

# Metal Diaphragm Pressure Switches

Type **D1T-.../D2T-...**

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

## Features

Metal diaphragm pressure switch  
Wetted parts welded.  
Direct acting, no friction, high accuracy

## 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

<b>Wetted parts:</b>	Stainless steel 17-7PH/SS304
<b>Repeatability:</b>	$\pm 1\%$ at constant temperature
<b>Switching rate:</b>	max. 20/min
<b>Temperature range:</b>	-40 °C... +75 °C
<b>Protection class:</b>	IP65
<b>Housing:</b>	powder coated aluminium
<b>Process connection:</b>	1/4" NPT female thread Optional: 1/2" NPT female thread (P2)
<b>Electrical connection:</b>	WAGO terminal and cable gland M20x1.5; clamping range $\varnothing 5 \dots 11$ mm

## Pressure ranges

Pressure range code	Adjustment range [bar]		Max. operating pressure [bar]	Proof pressure [bar] (short term)	Max. hysteresis of the different switches in bar (end of range)	
	Increasing press.	Decreasing press.			H, GH [bar]	M, GM [bar]
Overpressure						
<b>2SS</b>	0.005 ... 0.11	0.001 ... 0.11	0.15	0.2	0.004	0.006
<b>3SS</b>	0.012 ... 0.20	0.002 ... 0.196	0.5	0.7	0.004	0.010
<b>18SS</b>	0.050 ... 1.20	0.030 ... 1.20	3.0	4.0	0.010	0.040
<b>80SS</b>	0.300 ... 5.50	0.030 ... 5.30	8.0	10.7	0.110	0.240
<b>150SS</b>	0.500 ... 10.30	0.100 ... 9.90	15.0	20.0	0.180	0.420
Vacuum						
<b>3SS</b>	-0.006 ... -0.20	-0.002 ... -0.196	0.15	0.2	0.004	0.009
<b>18SS</b>	-0.040 ... -1.00	-0.020 ... -0.970	0.5	1.0	0.020	0.060



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<b>Electrical load capacity and hysteresis:</b>	Many micro switch versions with different switching powers and hysteresis are available and make it possible to make customized changes.
<b>Weight:</b>	D1T-...: approx. 1.0 kg D2T-...: approx. 1.1 kg
<b>Set point adjustment:</b>	Turn the adjustment screw clockwise to decrease the set point
<b>Intrinsically safe:</b>	The switches are also available for intrinsically safe applications. Add "Exi" in case of ordering. Maximum rating according to ATEX: U <sub>max</sub> = 28 V I <sub>max</sub> = 50 mA
<b>Approval:</b>	---

Specifications are subject to changes without notice.

