

Bourdon Tube Pressure Switches

B1T/B2T

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

Features

- Bourdon tube pressure switch
- Switching point during operation with can be set with the corresponding reference device
- All wetted parts welded
- Approvals: optional CSA, Ex ia, UL, DNV
- Suitable for SIL2/3 (IEC 61508) acceptance

Adjustment ranges

- 4.8 ... 950 bar

Applications

- Pump control
- Die-casting machines
- Press control
- Power plants
- Alarm functions

Technical Data

Wetted parts	Stainless steel 1.4401
Process connection	Stainless steel 1.4401
Bourdon tube	Stainless steel 1.4401
Repeatability	± 1 % at constant temperature
Switching rate	max. 20/min
Temperature range	-40 °C... +75 °C
Protection class	IP65
Housing	Aluminium, anodized
Process connection	1/4" NPT female thread except ranges marked with *). These switches have proof pressures above 500 bar and are provided with high pressure thread with adapter "G1/4 female".
Electrical connection	Internal terminal strip (0.5 ... 2.5 mm ²) Standard: WAGO terminal and cable gland M20 x 1,5
Electrical ratings and hysteresis	A large variety of micro switches offers different electrical ratings and hysteresis for many applications.
Weight	B1T-...: approx. 1.1 kg B2T-...: approx. 1.2 kg
Set point adjustment	Turn the adjustment screw clockwise to decrease the set point

Pressure Ranges

Pressure range code	Adjustment range [bar]		Max. operating pressure [bar]	Proof pressure [bar] (short term)	The resulting hysteresis is approx. ... bar at the end of range	
	Increasing press.	Decreasing press.			H, GH [bar]	M [bar]
12SS	4.8 ... 82	3.4 ... 81	100	120	0.96	1.86
32SS	13.7 ... 220	11.0 ... 217	250	330	2.68	5.44
48SS	22.4 ... 330	16.5 ... 325	400	500	2.75	5.90
65SS*	30.3 ... 448	22.5 ... 440	550	670	3.58	7.92
120SS*	79.3 ... 827	41.4 ... 790	900	1200	16.90	37.90
180SS*	79.3 ... 950	41.4 ... 950	999	1600	16.90	37.90

* 65SS, 120SS, 180SS are not in DNV approval

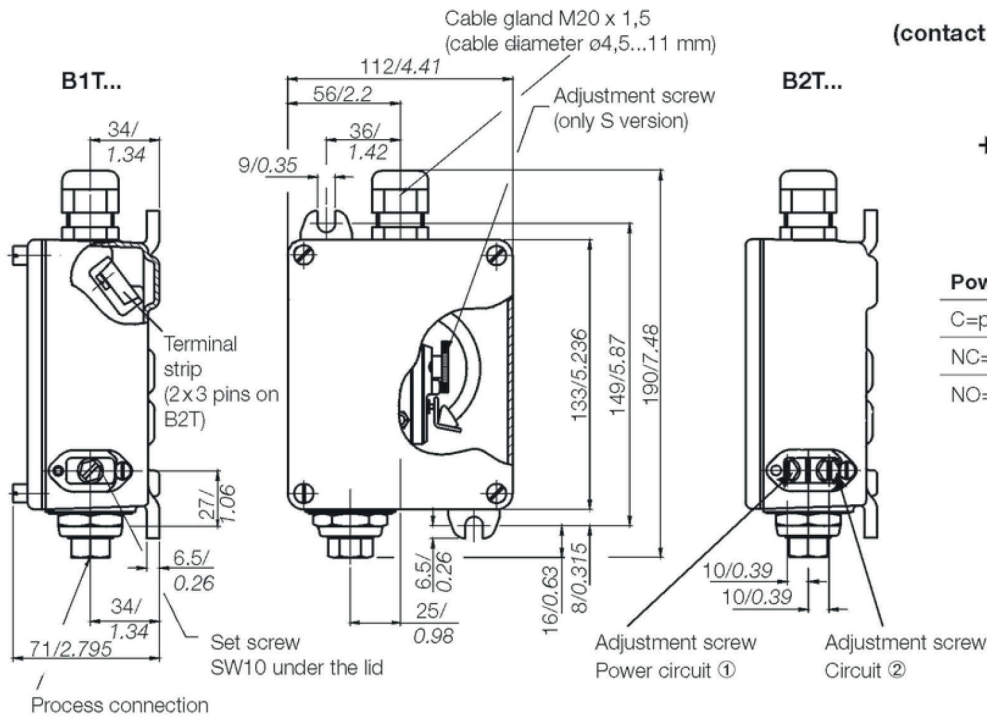


Approval	Optional: CSA, ATEX / IECEx (Ex ia) UL: 42816 marine (DNV) Note: DNV and ship approved version have "GL" in order code.
ATEX Ex ia Intrinsically safe	The switches are designed for intrinsically safe applications. In this case we recommend gold contacts. Please add "Exi" to your ordering details when placing an order. To comply with the intrinsically safe approval following max. ratings must not be exceeded: U _{max} = 28 V I _{max} = 50 mA 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 For B1T, B2T-...- EXI: (Ex) II 1 G Ex ia IIC T6 Ga or II 1 D Ex ia IIIC T200 100°C Da For B1T with ST1, and B2T-...-EXI with ST3: (Ex) II 1 G Ex ia IIB T6 Ga or II 1 D Ex ia IIIC T200 100°C Da

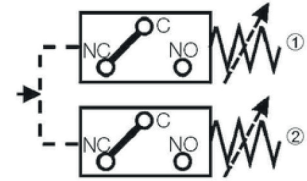
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Dimensions (mm / inch)

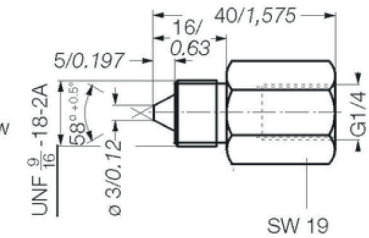


Wiring code for all types (contact status at atmospheric pressure)



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

Adapter see note "process connection"



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-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	Bourdon tube pressure switch					
B						
Number of switching points	1	1 switchpoint				
	2	2 switchpoints				
Housing type	T	Aluminium body				
Micro switch contact type	-H	H-micro switch				
	-GH	GH-micro switch				
	-M	M-micro switch				
Pressure range	12	4.8 ... 82.0 bar				
	32	13.7 ... 220.0 bar				
	48	22.4 ... 330.0 bar				
	65	30.3 ... 448.0 bar (not DNV approved)				
	120	79.3 ... 827.0 bar (not DNV approved)				
	180	79.3 ... 950.0 bar (not DNV approved)				
Material of wetted parts	SS	Stainless steel, 1.4401, 1.4305 and 1.4571				
Electrical connection	-ST1	Cube plug DIN EN 175301-803 A (formerly DIN 43650)				
	-ST3	Plug Amphenol (Tuchel) accord. EN 43651 E 6-pin				
	()	Wago-Clamp				
Options	-EXI	ATEX / IECEx (Ex ia)				
	-GL	Shipbuilding approval DNV				

Example

B 1 T -GH 48 SS -ST1 -EXI