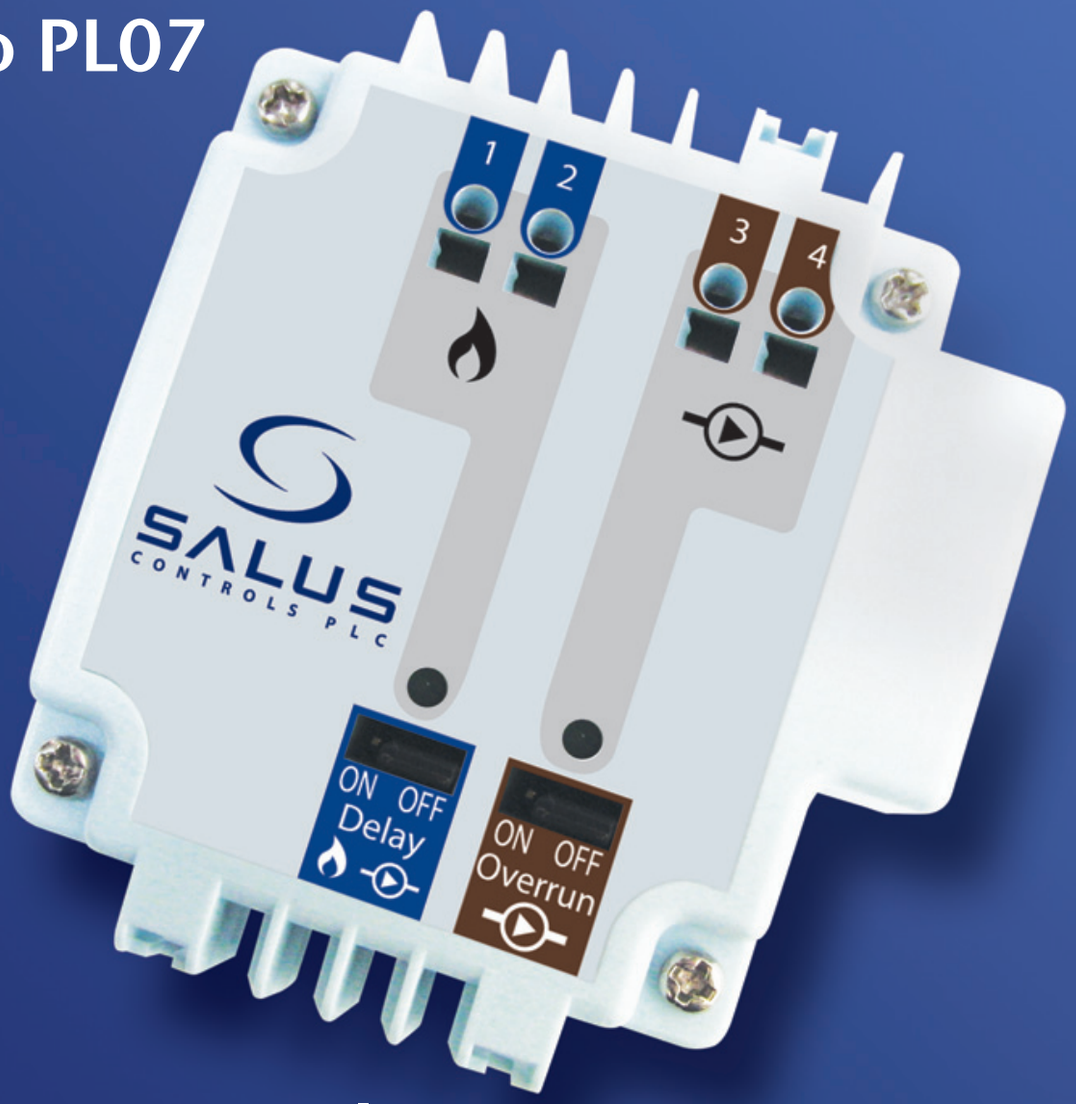
