CT-FL

Temperature control of heat trace circuits in safe or hazardous areas

- Three wide span temperature ranges
- Stainless steel sensor and capillary tube
- Optional over-temperature lock-out
- Approved for use in Zone 1 and 2 hazardous areas
- Enclosures suitable for Gas groups IIA, IIB & IIC
- Stainless steel armoured capillary

FEATURES

Capstats are temperature adjustable ON-OFF thermostats comprising a liquid filled sensing bulb connected to an electrical switch via a capillary tube.

Expansion of the liquid on rise in temperature causes the switch to open, and on cooling, it closes.

Capstats may control surface temperatures such as pipes or vessels, or the sensing bulb may be positioned to sense the air temperature.

They may be used to provide process temperature control in safe or Zone 1 or 2 hazardous areas by switching the heating circuits at the desired temperature and are available to suit Group IIA, IIB or IIC gases.

The addition of a high limit cut-out switch (as provided with the Capstat-Dual version) is specified when the heat tracing scheme will not stabilise at a safe temperature without process control. It will operate if the process control switch fails or if an unsafe process temperature occurs.

OPTIONS

CT-FL ../X
Hazardous area Ex’d Capstat suitable for use in Zone 1 and 2 hazardous areas, Gas Groups IIA, IIB and IIC.

CT-FL ../X/DUAL
Hazardous area Ex’d Capstat suitable for use in Zone 1 and 2 hazardous areas, Gas Groups IIA, IIB and IIC. Over-temperature lock-out (20° - 300°C) (Factory preset)

Hazardous area aluminium junction box
Protective metal sheath
Capillary thermostat sensor

WARNING - do not open when an explosive gas atmosphere may be present. Cable at entry point may reach 77º at max dissipation.

Hazardous area aluminium junction box
Protective metal sheath
Capillary thermostat sensor
### THERMOSTAT SPECIFICATION:

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp. range (°C)</td>
<td>0-40</td>
<td>20-110</td>
<td>20-300</td>
</tr>
<tr>
<td>Setting accuracy</td>
<td>±6</td>
<td>±6</td>
<td>±6</td>
</tr>
<tr>
<td>Switch differential (°C)</td>
<td>2±1.5k</td>
<td>4±2k</td>
<td>10±4k</td>
</tr>
<tr>
<td>Max. sensor temp</td>
<td>110°C</td>
<td>140°C</td>
<td>320°C</td>
</tr>
<tr>
<td>Min. sensor temp</td>
<td>-20°C</td>
<td>-20°C</td>
<td>-15°C</td>
</tr>
<tr>
<td>Capillary tube length</td>
<td>1.5m</td>
<td>1.5m</td>
<td>1.5m</td>
</tr>
<tr>
<td>Sensor diameter</td>
<td>6mm</td>
<td>6mm</td>
<td>6mm</td>
</tr>
<tr>
<td>Sensor length (mm)</td>
<td>143</td>
<td>140</td>
<td>89.5</td>
</tr>
<tr>
<td>Capillary tube material</td>
<td>Stainless Steel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capillary tube protection</td>
<td>Stainless Steel Conduit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor type</td>
<td>Liquid Filled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor material</td>
<td>Stainless Steel</td>
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</tr>
</tbody>
</table>

**SWITCH TYPE:** Single Pole, Single Throw Changeover

**SWITCH RATING:** 16A (Max), 230V / 400V resistive load

**SWITCH LIFE:** 100,000 operations

**TEMPERATURE SETTING ADJUSTMENT:** Internal Tamperproof Knob

**INGER PROTECTION:** IP66

**ENCLOSURE:** CT-FL

**Material:** Cast Aluminium

**Finish:** Anodised black, Paint, Powder Coating or Epoxy

**Conduit entries:** 3 x 6 - 25mm Diameter

**Weight:** 4.3kg

**TERMINALS:** Electrical connections 2.5mm² terminals (incoming/outgoing)

**MAX. POWER DISSIPATION:** 16.80W

**APPROVAL DETAILS:**

- ATEX: CML 19ATEX1461
- IECEx: CML 17.0113
- EAC: TC RU C-GB MIO62.B.06043
- JAPAN: CML 17JPN3008X

**EQUIPMENT MARKING:**

- II 2 G
- Ex db IIC T6 Gb
  - Ta = -30°C ≤ Ta ≤ +50°C
- Ex db IIC T4 Gb
  - Ta = -30°C ≤ Ta ≤ +60°C

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### ‘DUAL’ SPECIFICATION:

<table>
<thead>
<tr>
<th>Low Temperature Thermostat</th>
<th>High Temperature Thermostat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>35 - 120°C</td>
</tr>
<tr>
<td>Switching Differential</td>
<td>± 4.5°C</td>
</tr>
<tr>
<td>Probe Diameter</td>
<td>Ø6mm</td>
</tr>
<tr>
<td>Length</td>
<td>1067mm</td>
</tr>
<tr>
<td>Maximum Sensor Temperature</td>
<td>As indicated for types</td>
</tr>
</tbody>
</table>

**EARTHING:** Internal and external earthing options available.

**BLANKING PLUGS:** The equipment is not supplied with blanking plugs or cable glands, it is the responsibility of the user to ensure that suitably certified glands/plugs are fitted that do not affect the type of protection. A bottom entry may also be fitted with Peppers type 781D breather / drain plug. (Sira 10ATEX1307U / IECEx SIR 10.0149U). Only use approved termination methods that are provided.

**ORDERING INFORMATION:**

Example

Capstat capillary thermostat

Hazardous area version

Temperatures range (0-40°C)

Armoured capillary

Dual lock-out*

* when ordering a Dual thermostat, please state the maximum permissible workpiece surface temperature (factory preset).

**CT-FL/2C VERSION:**

- **Dimensions:**
  - Width: 130mm
  - Height: 93mm
  - Depth: 130mm
  - Diameter: Ø7.5mm

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