R27 V2

2 Zone Programmer

Installation and Operating Guide

EPH CONTROLS

Table of contents

Installation Instructions

Factory Default Settings	3
Specifications	3
LCD Display	4
Button Description	5
Wiring Diagram	6
Mounting & Installation	7

Operating Instructions

Quick Introduction to your R27 V2 programmer	10
Mode Selection	11
Programming Modes	12
Factory Program Settings	12
Adjust the Program Setting in 5/2 Day Mode	13
Reviewing the Program Settings	14
Boost Function	14
Advance Function	15

Operating Instructions Continued

Menu Function	16
P01 Setting the Date, Time and the Programming Mode	16
P02 Holiday Mode	17
P03 Frost Protection	18
P04 Zone Title	19
P05 PIN	20
Copy Function	22
Backlight Mode Selection	23
Locking the Keypad	24
Resetting the Programmer	24
Master Reset	25
Service Interval	25

2 Zone Programmer

Installation Instructions

Factory Default Settings

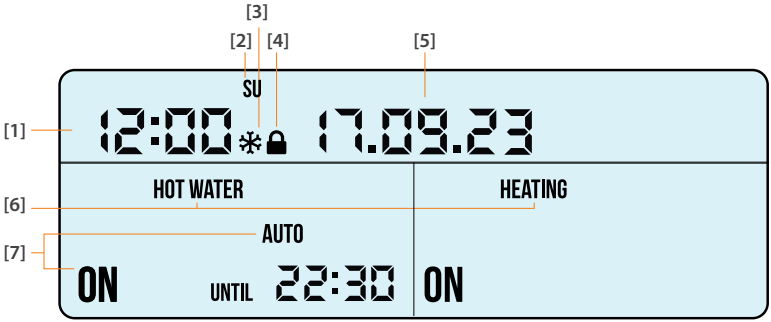
Contacts:	230VAC	Operating Mode:	Auto
Program:	5/2D	Pin Lock:	Off
Backlight:	On	Service Interval:	Off
Keypad Lock:	Off	Zone Title:	HOT WATER HEATING
Frost Protection:	Off		

Specifications

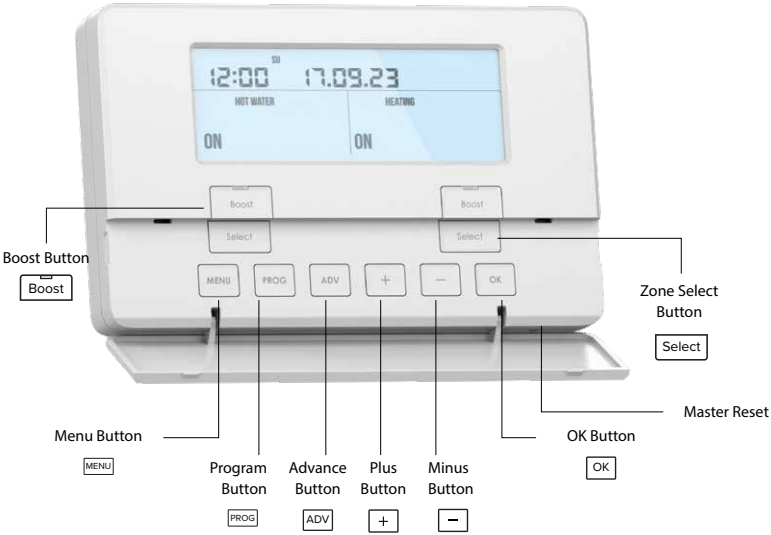
Power Supply:	230VAC	Backplate:	British System Standard
Ambient Temperature:	0 … 50˚C	Pollution degree:	2 (Resistance to voltage surge 2000V; as per EN60730)
Dimensions:	161 x 100 x 31 mm		
Contact Rating:	3(1)A		
Program Memory	5 Years	Software Class:	Class A
Temperature Sensor:	NTC 100K		
Backlight:	White		
IP Rating:	IP20		
Battery:	3VDC Lithium LIR2032 & CR2032		

