

AR581 Temperature transmitter



- linear processing of measured temperature into a current or voltage signal
- universal input:
 - thermoresistance Pt100
 - termoparowe J, K, S, N, E
- output current 4±20mA (2-wire with power supply in current loop) or voltage
- 0÷10V (3-wire)
- no galvanic separation input / output
- narrow housing for mounting on TS35 rail
- input type, processing range and other processing parameters configured with AR950, AR956 programmer or AR956 programming set or by the manufacturer according to customer specifications
- exceeded processing range or sensor error signalled with a LED
- high accuracy and immunity to interference

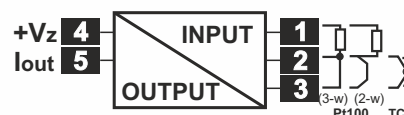


AR956 programmer can be used to power transmitter from computer's USB port during parameter configuration.

TECHNICAL DATA

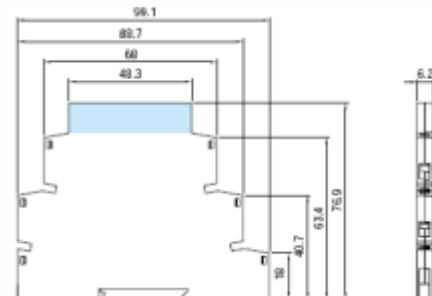
Universal input (programmable)	measuring range
- Pt100 (3- or 2-wire)	-100 ÷ 850 °C
- thermocouple J	-5 ÷ 800 °C
- thermocouple K	-5 ÷ 1200 °C
- thermocouple S	-5 ÷ 1600 °C
- thermocouple N	-5 ÷ 1300 °C
- thermocouple E	-5 ÷ 700 °C
Cold ends temperature compensatio	automatic or fixed
Lead resistance for Pt100	Rd<25W each line 3-cable connection
Pt100 resistance input current	~300 mA
Processing range (programmable)	within the input measuring rang
- processing range minimum width	40°C
- factory setting	0 ÷ 100 °C
- measuring resolution	0,1 °C
Current output (programmable)	4±20 mA, 20±4 mA
- load characteristics	Robc < (Usup-10V) / 21mA < 1238 W
- output current resolutions	16000[mA] / (processing range[°C])
- maximum resolution	2mA
- nonlinearity	< 0,04%
Processing basic error (25°C)	
- for Pt100 input	< 0,2% of the full measuring range
- for thermocouple input	< 0,3% of the full measuring range
- processing resolution error (%)	±0,1°C x100 / processing range[°C]
Additional errors	
- cold ends temperature compensation	< 2°C ((thermocouple inputs only)
- cables resistance compensation	< 0,1% Pt100 input measuring range
- environment temperature variation	< 0,01 % measuring range / °C
Rated operating environment	
- supply (+Vz) - current output	10÷36Vdc (>10[V]+Robc[W]x0.021[A])
- operating temperatur range	0 ÷ 65 °C
- operating relative humidity range	0 ÷ 90 %RH (non condensing)
Response time (10÷90%)	
- programmable	in range 350÷1600 ms
- factory setting	900 ms
Indication of detected error	
- optical	red LED
- current output signal	3,8 or 21 mA
Housing on TS35 rail	GUIDEBOX COMPACT
- dimensions	6,2 x 76,9 x 99,1 mm
- protection rating	IP40 (housing), IP20 (terminals)
Weight	~ 20g
Electromagnetic compatibility (EMC)	
- immunity: acc. to PN-EN 61000-6-2	
- emission: acc. to PN-EN 61000-6-4	

DESCRIPTION OF THE TERMINAL BLOCK



HOUSING AND INSTALLATION

Dimensions	6,2 x76,9 x 99,1 mm
Installation	on TS35 rail
Material	polyamide (UL 94V-0)



HOW TO ORDER

AR581 Please specify in order :
AR581 / input / range / output / for thermocouples way to compensate for temperature of cold ends

Transmitter can be configured by the manufacturer, when ordering, please specify the type of entry, range, output type (4 ... 20 or 20 ... 4 mA) and other parameters described in the user's manual (available at www.apar.pl)

For example :

- AR581 / J / 100...500°C / 20...4mA / auto**
Thermocouple J type input, processing range 100 ÷ 500 °C, output 20 ÷ 4mA with automatic temperature compensation of cold ends
- AR581 / J / 100...500°C / 4...20mA / 25°C**
Thermocouple J type input, processing range 100 ÷ 500 °C, output 4 ÷ 20mA with constant cold temperature compensation of 25 °C