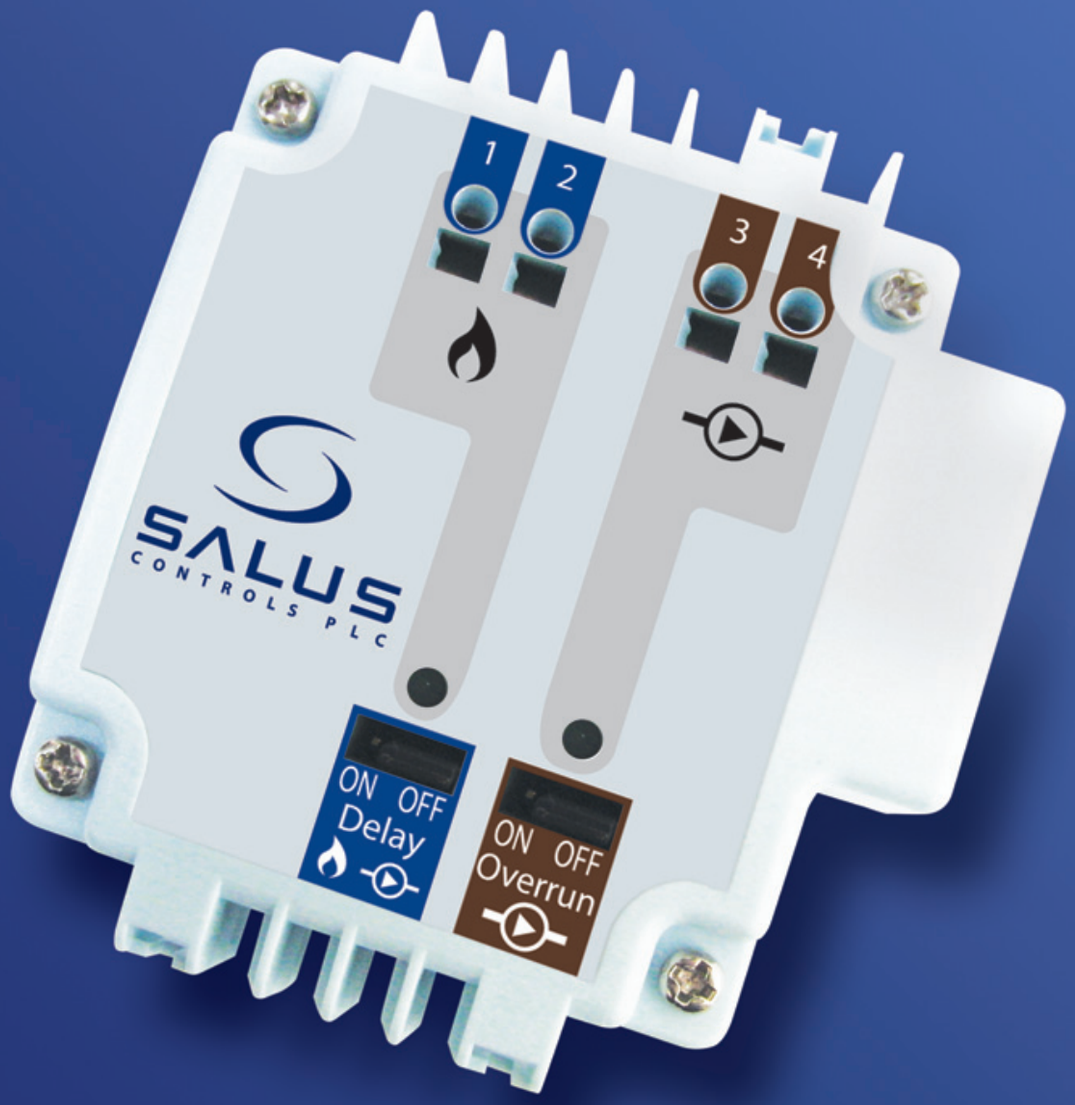
Pump and Boiler Logic Module

