



Orion INSTRUMENTS MT Series Hydraulic Diaphragm Switch Instruction Manual

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MT Series Hydraulic Diaphragm Switch
Instruction Manual



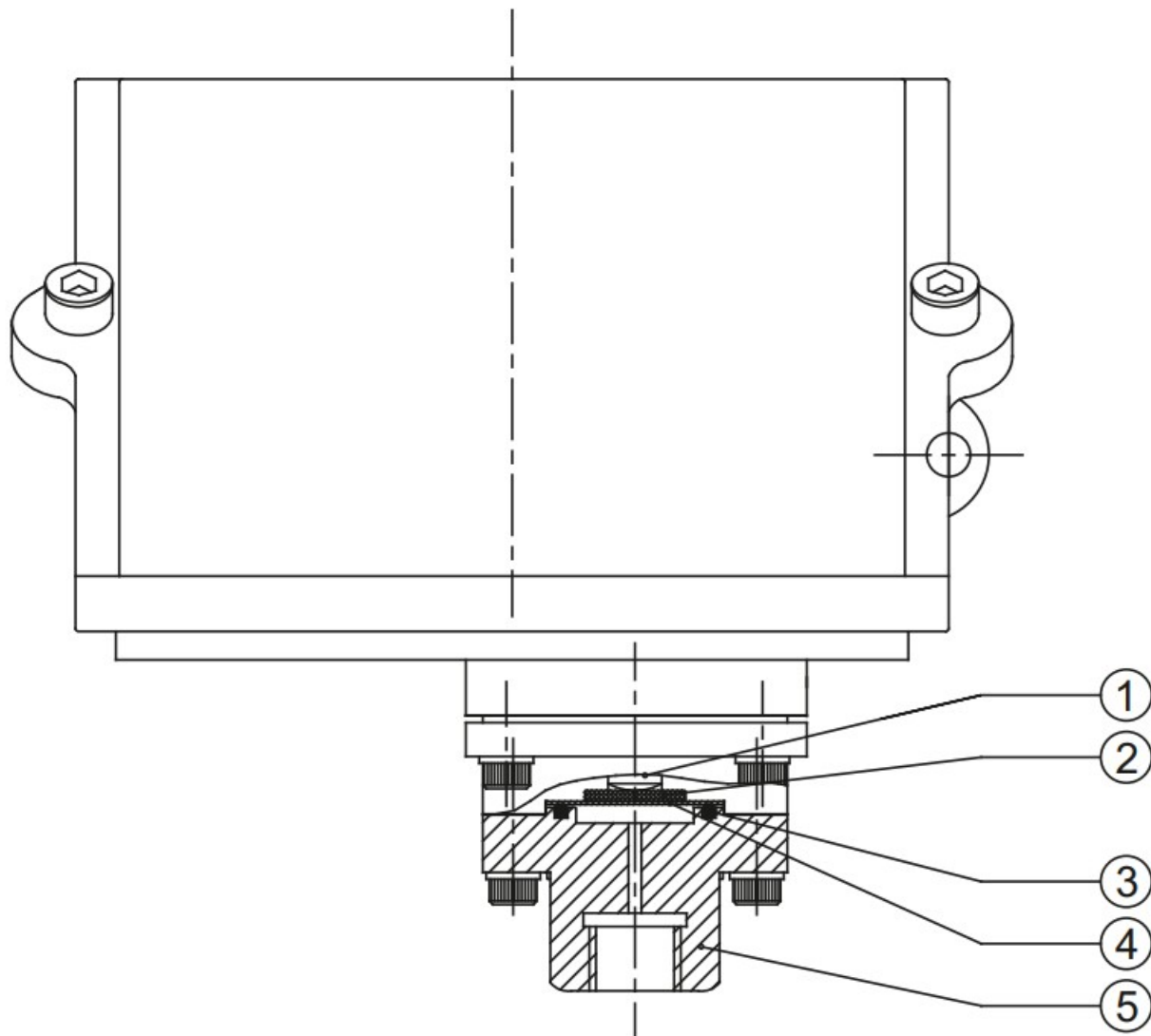
MD/MT
HYDRAULIC DIAPHRAGM SWITCH
CE MT

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MT Series Hydraulic Diaphragm Switch

