

Technical Application Guide

Eurotherm 3508 Controller



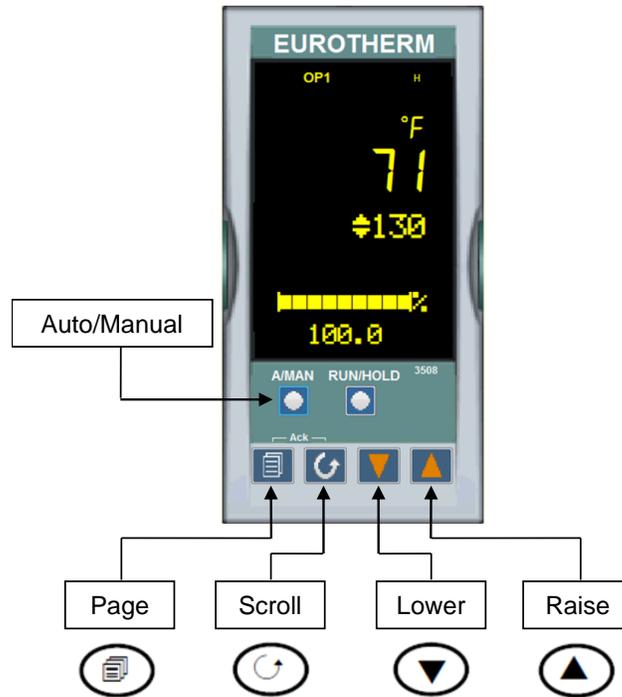
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Heating and Hot Water Solutions

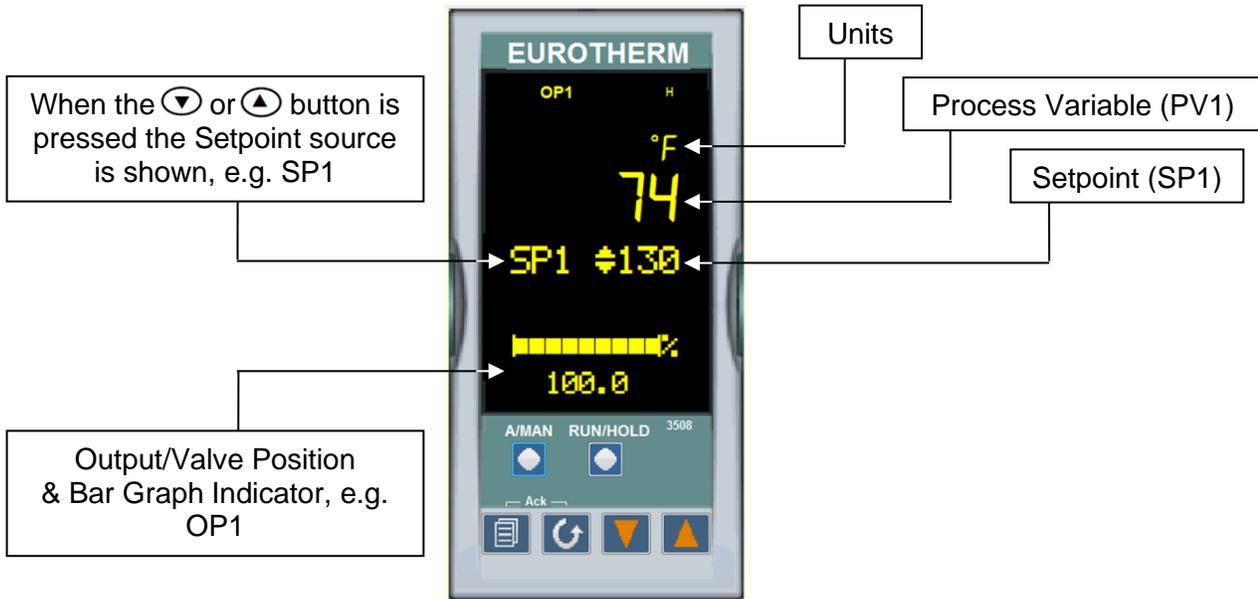
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1 OPERATOR BUTTONS



<p>A/MAN This button can be disabled</p>	<p>Toggles the selected loop between Auto and Manual operation.</p> <p>Manual operation means that the controller output power is adjusted by the user. The input sensor is still connected and reading the PV but the control loop is open.</p> <p>Auto means that the controller is automatically adjusting the output to maintain control, ie the loop is closed.</p> <p>If the controller is in manual mode, 'MAN' light will be indicated.</p> <p>If the controller is powered down in Manual operation it will resume this mode when it is powered up again.</p>
<p>PROG</p>	<p>To select the programmer summary page</p>
<p>RUN/HOLD This button can be disabled</p>	<p>Press once to start a program. 'RUN' will be indicated</p> <p>Press again to hold a program. 'HLD' will be indicated</p> <p>Press and hold for at least two seconds to reset a program.</p> <p>'RUN' will flash at the end of a program</p> <p>'HLD' will flash during holdback</p>
	<p>Press to select new PAGE headings</p>
	<p>Press to select a new parameter in the page</p>
	<p>Press to decrease an analogue value, or to change the state of a digital value</p>
	<p>Press to increase an analogue value, or to change the state of a digital value</p>