Model No PL07



Instruction Manual



PRODUCT COMPLIANCE

This product complies with the essential requirements of the following EC Directives:

- Electro-Magnetic Compatibility Directive 2004/108/EC
- Low Voltage Directive 2006/95/EEC
- EC Marking Directive 93/68/EEC

SAFETY INFORMATION

These instructions are applicable to the Salus Controls model stated on the front cover of this manual only, and must not be used with any other make or model.

These instructions are intended to apply in the United Kingdom only, and should be followed along with any other statutory obligations.

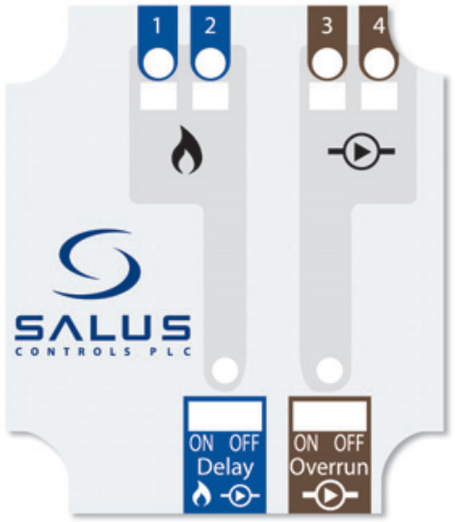
This accessory must be fitted by a Competent person, and installation must comply with the guidance provided in the current editions of BS7671 (IEE Wiring Regulations) and Part 'P' of the Building Regulations. Failure to comply with the requirements of these publications could lead to prosecution.

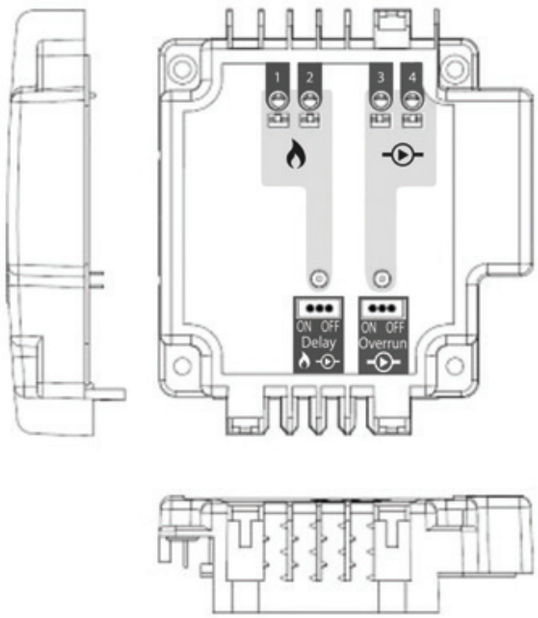
Always isolate the AC Mains supply before inserting or removing the unit from the KL06 wiring centre, or carrying out any work on the PL07 logic module.

Please leave these instructions with the end user where they should be kept in a safe place for future reference.

INTRODUCTION

The PL07 from Salus Controls is a modular pump and boiler logic control module, designed specifically for heating applications.





FEATURES

- Modular installation
- Cage clamp wiring terminals (no terminal screws)
- Separate circulating pump and boiler control relays
- Volt free contacts
- User selectable pump run-on timer
- Auto shutdown in case of power failure

INSTALLATION

Please read the important safety information at the start of this manual before you begin to install the device.

NOTE: All electrical installation work should be carried out by a suitably qualified Electrician or other competent person.

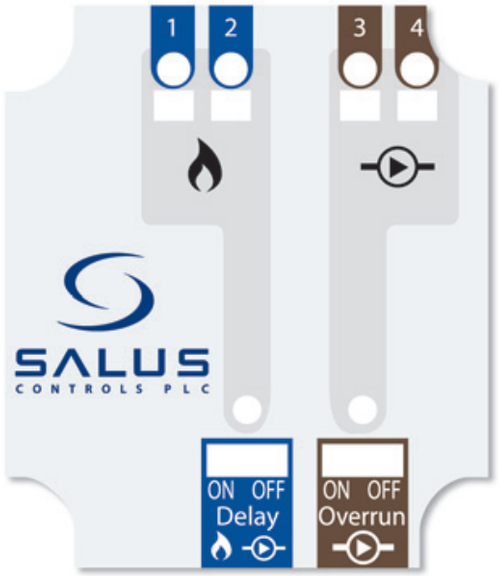
If you are not sure how to install this logic module consult either with a qualified electrician, heating engineer or your boiler / heating system supplier for advice on how to continue.

The PL07 logic module is not a standalone unit, and is intended to be mounted on a KL06 wiring centre. The wiring centre should be installed first, followed by the PL07 logic module.

To install the logic module, undo the securing screw on the wiring centre, insert the logic module and then refit and tighten the securing screw.

The PL07 logic module should be mounted in a location where it will not come into contact with water, moisture or condensation. The location should also be accessible for the connection of mains and control wiring.

