IMC

Immersion Controller

Installation and Operation Guide

EPH CONTROLS

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Installation Instructions

Factory Default Settings

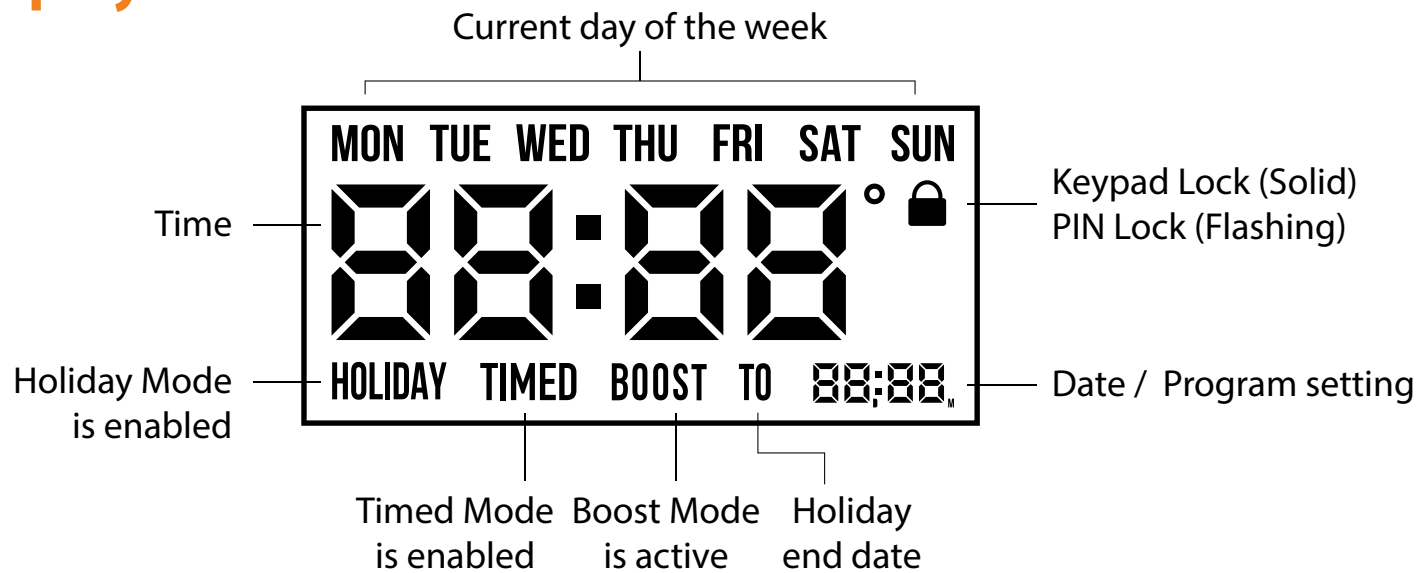
Clock:	24 hour
Daylight saving:	On
Backlight:	Auto
Keypad lock:	Off
PIN lock:	Off
Programming mode:	24H

