


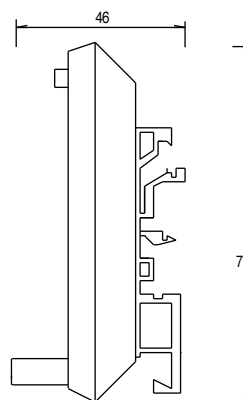
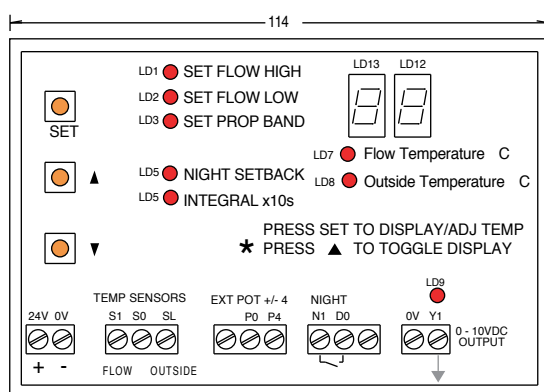
## COMPENSATOR 0 - 10VDC FOR BOILERS OR MIXING VALVES

### E13-PCOM1

|  |   |  |
|--|---|--|
| <p>■ This simple compensator can be used to adjust boiler flow temperature in relation to changes in outside temperature.</p> <p><b>Valve</b> : A 0-10VDC mixing valve can be modulated according to variations in outside temperature.</p> <p><b>Boiler(s)</b>: Alternatively, the 0-10VDC signal can be wired into a relay ie. E4RM to switch a boiler or several boilers in sequence. The time delay on the relay can prevent nuisance cycling.</p> |  <p>E13-PCOM1</p> | <p>The compensator must be used with an outside sensor and a flow sensor.</p> <p>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.</p> <p>Frost protection &amp; high limit devices must be installed in the heating system.</p> <p>Power Consumption: 2VA</p> |
|--|---|--|

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

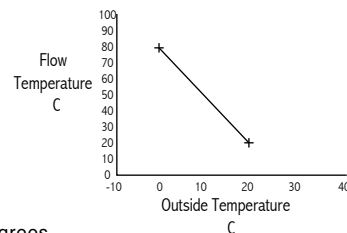
If when outside temperature is 0 C the compensated flow temperature required is 80 C, then set the Flow High to 80 C. If when the outside temperature is 20 C the compensated flow temperature required is 20 C, then set the Flow Low to 20 C.

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