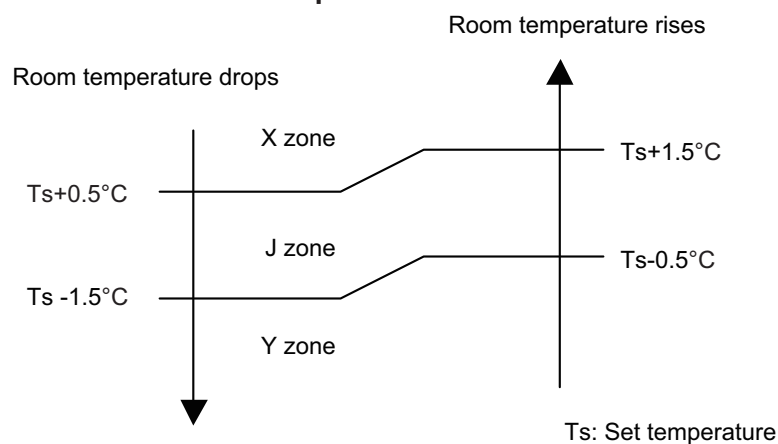
- Rotation number range of compressor

Unit: rps

- Models: AOHG18KBTA3 and AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ASHG07KETA ASHG07KETA-B ASHG09KETA ASHG09KETA-B ASHG12KETA ASHG12KETA-B ASHG14KETA ASHG14KETA-B ASHG07KETE ASHG07KETE-B ASHG09KETE ASHG09KETE-B ASHG12KETE ASHG12KETE-B ASHG14KETE ASHG14KETE-B	X zone	54
	J zone	54
	Y zone	0

- Compressor control based on room temperature





## ■ Ceiling type

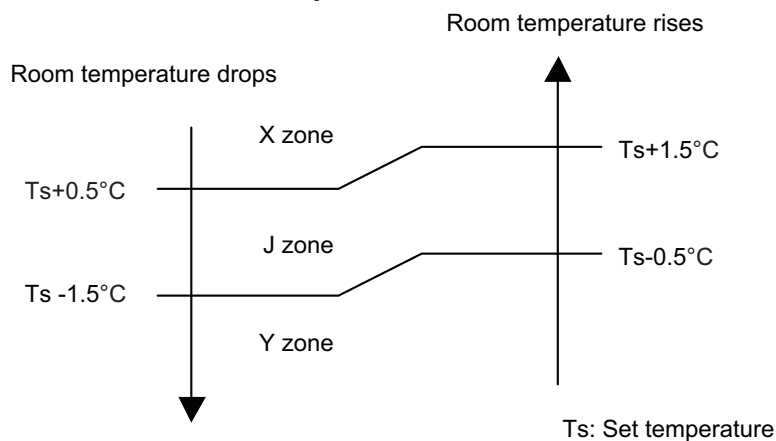
- Rotation number range of compressor

Unit: rps

– Model: AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
ABHG18KRTA	X zone	46
	J zone	46
	Y zone	0

- Compressor control based on room temperature



## ■ Floor type

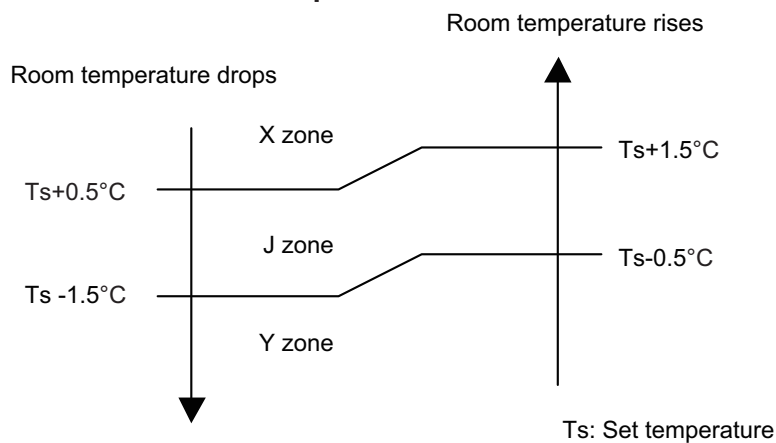
- Rotation number range of compressor

Unit: rps

– Models: AOHG18KBTA3 and AOHG24KBTA3

Model name	Outdoor temperature zone	Operating rotation number
AGHG09KVCA	X zone	54
AGHG12KVCA	J zone	54
AGHG14KVCA	Y zone	0

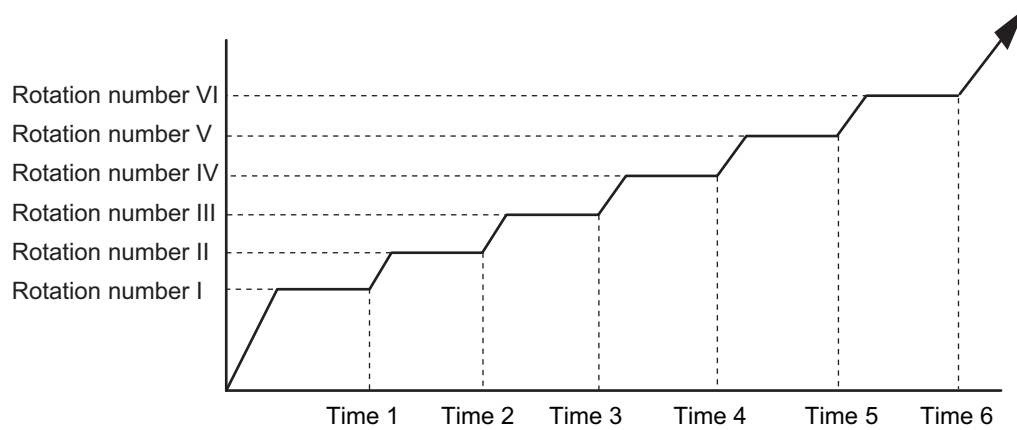
- Compressor control based on room temperature



## 1-4. Rotation number of compressor at normal start-up

### ■ Models: AOHG18KBTA3 and AOHG24KBTA3

Rotation number of the compressor soon after starting is controlled as below.



Rotation number (rps)	I	II	III	IV	V	VI
	35	52	64	71	89	97
Time (sec)	1	2	3	4	5	6
	60	140	170	200	350	410

## 1-5. Rotation number of compressor limitation by outdoor temperature

The minimum rotation number of compressor is limited by outdoor temperature as below.

- **Cooling/Dry mode**

38°C	D zone
18°C	C zone
7°C	B zone
	A zone

Unit: rps

Model name	Outdoor temperature zone	Limitation of compressor rotation number
AOHG18KBTA3 AOHG24KBTA3	A zone	20
	B zone	19
	C zone	14
	D zone	20

- **Heating mode**

5°C	D zone
-1°C	C zone
-6°C	B zone
	A zone

Unit: rps

Model name	Outdoor temperature zone	Limitation of compressor rotation number
AOHG18KBTA3 AOHG24KBTA3	A zone	40
	B zone	35
	C zone	26
	D zone	14

## 2. Auto changeover operation

When the air conditioner is set to AUTO mode by remote controller, operation starts in the optimum mode from among heating, cooling, dry and monitoring modes. During operation, the optimum mode is automatically switched in accordance with temperature changes. The temperature can be set between 18°C and 30°C in 1.0°C steps.

- When operation starts, indoor fan and outdoor fan are operated for around 1 minute. Room temperature and outdoor temperature are sensed, and the operation mode is selected in accordance with the table below.

Room temperature	Operation mode
$Tr > Ts + 2^{\circ}\text{C}$	Cooling
$Ts + 2^{\circ}\text{C} \geq Tr \geq Ts - 2^{\circ}\text{C}$	Middle zone
$Tr < Ts - 2^{\circ}\text{C}$	Heating

Tr: Room temperature

Ts: Setting temperature

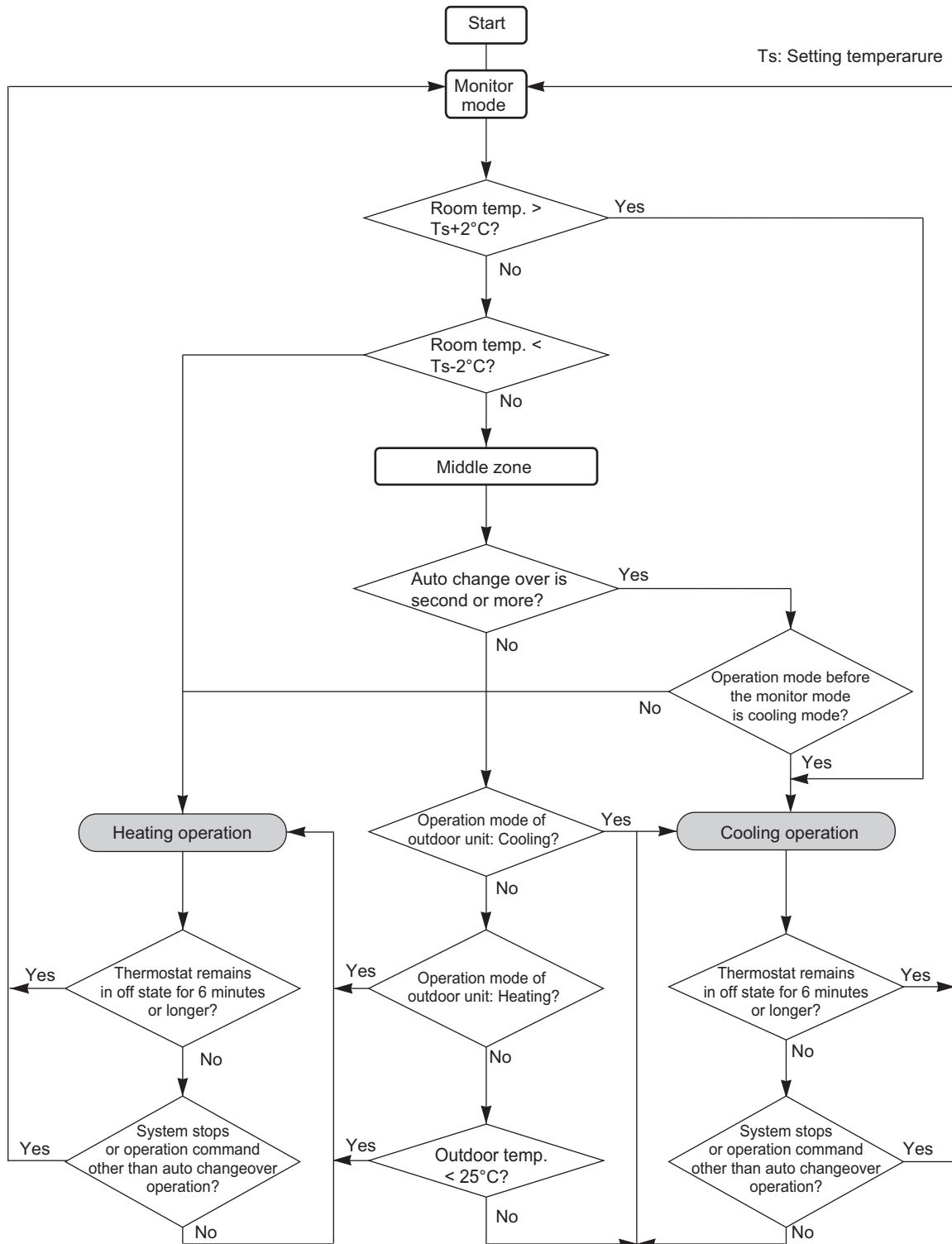
**NOTE:** When the operation mode is middle zone, indoor unit operation mode is selected as below.

- Same operation mode is selected as outdoor unit.  
If outdoor unit is operating in cooling and heating mode, indoor unit will be operated by the same operation mode.
- Selected by outdoor temperature.  
If outdoor unit is operating in other than cooling and heating mode, indoor unit will be operated according to the outdoor temperature as below.

Outdoor temp.	Operation mode
25°C or more	Cooling
Less than 25°C	Heating

- When the compressor was stopped for 6 consecutive minutes by temperature control function after the cooling or heating mode was selected as above, operation is switched to monitoring mode and the operation mode selection is done again.
- When the middle zone is selected on the predetermining of the operation mode, the operation mode before the changing to the monitoring mode is selected.

## Operation flow chart



### 3. Fan control

Tr: Room temperature

Ts: Setting temperature

#### 3-1. Indoor fan control

##### ■ Compact cassette type

##### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)				
		07	09	12	14	18
Heating	HIGH	590	590	650	830	830
	MED+	570	570	620	770	770
	MED	540	540	580	730	730
	LOW	490	490	520	630	630
	QUIET	440	440	460	500	500
	Cool air prevention	400	400	400	400	400
	S-LOW	300	300	300	300	300
Cooling/Fan	HIGH	590	590	650	730	730
	MED	540	540	580	630	630
	LOW	490	490	520	540	540
	QUIET	440	440	460	460	460
	Soft quiet	400*1	400*1	400*1	400*1	400*1
	S-LOW	300*2	300*2	300*2	300*2	300*2
Dry		X zone: 440 J zone: 440	X zone: 440 J zone: 440	X zone: 460 J zone: 460	X zone: 460 J zone: 460	X zone: 460 J zone: 460

\*1: Fan mode only

\*2: Cooling mode only

##### ● Fan operation

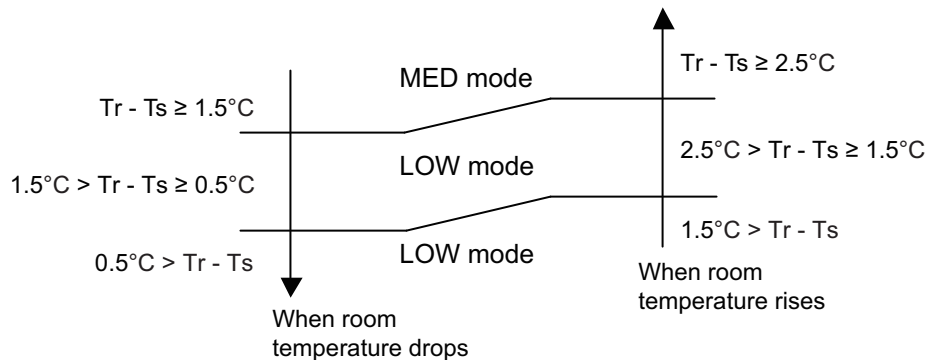
Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

When fan mode is set at AUTO, it operates on MED fan speed.

## ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.  
On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



## ● Dry operation

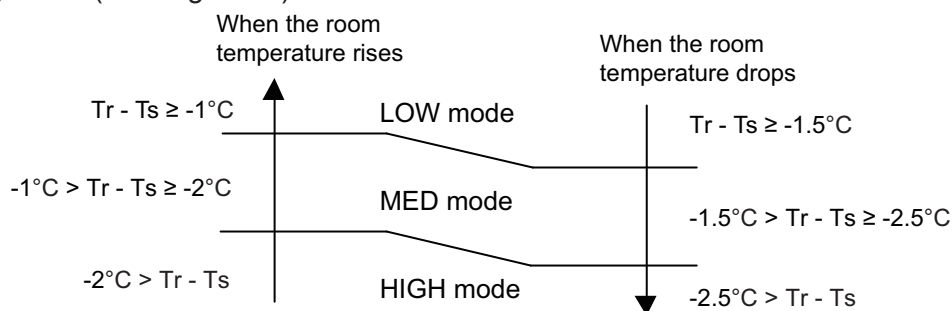
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

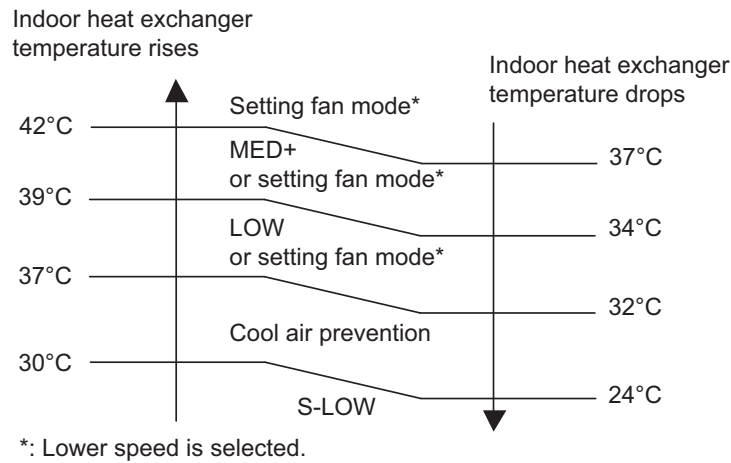
Airflow change over (Heating: Auto)



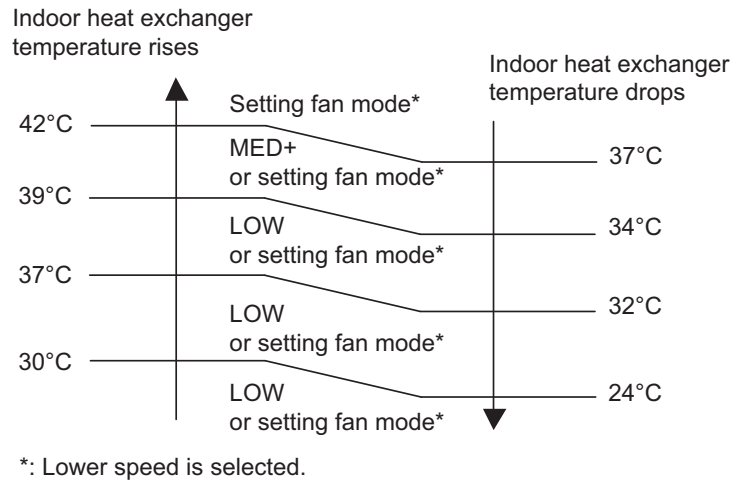
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

### • Normal operation

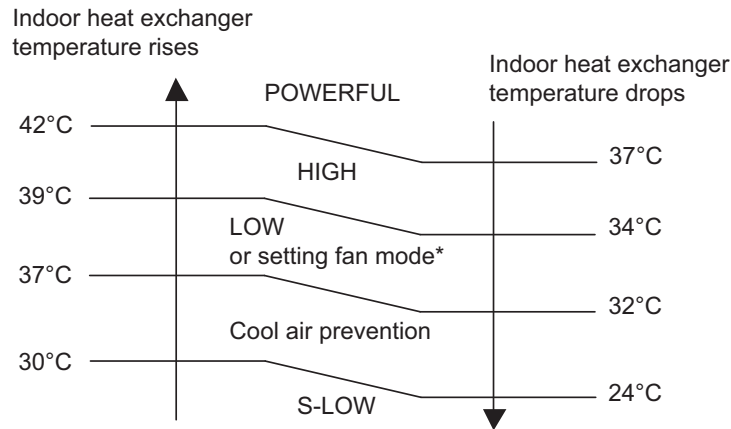


13 minutes later:

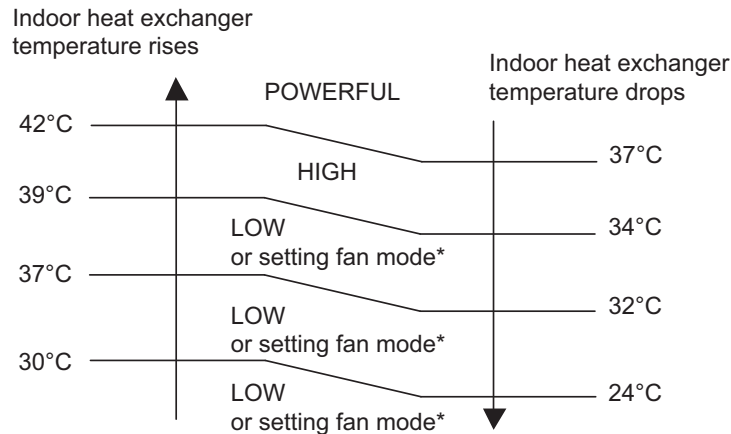




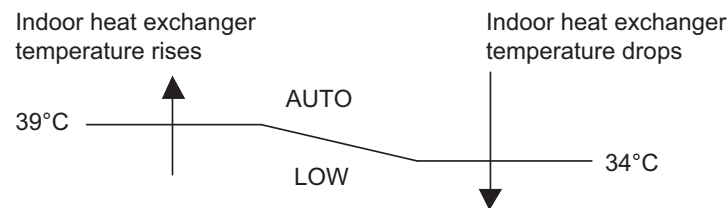
- **Powerful operation**



13 minutes later:

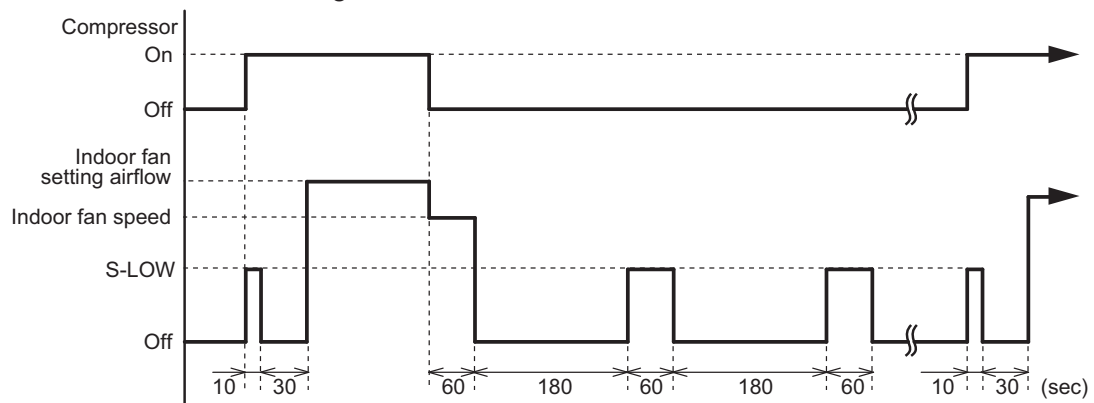


- **10 °C HEAT operation**



- **Moisture return prevention control (cooling and dry mode)**

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Mini duct type

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)				
		07	09	12	14	18
Heating	HIGH	1,100	1,170	1,240	1,500	1,290
	MED	890	890	960	1,220	1,060
	LOW	810	810	850	1,030	800
	QUIET	750	750	730	730	730
	S-LOW	360	360	360	360	530
Cooling/Fan	HIGH	1,100	1,170	1,240	1,500	1,290
	MED	890	890	960	1,220	1,060
	LOW	810	810	850	1,030	800
	QUIET	750	750	730	730	730
	Soft quiet	360 <sup>*1</sup>	360 <sup>*1</sup>	360 <sup>*1</sup>	360 <sup>*1</sup>	530 <sup>*1</sup>
	S-LOW	360 <sup>*2</sup>	360 <sup>*2</sup>	360 <sup>*2</sup>	360 <sup>*2</sup>	530 <sup>*2</sup>
Dry		X zone: 750 J zone: 750	X zone: 750 J zone: 750	X zone: 730 J zone: 730	X zone: 730 J zone: 730	X zone: 730 J zone: 730

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

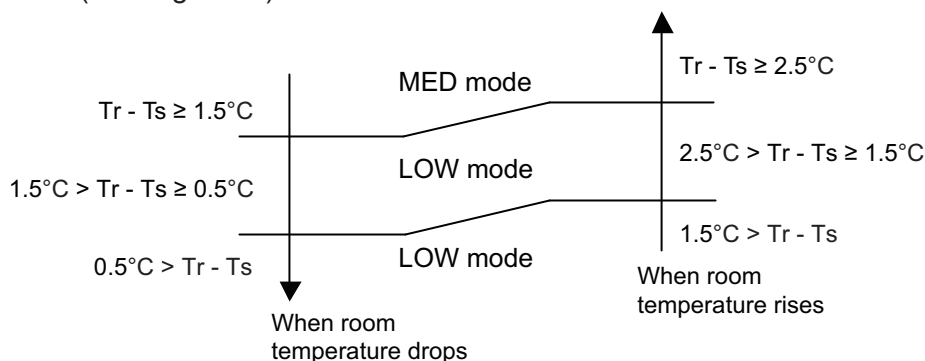
When fan mode is set at AUTO, it operates on MED fan speed.

### ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



### ● Dry operation

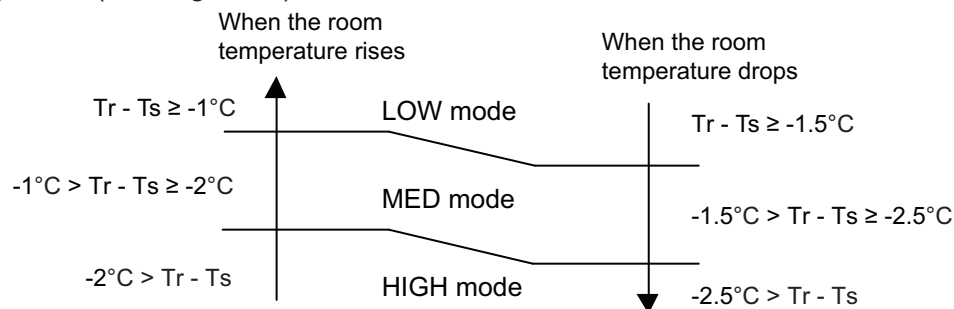
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

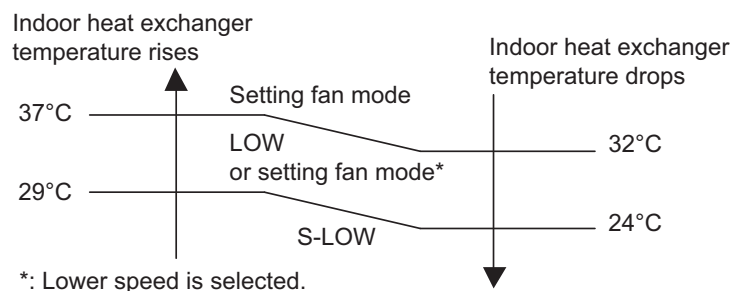
Airflow change over (Heating: Auto)



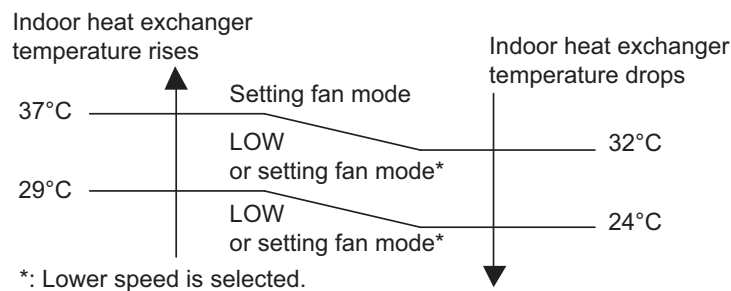
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

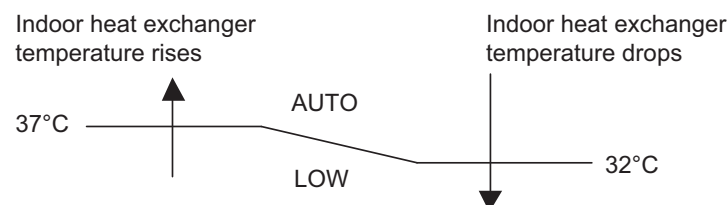
### • Normal operation



13 minutes later:

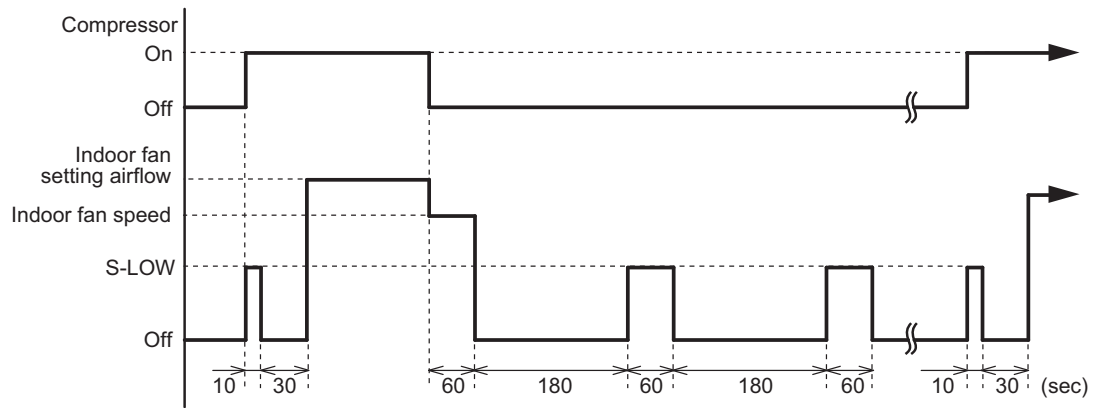


### • 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Slim duct type

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)				
		07	09	12	14	18
Heating	HIGH	1,160	1,260	1,340	1,560	1,380
	MED	1,000	1,160	1,240	1,400	1,300
	LOW	940	1,060	1,140	1,240	1,220
	QUIET	880	960	1,030	1,030	1,140
	S-LOW	500	500	500	500	600
Cooling/Fan	HIGH	1,160	1,260	1,340	1,560	1,380
	MED	1,000	1,160	1,240	1,400	1,300
	LOW	940	1,060	1,140	1,240	1,220
	QUIET	880	960	1,030	1,030	1,140
	Soft quiet	500*1	500*1	500*1	500*1	600*1
	S-LOW	500*2	500*2	500*2	500*2	600*2
Dry		X zone: 880 J zone: 880	X zone: 960 J zone: 960	X zone: 1,030 J zone: 1,030	X zone: 1,030 J zone: 1,030	X zone: 1,140 J zone: 1,140

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

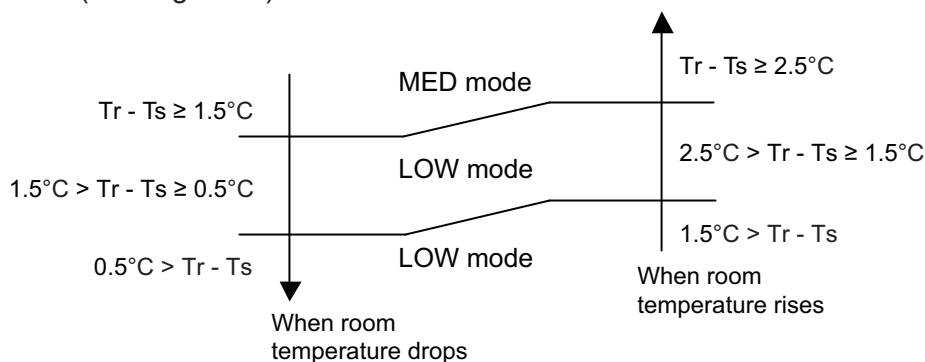
When fan mode is set at AUTO, it operates on MED fan speed.

### ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



### ● Dry operation

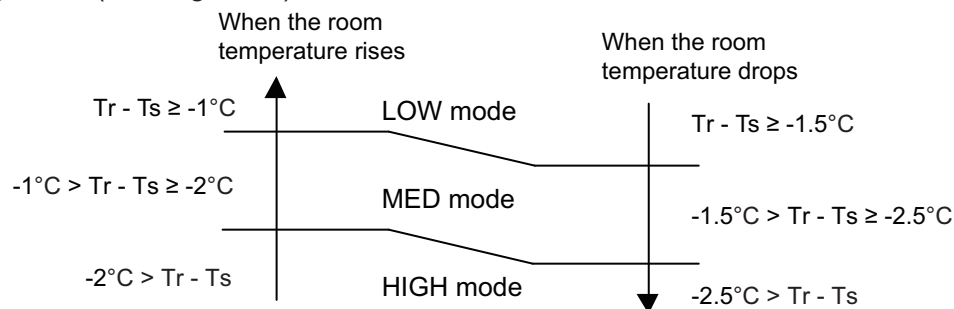
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

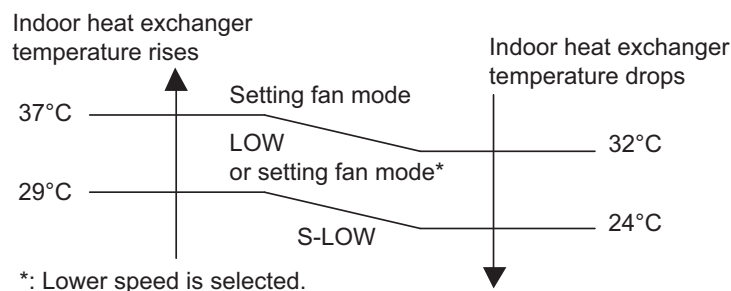
Airflow change over (Heating: Auto)



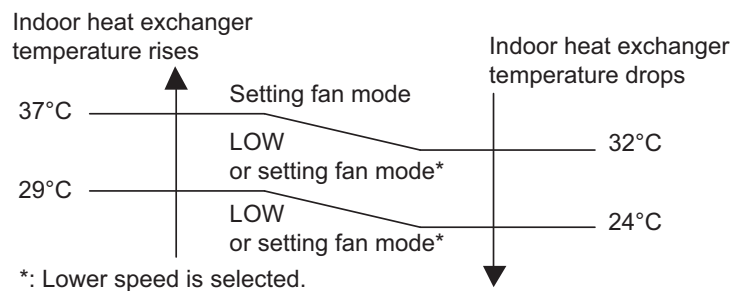
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

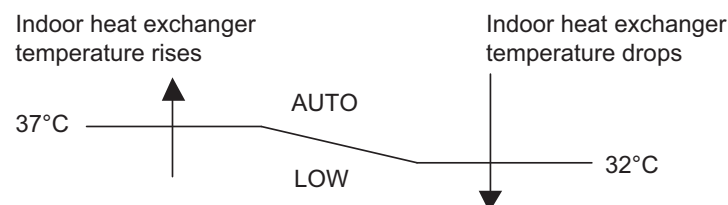
### • Normal operation



13 minutes later:

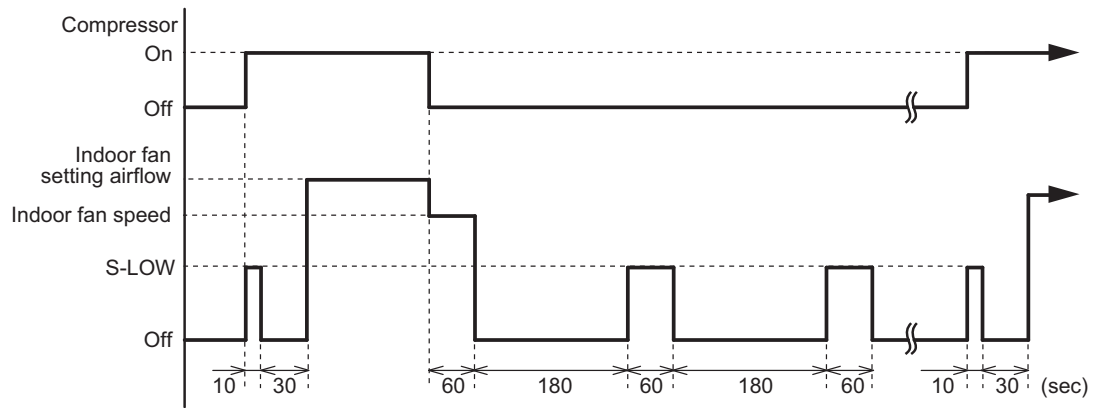


### • 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Wall mounted type (For KGTB)

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)			
		ASHG07KGTB	ASHG09KGTB	ASHG12KGTB	ASHG14KGTB
Heating	POWERFUL	1,200	1,230	1,290	1,330
	HIGH	1,130	1,160	1,220	1,260
	MED+	1,040	1,070	1,140	1,160
	MED	950	980	1,060	1,080
	LOW	790	800	900	900
	QUIET	620	620	630	670
	Cool air prevention	550	550	550	590
	S-LOW	400	400	470	470
Cooling/Fan	POWERFUL	1,110	1,170	1,200	1,290
	HIGH	1,040	1,100	1,130	1,220
	MED	890	920	950	1,000
	LOW	750	750	790	810
	QUIET	550	550	550	590
	Soft quiet	470 <sup>*1</sup>	470 <sup>*1</sup>	490 <sup>*1</sup>	510 <sup>*1</sup>
	S-LOW	400 <sup>*2</sup>	400 <sup>*2</sup>	470 <sup>*2</sup>	470 <sup>*2</sup>
Dry		X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 590 J zone: 590

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

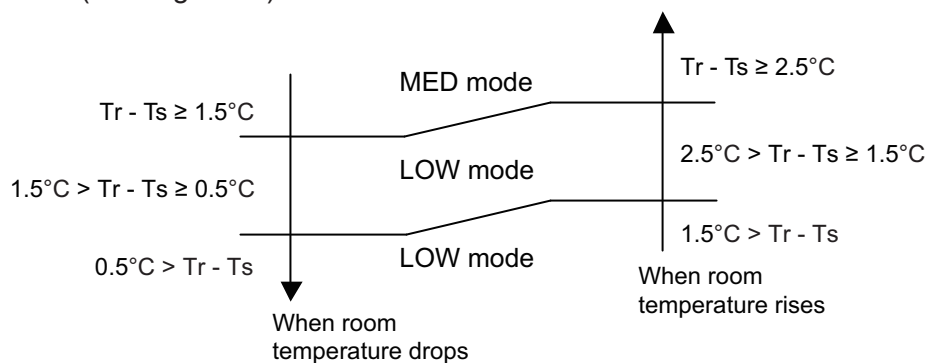
When fan mode is set at AUTO, it operates on MED fan speed.

### ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)





## ● Dry operation

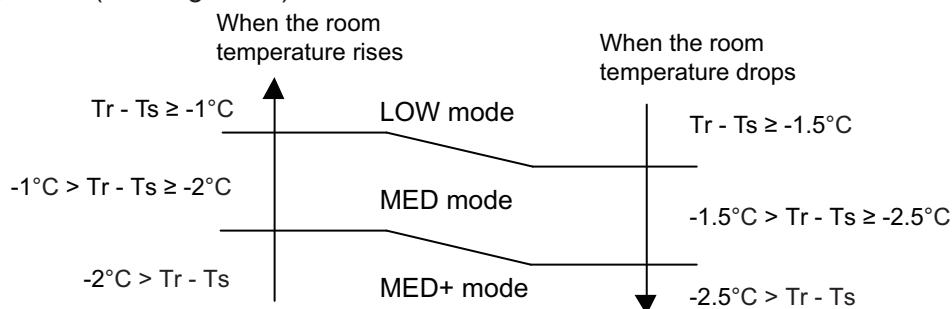
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

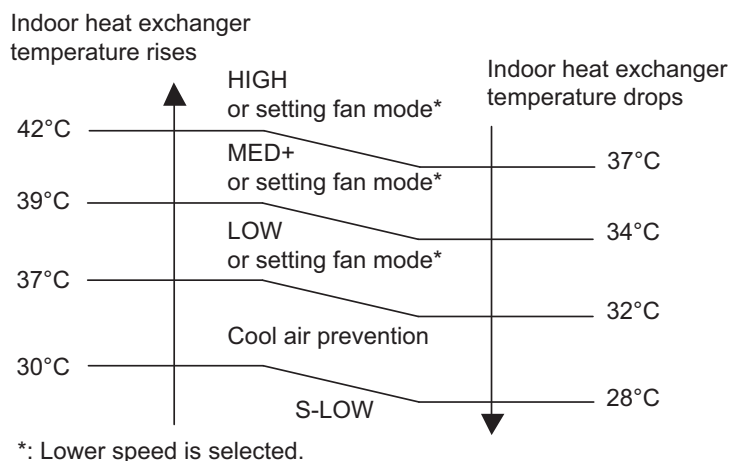
Airflow change over (Heating: Auto)



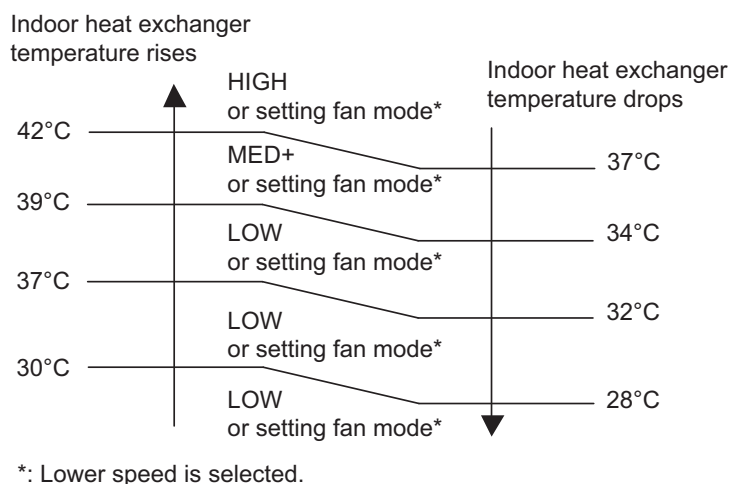
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

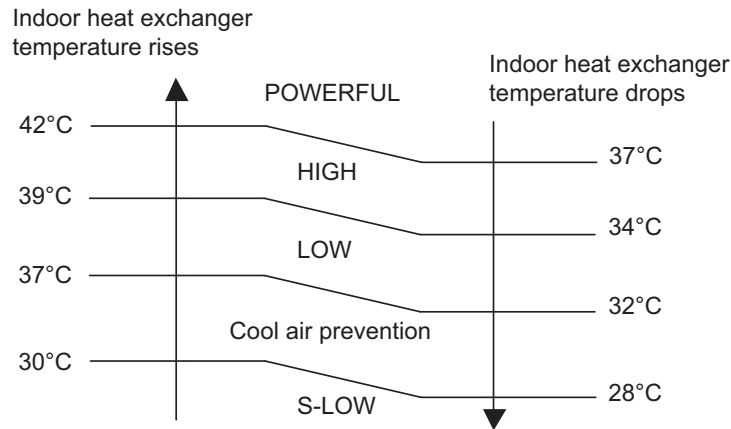
### • Normal operation



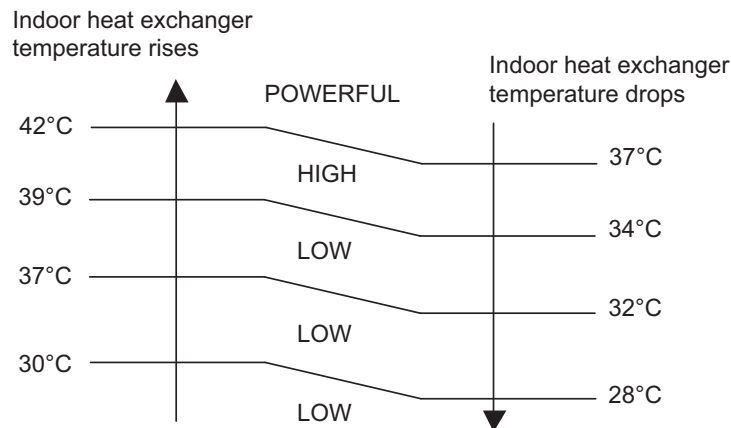
13 minutes later:



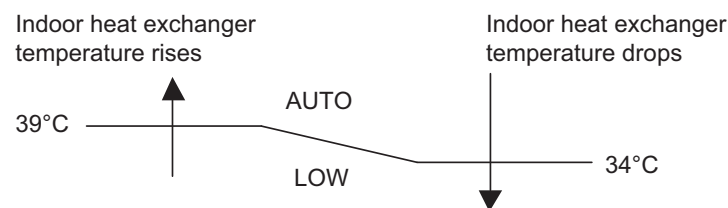
## • Powerful operation



13 minutes later:

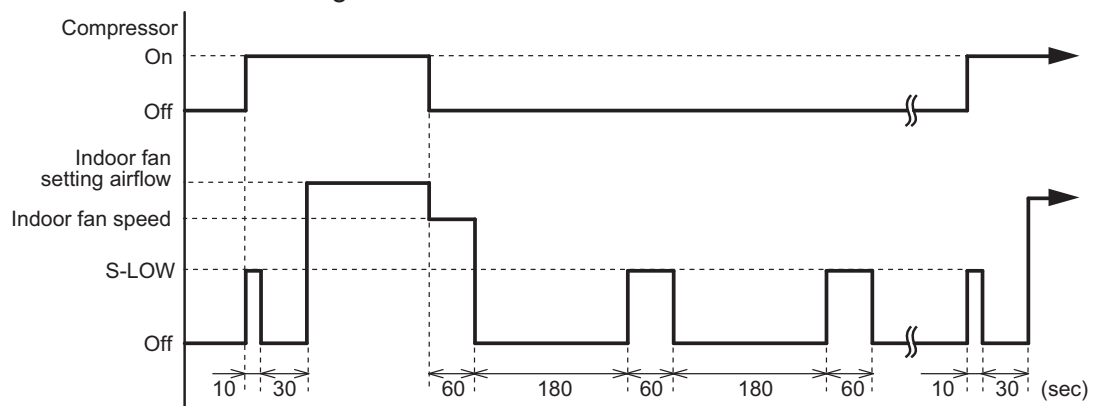


## • 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Wall mounted type (For KGTE)

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)			
		ASHG07KGTB	ASHG09KGTB	ASHG12KGTB	ASHG14KGTB
Heating	POWERFUL	1,200	1,230	1,290	1,330
	HIGH	1,130	1,160	1,220	1,260
	MED+	1,040	1,070	1,140	1,160
	MED	950	980	1,060	1,080
	LOW	790	800	900	900
	QUIET	620	620	630	670
	Cool air prevention	550	550	550	590
	S-LOW	400	400	470	470
Cooling/Fan	POWERFUL	1,110	1,170	1,200	1,290
	HIGH	1,040	1,100	1,130	1,220
	MED	890	920	950	1,000
	LOW	750	750	790	810
	QUIET	550	550	550	590
	Soft quiet	470 <sup>*1</sup>	470 <sup>*1</sup>	490 <sup>*1</sup>	510 <sup>*1</sup>
	S-LOW	400 <sup>*2</sup>	400 <sup>*2</sup>	470 <sup>*2</sup>	470 <sup>*2</sup>
Dry		X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 590 J zone: 590

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

Airflow can be switched in 6 steps such as AUTO, QUIET, LOW, MED, MED—HIGH, HIGH while indoor unit fan only runs.

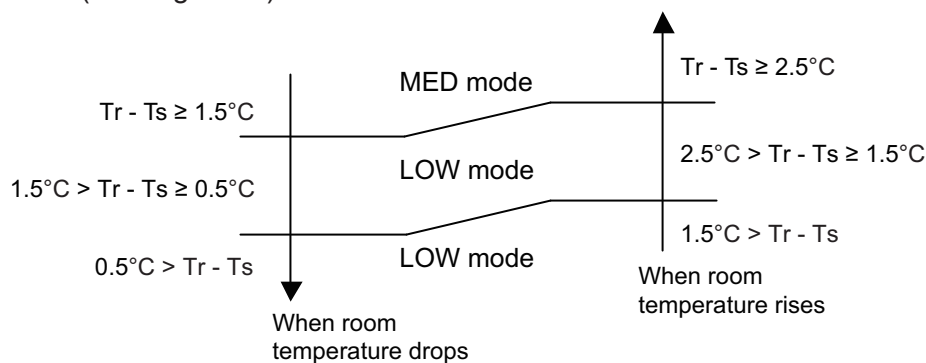
When fan mode is set at AUTO, it operates on MED fan speed.

### ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



## ● Dry operation

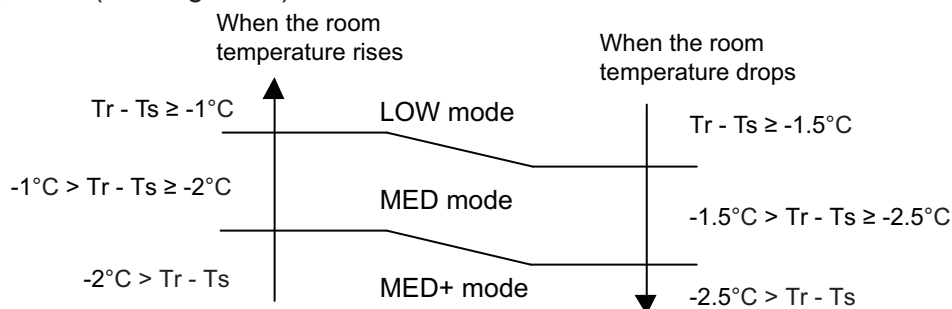
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

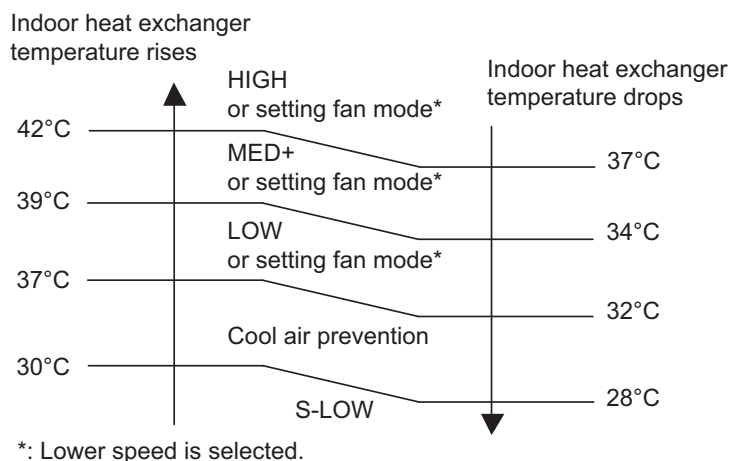
Airflow change over (Heating: Auto)



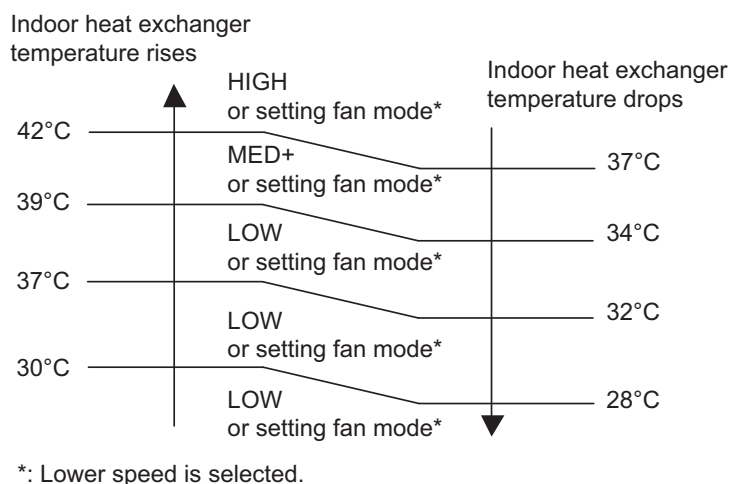
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

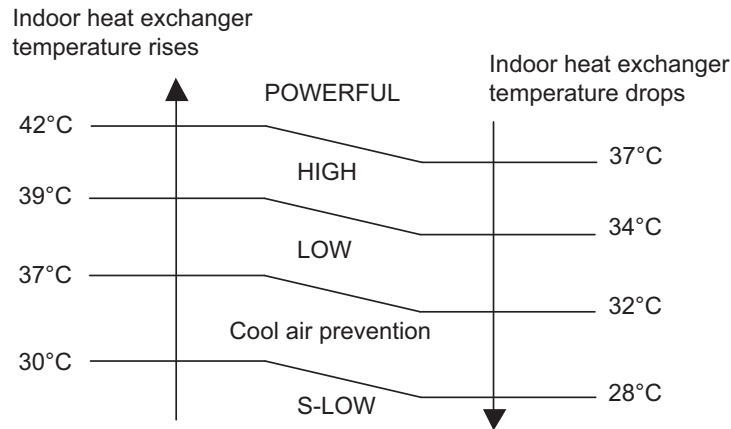
### • Normal operation



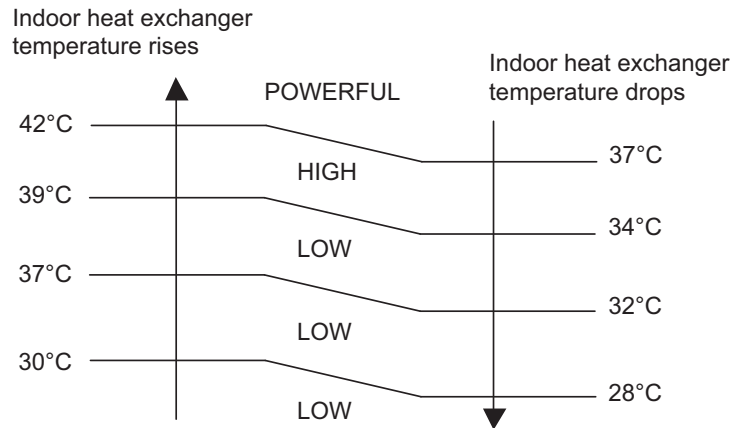
13 minutes later:



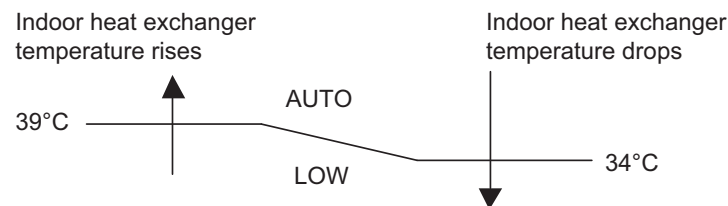
## • Powerful operation



13 minutes later:

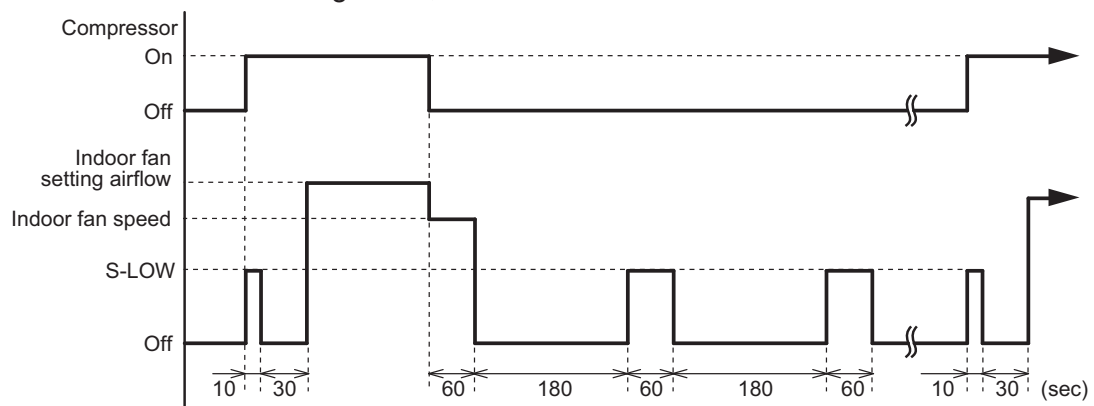


## • 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Wall mounted type (For KMTB, KMTE, KMCC, and KMCE)

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)				
		ASHG18KMTB ASHG18KMTE	ASHG07KMCC ASHG07KMCE	ASHG09KMCC ASHG09KMCE	ASHG12KMCC ASHG12KMCE	ASHG14KMCC ASHG14KMCE
Heating	POWERFUL	1,400	1,230	1,270	1,310	1,400
	HIGH	1,300	1,160	1,200	1,240	1,330
	MED+	1,230	1,060	1,060	1,120	1,160
	MED	1,130	970	990	1,050	1,100
	LOW	900	820	830	900	910
	QUIET	760	650	650	650	670
	Cool air prevention	650	570	570	570	580
	S-LOW	520	420	420	420	470
Cooling/ Fan	POWERFUL	1,400	1,140	1,200	1,200	1,320
	HIGH	1,260	1,070	1,130	1,130	1,250
	MED	1,080	920	940	940	1,020
	LOW	900	780	780	780	810
	QUIET	760	630	630	630	630
	Soft quiet	650* <sup>1</sup>	490* <sup>1</sup>	490* <sup>1</sup>	490* <sup>1</sup>	510* <sup>1</sup>
	S-LOW	520* <sup>2</sup>	420* <sup>2</sup>	420* <sup>2</sup>	420* <sup>2</sup>	470* <sup>2</sup>
Dry		X zone: 760 J zone: 670	X zone: 630 J zone: 630	X zone: 630 J zone: 630	X zone: 630 J zone: 630	X zone: 630 J zone: 630

Operation mode	Fan mode	Speed (rpm)			
		ASHG07KMTB	ASHG09KMTB	ASHG12KMTB	ASHG14KMTB
Heating	POWERFUL	1,210	1,250	1,270	1,360
	HIGH	1,140	1,180	1,200	1,290
	MED+	1,040	1,040	1,100	1,160
	MED	950	970	1,030	1,100
	LOW	800	810	880	910
	QUIET	630	630	630	670
	Cool air prevention	550	550	550	580
	S-LOW	400	400	400	470
Cooling/ Fan	POWERFUL	1,120	1,180	1,180	1,320
	HIGH	1,050	1,100	1,110	1,250
	MED	900	920	920	1,020
	LOW	760	760	760	810
	QUIET	550	550	550	580
	Soft quiet	470* <sup>1</sup>	470* <sup>1</sup>	470* <sup>1</sup>	510* <sup>1</sup>
	S-LOW	400* <sup>2</sup>	400* <sup>2</sup>	400* <sup>2</sup>	470* <sup>2</sup>
Dry		X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 580 J zone: 580

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

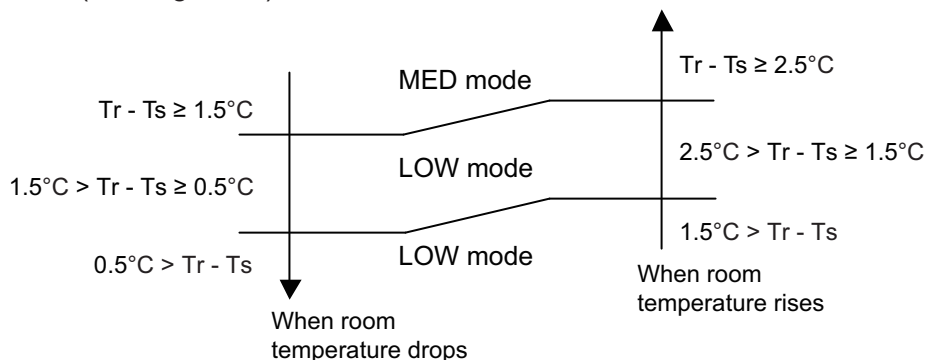
Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

When fan mode is set at AUTO, it operates on MED fan speed.

## ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.  
On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



## ● Dry operation

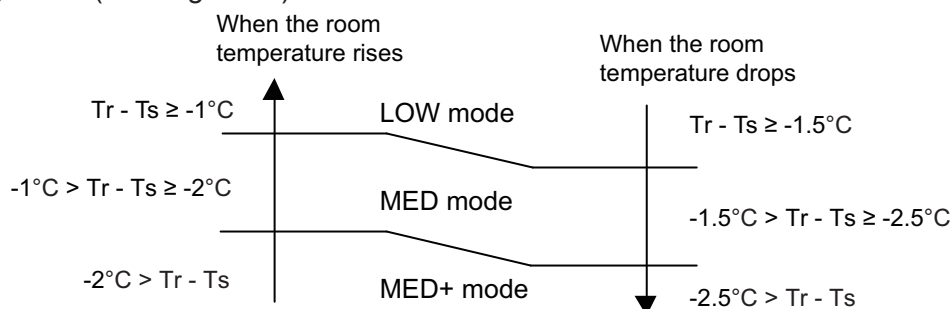
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

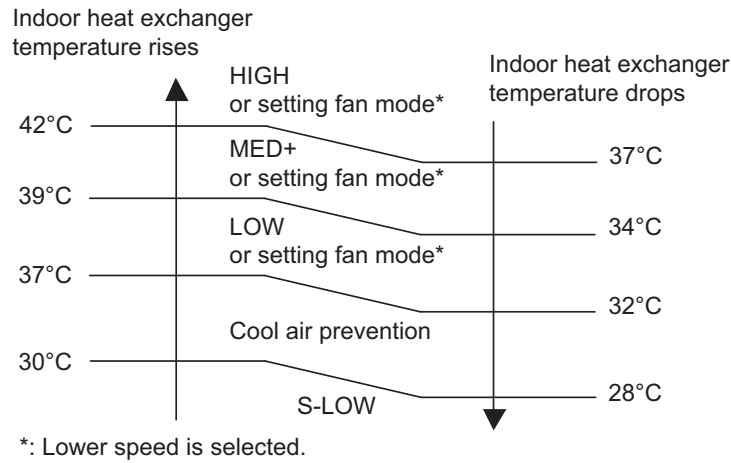
Airflow change over (Heating: Auto)



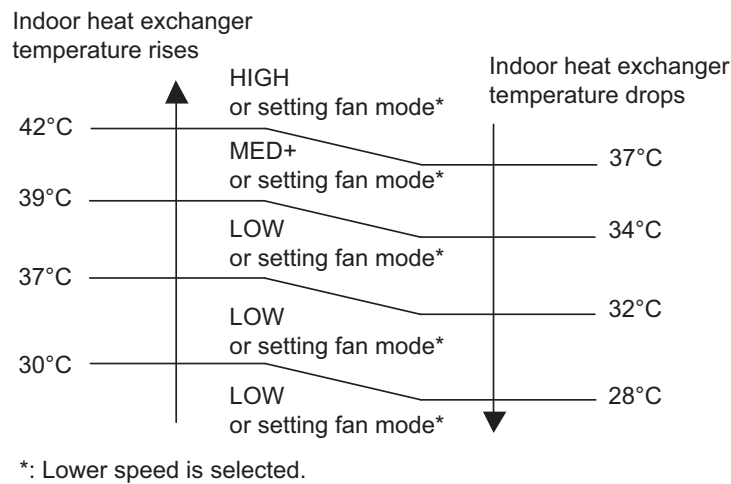
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

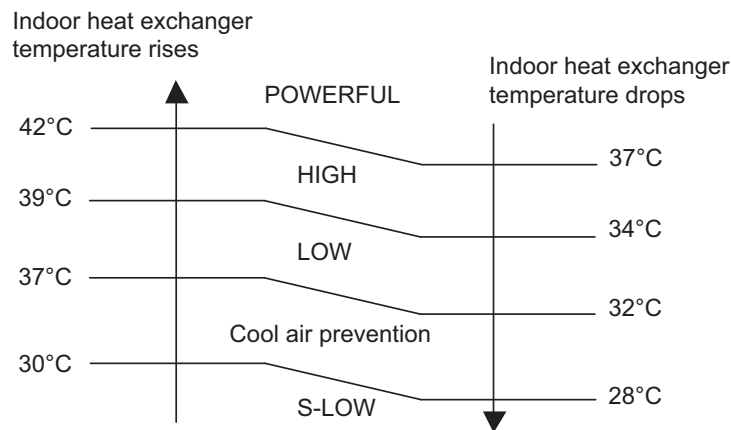
- Normal operation



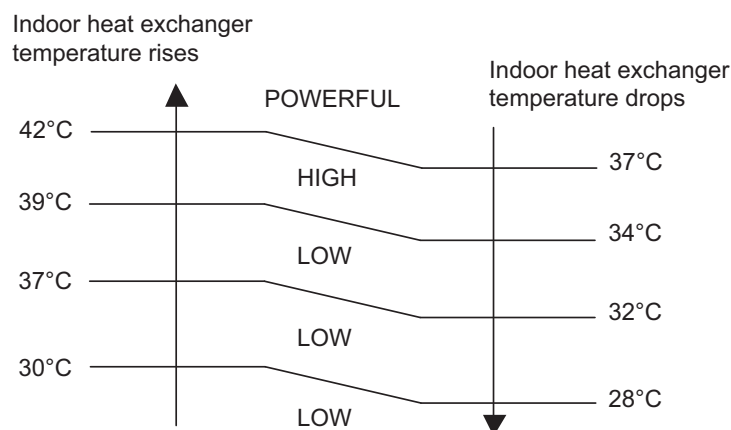
13 minutes later:



- Powerful operation

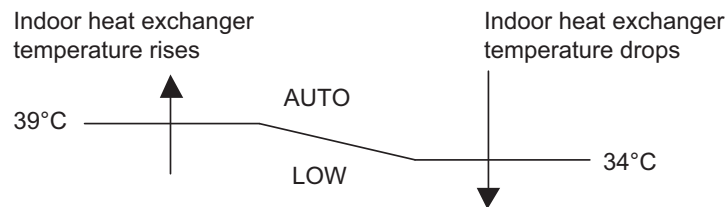


13 minutes later:



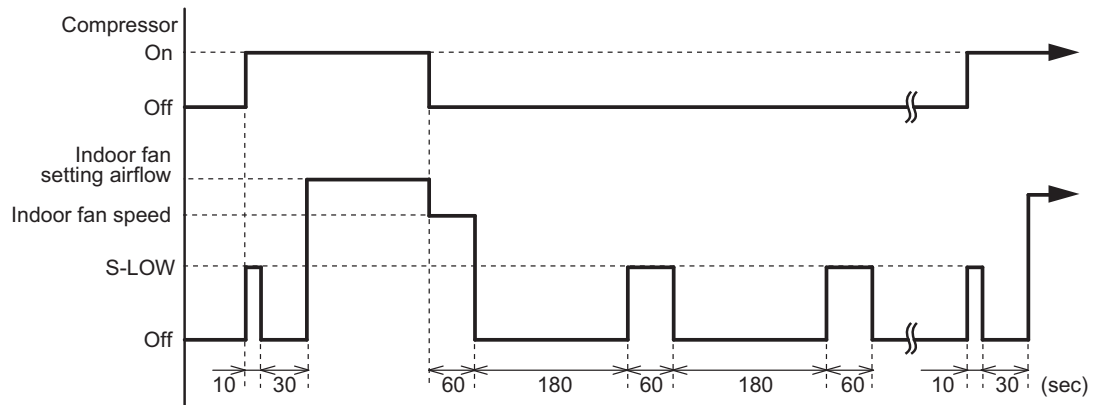


- 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Wall mounted type (For KETA and KETE)

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)			
		ASHG07KETA ASHG07KETA-B ASHG07KETE ASHG07KETE-B	ASHG09KETA ASHG09KETA-B ASHG09KETE ASHG09KETE-B	ASHG12KETA ASHG12KETA-B ASHG12KETE ASHG12KETE-B	ASHG14KETA ASHG14KETA-B ASHG14KETE ASHG14KETE-B
Heating	POWERFUL	1,210	1,250	1,270	1,360
	HIGH	1,140	1,180	1,200	1,290
	MED+	1,040	1,040	1,100	1,160
	MED	950	970	1,030	1,100
	LOW	800	810	880	910
	QUIET	630	630	630	670
	Cool air prevention S-LOW	550 400	550 400	550 400	580 470
Cooling/Fan	POWERFUL	1,120	1,180	1,180	1,320
	HIGH	1,050	1,110	1,110	1,250
	MED	900	920	920	1,020
	LOW	760	760	760	810
	QUIET	550	550	550	580
	Soft quiet	470 <sup>*1</sup>	470 <sup>*1</sup>	470 <sup>*1</sup>	510 <sup>*1</sup>
	S-LOW	400 <sup>*2</sup>	400 <sup>*2</sup>	400 <sup>*2</sup>	470 <sup>*2</sup>
Dry		X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 550 J zone: 550	X zone: 580 J zone: 580

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

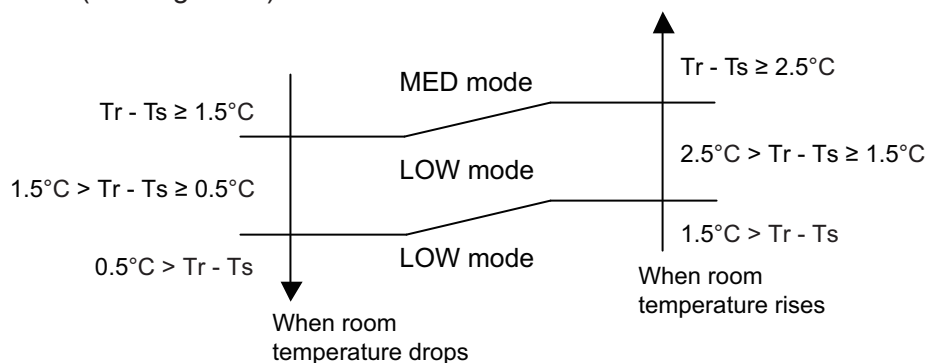
When fan mode is set at AUTO, it operates on MED fan speed.

### ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



## ● Dry operation

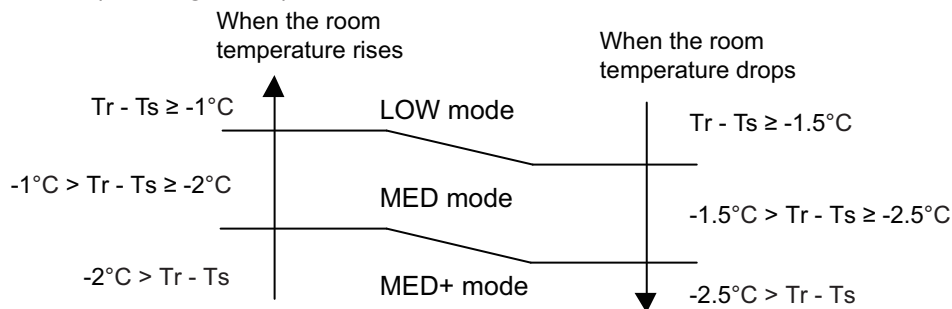
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

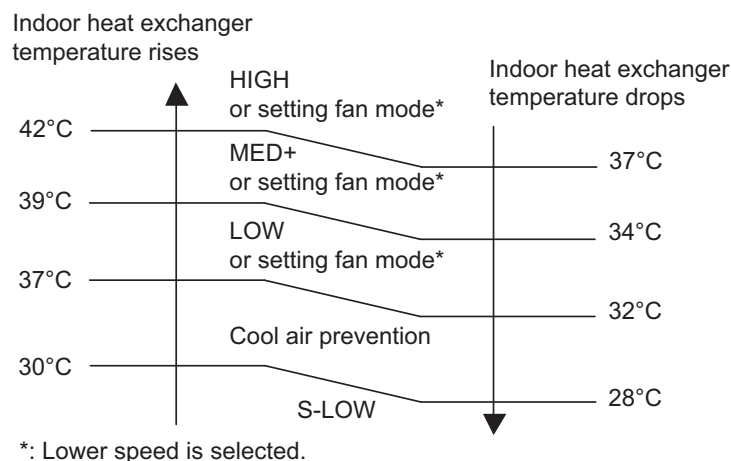
Airflow change over (Heating: Auto)



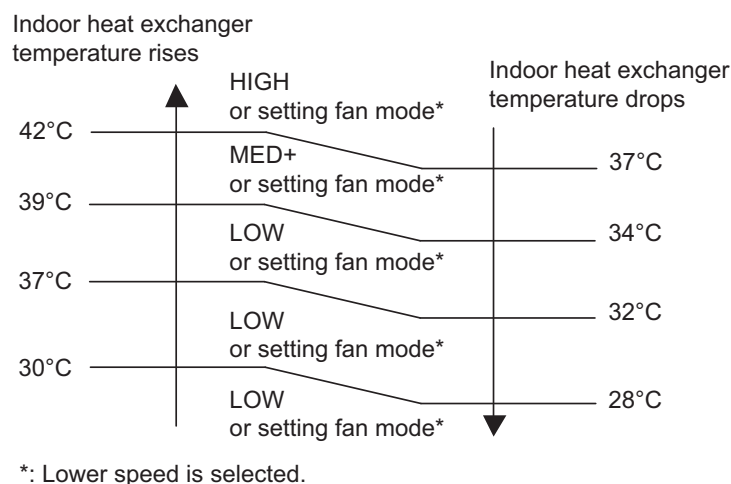
## ● Cool air prevention control (heating mode)

The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

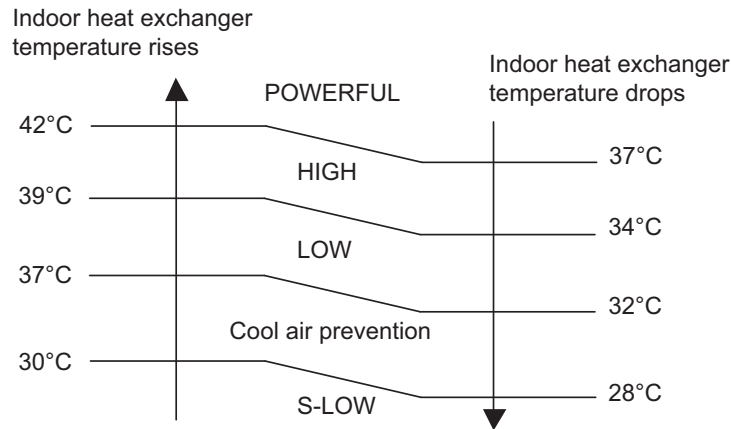
### • Normal operation



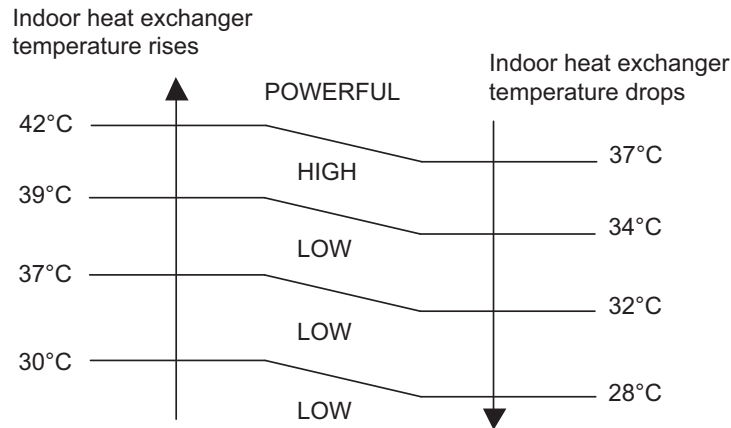
13 minutes later:



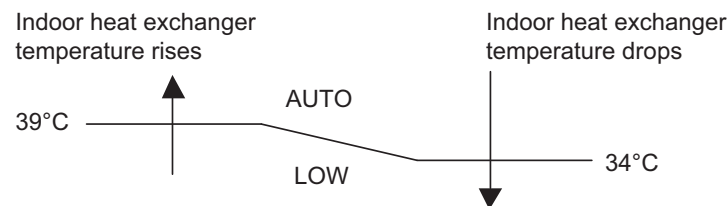
## • Powerful operation



13 minutes later:

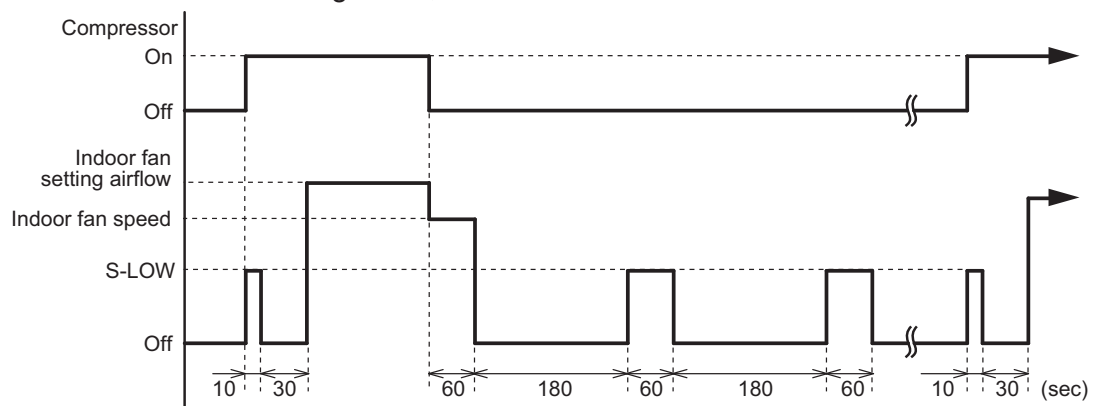


## • 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Ceiling type

### ● Fan speed

Indoor fan speed is defined as below.

Operation mode	Fan mode	Speed (rpm)
		ABHG18KRTA
Heating	HIGH	950
	MED+	900
	MED	880
	LOW	800
	QUIET	750
	Cool air prevention	500
	S-LOW	300
Cooling/Fan	HIGH	950
	MED	880
	LOW	800
	QUIET	750
	Soft quiet	500 <sup>*1</sup>
	S-LOW	300 <sup>*2</sup>
Dry		X zone: 750 J zone: 750

\*1: Fan mode only

\*2: Cooling mode only

### ● Fan operation

Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

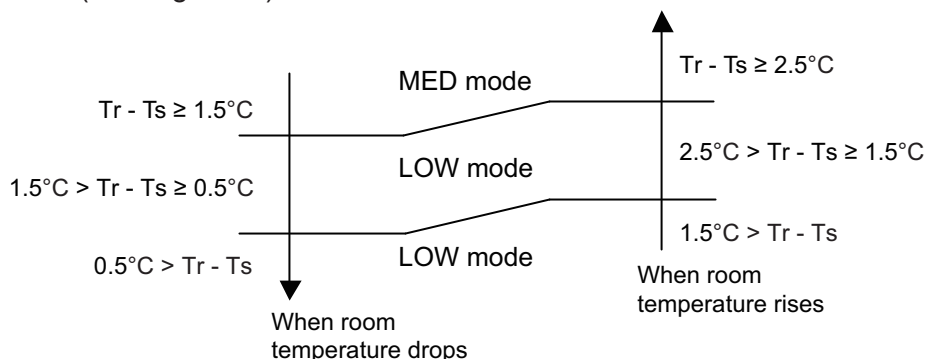
When fan mode is set at AUTO, it operates on MED fan speed.

### ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



### ● Dry operation

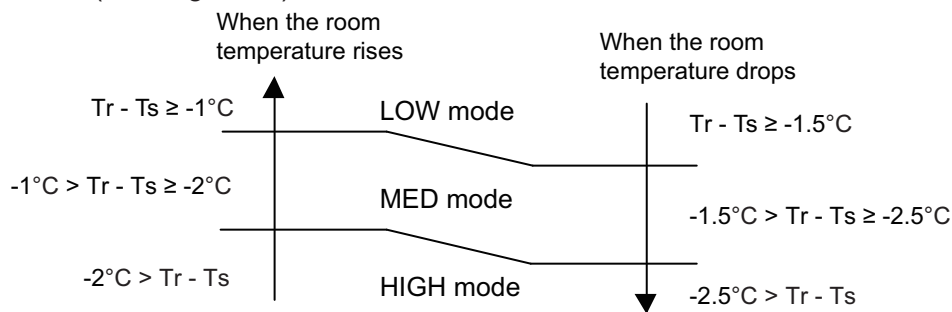
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

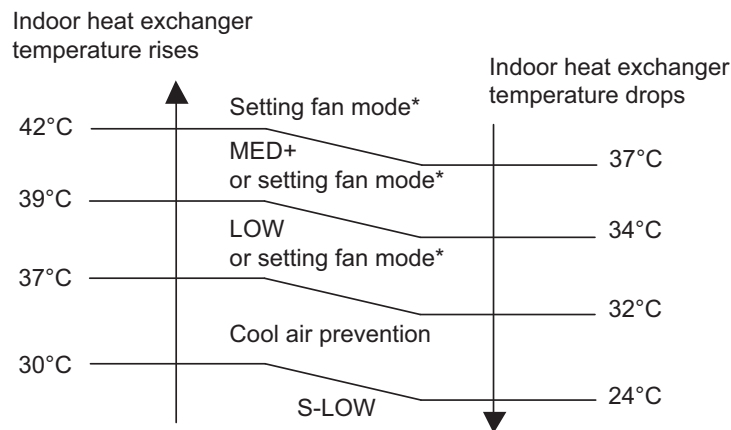
Airflow change over (Heating: Auto)



## ● Cool air prevention control (heating mode)

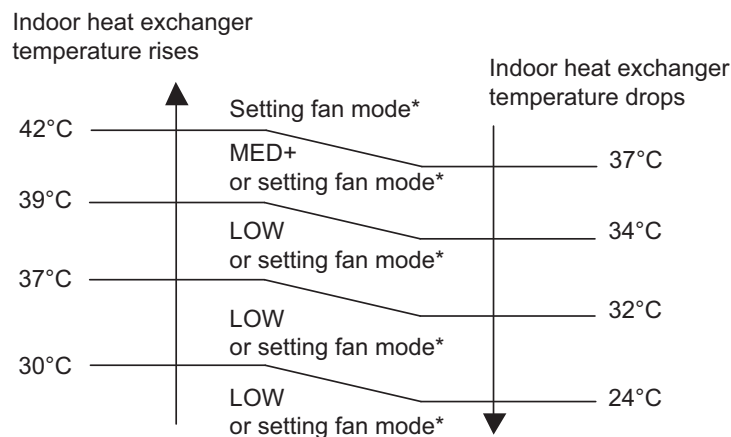
The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

### • Normal operation



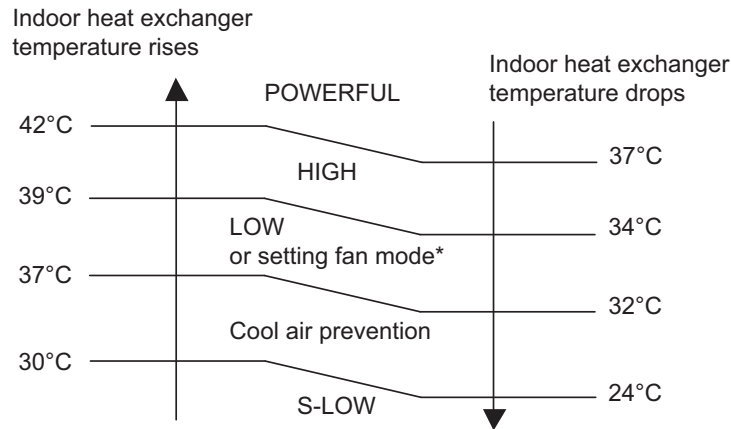
\*: Lower speed is selected.

13 minutes later:

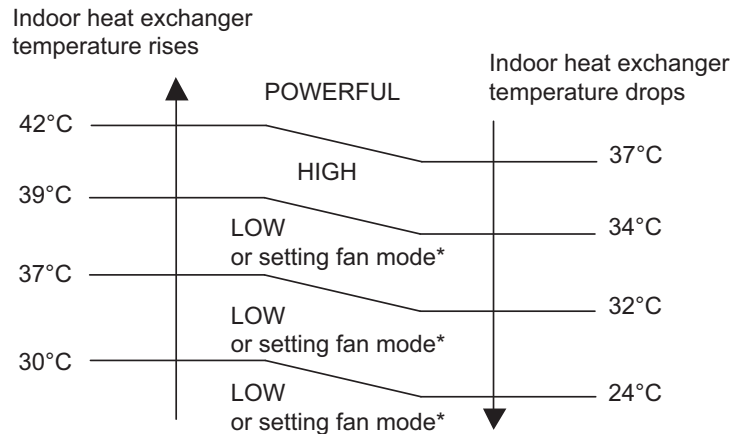


\*: Lower speed is selected.

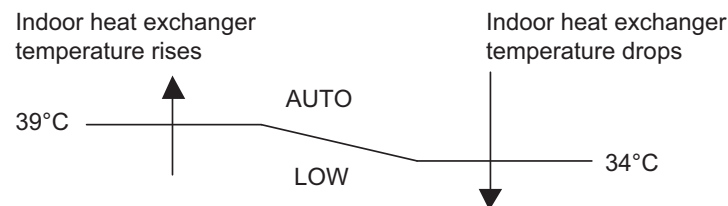
- **Powerful operation**



13 minutes later:

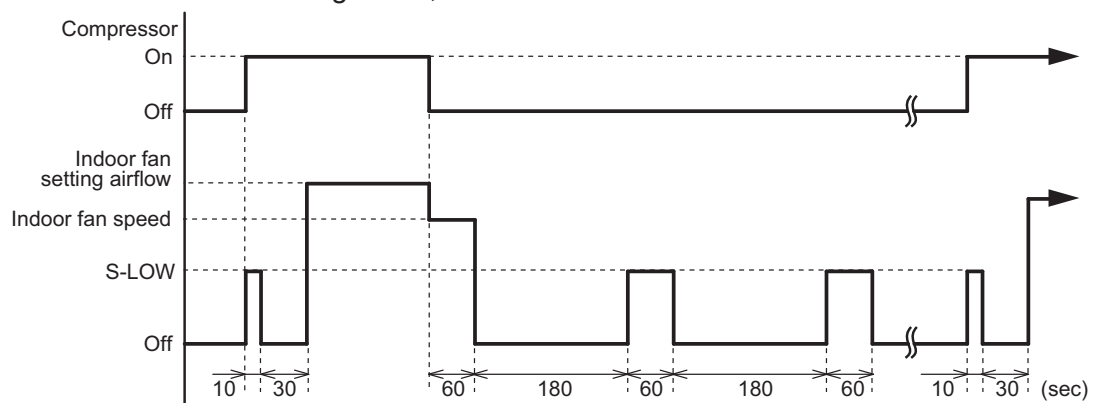


- **10 °C HEAT operation**



- **Moisture return prevention control (cooling and dry mode)**

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## ■ Floor type

### ● Fan speed

Indoor fan speed is defined as below.

- Model: AGHG09KVCA

Operation mode	Fan mode (Upper/Lower)	Speed (rpm)	
		Upper & Lower air flow mode	Upper air flow mode
Heating	POWERFUL	1,230/1,040	1,300/ —
	HIGH	1,120/950	1,230/ —
	MED+	1,000/850	1,090/ —
	MED	1,000/850	1,090/ —
	LOW-	860/730	940/ —
	QUIET	660/560	790/ —
	Cool air prevention	660/560	790/ —
	S-LOW	660/560	790/ —
Cooling/Fan	POWERFUL	1,230/1,040	1,300/ —
	HIGH	1,120/950	1,230/ —
	MED	960/820	1,070/ —
	LOW	820/700	910/ —
	QUIET	660/560	790/ —
	Soft quiet	570/480*1	790/ —*1
	S-LOW	660/560*2	790/ —*2
Dry		X zone: — / — J zone: — / —	X zone: 790/ — J zone: 790/ —

\*1: Fan mode only

\*2: Cooling mode only

- Model: AGHG12KVCA

Operation mode	Fan mode (Upper/Lower)	Speed (rpm)	
		Upper & Lower air flow mode	Upper air flow mode
Heating	POWERFUL	1,350/1,150	1,370/ —
	HIGH	1,240/1,040	1,300/ —
	MED+	1,080/920	1,140/ —
	MED	1,080/920	1,140/ —
	LOW-	910/770	980/ —
	QUIET	660/560	790/ —
	Cool air prevention	660/560	790/ —
	S-LOW	660/560	790/ —
Cooling/Fan	POWERFUL	1,350/1,150	1,370/ —
	HIGH	1,240/1,040	1,300/ —
	MED	1,050/890	1,120/ —
	LOW	860/730	930/ —
	QUIET	660/560	790/ —
	Soft quiet	570/480*1	790/ —*1
	S-LOW	660/560*2	790/ —*2
Dry		X zone: — / — J zone: — / —	X zone: 790/ — J zone: 790/ —

\*1: Fan mode only

\*2: Cooling mode only



- Model: AGHG14KVCA

Operation mode	Fan mode (Upper/Lower)	Speed (rpm)	
		Upper & Lower air flow mode	Upper air flow mode
Heating	POWERFUL	1,440/1,230	1,440/ —
	HIGH	1,330/1,120	1,370/ —
	MED+	1,140/970	1,180/ —
	MED	1,140/970	1,180/ —
	LOW-	940/800	1,020/ —
	QUIET	660/560	790/ —
	Cool air prevention	660/560	790/ —
Cooling/Fan	S-LOW	660/560	790/ —
	POWERFUL	1,440/1,230	1,440/ —
	HIGH	1,330/1,120	1,370/ —
	MED	1,100/930	1,160/ —
	LOW	890/750	960/ —
	QUIET	660/560	790/ —
	Soft quiet	570/480 <sup>*1</sup>	790/ — <sup>*1</sup>
Dry	S-LOW	660/560 <sup>*2</sup>	790/ — <sup>*2</sup>
		X zone: — / — J zone: — / —	X zone: 790/ — J zone: 790/ —

\*1: Fan mode only

\*2: Cooling mode only

## ● Fan operation

Airflow can be switched in 5 steps such as AUTO, QUIET, LOW, MED, HIGH while indoor unit fan only runs.

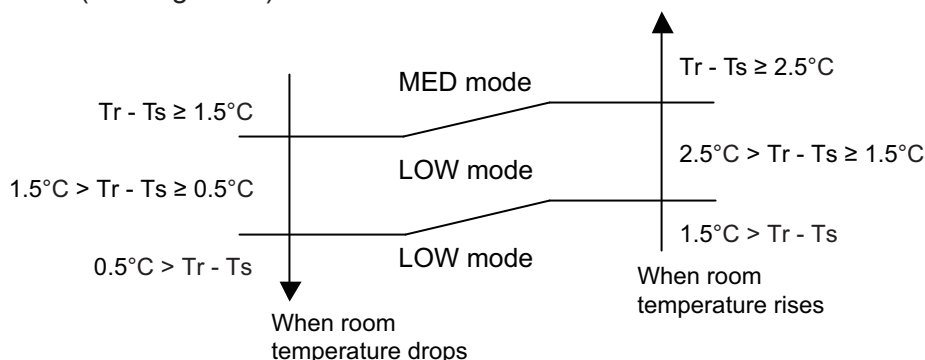
When fan mode is set at AUTO, it operates on MED fan speed.

## ● Cooling operation

Switch the airflow AUTO, and indoor fan motor will run according to room temperature, as below.

On the other hand, if switched in HIGH—QUIET, indoor motor will run at a constant airflow of COOL operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

Airflow change over (Cooling: Auto)



## ● Dry operation

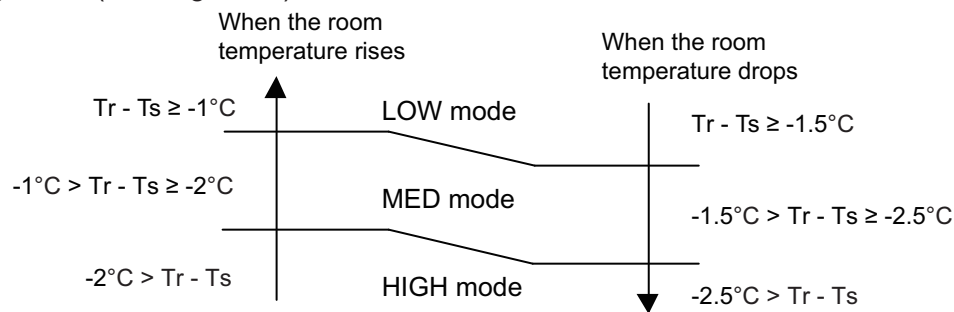
During dry operation, fan speed setting can not be changed as shown in “Fan speed” above.

## ● Heating operation

Switch the airflow AUTO, and the indoor fan motor will run according to a room temperature, as below.

On the other hand, if switched in HIGH—QUIET, the indoor motor will run at a constant airflow of HEAT operation modes QUIET, LOW, MED, HIGH as shown in “Fan speed” above.

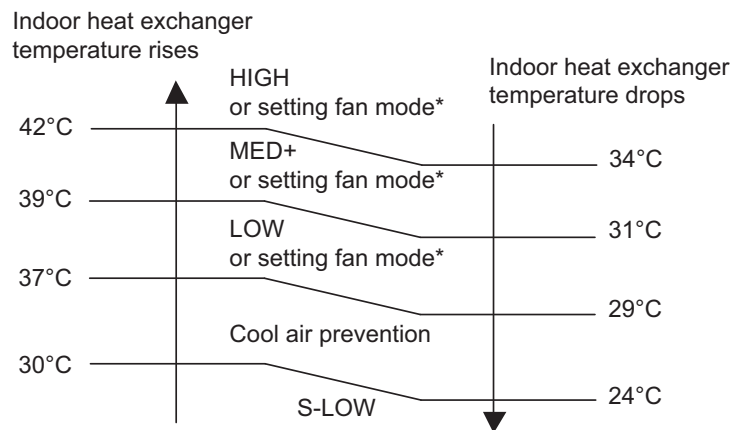
Airflow change over (Heating: Auto)



## ● Cool air prevention control (heating mode)

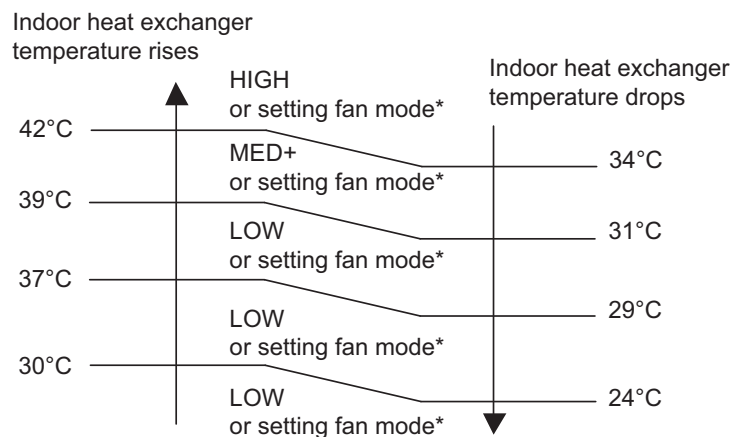
The maximum value of the indoor fan speed is set as shown below, based on the detected temperature by the indoor heat exchanger sensor on heating mode.

### • Normal operation



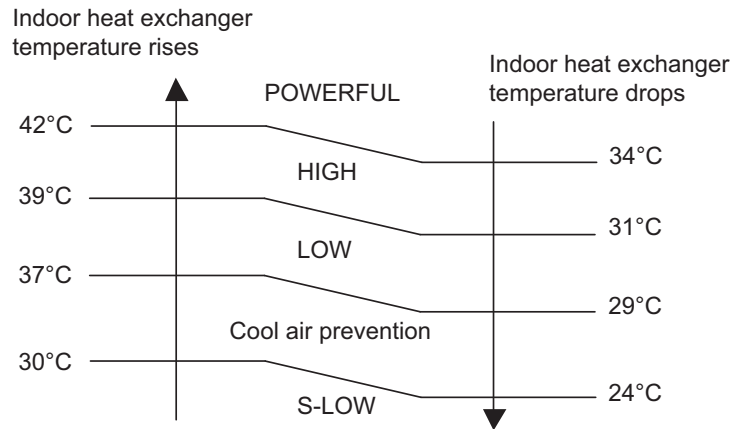
\*: Lower speed is selected.

13 minutes later:

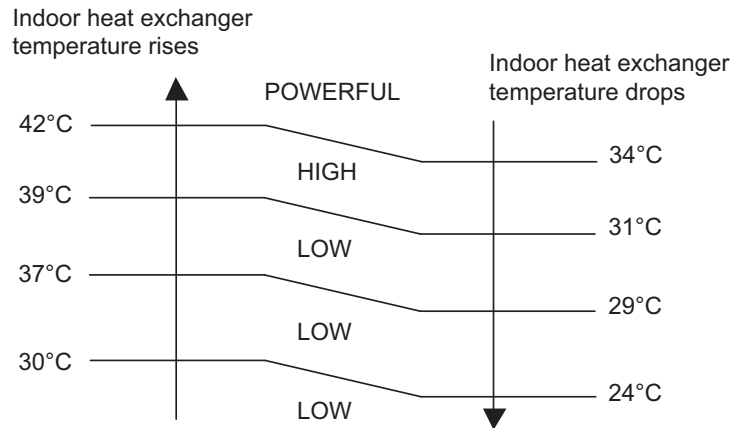


\*: Lower speed is selected.

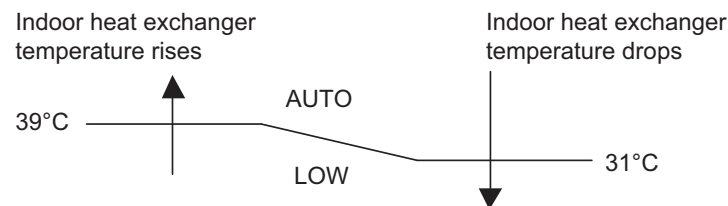
## • Powerful operation



13 minutes later:

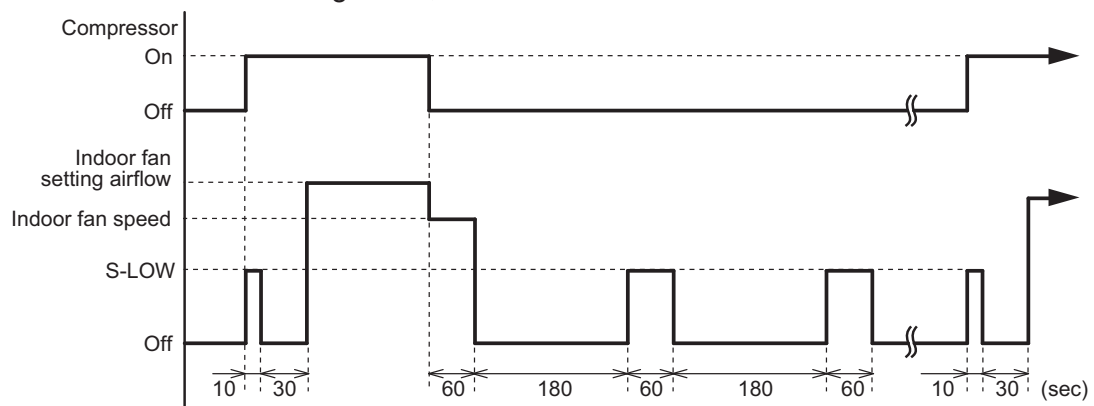


## • 10 °C HEAT operation



## ● Moisture return prevention control (cooling and dry mode)

Switch the airflow AUTO at cooling mode, and the indoor fan motor will run as shown below.



## 3-2. Outdoor fan control

### ■ Outdoor fan motor

This outdoor unit has a DC fan motor. (Control method is different between AC and DC motors.)

### ■ Fan speed

#### ● Model: AOHG18KBTA3

Fan speed is defined by outdoor temperature and compressor frequency.

Unit: rpm

Fan step	Cooling or dry	Heating
S-HIGH	—	1,200
13	1,000	—
12	1,000	—
11	940	—
10	840	1,200
9	820	1,100
8	770	940
7	630	800
6	550	700
5	470	550
4	390	470
3	320	440
2	270	320
1	190	270

- When the compressor frequency increases, the outdoor fan speed also changes to the higher speed.
- When the compressor frequency decreases, the outdoor fan speed also changes to the lower speed.

**NOTE:** After defrost control on the heating mode, the fan speed is kept higher regardless of the compressor frequency.

Fan speed after defrost control: 1,200 rpm

## ● Model: AOHG24KBTA3

Fan speed is defined by outdoor temperature and compressor frequency.

Unit: rpm

Fan step	Cooling or dry	Heating
S-HIGH	—	1,200
13	1,000	—
12	1,000	—
11	940	—
10	840	1,200
9	820	1,100
8	770	1,000
7	630	800
6	550	700
5	470	550
4	390	470
3	320	440
2	270	320
1	190	270

- When the compressor frequency increases, the outdoor fan speed also changes to the higher speed.
- When the compressor frequency decreases, the outdoor fan speed also changes to the lower speed.

**NOTE:** After defrost control on the heating mode, the fan speed is kept higher regardless of the compressor frequency.

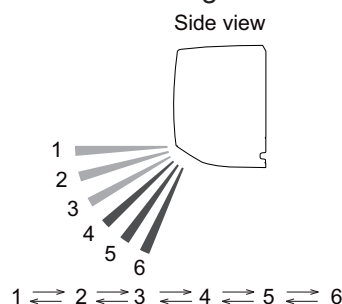
Fan speed after defrost control: 1,200 rpm

## 4. Louver control

### 4-1. Horizontal louver control

#### ■ Wall mounted type

Each time the button is pressed, the air direction range will change as below:



- Remote controller display is not changed.
- Vertical airflow direction is set automatically as shown, in accordance with the type of operation selected.

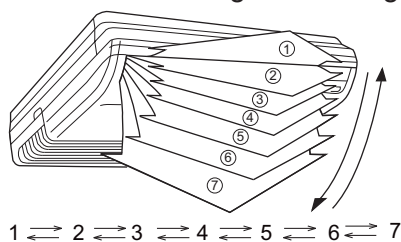
Cooling / Dry mode : Horizontal flow 1

Heating mode : Downward flow 6

- During AUTO operation, for the first a few minutes after beginning operation, airflow will be horizontal 1; the air direction cannot be adjusted during this period. The airflow direction setting will temporarily become 1 when the temperature of the airflow is low at the start of the Heating mode.
- After beginning of AUTO/HEAT mode operated and automatic defrosting operation, the airflow will be horizontal 1. However, the airflow direction cannot be adjusted at beginning AUTO operation mode.

## ■ Ceiling type

Each time the button is pressed, the air direction range will change as below:



- Remote controller display is not changed.
- Vertical airflow direction is set automatically as shown, in accordance with the type of operation selected.

Cooling/dry mode : Horizontal flow 1

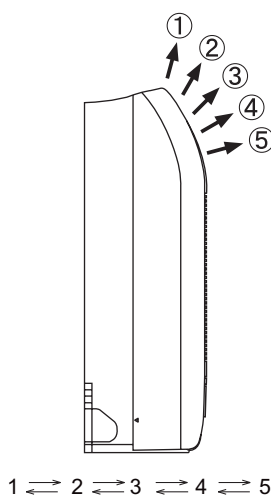
Heating mode : Downward flow 7

- During AUTO operation, for the first a few minutes after beginning operation, airflow will be horizontal 1; the air direction cannot be adjusted during this period. The airflow direction setting will temporarily become 1 when the temperature of the airflow is low at the start of the Heating mode.
- After beginning of AUTO/HEAT mode operated and automatic defrosting operation, the airflow will be horizontal 1. However, the airflow direction cannot be adjusted at beginning AUTO operation mode.

## ■ Floor type

Each time the button is pressed, the air direction range will change as below:

Side view



- Remote controller display is not changed.
- Vertical airflow direction is set automatically as shown, in accordance with the type of operation selected.

Cooling/dry mode : Horizontal flow 1

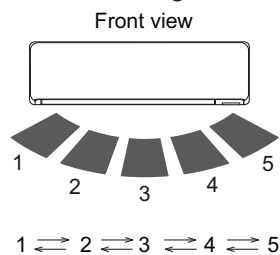
Heating mode : Downward flow 4

- During AUTO operation, for the first a few minutes after beginning operation, airflow will be horizontal 1; the air direction cannot be adjusted during this period. The airflow direction setting will temporarily become 1 when the temperature of the airflow is low at the start of the Heating mode.
- After beginning of AUTO/HEAT mode operated and automatic defrosting operation, the airflow will be horizontal 1. However, the airflow direction cannot be adjusted at beginning AUTO operation mode.

## 4-2. Vertical louver control

### ■ Wall mounted type (For KGTE and 18KMTB)

Each time the button is pressed, the air direction range will change as below:

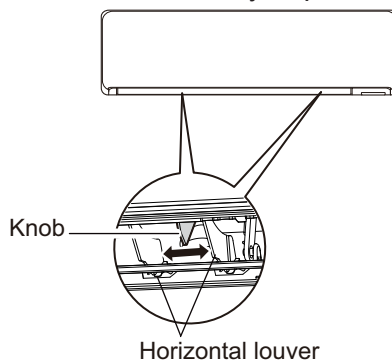


Remote controller display is not changed.

## 4-3. Adjust the horizontal louver

### ■ Wall mounted type (For KGTEB, KMTE, 07-14KMTB, KMCC, KMCE, KETA, and KETE)

Move the horizontal louvers to adjust airflow direction you prefer.

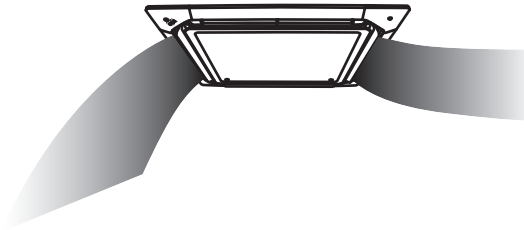




## 4-4. Individual louver control

### ■ Compact cassette type

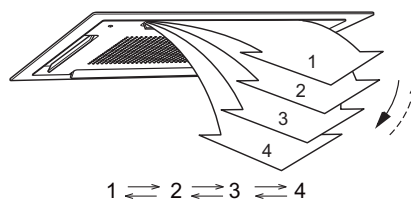
To independently can be set the airflow pattern of each louver as follows:



This function is given priority to overall louver control. But this function is release during the following operation.

- Cold air prevention control
- Monitor mode on the auto change over operation
- Defrost operation

The air direction range will change as follows:



Use the wired remote controller to set this function. This function is only available by 2-wire remote controller.

**NOTE:** When the 2-wire remote controller is disconnected, clear the individual setting. Otherwise, this setting can't change.

## 4-5. All louver control

### ■ Compact cassette type

- **All louver operation**

When the mode is selected, the standard louver position of the each mode is set.

Operation mode	Standard Position
Cooling	1
Dry	1
Heating	4
Monitor	1

**NOTES:**

- Setting of the wireless remote controller is not displayed on the wired remote controller.
- The setting louver of the individual control function cannot be controlled.

## 4-6. Swing operation

### ■ Compact cassette type

- To select up/down airflow swing operation  
When the swing signal is received, the horizontal louver starts to swing.
  - Swinging range
    - Cooling mode/dry mode/fan mode: 1 ↔ 4
    - Heating mode: 1 ↔ 4
  - When the indoor fan is S-LOW or stop mode, the swing operation is interrupted and it stops at either upper end or bottom end.

### ■ Wall mounted type

- To select up/down airflow swing operation  
When the swing signal is received, the horizontal louver starts to swing.
  - Swinging range
    - Cooling mode/dry mode/fan mode (1 to 3): 1 ↔ 4
    - Heating mode/fan mode (4 to 6): 3 ↔ 6
  - When the indoor fan is S-LOW or stop mode, the swing operation is interrupted and it stops at either upper end or bottom end.
- To select left/right airflow swing operation (for KMTB model only)  
When the swing signal is received, the vertical louver starts to swing.
  - Swinging range
    - All mode: 1 ↔ 5
  - When the indoor fan is S-LOW or stop mode, the swing operation is interrupted and it stops at either left end or right end.
- To select up/down and left/right airflow swing operation (for KMTB model only)  
When the swing signal is received, the horizontal and the vertical louvers start to swing.

### ■ Ceiling type

- To select up/down airflow swing operation  
When the swing signal is received, the horizontal louver starts to swing.
  - Swinging range
    - Cooling mode/dry mode/fan mode: 1 ↔ 7
    - Heating mode: 1 ↔ 7
  - When the indoor fan is S-LOW or stop mode, the swing operation is interrupted and it stops at either upper end or bottom end.

