

COMPENSATOR 0 - 10VDC
FOR BOILERS OR MIXING VALVES

E13-PCOM1

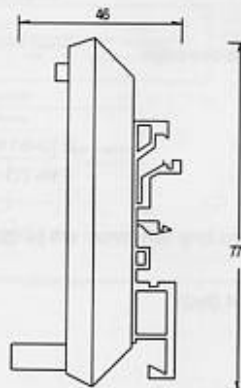
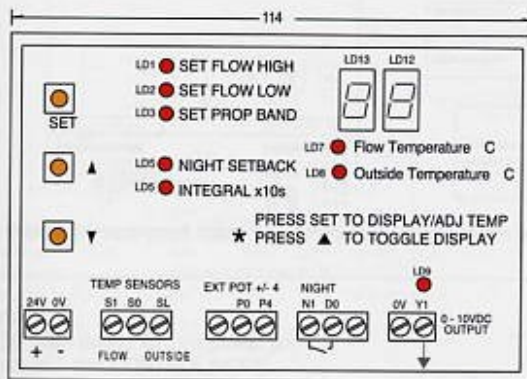
This simple compensator can be used to adjust boiler flow temperature in relation to changes in outside temperature.
Valve: A 0-10VDC mixing valve can be modulated according to variations in outside temperature.
Boiler(s): Alternatively, the 0-10VDC signal can be wired into a relay i.e. E4RM to switch a boiler or several boilers in sequence. The time delay on the relay can prevent nuisance cycling.



The compensator must be used with an outside sensor and a flow sensor.
 The display can be toggled to show flow temperature, outside temperature and calculated flow set-point by pressing the up button. The display remains on for approx 5 mins after any adjustments are made and then turns off. It is activated again by pressing the SET button.
 Frost protection & high limit devices must be installed in the heating system.
 Power Consumption: 2VA

| Type | Flow High at Outside Temp 0 C C | Flow Low at Outside Temp 20 C C | Prop Band C | Night Setback C | Integral Time Adj | Supply ± 15% | Output | Mounting | Protection |
|----------------------------|------------------------------------|--|---------------------|----------------------|----------------------|-----------------|---------|----------|------------|
| E13-PCOM1 | 25 to 90 Preset 80 | 20 to 60 Preset 20 | 0 to 40 Preset 8 | 0 to 30 Preset 20 | 0-500s | 24VAC/DC | 0-10vdc | Din Rail | IP00 |
| ACCESSORIES | E10 - X | Outside Sensor 80 dia x 55 | | | | | | | IP65 |
| | E10 - I | Immersion Sensor 80 dia x 55 Probe Length 120mm x 6mm OD See pocket below - | | | | | | | IP65 |
| SEE SEPARATE DATA SHEET | E10 - S | Strap-On Sensor with strap for up to 6" dia. Pipe. 2m cable Approx 80 dia x 55mm | | | | | | | IP65 |
| | EE-2B | Brass Pocket 1/2" BSP x 120mm long x 6.2mm ID | | | | | | | |
| | E10-P4 | Adjusts Calculated Flow Set Point by +/- 4 C. Front panel mtg 48mm x 48mm | | | | | | | |
| | EE-M2T | Wall mounting enclosure for E13.. 125H x 125W x 75D | | | | | | | IP65 |

WIRING:



SETTINGS:

Pressing the ▲ ▼ buttons allows adjustment during any of the following stages.

1. Press SET Button = Set Flow High - LD1 Lights - Adjust to the Flow High value desired when the outside temperature is 0 C
2. Press SET Button = Set Flow Low - LD2 Lights - Adjust to the Flow Low value desired when the outside temperature is 20 C
3. Press SET Button = Set Prop Band - LD3 Lights - Adjust Prop Band
4. Press SET Button = Night Setback - LD5 Lights - Adjust Night Setback. Enabled upon contact closure on terminals N1 - D0
This will reduce the calculated flow set point by X C during the night
5. Press SET Button = Integral x10s - LD6 Lights - Adjust Integral Time between 0 and 500 seconds

Pressing the SET Button again restarts the sequence. The unit returns to normal operation if left untouched for 15 seconds.

- * During normal operation - by pressing the up button, the display can be toggled to show flow temperature (LD7 Lights), outside temperature (LD8 Lights) or calculated flow set-point (Both LD7 and LD8 Light).

EXAMPLES:

If when outside temperature is 0 C the compensated flow temperature required is 80 C, then set the Flow High to 80 C. If when the outside temperature is 20 C the compensated flow temperature required is 20 C, then set the Flow Low to 20 C.

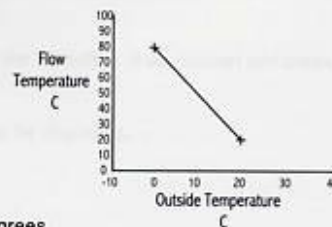
According to these settings the calculated flow set point will move along the slope

- i.e. at 10 C outside temperature, the set point will be 50 C.

Therefore when the flow sensor reaches 50 C the output will be 0vdc.

As the flow falls below 50 C the output will increase towards 10vdc across the prop band.

By using the E10-P4 the calculated flow set point can be adjusted up or down by up to 4 degrees.



INSTALLATION:

Terminals 0.5-2.5mm Sensor cable size 7/0.2mm Keep away from power cables/units which may cause interference.
 Max length 100m. Screened cable is highly recommended. The screen should be earthed at the controller 0V terminal only.