PRESSURE CAPSULE DETAILS

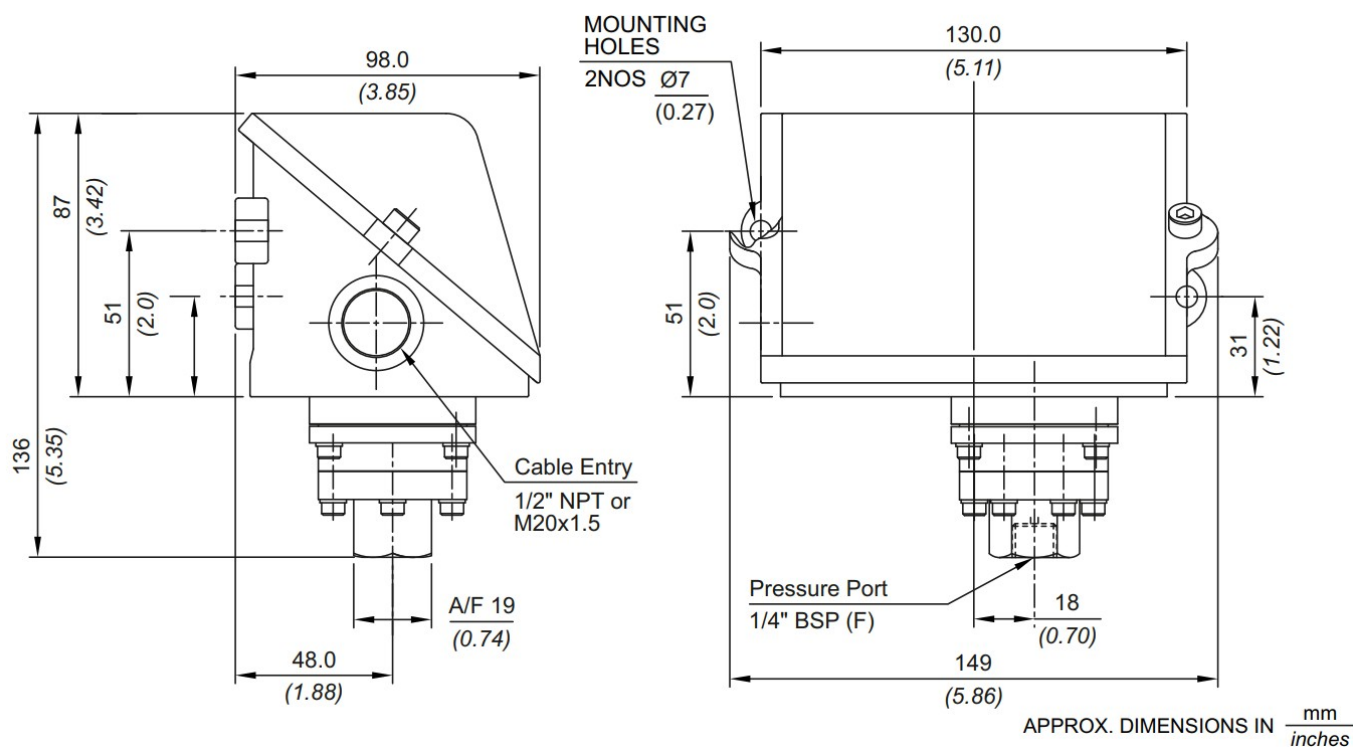


No.	Description
1	Transfer Pin (SS)
2	Cushioning Pad
3	'O' ring(PTFE ®)
4	Diaphragm (PTFE ®)
5	Pressure Housing (SS316)

Note : wetted parts are mentioned in italics.