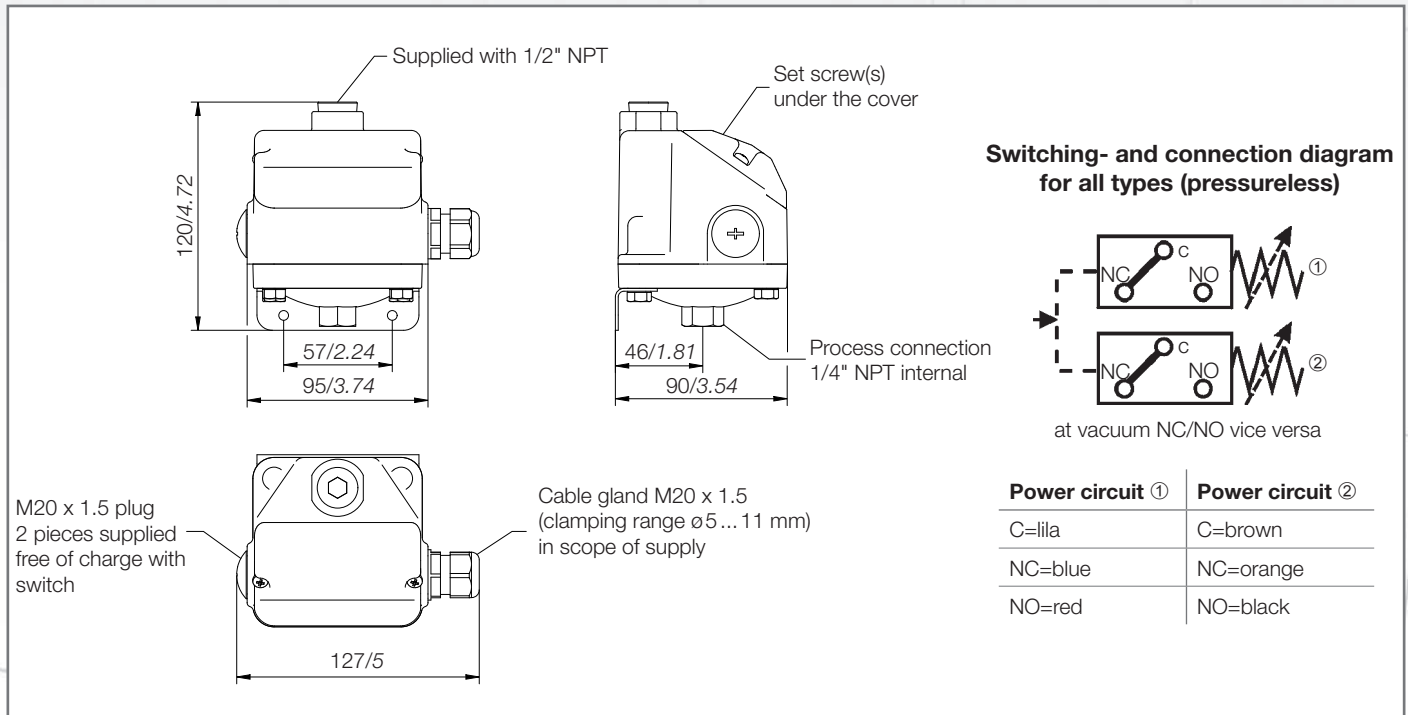
# Pressure

## Metal Diaphragm Pressure Switches

## Type D1T-.../D2T-...

### Dimensions (in mm / inch)

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### 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
<b>H</b>	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
<b>M</b>	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
<b>GH</b>	Micro switch with gold-plated contacts for low voltage and/or low current	125	1	1	24	1.00	1.0	Small hysteresis
<b>GM</b>		30	0.1	0.1	30	0.10	0.1	Medium hysteresis

480 V AC and 15 A only upon request

### Options

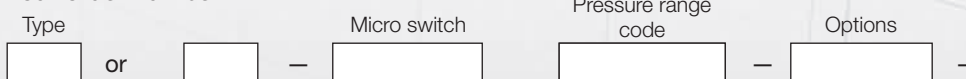
	D1T-...		D2T-...
<b>ST1</b>	Plug, 3-pin + E, DIN EN 175 301-801-A (prev. DIN 43650)	<b>ST3</b>	Plug, 6-pin + E, DIN 43651
<b>ST2</b>	Amphenol plug 4-pin + E	<b>EXI</b>	for intrinsically safe application
<b>EXI</b>	for intrinsically safe application		

