UTS7

Solid State Temperature Switch

TS2000

✧ **Dual Switch with Built-In Transducer Output**

✧ **High Accuracy with Fully Adjustable Deadband**

✧ **Built-In Digital Temperature Readout**

✧ **Fully Configurable via Keypad**

Barksdale's **UTS7 Series** of **Solid State Temperature Switches** offers the convenience of three discrete components (dual temperature switch, temperature transducer, and digital temperature gauge) combined into one compact package. Setpoints and deadband are easily adjusted by using a built-in, user-friendly menu, eliminating the need for a test bench. Analog transducer outputs are scalable from 25% to 125% of the full adjustable range. A 12-bit microprocessor provides built-in self diagnostics and allows for switch time delays and cycling up to 100 times per second. For applications requiring precise temperature monitoring and extremely long life, the **UTS7 Series** is the ideal solution.

Barksdale
CONTROL PRODUCTS

CRANE. Barksdale, Inc./Barksdale GmbH
A Subsidiary of Crane Co.

Exceeding Your Expectations Through Our People, Products and Performance

UTS7

For temperature monitoring with digital display, 2 solid state outputs and 1 analog output, accuracy class 0.5 % f. s.

Electrical Connector
Not Included.

Features

Alphanumeric 4-digit LED-Dot-Matrix-display, display rotable around 330°, microcontroller and self monitoring with error output, all parameters programmable via keypad, adjustable keypad lock, different access levels, rugged stainless steel construction.

Measuring Ranges

32° to +212°F (0° to +100°C); -22° to +302°F (-30° to +150°C)

Applications

Hydraulics and pneumatics. process- and chemical industry, machine industry, machine tools.

Technical Data

Sensor element	: Pt 100 (Class B)
Materials	
Housing	: stainless steel (316)
Process seal	: FKM (fluorelastomer)
Operating elements	: 3 easy response pushbuttons at the frontside, all parameters programmable, adjustable keypad lock
Protection class	: IP65
Process connection	: 1/4 - 18 NPT Male (standard), G1/4
Housing dimensions	: 5.1 in. (131 mm) (without electrical plug) rotable housing for adjusting display after installation
Weight	: appr. 0.8 lbs (350 g) with .2 in. (5 mm) sensor length
Measuring ranges	: 32° to 212°F
	: -22° to 302°F
Linearity error	: ± 0,5% f. s.
Time constant	: appr. 40 s
Data aquisition	: microcontroller and self monitoring with error output
Resolution	: 12 bit (4096 steps)
Scanning rate	: 100 Hz
Electrical connection	: M 12 x 1, 5-pin
Sensor length	: 0.67 in., 1.97 in., 11.82 in.
Sensor diameter	: .24 in. (6 mm)
Temperature influence	: ± 0.1 % f. s. / 10 K
Compensation range	: 14° to 158° F (-10 °C to +70 °C)
Repeatability	: ± 0.1 % f. s.

Temperature range	
Media	: -22° to 302°F (-30° to +150°C)
Electronics	: 14° to 158°F (-10°C to + 70°C)
Storage	: -22° to 176°F (30°C to +80°C
Power supply	: 10 - 30 V DC unregulated, max. 10 % residual ripple, reversed polarity protected
Operating display	: 4-digit LED-Dot-Matrix-display, green, height 5 mm with decimal point
Display rate	: 5/s
Display unit	: °F/°C
Delay	: 0.0 - 9.9s adjustable (for display damping)
Brightness	: 20 - 100% - adjustable
Error Display	: LED red and alphanumeric display
Power Consumption	: appr. 40 mA at Ub = 24 V DC (without load)
Output signal	: 4 - 20 mA, short circuit-proof
Delay	: 0.0 - 9.9 s adjustable
Max. load	: max.RI = (Ub-12V)/20mA, 600 Ohm at 24 V DC
Solid state output(s)	: 1 or 2 pnp-Open-Collector solid state switching outputs
Adjustment range	: 0 to 125% f. s.
Hysteresis	: 0 to 125% f. s.
Switching frequency	: 100/s
Delay time	: 0.0 to 9.9 s - adjustable
Max. constant current	: 400 mA
Display	: 2 x LED green for activated set point

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UTS7

Dimensions
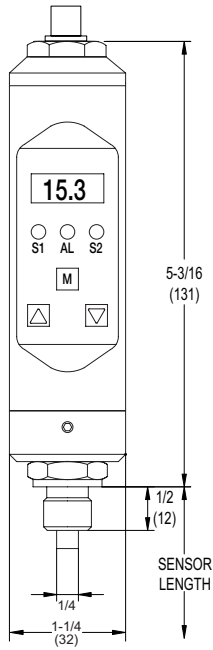
Connection Chart

Plug M 12 x 1 5-pin	Version with 2 switching outputs and 1 analog output
Pin 1	+Ub 18 - 32 V/DC
Pin 2	analog 4-20 A/ 0-10VDC
Pin 3	0V
Pin 4	SP1 0.5A max.
Pin 5	SP2 0.5A max.

Pressure Ranges

Switch Output	Temperature Range	Sensor Length	Part No. 1/4-18 NPT
Dual Switch and Analog Output	0° to +212°F	0.67 inch	UTS7-212-A-N-3
Dual Switch and Analog Output	0° to +212°F	1.97 inch	UTS7-212-B-N-3
Dual Switch and Analog Output	0° to +212°F	11.82 inch	UTS7-212-C-N-3
Dual Switch and Analog Output	-22° to +302°F	0.67 inch	UTS7-302-A-N-3
Dual Switch and Analog Output	-22° to +302°F	1.97 inch	UTS7-302-B-N-3
Dual Switch and Analog Output	-22° to +302°F	11.82 inch	UTS7-302-C-N-3

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Base model	UTS7				
Temperature Range		-212	32° TO 212° F		
		-302	-22° TO 302° F		
			-A	0.67 Length	
			-B	1.97 Length	
			-C	1.82 Length	
Process Connection				-N	1/4 NPT
				-G	G1/4
Output					-3 Dual Switch Plus 4-20 mA Output
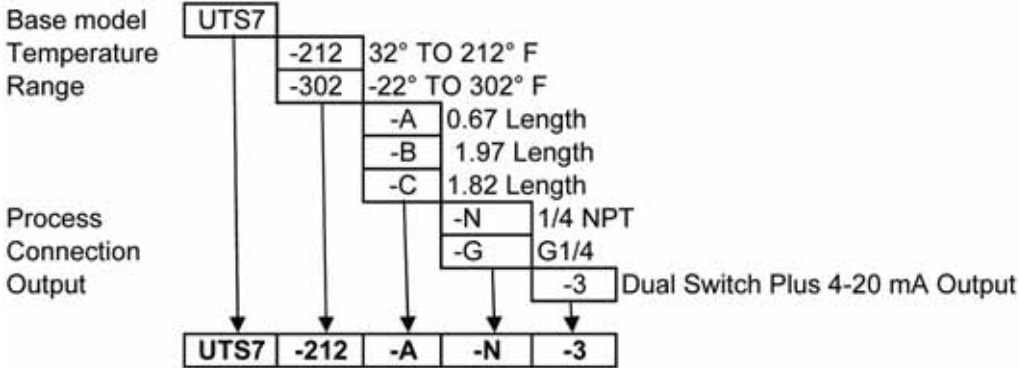
UTS7	-212	-A	-N	-3

EXAMPLE: UTS7-212-A-N-3

Accessories

Description			Order Number
Mating Electrical connector (not included)	5-Pin	M-12	239263