Programmable Controller RT28

♦ **2 output relays**
♦ **ON/OFF or PD-for-MV control algorithm**
♦ **3 DIN cases**
♦ **Fixed input**
♦ **Various power supplies**
♦ **Easy programming**

The simple-design low-cost microprocessor-based controller RT28 combines the advantages of the microprocessor devices with the high reliability of analog controllers. It is available with 96x48, 48x96, and 96x96 mm DIN-sized front panel and can be equipped with up to 2 control relays. To control its outputs, RT28 may utilize either ON/OFF (heat/cool) duplex or PD control algorithm. The ON/OFF control algorithm allows flexible programming of the action of each relay for solving variety of problems. The PD algorithm results in PI control when used to control motorized valve actuators without position feedback. The reliable operation even in the presence of electromagnetic disturbances and the attractive price also account for the success of the RT28 controller.

Technical specifications

Input	*(total number of points for any range: 999)*
Pt50 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Pt100 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Pt500 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Pt1000 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Cu100; 3-wire	-9.9(-50)...90.0(200) °C
Cu50; 3-wire	-9.9(-50)...90.0(200) °C
Other RTD [1]	min. -99...max. 500 °C
Thermocouple "J"	0...999(600) °C
Thermocouple "K"	0...999(850) °C
Thermocouple "L"	0...900(600) °C
Thermocouple "L-GOST"	0...650(550) °C
Other thermocouple [1]	min. -99(0)...max. 900(999) °C
Linear voltage 0...10 V	-99...900 (0...999) [2,3]
Linear current 0(4)...20 mA	-99...900 (0...999) [2,3]
Custom linear voltage; max. 40 V	min. -99...max. 999 [2,3]
Custom linear current; max. 80 mA	min. -99...max. 999 [2,3]

Outputs	*(up to 2 relay outputs)*
Relay electromechanical	5A/250V w/ NO/NC contact
Solid state relay [4]	1A/250VAC
MOS gate [4]	0.1A/60V, optically isolated
Output for external SSR	5...24 V, 30 mA
Control algorithm	ON/OFF, PD
Set point	within input range limits
Programmable parameters	according to control algorithm

[1] Custom; specify range within the limits stated.
[2] Specify lower and upper display limits.

Accuracy	
Measurement error	0.4% from span
Temperature drift	0.005% from span for 1 °C
Cold junction compensation	± 1 °C
RTD line compensation (option)	0.01% from span for 1 Ω

Power supply	
Mains supply voltage	230 VAC or 115 VAC
SMPS voltage	90...250 V
Isolated low voltage	12…24 V or 24 VAC
Non-isolated low voltage	12…24 V
Consumption	max. 3 VA

Indication and controls	
Digital display	3 LED indicators
LEDs	2 LED for output state
Keyboard	3 membrane keys

Operating conditions	
Ambient temperature	-10...65 °C
Ambient humidity	0...85 %RH

Design and materials	'B'	'H'	'V'
Front dimensions [mm]	96x96	96x48	48x96
Mounting	panel	panel	panel
Panel cutout [mm]	90x90	90x42	42x90
Mounting depth [mm]	98	98	98
Display digit height [mm]	20	14	14
Maximum weight [g]	350	300	300
Protection, front/terminals	IP54 / IP20	IP54 / IP20	IP54 / IP20
Increased front IP (option)	IP65	IP65	IP65
Case material	plastic	plastic	plastic
Wiring (terminals)	plug-in	plug-in	plug-in

[3] Provides loop supply voltage - 24 VDC (only w/ isolated power supply)
[4] Ask for availability!

Ordering code   RT28 - G0.G1.G3.G5G5.G6'6".G8 - #1.#2

Code	Feature or option		Code values
G0	Case (front size)		**B** - 96x96 mm, **H** - 96x48 mm, **V** - 48x96 mm
G1	Power supply		**A** - 230 VAC, **B** - 115 VAC, **C** - 90…250 V, **P** - 12…24 V, non-isolated, **Q** - 12…24 V, isolated, **R** - 24 VAC
G3	Resolution		**B** - 1, **C** - 0.1
G5	Relay output		**X** - none, **C** - relay NO/NC, **D** - SSR [4], **J** - for external SSR, **M** - isolated MOS gate [4]
G6'	Input signal		**B** - thermoresistance, **C** - thermocouple, **D** - linear, **Z** - other on request
G6"	Sensor	RTD	**B** - Pt50, **D** - Pt100, **F** - Pt500, **G** - Pt1000, **H** - Cu50, **K** - Cu100, **Z** - other [1]
		T/C	**J** - "J", **K** - "K", **L** - "L", **M** - "L-GOST", **Z** - other [1]
		linear	**B** - 0…20 mA [2], **C** - 4…20 mA [2], **K** - 0…10 V [2], **Z** - other [2]
G8	Control algorithm		**A** - ON/OFF, **D** - PD
#1	Compensation for 3-wire RTD line		**X** - none, **LC** - built-in line resistance compensation
#2	Increased front protection		**X** - none, **P** - IP65 front protection