

AR580 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
- housing for mounting on TS35 strip (DIN 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

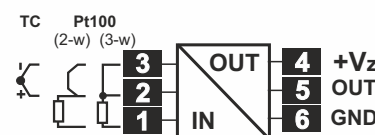
AR956 programmer can be used to power transmitter from computer's USB port during parameter configuration.



TECHNICAL DATA

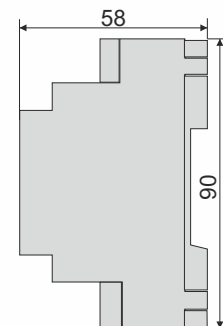
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|--|------------------------------------|
| Universal input (programmable) | measuring range |
| - Pt100 (3- or 2-wire) | -100 ÷ 850 °C |
| - thermocouple J | -5 ÷ 800 °C |
| - thermocouple K | -5 ÷ 1200 °C |
| - thermocouple S | -5 ÷ 1600 °C |
| - thermocouple N | -5 ÷ 1300 °C |
| - thermocouple E | -5 ÷ 700 °C |
| Cold ends temperature compensatio | automatic or fixed |
| Lead resistance for Pt100 | Rd<25Weach line 3-cable connection |
| Pt100 resistance input curren | ~300 nA |
| 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% |
| Voltage output (programmable) | 0+10 or 10÷0 Vdc |
| - load characteristics | lobc < 4mA (Robc > 2500 W) |
| - output voltage resolutions | 10000[mV] / (processing range[°C] |
| - maximum resolution | 1,25mV |
| - 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]) |
| - supply (+Vz) - voltage output | 18+36Vdc, lobc < 4mA |
| - 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 |
| - voltage output signal | 10,6 V |
| Housing on TS35 rail | MODULBOX 1MH53 |
| - dimensions | 18 x 90 x 58 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..... 18 x 90 x 58 mm
Installation on TS35 rail
Material..... self-extinguishing material PPO
Connecting loads and supply..... screw terminals



HOW TO ORDER

AR580 / U...3-wire version with voltage output
AR580 / I2-wire version with current output

Please specify in order:
AR580 / input / range / output / for thermocouples
 way to compensate for temperature of cold ends

For example :

- AR580 / 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
- AR580 / 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
- AR580 / Pt100 / 0...500°C / 0...10V**
Pt100 input, processing range 0 ÷ 500 ° C, 3-wire output 0 ÷ 10V