

## Programmable Controller RT284U

- ◆ Low cost
- ◆ 4-digit bright LED display
- ◆ 6 DIN cases
- ◆ Universal input for 4 RTDs, 6 T/Cs, and 4 linear types
- ◆ RS485 serial interface available
- ◆ up to 4 relay outputs and 1 analog retransmission output



RT284U is designed for wide range of applications. It is equipped with a 4-digit LED display, a universal input for Pt100, Pt1000, PTC, 6 thermocouple types as well as for linear current, voltage, and resistive signals from external transmitters and can have up to 4 programmable relay control/alarm outputs and 1 analog retransmission output. The device has a built-in circuit for self-testing and self-calibration, manual measurement offset setting, and 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. Thanks to its universal input, the available various enclosures and serial interface as well as excellent price-to-performance ratio, RT284U is an exceptionally widely applicable device.

### Technical specifications

Input	(programmable)	Accuracy
Pt100 ( $w=1.385$ ); 3-wire	-100...850 °C	0.3% <sup>(5)</sup> from span
Pt1000 ( $w=1.385$ ); 3-wire	-100...600 °C	0.02% from span for 1 °C
PTC (1k at 25 °C); 3-wire	-50...150 °C	automatic, -10...80 °C
PTC (2k at 25 °C); 3-wire	-50...150 °C	automatic, up to 2 x 25 °C
Thermocouple "T"	-40...400 °C	
Thermocouple "J"	-20...1000 °C	
Thermocouple "K"	-20...1300 °C	
Thermocouple "S"	0...1700 °C	
Thermocouple "R"	0...1700 °C	
Thermocouple "B"	100...1800 °C	
Linear voltage 0...10 V	-1999...9999, programmable	
Linear current 0(4)...20 mA	-1999...9999, programmable	
Linear resistive 0...1 kΩ	-1999...9999, programmable	
Custom linear (option) <sup>(1)</sup>	-1999...9999, programmable	
Two-wire external transmitter	4...20 mA <sup>(2)</sup>	
Manual input offset	programmable	
Input type selection	programmable	
Decimal point selection	programmable	
Temperature measurement unit	°C or °F, programmable	
Outputs	(up to 4 relay outputs)	
Relay electromechanical	5A/250V w/ NO/NC or NO <sup>(3)</sup> contact	
Solid state relay <sup>(8)</sup>	1A/250VAC <sup>(4)</sup>	
MOS gate <sup>(8)</sup>	0.1A/60V, optically isolated	
Output for external SSR	5...24 V, 30 mA	
Control algorithm	ON/OFF	
Set point	within input range limits	
Alarms	programmable	
Analog output	4(0)...20 mA, 0...10 V	
Serial interface	RS485, isolated	

<sup>(1)</sup> Instead of linear current

<sup>(2)</sup> Provides loop supply voltage - 24 VDC (only w/ isolated power supply).

<sup>(3)</sup> For case 'Q' and case 'S' w/ SMPS, 1<sup>st</sup> relay is NO;

for case 'L', case 'Q' w/ SMPS, and case 'S' w/ serial interface, 2<sup>nd</sup> relay is NO.

<sup>(4)</sup> 0.2A/250VAC for case 'L'

<sup>(5)</sup> 0.5% for T/Cs "S", "R", and "B"

<sup>(6)</sup> Not available for case 'L'.

<sup>(7)</sup> Available only for case 'L'. Transformer is ordered separately.

<sup>(8)</sup> Ask for availability!

<sup>(9)</sup> Not available for cases 'Q' and 'S'.

### Ordering code RT284U - G0.G1.G5G5G5G5.G9'9".G11 - #1.#2

Code	Feature or option	Code values
G0	Case (front size)	B - 96x96 mm, H - 96x48 mm, V - 48x96 mm, Q - 72x72 mm, S - 48x48 mm, L - 72x36 mm
G1	Power supply	A - 230 VAC <sup>(6)</sup> , B - 115 VAC <sup>(6)</sup> , C - 90...250 V, E - 9(12) VAC w/ external transformer <sup>(7)</sup> , P - 12...24 V, non-isolated, Q - 12...24 V, isolated, R - 24 VAC <sup>(6)</sup>
G5	Relay output	X - none, A - relay NO <sup>(3)</sup> , C - relay NO/NC <sup>(3)</sup> , D - SSR <sup>(8)</sup> , J - for external SSR, M - isolated MOS gate <sup>(8)</sup>
G9'	Serial interface	X - none, B - RS485
G9"	Protocol	A - ASCII, C - ASCII for "PolyMonitor"
G11	Analog output	X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V, Z - other
#1	Increased front protection	X - none, P - IP65 front protection <sup>(9)</sup>
#2	Customer specified input signal	X - none, Z - custom linear signal (specify!) <sup>(1)</sup>