### ■ Floor type

- To select up/down airflow swing operation  
When the swing signal is received, the horizontal louver starts to swing.
  - Swinging range
    - Cooling mode/dry mode/fan mode: 1 ↔ 5
    - Heating mode: 1 ↔ 5
  - When the indoor fan is S-LOW or stop mode, the swing operation is interrupted and it stops at either upper end or bottom end.

## 5. Timer operation control

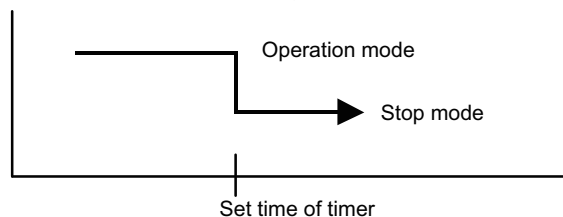
### 5-1. Wireless remote control

#### ■ Compact cassette, Mini duct, Slim duct, Wall mountend (For KGTE, 07-14KMTB, KMCC, and KMCE), and Ceiling types

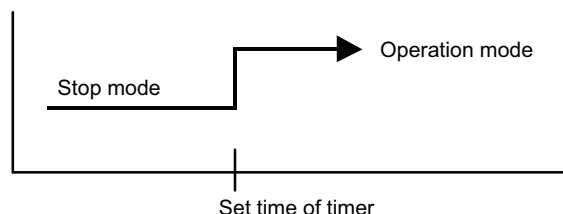
On/Off timer	Program timer	Sleep timer	Weekly timer
○	○	○	—

#### ● On/Off timer

- Off timer: When the clock reaches the set timer, the air conditioner will be turned off.

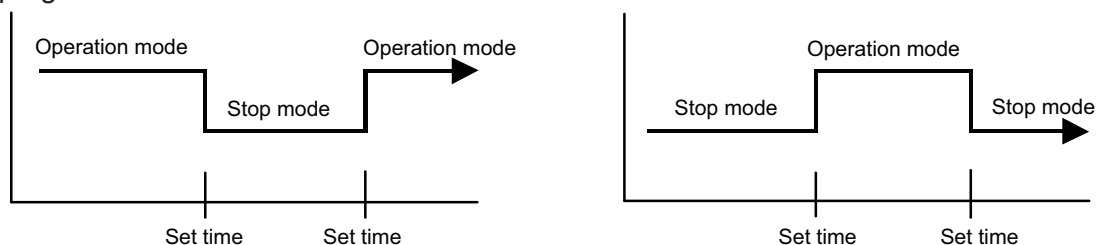


- On timer: When the clock reaches the set timer, the air conditioner will be turned on.



#### ● Program timer

- The program timer allows the off timer and the on timer to be used in combination one time.



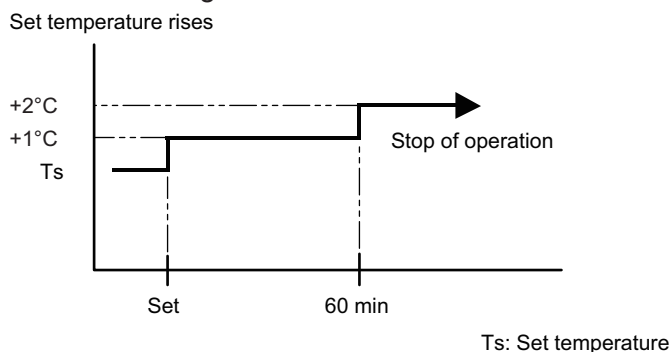
- Operation will start from the timer setting (either off timer and on timer) whichever is closest to the clock current timer setting. The order of operations is indicated by the allow in the remote controller screen.
- Sleep timer operation cannot be combined with on timer operation.

## ● Sleep timer

If the sleep timer is set, the room temperature is monitored and the operation is stopped automatically. If the operation mode or the set temperature is change after the sleep timer is set, the operation is continued according to the changed setting of the sleep timer from that time on.

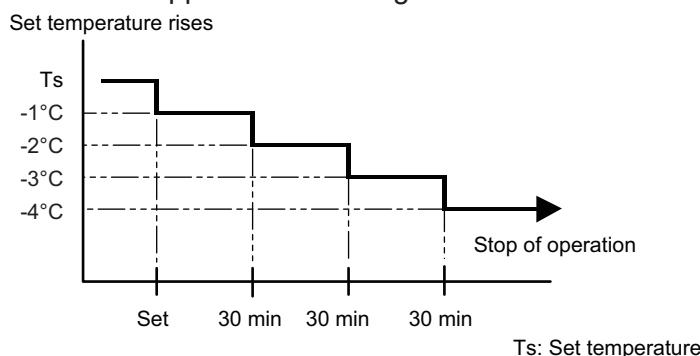
- In the cooling operation mode

When the sleep timer is set, the setting temperature is increased 1°C. It increases the setting temperature another 1°C after 1 hour. After that, the setting temperature is not changed and the operation is stopped at the setting time.



- In the heating operation mode

When the sleep timer is set, the setting temperature is decreased 1°C. It decreases the setting temperature another 1°C every 30 minutes. Upon lowering 4°C, the setting temperature is not changed and the operation is stopped at the setting time.

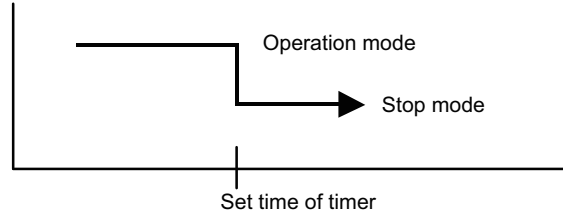


## ■ Wall mounted (For KGTB, 18KMTB, KMTE, KETA, and KETE) and Floor types

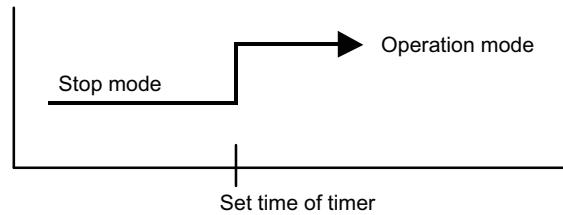
On/Off timer	Program timer	Sleep timer	Weekly timer
○	○	○	○

### ● On/Off timer

- Off timer: When the clock reaches the set timer, the air conditioner will be turned off.

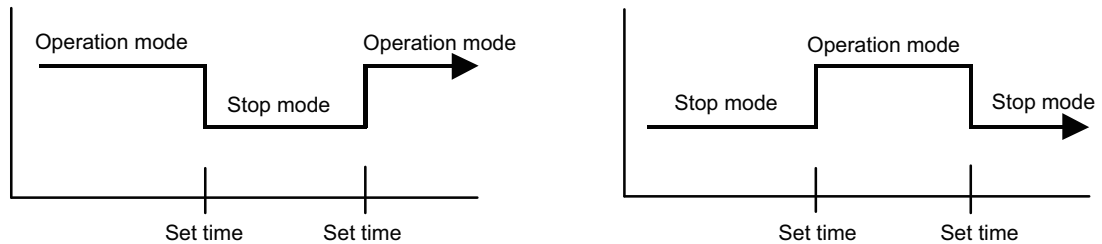


- On timer: When the clock reaches the set timer, the air conditioner will be turned on.



### ● Program timer

- The program timer allows the off timer and the on timer to be used in combination one time.



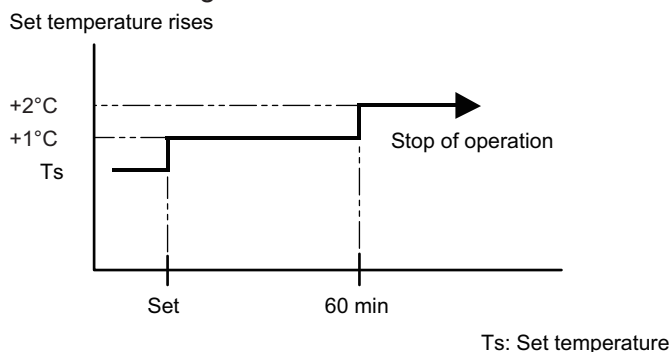
- Operation will start from the timer setting (either off timer and on timer) whichever is closest to the clock current timer setting. The order of operations is indicated by the allow in the remote controller screen.
- Sleep timer operation cannot be combined with on timer operation.

## ● Sleep timer

If the sleep timer is set, the room temperature is monitored and the operation is stopped automatically. If the operation mode or the set temperature is change after the sleep timer is set, the operation is continued according to the changed setting of the sleep timer from that time on.

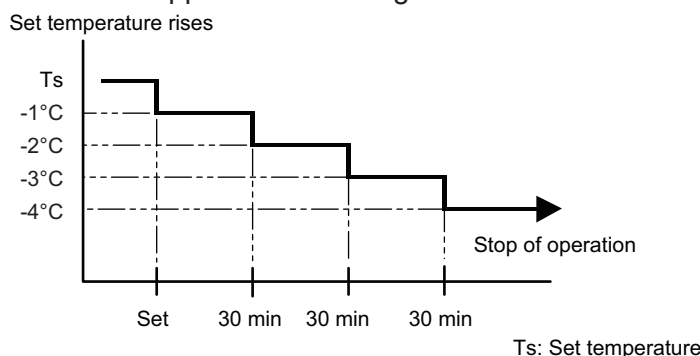
- In the cooling operation mode

When the sleep timer is set, the setting temperature is increased 1°C. It increases the setting temperature another 1°C after 1 hour. After that, the setting temperature is not changed and the operation is stopped at the setting time.



- In the heating operation mode

When the sleep timer is set, the setting temperature is decreased 1°C. It decreases the setting temperature another 1°C every 30 minutes. Upon lowering 4°C, the setting temperature is not changed and the operation is stopped at the setting time.



## ● Weekly timer

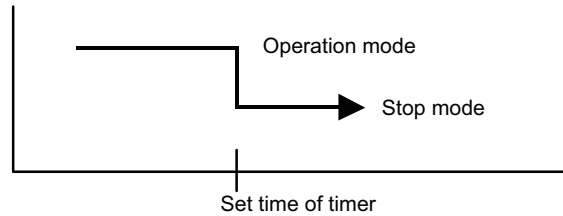
On and off timer can be combined, and up to 4 reservations per day and 28 reservations per week. Before setting the program, set the week and time of the air conditioner at first. If the week and time are not set, the weekly timer will not operate correctly at the setting time.

## 5-2. Wired remote control

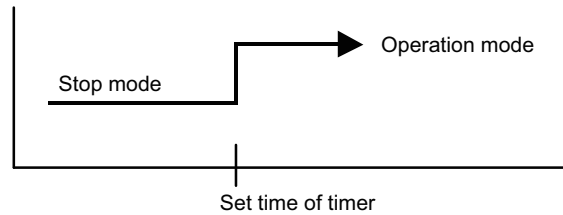
On/Off timer	Program timer	Sleep timer	Weekly timer	Temperature Setback Timer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### ■ On/Off timer

- Off timer: When the clock reaches the set timer, the air conditioner will be turned off.

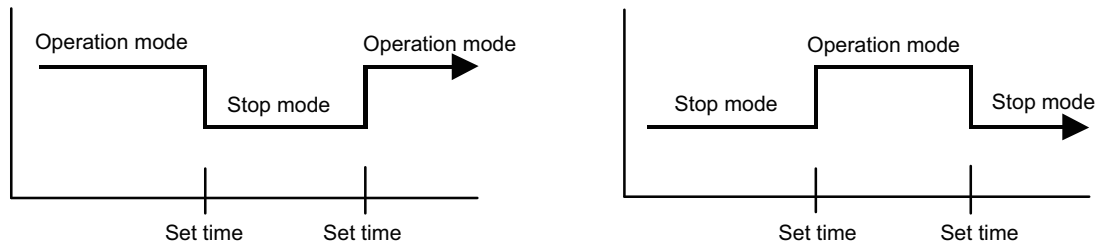


- On timer: When the clock reaches the set timer, the air conditioner will be turned on.



### ■ Program timer

- The program timer allows the off timer and the on timer to be used in combination one time.



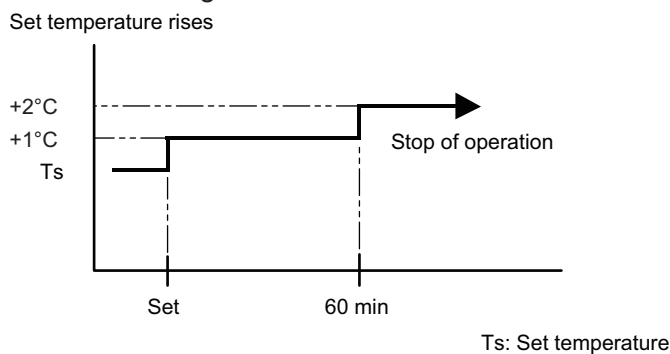
- Operation will start from the timer setting (either off timer and on timer) whichever is closest to the clock current timer setting. The order of operations is indicated by the allow in the remote controller screen.
- Sleep timer operation cannot be combined with on timer operation.

## ■ Sleep timer

If the sleep timer is set, the room temperature is monitored and the operation is stopped automatically. If the operation mode or the set temperature is change after the sleep timer is set, the operation is continued according to the changed setting of the sleep timer from that time on.

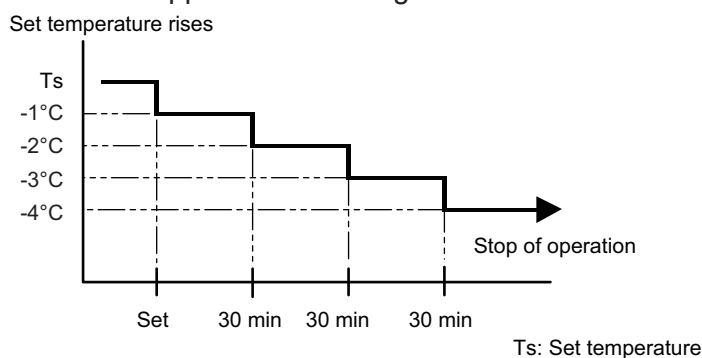
- In the cooling operation mode

When the sleep timer is set, the setting temperature is increased 1°C. It increases the setting temperature another 1°C after 1 hour. After that, the setting temperature is not changed and the operation is stopped at the setting time.



- In the heating operation mode

When the sleep timer is set, the setting temperature is decreased 1°C. It decreases the setting temperature another 1°C every 30 minutes. Upon lowering 4°C, the setting temperature is not changed and the operation is stopped at the setting time.



## ■ Weekly timer

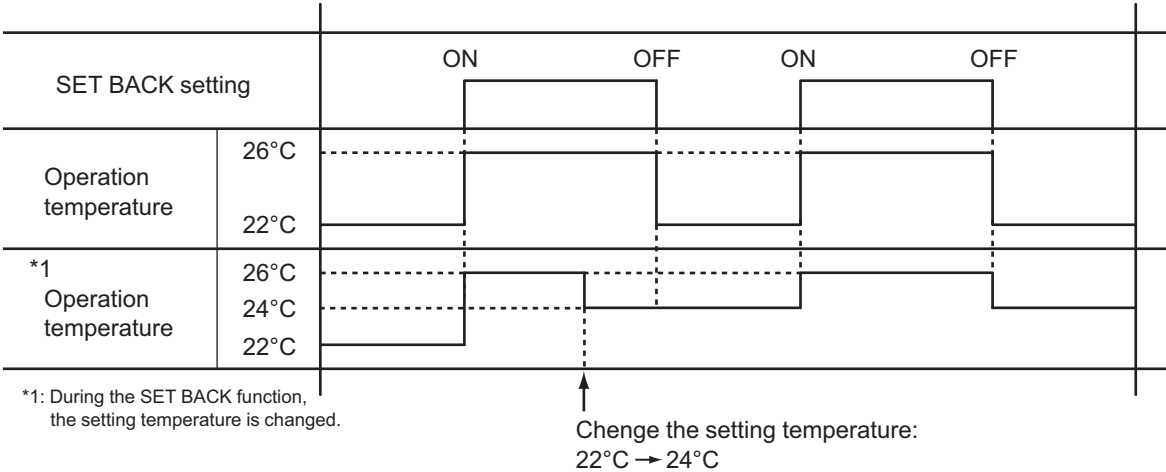
On and off timer can be combined, and up to 4 reservations per day and 28 reservations per week. Before setting the program, set the week and time of the air conditioner at first. If the week and time are not set, the weekly timer will not operate correctly at the setting time.



■ Temperature Setback Timer

- The temperature setback timer only changes the set temperature for 7 days, it cannot be used to start or stop air conditioner operation.
- The temperature setback timer can be set to operate up to two times per day but only one temperature setting can be used.
- During COOLING/DRY mode, the air conditioner will operate at a minimum of 18°C even if the SET BACK temperature is set to 17°C or lower.

Case of Temperature Setback Timer on the Cooling operation. (Setting temperature :22°C, SET BACK temperature :26°C)



CONTROL AND FUNCTIONS

CONTROL AND FUNCTIONS

## 6. Defrost operation control

Tn: Outdoor unit heat exchanger temperature

Ta: Outdoor temperature

Tn10: Temperature at 10 minutes after compressor start

Tnb: Temperature before 5 minutes

### • Triggering condition

The defrost operation starts when outdoor unit heat exchanger temperature sensor detects the temperature lower than the values shown below.

#### – 1st time defrosting after starting operation

Compressor integrating operation time	Less than 17 min.	17 to 57 min.	More than 57 min.
Condition	Does not operate	$T_n \leq -9^{\circ}\text{C}$ and $T_n - T_a \geq 5$ deg	$T_n \leq -5^{\circ}\text{C}$

#### – 2nd time and after

Compressor integrating operation time	Less than 40 min.	More than 40 min.
Condition	Does not operate	$T_n - T_{n10} < -5$ deg ( $T_n \leq -6^{\circ}\text{C}$ ) $T_n - T_{nb} < -2$ deg ( $T_n \leq -6^{\circ}\text{C}$ ) $T_n \leq -20^{\circ}\text{C}$ ( $T_a \geq -10^{\circ}\text{C}$ ) $T_n \leq -7^{\circ}\text{C}$ or $T_n \leq -25^{\circ}\text{C}$ ( $T_a < -10^{\circ}\text{C}$ )

#### – Integrating defrost (Constant monitoring)

Compressor integrating operation time	More than 240 min. (For long continuous operation)	More than 213 min. (For long continuous operation)	Less than 10 min.* (For intermittent operation)
Condition	$T_n \leq -3^{\circ}\text{C}$	$T_n \leq -5^{\circ}\text{C}$	Count of the compressor off: 40 times

\*: If the compressor continuous operation time is less than 10 minutes, the number of the compressor off is counted. If any defrost operated, the compressor off count is cleared.

### • Release condition

The defrost operation is released when either one of the conditions below is satisfied.

Outdoor unit heat exchanger temperature (after 1 minute or later since compressor start)	13°C or more
Compressor operation time	15 minutes

## 6-1. Defrost operation in heating operation stopped

If the outdoor unit is frosted when stopping the heating operation, it stops after performing the automatic defrosting operation.

In this time, if the indoor unit operation lamp flashes slowly (6 sec on/2 sec off), the outdoor unit allows the heat exchanger to defrost, and then stop.

### • Triggering condition

When all of the following conditions are satisfied in heating operation

- Compressor operation integrating time: 30 minutes or more
- Compressor continuous operation time: 10 minutes or more
- Outdoor unit heat exchanger temperature: -4°C or less

### • Release condition

The defrost operation is released when either one of the conditions below is satisfied.

Outdoor unit heat exchanger temperature (after 1 minute or later since compressor start)	13°C or more
Compressor operation time	15 minutes

## 7. Various control

### 7-1. Auto restart

When the power was interrupted by a power failure etc. during operation, the operation contents at that time are memorized and when the power is recovered, operation is automatically started with the memorized operation contents.

Operation contents memorized when the power is interrupted	Wall mounted (For KGTE, 18KMTB, KMTE, KMCE, KETA, and KETE), Floor	Compact cassette, Mini duct, Slim duct, Wall mounted (For KGTB, 07-14KMTB, and KMCC), Ceiling
Operation mode	○	○
Setting temperature	○	○
Fan mode setting	○	○
Timer mode and set time (set by wireless remote controller)	○	○
Airflow direction setting	○	○
Swing	○	○
ECONOMY operation	○	○
10 °C HEAT operation	○	○
Outdoor low noise operation	○	○
Remote control setting	○	—
WLAN indicator lamp setting	○	—

### 7-2. MANUAL AUTO operation

When the wireless remote controller is lost or battery power dissipated, this function will work without the remote controller.

When MANUAL AUTO button is pressed more than 3 seconds and less than 10 seconds, MANUAL AUTO operation starts as shown in the table below. To stop operation, press the MANUAL AUTO button for 3 seconds.

	Wall mounted, Floor	Compact cassette, Mini duct, Slim duct, Ceiling
Operation mode	Auto changeover	
Fan mode	AUTO	
Timer mode	Continuous (no timer setting available)	
Setting temperature	24°C	
Horizontal louver setting	Standard	According to memory position
Vertical louver setting	According to memory position	
SWING	Off	
ECONOMY	Off	
Human sensor	Off	

## 7-3. Forced cooling operation

The outdoor unit may not operate depending on the room temperature.

When FORCED COOLING OPERATION button is pressed more than 10 seconds, forced cooling operation starts as shown in the table below.

Operation mode	Cooling
Fan mode	HIGH
Timer mode	Continuous (no timer setting available)
Setting temperature	24°C
Horizontal louver setting	Standard
SWING	Off
ECONOMY	Off
Human sensor	Off

- During the forced cooling operation, it operates regardless of room temperature sensor.
- The operation indicator lamp and the timer indicator lamp blink simultaneously during the forced cooling operation.  
They blink for 1 second ON and 1 second OFF on both the operation indicator lamp and the timer indicator lamp (same as test operation).

By performing one of the following action, test operation will be canceled:

- Pressing the remote controller START/STOP button
- Pressing FORCED COOLING OPERATION button for 3 seconds
- 60 minutes passed after starting forced cooling operation

**NOTE:** When HEAT operation is selected on the remote controller during forced cooling operation, heating test run will begin in about 3 minutes.

## 7-4. 10 °C HEAT operation

10 °C HEAT operation performs as below setting when pressing 10 °C HEAT button.

Operation mode	Heating
Setting temperature	10°C
Fan mode	AUTO
LED display	Economy
Defrost operation	Operate as normal

## 7-5. ECONOMY operation

The ECONOMY operation starts by pressing ECONOMY button on the remote controller.

The ECONOMY operation is almost the same operation as below settings.

Mode	Cooling/Dry	Heating
Target temperature	Setting temperature +1°C	Setting temperature -1°C

## 7-6. POWERFUL operation

### ■ Wall mounted and Ceiling types

The POWERFUL operation starts by pressing POWERFUL button on the remote controller.

The indoor unit and outdoor unit operate at maximum power as shown in the table below.

		Wall mounted type	Ceiling type
Compressor frequency		Maximum	
Fan mode		POWERFUL	
Horizontal louver setting	Cooling	3	
	Dry		
	Heating	6	5

#### Release condition:

- Cooling/Dry  
Room temperature  $\leq$  Setting temperature -0.5°C or Operation time has passed 20 minutes.
- Heating  
Room temperature  $\geq$  Setting temperature +0.5°C or Operation time has passed 20 minutes.

### ■ Floor type

The POWERFUL operation starts by pressing POWERFUL button on the remote controller.

The indoor unit and outdoor unit operate at maximum power as shown in the table below.

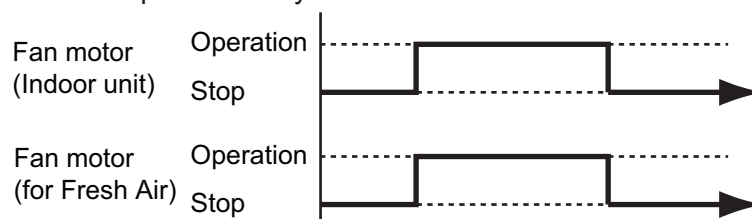
Compressor frequency		Maximum	
Fan mode		POWERFUL	
Horizontal louver setting	Cooling	3	
	Dry		
	Heating	5	

#### Release condition:

- Cooling/Dry  
Room temperature  $\leq$  Setting temperature -1.5°C or Operation time has passed 20 minutes.
- Heating  
Room temperature  $\geq$  Setting temperature +1.5°C or Operation time has passed 20 minutes.

## 7-7. Fresh air control (For other than 07-14KMTB and KMCC series wall mounted type)

The fan motor for Fresh Air is operated in synchronization with the indoor fan operation as below.

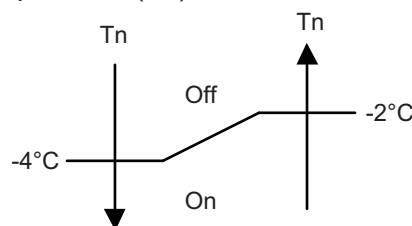


## 7-8. Compressor preheating

By preheating the compressor, warm airflow is quickly discharged when the operation is started.

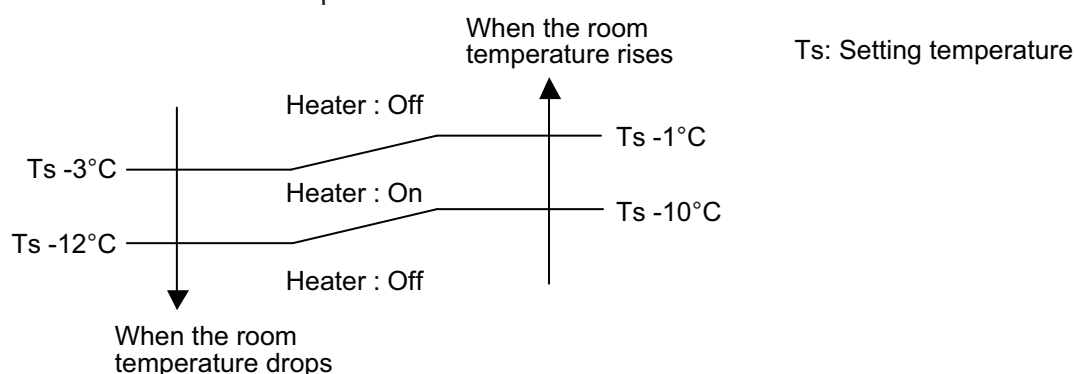
- **Triggering condition**

- 30 minutes after compressor stopped.
- Outdoor unit heat exchanger temperature ( $T_n$ )



## 7-9. External electrical heater control (For Compact cassette, Mini duct, Slim duct, KGTE, KMTE, KMCE, and KETE series wall mounted and Ceiling types)

The external electrical heater is operated as below.



**NOTES:**

- When the compressor stop, external electric heater is off.
- It operates only in heating mode and when the indoor fan operates. (However, S-LOW is excluded.)

## 7-10. Electronic expansion valve control

The most proper opening of the electronic expansion valve is calculated and controlled under the present operating condition based on the table below.

Operation mode	Pulse range
Cooling/dry mode	Between 30 and 480 pulses
Heating mode	

**NOTE:** At the time of supplying the power to the outdoor unit, the initialization of the electronic expansion valve is operated (700 pulses are input to the closing direction).

## 7-11. Drain pump control

### ■ Drain control for cooling operation (For Mini duct and Ceiling types)

#### ● During the compressor in operation

- **Triggering condition**

The thermostat is turned on during cooling or dry mode.

- **Operation details**

The drain pump is turned on.

- **Release condition**

- The thermostat is turned off.

Refer to "When the compressor is not in operation" for the operation after release.

- The compressor is stopped.

Refer to "When the compressor is not in operation" for the operation after release.

- The operation is switched to heating mode.

Refer to "When the compressor is not in operation" for the operation after release.

- The float switch is turned on.

Refer to "Overflow control" for the operation after release.

- The compressor is stopped by Anti-freezing control.

Refer to "The compressor is stopped by Anti-freezing control" for the operation after release.

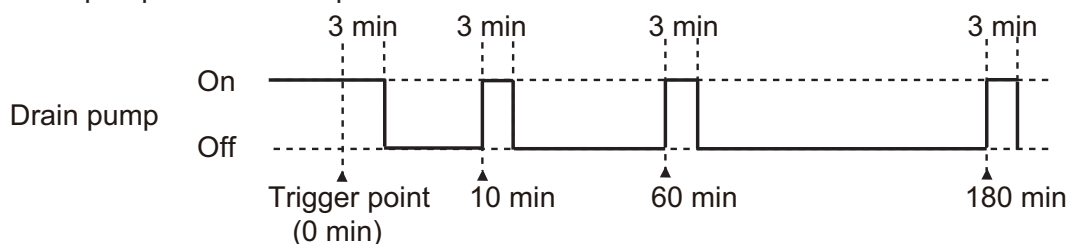
#### ● When the compressor is not in operation

- **Triggering condition**

- The thermostat is turned off.
- The compressor is stopped.
- The operation is switched to heating mode.
- The float switch is turned off.

- **Operation details**

- Count 180 minutes.
- Start drain pump intermittent operation.



- **Release condition**

- 3 minutes drain pump operation is finished after 180 minutes count.
- The operation is switched to cooling or dry mode.  
Refer to "During the compressor in operation" for the operation after release.
- The float switch is turned on.  
Refer to "Overflow control" for the operation after release.

- **Operation after release**

The drain pump is turned off and the air conditioner operate according the settings.



## ● Overflow control

### • Triggering condition

The float switch is turned on.

### • Operation details

- The drain pump is turned on.
- When the operation mode is cooling or dry, operate the followings.
  - The compressor is stopped.
  - Then indoor fan control is turned off.

### • Release condition

- The float switch is turned off.
  - In the case that on the cooling or dry mode the thermostat is on, refer to "[During the compressor in operation](#)" for the operation after release.
  - In other case, refer to "[When the compressor is not in operation](#)" for the operation after release.
- 3 minutes passed

### • Operation after release

The compressor stopps permanently.

## ● The compressor is stopped by Anti-freezing control

### • Triggering condition

During the compressor in operation, the compressor is stopped by Anti-freezing control.

### • Operation details

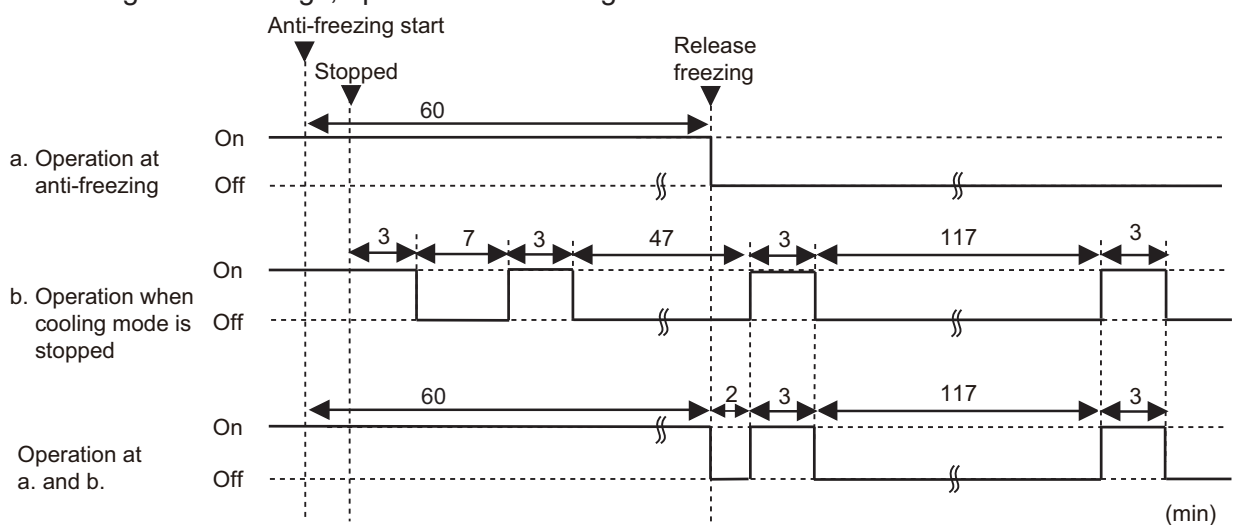
The drain pump is kept on in 60 minutes after Anti-freezing control released.

### • Release condition

60 minutes passed

### • Operation after release

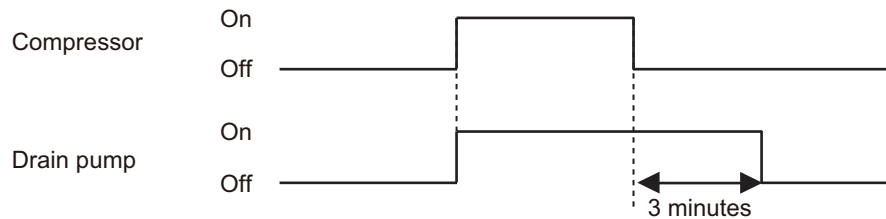
According to the settings, operate the followings.



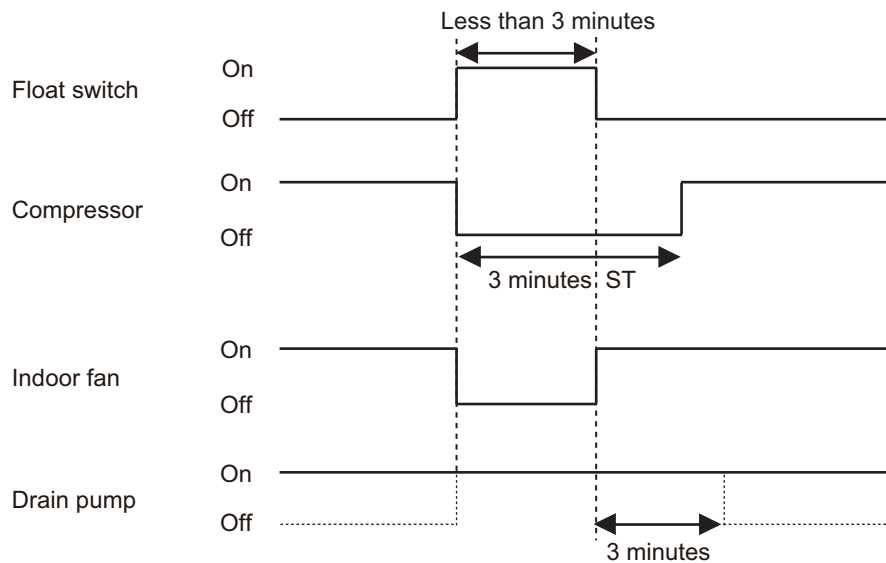
## ■ Drain control for defrosting operation (For Compact cassette and Slim duct types)

### ● During cooling or dry mode

- When the compressor starts, the drain pump starts simultaneously.
- The drain pump operates continuously for 3 minutes after the compressor is turned off.



- When the compressor stops by the ["Anti-freezing control \(cooling and dry mode\)"](#) on page 04-77, the drain pump is turned off in 1 hour after the compressor stops.
- When the float switch is on, the compressor, indoor and outdoor fan motor operation are stopped.
- Drain pump operates continuously for 3 minutes after the float switch is turned off and then drain pump is turned off.
- When the float switch turns on continuously for 3 minutes, "failure indication" operates. (It is necessary to turn off power for release it.)
- When the float switch turns off less than 3 minutes, the unit starts cooling operation. Indoor fan motor starts after the float switch is turned off and the compressor starts after 3 minutes st.



