

AR625

TEMPERATURE CONTROLLER



- 1 universal measurement input (for thermoresistance, thermocouple or digital temperature probes AR182 and AR183)
- 2 control outputs, relay or for SSR control
 - output 1: ON-OFF with hysteresis, PID, AUTOTUNING PID
 - output 2: ON-OFF with hysteresis
- automatic selection of PID parameters function
- programmable operating characteristics (process controller, ramping)
 - 4 stages, ON-OFF controlling with hysteresis
 - 2 timers, setting range up to 144 hours
 - temperature gradient in the first stage (0,1 ÷ 30,0°C / min)
- triple digital LED readout with adjustable brightness
 - **UPPER** display - measured value
 - **BOTTOM LEFT** display - set 1 value
 - - set 2 value
- line resistance compensation for resistive sensors
- thermocouple cold junction temperature compensation
- programmable input type, digital filtering, adjustment options, access and other configuration parameters
- access to configuration parameters protected by user password
- methods to configure parameters
 - via membrane keyboard IP65 located on the front panel
 - via PRG port (AR955/AR956 programmer) and free software ARsoft-CFG (Windows 7/8/10)
- software and programmer enabling viewing of the measured value and quick configuration of single or ready-made sets of parameters previously saved in the computer for reuse, for example in other controllers of the same type (configuration duplication)
- panel housing, IP65 from front, IP20 from connectors side
- high accuracy, long-term stability as well as resistance to interference
- wide range of supply voltages (20÷250Vac, 22÷350Vdc)

Contents of set:

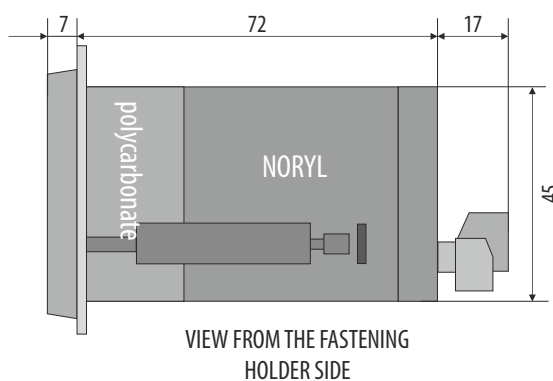
- controller with handles mounting
- user manual

Available accessories:

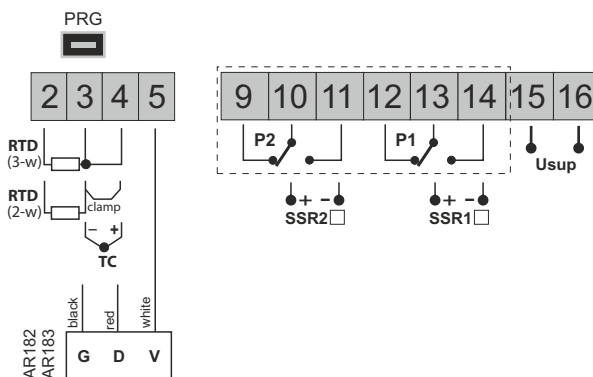
- AR955/AR956 programmer
- AR182/AR183 digital temperature probe

INSTALLATION DATA

Dimensions	96x48x79 mm
Panel window	92x46 mm
Fixin method	panel, groups on the side of the enclosure
Material	self-extinguishing NORYL 94V-0, polycarbonate
Conductor cross-sections (separate connectors)	2,5mm ² (supply and output 1), 1,5mm ² (others)



TERMINAL STRIPS, ELECTRICAL CONNECTIONS



Ordering procedure

AR625 / □ / □

Output 1	Output 2	Code
relay	relay	P
SSR	SSR	S

Order example

AR625 / P / P

Ar625, output 1 relay, output 2 relay

TECHNICAL DATA

Universal input (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 measuring inputs		1
Respond time for measurements (10 ÷ 90%)		0,5 ÷ 2 s (programmable)
Resistance of leads (RTD)		$R_t < 30 \Omega$ (for each line)
Resistive input current (RTD)		~250 μ A (Pt100)
Processing errors (at 25°C ambient temperature):		
- basic	- dla Pt100	0,2 % of measuring range \pm 1 digit
	- dla termopar	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
Communication interface		- PRG programming link (no separation) for AR955/AR956 programmer - bitrate 2,4 kb/s, - format 8N1 (8 data bit, 1 stop bit, no parity bit), - MODBUS-RTU (SLAVE) protocols
Outputs P/SSR (relay or SSR)	- relays (P1, P2), standard	8A / 250Vac (for resistive loads), SPDT
	- SSR (SSR1, SSR2), optional	transistor type NPN OC, 10,5 ÷ 11V, with limiting current to ~25mA
Display 7-segment LED, two-rows with brightness adjustment		- upper, red 14mm, 4 digits - bottoms, green 7mm, 2 x 4 digits
Signalling	- relays active	LED diodes, red
	- messages and errors	LED display
Power (Usup)	- universal, in accordance with 24V and 230V voltage	20 ÷ 250 Vac, <3VA (AC voltage, 50/60Hz)
		22 ÷ 350 Vdc, <3W (DC voltage)
Rated operating conditions		0 ÷ 50°C, <90 %RH (no condensation)
Working environment		air and neutral gases
Protection rating		IP65 from the front, IP20 of the connectors side
Weight		~185g
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		- overvoltage category - II - pollution degree - 2 - voltage to the ground (earth) for power supply and output relay circuits - 300 V - voltage to the ground (earth) for other inputs/outputs circuits and communication - rezystancja izolacji >20 M Ω - wysokość n.p.m. <2000 m