Specifications

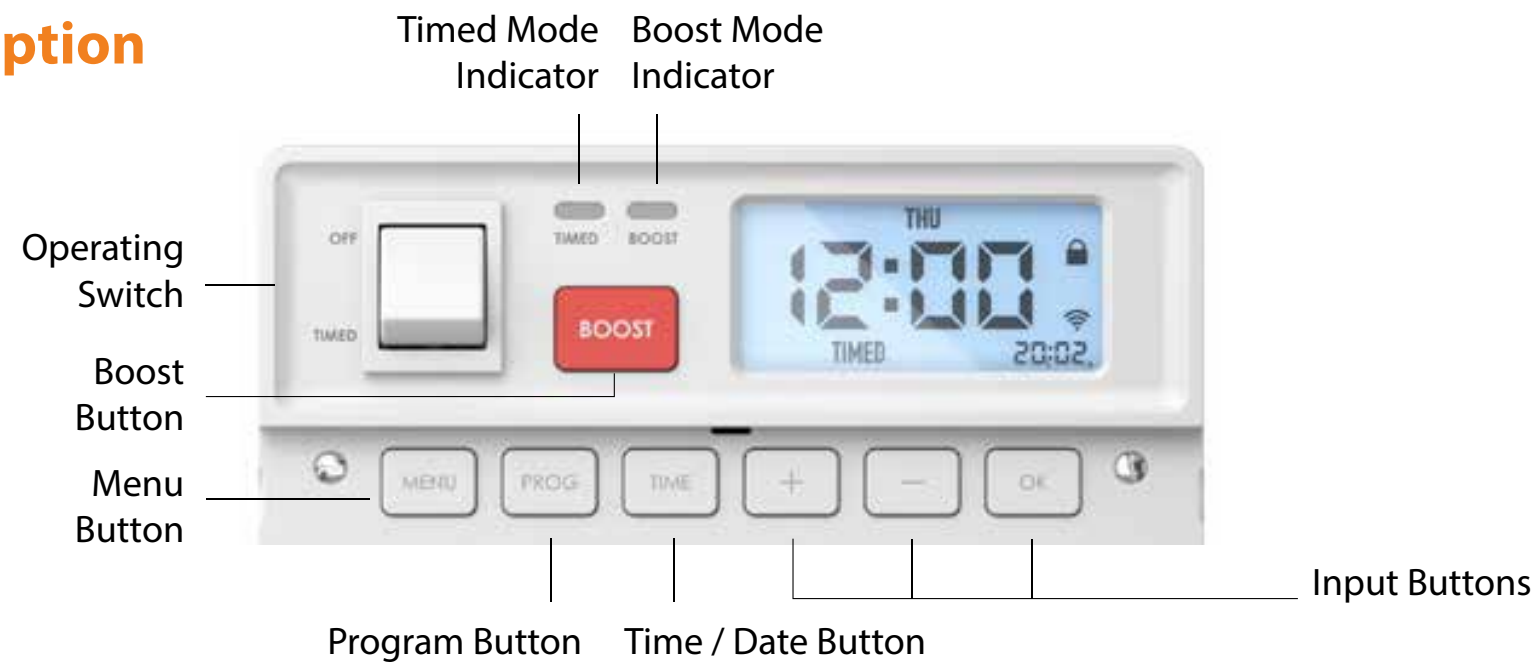
Power supply:	230V~, 50Hz
Power consumption:	10mA
Ambient temperature:	0…45°C
Admissible ambient humidity:	5-95%RH
Dimensions:	170 x 116 x 63 mm
Contact rating:	230V~, 50Hz, Max. 13A resistive
Program memory backup:	Internal
Battery:	LIR 2032
Backlight :	White
IP rating:	IP20
Pollution degree:	Pollution Degree 2
Rated impulse voltage:	Resistance to voltage surge 2KV as per EN60730
Automatic action:	Type 1C

LCD Symbol / Button Description

LCD Display



Button Description



Mounting & Installation

Caution!

- *Installation and connection should only be carried out by a qualified person.*
- *Only qualified electricians or authorised service staff are permitted to open the controller.*
- *If the controller is used in a way not specified by the manufacturer, its safety may be impaired.*
- *Prior to setting the controller, it is necessary to complete all required settings described in the section.*
- *Do not use sharp tools to push any button.*
- ***WARNING!*** *Isolate mains supply before commencing installation and ensure the unit is properly earthed.*

The IMC is supplied with its own surface mounting box, which can be mounted over a single or double gang flush wall box. It should not be mounted on an unearthed metal surface.

An immersion heater must have its own radial circuit.

This should be protected by a 16 Amp RCBO.

A three core heat resistant flexible cable with a minimum conductor size of 1.5mm^2 must be used to connect the IMC controller to the immersion heater and must be well insulated.

Mounting & Installation (Continued)

1) Loosen the 2 screws on the front housing of the controller.
2) Remove the appropriate break-outs before fixing the surface mounting box.
3) Secure the back housing with fixing screws as shown.

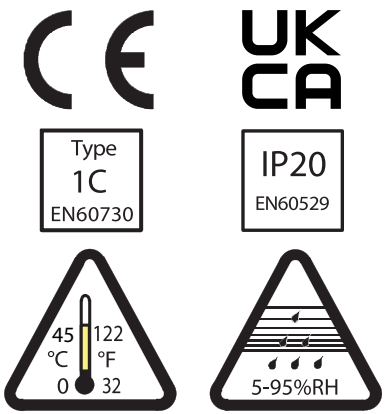
   Wire the controller as per wiring diagram on page 8.

