

2-Wire Head-Mounted Transmitter -- RTD (PT100) Model LW-130P

Multi-ranges Selectable

Temperature Linearized

Low Temperature Drift

Easy Calibration

Competitive pricing



Descriptions

The Model LW-130P is an analog, non-isolated, 2-wire head-mounted temperature transmitter that converter the RTD input into a proportional, linear, and highly accurate 4- 20 mA output current in a variety applications such as process control, automation system, and energy source management. The LW-130P is performed by means of a dip-switch array for the coarse range setting, and two multi-turn potentiometers (Zero & Span) which are used for the final fine-tuning. The LW130P is housed in a metal enclosure with plastic top cover, fitting into DIN B connection heads providing excellent RFI immunity. The LW-130P accepts low level signal from RTD, filtered, amplified, and converter to process current to reduce susceptibility transients and noise operations and allow the same two wires to carry the transmitter power and output current signal simultaneously.

Specifications: (Vloop = 24 Vdc, Tamb = 23 2 " , Rload = 250 ohms)

Output:	4 - 20 mA; Upscale < 25 mA; Downscale < 3.0 mA
Loop power:	10 - 32 Vdc. Reverse polarity protected,
Input RTD:	Pt100, 2 or 3- wire DIN. 43760, BS1904 characteristics
Max.sensor wire resistance:	30 ohm / wire
Supply voltage effect:	0.01 % of span /Volt
Temperature coefficient:	0.01 % of span / (400 measurement range)
Linearity error:	0.15% of span
Repeatability:	0.01 % of span
Load capability:	50 x (loop power - 10) ohms
Input zero range:	-50 to 50" , adjustable
Span:	50 to 200"C selectable; see table 1
Fine adjustment:	5% of ZERO and SPAN
RFI effect (5W, 470 MHz):	<10% of span
Response time (0 to 90%):	200 ms
Housing material:	Polycarbonate, UL94-V0 grade
Connection:	M3 Screw, AWG 14 - 22
Operation environment:	- 40 to 85 " , 5 to 85 %, non-condensing
Dimensions:	45mm Dia. X 20 mm H
Weight:	50g

Measurement Range

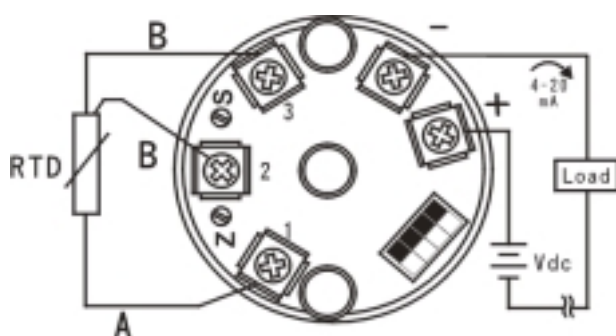
DIP-Switch Setting				SPAN (°C)
S1	S2	S3	S4	
ON	OFF	OFF	OFF	50
ON	OFF	OFF	ON	100
OFF	OFF	ON	OFF	150
OFF	ON	OFF	OFF	200

Note:

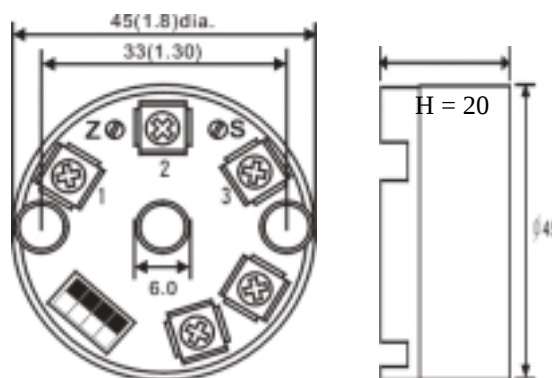
The DIP-switch is protected by a small tip which has to be moved before setting

Table 1 span setting

Wiring diagram



Dimensions: mm (inch)



- Note:
1. For 2-wire RTD input Terminal # 2 & # 3 must be shorted together.
 2. When change the span by DIP-switch setting, the transmitter should be calibrated again for best accuracy.
 3. Without specified, the unit is calibrated 200°, before shipping.

Adjustments

Connect signal source (calibrator) to the unit, power on warm up 5 minutes or more.

- A. Set the calibrator to the desired low temperature (4 mA point) and adjust the potentiometer ZERO to get Iout = 4 mA.
- B. Set the calibrator to the desired high temperature (20 mA point) and adjust the potentiometer SPAN to get Iout = 20 mA.
- C. Repeats steps A & B once, if necessary for best accuracy

Order information

- A. Standard calibrated range
LW130P
- B. Customer defined range
LW130P – Low/ High Temperature Range Unit

PISOAMP, Inc

Subject to improvement
& change without notice

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