

Stratton mk3

**Grundfos UPMXXL 25-120
Pump Control Instructions**

IMPORTANT NOTE

**THESE INSTRUCTIONS MUST BE READ
AND UNDERSTOOD BEFORE INSTALLING,
COMMISSIONING, OPERATING OR
SERVICING EQUIPMENT**



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Technical Enquiries

To supplement the detailed technical brochures, technical advice on the application and use in the Hamworthy Heating range is available from our technical team in Poole and our accredited agents.

Site Assembly

Hamworthy offer a service if site assembly for many of our products where plant room access is restricted. Using our trained staff we offer a high quality of build and assurance of a boiler built and tested by the manufacturer.

Commissioning

Commissioning of equipment by our own engineers, accredited agents or specialist sub-contractors will ensure the equipment is operating safely and efficiently.

Service Contracts

Regular routine servicing of equipment by Hamworthy service engineers inspects the safety and integrity of the plant, reducing the risk of failure and improving performance and efficiency. Service contracts enable you to plan and budget more efficiently.

Breakdown service, repair, replacement

Hamworthy provide a rapid response breakdown, repair or replacement service through head office at Poole and accredited agents throughout the UK.

Spare Parts

We offer a comprehensive range of spare parts, providing replacement parts for both current and discontinued products. Delivery options are available to suit you. Please refer to our website hamworthy-heating.com for more details.

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Section 1 - General

1.1 INTRODUCTION

This kit is suitable for the following boilers:

Stratton mk3 range of boilers utilising the Grundfos UPMXXL 25-120 pump.

This manual explains how to wire the pump leads to the installer wiring connections and determine the pump settings within the boiler control.

The Pump is powered by a 230 V auxillary supply within the boiler, and controlled by a PWM signal.

Table 1 - Stratton mk 3 for Hamworthy

Stratton mk3	Boiler Size
Stratton mk3	40
Stratton mk3	60
Stratton mk3	70
Stratton mk3	80
Stratton mk3	100
Stratton mk3	120

1.2 CONTENTS

This kit includes the following items:

Item	Description
1.	Grundfos UPMXXL 25-120 pump
2.	Fibre Washer Kit
3.	Instructions

Section 2 - Installation

2.1 PREPARATION

Install the Pump Control kit as follows:

⚠ WARNING: Be careful when you install electrical connections. Electric shock can cause serious injury or death and can cause damage to equipment.

1. Make sure that the electrical power supply to the boiler is set to OFF. For safe electrical isolation refer to Gas Safe technical bulletin 118. All work must be carried out by a competent person.
2. For access to the control box (refer to manual Stratton mk 3 INSTALLATION, COMMISSIONING AND SERVICING INSTRUCTIONS Frame 4.6.1).

Table 2 - Stratton mk 3 no separation

Boiler model	Flow rate Q (m ³ /hr) Δt 20° C	Head (m)	Pump used
S3-40	1.72	4.58	Grundfos UPMXXL 25-120
S3-60	2.59	6.01	
S3-70	3.02	5.81	
S3-80	3.45	4.89	
S3-100	4.28	7.29	
S3-120	5.14	7.75	

2.2 INSTALLATION

Install the pump electrical connections as follows (refer to Figure 1).

1. Mains power connections 13 earth, 14 live and 15 neutral.
2. PWM connections 37 ground (Blue) and 38 PWM (Brown) signal, the remaining Black wire should be taped back or removed.