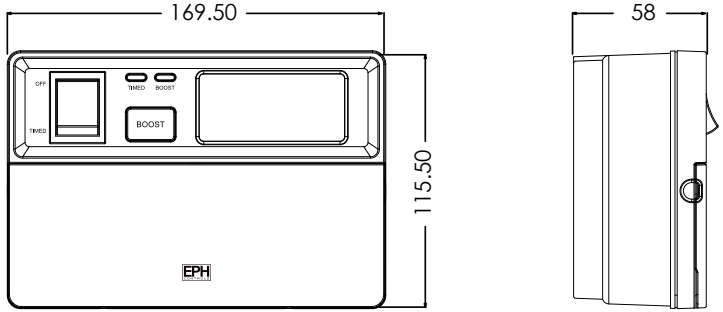
4) Replace the front housing and tighten the 2 screws.

Note

- *Use a cable with a minimum conductor size of 1.5mm^2 for a 3kW heater to connect the element(s) to the IMC controller.*
- *When wiring is complete ensure that all terminal screws, including the earth terminal screws are securely tightened.*
- *Clamp all surface wiring adjacent to the back housing of the controller or use trunking where appropriate.*
- *Secure the heat resistant flexible cords from the immersion heater using the cable clamp on the back housing.*

Installation Drawing





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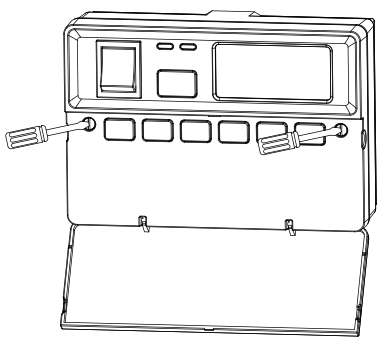

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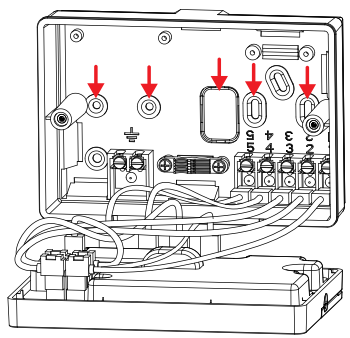

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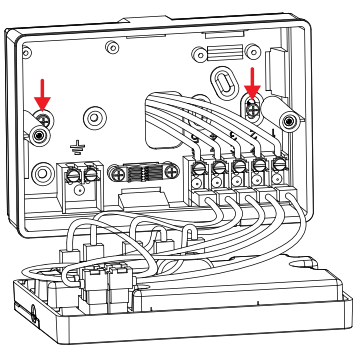

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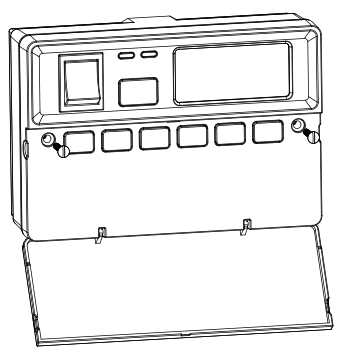
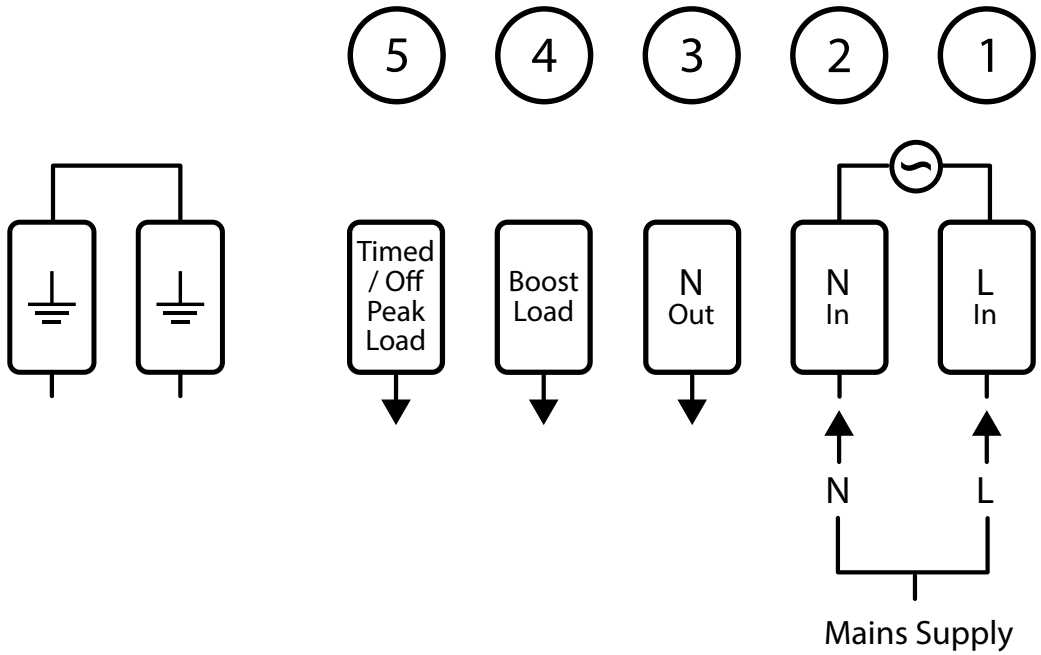


