

Electronic Temperature Switch

Type TempSwitch 2000

Temperature control digital display, 1 or 2 solid state contacts or 1 solid state contact plus 1 analog output 4...20 mA, accuracy class 0,5% f. s.

Features

7-segment LED display, microprocessor controlled, self monitoring with error display, display rotatable around 330°, all parameters are configured by keypad, tamper proof, keypad lock, rugged construction, vibration- and shock-proof, long term stability

Measuring Ranges

0...+100 °C to -30...+150 °C, 0...+212 °F to -22...+302 °F

Applications

Hydraulics and pneumatics (e. g. presses), lubrication monitoring, machine industry, automobile industry, machine tools, injection moulding machines



Technical Data

Sensor element:	PT100-element (Class B)
Materials:	
Wetted parts:	Stainless steel, mat. no. 1.4301
Electronics housing:	Aluminum die-cast
Seals:	FKM
Proof Pressure	600 bar (8700 psi)
Operating elements:	3 easy-response pushbuttons
System of protection:	IP65
Protection class:	III
Process connection:	G1/4 M
Dimensions:	36 x 130 mm (1,42 x 5,12 inch) (without plug connector)
Weight:	appr. 200 g with 17 mm sensor length appr. 0.44 lb with 0.67 inch sensor l.
Measuring ranges [bar]:	-30...+100 °C, -30...+150 °C 0...+100 °C, 0...+150 °C (-22...+212 °F, -22...+302 °F 0...+212 °F, 0...+302 °F)
Linearity error:	± 0.5 % f. s. at +25 °C (77 °F)
Time Constant:	appr. 40 s
A/D converter:	
Resolution:	10 bit (1024 steps per measuring span)
Scanning rate:	100 / s (for peak value memory)
Electrical connection:	Plug M12 x 1, 4-pin
Sensor Length:	17 mm (Standard), 25, 50, 100, 150, 200, 250 mm (0.67 inch standard, 0.98, 1.97, 3.94, 5.91, 7.88, 9.85 inch)
Sensor Diameter	6 mm (0,24 inch)
Repeatability:	±0.1 % f. s.

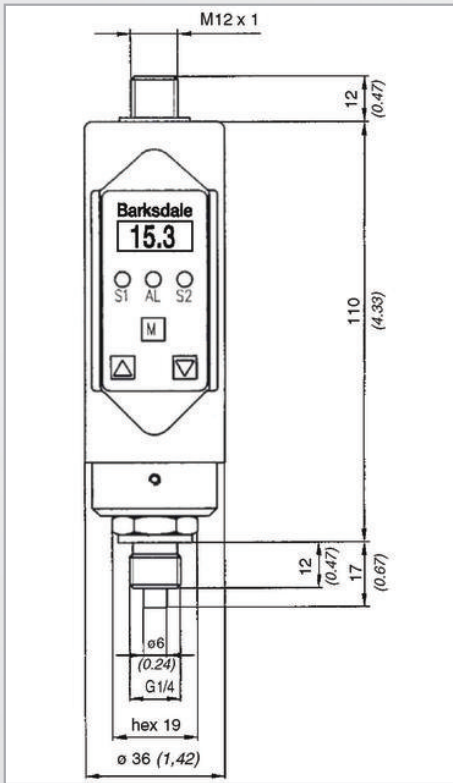
Temperature range:	
Medium:	-30 °C... +150 °C (-22 °F...+302 °F)
Electronics:	-10 °C... +70 °C (+14 °F...+158 °F)
Storage:	-30 °C... +80 °C (-22 °F...+176 °F)
Power supply:	15... 32 V DC, unregulated, max 10% residual ripple, reversed polarity protected (SELV, PELV)
Digital display:	3-digit LED display, 7-segment, red, digit height 10 mm (0,39 inch)
Display range:	-99 ... 999
Display rate:	20 / s
Display unit:	°C, °F - adjustable
Error display:	LED yellow and alphanumeric display
Power consumption:	approx. 50 mA (without load)
Analog output:	
Current output:	4...20 mA
Load:	max. RI = (Ub-12 V) / 20 mA RI = 600 Ohm at Ub = 24 V DC
Load influence:	0.3 % / 100 Ohm
Scanning rate:	5 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:	0 %... 125 % f. s.
hysteresis:	0 %... 125 % f.s.
Switching frequency:	max. 100 Hz
Contact Rating:	max. 500 mA, short-circuit proof
Delay:	0.0 s ... 9.9 s adjustable
Status display(s):	LED(s) green for activated switching point
Options:	see accessories

Temperature

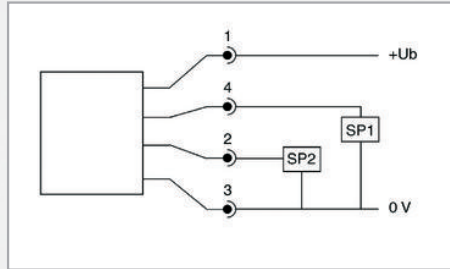
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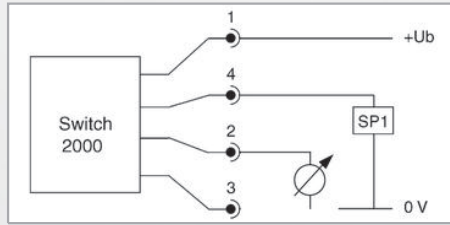
Dimensions (mm / inch)



Connection Diagram 1



Connection Diagram 2



Connection Chart

Plug, M 12 x 1, 4-pin	Version with 1 switching output	Version with 1 switching output and 1 analog output
Pin 1	+Ub (15...32 V DC)	+Ub (15...32 V DC)
Pin 2	---	analog
Pin 3	0 V	0 V
Pin 4	SP1 (0,5 A max.)	SP1 (0,5 A max.)

Order Numbers

Measuring range (°C)	0...+100 °C	-30...+150 °C	0...+100 °C	-30...+150 °C	0...+100 °C	-30...+150 °C
Measuring range (°F)	0...+2120 °F	-22...+302 °F	0...+2120 °F	-22...+302 °F	0...+2120 °F	-22...+302 °F
Sensor length	17 mm (0.67 inch)		50 mm (1.97 inch)		300 mm (11.82 inch)	
1 Switching output	0628-011	0628-012	0628-013	0628-014	0628-023	0628-024
2 Switching output	0628-015	0628-016	0628-017	0628-018	0628-025	0628-026
1 Switching output 1 Analog output 4... 20 mA	0628-096	0628-097	0628-098	0628-099	0628-100	0628-101

Accessories

Order No.	Description
907-0357	Electrical plug M 12 x 1, 4-pin, with screw terminal, 90° elbow
907-0344	Electrical plug M 12 x 1, 4-pin, with screw terminal, straight