

Metal Diaphragm Pressure Switches

D1T/D2T

Mechanical single/dual pressure switch
Repeatability ± 1.0 % at constant temperature

Features

- Metal diaphragm pressure switch
- Switching point adjustable during operation with corresponding reference device
- Direct acting, no friction, high accuracy
- Approvals: Ex ia, UL, CSA, marine
- Suitable for SIL2/3 (IEC 61508) acceptance

Adjustment ranges

- 0.005 ... 10.3 bar and
- -0.006 ... -1 bar (Vaccum)

Applications

- Machine and tool engineering
- Autoclaves, pump control
- Refrigerant monitoring, chemical industry
- Ship building applications

Technical Data

Wetted parts	Stainless steel 17 - 7PH / SS304
Repeatability	± 1 % at constant temperature
Switching rate	max. 20/min
Temperature range	-40 °C... +75 °C
Protection class	IP65
Housing	Top part: aluminium powder coated bottom part: aluminium anodized
Process connection	1/4" NPT female thread Optional: 1/2" NPT female thread (P2)
Electrical connection	WAGO terminal and cable gland M20 x 1.5 clamping range \varnothing 5 ... 11 mm
Electrical load capacity and hysteresis	Many micro switch versions with different switching powers and hysteresis are available and make it possible to make customized changes.
Weight	D1T-...: approx. 1.0 kg D2T-...: approx. 1.1 kg
Set point adjustment	Turn the adjustment screw clockwise to decrease the set point



Approval	UL, CSA, marine (DNV), ATEX (Ex ia) Note: DNV and ship approved versions have "GL" in order code.
ATEX 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: Um = 28 V Imax = 50 mA Cert. No.: TÜV 20 ATEX 248753 X, IECEx TUN 21.0002X D1T, D2T: (Ex) II 1 G Ex ia IIC T6 Ga or II 1 D Ex ia IIIC T ₂₀₀ 100°C Da -40 °C < Ta < +75 °C Ui = 28 V li = 50 mA Pi = 0.84 W Ci, Li = negligibly small D1T with connector ST1, D2T with connector ST3: (Ex) II 1 G Ex ia IIB T6 Ga or II 1 D Ex ia IIIC T ₂₀₀ 100°C Da -40 °C < Ta < +75 °C Ui = 28 V li = 50 mA Pi = 0.84 W Ci, Li = negligibly small

Pressure Ranges

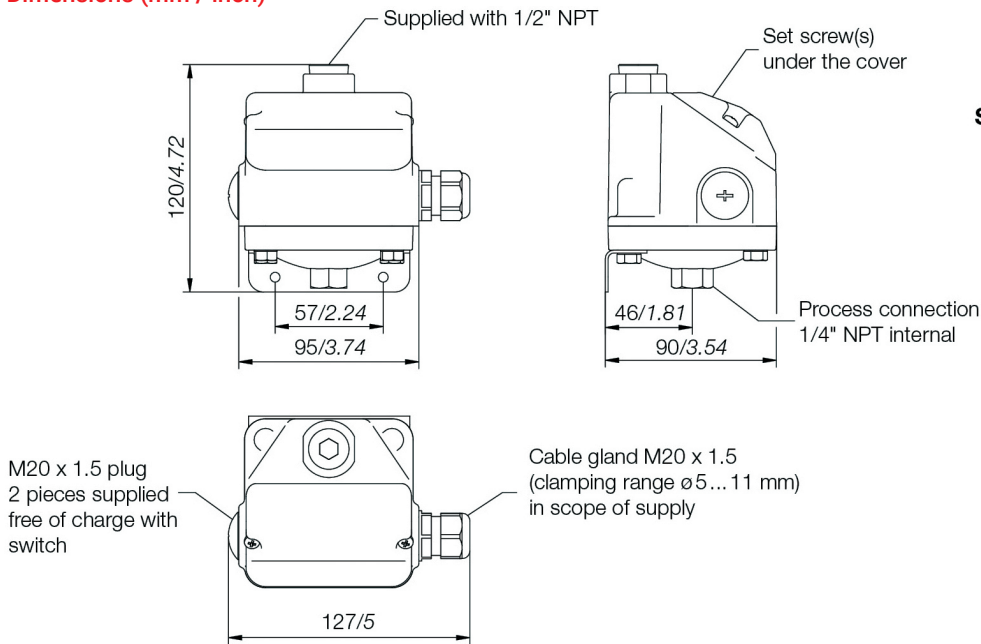
Pressure range code	Adjustment range [bar]		Proof pressure [bar]	The resulting hysteresis is approx. ... bar at the end of range	
	Increasing press.	Decreasing press.		H, GH [bar]	M [bar]
Overpressure					
2SS*	0.005 ... 0.11	0.001 ... 0.11	0.2	0.004	0.006
3SS	0.012 ... 0.20	0.002 ... 0.196	0.7	0.005	0.010
18SS	0.050 ... 1.20	0.030 ... 1.20	4.0	0.018	0.040
80SS	0.300 ... 5.50	0.030 ... 5.30	10.7	0.110	0.240
150SS	0.500 ... 10.30	0.100 ... 9.90	20.0	0.190	0.420
Vacuum					
3SS	-0.006 ... -0.20	-0.002 ... -0.196	-0.2	0.004	0.009
18SS	-0.040 ... -1.00	-0.020 ... -0.970	-1.0	0.030	0.060

* 2SS is not DNV approved

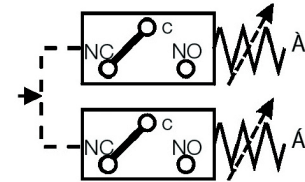
Metal Diaphragm Pressure Switches

D1T/D2T

Dimensions (mm / inch)



Switching- and connection diagram for all types (pressureless)



at vacuum NC/NO vice versa

Power circuit A	Power circuit A
C=illa	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	10 10	10 10	6 to 24	0.50	0.5	Small hysteresis; High AC-/ low DC-load
M	Micro switch with silver contacts	125 250	10 10	10 10	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

Order Code

Base model		Metal diaphragm pressure switch	
D	Number of switching points		
1	switchpoint		
2	switchpoints		
Housing type		Aluminium body	
T	Micro switch contact type		
H	H-micro switch		
GH	GH-micro switch		
M	M-micro switch		
Pressure range			
2	0,005 ... 0,11 bar (not certified for shipbuilding)		
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		Stainless steel, 17.7 PH / SS304	
SS	Electrical connection		
ST1	Cube plug DIN EN 175301-803 A (formerly DIN 43650) (for 1 switching point only)		
ST3	Plug Amphenol (Tuchel) accord. EN 43651 E 6-pin (for 2 switching points only)		
()	Wago-Clamp		
Options			
PE	1/2" NPT IG SS-Diaphragm		
EXI	ATEX (Ex ia)		
GL	Shipbuilding approval DNV		
UL	Underwriter's Laboratories		

Example

D 1 T -GH 2 SS- -EXI