

# Metal Diaphragm Switches

## D1X/D2X

Mechanical single/dual pressure switch  
Repeatability  $\pm 1.0$  % at constant temperature

### Features

- ▶ Metal diaphragm pressure switch
- ▶ Wetted parts welded
- ▶ Direct action, no friction, high accuracy
- ▶ Approvals: Ex ia, Ex d, UL, SIL2/3 (IEC 61508)

### Adjustment ranges

0.012 ... 10.3 bar and  
-0.006 ... -1 bar (Vacuum)

### Applications

Petrochemical industry,  
Process technology



### Technical Data

Wetted parts:	Stainless steel 17 - 7PH / SS304 and 1.4305
Repeatability:	$\pm 1$ % at constant temperature
Switching rate:	max. 20/min
Temperature range:	-40 °C... +75 °C
Protection class:	IP65
Housing:	Explosion proof housing, aluminum anodized and lacquered
Process connection:	1/4" NPT female thread Optional: 1/2" NPT female thread (P2)
Electrical connection:	Internal terminal strip (0.5 - 2.5 mm <sup>2</sup> ), approved cable gland has to be provided by the customer
Electrical ratings and hysteresis:	A large variety of micro switches offers different electrical ratings and hysteresis for many applications.

Weight	D1X-....: approx. 2.7 kg D2X-....: approx. 2.8 kg
Set point adjustment:	Turn the adjustment screw clockwise to decrease the set point
Intrinsically safe:	The switches are designed for intrinsically safe applications. In this case we recommend gold contacts. Please add "Exi" to your ordering details when placing an order. To comply with the intrinsically safe approval following max. ratings must not be exceeded: U <sub>max</sub> = 28 V I <sub>max</sub> = 50 mA
Approval:	Ex: Ex d II C T6 acc. to ATEX cULus: Class I, Groups B, C, D Class II, Groups E, F, G acc. to Underwriter Laboratories Inc. and Canadian Standard Assn.

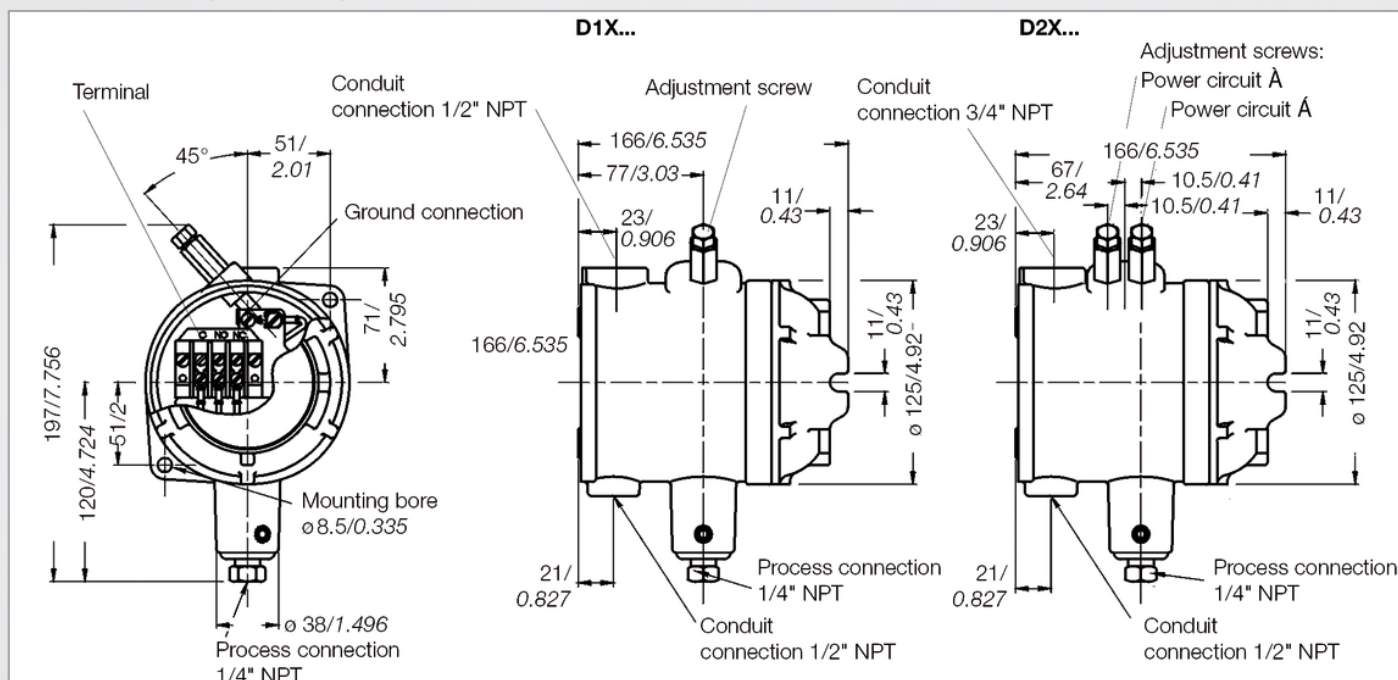
### Pressure Ranges

Pressure range code	Adjustment range [bar]		Max. operating pressure [bar]	Proof pressure [bar]	The resulting hysteresis is approx. ... bar at the end of range	
	Increasing press.	Decreasing press.		(short term)	H, GH [bar]	M, GM [bar]
Overpressure						
3SS	0.012 ... 0.2	0.002 ... 0.196	0.5	0.7	0.005	0.010
18SS	0.050 ... 1.2	0.030 ... 1.2	3.0	4.0	0.018	0.040
80SS	0.300 ... 5.5	0.030 ... 5.3	8.0	10.7	0.110	0.220
150SS	0.500 ... 10.3	0.100 ... 9.9	15.0	20.0	0.190	0.400
Vacuum						
3SS	-0.006 ... -0.2	-0.002 ... -0.196	0.15	0.2	0.004	0.009
18SS	-0.040 ... -1.0	-0.020 ... -0.970	0.5	1.0	0.030	0.060

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### Dimensions (mm / inch)



### Approvals

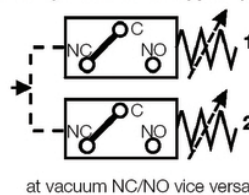
EX	Ex d approval
UL	cULus approval
EXI	Ex i approval

### Options

P2 = 1/2" NPT F SS Process connection

### Wiring Code 1

Wiring code for all types (contact status at atmospheric pressure)



Power circuit 1	Power circuit 2
C=purple	C=brown
NC=blue	NC=orange
NO=red	NO=black

### Electrical Ratings

Micro switch	Special features	Volt AC 50/60 Hz	Ind. load A	Res. load A	Volt DC	Ind. load A	Res. load A	Comments
H	Micro switch with silver contacts	125 250 480*	10 10 3	10 10 3	6 to 24	0.50	0.5	Small hysteresis; High AC / low DC loads
M	Micro switch with silver contacts	125 250 480*	10 10 3	10 10 3	12 24 250	5.00 1.00 0.25	15.0 2.0 0.4	Medium hysteresis; High AC and DC loads
GH	Micro switch with gold contacts	125	1	1	24	1.00	1.00	Small hysteresis
GM	for low voltage and/or low current (e. g. "Exi")	30	0.1	0.1	30	0.10	0.1	Medium hysteresis

### Order Code

Example for order number

Type	Micro switch	Pressure range	Options	Approval
D1X or D2X - GH	3SS	P2	EX	

Your order number

Type	Micro switch	Pressure range	Options	Approval
or -				