

Electr. Dual Temperature Switch

BTS3000

Features

- ▶ Measuring ranges: 0 ...100 °C to -30 ... 140 °C
- ▶ max. 2 switch points
- ▶ Analogue output 4 - 20 mA or 0 - 10 V
- ▶ Rotatable 320° display & electrical connection
- ▶ Menu navigation refers to VDMA standard

Applications

- ▶ Machine tool industry
- ▶ Hydraulic & Pneumatic
- ▶ Injection moulding machines
- ▶ Cooling monitoring



Technical Data

Sensor element:	PT100 Class A DIN/IEC 60751
Materials:	
Wetted parts:	Stainless steel mat. no. 1.4301
Electronics housing:	Stainless steel V2A, PC, PA6.6 GF30 FKM
Seals:	
Operating elements:	3 easy-response pushbuttons
System of protection:	IP65/IP67
Protection class:	III
Electrical connection:	Plug M12 x 1, 4-pin / 5-pin
Process connection:	G1/4" M, 1/4" NPT M
Dimensions:	110 x 41 mm (without plug connector and probe)
Weight:	approx. 200 g
Measuring ranges:	0 ...100 °C / 32 ... 210 °F -30 ... 140 °C / -22 ... 280 °F
A/D converter:	
Resolution:	12 bit (4096 steps per measuring span)
Scanning rate:	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:	200 bar
Temperature range:	
Electronics:	-10 °C... +60 °C
Storage:	-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)	
Analog output:		
Current output:	4...20 mA	
Scanning rate:	2 ms	
Voltage output:	0...10 V DC	
Rating:	max. 10 mA	
Adjustment range:	25 %... 100 % f. s.	
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	
Approvals:		
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
Shock resistance	DIN EN 60028-2-27	50 g (11 ms)
Vibrations resistance*	DIN EN 60028-2-26	20 g (10...2000 Hz)
cULus	E302981	

