

AR507

TEMPERATURE METER

Single channel temperature meter



- 1 universal measurement input (thermoreistance, thermocouple, digital temperature probes AR182 and AR183)
- BIN input for stopping the measurement - HOLD function
- LED display with adjustable brightness
- compensation of line resistance for resistance sensors
- temperature compensation of thermocouple cold ends
- programmable input, filtration and other configuration parameters
- memorizing minimum and maximum values
- access to configuration parameters protected with a user password
- parameter configuration methods:
 - via membrane keyboard (IP65) located on the front panel of the device
 - via RS485 or PRG AR955/GP programmer and freeware: ARsoft-LOG (Windows 7/8/10)
- software and programmer allow you to view the measured value and quickly configure single or few sets of parameters previously saved in the computer for re-use, e.g. in other controllers of the same type (duplicate configuration)
- ingress protection rating: IP65 from the front
- high accuracy, long-term stability and immunity to interference
- wide range of supply voltages: 15 ÷ 250 Vac (alternating voltage), 20 ÷ 350 Vdc (direct voltage)

Contents of set:

- meter with handles mounting in the window
- user manual

Available accessories:

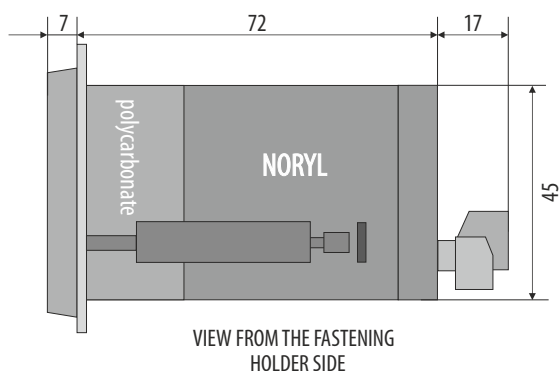
- programmer AR955
- digital temperature probes AR182, AR183

Ordering procedure

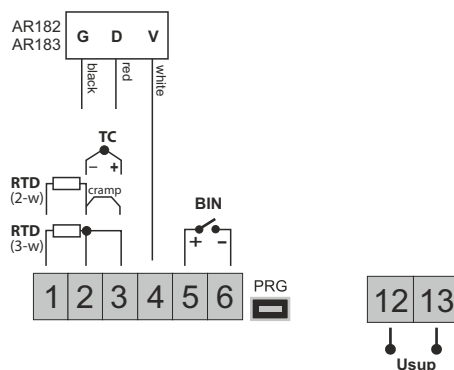
AR507

DIMENSIONS, INSTALATTION DATA

Enclosure dimensions	96x48x79 mm
Panel window	92x46 mm
Fixing methods	panel, grips on the side of the enclosure
Material	elf-extinguishing polycarbonate NORYL 94V-0
Leads cross sections	2,5mm ² (power), 1,5mm ² (remaining)



TERMINAL STRIPS, ELECTRICAL CONNECTIONS



TECHNICAL DATA

Universal inputs (programmable)	measurement ranges
- Pt100 (RTD, 3- or 2-wire)	-100 ÷ 850 °C
- thermocouple J (TC, Fe-CuNi)	0 ÷ 880 °C
- thermocouple K (TC, NiCr-NiAl)	0 ÷ 1200 °C
- thermocouple S (TC, PtRh 10-Pt)	0 ÷ 1750 °C
- thermocouple B (TC, PtRh30PtRh6)	300 ÷ 1800 °C
- thermocouple R (TC, PtRh13-Pt)	0 ÷ 1600 °C
- thermocouple T (TC, Cu-CuNi)	0 ÷ 380 °C
- thermocouple E (TC, NiCr-CuNi)	0 ÷ 700 °C
- thermocouple N (TC, NiCrSi-NiSi)	0 ÷ 1300 °C
- digital temperature probe AR182	-50 ÷ 120 °C
- digital temperature probe AR183	-50 ÷ 80 °C
Number of measurement inputs	1
Response time for measurements (10 ÷ 90%)	0,5 ÷ 2 s (programmable)
Resistance of leads (RTD)	$R_L < 30 \Omega$ (for each line)
Resistance current (RTD)	~250 μ A (Pt100)
Processing errors (at 25°C ambient temperature):	
- basic	- for Pt100 0,2 % of measuring range \pm 1 digit
	- for thermocouple 0,3 % of measuring range \pm 1 digit
- additional for thermocouples	<2 °C (thermocouple cold junction temperature compensation)
Resolution of measured temperature	0,1 °C or 1 °C
Binary inputs (contact or voltage <24V), standard	bistable, active level: short-circuit or < 0,8 V
Communication interface	- PRG programming link (no separation) for programmer AR955 - bitrate 2,4 kb/s, - format 8N1 (8 data bit, 1 bit stop, no parity bit), - MODBUS-RTU protocol (SLAVE)
7-segment LED display with adjustable brightness	4 digits, height 20 mm, red
Power supply (Usup)	- universal, compliant with standards 24V and 230V, dc or ac voltage 15 ÷ 250 Vac, <2VA (alternating voltage, 50/60Hz) 20 ÷ 350 Vdc, <2W (direct voltage)
Rated operating conditions	0 ÷ 50°C, <90 %RH (non-condensing)
Working environment	air and neutral gases
Protection rating	Ip65 front, IP20 of the connections side
Weight	~145g
Electromagnetic compatibility (EMC)	- immunity: acc. to PN-EN 61000-6-2 - emission: acc. to PN-EN 61000-6-4
Safety requirements according to PN-EN 61010-1	- installation category - II - pollution degree - 2 - value of voltage to earth for the power supply circuit, output - 300 V - value of voltage to earth for input circuit - 50 V - insulation resistance >20 M Ω - altitude above the sea level <2000 m