

Programmable Controller RT384-R

- ◆ DIN-rail mounting
- ◆ 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



RT384-R is a multifunctional programmable controller with universal input for the most common thermoresistances, thermocouples, and linear signals, especially designed for rail mounting. 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. RT384-R is also equipped with a programmable input filter and a 4-digit display 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. RT384-R 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 ⁽³⁾ contact
Solid state relay ⁽⁶⁾	1A/250VAC
MOS gate ⁽⁶⁾	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 ^(4,6)	4(0)...20 mA or 0...10 V, isolated
Serial interface	RS485, isolated

Accuracy	
Measurement error	0.3% ⁽⁵⁾ 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 ⁽⁶⁾	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	4 LED indicators, 10 mm
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	
Case material	plastic
Mounting	on 35 mm DIN rail
Wiring	screw terminals
Dimensions	45x78x124 mm
Weight	max. 400 g
Protection, front/terminals	IP40 / IP20

⁽¹⁾ Other voltage ranges can be obtained by the means of 2 external resistors.
⁽²⁾ Provides loop supply voltage - 24 VDC (only w/ isolated power supply).
⁽³⁾ NO for 2nd relay; NO for 1st relay in case of SMPS.
⁽⁴⁾ Instead of 1st relay! If mounted, it can be programmed as control or retransmission!
⁽⁵⁾ 0.5% for noble thermocouples
⁽⁶⁾ Ask for availability!

Ordering code RT384 - R.G1.G5G5.G9'9".G11

Code	Feature or option	Code values
G1	Power supply	A - 230 VAC, B - 115 VAC, C - 90...250 V ⁽⁶⁾ , P - 12...24 V, non-isolated, Q - 12...24 V, isolated, R - 24 VAC
G5	Relay output	X - none, A - relay NO ⁽³⁾ , C - relay NO/NC ⁽³⁾ , D - SSR ⁽⁶⁾ , J - for external SSR, M - isolated MOS gate ⁽⁶⁾
G9'	Serial interface	X - none, B - RS485
G9"	Protocol	A - ASCII, C - ASCII for "PolyMonitor"
G11	Analog output ^(4,6)	X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V

COMECO reserves the right of changing specifications without prior notice!