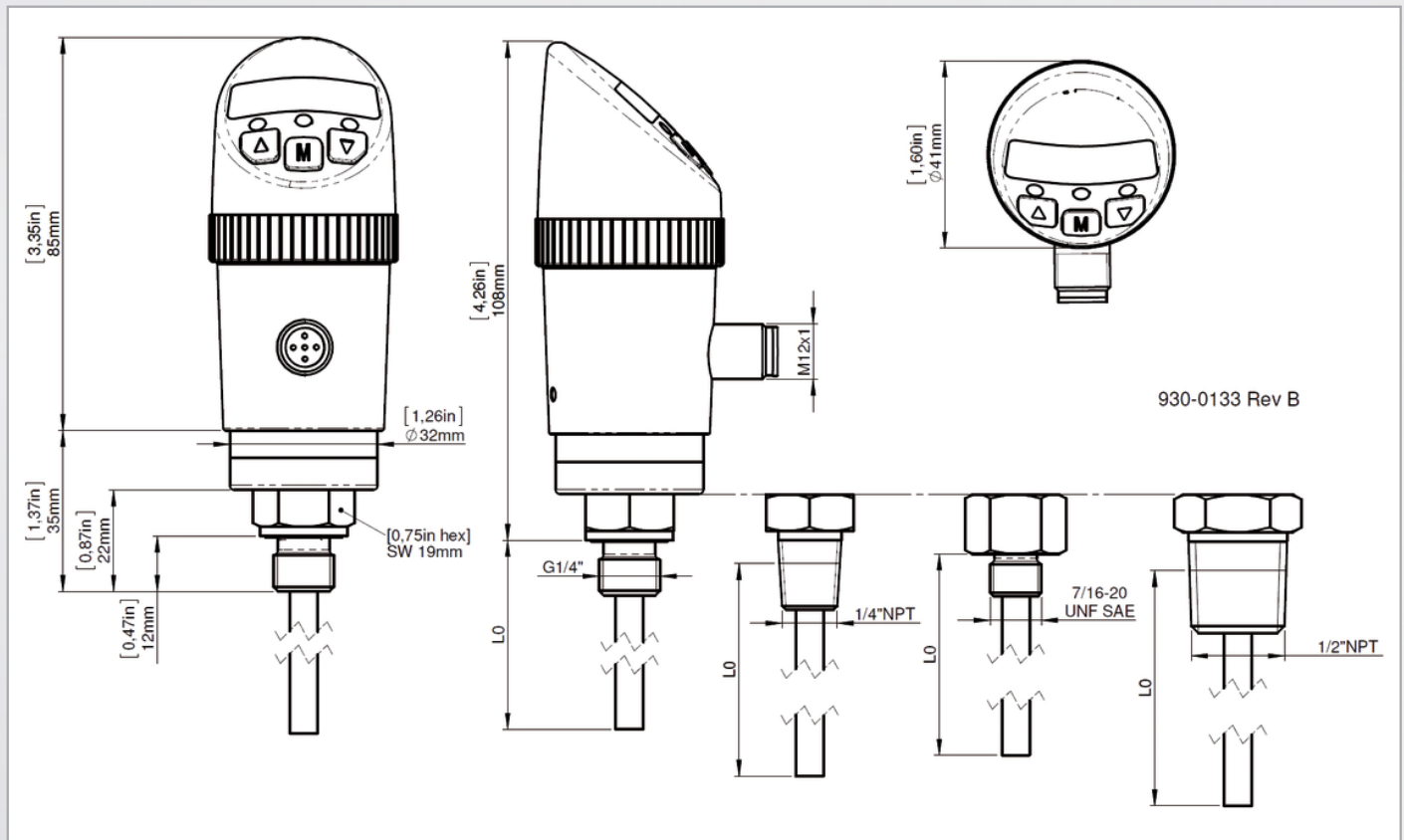
Accessories

Order Number	Description
907-0357	Plug connector M12 x 1, 4-pin, with screw terminals, angled (IP65)
907-0185	Plug connector M12 x 1, 5-pin, with screw terminals (IP65)
908-0361	Plug connector M12 x 1, 5-pin, with sharped cable (IP67), 2 m length

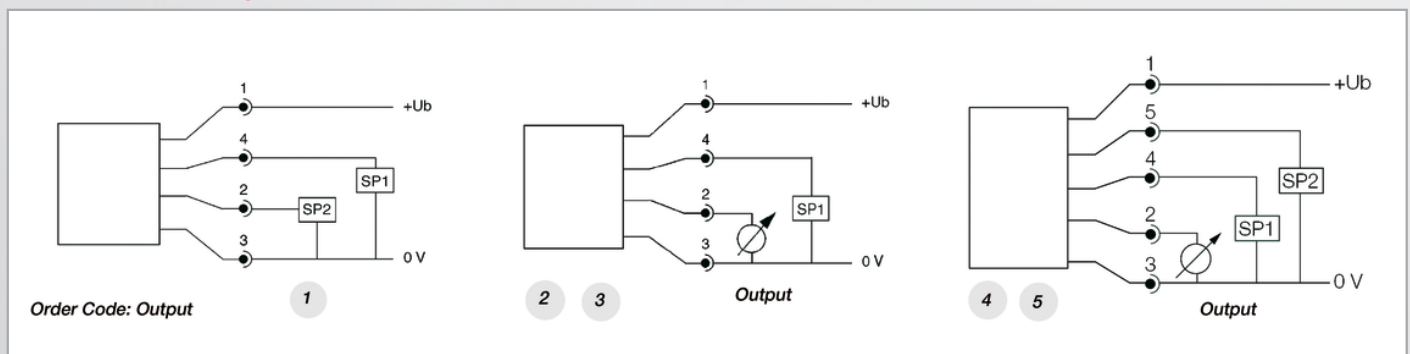
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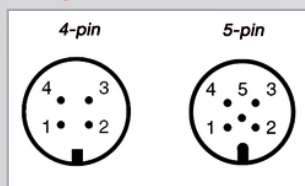
Dimensions (mm / inch)



Connection diagram



Plug



Order Code

BTS3000											
BTS3				Base Mode							
				Output							
				1							
				2							
				3							
				4							
				5							
				Process Connection							
				G							
				2							
				N							
				3							
				E							
				Sealing							
				V							
				E							
				F							
				E							
				X							
				Electrical Connection							
				M							
				Probe length*							
				0 0 1 7 M							
				0 0 2 5 M							
				0 0 5 0 M							
				0 1 0 0 M							
				0 3 0 0 M							
				0 6 5 0 M							
				0 . 7 0 Z							
				2 . 0 0 Z							
				4 . 0 0 Z							
				6 . 0 0 Z							
				1 2 . 0 Z							
				Temperature Range							
				1							
				2							
				3							
				4							
BTS3				X							

* If probe length > 100 mm shock and vibration values can deviate - depending on application.

If probe length > 300 mm keep away the flow from the probe.

If probe length < 25 mm linearity error and time constant values can deviate - depending on application.