LCD Display

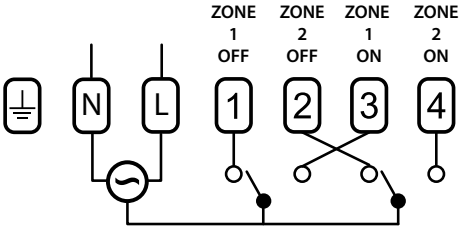
[1] Displays current time.
[2] Displays current day of the week.
[3] Displays when frost protection is activated.
[4] Displays when keypad is locked.
[5] Displays current date.
[6] Displays zone title.
[7] Displays current mode.



Button Description



Wiring Diagram



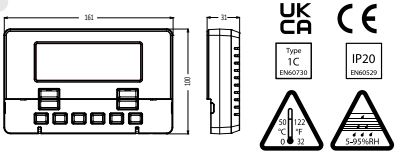
200-240V~
50/60Hz

Terminal Connections

⏚	Earth
N	Neutral
L	Live
1	Zone 1 OFF - N/C Normally closed connection
2	Zone 2 OFF - N/C Normally closed connection
3	Zone 1 ON - N/O Normally open connection
4	Zone 2 ON - N/O Normally open connection

Mounting & Installation

1



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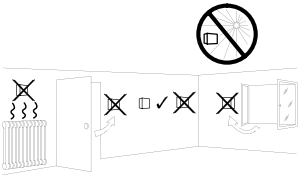

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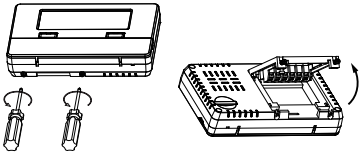

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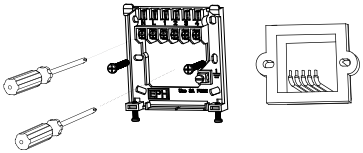

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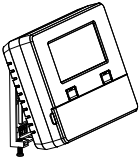

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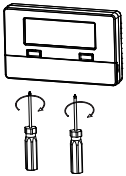

Caution!

- Installation and connection should only be carried out by a qualified person.
- Only qualified electricians or authorised service staff are permitted to open the programmer.
- If the programmer is used in a way not specified by the manufacturer, its safety may be impaired.
- Prior to setting the programmer, it is necessary to complete all required settings described in this section.
- Before commencing installation, the programmer must be first disconnected from the mains.

This programmer can be surface mounted or mounted to a recessed conduit box.

1) Remove the programmer from its packaging.
2) Choose a mounting location for the programmer:
   - Mount the programmer 1.5 metres above the floor level.
   - Prevent direct exposure to sunlight or other heating / cooling sources.
3) Use a philips screwdriver to loosen the screws of the backplate on the bottom of the programmer. The programmer is lifted upwards from the bottom and removed from the backplate. (See Diagram 3 on Page 7)
4) Screw the backplate onto a recessed conduit box or directly to the surface.
5) Wire the backplate as per the wiring diagram on page 6.
6) Sit the programmer onto the backplate making sure the programmer pins and the backplate contacts are making a sound connection, push the programmer flush to the surface and tighten the screws of the backplate from the bottom. (See Diagram 6 on Page 7)

2 Zone Programmer

Operating Instructions

Quick introduction to your R27^{V2} programmer:

The R27 ^{V2} programmer will be used to control two separate zones in your central heating system.

Each zone can be independently operated and programmed to suit your needs. Each zone has up to three daily heating programs called P1, P2 and P3. See Page 13 for instructions on how to adjust the program settings.

On the LCD screen of your programmer you will see two separate sections, one to represent each zone.

Within these sections you can see what mode the zone is currently in.

When in the AUTO mode, it will show when the zone is next programmed to be switched ON or OFF.

For 'Mode Selection' please see page 11 for further explanation.