Wiring



Caution!

- *Mains voltage output only*

Terminal Connections

Terminal 1	Live In
Terminal 2	Neutral In
Terminal 3	Neutral Out
Terminal 4	Boost Load
Terminal 5	Timed / Off Peak Load

Single Element Immersion Heaters

1) Connect the Neutral to Terminal 3.
2) Connect the Earth to the Earth terminals.
3) Connect the Live to both Terminal 4 and Terminal 5.

Dual Element Immersion Heaters

1) The heaters should be controlled through separate thermostats. In practice the thermostat for the top (short) element is usually set 5 – 10 °C less than the thermostat for the (long) Off Peak element.
2) Connect the Neutral to Terminal 3.
3) Connect the Earth to the Earth terminals.
4) Connect the short element (Boost Load) to Terminal 4.
5) Connect the long element (Timed/Off Peak Load) to Terminal 5.

Note:

- *The 3 core flexible cable from the immersion heater to the IMC controller should be heat resistant and rated to 85˚C.*

Operating Instructions

Setting the date, time and programming mode

Press TIME once, the year will begin flashing.

Press + or − to select the year. Press OK .

Press + or − to select the month. Press OK .

Press + or − to select the day. Press OK .

Press + or − to select the hour. Press OK .

Press + or − to select the minute. Press OK .

Press + or − to adjust from 24H to 5/2 day

or 7 day. Press OK .

Press + or − to turn DST (daylight savings time) On or Off.

Press MENU or wait 30 seconds to return to normal operation.

Operating Switch

This function allows you to change the operating mode of the controller. There are two selections 'OFF' and 'Timed'.

Setting Controller to OFF

Use the Operating Switch to set the controller to OFF.

The controller will not operate when the switch is set to OFF.

Setting Controller to TIMED

Use the Operating Switch to set the controller to TIMED.

The controller will switch on and off based on the time programs set by the user in the PROG mode. (*Factory settings on page 14*)

Setting Controller to BOOST

Note: *Boost is only possible when the operating switch is set to TIMED*

Press the BOOST once for 30 minutes, twice for 1 hour, three times for 2 hours, four times for 3 hours. Press OK to confirm BOOST time required.

The controller will activate for the selected period and then revert to its previous timed program.

Programming Modes

The IMC Controller has the following programming modes available:

24 Hour mode	Programming all 7 days as one block with the same times.
5/2 Day mode	Programing Monday to Friday as one block and Saturday and Sunday as a 2nd block. There are 3 On and Off times per day possible.
7 Day mode	Programming all 7 days individually with different times.

If 7 D mode is selected, you can program each day of the week with 3 On and Off times.

If 24H mode is selected, you can only program each day of the week with the same 3 On and Off times.

Factory Program Setting

24H

	24 Hour					
	P1 ON	P1 OFF	P2 ON	P2 OFF	P3 ON	P3 OFF
Everyday	02:15	07:15	12:00	12:00	18:00	18:00

	5/2 Day					
	P1 ON	P1 OFF	P2 ON	P2 OFF	P3 ON	P3 OFF
Mon-Fri	02:15	07:15	12:00	12:00	18:00	18:00
Sat-Sun	02:15	07:15	12:00	12:00	18:00	18:00

	7 DAY					
	P1 ON	P1 OFF	P2 ON	P2 OFF	P3 ON	P3 OFF
Each day individually	02:15	07:15	12:00	12:00	18:00	18:00

Programming Timed Mode

Adjusting the program settings in 24H Mode

There are three On/Off times per day possible, represented by P1, P2 and P3.

Press the PROG once.

The day(s) of the week being programmed will appear at the top of the screen, the different modes (5/2 d, 7 d & 24 hr) can be chosen in the TIME menu (see page 11)

Press + or − to adjust the P1 ON time. Press OK .

