

Metal Diaphragm Switches

D1X/D2X

Mechanical single/dual pressure switch

Repeatability ± 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
- Suitable for SIL2/3 (IEC 61508) acceptance

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 SS303
Repeatability	± 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
Electrical connection	Internal terminal strip (0.5 - 2.5 mm ²), approved cable gland has to be provided by the customer
Electrical load capacity 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

Approval	cULus: Class I, Groups B, C, D Class II, Groups E, F, G acc. to Underwriter Laboratories Inc. and Canadian Canadian Standard Assn. ATEX (Ex d and Ex ia)
Intrinsically safe	Gold contact micro switches must be used for intrinsically safe applications. Add "EXI" in case of ordering. Maximum rating according to ATEX: U _{max} = 28 V; I _{max} = 50 mA Ex i: Certificate No.: TÜV 22 ATEX 322922 X, IECEx TUN 22.0011X U _i = 28 V, I _i = 50 mA, P _i = 0.84 W, C _i , L _i negligibly small -40 °C < T _a < +75 °C (Ex) II 1 G Ex ia IIC T6 Ga or II 1 D Ex ia IIIC T ₂₀₀ 100°C Da Ex d: Certificate No.: ISSeP08ATEX024X/3, -40 °C < T _a < +75 °C (Ex) II 2 G Ex db IIC T6 Gb or II 2 D Ex tb IIIC T80°C Db IP66

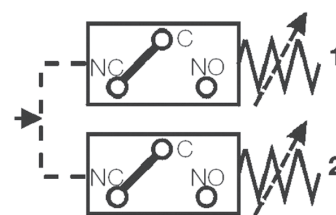
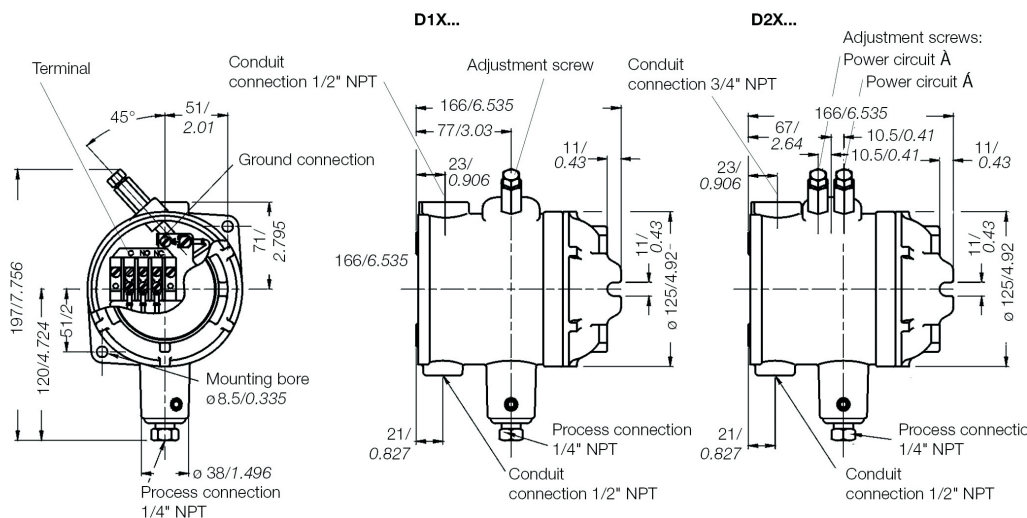
Pressure Ranges

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

D1X/D2X

Dimensions (mm / inch)

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



at vacuum NC/NO vice versa

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 bis 24	0.50	0.5	Small hysteresis; High AC-/ low DC-load
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 for low voltage and/or low current (e. g. "Exi")	125	1	1	24	1.00	1.00	Small hysteresis

* on request

Order code

Base model		Metal diaphragm pressure switch	
D			
	Number of switching points		
	1	switch point	
	2	switch points	
	Housing type		
	X	Ex-d housing	
	Micro switch contact type		
	H	H-micro switch	
	GH	GH-micro switch	
	M	M-micro switch	
	Pressure ranges		
	3	0,012 ... 0,20 bar	
	18	0,050 ... 1,20 bar	
	80	0,300 ... 5,50 bar	
	150	0,500 ... 10,3 bar	
	3	-0,006 ... -0,20 bar (Vacuum)	
	18	-0,040 ... -1,00 bar (Vacuum)	
	Material of wetted parts		
	SS	VA-Stahl, 17.7 PH / SS304 and SS303	
	Electrical connection		
	()	Terminal strip intern	
	Options		
	EXI	ATEX (Ex ia)	
	EX	ATEX (Ex d)	
	UL	Underwriter's Laboratories	

Example

D	1	X	-GH	18	SS-	-EXI
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