There are few electrical connections required to the PL07, and these connections should be made to the cage clamp terminals on the front of the module (after first securing the cable in the KL06 wiring centre):



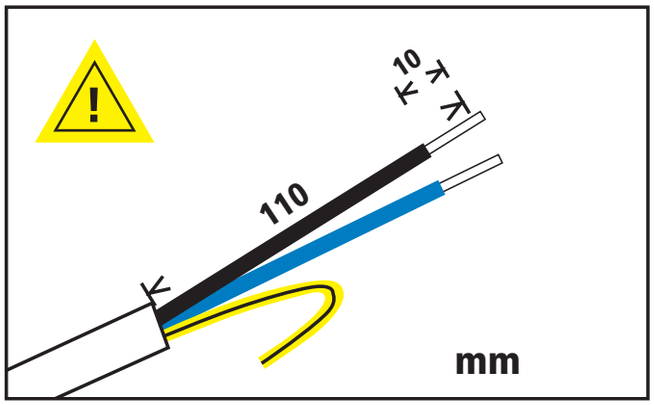
Terminal Marking	Function
1	Common Contact (Boiler)
2	Normally Open Contact (Boiler)
3	Common Contact (Pump)
4	Normally Open Contact (Pump)

CABLE CONNECTIONS

The PL07 does not use conventional screw terminals for wiring connections, but uses cage clamp terminals. The cage clamp terminals are spring loaded and provide a very quick and secure method of making all the electrical connections to the module.

Please take the following steps to make the wiring connections to the PL07:

1. Prepare the cable ends:



- Strip outer sheath to a distance of 110mm
- Strip 10mm from the ends of each conductor sheath

It is very important that these dimensions are followed to ensure correct connection to the module.

2. Insert the cable into the cable grip:

3. Route the conductors through the wire guides:

4. Insert the conductors into their appropriate terminals:

Cable sizes used should be within the following ranges –

- Solid: 0.5 – 1.5mm^2
- Stranded: 1.0 – 1.5mm^2

If using stranded cable, a small screwdriver can be used to open the cage clamp to allow conductor insertion.

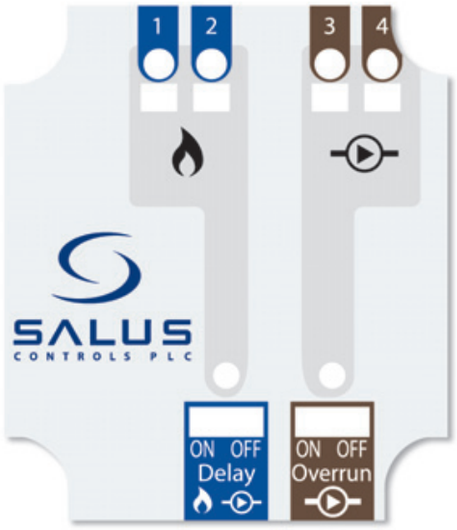
5. Fit the protective cover:

Secure the cover by turning the locking screws a quarter turn.

ELECTRICAL SAFETY - The PL07 logic module should not be operated without the protective cover in place.

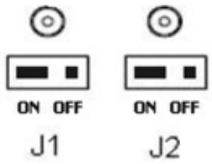
USER INTERFACE AND CONTROLS

The status and operation of the PL07 is clearly shown by the use of two green Light Emitting Diodes (LEDs) on the module front panel:

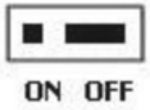
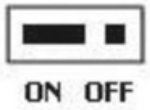
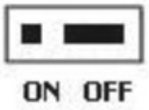


When initially powering up the PL07, both LEDs will turn on for about one second before turning off.

The LED indicators allow the user to see at a glance the current status of the logic module. The only user adjustable settings for the PL07 are the mode jumper settings, accessible from the front panel of the module:



JUMPER SETTING SUMMARY

Jumper	Function	Default Setting
J1 – Boiler and Pump protection ON – OFF  	**OFF** – Disables boiler and pump protection (immediately turns pump and boiler relays on when a thermostat calls for heat). **ON** – Enables boiler and pump protection (delays turning on pump and boiler relays for 3 minutes when a thermostat calls for heat).	Jumper in ON position
J2 – Pump overrun time ON – OFF  	**ON** – After all thermostats have switched off the pump runs for an additional 3 minutes for boiler protection. **OFF** – Disables pump over run. When all thermostats are switched off the pump will also switch off immediately as well.	Jumper in ON (3 minute) position

OPERATION

Boiler Control

The PL07 will turn the boiler on when it receives a call for heat from any of the installed thermostats via the KL06 wiring centre. Depending on the jumper settings the boiler will be turned on immediately, or after a delay of three minutes. Once the thermostats are no longer calling for heat, the boiler will be turned off immediately.