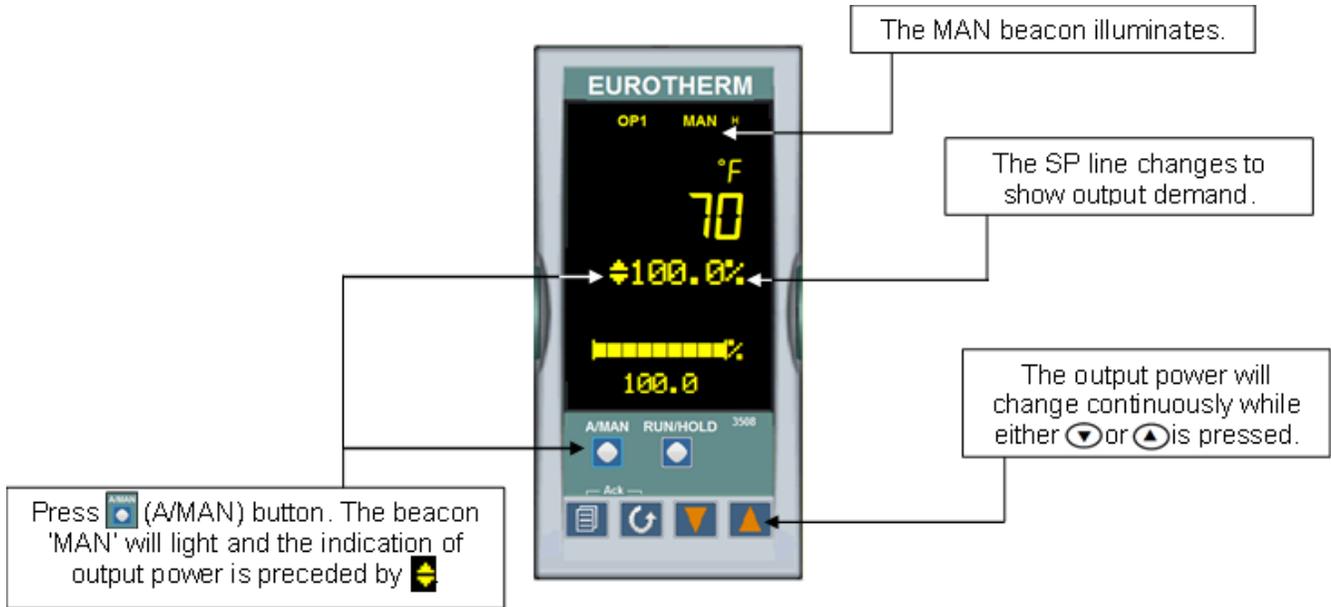
2 NORMAL OPERATION HOME DISPLAY



3 BEACON DISPLAY AND DESCRIPTION

OP1	In a single loop controller OP1 and OP2 operate channel 1 and 2 outputs respectively for the configured loop.
MAN	Illuminates when manual mode active. If the HOME display is showing the dual loop overview, MAN illuminates if Loop 1 is in manual. If the Loop 1 or Loop 2 overviews are being displayed MAN applies to the loop being displayed.
REM	Illuminates when remote setpoint active
ALM	If an alarm occurs the red alarm beacon flashes accompanied by message showing source of alarm. To acknowledge press  and  . The message disappears. If the alarm condition is still present the beacon lights continuously. When cleared it will extinguish.
H	Flashes when H Channel comms active

4 SELECTING AUTO/MANUAL OPERATION



5 ACCESS LEVELS

Parameters are available under different levels of security are Level 1, Level 2, Level 3 and Configuration Level.

Level 1 has no security password since it contains a minimal set of parameters generally sufficient to run the process on a daily basis.

Level 2 allows parameters, such as those used in commissioning a controller, to be adjusted.

Level 3 makes all operating parameters available and alterable (if not read only). Examples are:

- Range limits
- setting alarm levels
- communications address.

The instrument will continue to control when in **Levels 1, 2 or 3**.

Configuration Level makes available all parameters including the operating parameters so that there is no need to switch between configuration and operation levels during commissioning. It is designed for those who may wish to change the fundamental characteristics of the instrument to match the process. Examples are:

- Input (thermocouple type)
- Alarm type
- Communications type.

In **Configuration Level** the controller will not necessarily be controlling the process or providing alarm indication. Do not select configuration level on a live process.

Eurotherm 3508 Access Levels

Level	Pass Code
Level 1	Default
Level 2	42
Level 3	106
Config	303

6 SELECTING ACCESS LEVELS

1. From any display press and hold the PAGE (📄) button. After a few seconds the display will enter the **Access List** & show: Goto ↕ **Level 1**.

NOTE: Press SCROLL (↻) button to scroll through the list of Access parameters. If no button is pressed for about 2 minutes the display returns to the HOME display.

