COMECO CONTROL & MEASUREMENT

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BS EN ISO 9001 Reg. No FM 403446

Programmable Controller RT384

CE

- ♦ **5 DIN cases**
- ♦ **Universal programmable input**
- ♦ **4 selectable 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 option**

The COMECO model RT384 is a multifunctional and cheap 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**. The operator can **calibrate the input** manually. RT384 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 has two relay outputs, which can control variety of actuators through different **programmable control algorithms** - ON/OFF, PID plus ON/OFF, PID-pulse and PID-step. Provided is also an **auto-tuning** mode. RT384 enables the operator to work in manual or automatic mode and the **RS485 option** enables networking. The device can be manufactured with one of the following **5 DIN front-panel dimensions**: 96x96, 48x96, 96x48, 48x48 and 36x72. Therefore, RT384 is an exceptionally applicable controller.

Technical specifications

RT

Input - universal

Pt100 (w=1.385); 3-wire	-100 to +600 °C
Pt100 (w=1.391); 3-wire	-100 to +600 °C
Cu100 (w=1.426); 3-wire	-50 to +200 °C
Cu100 (w=1.428); 3-wire	-50 to +200 °C
Thermocouple "J"	0 to +1000 °C
Thermocouple "K"	0 to +1300 °C
Thermocouple "S"	0 to +1700 °C
Thermocouple "R"	0 to +1700 °C
Thermocouple "B"	+100 to +1800 °C
Thermocouple "L - GOST"	0 to +600 °C
Linear voltage [1]	0 to 50 mV (-1999 to +9999)
Linear current	0(4) to 20 mA (-1999 to +9999)
Input type selection	through keyboard
Decimal point selection	through keyboard
Digital filter	programmable
Input calibration	through keyboard

Outputs and algorithms

Relay electromechanical	2 x 5A/250V with NO/NC contact
Solid state relay *(optional)*	SSR – 1A/250 VAC
Transistor gate *(optional)*	Open collector - 40mA/40V or TTL
Operation modes	manual and automatic
Control algorithms	ON/OFF, PID-pulse,
(programmable)	PID for motor-valves
Auto tuning	programmable
Alarms	programmable
Programmable parameters	see algorithm and alarm types
Other control features	BUMPLESS and ANTI-WINDUP
Analog output *(optional)*	4(0) to 20 mA, isolated
Serial interface *(optional)*	RS 485, isolated

[1] Other voltage ranges can be obtained using two external resistors

Accuracy

Measurement error	0.3 % from span
Temperature drift	negligible
Self-calibration	Automatic software
Cold junction compensation	Automatic software
RTD line compensation	Automatic software

Power supply

Supply voltage	220(110) VAC/DC or low-voltage
Consumption	Max. 3 VA

Indication and keyboard

Digital display	2 x 4 LED-indicators 10mm
LEDs	one for each relay
Keyboard	4 membrane keys

Operating conditions

Operating temperature	-10 to 65 °C
Operating humidity	0 to 85 %RH

Construction	H, V	B	S	L
Mounting	In panel			
Wiring	Screw terminals			
Mounting cut-out [mm]	93x45	93x93	45x45	29x71
Front dimensions [mm]	96x48	96x96	48x48	36x72
Mounting depth [mm]	118	118	111	55
Maximum weight [g]	200	250	100	50

Case material	Plastic
Protection front/terminals	IP-54 / IP-20

Ordering code ➡ **RT384 - G0 - G1.G5G5.G9.G11**

Code	Feature or option	Code values
G0	Case type	**H** - horizontal 96x48, **V** - vertical 48x96, **B** – 96x96, **S** – 48x48, **L** - 72x36
G1	Power supply	**A** - 220 VAC, **B** - 110 VAC, **D** - low-voltage DC[2], **E** - low-voltage AC[2]
G5	Relay output type	**C** - relay NO/NC (NO - for models 'S' and 'L'), **D** - SSR, **E** - open collector NPN, **G** – TTL
G9	Interface [3]	**X** - none, **B** - RS 485
G11	Analog output [3,4]	**X** - none, **E** - 0…20 mA, **F** - 4…20 mA

[2] Specify the exact voltage when order! For model 'L' the ONLY possible supply voltages are 12VAC/DC!
[3] Contact COMECO for availability. Not available with low-voltage power supply (respectively for model 'L')!
[4] Instead of alarm relay G5_ _!

For detailed instructions on ordering coding see chapter **"ORDERING CODES"**!