### Ordering

#### Example for order number



#### Your order number

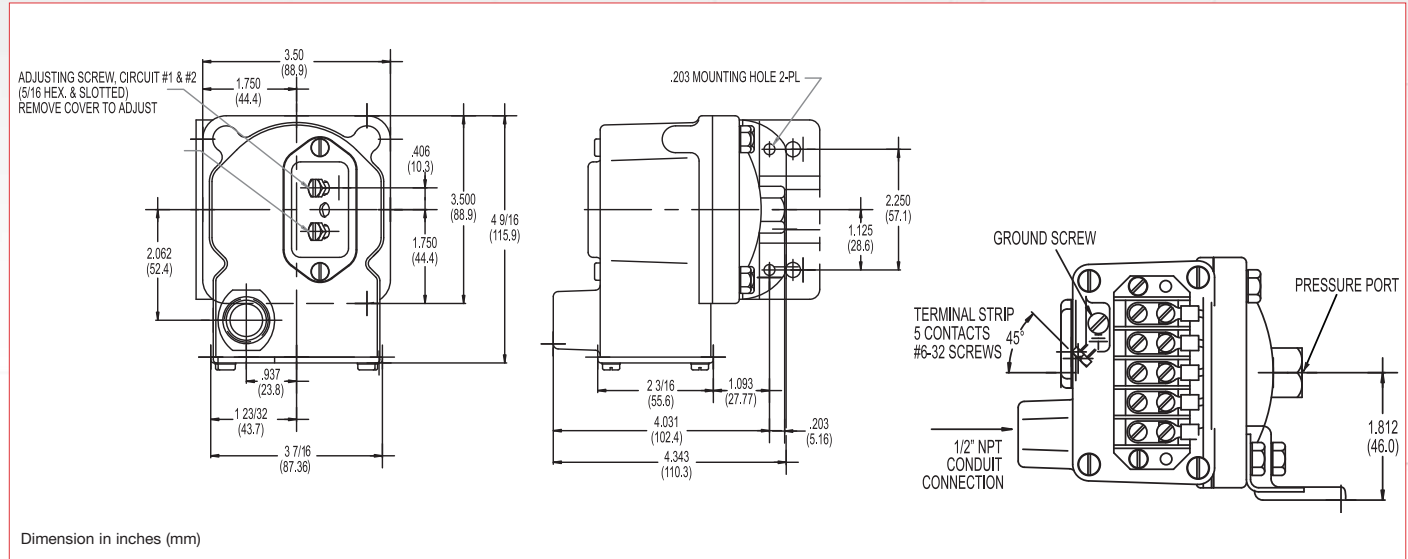


Specifications are subject to changes without notice.

# Terminal Block Diaphragm Switch

# D1T, D2T Series

## Technical Drawing



## Product Configurator

Example	D1T	-A	80SS		UL
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**H** Hermetically sealed limit switch option - Class I, Division II (requires AA, CC, GH or HH limit switch)

### Base Configuration

D1T	Single setpoint housed with terminal block
D2T	Dual setpoint housed with terminal block

### Limit Switch<sup>1</sup>

-A	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 3SS, 80SS or 150SS)
-B	10 amps @ 125/250/480 VAC; 2 amps @ 600 VAC; 0.05 amps @ 125 VDC; 0.03 amps @ 250 VDC
-C	10 amps @ 125/250/480 VAC; 2 amps @ 600 VAC; 0.1 amps @ 125 VDC; 0.05 amps @ 250 VDC
-H	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 2SS or 18SS)
-J	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (comes with an elastomer boot, not -U or -UL approved)
-M	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; 0.5 amps @ 125 VDC; 0.25 amps @ 250 VDC (not -U or -UL approved)
-GH	1 amp @ 125 VAC; 1 amp @ 24 VDC with gold contacts (not -UL approved)
-AA	Hermetically sealed; 4 amps @ 125/250 VAC (not available on 2SS or vacuum models)
-CC	Hermetically sealed; 10 amps @ 125/250 VAC (not available on 2SS or vacuum models)
-GH	Hermetically sealed; 1 amp @ 125 VAC with gold contacts (not available on 2SS or vacuum models)
-HH	Hermetically sealed; 5 amps @ 125/250 VAC (not available on 2SS or vacuum models)



### Options

-U	UL Approved
-UL	UL Approved Model*
-CS	CSA Approved Model
-Z1	Oxygen cleaned
-FX	NEMA 4X enclosure
-TC	Temperature stabilization and pre-cycle
-L6	6-Pin Terminal Block (for D2T models only. Non-UL listed)
-Sxxx	Factory pre-set (consult factory)

\* For hermetically sealed

### Adjustable Range

	Adjustable Range (PRESSURE)				Approx. Deadband <sup>2</sup> (Actuation Value) psi (bar)	Proof Pressure psi (bar)
	Decreasing - psi (bar)		Increasing - psi (bar)			
	Min	Max	Min	Max		
2SS <sup>3</sup>	0.018 (.0)	1.65 (.1)	0.068 (.0)	1.7 (.1)	.02 - .05 (.0 - .0)	3 (.2)
3SS	.03 (.00)	2.85 (.2)	.18 (.02)	3 (.2)	.07 - .15 (.0 - .01)	10 (.7)
18SS	.4 (.03)	17.74 (1.2)	.66 (.05)	18 (1.2)	.12 - .26 (.01 - .02)	60 (4.1)
80SS	.5 (.03)	76.6 (5.3)	3.9 (.3)	80 (5.5)	1.6 - 3.4 (1 - .2)	160 (10.9)
150SS	1.5 (.1)	144 (9.9)	7.5 (.5)	150 (10.3)	2.3 - 6 (.2 - .4)	300 (20.4)

	Adjustable Range (VACUUM)				Approx. Deadband <sup>2</sup> (Actuation Value) In. Hg	Proof Pressure In. Hg
	Decreasing - In. Hg		Increasing - In. Hg			
	Min	Max	Min	Max		
3SS	0.06	5.72	0.34	6	.14 - .28	20
18SS	0.8	29.2	1.6	30	.4 - .8	30

### Pressure Connection

Blank	Std 1/4" NPT female pressure connection
-P2	1/2" NPT female pressure connection

### NOTES:

<sup>1</sup> Consult Supplemental Guide for specific deadband values

<sup>2</sup> Deadband values indicated when used with the "standard" limit switch

<sup>3</sup> Not available with hermetically sealed limit switches