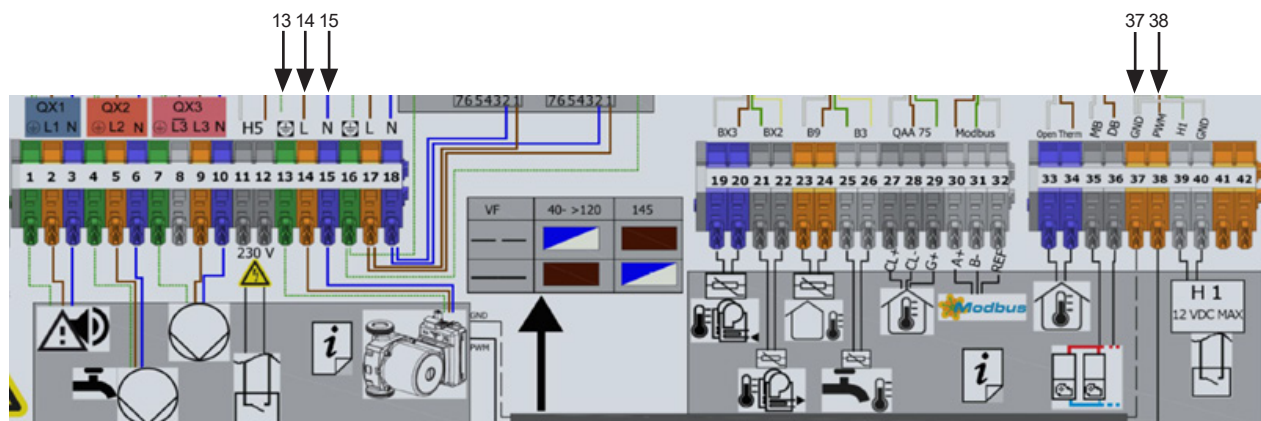


Figure 1 - Pump electrical connections

Section 2 - Installation

2.3 PUMP CONFIGURATION

The following parameters configure the PWM output to control a boiler pump.

Table 3 - Stratton mk 3 PWM output

Line No.	Parameter	Settings
6085	Function output P1	Boiler pump Q1
6086	Signal logic output P1	Inverted

2.4 PUMP PERFORMANCE

For pump performance refer to Figure 2 below.

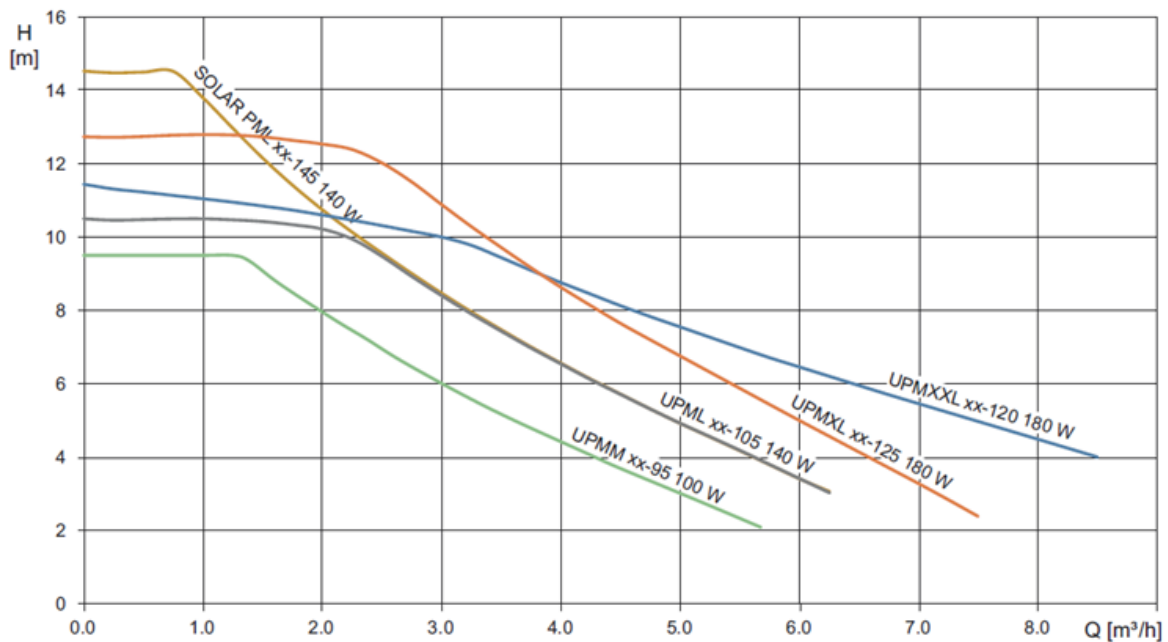


Figure 2 - UPMXXL pump performance curve (Blue line)

Section 2 - Installation

2.5 PUMP PARAMETER SETTINGS

The following parameters configure how the pump speed is to be controlled.

Table 4 - Stratton mk 3 pump speed control

Line No.	Parameter	Settings
2320	Pump modulation	Temp differential nominal
2321	Starting speed	100%
2322	Pump speed min	40%
2323	Pump speed max	100%

The following parameters determine the limitation.

Table 5 - Stratton mk 3 limitation

Line No.	Parameter	Settings
2316	Temp differential max	20° C
2317	Temp differential nominal	10° C

Notes

Notes



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