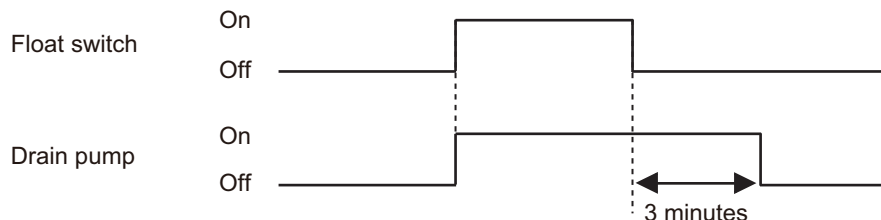
## ● During heating mode or fan mode and when operation is stopped

- **Triggering condition**

Drain pump is turned on at the same time that the float switch is turned on.

- **Operation details**

When the float switch turns on continuously for 3 minutes, "failure indication" operates. Thereafter, even if the float switch turns off, the "failure indication" is not released. (It is necessary to turn off power for release it.)



- **Release condition**

Drain pump operates continuously for 3 minutes after the float switch is turned off and then drain pump is turned off.

## 7-12. Prevention to restart for 3 minutes (3 minutes st)

When the compressor fails to start for the number of times below, it does not enter operation status for 3 minutes.

Retry number	50
Retry set number	3

When the compressor fails to start in the retry set number above, the compressor is stopped.

## 7-13. 4-way valve control

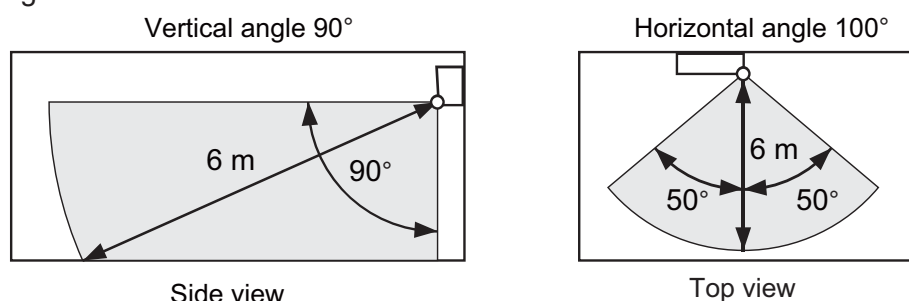
- If heating mode is selected at the compressor start, 4-way valve is energized for heating.
- When the air conditioner is switched between cooling and heating mode, compressor is stopped, and the 4-way valve is switched when the 158 seconds passes and the compressor is started.

## 7-14. Human sensor for energy saving (For KGTB series and KGTE series wall mounted and Ceiling types)

If no one enters the room for approximately 20 minutes, the set temperature is automatically controlled. (When someone comes back into the room, the human sensor detect this, and automatically revert to the original settings.)

Operation mode	Operation details (If there is no one in the room for a while)	
	Wall mounted	Ceiling
Cool/Dry	The setting temperature is increased by maximum 2°C. (Maximum setting temperature: 30°C)	
Heat	The setting temperature is decreased by maximum 4°C. (Minimum setting temperature: 16°C)	The setting temperature is decreased by maximum 2°C. (Minimum setting temperature: 16°C)
Auto	Energy saving function is performed automatically for the selected mode (cool/heat/dry).	

- Application range:



Energy saving function may not work when the room temperature is very different from the temperature defined in the temperature setting, such as when immediately after starting the operation.

- Details about detection with the human sensor:  
The human sensor detects whether there are people in the room by looking for movement by people in the room.

## 8. Various protections

### 8-1. Discharge gas temperature over-rise prevention control

The discharge gas temperature sensor (discharge thermistor: outdoor unit side) detects the discharge gas temperature.

- When the discharge temperature becomes higher than the trigger condition, the compressor frequency is decreased as the table below, and it continues to decrease until the discharge temperature becomes lower than the trigger condition.
- When the discharge temperature becomes lower than the release condition, control of compressor frequency is released.
- When the discharge temperature becomes higher than the compressor protection temperature, the compressor is stopped and the indoor unit indicator lamp starts blinking.

Trigger condition	104°C
Compressor frequency	-30 rps/120 seconds
Release condition	101°C
Compressor protection temperature	110°C

### 8-2. Anti-freezing control (cooling and dry mode)

The compressor frequency is decrease in cooling and dry mode when the indoor unit heat exchanger temperature sensor detects the temperature lower than the trigger condition.

When the indoor unit heat exchanger temperature reaches release condition, the anti-freezing control is stopped.

Trigger condition		3°C
Release condition	Outdoor temp. ≥ 10°C*1	7°C
	Outdoor temp. ≥ 12°C*2	
	Outdoor temp. < 10°C*1	7°C
	Outdoor temp. < 12°C*2	

\*1: During the outdoor temperature dropping

\*2: During the outdoor temperature rising

## 8-3. Current release control

The rotation number of compressor is controlled so that the outdoor unit input current does not exceeds current limit value set according to the outdoor temperature.

The rotation number of compressor returns according to the operation mode, when the current becomes lower than the release value.

### ■ Model: AOHG18KBTA3

Operation mode	Outdoor temp. (Ta)	Trigger condition	Release condition
Cooling	$50^{\circ}\text{C} \leq \text{Ta}$	8.0 A	7.5 A
	$46^{\circ}\text{C} \leq \text{Ta} < 50^{\circ}\text{C}$	9.5 A	9.0 A
	$40^{\circ}\text{C} \leq \text{Ta} < 46^{\circ}\text{C}$	10.0 A	9.5 A
	$12^{\circ}\text{C} \leq \text{Ta} < 40^{\circ}\text{C}$	10.0 A	9.5 A
	$2^{\circ}\text{C} \leq \text{Ta} < 12^{\circ}\text{C}$	10.0 A	9.5 A
	$\text{Ta} < 2^{\circ}\text{C}$	10.0 A	9.5 A
Heating	$17^{\circ}\text{C} \leq \text{Ta}$	10.0 A	9.5 A
	$12^{\circ}\text{C} \leq \text{Ta} < 17^{\circ}\text{C}$	10.0 A	9.5 A
	$5^{\circ}\text{C} \leq \text{Ta} < 12^{\circ}\text{C}$	10.0 A	9.5 A
	$\text{Ta} < 5^{\circ}\text{C}$	10.0 A	9.5 A

### ■ Model: AOHG24KBTA3

Operation mode	Outdoor temp. (Ta)	Trigger condition	Release condition
Cooling	$50^{\circ}\text{C} \leq \text{Ta}$	8.0 A	7.5 A
	$46^{\circ}\text{C} \leq \text{Ta} < 50^{\circ}\text{C}$	9.5 A	9.0 A
	$40^{\circ}\text{C} \leq \text{Ta} < 46^{\circ}\text{C}$	11.0 A	10.5 A
	$12^{\circ}\text{C} \leq \text{Ta} < 40^{\circ}\text{C}$	12.0 A	11.5 A
	$2^{\circ}\text{C} \leq \text{Ta} < 12^{\circ}\text{C}$	12.0 A	11.5 A
	$\text{Ta} < 2^{\circ}\text{C}$	12.0 A	11.5 A
Heating	$17^{\circ}\text{C} \leq \text{Ta}$	10.5 A	10.0 A
	$12^{\circ}\text{C} \leq \text{Ta} < 17^{\circ}\text{C}$	12.0 A	11.5 A
	$5^{\circ}\text{C} \leq \text{Ta} < 12^{\circ}\text{C}$	12.0 A	11.5 A
	$\text{Ta} < 5^{\circ}\text{C}$	12.0 A	11.5 A

## 8-4. Indoor unit fan motor over temperature protection

### ■ Compact cassette and Ceiling types

When satisfy the following conditions, the protection works.

- After the 90 seconds from the fan operation, detect less than 300 rpm for 10 seconds.
- IPM trip protection works.
- Current overload protection works.

When detecting the above condition, recheck the condition after 6 minutes. When count the twice, the protection works.

- **Protection contents**

Reduce the static pressure 20 Pa. When it does not dissolve even the minimum static pressure condition, work the following operation.

- Fan motor error displayed when less than 300 rpm for 10 seconds is detected after the 90 seconds from the fan operation.
- Fan stop 40 seconds when IPM trip protection works.
- Fan stop 50 seconds when current overload protection works.

### ■ Slim duct and Mini duct types

When satisfy the following conditions, the protection works.

- After the 90 seconds from the fan operation, detect less than 200 rpm for 10 seconds.
- IPM trip protection works.
- Current overload protection works.

When detecting the above condition, recheck the condition after 6 minutes. When count the twice, the protection works.

- **Protection contents**

Reduce the static pressure 20 Pa. When it does not dissolve even the minimum static pressure condition, work the following operation.

- Fan motor error displayed when less than 200 rpm for 10 seconds is detected after the 90 seconds from the fan operation.
- Fan stop 40 seconds when IPM trip protection works.
- Fan stop 50 seconds when current overload protection works.

## 8-5. Compressor temperature protection

When the compressor temperature sensor detects higher than the trigger condition below, the compressor is stopped. When the compressor temperature sensor detects the release condition, the protection is released.

Trigger condition	108°C
Release condition	80°C (3 minutes after compressor stop)

## 8-6. High pressure protection

Trigger condition	Pressure switch: Off (Open: Higher than 4.2 MPa) Compressor stop
Release condition	Pressure switch: On (Close: Lower than 3.2 MPa) (3 minutes after compressor stop) Compressor restart

## 8-7. Low outdoor temperature protection

When the outdoor temperature sensor detects lower than the trigger condition below, the compressor is stopped.

Operation mode	Cooling/Dry
Trigger condition	-20°C
Release condition	-15°C

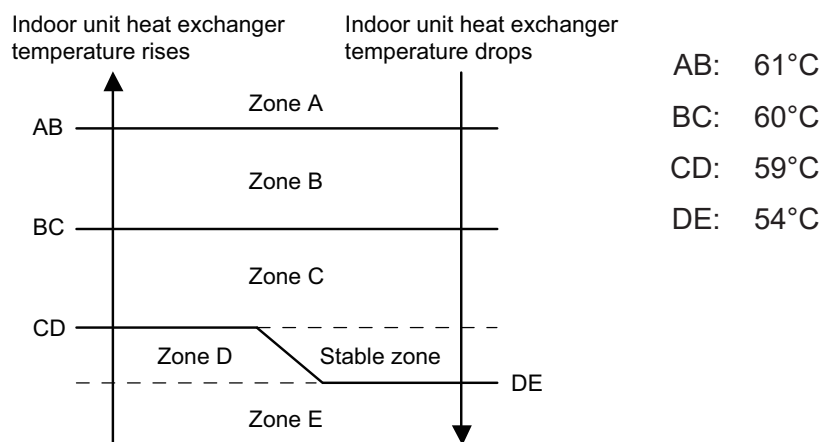


## 8-8. High temperature and high pressure release control

The compressor is controlled as follows.

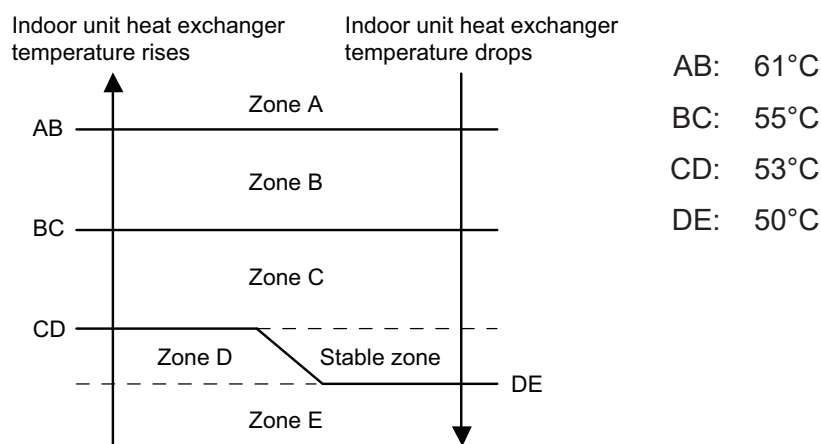
### ■ Models: AOHG18KBTA3 and AOHG24KBTA3

#### • Cooling mode



Zone	Operation	
Zone A	Compressor is stopped.	
Zone B	The compressor frequency is decreased.	-30 rps/30 sec.
Zone C		-5 rps/60 sec.
Zone D	The protection is released and the operation is returned to normal mode.	
Zone E		

#### • Heating mode



Zone	Operation	
Zone A	Compressor is stopped.	
Zone B	The compressor frequency is decreased.	-25 rps/120 sec.
Zone C		-3 rps/60 sec.
Zone D	The protection is released and the operation is returned to normal mode.	
Zone E		



## 5. FILED WORKING

# CONTENTS

## 5. FILED WORKING

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# 1. Function settings (for indoor unit)

To adjust the functions of this product according to the installation environment, various types of function settings are available.

**NOTE:** Incorrect settings can cause a product malfunction.

## 1-1. Compact cassette, Mini duct, Slim duct types indoor unit (setting by DIP switch)

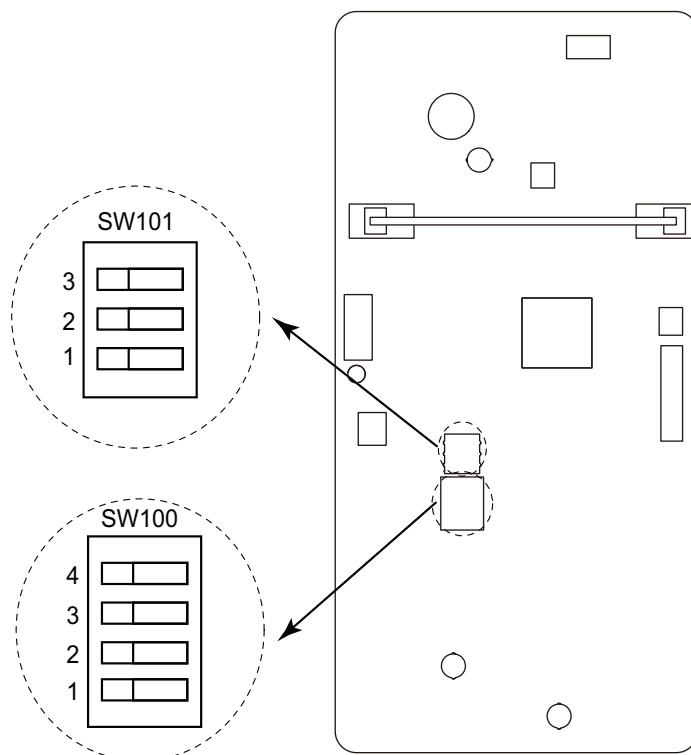
By using some components on the PCB, you can change the function settings.

**Related components on the PCB and the applicable settings:**

Component			Setting content
DIP switch	SW100	1	Remote controller address setting
		2	
		3	
		4	
	SW101	1	Drainage function setting
		2	Auto louver grille setting
		3	Fan delay setting

### ■ Component location

Components on the indoor unit main PCB used for the function settings are located as shown in the following figure.



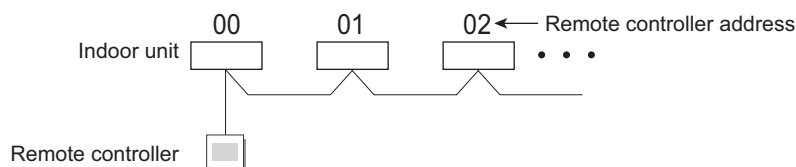
## DIP switch setting

- SW100: Remote controller address setting**

When operating a number of indoor units by using a wired remote controller, DIP switch setting for assigning unit number to each indoor unit is required.

The slide switches are normally set to make the unit number 00.

Remote controller address	Switch number				Factory setting
	1	2	3	4	
00	OFF	OFF	OFF	OFF	◆
01	ON	OFF	OFF	OFF	
02	OFF	ON	OFF	OFF	
03	ON	ON	OFF	OFF	
04	OFF	OFF	ON	OFF	
05	ON	OFF	ON	OFF	
06	OFF	ON	ON	OFF	
07	ON	ON	ON	OFF	
08	OFF	OFF	OFF	ON	
09	ON	OFF	OFF	ON	
10	OFF	ON	OFF	ON	
11	ON	ON	OFF	ON	
12	OFF	OFF	ON	ON	
13	ON	OFF	ON	ON	
14	OFF	ON	ON	ON	
15	ON	ON	ON	ON	



- SW101-Switch 1: Drainage function setting**

Switch 1	Drainage function	Factory setting
ON	Disabled	
OFF	Enabled	◆

- SW101-Switch 2: Auto louver grille setting**

When Auto louver grille kit (optional parts) is attached, set to "Enabled".

Switch 2	Auto louver grille setting	Factory setting
ON	Enabled	
OFF	Disabled	◆

- SW101-Switch 3: Fan delay setting**

When the indoor unit is stopped while operating in conjunction with auxiliary heater, the indoor unit fan operation will continue for 1 minute.

Switch 3	Fan delay	Factory setting
ON	Enabled	
OFF	Disabled	◆

## 1-2. Indoor unit (setting by wireless remote controller)

### ⚠ CAUTION

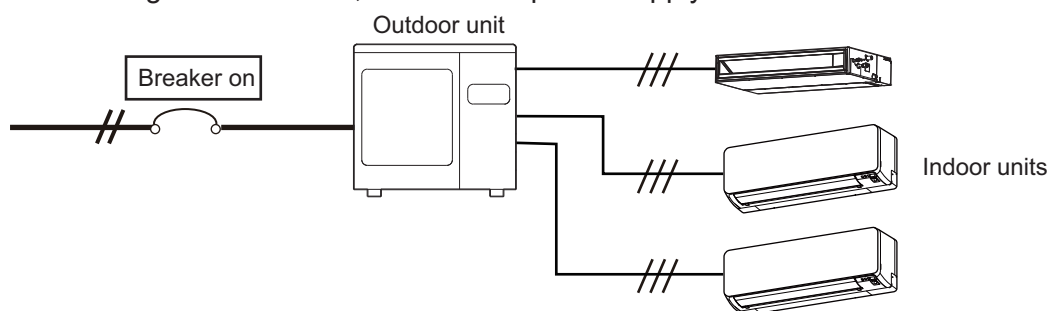
This setting changes the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause a product malfunction.

- After the power is turned on, perform the “Function setting” according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function number or Setting number.
- Settings will not be changed if invalid numbers or setting numbers are selected.

### ■ Preparation

Before connecting the power supply of the indoor unit, reconfirm following items:

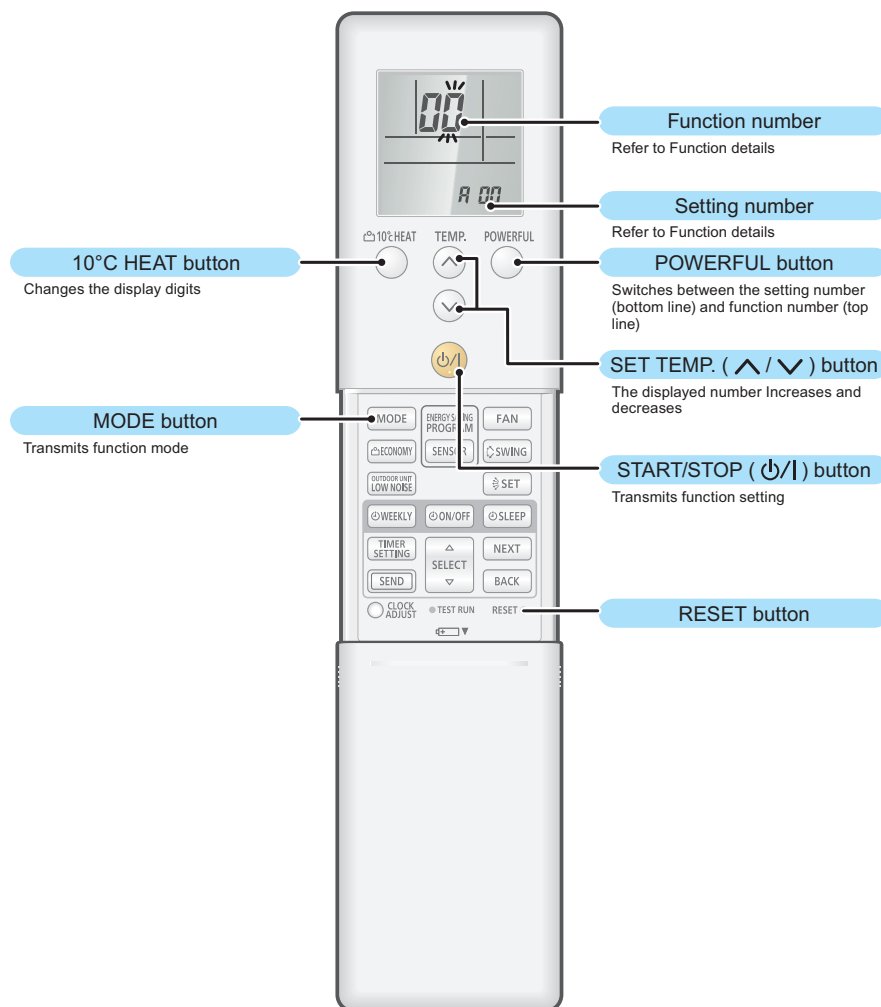
- Piping air tightness test and vacuuming have been performed firmly.
- There is no wiring mistake. Then, connect the power supply of the indoor unit.



# ■ AR-REM4E (for Wall mounted type KGTB), AR-REW3E (for Wall mounted type KGTE), AR-REW4E (for Wall mounted type KETA and KETE), AR-REW2E (for Wall mounted type KMTB and KMTE), and AR-REM7E (for Floor type)

## ● Button name and function

During address setting mode, indoor unit reject the any operation command from remote controller.

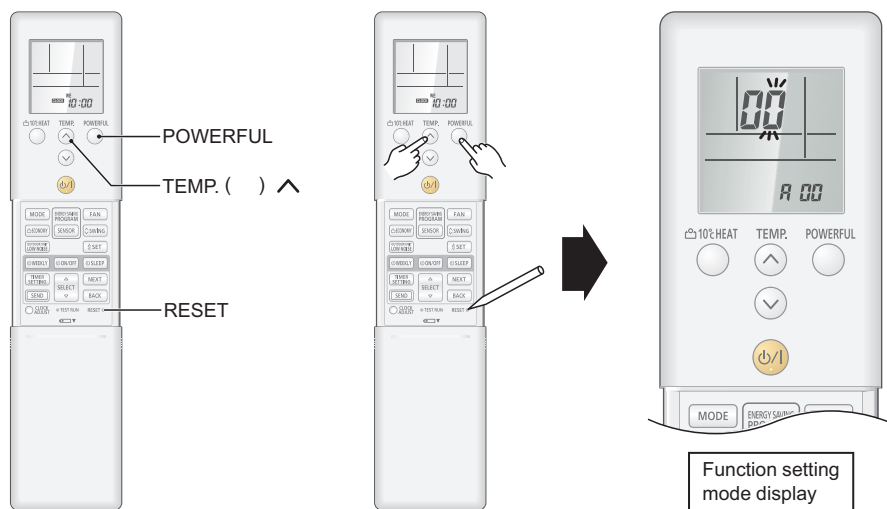


**NOTE:** The number of buttons varies by the remote controller model.

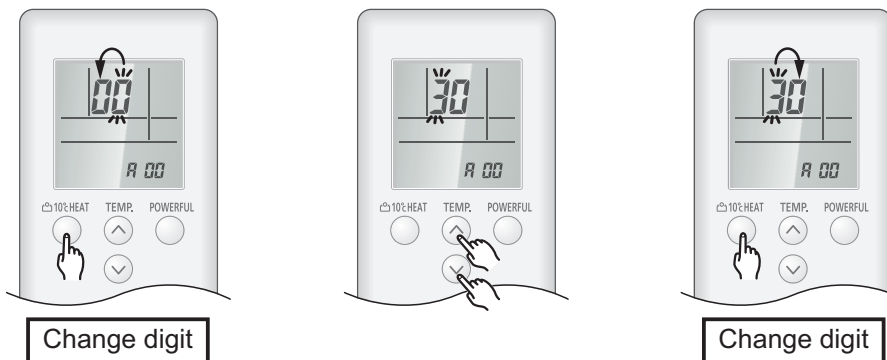


## ● Function setting procedure

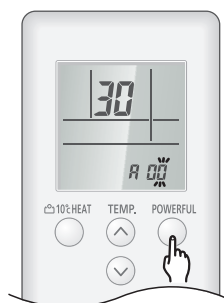
1. Connect the power supply of the outdoor unit.
2. To enter the function setting mode, while holding down the POWERFUL and TEMP.  $\wedge$  button, press the RESET button.



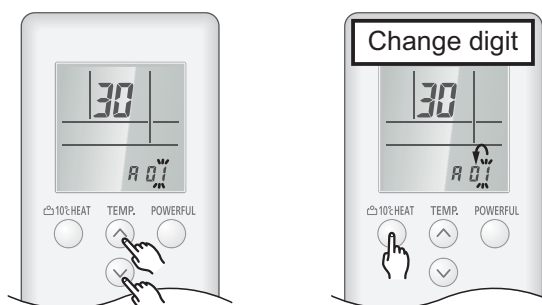
3. Select the function number by pressing the  $\wedge$  or the  $\vee$  buttons. Each time the 10 °C HEAT button is pressed, it switches between the right digit and the left digit.



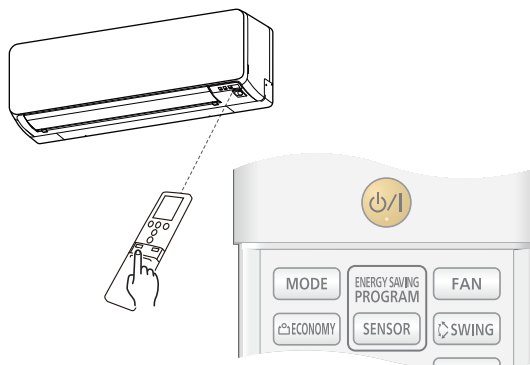
4. Proceed to the setting number by pressing the POWERFUL button. (To return to the function number selection, press the POWERFUL button again.)



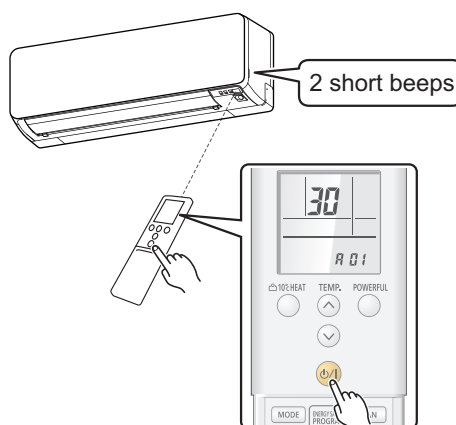
5. Select the function number by pressing the  $\wedge$  or the  $\vee$  button. Each time the 10 °C HEAT button is pressed, it switches between the right digit and the left digit.



6. Press the MODE button once to transmit the function mode information.



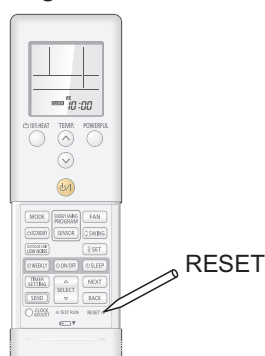
7. Press the  $\phi/I$  button once to transmit the function setting information. 2 short beeps will be emitted from the indoor unit when the signal is received correctly. If wrong code is set, no beep sound will be emitted.



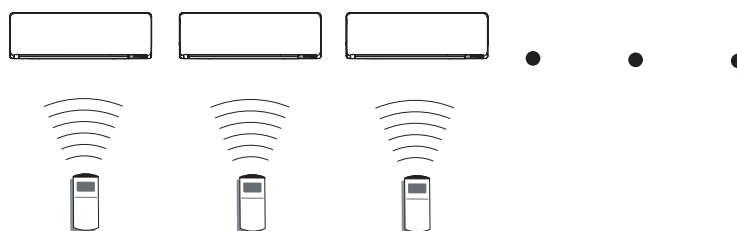
**NOTE:** Press  $\phi/I$  button within 30 seconds after pressing MODE button.

For the function details, refer to [Chapter 1-5. "Function details"](#) on page 05-38.

8. Exit the function setting mode by pressing the RESET button.



## ● Setting up each indoor unit



Repeat step from 1. to 8. to set up each indoor unit. If the custom code is other than "R", steps from 1. to 2. and 8. need to be performed.

## ● Resetting the power after setting up all indoor units

### Important:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.  
However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

Once the RESET button is pressed on the remote controller, the operation mode will be set to the AUTO MODE.

Adjust the operation mode to either cooling or heating before starting the operation of the air conditioner.

**NOTE:** If custom code other than "H" is set, the remote control must be set accordingly to the indoor unit setting.

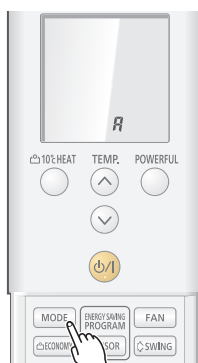
## ● Remote controller custom code setting

Custom code setting of wireless remote controller needs to be same as the setting of the indoor unit. When you change the custom code setting of the wireless remote controller, do as follows:

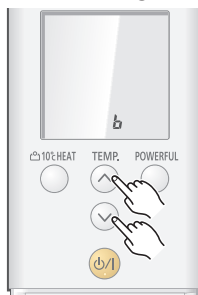
1. Press the START/STOP button until only the clock is displayed on the display.



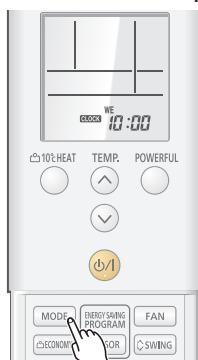
2. Press the MODE button for at least 5 seconds to display the current custom code (initially set to A).



3. Press the TEMP. “^” or the “v” button to change the custom code between A → b → c → d.



4. Press the MODE button again to return to the clock display. The custom code will be changed.

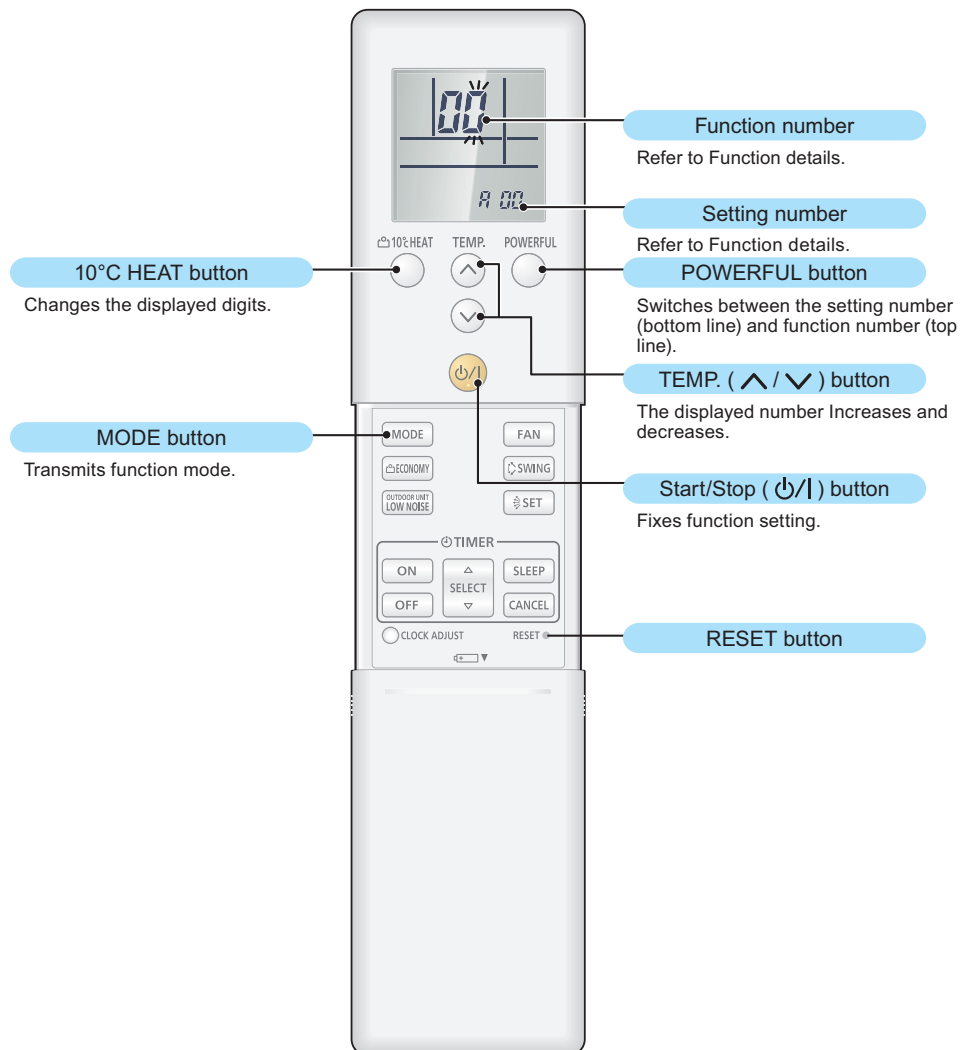


- If no buttons are pressed within 30 seconds after the custom code is displayed, the system returns to the original clock display. In this case, start again from step 1.
- The air conditioner custom code is set to A prior to shipment.
- If you do not know the air conditioner custom code setting, try each of the custom codes (A → b → c → d) until you find the code which operates the air conditioner.

# ■ AR-REB1E (for Wall mounted type KMCC) and AR-RMB1E (for Wall mounted type KMCE)

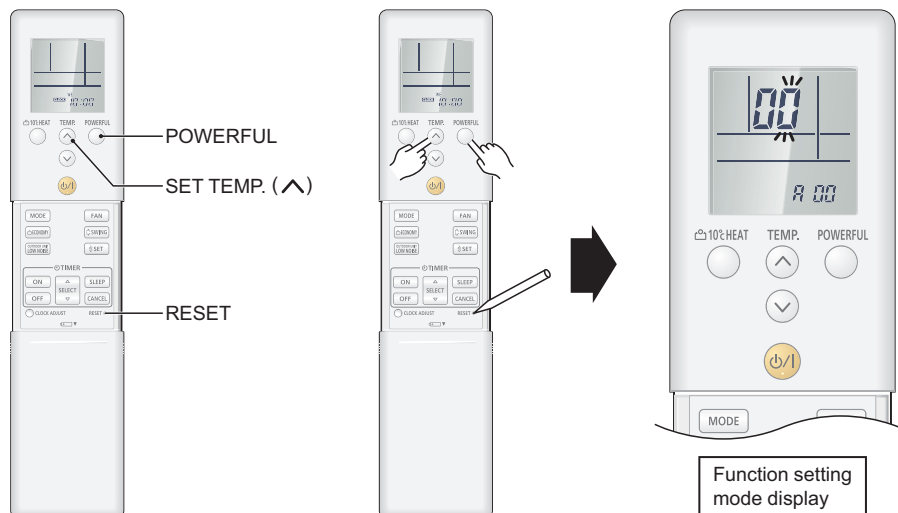
## ● Button name and function

During address setting mode, indoor unit reject the any operation command from remote controller.



## ● Function setting procedure

1. Connect the power supply of the outdoor unit.
2. To enter the function setting mode, while holding down the POWERFUL and SET TEMP. (^) buttons, press the RESET button.



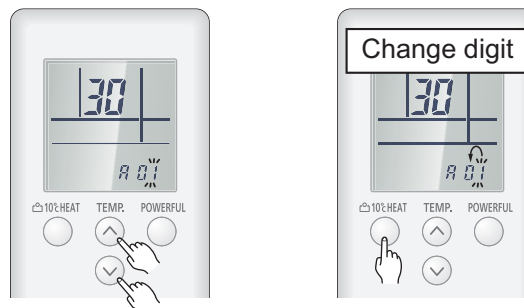
3. Select the function number by pressing the ^ or the v buttons. Each time the 10°C HEAT button is pressed, it switches between the right digit and the left digit.



