

LOOP POWERED TRANSMITTER DPT420-S

- *Accepts standard Pt100, Pt500 or Pt1000 sensor, according to DIN IEC 751*
- *Range: -50°C to 600°C (or other on request)*
- *Analog output 4-20 mA, 2-wire connection, loop powered*
- *4 LCD Display, 11 mm*
- *All Stainless Steel, IP65 protection*



GENERAL DESCRIPTION

The Loop Powered Thermometer DPT420-S accepts standard Pt100 (Pt500, Pt1000) sensor and digitally displays the temperature in °C (or °F). The resolution is 0.1°C. 2- or 3-wire connection of RTD probe is provided. The 3-wire connection assures a good compensation of connecting wire resistance and permits a longer distance between the sensor and the instrument.

The measuring range of the transmitter / thermometer type DPT420V2 can be reduced additionally within the full range by configuring the bottom and top border. This range is proportional to a current output of 4-20mA with two-wire connection. The unit remembers this separately by °C and by °F.

The Loop Powered Transmitter DPT420-S is suitable for use in food and chemical industry, pharmacy and many others.

The RTD probe dimensions are specified upon request.

The connection between the sensor and the thermometer can be either with ordinary or armoured 2 or 3-wire cable.

In a basic mode, the SP4 symbol flashes for about 4 seconds, indicating that the measured value has been updated.

To change the measurements from °C to °F or vice versa, use C / F jumper shown in the diagram below.

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Additive correction configuration Instructions

DPT3V2-S supports additive correction (aka zero adjustment) up to ± 5 °C or ± 9 °F with resolution of 0.1. To adjust the measured temperature value, you can use the two buttons UP and DOWN shown on the diagram below. Pressing any of them initially enters the additive correction mode (indicated by symbols SP3) and displays the currently saved correction value. Any subsequent press of UP will increment and DOWN will decrement the correction. If you hold any button pressed, the correction will change more rapidly. If you don't press any button for 3 seconds, the new correction value will be saved and the device will enter standard measurement mode.

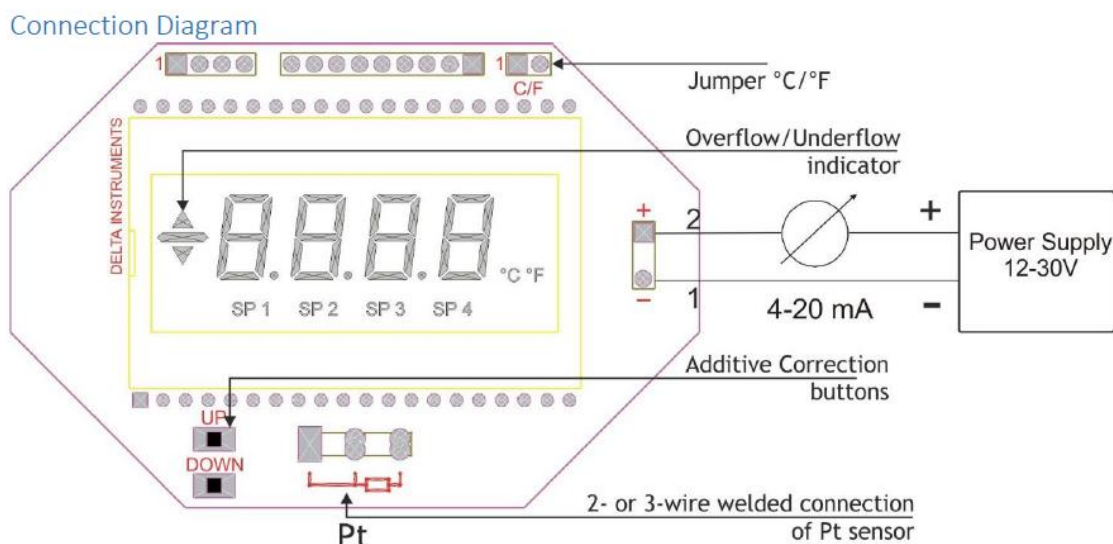
Note: When changing the units of measurement, the additive correction values are not remembered and need to be re-entered.

Current output range configuration

Press both UP and DOWN buttons simultaneously for about 2 seconds. The value of the temperature for which the output current is 4mA is displayed. The indication of this is the light of the "Underflow" ▼ indicator.

SP1 blinking. Each flashing SP1, SP2, SP3, SP4 can be changed with the UP button, the DOWN button selects which one to be change.

If within 4 seconds is not pressed button the selected value is saved and switches to set the value of the temperature for which the output current is 20mA. An indication of this is the light of the "Overflow" indicator ▲. The selection procedure is repeated. After recording the transmitter enters the basic measurement mode.



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Specifications:

Case:	stainless steel, Φ 100 or Φ 80 mm
Ingress Protection (IP) Rating:	IP65
Stem Material:	304 stainless steel*
Display:	4 digits LCD, 11 mm digits height
Input:	Pt100 (DIN IEC 751, $\alpha=1.385$), 3-wire connection
Range:	-50 to 600 °C.
Analog output:	4-20 mA, 2-wire connection, loop powered
Accuracy:	0.25 % F.S.
RTD probe Accuracy:	0.5 % F.S.
Connection between the sensor and the thermometer:	Ordinary or armoured 2 or 3-wire cable, Φ 6 mm
Cable length:	Up to 200-250 m with additional error <0.5%
Ambient conditions:	-20..+50 °C

FOR ORDER, PLEASE SPECIFY:

- range of the thermometer
- regular or armored cable between the sensor and the thermometer
- for armored cable - length, diameter and 2-wire or 3-wire cables