The boiler is controlled by the use of a Normally Open (NO) latching relay within the PL07 logic module. The relay is designed for Volt-free operation, and will work with boilers with 24V AC or 230V AC control systems.

Circulating Pump Control

The PL07 will turn the circulating pump on when it receives a signal from any of the installed thermostats via the KL06 wiring centre.

The circulating pump is controlled by the use of a Normally Open (NO) latching relay within the PL07 logic module. The relay is designed for 230V AC switching. If within a one week period no switching signal has been detected from the KL06 wiring centre, the PL07 will run the circulating pump for five minutes to avoid any damage to the pump and boiler.

The boiler and pump will be turned on by the PL07 (immediately, or after a delay of three minutes) if there is a call for heat from any of the installed thermostats. Once all the thermostats are no longer calling for heat, the boiler will be turned off immediately and the pump will be operated in accordance with the relevant jumper settings (i.e. the pump will be turned off immediately, or after a delay of three minutes).

Safety Protection

In case of power failure to the wiring centre, the PL07 has the capability to detect this power loss, and will automatically switch the boiler and circulating pump relays OFF.

MAINTENANCE

The PL07 logic module requires no special maintenance. Periodically, the outer casing can be wiped clean using a dry cloth (please DO NOT use solvents, polishes, detergents or abrasive cleaners, as these can damage the module).

There are no user serviceable parts within the unit; any servicing or repairs should only be carried out by Salus Controls or their appointed agents.

Should the PL07 logic module fail to function correctly, check:

- The KL06 wiring centre has mains power.
- The PL07 is inserted correctly into the wiring centre.
- Heating system time switch or programmer is switched on.

WARRANTY

Salus Controls warrants that this product will be free from any defect in materials or workmanship, and shall perform in accordance with its specification, for a period of two years from the date of installation. Salus Controls sole liability for breach of this warranty will be (at its option) to repair or replace the defective product.

PRODUCT SPECIFICATION

Model:	PL07
Type:	Controlled logic module for pump and boiler control in heating applications.

Switching

1. Circulating Pump Relay:

Switching Voltage:	230V AC, 50Hz
Switching Current:	5A resistive, 2A inductive
Contact Type:	Normally Open

2. Boiler Relay:

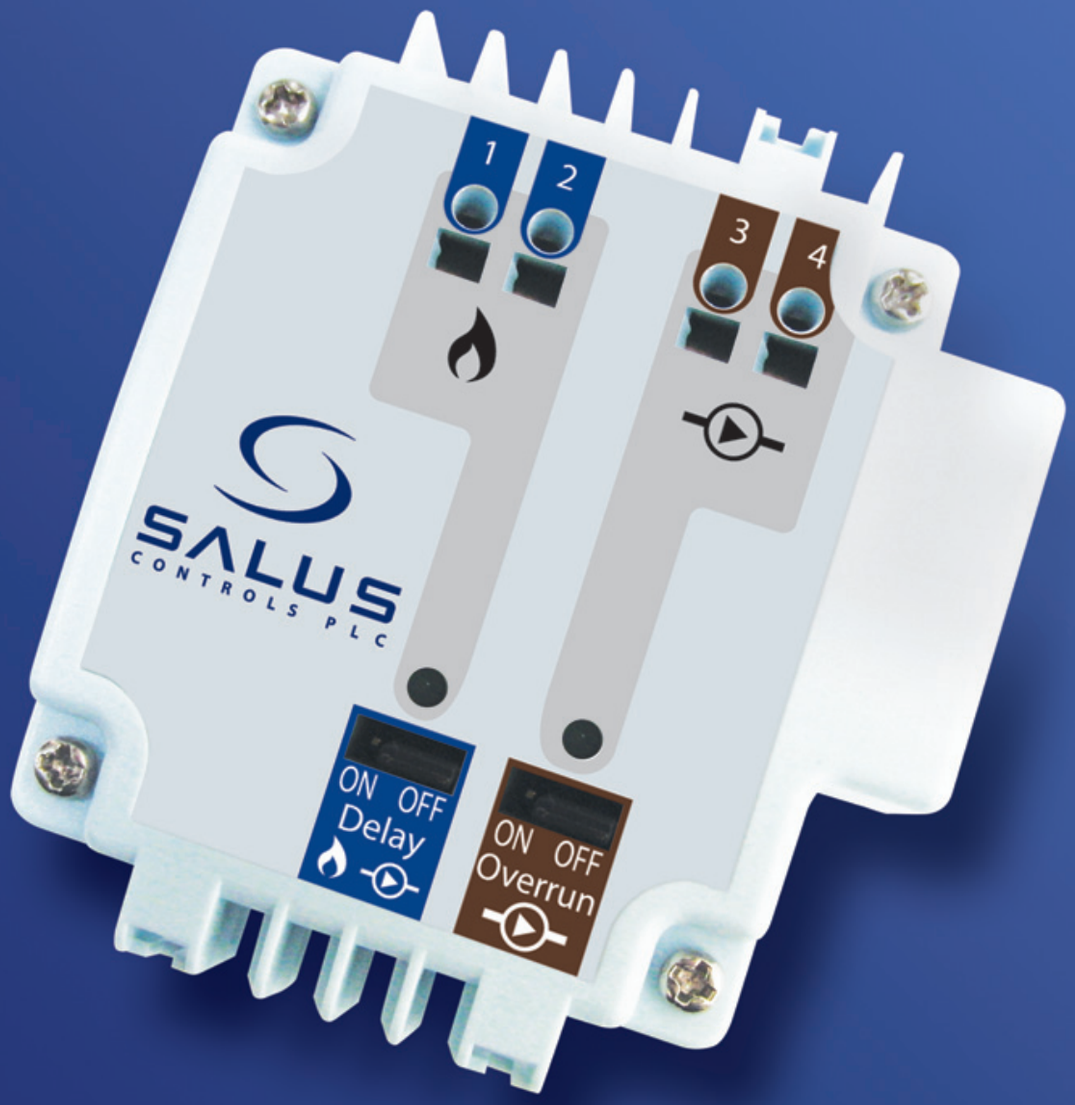
Switching Voltage:	24V AC or 230V AC, 50Hz
Switching Current:	5A resistive, 2A inductive
Contact Type:	Normally Open