Press + or − to adjust the P1 OFF time. Press OK .

Press + or − to adjust the P2 ON time. Press OK .

Press + or − to adjust the P2 OFF time. Press OK .

Press + or − to adjust the P3 ON time. Press OK .

Press + or − to adjust the P3 OFF time. Press OK .

Press MENU or wait 30 seconds to return to normal operation.

Programming Timed Mode (Continued)

Adjusting the program settings in 5/2D Mode

Press the PROG once.

MON – FRI will appear at the top of the screen.

Press + or − to adjust the P1 ON time. Press OK .

Press + or − to adjust the P1 OFF time. Press OK .

Repeat this process for P2 and P3 On / Off times.

SAT – SUN will appear at the top of the screen.

Repeat this process for the Saturday and Sunday programs

Press MENU or wait 30 seconds to return to normal operation.

Adjusting the program settings in 7D Mode

Press the PROG once.

MON will appear at the top of the screen.

Press + or − to adjust the P1 ON time. Press OK .

Press + or − to adjust the P1 OFF time. Press OK .

Repeat this process for P2 and P3 On / Off times.

TUE will appear on the screen, repeat this process for the remaining days of the week.

Press MENU or wait 30 seconds to return to normal operation.

Keypad Lock Function Unlocked

The Keypad Lock function allows the user to prevent changes being made by disabling the buttons.

Locking the keypad

To lock the keypad, press and hold both the + and − together for 10 seconds.

🔒 will appear on the screen. Keypad is now locked.

Unlocking the keypad

To unlock the keypad, press and hold both the + and − together for 10 seconds.

🔒 will disappear from the screen. Keypad is now unlocked.

Note: *The user can still use the operating switch to change between TIMED and OFF modes even when the keypad is locked.*

Menu Function

This menu allows the user to adjust additional functions on the controller.

P01 - Backlight Function Auto

There are two settings for selection, the factory default setting is AUTO.

AUTO: On pressing any button the backlight stays on for 10 seconds.

ON: Backlight is permanently ON.

To adjust the backlight function, press MENU .

P01 will be flashing on the screen. Press OK .

Press either + or − to select between AUTO and ON mode.

Press OK to confirm and to return to normal operation.

Menu Function (Continued)

P02 - Holiday Function Off

This function lets the user set the controller to the off position for a set duration.

To access the Holiday function. Press MENU .

'P01' will be flashing on the screen. Press + .

'P02' will be flashing on the screen. Press OK .

'HOLIDAY' and 'TO' will appear on the screen and the 'year' will be flashing.

Use + and − to confirm the year. Press OK .

Use + and − to confirm the month. Press OK .

Use + and − to confirm the day. Press OK .

Use + and − to confirm the hour. Press OK to confirm.

The controller is now in holiday mode and will not activate until the holiday period finishes. The screen will display the holiday end date and time.

All buttons, except MENU become inactive during the holiday period.

To cancel holiday mode, simply press MENU once.

P03 - PIN lock Off

The PIN lock function lets the user lock the controller with a PIN number to prevent changes to the programming.

To access the PIN lock function. Press MENU .

'P01' will be flashing on the screen. Press + .

'P02' will be flashing on the screen. Press + .

'P03' will be flashing on the screen. Press OK .

'0000' will be appear on the screen.

Use + and − to choose a value between 0 and 9 for the first digit of the PIN.

Press OK .

Repeat this process for the remaining 3 digits of the PIN.

Press OK .

Menu Function

P03 - PIN lock (Continued)

'COnF' will appear on the screen, the user needs to re-enter the PIN to confirm.

Enter your PIN number again by using + , − and OK.

Note

- *When the PIN is confirmed, the PIN lock is activated immediately.*
- *When the PIN lock is activated, will flash on the main screen.*
- *The user can still use the mode switch to change between TIMED and OFF modes even when the keypad is PIN locked.*
- *When the PIN lock is activated, Boost is limited to 30 minutes or 1 hour.*

To cancel PIN lock:

Press MENU and enter your PIN number again by using + , − and OK.

P04 - Reset Function

The Reset function lets the user reset the controller to factory default settings.

Press MENU.

'P01' will be flashing on the screen.

Use + to scroll to 'P04'. Press OK.

'No' and 'rst' will appear on the screen.

Use + to scroll to 'YES'. Press OK.

Device will now restart and revert to its original factory settings.

Notes

Notes

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