APLISENS®
AR580 TEMPERATURE TRANSMITTER

- linear processing of measured temperature into a current or voltage signal
- universal inpu:
  - 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
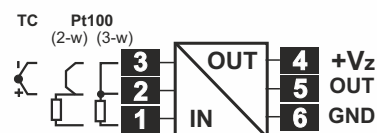- high accuracy and immunity to interference

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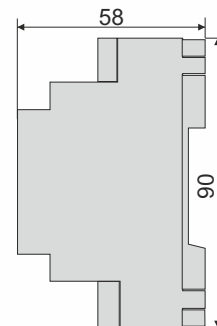
TECHNICAL DATA

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 .... $Rd < 25\,W$ each line 3-cable connection
Pt100 resistance input curren .... ~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%
Voltage output (programmable) .... 0÷10 or 10÷0 Vdc
- load characteristics .... Iobc < 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
- thermocouple cold junction temp. comp..... < 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, Iobc < 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...3wire version with voltage output
AR580 / I ....2wire version with current output

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

For example :
1.   **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
2.   **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
3.   **AR580 / Pt100 / 0...500°C / 0...10V**
Pt100 input, processing range 0 ÷ 500 ° C, 3-wire output 0 ÷ 10V

APLISENS GROUP