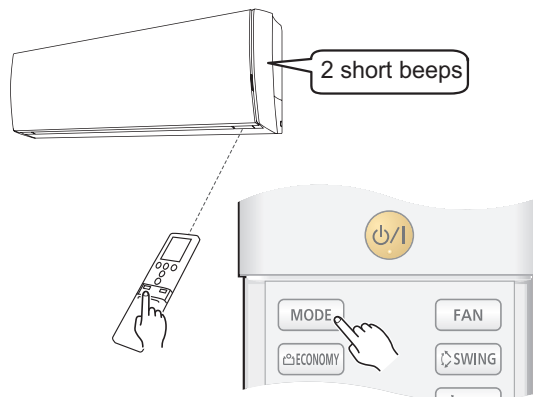
4. Proceed to the setting number by pressing the POWERFUL button. (To return to the function number selection, press the POWERFUL button again.)



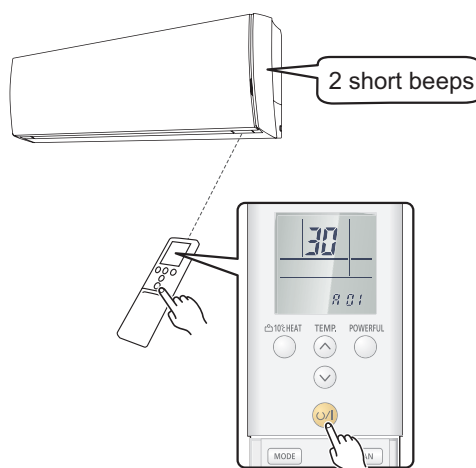
5. Select the function number by pressing the ^ or the v button. Each time the 10°C HEAT button is pressed, it switches between the right digit and the left digit.



6. Press the MODE button once to transmit the function mode information.



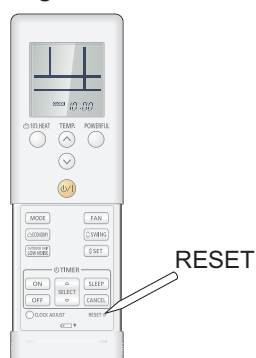
7. Press the  $\phi/I$  button once to transmit the function setting information. 2 short beeps will be emitted from the indoor unit when the signal is received correctly. If wrong code is set, no beep sound will be emitted.



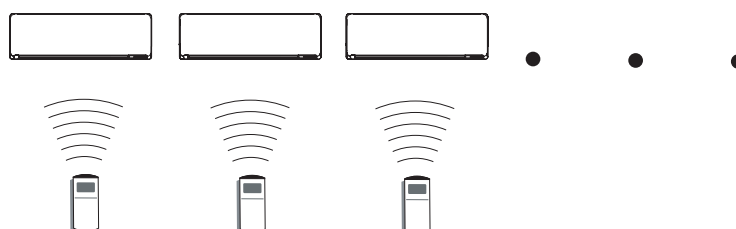
**NOTE:** Press  $\phi/I$  button within 30 seconds after pressing MODE button.

For the function details, refer to [Chapter 1-5. "Function details"](#) on page 05-38.

8. Exit the function setting mode by pressing the RESET button.



## ● Setting up each indoor unit



Repeat step from 1. to 8. to set up each indoor unit. If the custom code is other than "A", steps from 1. to 2. and 8. need to be performed.

## ● Resetting the power after setting up all indoor units

### Important:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.  
However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

Once the RESET button is pressed on the remote controller, the operation mode will be set to the AUTO MODE.

Adjust the operation mode to either cooling or heating before starting the operation of the air conditioner.

**NOTE:** If custom code other than "H" is set, the remote control must be set accordingly to the indoor unit setting.



## ● Remote controller custom code setting

Custom code setting of wireless remote controller needs to be same as the setting of the indoor unit. When you change the custom code setting of the wireless remote controller, do as follows:

1. Press the START/STOP button until only the clock is displayed on the display.



2. Press the MODE button for at least 5 seconds to display the current custom code (initially set to A).



3. Press the SET TEMP. " ^ " or the " v " button to change the custom code between A → b → c → d.



4. Press the MODE button again to return to the clock display. The custom code will be changed.

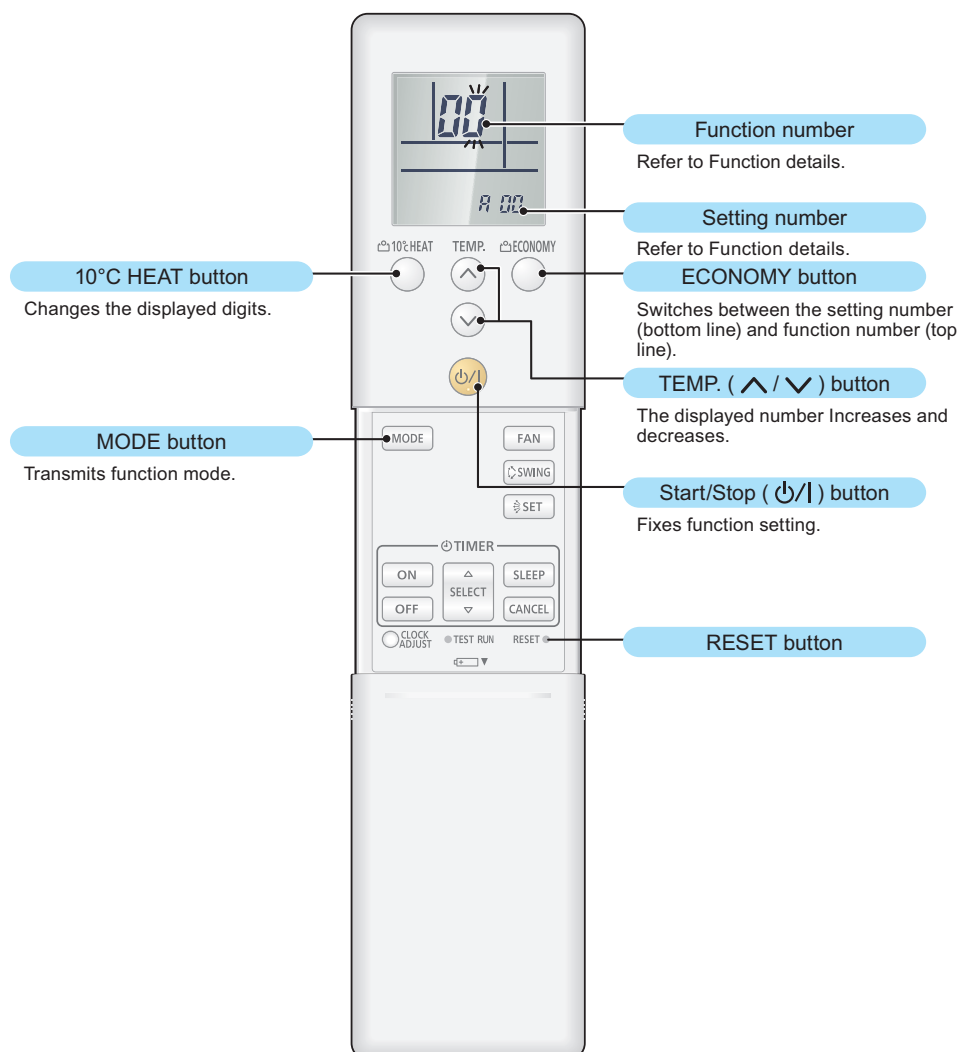


- If no buttons are pressed within 30 seconds after the custom code is displayed, the system returns to the original clock display. In this case, start again from step 1.
- The air conditioner custom code is set to A prior to shipment.
- If you do not know the air conditioner custom code setting, try each of the custom codes (A → b → c → d) until you find the code which operates the air conditioner.

# ■ UTY-LNTG (for Compact cassette type) or AR-REJ1E (included in UTY-LBTGM for Duct type)

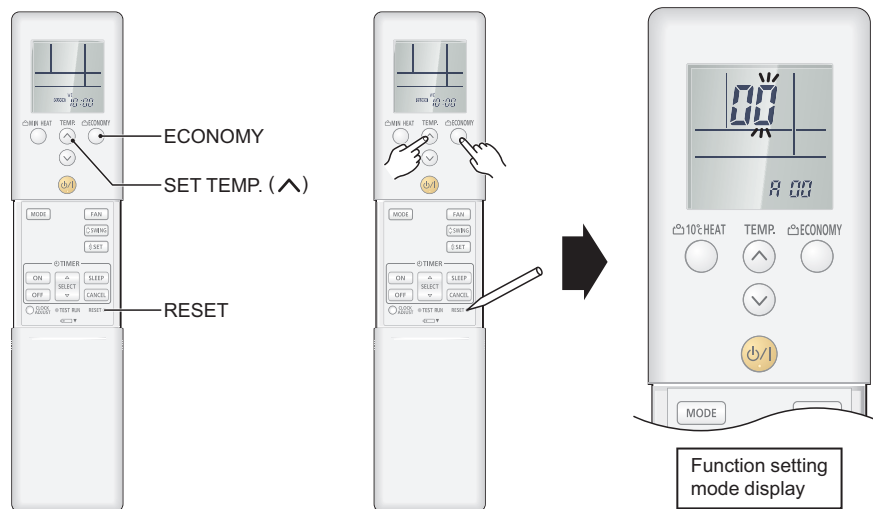
## ● Button name and function

During address setting mode, indoor unit reject the any operation command from remote controller.



## ● Function setting procedure

1. Connect the power supply of the outdoor unit.
2. To enter the function setting mode, while holding down the ECONOMY and SET TEMP. (^) buttons, press the RESET button.



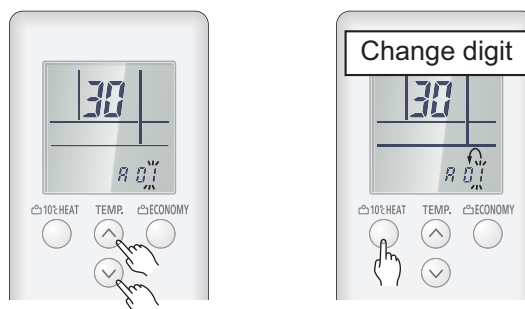
3. Select the function number by pressing the  $\wedge$  or the  $\vee$  buttons. Each time the 10°C HEAT button is pressed, it switches between the right digit and the left digit.



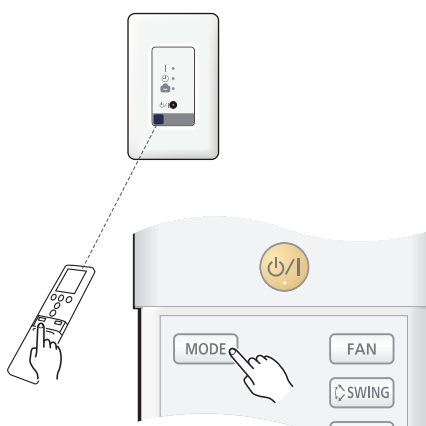
4. Proceed to the setting number by pressing the ECONOMY button. (To return to the function number selection, press the ECONOMY button again.)



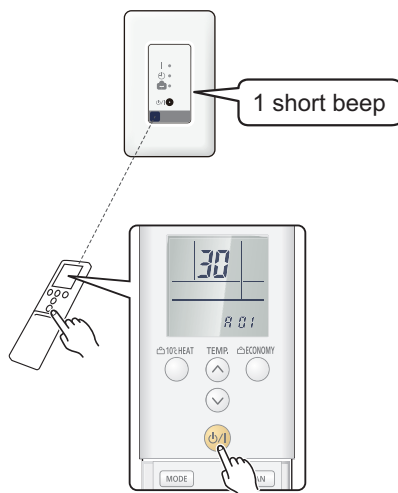
5. Select the function number by pressing the  $\wedge$  or the  $\vee$  button. Each time the 10°C HEAT button is pressed, it switches between the right digit and the left digit.



6. Press the MODE button once to transmit the function mode information.



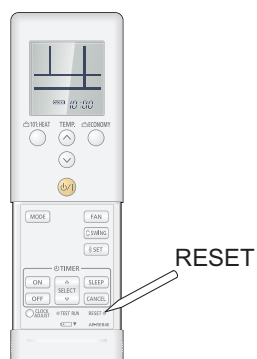
7. Press the  $\phi/I$  button once to transmit the function setting information. 1 short beep will be emitted from the indoor unit or the IR receiver when the signal is received correctly. If wrong code is set, no beep sound will be emitted.



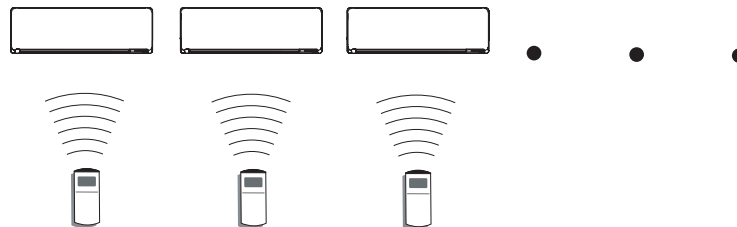
**NOTE:** Press  $\phi/I$  button within 30 seconds after pressing MODE button.

For the function details, refer to [Chapter 1-5. "Function details"](#) on page 05-38.

8. Exit the function setting mode by pressing the RESET button.



## ● Setting up each indoor unit



Repeat step from 1. to 8. to set up each indoor unit. If the custom code is other than "H", steps from 1. to 2. and 8. need to be performed.

## ● Resetting the power after setting up all indoor units

### Important:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.  
However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

Once the RESET button is pressed on the remote controller, the operation mode will be set to the AUTO MODE.

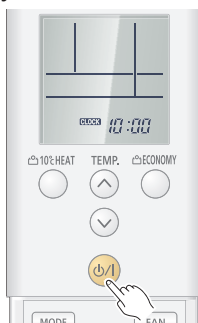
Adjust the operation mode to either cooling or heating before starting the operation of the air conditioner.

**NOTE:** If custom code other than "H" is set, the remote control must be set accordingly to the indoor unit setting.

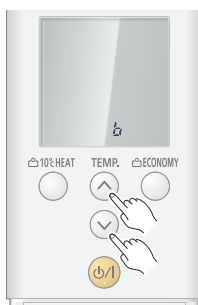
## ● Remote controller custom code setting

Custom code setting of wireless remote controller needs to be same as the setting of the indoor unit. When you change the custom code setting of the wireless remote controller, do as follows:

1. Press the START/STOP button until only the clock is displayed on the display.



2. Press the MODE button for at least 5 seconds to display the current custom code (initially set to A).
3. Press the SET TEMP. “ $\wedge$ ” or the “ $\vee$ ” button to change the custom code between  $A \rightarrow b \rightarrow c \rightarrow d$ .



4. Press the MODE button again to return to the clock display. The custom code will be changed.



- If no buttons are pressed within 30 seconds after the custom code is displayed, the system returns to the original clock display. In this case, start again from step 1.
- The air conditioner custom code is set to A prior to shipment.
- If you do not know the air conditioner custom code setting, try each of the custom codes ( $A \rightarrow b \rightarrow c \rightarrow d$ ) until you find the code which operates the air conditioner.

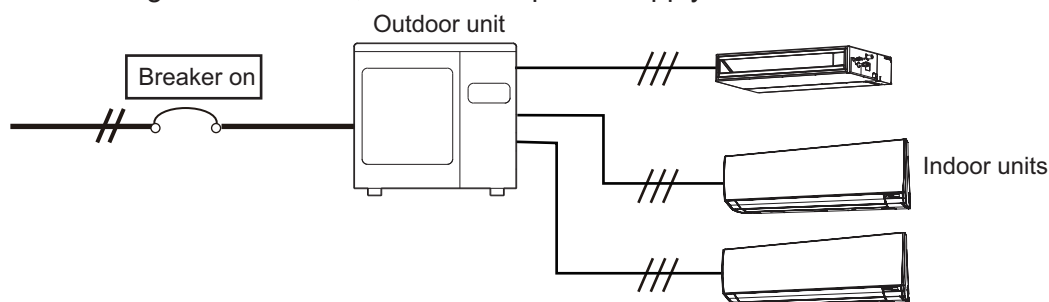
## 1-3. Indoor unit (setting by wired remote controller)

- The function settings of the control of the indoor unit can be changed by this procedure according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “Function setting” according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function number or Setting number.
- Settings will not be changed if invalid numbers or setting numbers are selected.
- This function cannot be used on the secondary units.

### ■ Preparation

Before connecting the power supply of the indoor unit, reconfirm following items:

- Piping air tightness test and vacuuming have been performed firmly.
- There is no wiring mistake. Then, connect the power supply of the indoor unit.

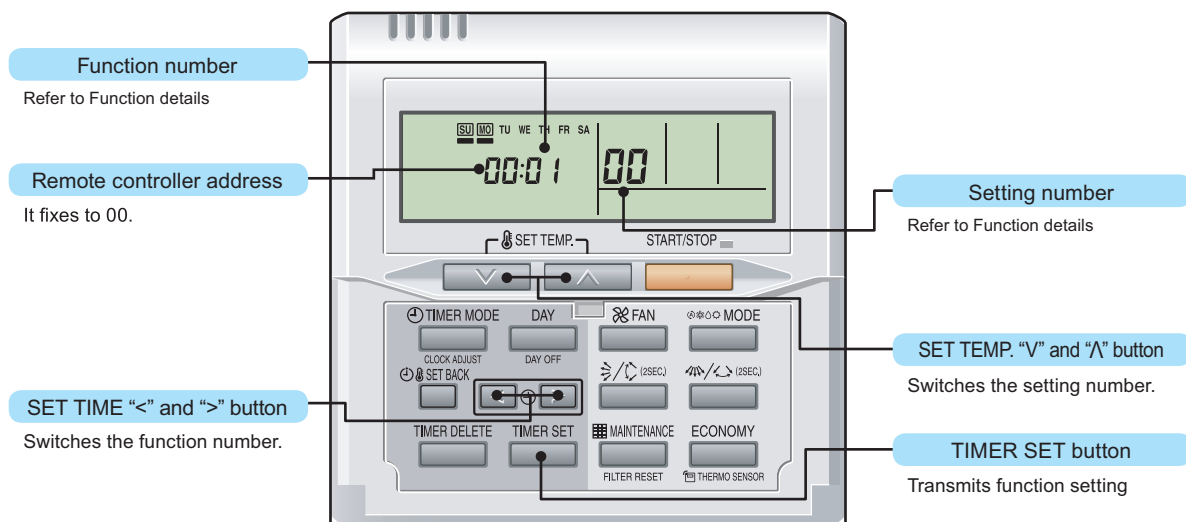




## ■ UTY-RNNGM

### ● Button name and function

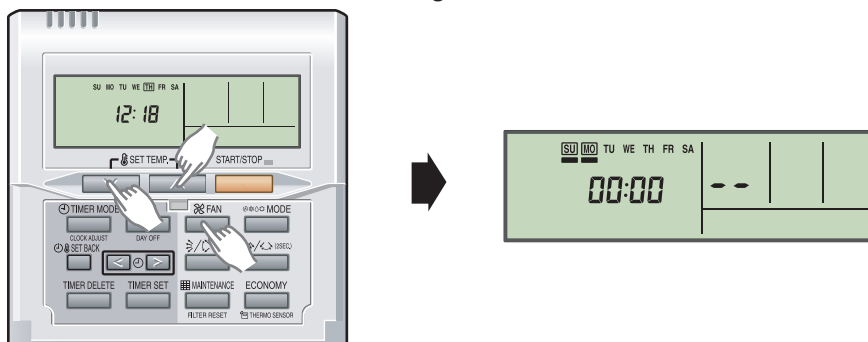
During address setting mode, indoor unit reject the any operation command from remote controller.



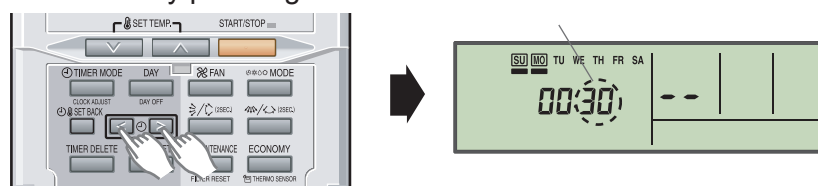
### ● Function setting procedure

1. Connect the power supply of the outdoor unit.
2. Switch to the function setting mode.

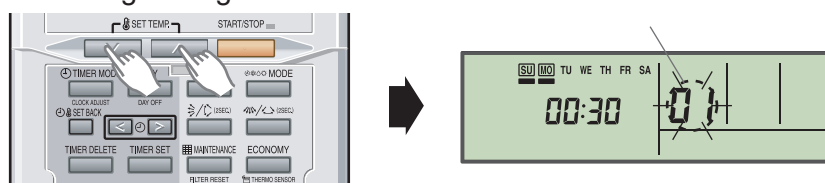
To enter the function setting mode, hold down the 3 buttons of SET TEMP. ∇, SET TEMP. ∆, and FAN at the same time for 5 seconds or longer.



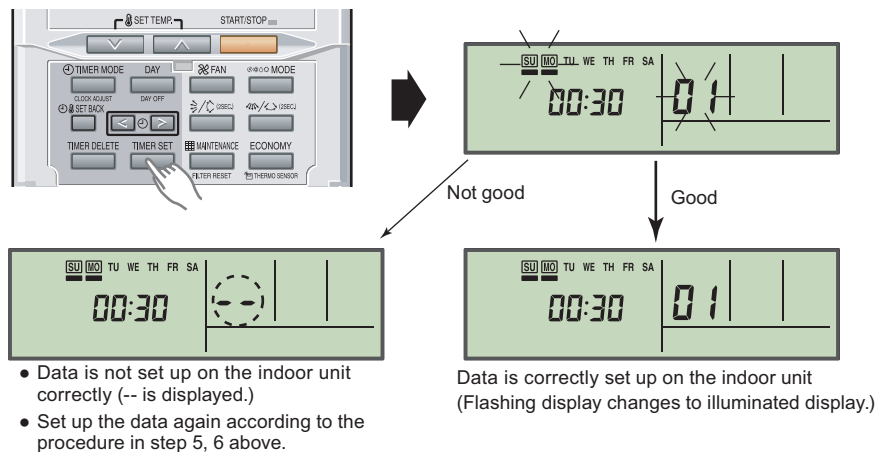
3. Select the function number by pressing the SET TIME < or the SET TIME > button.



4. Select the setting number by pressing the SET TEMP. ∆ or the SET TEMP. ∇ button. The display flashes during setting number selection.

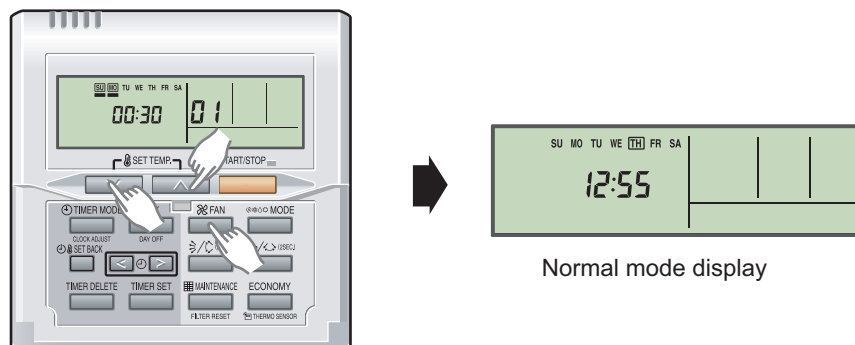


5. Confirm the setting by pressing the **TIMER SET** button.  
The data will be transferred to the indoor unit.



Function details: Refer to [Chapter 1-5. "Function details"](#) on page 05-38.

6. Exit the function setting mode by holding 3 buttons of **SET TEMP.**  $\nabla$ , **SET TEMP.**  $\wedge$  and **FAN** at the same time.



If no button is pressed within 60 seconds after buttons mentioned above are pressed, it will automatically exit the function setting mode.

If you exit the function setting mode unintentionally during setting, enter the mode again according to the procedure in step 2.

## ● Setting up each indoor unit

Repeat the procedures from step 1 to 6, and set up the indoor units requiring function setting.

## ● Resetting the power after setting up function of all indoor units

### NOTES:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.

However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

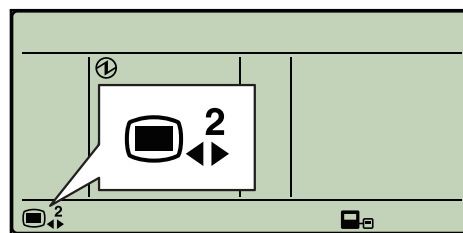
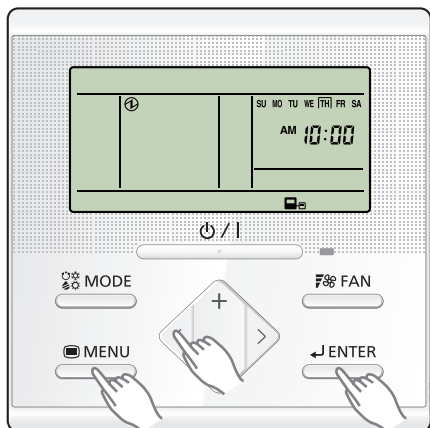
## ■ UTY-RLRG

### ● Setting procedure by using wired remote controller

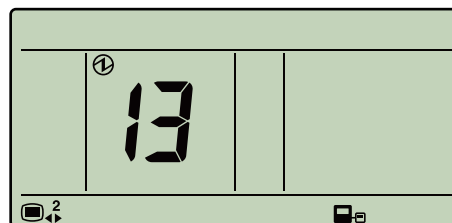
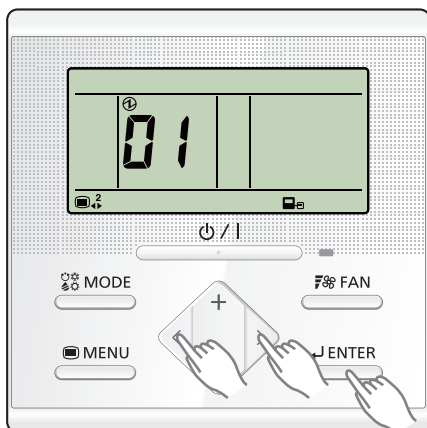
The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

Before connecting the power supply of the indoor unit, reconfirm following items:

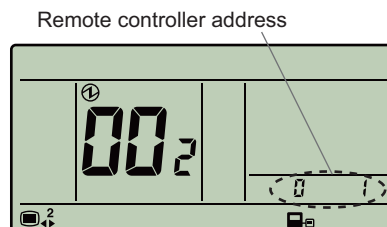
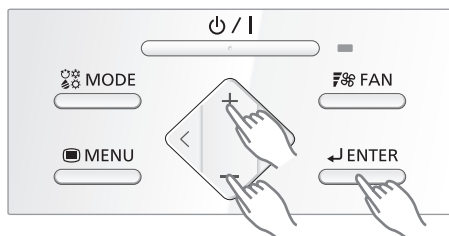
- Piping air tightness test and vacuuming have been performed firmly.
  - There is no wiring mistake.
1. Connect the power supply.
  2. To activate the address setting mode, hold down the three buttons of “MENU”, “<”, and “ENTER” at the same time for 2 seconds or longer. Menu 2 setting screen is displayed.



3. Select the “13” in Menu 2 settings. Then press the “ENTER” button.

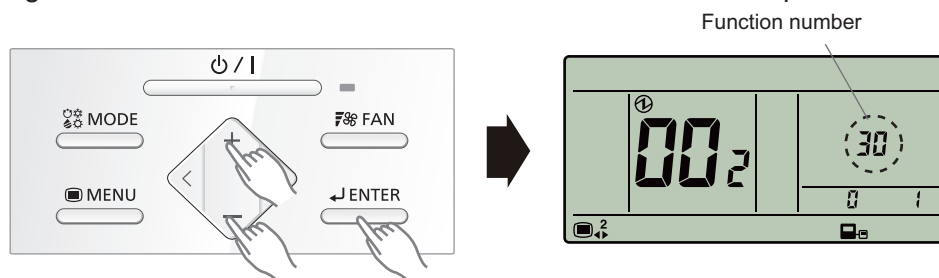


4. Pressing the “+” or “-” button, select a remote controller address (select the indoor unit you want to operate). Then press the “ENTER” button.

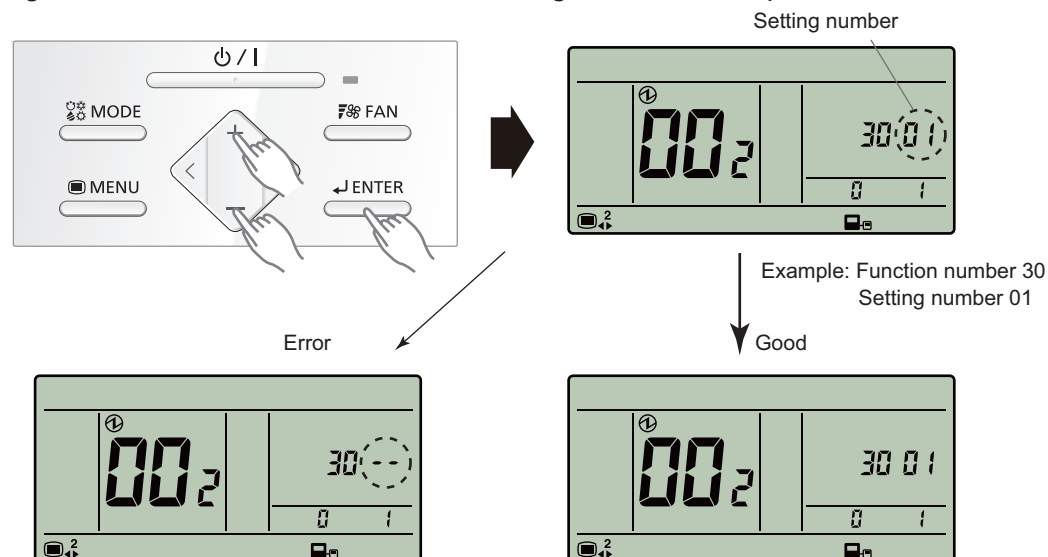


Example: When remote controller address “01” is selected.

5. Pressing the "+" or "-" button, to select the function number. Then press the "ENTER" button.



6. Pressing the "+" or "-" button, to select the setting number. Then press the "ENTER" button.



- When the data was not set up on the indoor unit (" --" is displayed.)
- Set up the data again.

- When the data was normally set up on the indoor unit.

Pressing the "ENTER" button to return to the address selection screen.

If setting has been completed, pressing the "MENU" button to return to the Menu 2 item selection screen.

## ● Setting up each indoor unit

Repeat the procedure from step 1 to 6, and set up the indoor units requiring function setting.

## ● Resetting the power after setting up function of all indoor units

### NOTES:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.

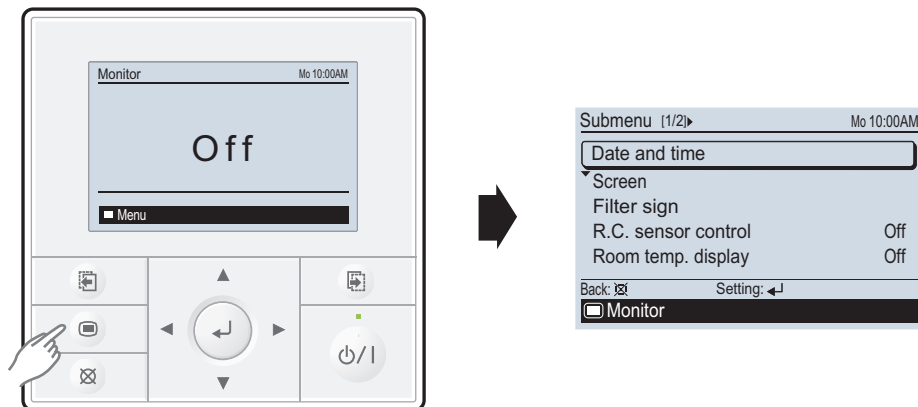
However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

## ■ UTY-RVNGM

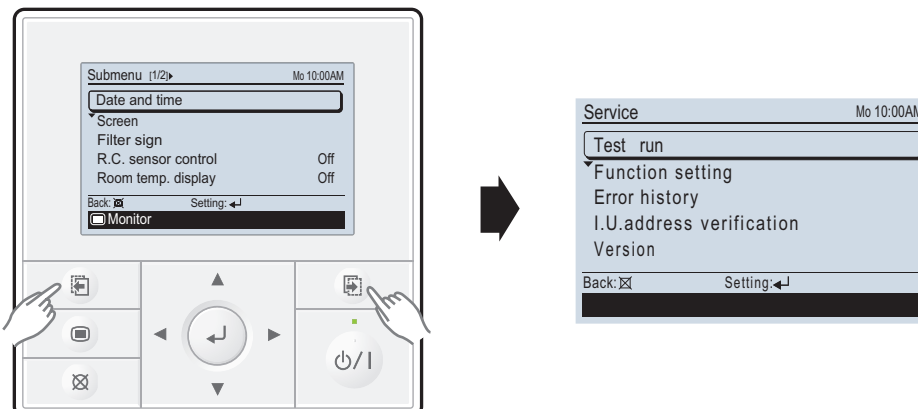
### ● Function setting procedure

1. Connect the power supply of the outdoor unit.
2. Switch to the function setting mode.

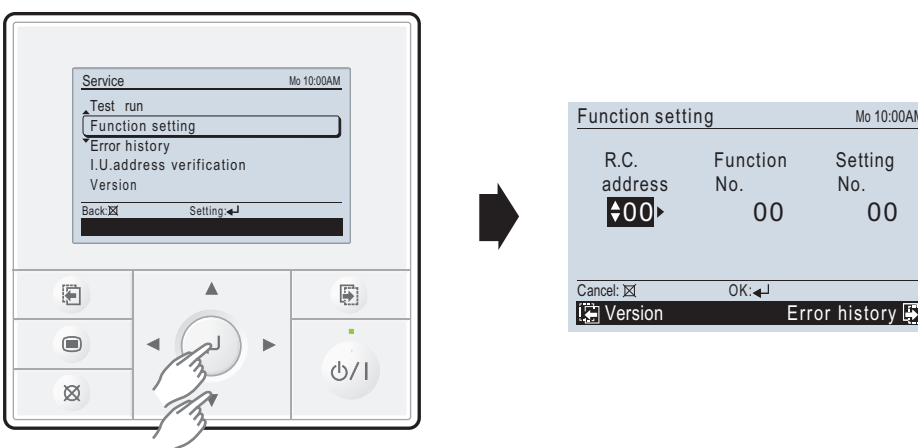
When [Menu button] is pressed twice while “Monitor” screen is displayed, it switches to the “Submenu” screen. If [Menu button] is pressed while the “Submenu” screen is displayed, the display returns to the “Monitor” screen.



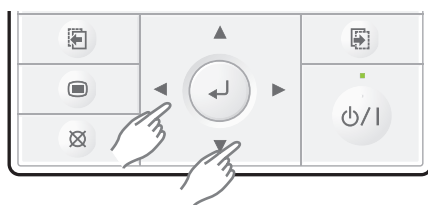
Press the [Screen switch button (Left)] and [Screen switch button (Right)] simultaneously for 5 seconds to switch to “Service” screen.



Select [Function setting] with pressing the [Cursor button (Up/Down)], and press the [Enter button].

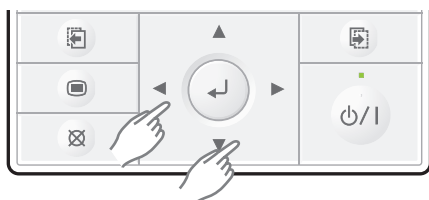


3. Select the [Function No.] with pressing the [Cursor button (Left/Right)], and select the Function No. to be set with pressing the [Cursor button (Up/Down)].



