

STO300 is an electronic temperature transmitter that converts the measurement into an electric signal 4–20 mA.

The transmitter is supplied as a complete unit, comprising the sensing element, the amplifier mounted in a housing, which is resistant to ultraviolet light.

The transmitter is intended for mounting on an outside wall, on the north side where possible.

The transmitter is connected over a 2-wire cable, which serves both as power supply and signal transmission.

The reading of the measured signal is done over an external load resistance R_L . The supply voltage U_M is the total of the voltage at the outdoor transmitter U_G and the voltage drop across the load resistor and the wire resistances.



TECHNICAL SPECIFICATION

- Range see table
 Signal output 4-20 mA
 Time constant approx. 2 min.
 Materials:

- Immersion tube stainless steel
 Connection box polyamid plastic
 Enclosure rating IP 65

Dimensions (in mm) according to figure and table

Voltage across transmitter U_G max. 36 V DC
 U_G min. 15 V DC

Maximum load (ohm) $R = (U_M - 9)/0,02A$

Accuracy $\pm 0,4 \%$ of range
 at ambient temp. of 25 °C (77°F) and $U_G = 24$ V DC

Temperature dependence $\pm 0,04$ °C/°C
 at ambient temp. of 25 °C (77°F) and $U_G = 24$ V DC

Voltage dependence 0,1 °C (0.18°F) when $U_G = 15$ to 36 V DC

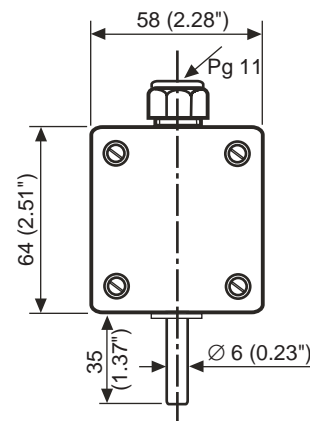
Load dependence 0,1 °C(0.18°F) when $R = 0$ to max. R

Ambient temperature (amplifier) min. -30°C (-22°F),
 max. +60°C (140°F)

Standards:

EMC EN 50081-1, EN 50082-1

Dimensions mm (inches)



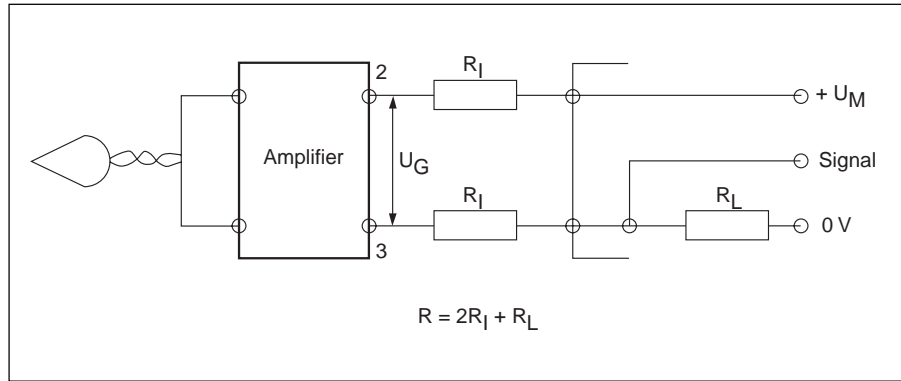
Part number	Description	Range		Weight	
		°C	°F	g	lb
0-069-2050-0	STO300 -50/50	-50/50	-58/122	100	0.22

WIRING

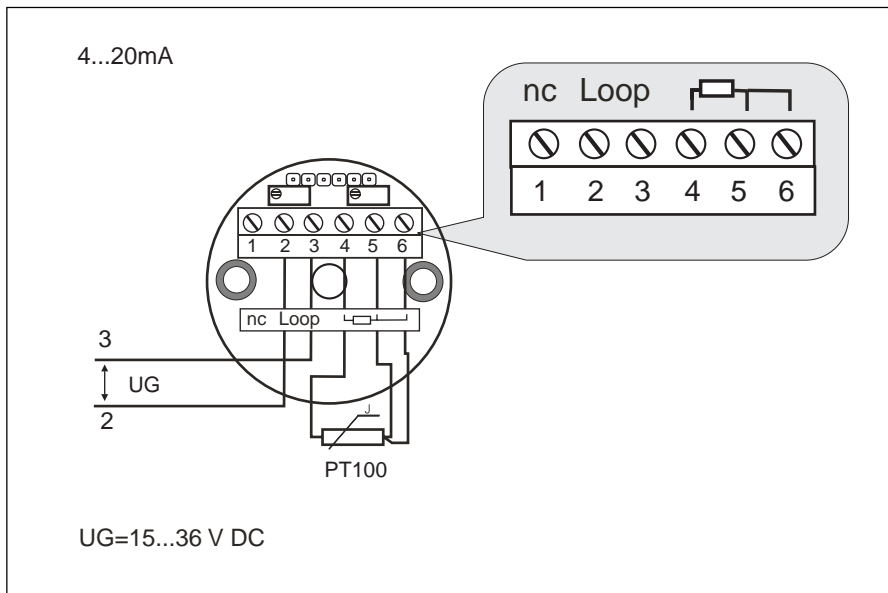
The transmitter will operate even if the cable connections at 2 and 3 are reversed.

Cable: 0,2-1,5 mm².

Note! Avoid contact with the sensor terminals if the connection wires are live.



ADJUSTMENT



The transmitter is factory calibrated for the required range within the specified accuracy, prior to delivery. Any further calibration should normally not be necessary. The sensor and the electronic unit are calibrated together. If either of these are replaced, the transmitter is no longer in calibration.

The builtin amplifier is equipped with two trim potentiometers:

- ZERO to adjust the lower end of the range, 4 mA.
- SPAN to adjust the upper end of the range, 20 mA.

When calibrating, adjust ZERO first and then SPAN. Because of a certain degree of interaction, the adjustment process must be repeated several times.

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