When the zone is ON, you will see the red LED for that zone light up. This indicates that power is being sent from the programmer on this zone.

Mode Selection AUTO

There are four modes available for selection.

AUTO The zone operates up to three 'ON/OFF' periods per day (P1,P2,P3).

ALL DAY The zone operates one 'ON/OFF' period per day. This operates from the first 'ON' time to the third 'OFF' time.

ON The zone is permanently ON.

OFF The zone is permanently OFF.

Press Select to change between AUTO, ALL DAY, ON & OFF.

The current mode will be shown on the screen under the specific zone.

The Select are found under the front cover. Each zone has its own Select .

Programming Modes

This programmer has the following programming modes.

5/2 Day mode Programming Monday to Friday as one block and Saturday and Sunday as a 2nd block.

7 Day mode Programming all 7 days individually.

24 Hour mode Programming all 7 days as one block.

Factory Program Setting

5/2d

	5/2 Day					
	P1 ON	P1 OFF	P2 ON	P2 OFF	P3 ON	P3 OFF
Mon-Fri	06:30	08:30	12:00	12:00	16:30	22:30
Sat-Sun	07:30	10:00	12:00	12:00	17:00	23:00

	7 Day					
	P1 ON	P1 OFF	P2 ON	P2 OFF	P3 ON	P3 OFF
All 7 days	06:30	08:30	12:00	12:00	16:30	22:30

	24 Hour					
	P1 ON	P1 OFF	P2 ON	P2 OFF	P3 ON	P3 OFF
Everyday	06:30	08:30	12:00	12:00	16:30	22:30

Adjust the Program Setting in 5/2 Day Mode

Press [PROG].

Programming for Monday to Friday for Zone1 is now selected.

To change programming for Zone 2, press the appropriate [Select].

Press [+] and [−] to adjust the P1 ON time. Press [OK].

Press [+] and [−] to adjust the P1 OFF time. Press [OK].

Repeat this process to adjust P2 and P3 times.

Programming for Saturday to Sunday is now selected.

Press [+] and [−] to adjust the P1 ON time. Press [OK].

Press [+] and [−] to adjust the P1 OFF time. Press [OK].

Repeat this process to adjust P2 and P3 times.

Press [MENU] to return to normal operation.

While in programming mode, pressing [Select] will jump to the next day (block of days) without changing the program.

Note:

1. To change from 5/2d to 7D or 24H programming, refer to page 16, Menu P01.
2. If you don't wish to use one or more of the daily programs then simply set the start time and end time to be identical. For example, if P2 is set to start at 12:00 and end at 12:00 the programmer will simply ignore this program and proceed to the next switching time.

Reviewing the Program Settings

Press PROG .

Press OK to scroll through the periods for the individual day (block of days).

Press Select to jump to the next day (block of days).

Press MENU to return to normal operation.

You must press the specific Select to review the schedule for that zone.

Boost Function

Each zone can be boosted for 30 minutes, 1, 2 or 3 hours while the zone is in the AUTO, ALL DAY & OFF mode.

Press Boost 1, 2, 3 or 4 times, to apply the desired BOOST period to the Zone.

When a Boost is pressed there is a 5 second delay before activation where '**BOOST**' will flash on the screen, this gives the user the time to select the desired BOOST period.

To cancel a BOOST, press the respective Boost again.

When a BOOST period has ended or has been cancelled, the Zone will return to the mode that was previously active prior to the BOOST.

Note: A BOOST cannot be applied while in the ON or Holiday Mode.

Advance Function

When a zone is in the AUTO or ALLDAYmode, the Advance function allows the user to bring the zone or zones forward to the next switching time.

If the zone is currently timed to be OFF and ADV is pressed, the zone will be switched ON until the end of the next switching time. If the zone is currently timed to be ON and ADV is pressed, the zone will be switched OFF until the start of the next switching time.

Press ADV.

Zone1 and Zone 2 will begin to flash.

Press the appropriate Select.

The zone will display '**ADVANCE ON**' or '**ADVANCE OFF**' until the end of the next switching time.

