Field Mounting ON/OFF Controller RT38-Y

- **Ready to incorporate temperature or other sensor**
- **Direct in-process mounting**
- **Relay control output switching power supply**
- **Semi-universal input**
- **Mains or low-voltage power supply**
- **Fully programmable parameters**
- **IP66 protection class**

RT38-Y is a programmable ON/OFF controller, designed for direct control over temperature or other processes when coupled with a TSEC temperature probe or other sensor. The device is equipped with a 3-digit LED display and a control relay. Available are 2 universal-input versions – RTD (for 7 selectable Ptx and 4 Cux sensor types) and T/C (for 3 selectable thermocouples) – as well as versions for linear current and voltage signals. The controller can be ordered either for mains or for low-voltage power supply and allows an automatic software compensation of line resistance and cold junction temperature. The display-to-input correspondence (in case of linear input), decimal point position, temperature measurement unit, and offset value are also programmable. RT38-Y is enclosed in a robust plastic box with IP66 connector and enables easy and firm sensor assembly. Thanks to its design, RT38-Y is widely applicable in cases, in which direct control of electrical actuators is required.

Technical specifications

Input	
RTD, DIN (w=1.385); 3-wire	Pt50, Pt100, Pt500, Pt1000
RTD, GOST (w=1.391); 3-wire	Pt46, Pt50, Pt100, Cu50, Cu100
RTD measurement range	-100...600 °C
Thermocouple "T"	-40...400 °C
Thermocouple "J"	-20...999 °C
Thermocouple "K"	-20...999 °C
Linear voltage 0...10 V	-199...999, programmable
Linear current 0(4)...20 mA	-199...999, programmable
Two-wire external transmitter	4...20 mA [1]
RTD or T/C type selection	programmable
Decimal point selection	programmable
Temperature measurement unit	°C or °F, programmable

Output	
Relay electromechanical	5A/250V w/ NO contact
Solid state relay [2]	1A/250VAC
MOS gate [2]	0.1A/60V, optically isolated
Output for external SSR	5…24 V, 30 mA
Direct power supply switching	OFF - open circuit; ON - supply voltage
Control algorithm	ON/OFF
Set point	within input range limits
Alarms	programmable

Accuracy	
Measurement error	0.3% from span
Temperature drift	0.02% from span for 1 °C
Cold junction compensation	automatic, -10...80 °C
Power supply	
Mains supply voltage	230 VAC or 115 VAC
SMPS voltage [2]	90…250 V
Isolated low voltage	12…24 V or 24 VAC
Non-isolated low voltage	12…24 V
Consumption	max. 1.5 VA
Indication and controls	
Digital display	3 LED indicators, 14 mm
LEDs	LED for output state
Keyboard	3 membrane keys
Operating conditions	
Ambient temperature	-10...65 °C
Ambient humidity	0...85 %RH
Design and materials	
Case material	ABS plastic
Controller mounting	on probe top or free [3]
Probe mounting	axial (box bottom) or radial (connector opposite)
Power wiring	4-pin M12 connector, always on top
Probe wiring	4-pin M12 connector or direct [4]
Dimensions	92x92x60 mm
Protection, enclosure/terminals	IP66 / IP65

[1] Provides loop supply voltage - 24 VDC (only w/ isolated power supply).
[2] Ask for availability!
[3] May be mounted on plate or rail by special accessories, which are ordered separately (see 'Accessories').
[4] Order separately! Suitable for assembly are temperature probes type TSEC w/ head connection M12x1.5 (see 'Temperature Probes').

Ordering code RT38 - Y.G1.G5.G6.G12' - #1

Code	Feature or option	Code values
G1	Power supply	**A** - 230 VAC, **B** - 115 VAC, **C** - 90…250 V [2], **P** - 12…24 V, non-isolated, **Q** - 12…24 V, isolated, **R** - 24 VAC
G5	Output	**X** - none, **A** - relay NO, **D** - SSR [2], **J** - for external SSR, **M** - isolated MOS gate [2], **Y** - power supply
G6	Input	**B** - RTD (programmable), **C** - thermocouple (programmable), **D** - 0(4)…20 mA, **DK** - 0…10 V
G12'	Probe connection	**I** - direct [4], **E** - via connector
#1	Probe position	**A** - axial, **R** - radial