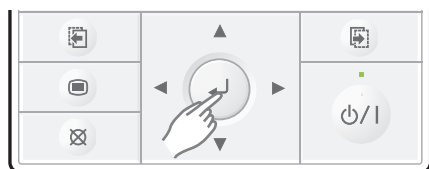
Function setting			Mo 10:00AM
R.C. address	Function No.	Setting No.	
00	30	00	
Cancel: [X] OK: [Enter]			
Version			Error history

4. Select the [Setting No.] with pressing the [Cursor button (Left/Right)], and select the Setting No. to be set with pressing the [Cursor button (Up/Down)].



Function setting			Mo 10:00AM
R.C. address	Function No.	Setting No.	
00	30	01	
Cancel: [X] OK: [Enter]			
Version			Error history

5. Pressing the [Enter button], confirm the setting. The data will be transferred to the indoor unit.



Function setting			Mo 10:00AM
R.C. address	Function No.	Setting No.	
00	30	01	
Cancel: [X] OK: [Enter]			
Version			Error history

Error

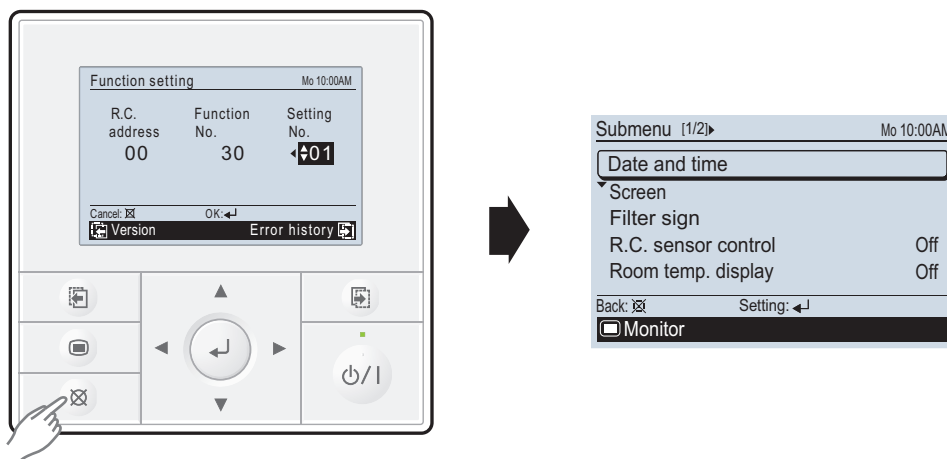
Good

Function setting			Mo 10:00AM
R.C. address	Function No.	Setting No.	
00	30	--	
Cancel: [X] OK: [Enter]			
Version			Error history

Function setting			Mo 10:00AM
R.C. address	Function No.	Setting No.	
00	30	01	
Cancel: [X] OK: [Enter]			
Version			Error history

Function details: Refer to [Chapter 1-5. "Function details"](#) on page 05-38.

6. When [Cancel button] is pressed twice while “Function setting” screen is displayed, it switches to the “Submenu” screen.



If no button is pressed within 60 seconds after buttons mentioned above are pressed, it will automatically exit the function setting mode.

If you exit the function setting mode unintentionally during setting, enter the mode again according to the procedure in step 2.

## ● Setting up each indoor unit

Repeat the procedures from step 1 to 6, and set up the indoor units requiring function setting.

## ● Resetting the power after setting up function of all indoor units

### NOTES:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.

However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

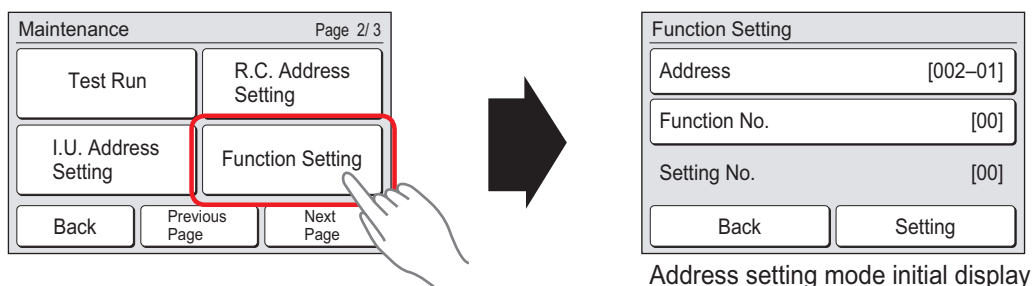
## ■ UTY-RNRGZ\*

### ● Setting procedure by using wired remote controller

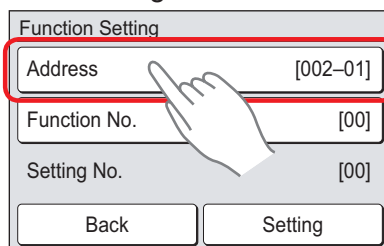
The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

Before connecting the power supply of the indoor unit, reconfirm following items:

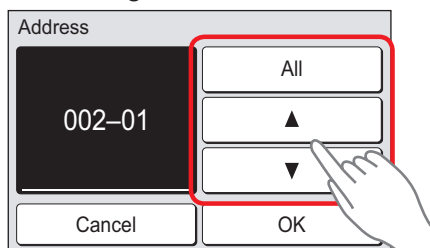
- Piping air tightness test and vacuuming have been performed firmly.
  - There is no wiring mistake.
1. Connect the power supply.
  2. When the “Function Setting” on the “Maintenance” screen is touched, the “Installer Password Verification” screen is displayed. After enter the installer password, and touch the “OK”, “Function Setting” screen is displayed.



3. Touch the “Address” on the “Function Setting” screen.

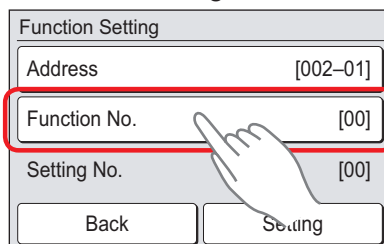


4. “Address” screen is displayed. Select the address of the indoor unit whose function number is be set by touching ▲ or ▼. When setting at all the indoor units, touch “All”.



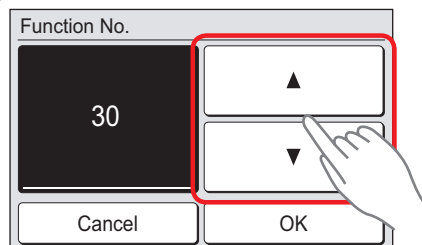
When the “OK” is touched, the display returns to the “Function Setting” screen.

5. Touch the “Function No.” on the “Function Setting” screen.



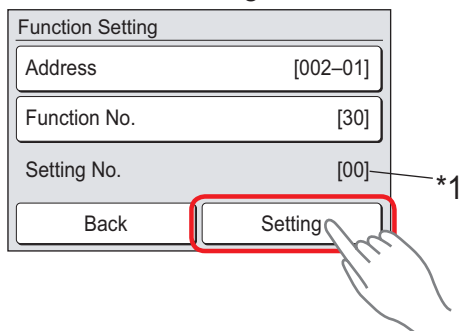


6. "Function No." screen is displayed. Set the "Function No." with ▲ or ▼.



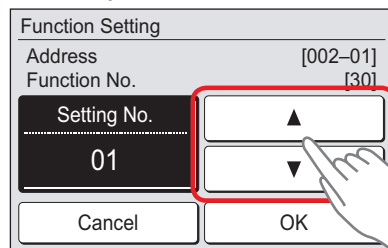
When the "OK" is touched, the display returns to the "Function Setting" screen.

7. Touch the "Function No." on the "Function Setting" screen.



**NOTE:** \*1: When "All" is chosen by "5", and different set up "Setting No." from two or more indoor units, "-" is displayed on "Setting No.".

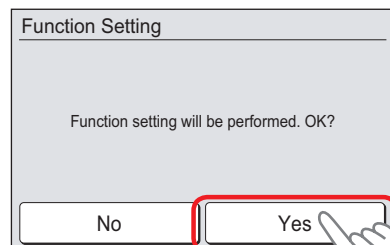
8. Setting screen of "Setting No." is displayed. Set the "Function No." with ▲ or ▼.



Example: Function number: 30, Setting Number: 01

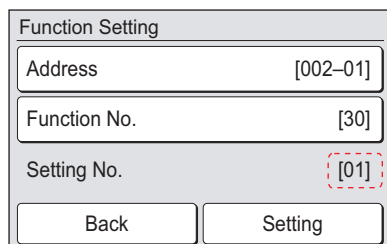
When the "OK" is touched, the "Function Setting" verification screen is displayed.

9. Touch the “Yes” of the verification screen.

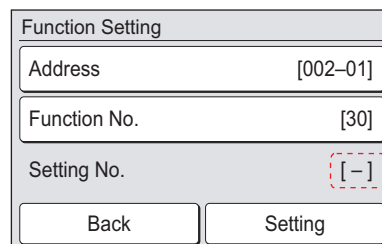


In case of “OK”

In case of “ERROR”

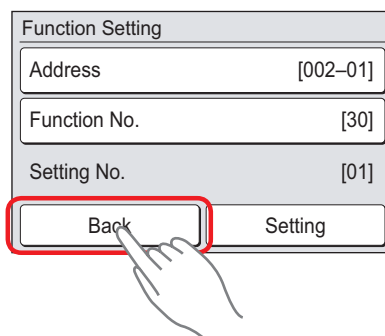


When the data was normally set up on the indoor unit



When the data was not set up on the indoor unit ( [-] is displayed.), set up the data again according to the procedure in step 4 to 7 above

10. When the “Back” on the “Function Setting” screen is touched, the display returns to the “Maintenance” screen.



## ● Setting up each indoor unit

Repeat the procedure from step 1 to 6, and set up the indoor units requiring function setting.

## ● Resetting the power after setting up function of all indoor units

### NOTES:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.

However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

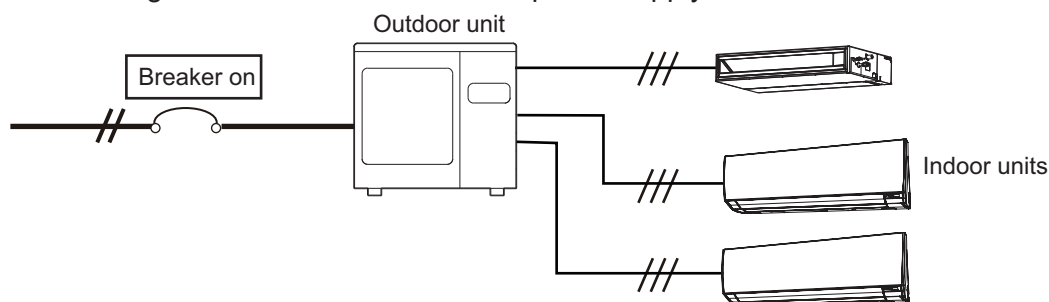
## 1-4. Indoor unit (setting by simple remote controller)

- The function settings of the control of the indoor unit can be changed by this procedure according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “Function setting” according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function number or Setting number.
- Settings will not be changed if invalid numbers or setting numbers are selected.
- This function cannot be used on the secondary units.

### ■ Preparation

Before connecting the power supply of the indoor unit, reconfirm following items:

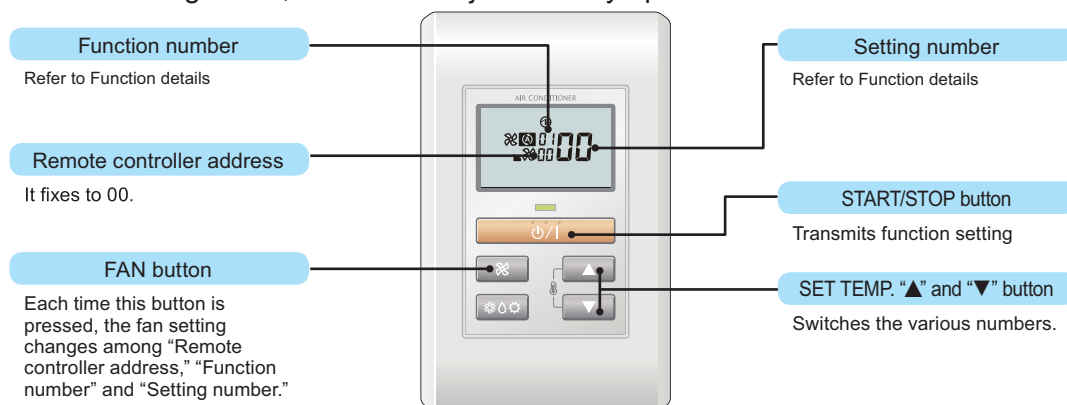
- Piping air tightness test and vacuuming have been performed firmly.
- There is no wiring mistake. Then, connect the power supply of the indoor unit.



## ■ UTY-RSNGM

### ● Button name and function

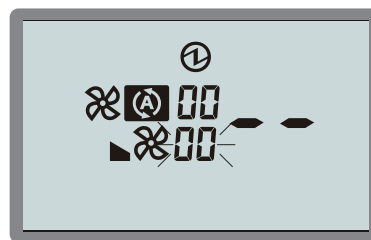
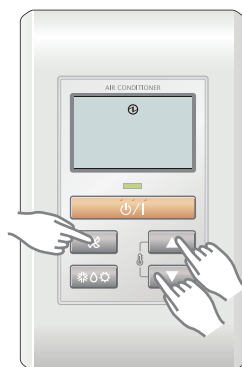
During address setting mode, indoor unit reject the any operation command from remote controller.



### ● Function setting procedure

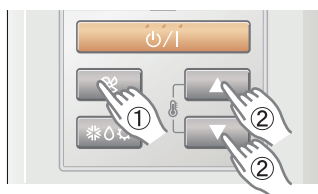
1. Connect the power supply of the outdoor unit.
2. Switch to the function setting mode.

To enter the function setting mode, hold down the 3 buttons of SET TEMP. ▲, SET TEMP. ▼ and FAN at the same time for 5 seconds or longer.

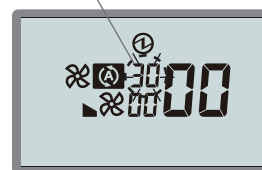


Function setting mode initial display

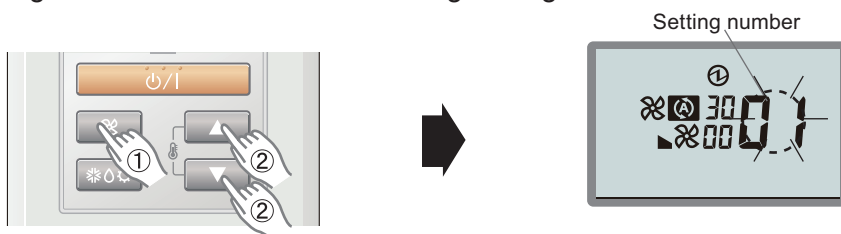
3. Press the FAN button.  
The Function number indicator flashes. Then, press either the SET TEMP. ▲ button or the SET TEMP. ▼ button to set up the function number.



Function number

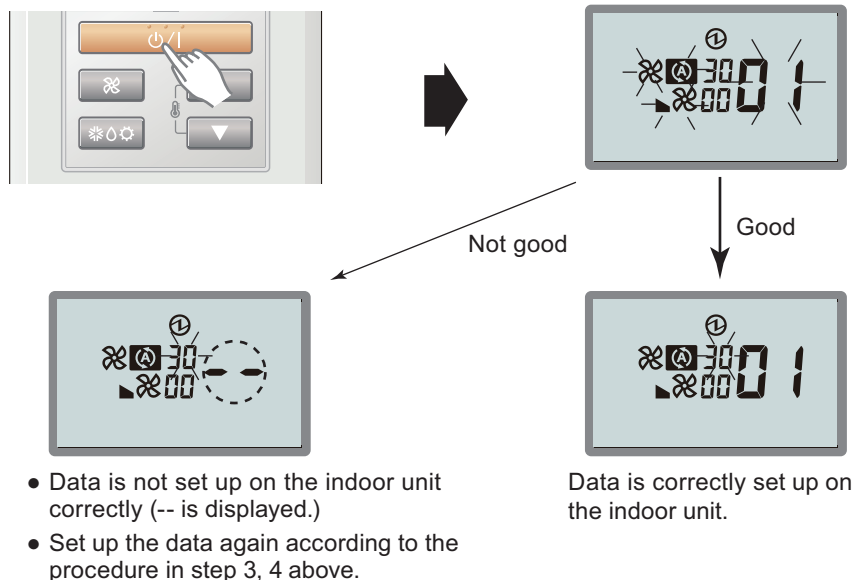


4. Select the setting number by pressing the SET TEMP. ▲ or SET TEMP. ▼ button. The setting number indicator flashes during setting number selection.



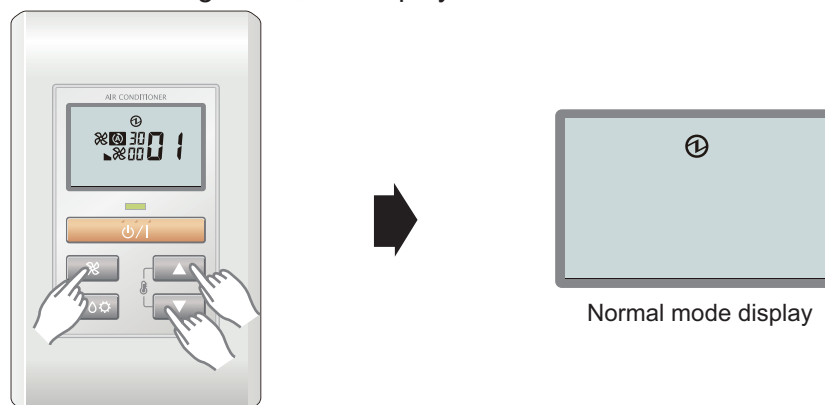
Example) Function number : 30, Setting number : 01

5. Confirm the setting by pressing the TIMER SET button. The data will be transferred to the indoor unit.



Function details: Refer to [Chapter 1-5. "Function details"](#) on page 05-38.

6. Exit the function setting mode by pressing the 3 buttons of SET TEMP. ▲, SET TEMP. ▼, and FAN at the same time for 5 seconds or longer. After exiting the function setting mode, the display returns to the normal mode.



If no button is pressed within 60 seconds after buttons mentioned above are pressed, it will automatically exit the function setting mode.

If you exit the function setting mode unintentionally during setting, enter the mode again according to the procedure in step 2.

## ● Setting up each indoor unit

Repeat the procedures from step 1 to 6, and set up the indoor units requiring function setting.

## ● Resetting the power after setting up function of all indoor units

### NOTES:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.  
However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

## ■ UTY-RSRG/UTY-RHRG

### ● Setting procedure by using wired remote controller

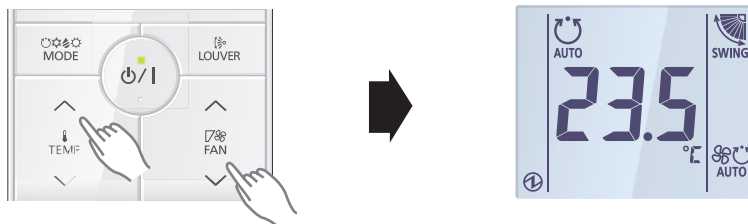
The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

Before connecting the power supply of the indoor unit, reconfirm following items:

- Piping air tightness test and vacuuming have been performed firmly.
- There is no wiring mistake.

**NOTE:** Set only one Master remote controller.

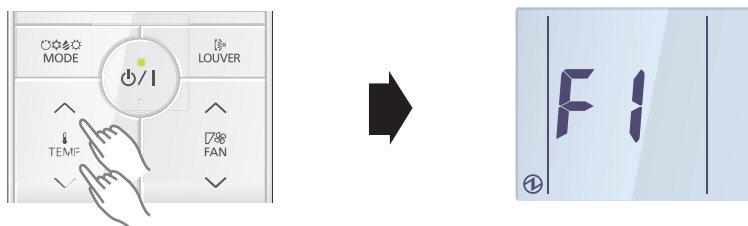
1. Connect the power supply.
2. With "Monitor mode" screen displayed, press and hold the SET TEMP.  $\wedge$  button and FAN  $\vee$  button simultaneously for at least 2 seconds.



3. The Menu 1 screen is displayed. Press and hold the SET TEMP.  $\wedge$  button at least 2 seconds. Setting mode selection screen is displayed.



4. Press the SET TEMP.  $\wedge$  or SET TEMP.  $\vee$  button to select F1 (Menu 2-F1) setting mode or F2 (Menu 2-F2) setting mode.



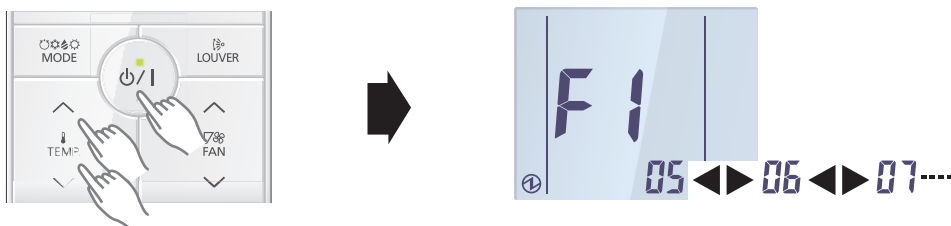
F1: Initial settings mode

F2: Maintenance settings mode

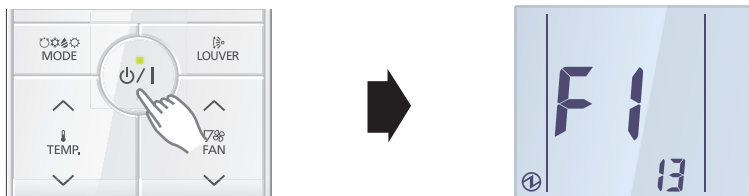
5. Press the  $\phi/I$  button. Setting item selection screen is displayed. (Item No. is displayed.)



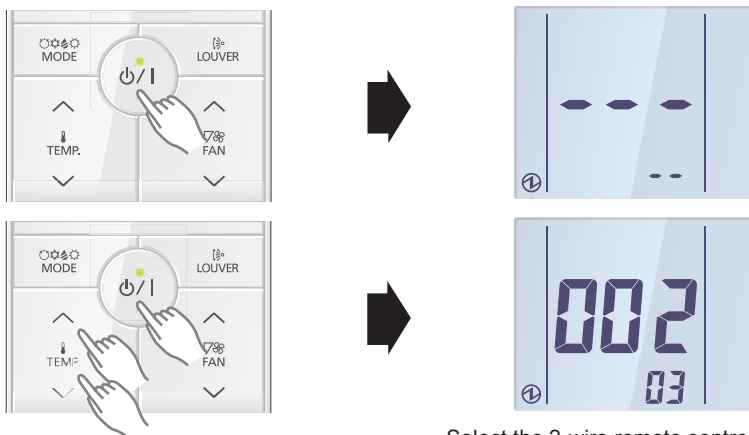
6. Select the item number to be set with the SET TEMP.  $\wedge$  or SET TEMP.  $\vee$  button, and press the  $\phi/I$  button to switch to the setting screen.



7. Select the "13" in Menu 2-F1 settings. Then, press the  $\phi/I$  button.

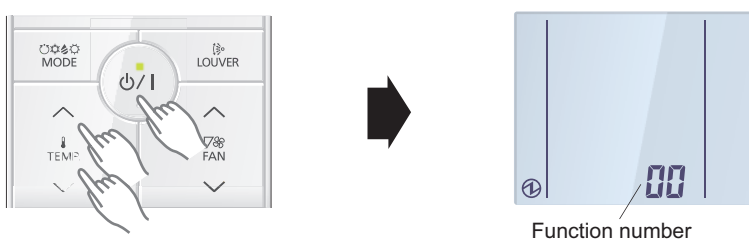


8. Select the 2-wire remote controller address with the SET TEMP.  $\wedge$  or SET TEMP.  $\vee$  button. Then press the  $\phi/I$  button.

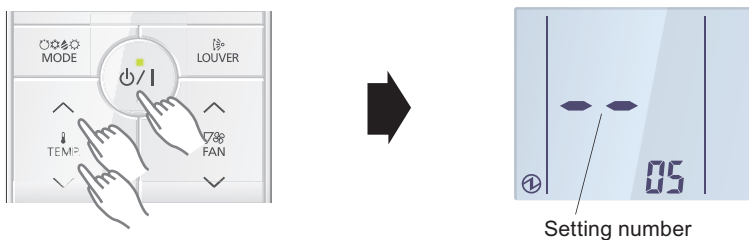


Select the 2-wire remote controller address (Ex. Select the 002-03)

9. Set the function number with the SET TEMP.  $\wedge$  or SET TEMP.  $\vee$  button. Then press the  $\phi/I$  button.

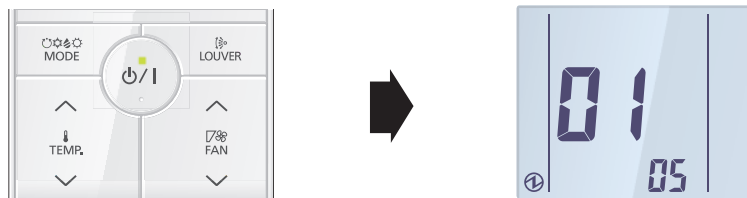


10. Set the setting number with the SET TEMP.  $\wedge$  or SET TEMP.  $\vee$  button. Then press the  $\phi/I$  button.

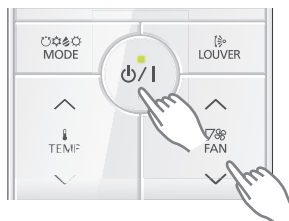




11. Setting results are displayed after data transmission.



12. Press the  $\phi/I$  button to return to the 2-wire remote controller address selection screen of step 9. If setting has been completed, press the FAN  $\nabla$  button to return to the Menu 2-F1 item selection screen.



## ● Setting up each indoor unit

Repeat the procedure from step 1 to 6, and set up the indoor units requiring function setting.

## ● Resetting the power after setting up function of all indoor units

### NOTES:

- If the reset is not performed, function cannot be read correctly.
- After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
  - After the 2 minutes has passed, power can be restored.
  - The set function is stored in the PCB and will remain in memory even when the power of indoor unit is turned off.  
However setting function is effective after disconnecting the power supply and then reconnecting it.
- Record the latest configuration of the indoor unit function setting on a label, and put the label on the unit so it can be used for after-sales service operations.

## 1-5. Function details

### ■ Contents of function setting

Each function setting listed in this section is adjustable in accordance with the installation environment.

**NOTE:** Setting will not be changed if invalid numbers or setting values are selected.

### ● Function setting list

	Function no.	Functions	Compact cassette	Mini duct	Slim duct	Ceiling	Floor
1)	00	Remote controller address setting	—	—	—	—	—
2)	11	Filter sign	●	●	●	●	●
3)	20	Ceiling height	●	—	—	●	—
4)	22	Outlet directions	●	—	—	—	—
5)	26	Static pressure	—	●	●	—	—
6)	28	Horizontal louver direction switching for dew condensation prevention	—	—	—	—	—
7)	30/31	Room temperature control for indoor unit sensor	●	●	●	●	●
8)	35/36	Room temperature control for wired remote controller sensor	●	●	●	●	—
9)	40	Auto restart	●	●	●	●	●
10)	42	Room temperature sensor switching	●	●	●	●	●
11)	44	Remote controller custom code	●	●	●	●	●
12)	46	External input control	●	●	●	●	●
13)	48	Room temperature sensor switching (Aux.)	●	●	●	●	—
14)	49	Indoor unit fan control for energy saving for cooling	●	●	●	●	—
15)	60	Switching functions for external output terminal	●	●	●	●	●

	Function no.	Functions	Wall mounted							
			KGTB	KGTE	KMTB	KMTE	KMCC	KMCE	KETA	KETE
1)	00	Remote controller address setting	●	—	●	—	●	—	●	—
2)	11	Filter sign	●	●	●	●	●	●	●	●
3)	20	Ceiling height	—	—	—	—	—	—	—	—
4)	22	Outlet directions	—	—	—	—	—	—	—	—
5)	26	Static pressure	—	—	—	—	—	—	—	—
6)	28	Horizontal louver direction switching for dew condensation prevention	—	—	—	—	—	—	●	—
7)	30/31	Room temperature control for indoor unit sensor	●	●	●	●	●	●	●	●
8)	35/36	Room temperature control for wired remote controller sensor	●	●	●	●	●	●	●	●
9)	40	Auto restart	●	●	●	●	●	●	●	●
10)	42	Room temperature sensor switching	●	●	●	●	●	●	●	●
11)	44	Remote controller custom code	●	●	●	●	●	●	●	●
12)	46	External input control	●	●	●	●	●	●	●	●
13)	48	Room temperature sensor switching (Aux.)	●	●	●	●	●	●	●	●
14)	49	Indoor unit fan control for energy saving for cooling	●	●	●	●	●	●	●	●
15)	60	Switching functions for external output terminal	●	●	●*	●	●	●	—	●

\*: For 07-14 models

## 1) Remote controller address setting (for Wall-mounted type only)

### NOTES:

- Because this setting is normally done automatically when 2-wire-type wired remote controller is installed, setting is unnecessary.
- This setting is configurable only by wireless remote controller, but not configurable by Polar 3-wired remote controller.

Multiple indoor units can be operated by using one wired remote controller.

Set the unit number of each indoor unit.

Function number	Setting value	Setting description	Factory setting
00	00	Unit no. 0	◆
	01	Unit no. 1	
	02	Unit no. 2	
	03	Unit no. 3	
	04	Unit no. 4	
	05	Unit no. 5	
	06	Unit no. 6	
	07	Unit no. 7	
	08	Unit no. 8	
	09	Unit no. 9	
	10	Unit no. 10	
	11	Unit no. 11	
	12	Unit no. 12	
	13	Unit no. 13	
	14	Unit no. 14	
	15	Unit no. 15	

### NOTES:

- When connecting Polar 3-wired remote controller, set the remote controller address in the order of 0, 1, 2, ....., and 15.
- When different type of indoor units (such as wall mounted type and cassette type, cassette type and duct type, or other combinations) are connected using group control system, some functions may no longer be available.

## 2) Filter sign

Select appropriate intervals for displaying the filter sign on the indoor unit according to the estimated amount of dust in the air of the room.

If the indication is not required, select "No indication" (03).

Function number	Setting value	Setting description	Factory setting
11	00	Standard	
	01	Long interval	
	02	Short interval	
	03	No indication	◆

Setting description	Compact cassette	Mini duct	Slim duct	Wall mounted
Standard	2,500 hours		400 hours	
Long interval	4,400 hours		1,000 hours	
Short interval	1,250 hours		200 hours	

**3) Ceiling height (for Compact cassette type and Ceiling type only)**

Select the appropriate ceiling height according to the place of installation.

Function number	Setting value	Setting description	Factory setting
20	00	Standard	◆
	01	High ceiling	

For the specific height for each setting value, refer to “Installation space” in Chapter 2. ["Dimensions"](#) in Chapter 1. GENERAL INFORMATION on page 01-20.

**In case of cassette type models:**

The ceiling height values are for the 4-way outlet. Do not change this setting in the 3-way outlet mode.

7,000 or 9,000 Btu/h models cannot be installed in high ceilings. Do not change this setting.

**4) Outlet directions (for Compact cassette type only)**

Select the appropriate number of outlet directions according to the installation conditions.

Function number	Setting value	Setting description	Factory setting
22	00	4-way	◆
	01	3-way	

## 5) Static pressure (for Mini duct type and Slim duct type)

Select the appropriate static pressure according to the installation conditions.

For mini duct type:

Function number	Setting value	Setting description	Factory setting
26	00	0 Pa	
	01	10 Pa	
	02	20 Pa	
	03	30 Pa	
	04	40 Pa	
	05	50 Pa	
	31	Standard (10 Pa: 07; 09; 12 models, 15 Pa: 14; 18 models)	◆

### NOTES:

- Range of static pressure is different by model.

Model	Range of static pressure
07, 09, 12 models	0 to 30 Pa
14, 18 models	0 to 50 Pa

- Setting number in 07, 09, 12 models is "04 to 30": Operation is same as that "03".
- Setting number in 14, 18 models is "06 to 30": Operation is same as that "05".
- Setting number value cannot be set to 32 or more.

For slim duct type:

Function number	Setting value	Setting description	Factory setting
26	00	0 Pa	
	01	10 Pa	
	02	20 Pa	
	03	30 Pa	
	04	40 Pa	
	05	50 Pa	
	06	60 Pa	
	07	70 Pa	
	08	80 Pa	
	09	90 Pa	
	31	Standard (25 Pa)	◆

## 6) Horizontal louver direction switching for dew condensation prevention (for KE model in Wall-mounted type only)

Automatically switches the position of the horizontal louver if the airflow direction is set at lower than the dew condensation limit position in cooling or drying operation.

Select suitable adjustment position according to the customer's preference.

Function number	Setting value	Setting description	Factory setting
28	00	Adjust to dew condensation limit position	◆
	01	Adjust to cooling standard position	

## 7) Room temperature control for indoor unit sensor (for other than Floor type)

**NOTE:** If the remote sensor unit option is selected, perform this setting.

Depending on the installed environment, correction of the room temperature sensor may be required. Select the appropriate control setting according to the installed environment.

The temperature of the room temperature sensor is corrected as follows:

Corrected temp. = Temp. of the room temp. sensor - Correction temp. value

Example of correction:

When the temperature of the room temp. sensor is 26°C and the setting value is "03" (-1.0°C), corrected temp. will be 27°C (26°C - [-1.0°C]).

The temperature correction values show the difference from the Standard setting "00" (manufacturer's recommended value).

Function number		Setting value	Setting description	Factory setting
30 (For cooling)	31 (For heating)	00	Standard setting	♦
		01	No correction 0.0 °C	
		02	-0.5 °C	More cooling Less heating
		03	-1.0 °C	
		04	-1.5 °C	
		05	-2.0 °C	
		06	-2.5 °C	
		07	-3.0 °C	
		08	-3.5 °C	
		09	-4.0 °C	
		10	+0.5 °C	Less cooling More heating
		11	+1.0 °C	
		12	+1.5 °C	
		13	+2.0 °C	
		14	+2.5 °C	
		15	+3.0 °C	
		16	+3.5 °C	
		17	+4.0 °C	

## 8) Room temperature control for wired remote controller sensor (for other than Floor type)

Depending on the installed environment, correction of the wire remote temperature sensor may be required. Select the appropriate control setting according to the installed environment.

To change this setting, set Function 42 to Both "01".

Ensure that the Thermo Sensor icon is displayed on the remote controller screen.

Function number		Setting value	Setting description	Factory setting
35 (For cooling)	36 (For heating)	00	Standard setting	◆
		01	No correction 0.0°C	
		02	-0.5 °C	More cooling Less heating
		03	-1.0 °C	
		04	-1.5 °C	
		05	-2.0 °C	
		06	-2.5 °C	
		07	-3.0 °C	
		08	-3.5 °C	
		09	-4.0 °C	
		10	+0.5 °C	Less cooling More heating
		11	+1.0 °C	
		12	+1.5 °C	
		13	+2.0 °C	
		14	+2.5 °C	
		15	+3.0 °C	
		16	+3.5 °C	
		17	+4.0 °C	

## 9) Auto restart

Enables or disables automatic restart after a power interruption.

Function number	Setting value	Setting description	Factory setting
40	00	Enable	◆
	01	Disable	

**NOTE:** Auto restart is an emergency function such as for power outage etc. Do not attempt to use this function in normal operation. Be sure to operate the unit by remote controller or external device.

## 10) Room temperature sensor switching

(Only for wired remote controller)

When using the wired remote controller temperature sensor, change the setting to "Both" (01).

Function number	Setting value	Setting description	Factory setting
42	00	Indoor unit	◆
	01	Both	

00: Sensor on the indoor unit is active.

