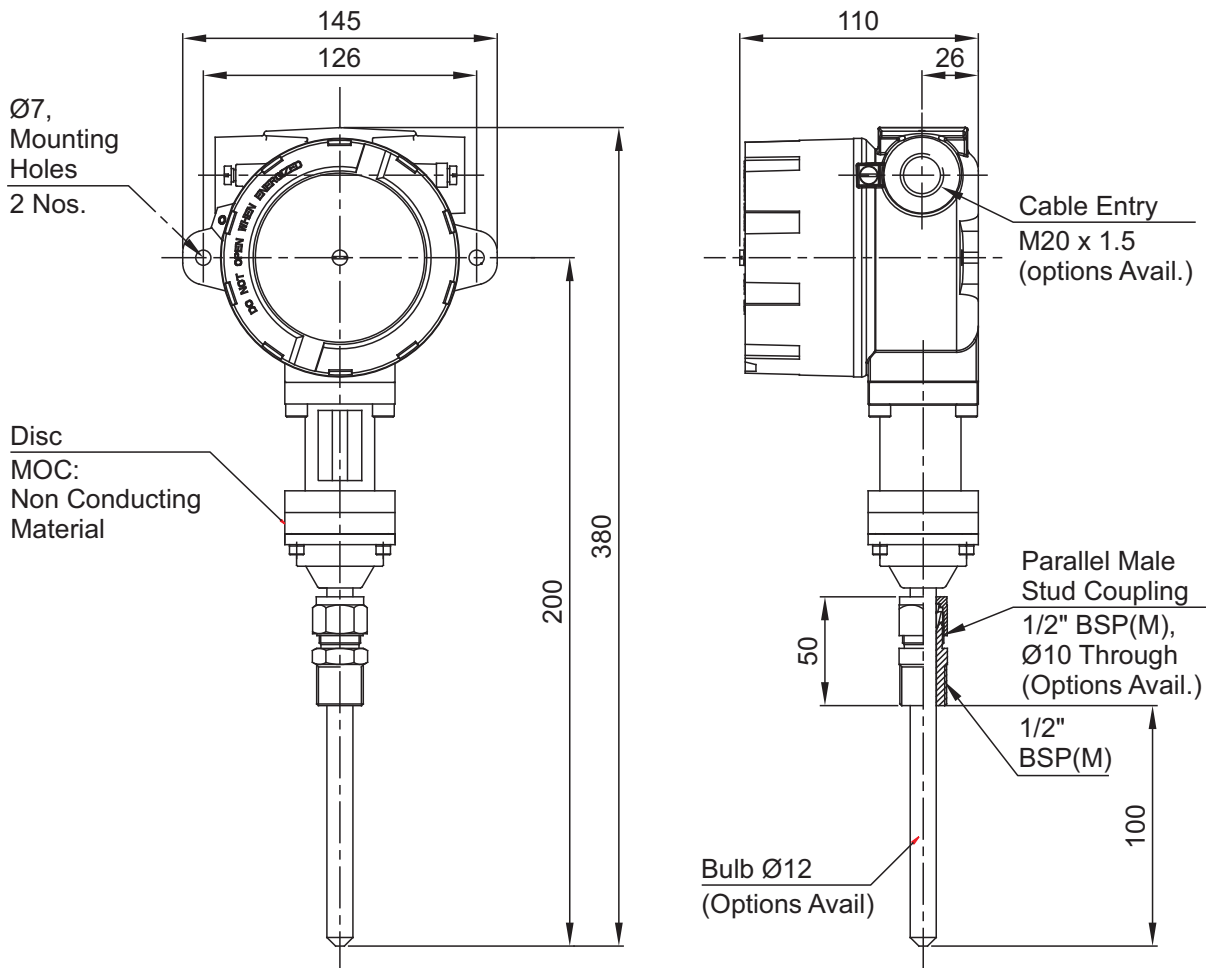


FR DIRECT MOUNTED TEMPERATURE SWITCHES



INSTALLATION DRAWING



APPROX. DIMENSIONS IN $\frac{\text{mm}}{\text{inches}}$

FR DIRECT MOUNTED TEMPERATURE SWITCHES

RANGE SELECTION TABLE

Range Code	Range °C (°F)	Differential* °C (°F)	Maximum Working Temperature °C (°F)
		Approximate Maximum for "A1" microswitch	
T1H	25 to 90 (77 to 194)	15 (59)	150 (302)
T2H	70 to 150 (158 to 302)	20 (68)	200 (392)
T3H	120 to 215 (248 to 419)	30 (86)	300 (572)

Note:

1. The minimum differential increases with the setpoint. The differential values mentioned in the above table are approximate maximum for FSR. The differential value will vary according to the pressure range selected and microswitch type. For actual values of differential please contact sales office.

