



STD300

Duct temperature transmitter
4–20 mA

D-60-21

8 June 2004

STD300 is an electronic temperature transmitter that converts the temperature measured into an electric current signal 4–20 mA.

The transmitter is delivered as a complete unit, comprising a stainless steel immersion well, the sensing element and an amplifier, mounted in a housing. The transmitter is intended for immersion installation and is used for temperature measurement in air ducts.

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 over the 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 air velocity 1,5 m/s approx. 72 s
air velocity 3,0 m/s approx. 52 s

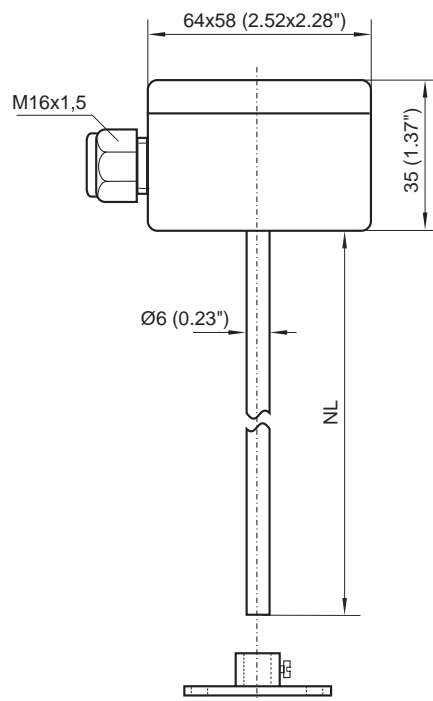
Materials:

Immersion tube stainless steel
Connection box polyamid plastic
Mounting flange aluminium
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. -20°C (-4°F)
max. +70°C (158°F)

Standards:

EMC EN 50081-1, EN 50082-1

Dimensions mm (inches)



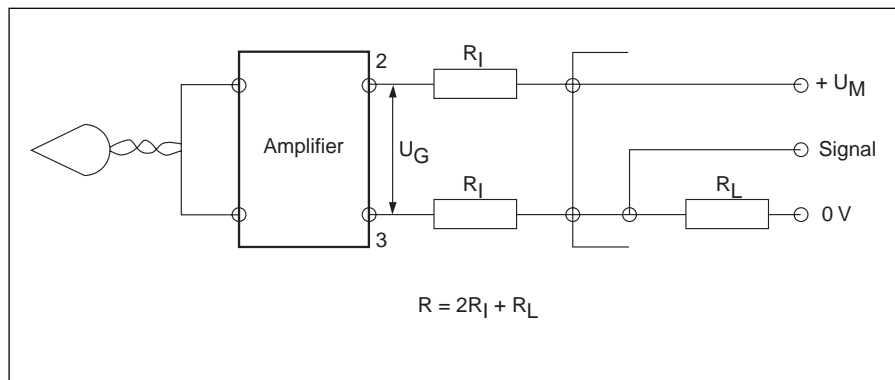
Part number	Description	Range		NL		Weight	
		°C	°F	mm	In.	g	lb
0-069-2012-0	STD300-300 -50/50	-50/50	-58/122	313	12.32	125	0.76
0-069-2014-0	STD300-300 0/100	0/100	32/212	313	12.32	125	0.76

WIRING

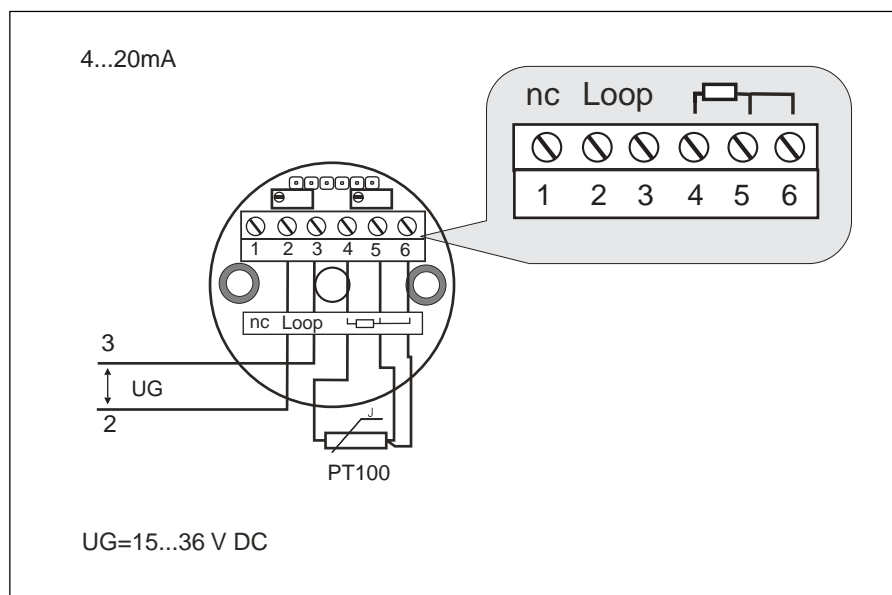
The transmitter will operate even if the cable connections at 2 and 3 are reversed.

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 built in 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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