

# MD/MT DIRECT MOUNTED TEMPERATURE SWITCHES

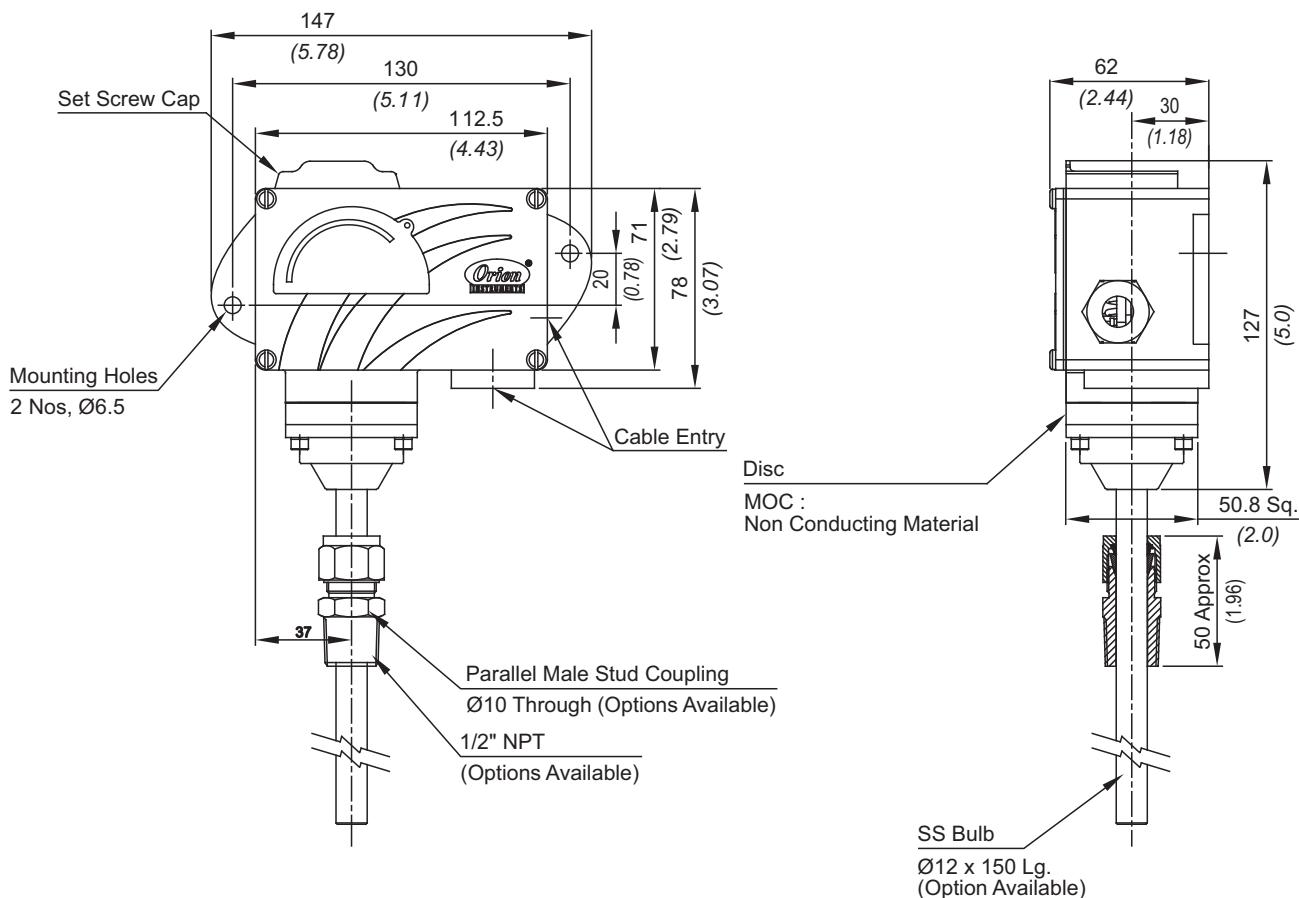


**MD**

**CE**

**Orion**  
INSTRUMENTS®

## INSTALLATION DRAWING



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

# MD/MT 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 - 90 (77 - 194)	15 (59)	150 (302)
T2H	70 - 150 (158 - 302)	20 (68)	200 (392)
T3H	120 - 215 (248 - 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 deactivate 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.

## HOW TO ORDER FLAMEPROOF TEMPERATURE SWITCHES

<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>	<b>Group 6</b>	<b>Group 7</b>	<b>Group 8</b>
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
<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.	<b>MD</b> = Industrial temperature switch with IP66 rated enclosure as per IS/IEC 60529  <b>MT</b> = Industrial temperature switch with IP66 rated enclosure as per IS/IEC 60529	<b>1</b> = Al. enclosure $\frac{1}{2}$ " NPT threads <b>*2</b> = Al. enclosure $\frac{3}{4}$ " NPT threads <b>3</b> = Al. enclosure M20 X 1.5 threads  <b>7</b> = SS enclosure, $\frac{1}{2}$ " NPT threads  <b>8</b> = SS enclosure, $\frac{3}{4}$ " NPT threads <b>9</b> = SS enclosure, M20 X 1.5 threads	<b>TF1</b> = Temperature Switch, fixed differential without scale  <b>TF2</b> = Temperature Switch, fixed differential with scale in °C  <b>*TA1</b> = temperature switch, adjustable differential without scale  <b>*TA2</b> = temperature switch, adjustable differential with scale in °C	<b>T1H</b> = 25 - 90  <b>T2H</b> = 70 - 150  <b>T3H</b> = 120 - 215	<b>A1</b> = General purpose microswitch rated at 15A, 250 VAC <b>A6</b> = Elements with adjustable differential <b>A7</b> = 2SPDT switching elements <b>A8</b> = General purpose microswitch rated at 5A, 250 VAC, 5A, 28 VDC <b>*A9</b> = General purpose microswitch rated at 15A, 250 VAC	<b>D1</b> = Direct mounted temperature switch with 150mm bulb length; 12mm bulb diameter; 3/8" BSPM connection.  <b>D2</b> = Direct mounted temperature switch with 150mm bulb length; 12mm bulb diameter; 3/8" NPNT connection.  <b>D3</b> = Direct mounted temperature switch with 150mm bulb length; 12mm bulb diameter; 1/2" NPNT connection.  <b>B6</b> = Hermetically Sealed Gold Plated contact 2SPDT <b>B9</b> = 2SPDT Switching Elements for adjustable differential rated at 15 A, 250 VAC	<b>1</b> = Brass <b>2</b> = SS

<b>Enclosure</b>	<b>MD</b>	<b>MT</b>
Aluminium	0.780	1.240
SS	2.310	2.870

The prefix is subject to change as per specific requirement.

Approx. switch weight in Kgs

<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>	<b>Group 6</b>	<b>Group 7</b>	<b>Group 8</b>
<input type="checkbox"/>	MD	1	TF1	T1H	A1	D1	1

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

<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>	<b>Group 6</b>	<b>Group 7</b>	<b>Group 8</b>

Please specify full model number to avoid ambiguity.

\*Please refer to page nos. 290 & 291 for options and specifications of microswitches  
Please contact sales office for additional information

Please contact sales office for customised dimensions of the bulb and process connections

\*Available with A6, A7, A9 & B9 (in group 6) only