01: Sensors on both indoor unit and wired remote controller are active.

### NOTES:

- Remote controller sensor must be turned on by using the remote controller.
- When using the remote sensor unit, set to "00" or set to "01" and then select "indoor unit sensor" from wired remote controller.



**11) Remote controller custom code**

(Only for wireless remote controller)

The indoor unit custom code can be changed. Select the appropriate custom code.

Function number	Setting value	Setting description	Factory setting
44	00	A	◆
	01	B	
	02	C	
	03	D	

**12) External input control**

"Operation/Stop" mode or "Forced stop" mode can be selected.

Function number	Setting value	Setting description	Factory setting
46	00	Operation/Stop mode 1	◆
	01	(Setting prohibited)	
	02	Forced stop mode	
	03	Operation/Stop mode 2	

**NOTE:** If this function is necessary, the rotary switch on the External input and output PCB should be set to 1.

**13) Room temperature sensor switching (Aux.) (for other than Floor type)**

To use the temperature sensor on the wired remote controller only, change the setting to "Wired remote controller" (01).

This function will only work if the function setting 42 is set at "Both" (01).

When the setting value is set to "Both" (00), more suitable control of the room temperature is possible by setting function setting 30 and 31 too.

Function number	Setting value	Setting description	Factory setting
48	00	Both	◆
	01	Wired remote controller	

**14) Indoor unit fan control for energy saving for cooling (for other than Floor type)**

Enables or disables the power-saving function by controlling the indoor unit fan rotation when the outdoor unit is stopped during cooling operation.

Function number	Setting value	Setting description	Factory setting
49	00	Disable	
	01	Enable	
	02	Remote controller	◆

00: When the outdoor unit is stopped, the indoor unit fan operates continuously following the setting on the remote controller.

01: When the outdoor unit is stopped, the indoor unit fan operates intermittently at a very low speed.

02: Enable or disable this function by remote controller setting.

**NOTE:** Set to "00" or "01" when connecting a remote controller that cannot set the Fan control for energy saving function or connecting a network converter. To confirm if the remote controller has this setting, refer to the operating manual of each remote controller.

# 15) Switching functions for external output terminal (For other than 18KMTB and KETA models in Wall-mounted type)

Functions of the external output terminal can be switched. For details, refer to “External input and output”.

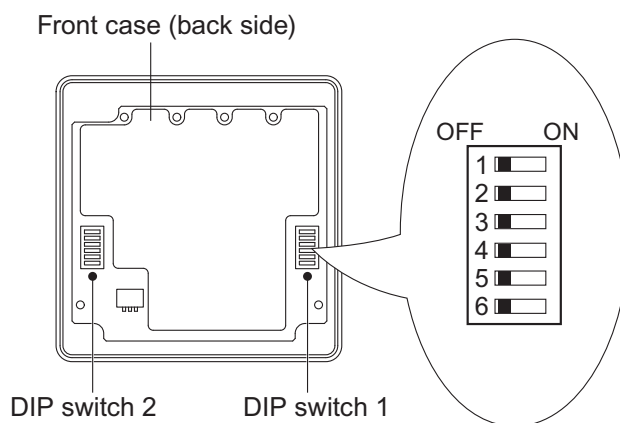
Function number	Setting value	Setting description	Factory setting
60	00	Operation status	◆
	01—08	(Setting prohibited)	
	09	Error status	
	10	Indoor unit fan operation status	
	11	(Setting prohibited)	

## 1-6. Wired remote controller (UTY-RNNGM)

DIP switch 1	SW1	Prohibited
	SW2	Dual remote controller setting
	SW3	Prohibited
	SW4	°F/°C switch
	SW5	Prohibited
	SW6	Memory backup setting

\* Do not use DIP switch 2.

### Switch location

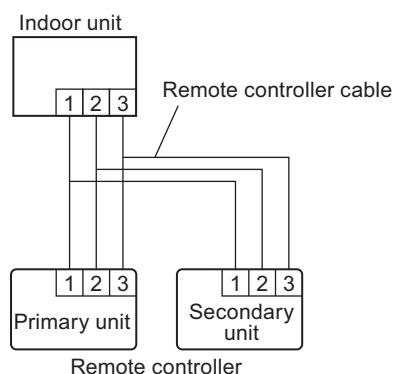


### DIP switch 1 setting

#### ● SW2: Dual remote controller setting

Set the remote controller SW2 according to the following table.

Number of remote controller	Primary unit	Secondary unit	Factory setting
	SW2	SW2	
1 (Normal)	OFF	—	◆
2 (Dual)	OFF	ON	



#### ● SW4: Switching temperature unit °F / °C

Displayed temperature unit can be switched between Fahrenheit (°F) and Celsius (°C).

SW4	Fahrenheit (°F) / Celsius (°C)	Factory setting
OFF	°C	◆
ON	°F	

## ● SW6: Memory backup setting

Set to “ON” to use batteries for the memory backup.

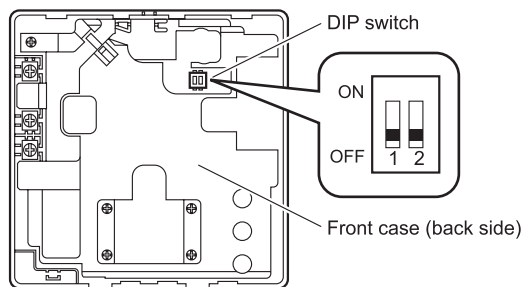
When batteries are not used, all of settings stored in memory will be deleted if there is a power failure.

SW6	Memory backup	Factory setting
OFF	Disable	◆
ON	Enable	

## 1-7. Wired remote controller (UTY-RVNGM)

DIP switch 1	SW1	Memory backup setting
	SW2	Dual remote controller setting

### ■ Switch location



### ■ DIP switch setting

#### ● SW1: Memory backup setting

Set to "ON" to use batteries for the memory backup.

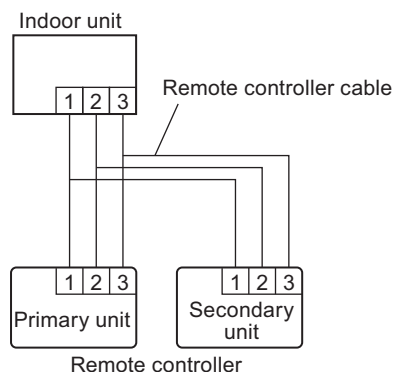
When batteries are not used, all of settings stored in memory will be deleted if there is a power failure.

SW1	Memory backup	Factory setting
OFF	Disable	◆
ON	Enable	

#### ● SW2: Dual remote controller setting

Set the remote controller SW2 according to the following table.

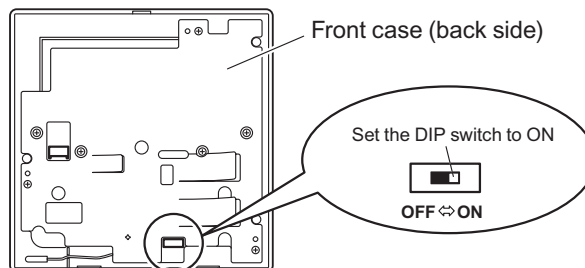
Number of remote controller	Primary unit	Secondary unit	Factory setting
	SW2	SW2	
1 (Normal)	OFF	—	◆
2 (Dual)	OFF	ON	



## 1-8. Wired remote controller (UTY-RLRG)

DIP switch	Memory backup setting
------------	-----------------------

### ■ Switch location



### ■ Dip switch setting

#### ● SW1: Memory backup setting

Set to "ON" to use batteries for the memory backup.

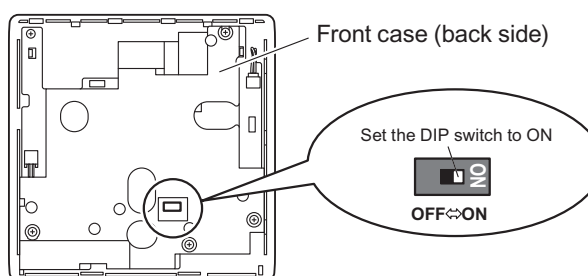
When batteries are not used, all of settings stored in memory will be deleted if there is a power failure.

SW1	Memory backup	Factory setting
OFF	Disable	◆
ON	Enable	

## 1-9. Wired remote controller (UTY-RNRGZ\*)

DIP switch	Memory backup setting
------------	-----------------------

### ■ Switch location



### ■ Dip switch setting

#### ● SW1: Memory backup setting

Set to "ON" to use batteries for the memory backup.

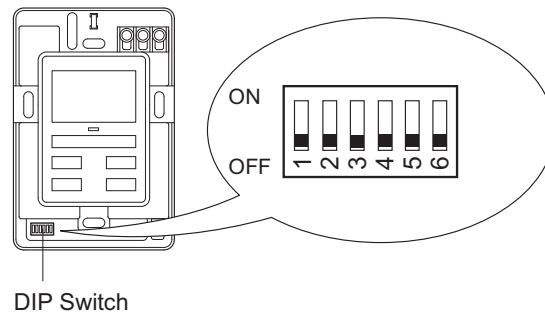
When batteries are not used, all of settings stored in memory will be deleted if there is a power failure.

SW1	Memory backup	Factory setting
OFF	Disable	◆
ON	Enable	

## 1-10. Simple remote controller (UTY-RSNGM)

DIP switch	SW1	Prohibited
	SW2	Dual remote controller setting
	SW3	°F/°C switch
	SW4	Prohibited
	SW5	Prohibited
	SW6	Prohibited

### ■ Switch location

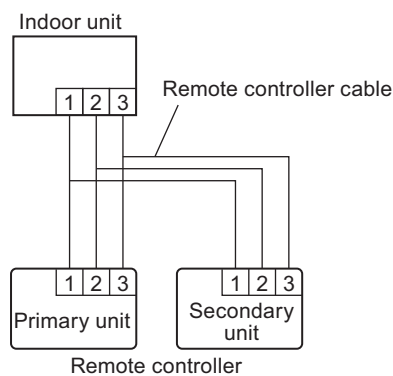


### ■ DIP switch setting

#### ● SW2: Dual remote controller setting

Set the remote controller SW2 according to the following table.

Number of remote controller	Primary unit	Secondary unit	Factory setting
	SW2	SW2	
1 (Normal)	OFF	—	◆
2 (Dual)	OFF	ON	



#### ● SW3: Switching temperature unit °F / °C

Displayed temperature unit can be switched between Fahrenheit (°F) and Celsius (°C).

SW3	Fahrenheit (°F) / Celsius (°C)	Factory setting
OFF	°C	◆
ON	°F	

## 2. Function settings (for outdoor unit)

Perform appropriate function setting locally according to the installation environment.

**NOTE:** Incorrect settings can cause a product malfunction.

### ⚠ CAUTION

- Before setting up the switch buttons, discharge the static electricity from your body.
- Never touch the terminals or the patterns on the parts that are mounted on the PCB.

### 2-1. Setting methods

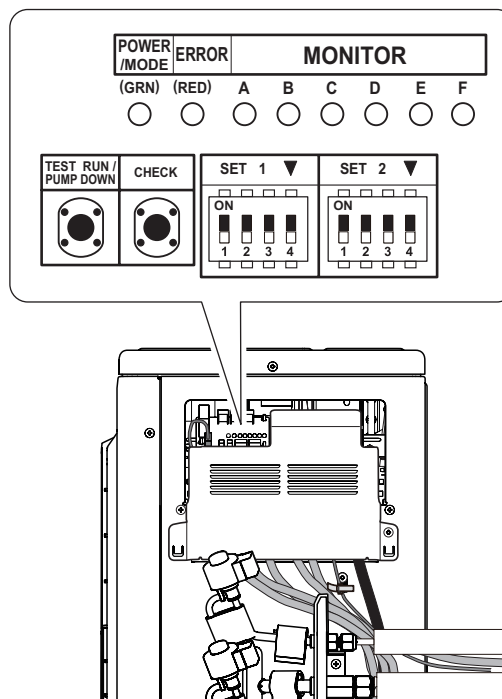
#### ⚠ WARNING

Never touch electrical components such as the terminal blocks or reactor except the switch on the display board. It may cause a serious accident such as electric shock.

#### ⚠ CAUTION

- Once refrigerant charging is completed, be sure to open the valve prior to performing the local settings. Otherwise, the compressor may fail.
- Discharge any static electricity from your body before touching the push switches. Never touch any terminal or pattern of any parts on the control board.

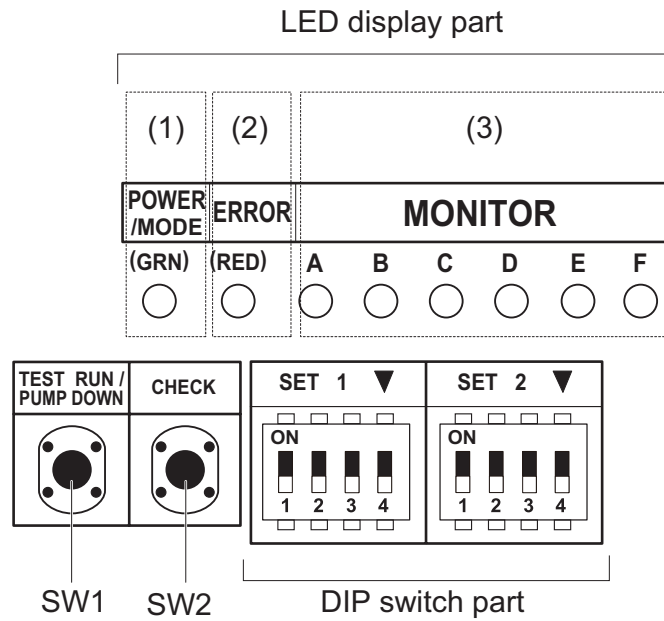
The positions of the switches on the outdoor unit control board are shown in the figure below.





## ■ Setting method

Various settings can be adjusted by changing DIP switches and push switches on the PCB of the outdoor unit.



1. Be sure to disconnect the power supply or turn off the breaker.
2. Change the DIP switch setting according to the required setting.

## ■ Description of display

LED lamp			Function or operation method
(1)	POWER/MODE	Green	<ul style="list-style-type: none"> <li>Turns on when the power supply is ON (Including when error occurs).</li> <li>Indicate the MODE by the number of flashes when the installation function is active.</li> </ul>
(2)	ERROR	Red	Flashes at high-speed when there is an error.
(3)	MONITOR	A	<ul style="list-style-type: none"> <li>Displays the location and contents of errors when there is an error. (Refer to <a href="#">Chapter 3-3. "Error code"</a> on page 05-63 for details.)</li> <li>Displays when check run is activated. (Refer to <a href="#">Chapter 3-1. "Check run"</a> on page 05-56 for details.)</li> </ul>
		B	
		C	
		D	
		E	
		F	

Switch		Function or operation method	Factory setting
SW1	Push	<ul style="list-style-type: none"> <li>For the test run start and stop.</li> <li>For the pump down start and stop.</li> </ul>	—
SW2	Push	<ul style="list-style-type: none"> <li>For when check run function is activated.</li> <li>For displaying the check run.</li> <li>For resetting the Automatic wiring correction memory.</li> </ul>	—
SET1-1	DIP	For selecting cooling or heating during test operation.	OFF
SET1-2	DIP	For switching SW1 operation.	OFF
SET1-3	DIP	(Prohibited)	OFF (Do not change)
SET1-4	DIP	For outdoor unit low noise operation function.	OFF
SET2-1	DIP	For selecting outdoor unit low noise operation function.	OFF
SET2-2	DIP	(Prohibited)	OFF (Do not change)
SET2-3	DIP	Changing the current limit	OFF
SET2-4	DIP		

Be sure to disconnect the power supply or turn off the breaker before changing the DIP switch setting.

## 2-2. Outdoor unit low noise operation function (option)

Change the outdoor unit low noise operation by using this setting.

### ⚠ CAUTION

- When the low noise operation function is working, cooling and heating capacity will decrease.
- When changing the settings, explain to the customer beforehand that the capacity decreases.

### NOTES:

- When SET1-4 is OFF, optional Central remote controller is required to use this function.
- When SET1-4 is ON, "Operation" and "Non-operation" mode of this function cannot be switched from the Central remote controller.

SET1-4	Setting	Factory setting
ON	Continuous operation	
OFF	Follow the Central remote controller settings	◆

SET2-1	Setting	Factory setting
ON	Lower	
OFF	Low	◆

## 2-3. Changing the current limit function

Change the outdoor unit current limit function by using this setting.

### ⚠ CAUTION

- When the current limited function is working, cooling and heating capacity will decrease.
- When changing the settings, explain to the customer beforehand that the capacity decreases.

SET2-3	SET2-4	Current		Factory setting
		AOHG18KBTA3	AOHG24KBTA3	
OFF	OFF	Full		◆
ON	OFF	10.0 A	12.0 A	
OFF	ON	8.0 A	10.5 A	

## 3. Check and test

### 3-1. Check run

- The check run is a function to screen and detect any wiring errors.
- After carrying out the check run, you can use the automatic wiring correction function to correct the wiring.
- Normal operation is possible without using the check run. In this case, use the test run or forced cooling function of the indoor unit to confirm any wiring errors.

#### ■ Things to confirm before starting the check run

To ensure safety, check that the following work, inspections and operations have been completed.

Check item		Check column
1	Check that all work on the piping connecting the outdoor unit, indoor units has been completed.	
2	Check that all work on the wiring connecting the outdoor unit, indoor units has been completed.	
3	Is there a gas leakage? (At pipe connections [flange connections and brazed areas])	
4	Is the system charged with the specified volume of refrigerant?	
5	Is a breaker installed at the power supply cable of outdoor unit?	
6	Are the wires connected to the terminals without looseness, and in accordance with the specifications?	
7	Is the 3-way valve of the outdoor unit open? (Gas pipe and liquid pipe)	
8	Is the power supply connected for more than 12 hours?	

#### ■ Restrictions applicable when performing the check run

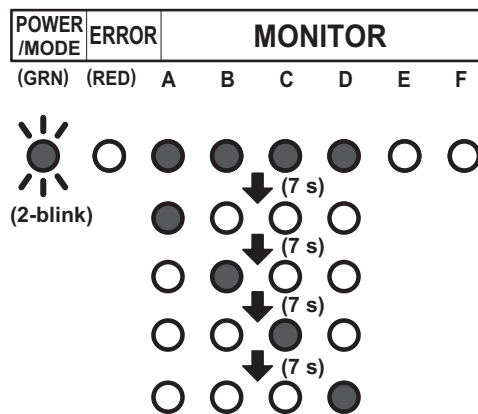
- When the check run starts, all indoor units connected to the outdoor unit will start to run automatically. During the check run, you cannot check the operation of the indoor units separately. After the check run, check the operation of the indoor units separately in normal operation.
- The check run can be used when the temperature is within the operable temperature of the air conditioner.
- In the check run, the air conditioner will automatically switch between cooling and heating depending on the external temperature and internal temperature.
- The check run can be completed in about 30 minutes (cooling) or about 1 hour (heating), but may take more depending on the external and internal temperature conditions etc.
- Do not conduct the check run with all the windows in the room closed. Otherwise the room temperature could get too low or too high.
- Depending on the difference of the room temperature of each room, a judgment may be impossible.
- Check run is a special operation so there may be a noise louder than the normal refrigerant flow sound or a creaking noise.



4. After the check run is completed, results will be displayed. Fill the displayed results in the result table accordingly.

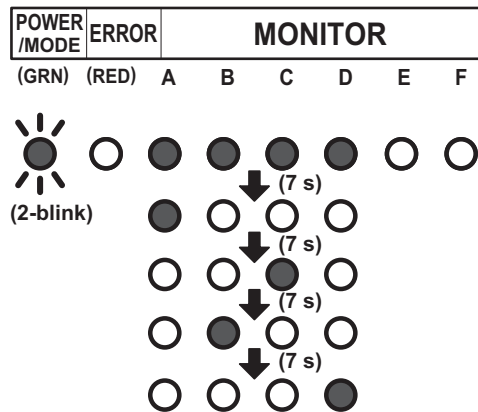
• **If the connection is correct (Example: When 4 indoor units are connected)**

After the number of connected units are displayed, the LED for each unit will light up in order from A to D.



• **If the connection is incorrect (Example: When connection of B and C of the 4 units are reversed)**

After the number of connected units are displayed, B and C will light up in reverse.



**NOTES:**

- Automatic wiring correction will not be completed if the power supply is disconnected while displaying the results. To confirm the automatic wiring correction, be sure to carry out step 5.
- If frost is formed on the outdoor unit while displaying the results, automatic defrost function will be operated. Proceed to step 5 after the defrost function is finished.

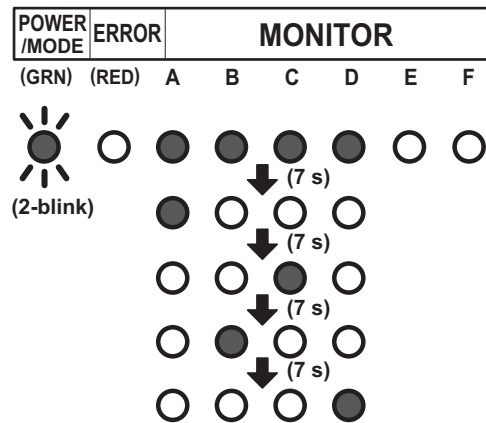
**[How to record the contents]**

- Fill the displayed results according to the following example.

Example: When piping A to D is connected but the wires for B and C are connected in reverse.

<Displayed results>

The LEDs will light up in 7 second intervals in the following order.



<Example of result table>

- a. Write a ● where the LEDs light up in the order that they light up.

	A	B	C	D	E	F
1	●	●	●	●	○	○
2	●	○	○	○	○	○
3	○	○	●	○	○	○
4	○	●	○	○	○	○
5	○	○	○	●	○	○
6	○	○	○	○	○	○
7	○	○	○	○	○	○

- b. Based on the results of step (a), record as follows.

- Trace the dotted circle with a pen if multiple places light up.

A	B	C	D	E	F
○	○	○	○	○	○

- Write the order from A to D in which the LEDs lit up inside the circle.

A	B	C	D	E	F
Ⓐ	Ⓒ	Ⓑ	Ⓓ	○	○

c. Select the correction method.



Correct the wiring manually.\*2  
Proceed to step 6.

Use the Automatic wiring correction function.\*1  
Proceed to step 5.

Write down the same results in the label on the reverse side of the service panel.

The results recorded are needed at the time of servicing.

### <Result Table>

	A	B	C	D	E	F
1	○	○	○	○	○	○
2	○	○	○	○	○	○
3	○	○	○	○	○	○
4	○	○	○	○	○	○
5	○	○	○	○	○	○
6	○	○	○	○	○	○
7	○	○	○	○	○	○

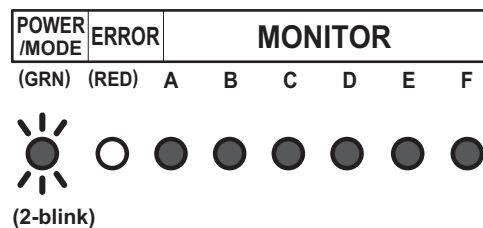
A	B	C	D	E	F
○	○	○	○	○	○

### NOTES:

- \*1: By using this function, the wiring is automatically corrected according to the piping.
- \*2: When correcting the wiring manually, please disconnect the power supply or turn off the breaker during results display, and then change the wiring manually according to the obtained test results.

For example, in Example 1, the wirings connected to the terminals B and C is to be exchanged manually.

- During results display, press the CHECK switch for 3 seconds or more.  
After LEDs A to F have lit in turn, all LEDs will light up indicating that the automatic wiring correction is completed.



- Disconnect the power supply or turn off the breaker and wait 10 minutes then turn the power back on and perform test run.

**NOTE:** If you do not disconnect the power supply or turn off the breaker, normal operation is not possible.

### Notices:

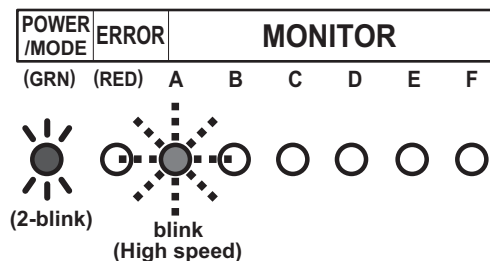
- If an error occurs during check run it will be suspended. Correct the error and start check run again.
- After the check run, if automatic wiring correction is carried out, the indoor unit's position will be modified to match the piping. (Note that the display of the optional remote controller changes.)
- If you start check run again after the automatic wiring correction is finished, the modification will be reset.



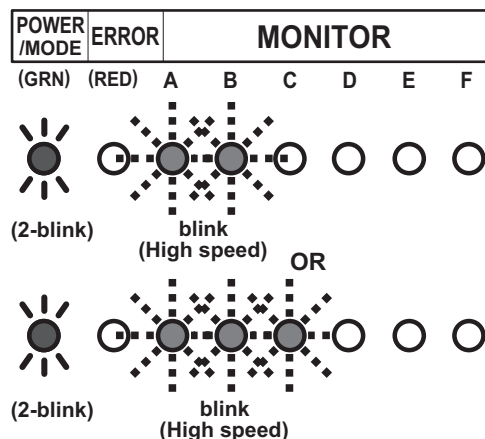
## ■ Failure indication of check-run judgment

The check run stops when there is an error, and the LED shows the relevant error indication. When you encounter the errors described here, perform checking by using the cooling test run of the indoor unit.

### • Temperature out of range judgment



### • Wiring/piping number difference



## ■ Redisplaying the results of check run

- When checking the content of automatic wiring correction, push the CHECK switch. The results of the check run is displayed. You can compare the result that is recorded in step (4) of "Chapter 3-1-3. ["Operating procedure for check run"](#) on page 05-57".
- If the automatic wiring correction is not completed, the POWER/MODE LED blinks twice and the MONITOR LED turns off.

## ■ Memory resetting of automatic wiring correction

### ⚠ CAUTION

When relocating the unit, reset the memory beforehand, or the unit may not function normally.

- Push the CHECK switch.  
The LED lights as shown in "["Redisplaying the results of check run"](#) on page 05-61".
- When the LED is on, press the CHECK switch for more than 3 seconds.
- The LEDs from A to F light in sequence, and then all LEDs light to indicate the completion of the memory resetting of automatic wiring correction.
- Disconnect the power supply or turn off the breaker.

## 3-2. Test run

### ⚠ CAUTION

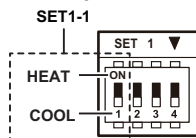
Always connect the power supply 12 hours prior to the start of the operation in order to protect the compressor.

1. Indoor unit
    - a. Is the drain normal?
    - b. Is there any abnormal noise and vibration during operation?
  2. Outdoor unit
    - a. Is there any abnormal noise and vibration during operation?
    - b. Will noise, wind, or drain water from the unit disturb the neighbors?
    - c. Is there any gas leakage?
- Do not operate the air conditioner in the test running state for a long time.
  - For the operation method of the test run for indoor unit and central remote controller, refer to the operating manual and perform operation check.

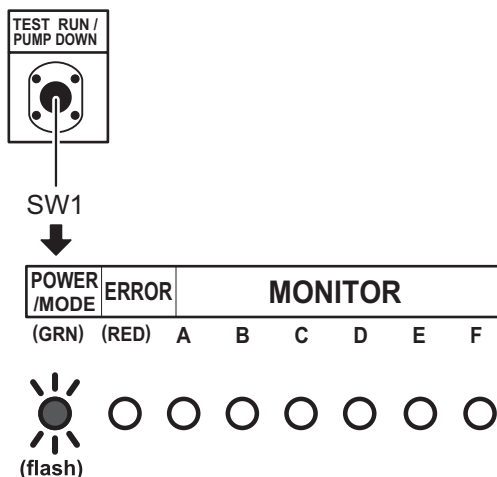
## ■ Test run method

Be sure to temporarily disconnect the power supply or turn off the breaker before changing the DIP switch settings.

1. Check the 3-way valves (both at the liquid side and gas side) are opened. Confirm that the DIP switch SET1-2 is switched off.
2. Set the operation mode to COOL or HEAT. When switching the DIP switch SET1-1 between HEAT and COOL, disconnect the power supply or turn off the circuit breaker beforehand.

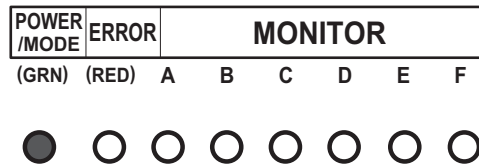


- In the first test run, be sure to set the operation mode to COOL.
  - The operation mode cannot be switched between COOL and HEAT during the test run. To switch the operation mode between COOL and HEAT, stop the test run, switch the operation mode, and then start the test run again.
3. Push TEST RUN switch for more than 3 seconds. The POWER / MODE LED flashes once.



4. Confirm operating status.

5. Push TEST RUN switch for more than 3 seconds.

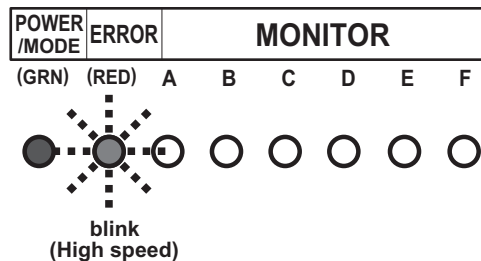


POWER/MODE LED will turn on, and test run stops.

### 3-3. Error code

If an error occurs, the LED lights to inform the relevant location and the code.

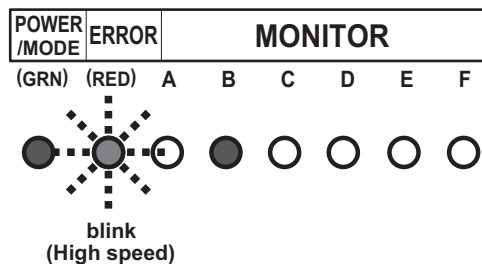
When error occurs, the error LED blinks at high speed.



#### ■ Error location

LEDs A to F of MONITOR light and indicate the location of the error. In the case of an overall error, LEDs A to F of MONITOR do not light.

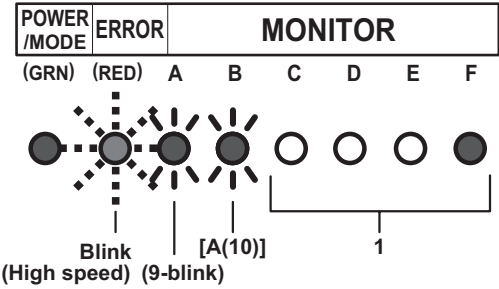
**Example:** Coil error on indoor unit B



## ■ Error code display

While the error is occurring, briefly push the SW1. The error code is displayed.

**Example: Coil error (Error cord = 9A.1)**



**Display mode**

LED on:

LED off:

Blink:   
(0.5s Light on / 0.5s Light off)

Number of blinking: ( )

For MONITOR (A and B)

- A: 10-blink
- C: 11-blink
- F: 12-blink
- J: 13-blink
- P: 14-blink
- U: 15-blink

C	D	E	F	
				1
				2
				3
				4
				5
				6
				7
				8
				9
				A
				C
				F
				J
				P
				U

Error code	Error type
11.3	Serial communication error
11.4	Serial communication error during operation
16.5	Communication error between controller and outdoor unit
22.1	Indoor unit capacity error
23.1	Connection prohibited (Series error)
5U.1	Indoor unit error
62.1	PCB model information error
62.3	EEPROM access error
62.8	EEPROM data corruption error
63.1	Inverter error
65.3	IPM error (Trip terminal L error)
71.1	Discharge temp. sensor error
72.1	Compressor temp. sensor error
73.2	Heat exchanger middle temp. sensor error
73.3	Heat exchanger liquid temp. sensor error
74.1	Outdoor temp. sensor error
75.1	Suction gas temp. sensor error
76.1	Valve sensor error
76.2	
77.1	Heat sink temp. sensor error
84.1	Current sensor 1 error (stoppage permanently)
86.1	Discharge pressure sensor error
86.4	High pressure switch 1 error
94.1	Trip detection
95.1	Compressor motor control error (stoppage permanently)
97.3	Fan motor 1 error (Duty error)
98.3	Fan motor 2 error (Duty error)
99.1	4-way valve error
9A.1	Coil 1 (expansion valve 1) error
A1.1	Discharge temperature 1 error (stoppage permanently)
A3.1	Compressor 1 temperature error

## 3-4. Pump down

### ⚠ WARNING

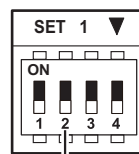
During the pump down operation, make sure that compressor is off before you remove the refrigerant pipe. Do not remove the connection pipe while the compressor is in operation with valve open. This may cause abnormal pressure in the refrigeration cycle that leads to breakage and even injury.

## ■ Pump down operation

When moving or discarding the air conditioner, in order to consider the environment and avoid the discharge of refrigerant to the atmosphere, pump down according to the following procedure.

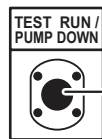
1. Connect the pressure gauge to the charging port.
2. Change the DIP switch on the board (SET1-2) to ON.

**NOTE:** Disconnect the power supply firmly on the breaker before changing the DIP switch settings.



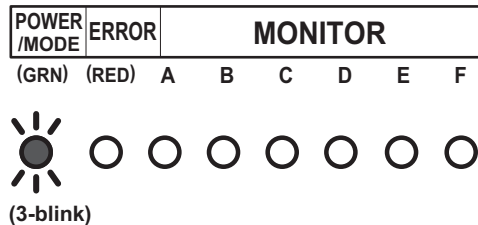
DIP switch  
(SET1-2)

3. To start operation, push the PUMP DOWN switch (SW1) for 3 seconds or push the switch after the power has been on for 3 minutes.



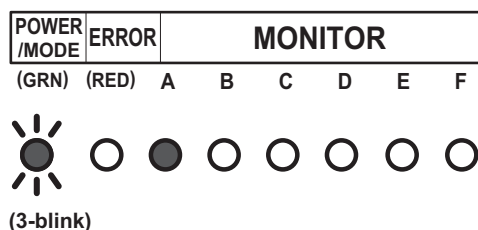
Push switch (SW1)

During pump down, the LED (POWER/MODE) blinks 3 times consecutively.



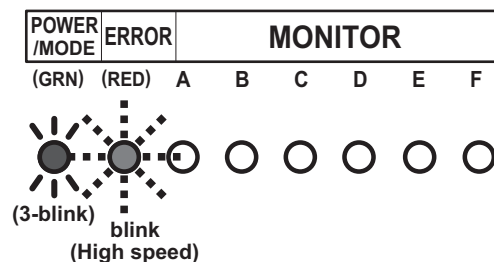
**NOTE:** If the PUMP DOWN switch (SW1) is pushed while the compressor is in operation, the compressor stops and the operation restart after about 3 minutes.

4. Close the liquid pipe valve.
5. When the value between 7.3 psi and 0 psi (0.05 MPa to 0 MPa) is shown, close the gas pipe valve.
6. Stop the pump down operation by pushing the PUMP DOWN switch (SW1) for 3 seconds. The LED light as follows.



## 7. Disconnect the power supply or turn off the breaker.

- NOTE:**
- Even if the pump down operation is not stopped by pushing the switch as in step 6, the operation stops automatically after 15 minutes, and the LED light as follows.



- After completing the pump down operation, disconnect the power supply or turn off the breaker.
- If the pump down operation still continues, open the liquid pipe valve. Then perform the procedure again starting from step 3.
- To cancel the pump down operation, push the PUMP DOWN switch (SW1) again. The indication of the LED returns to the original state which is before starting the pump down operation.  
(POWER/MODE LED: On)
- The pump down may stop before completion due to an error. To complete the pump down operation, correct the error, open the liquid pipe valve and then start from step 1 again. Otherwise, the refrigerant can be recovered from the service port.