*Pressure ports are brazed with flange

INSTALLATION DRAWING



MD/MT HYDRAULIC DIAPHRAGM SWITCH RANGE SELECTION TABLE

Range Code	Range bar (psi)	Differential* bar (psi) Approximate Maximum for "A8" microswitch	Maximum Working Pressure bar (psi)
H1T	0.5 – 10 (7.25 – 145.04)	1 (14.50)	150 (2175.51)
H2T	2 – 20 (29.00 – 290.07)	2 (29.00)	200 (2900.76)
H4T	5 – 40 (72.52 – 580.15)	5 (72.52)	200 (2900.76)
H1H	10 – 100 (146.04 – 1450.38)	12 (174.05)	200 (2900.76)
H2H	7 – 200 (101.52 – 2900.76)	24 (348.09)	400 (5801.52)
H4H	40 – 400 (580.15 – 5801.52)	50 (725)	500 (7251.88)
H7H	70 – 700 (1015.26 – 10152.64)	70 (1015.26)	800 (11603)
H1K	100 – 1000 (1450.37 – 14503.77)	100 (1450.37)	1100 (15954.15)

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.



Note: Welded diaphragm also available as shown

- 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 (hysterisis) 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 INDUSTRIAL HYDRAULIC DIAPHRAGM RANGE PRESSURE SWITCHES

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
Non standard allocation	Gas Group Classification	Cable Entry Size	Switch Type	Range Code (values in bar)	Microswitch Type	Pressure Port Material / Size	Diaphragm
		1 = Al. enclosure 1A" NPT threads	PF1 = pressure switch, fixed differential without scale PF2 = pressure switch, fixed		Al = General purpose microswitch, rated at 15A; 250 V AC *A6 =Adjust	S1 = SS316 / 1/4" BSP(F) S2 = SS316	

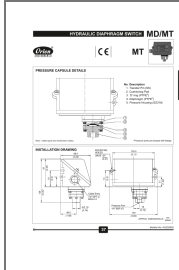
Reserved for non-standard options not covered in catalogue. Will be given by manufacturer, only after agreement of supply details with customer	MD = Industrial pressure switch with IP66 rated enclosure as per IS/IEC 60529 MT = Industrial pressure switch with IP66 rated enclosure as per IS/IEC 60529	*2 = Al. enclosure %” NPT threads 3 = Al. enclosure M20 X 1.5 threads 7 = SS enclosure, %” NPT threads *8 = SS enclosure, %” NPT threads 9 = SS enclosure, M20 X 1.5 threads *Not available for MT model For dual cable entry contact Sales Office	differential with scale in bar PF3 = pressure switch, fixed differential with scale in psi *PA1 = pressure switch, adjustable differential without scale *PA2 = pressure switch, adjustable differential with scale in psi *PA3 = pressure switch, adjustable differential with scale in psi *Available with A6, A7, A9 & B9 (in group 6) only	HIT = (0.5 – 10) H2T = (2 – 20) H4T = (5 – 40) H1H = (10 – 100) H2H = – 200) H4H = (40 – 400) H7H = (70 – 700) H1 K = 100 – 1000)	able deadband and *A7 = 2SPDT switching elements *A8 = General purpose microswitch *A9 = General purpose microswitch *B7 = 2SPDT Switching Elements *B9 = 2SPDT Switching Elements for adjustable differential * For detailed specifications of micro switches, please refer note under Range Selection Table N2 = Monel / ‘A’ NPT(F)	/ 1/4” NPT(F) S3 = (welded diaphragm) SS316 / 1” BSP(M) S4 = SS316 / 1/2” NPT(F) S5 = SS316 / W NPT(M) H1 = Hastelloy C / 1/4” BSP(F) H2 = Hastelloy C / 1/4” NPT(F) N1 = Monel / 1/4” BSP(F) More options available. Please contact sales office.	0 = Neoprene 1 = PTFE 2 = SS 316 L 3 = Hastelloy C 4 = Monel
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eg. A hydraulic diaphragm pressure switch, with 1/2” NPT cable entry in aluminium housing as 1SPDT pressure switch, fixed differential without scale, having 5 bar to 40 bar pressure range, with 15 Amp. microswitch, SS316 pressure housing with 1/4” BSP port size shall be specified by

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
	MD	1	PF1	H4T	A1	S1	2

Please specify full model number to avoid ambiguity. If only the first two groups are specified while ordering, uncalibrated switches with standard wetted parts and enclosures will be supplied.

Documents / Resources



[Orion INSTRUMENTS MT Series Hydraulic Diaphragm Switch](#) [pdf] Instruction Manual
MT Series Hydraulic Diaphragm Switch, MT Series, Hydraulic Diaphragm Switch, Diaphragm Switch, Switch