

# 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 VDMC standard

### Applications

Temperature & Level control for

- ▶ Hydraulics
- ▶ Cooling Systems



### Technical Data

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

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

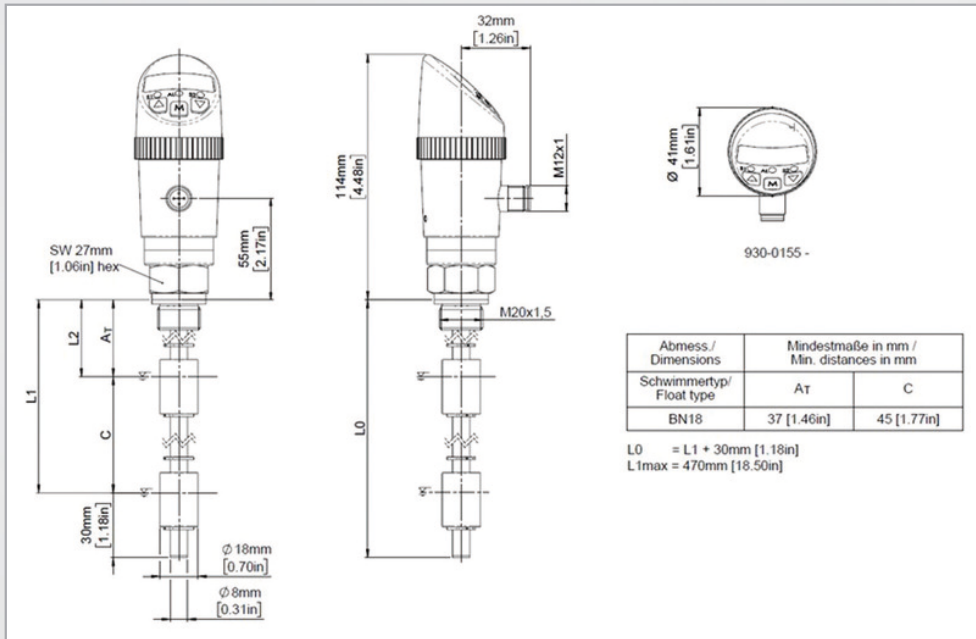
\* only Temperature switches

# Temperature

## Electr. Temperature Switch & Level Switch

**BTLS2000**

### Dimensions (mm / inch)



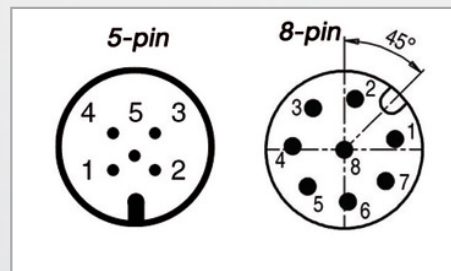
### Accessories

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)

### 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**

1  
4  
5

**Base Model**

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

Subject to technical changes.

**Barksdale®**