Zone 1 will stop flashing and enter Advance mode.

Zone 2 will remain flashing.

Repeat this process with Zone 2 if required.

Press OK.

To cancel an ADVANCE, press the appropriate Select.

When an ADVANCE period has ended or has been cancelled, the zone will return to the mode that was previously active prior to the ADVANCE.

Menu Function

This menu allows the user to adjust additional functions.

To access the menu, press MENU .

P01 Setting the Date, Time and the Programming Mode DST ON

Press MENU , '**P01 tInE**' will appear on the screen.

Press OK , the year will begin to flash.

Press + and − to adjust the year. Press OK .

Press + and − to adjust the month. Press OK .

Press + and − to adjust the day. Press OK .

Press + and − to adjust the hour. Press OK .

Press + and − to adjust the minute. Press OK .

Press + and − to adjust from 5/2d to 7d or 24h mode. Press OK .

Press + and − to turn DST (Day Light Saving time) On or Off.

Press MENU and the programmer will return to normal operation.

Note:

Please see page 12 for descriptions of Programming Modes.

P02 Holiday Mode

This menu allows the user to switch off their heating system by defining a start and end date.

Press [MENU], '**P01**' will appear on the screen.

Press [+] until '**P02 HOL**' will appears on the screen.

Press [OK], '**HOLIDAY FROM**', the date and time will appear on the screen. The year will begin to flash.

Press [+] and [−] to adjust the year. Press [OK].

Press [+] and [−] to adjust the month. Press [OK].

Press [+] and [−] to adjust the day. Press [OK].

Press [+] and [−] to adjust the hour. Press [OK].

'**HOLIDAY TO**' and the date and time will appear on the screen. The year will begin to flash.

Press [+] and [−] to adjust the year. Press [OK].

Press [+] and [−] to adjust the month. Press [OK].

Press [+] and [−] to adjust the day. Press [OK].

Press [+] and [−] to adjust the hour. Press [OK].

The programmer will now be switched off during this selected period.

To cancel the HOLIDAY, press [OK].

The programmer will return to the normal operation when a holiday has finished or been cancelled.

P03 Frost Protection OFF

This menu allows the user to activate the frost protection between a range of 5°C and 20°C.

Frost protection is default set to OFF.

Press MENU, '**P01**' will appear on the screen.

Press + until '**P03 FrOST**' appears on the screen.

Press OK, '**OFF**' will appear on the screen.

Press + to select '**ON**'. Press OK.

'**5˚C**' will flash on the screen.

Press + and − to select your desired frost protection temperature. Press OK.

Press MENU and the programmer will return to normal operation.

The Frost symbol ❄ will display on the screen if the user activates it in the menu.

If the ambient room temperature drops below the desired frost protection temperature, all zones of the programmer will activate and the frost symbol will flash until the frost protection temperature has been achieved.

P04 Zone Title

This menu allows the user to select different titles for each zone.

The options are:

DEFAULT OPTIONS	RENAME OPTIONS
HOT WATER	ZONE 1
HEATING	ZONE 2

Press MENU , '**P01**' will appear on the screen.

Press + until '**P04**' appears on the screen.

Press OK , '**HOT WATER**' will flash on the screen.

Press + to change from '**HOT WATER**' to '**ZONE 1**'. Press OK . '**HEATING**' will flash on the screen.

Press + to change from '**HEATING**' to '**ZONE 2**'.

Press MENU and the programmer will return to normal operation.

P05 PIN

This menu allows the user to put a PIN lock on the programmer.

The PIN lock will reduce the functionality of the programmer.

Set up the PIN

Press [MENU], '**P01**' will appear on the screen.

Press [+] until '**P05 PIn**' appears on the screen.

Press [OK], '**OFF**' will appear on the screen.

Press [+] to change from OFF to ON. Press [OK]. '**0000**' will flash on the screen.

Press [+] and [−] to set the value from 0 to 9 for the first digit. Press [OK] to move to the next PIN digit.