2. When using 2SPDT switching arrangement, both microswitches may not actuate and/or deactuate at the same point. A small stage gap, normally upto +/- 5% FSR (depending on range code) may be observed. The On-Off differential (hysteresis) typically tends to be atleast double of those published for 1SPDT pressure switches.

If actuation and/or deactuation at same point is critical part of operation, then it can be achieved by using a separate DPDT relay. This relay will need a separate power supply for it's coil.

Intrinsic Safety (Exia) : Pressure and temperature switches are classified as simple apparatus, as per IEC 60079-11, as they neither store or generate energy. Hence switches can be used in intrinsically safe systems provided the power source is IS certified. Because of low voltages and current it is recommended to use hermetically sealed microswitches / microswitches.

HOW TO ORDER FLAMEPROOF TEMPERATURE SWITCHES

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8								
Non standard allocation	Model	Cable Entry Size	Switch Type	Range Code (values in Deg. Cen.)	Microswitch Type	Temp. Bulb Dia./Size	MOC of the Bulb								
<p><input type="checkbox"/> A prefix "N" is used in the model code in case of any non standard options / accessories that are provided with the switches. Will be given by manufacturer, only after agreement of supply details with customer.</p> <p>The prefix is subject to change as per specific requirement.</p>	<p>FR = IP66 Flameproof pressure switch, EAC approved</p>	<p>1 = Al. enclosure 1/2" NPT threads *2 = Al. enclosure 3/4" NPT threads 3 = Al. enclosure M20 X 1.5 threads 7 = SS enclosure, SS Head 1/2" NPT threads *8 = SS enclosure, SS Head 3/4" NPT threads 9 = SS enclosure, SS Head M20 X 1.5 threads</p>	<p>T1 = Temperature Switch, fixed differential without scale T2 = Temperature Switch, fixed differential with scale in °C</p> <p>For adjustable differential please select microswitch A6 in group 6</p>	<p>T1H = 25 - 90 T2H = 70 - 150 T3H = 120 - 215</p>	<p>A1 = General purpose microswitch rated at 15 A; 250 VAC *A6 = elements with adjustable deadband *A7 = 2SPDT switching elements A8 = General purpose microswitch rated at 5 A, 250 VAC; 5 A, 28 VDC B1 = Low differential microswitch rated at 15 A, 250 VAC; 5 A, 28 VDC</p> <p>Please refer to page nos. 120 & 121 for options and specifications of microswitches * Please contact sales office for additional information Please check the note under Range Selection Table for Exi applications.</p>	<p>D1 = Direct mounted temperature switch with 150mm bulb length; 12mm bulb diameter; 3/8" BSPM connection. D2 = Direct mounted temperature switch with 150mm bulb length; 12mm bulb diameter; 3/8" NPTM connection. D3 = Direct mounted temperature switch with 150mm bulb length; 12mm bulb diameter; 1/2" NPTM connection.</p> <p>Please contact sales office for customised dimensions of the bulb and process connections</p>	<p>1 = Brass 2 = SS</p> <p>*In case of non-metallic diaphragms the ambient temperature range should be (-)20° to 60° C.</p>								
<p>Approx. switch weight in Kgs</p> <table border="1"> <tr> <td>Enclosure</td> <td>FR</td> </tr> <tr> <td>Aluminium</td> <td>2.240</td> </tr> <tr> <td>Grey Cl</td> <td>NA</td> </tr> <tr> <td>SS</td> <td>4.830</td> </tr> </table>		Enclosure	FR	Aluminium	2.240	Grey Cl	NA	SS	4.830						
Enclosure	FR														
Aluminium	2.240														
Grey Cl	NA														
SS	4.830														
<input type="checkbox"/>	FR	1	T1	T1H	A1	D1	1								

E.g. A Direct Mounted Flameproof Temperature Switch, with 1/2"NPT cable entry in aluminum housing as 1 SPDT, fixed differential without scale, having 25°C to 90°C temperature range, with 15Amp. microswitch, with SS316 10mm diameter bulb of 100mm length with 1/2" NPT(M), shall be specified by

Please specify full model number to avoid ambiguity.