

Electr. Temperature Switch & Level Switch

BTLS2000

Features

- ▶ Measuring ranges: 0 ... 100 °C to 30 ... 140 °C
- ▶ Max. 4 outputs
- ▶ 1 or 2 level setpoint, fixed set points depending on configuration
- ▶ Rotatable 320° display & electrical connection
- ▶ Menu navigation refers to VDI 4130 C standard

Applications

Temperature & Level control for

- ▶ Hydraulics
- ▶ Cooling Systems



Technical Data

Sensor element: Temp.	PT100 Class A DIN/IEC 60751
Sensor element: Level	Reed switch
Materials:	
Wetted parts:	NBR Foam, brass
Electronic housing:	Stainless steel, PBT
Seals:	FKM
Operating elements:	3 easy-response pushbuttons
System of protection:	IP65/IP67
Protection class:	III
Electrical connection:	Plug M12 x 1, 5-pin, 8-pin
Process connection:	M20 x 1,5
Dimensions:	110 x 41 mm (without plug connector and probe)
Weight:	approx. 250 g
Measuring ranges:	0 ... 100 °C / 32 ... 210 °F
A/D converter:	
Resolution:	12 bit
Scanning rate:	(4096 steps per measuring span) 1000 / s
Linearity error:*	< ± 0.5 % v. f. s. at +25 °C
Temperature influence:*	< ± 0.2 % FSO / 10K
Compensation range:*	-10 °C... +70 °C
Repeatability:*	± 0.1 % v. f. s.
Time constante T09:*	40 sec
Max. pressure:	3 bar
Temperature range:	
Electronics:	
Storage:	-10 °C ... +60 °C -30 °C ... +80 °C

Power supply:	15... 28 V DC, reversed polarity protected (SELV, PELV)	
Digital display:	4-digit 14-segment LED display, red, digit height 9 mm	
Error display:	LED red and alphanumeric display	
Power consumption:	approx. 50 mA (without load)	
Level switch output:	1 SPST, NO or 1 SPST, NO + 1 SPST, NC	
Contact rating:	24 V DC, 0.5 A	
Accuracy:	± 3 mm	
Transistor switching outputs PNP:		
Switching function:	Normally open/normally closed, standard / window mode and diagnosis function adjustable	
Adjustment range for switching point and hysteresis:	0 %... 125 % f. s.	
Switching frequency:	max. 100 Hz	
Load	max. 500 mA, short-circuit proof	
Delay	0.0 s ... 50 s adjustable	
Status display(s):	LED(s) red	
EMV	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-5-Surge	1/2 kV
	EN 61000-4-6 HF conducted	10 V
Float BN18		
Density Medium:	min. 0.66 g/cm ³	
Depth of immersion:	16 ± 2 mm (water), 18 ± 2 mm (oil)	

* only Temperature switches

Accessories

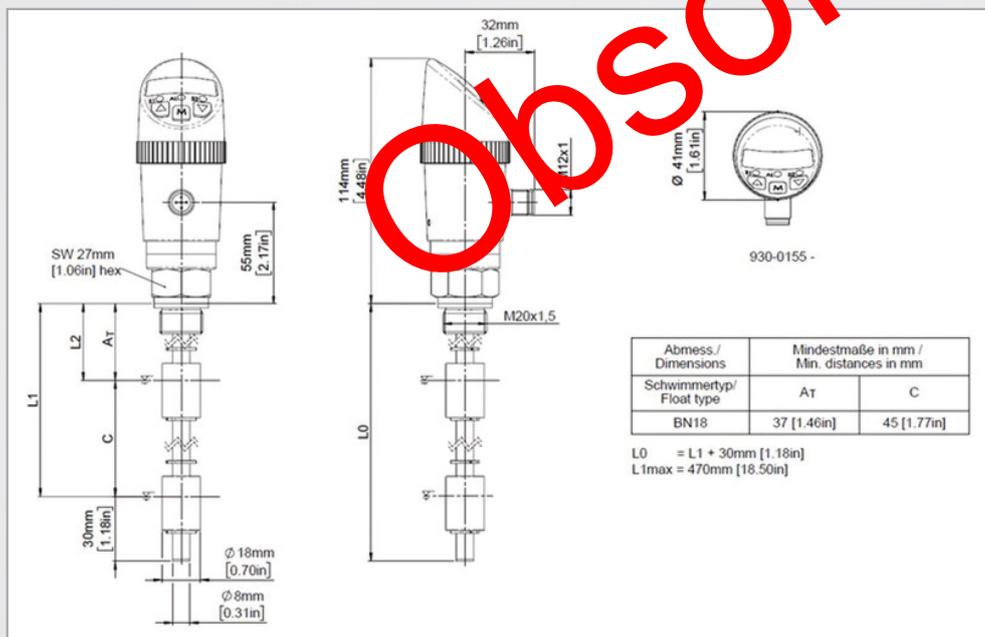
Order Number	Description
907-0185	Plug connector M12 x 1, 5-pin, with screw terminals (IP65)
908-0361	Plug connector M12 x 1, 5-pin, with sharpened cable (IP67)

Temperature

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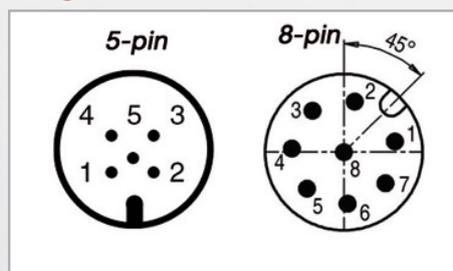
Dimensions (mm / inch)



Electrical Connection

Pin	5-pin	8-pin
1	VCC	VCC
2	SP1 Level	Analog Temperature
3	GND	GND
4	SP1 Temperature	SP1 Temperature
5	SP2 Temperature	SP2 Temperature
6	-	SP1 Level
7	-	SP2 Level
8	-	-

Plug



Order Code

BTLS2

Base Model

1
4
5

2 switch points temp.
4...20 mA 2 switch points temp.
0...10 V 2 switch points temp.

Process Connection

D

M20 x 1,5 mm male, with sealing (sealing code V, E or B)

Sealing

V

FKM (DIN 3869)

E

EPDM (DIN 3869)

B

NBR (DIN 3869)

Temperature Range

1

0...100°C

2

-30...140°C

3

32...210°F

4

-22...280°F

Level Switchpoint 1 (L1) (NO)

XXX

Length 0 ... XXX mm (0...XX inch) (L0 = L1+30mm)

Level Switchpoint 2 (L2) (NC)

XXX

Length 0 ... XXX mm (0...XX inch) (L2 max. = L1-45mm, L2 min = 37mm)

Example

BTLS2

1

D

V

1

180

100

2

Subject to technical changes.

Barksdale®