When the last digit of the PIN is set, press [OK]. Verify is displayed with '**0000**'.

Press [+] and [−] to set the value from 0 to 9 for the first digit. Press [OK] to move to the next PIN digit.

When the last digit of the PIN is set, press [OK]. The PIN is now verified, and the PIN lock is activated.

If the verification PIN is entered incorrectly the user is brought back to the menu.

When the PIN lock is active the Lock symbol 🔒 will flash every second on the screen.

When the programmer is PIN locked, pressing the menu will take the user to the PIN unlock screen.

Note:

When the PIN lock is enabled, BOOST periods are reduced to 30 minute and 1 hour periods.

When the PIN lock is enabled, Mode Selections are reduced to Auto and OFF.

To Unlock the PIN

Press MENU, '**UNLOCK**' will appear on the screen. '**0000**' will flash on the screen.

Press + and − to set the value from 0 to 9 for the first digit.

Press OK to move to the next PIN digit.

When the last digit of the PIN is set. Press OK.

The PIN is now unlocked.

If a PIN has been unlocked on the programmer, it will automatically reactivate if there is no button pressed for 2 minutes.

To Deactivate the PIN

When the PIN is unlocked (see above instructions)

Press MENU, '**P01**' will appear on the screen.

Press + until '**P05 PIn**' appears on the screen.

Press OK, '**ON**' will appear on the screen.

Press + or − to select '**OFF**'. Press OK.

'**0000**' will flash on the screen. Enter the PIN. Press OK.

The PIN is now disabled.

Press MENU to return to normal operation or it will automatically exit after 20 seconds.

Copy Function

Copy function can only be used when the 7d mode is selected. (See page 16 to select 7d mode)

Press PROG to program the ON and OFF periods for the day for the week you want to copy.

Do not press OK on the P3 OFF time, leave this period flashing.

Press ADV , '**COPY**' will appear on the screen, with the next day of the week flashing.

To add the desired schedule to this day press + .

To skip this day press − .

Press OK when the schedule has been applied to the desired days.

Ensure the zone is in the 'Auto' mode for this schedule to operate accordingly.

Repeat this process for Zone 2 if required.

Note:

You cannot copy schedules from one zone to another, E.g. Copying Zone 1 schedule to Zone 2 is not possible.

Backlight Mode Selection ON

There are 3 backlight settings available for selection:

AUTO Backlight stays on for 10 seconds when any button is pressed.

ON Backlight is permanently On.

OFF Backlight is permanently Off.

To adjust the backlight press and hold [OK] for 10 seconds.

'**Auto**' appears on the screen.

Press [+] or [−] to change the mode between Auto, On and Off.

Press [OK] to confirm selection and to return to normal operation.

Locking the Keypad

To lock the programmer, press and hold [+] and [−] together for 10 seconds.

🔒 will appear on the screen. The buttons are now disabled.

To unlock the programmer, press and hold [+] and [−] for 10 seconds.

🔒 will disappear from the screen. The buttons are now enabled.

Resetting the Programmer

To reset the programmer to factory settings:

Press [MENU].

'**P01**' will appear on the screen.

Press [+] until '**P06 rESEt**' appears on the screen.

Press [OK] to select.

'**nO**' will begin to flash.

Press [+], to change from '**nO**' to '**YES**'.

Press [OK] to confirm.

The programmer will restart and revert to its factory defined settings.
The time and date will not be reset.

Master Reset

To master reset the programmer to factory settings, locate the master reset button on the right-hand side underneath the programmer. *(see page 5)*

Press the Master Reset button and release it.

The screen will go blank and reboot.

The programmer will restart and revert to its factory defined settings.

Service Interval OFF

The service interval gives the installer the ability to put an annual countdown timer on the programmer. When the Service Interval is activated '**SErv**' will appear on the screen which will alert the user that their annual boiler service is due.

For details on how to enable or disable the Service Interval, please contact customer service.

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