INTELLIGENT TEMPERATURE SWITCHES

UTU Series

Intelligent Temperature Switch

MEASUREMENT RANGE	-50 to +200 °C
OUTPUT	2 x PNP/NPN + optional 0/4-20 mA or 0-10 V
WETTED MATERIAL	Stainless-steel housing and configurable probe
PROTECTION	IP67

PRODUCT OVERVIEW

The UTU Series combines a temperature switch, transmitter, and local display in one compact industrial instrument. Two configurable switching channels can operate in hysteresis or window mode with adjustable delay, while an optional analog current or voltage signal supports PLC, DCS, and monitoring integration. The display and housing can each rotate up to 330 degrees, and integrated or remote-probe versions support installation in machinery, hydraulic, pneumatic, water-treatment, and process equipment.

KEY FEATURES

- Integrated temperature switch, transmitter, and LED display
- Two configurable PNP or NPN switching outputs
- Optional 0/4-20 mA, 0-5 V, or 0-10 V analog signal, including reverse scaling
- Hysteresis or window switching with 0.00 to 1,000.0 second delay
- Integrated or remote probe configurations with selectable connections and probe dimensions
- Rotatable display and housing with password-protected setup

TYPICAL APPLICATIONS

- Circulating-water and cooling-water systems
- Hydraulic and pneumatic equipment
- Oil and gas machinery
- Industrial manufacturing
- Water-treatment equipment

TECHNICAL SPECIFICATIONS

Catalog values apply to the stated configuration. Final performance, materials, approvals, and connection details are confirmed on the quotation and controlled order documentation.

PARAMETER	SPECIFICATION
Measurement range	-50 to +200 °C
Temperature accuracy	<= ±0.5 °C
Sensing element	Pt1000
Supply voltage	12-30 VDC
Sensor response time	<=5 s
Temperature drift	±0.15% per 10 K
Display resolution	0.01 °C (catalog value)
Analog-output accuracy	±0.2% FS
Switch outputs	Two PNP or NPN outputs; normally open or normally closed, configurable
Maximum switch current	0.5 A
Switch response	<10 ms
Switch delay	0.00 to 1,000.0 s
Switching modes	Hysteresis or window mode
Current outputs	0-20 mA, 4-20 mA, 20-0 mA, or 20-4 mA; load <=0.5 kohm
Voltage outputs	0-5 V, 0-10 V, 5-0 V, or 10-0 V; load >10 kohm
Display / indicators	LED display with two red switch indicators
Operating / storage temperature	-30 to +80 °C / -40 to +80 °C
Vibration	<=10 g, 10-500 Hz, IEC 60068-2-6:2007
Shock	<=50 g, 11 ms, IEC 60068-2-27:2008
Electrical connection	M12 x 1, 5-pin
Ingress protection	IP67

ORDERING INFORMATION

ORDER-CODE PATTERN

UTU [signal] - [process] - M - [probe length] - [diameter] - [output type] - [construction]

SIGNAL CONFIGURATION

S2 = Two switch outputs | A3 = Two switch outputs + 0-20 or 4-20 mA | V5 = Two switch outputs + 0-5 or 1-5 V | V10 = Two switch outputs + 0-10 or 1-10 V

PROCESS CONNECTION

G12M = G1/2 male | G14M = G1/4 male | N14M = 1/4 NPT male | R14M = R1/4 male | K50 = Sanitary clamp, 50.5 mm outside diameter

ELECTRICAL CONNECTION

M = M12 x 1, 5-pin plug

PROBE LENGTH

025 = 25 mm example; enter required L in mm

PROBE DIAMETER

D6 = 6 mm | D8 = 8 mm

SWITCH OUTPUT TYPE

P = PNP | N = NPN

CONSTRUCTION

Blank = Integrated version | 2 = Remote probe with 2 m cable | 5 = Remote probe with 5 m cable | 10 = Remote probe with 10 m cable

M12 PIN ASSIGNMENT

1 / brown = Supply positive | 3 / blue = Supply negative | 4 / black = Switch output S1 | 2 / white = Switch output S2 | 5 / gray = Analog current or voltage output

ORDERING NOTE

Please include the process medium, normal and maximum temperature, process connection, insertion length, electrical interface, required approvals, quantity, and installation constraints with the RFQ. CASCED US will validate the complete code before acceptance.