Environment

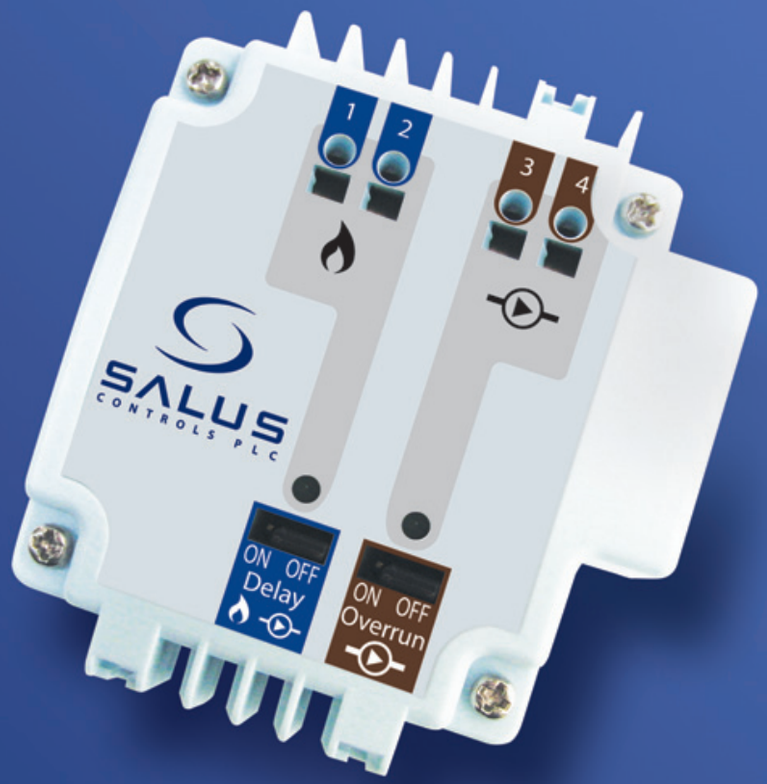
Operating Temperature:	0 °C to + 50 °C
Storage Temperature:	- 20 °C to + 60 °C

Protection

IP Rating:	IP20



PL07 INSTRUCTION MANUAL



www.salus-tech.com

Sales: Email: sales@salus-tech.com Tel: 01226 323961

Technical: Email: tech@salus-tech.com Tel: 01226 323961

Salus Controls plc, Salus House, Dodworth Business Park South,

Whinby Road, Dodworth, Barnsley S75 3SP