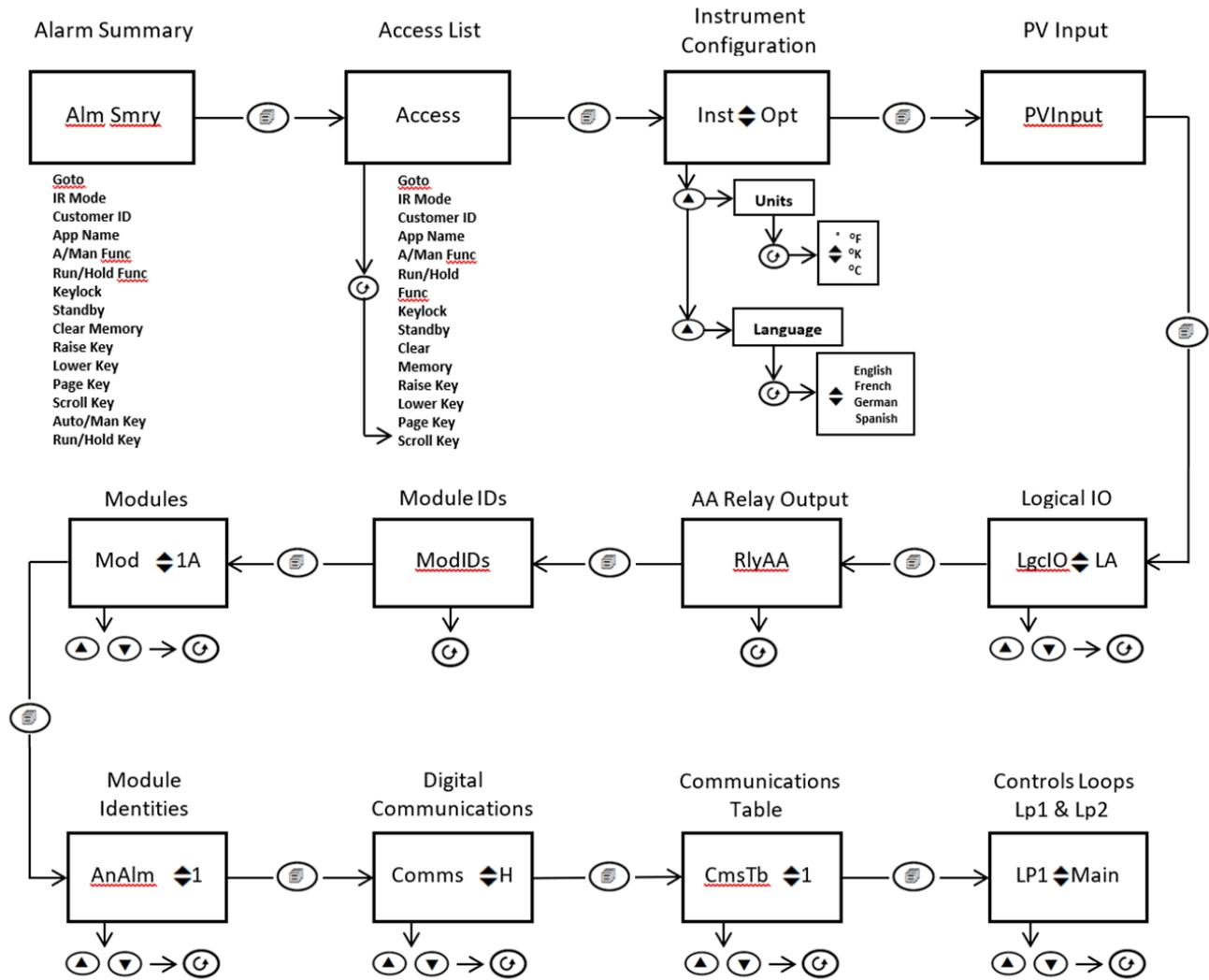
2. Press UP ▲ or DOWN ▼ button to select access level.
3. Use UP ▲ and DOWN ▼ buttons to scroll to passcode (1-999) .



Eurotherm 3508 Access Levels	
Level	Pass Code
Level 1	Default
Level 2	42
Level 3	106
Config	303

Note: It is not necessary to enter a code when changing to a lower level.

7 FUNCTION BLOCK NAVIGATION DIAGRAM



8 CHANGING MODBUS ADDRESS

1. From Access Level 3 press  until the Digital Communications Function Block is displayed.
2. Press ▲ or ▼ until Comms Identity “H” is displayed.
3. Press ↻ until the **Address** Parameter is displayed.
4. Press ▲ or ▼ until the desired Comm Address is displayed.



9 TRANSITION FROM LOCAL TO REMOTE SETPOINT CONTROL

1. Press until the **Control Loop 1 (Lp1) Function Block** is displayed.
2. Press or until **Setpoint (SP)** is displayed.



3. Press until the **Alternate Setpoint Enable (Alt SP En)** is displayed.
4. Press or to select YES.



5. The **Remote Beacon** will appear on the Display.
6. Write the **Remote Setpoint** to **Modbus Holding Register 485 (AltSP)**.