

Programmable Controller RT484



- ◆ Two 4-digit displays
- ◆ 4 DIN cases
- ◆ Universal programmable input
- ◆ Various control algorithms including auto-tuning
- ◆ PID-pulse and PID for motor valves
- ◆ Programmable digital filter
- ◆ Manual mode for bumpless switching
- ◆ Calibration and self-calibration
- ◆ RS485 serial interface available

RT484 is a multifunctional programmable controller with a universal input for the most common thermoresistances, thermocouples, and linear signals. The input has a built-in automatic software compensation of line resistance and cold junction temperature as well as automatic software compensation of temperature drift, and can be calibrated manually. RT484 is also equipped with a programmable input filter and two 4-digit displays with programmable refresh rate. Available are various options for access restriction. The device can have up to 2 outputs (2 relays or 1 relay and 1 analog output), which can control variety of actuators through different programmable control algorithms. RT484 can work in manual or automatic mode, and an RS485 serial interface enables networking.



Technical specifications

Input		(programmable)			
Pt100 (w=1.385, 1.391); 3-wire		-100...600 °C			
Cu100 (w=1.426, 1.428); 3-wire		-50...200 °C			
Thermocouple "J"		0...1000 °C			
Thermocouple "K"		0...1300 °C			
Thermocouple "S"		0...1700 °C			
Thermocouple "R"		0...1700 °C			
Thermocouple "B"		100...1800 °C			
Thermocouple "C"		0...2300 °C			
Thermocouple "L - GOST"		0...600 °C			
Linear voltage 0...50 mV ⁽¹⁾		-1999...9999, programmable			
Linear current 0...20 mA		-1999...9999, programmable			
Linear current 4...20 mA		-1999...9999, programmable ⁽²⁾			
Input type selection		programmable			
Decimal point selection		programmable			
Digital filter		programmable			
Input calibration		programmable			
Outputs		(up to 2 outputs)			
Relay electromechanical	5A/250V w/ NO/NC or NO contact				
Solid state relay ⁽⁵⁾	1A/250VAC				
MOS gate ⁽⁵⁾	0.1A/60V, optically isolated				
Output for external SSR	5...24 V, 30 mA				
Operation modes	manual and automatic				
Control algorithms	ON/OFF, PID-pulse, and PID for motor valves, programmable				
Auto-tuning	programmable				
Alarms	programmable				
Other control features	BUMPLESS and ANTI-WINDUP				
Analog output ⁽³⁾	4(0)...20 mA or 0...10 V, isolated				
Serial interface	RS485, isolated				
Accuracy					
Measurement error				0.3% ⁽³⁾ from span	
Temperature drift				0.01% from span for 1 °C	
Self-calibration				automatic software	
Cold junction compensation				automatic software	
RTD line compensation				automatic software	
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. 5 VA	
Indication and controls					
Digital display				2 x 4 LED indicators	
LEDs				2 LEDs for output state	
Keyboard				3 membrane keys	
Operating conditions					
Ambient temperature				-10...55 °C	
Ambient humidity				0...85 %RH	
Design and materials		'B'	'H'	'V'	'S'
Front dimensions [mm]		96x96	96x48	48x96	48x48
Mounting		panel	panel	panel	panel
Panel cutout [mm]		90x90	90x42	42x90	45x45
Mounting depth [mm]		98	98	98	100
PV display digit height [mm]		20	14	10	10
SV display digit height [mm]		14	10	10	10
Maximum weight [g]		350	300	300	200
Protection, front/terminals		IP54/20	IP54/20	IP54/20	IP54/20
Increased front IP (option)		IP65	IP65	IP65	-
Case material		plastic	plastic	plastic	plastic
Wiring (terminals)		plug-in	plug-in	plug-in	screw

⁽¹⁾ Other voltage ranges can be obtained by the means of two external resistors.

⁽²⁾ Provides loop supply voltage - 24 VDC (only w/ isolated power supply)

⁽³⁾ Instead of 1st relay! If mounted, it can be programmed as control or retransmission!

⁽⁴⁾ 0.5% for noble thermocouples

⁽⁵⁾ Ask for availability!

⁽⁶⁾ Not available for case 'S'

Ordering code RT484 - G0.G1.G5G5.G9'9".G11 - #1

Code	Feature or option	Code values
G0	Case (front size)	B - 96x96 mm, H - 96x48 mm, V - 48x96 mm, S - 48x48 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
G5	Relay output	X - none, C - relay NO/NC, D - SSR ⁽⁵⁾ , J - for external SSR, M - isolated MOS gate ⁽⁵⁾
G9'	Serial interface	X - none, B - RS485
G9"	Protocol	A - ASCII, C - ASCII for "PolyMonitor"
G11	Analog output ^(3,5)	X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V
#1	Increased front protection	X - none, P - IP65 front protection ⁽⁶⁾