

## Double Programmable Controller RT228U

- ◆ Two RT28U controllers in one case
- ◆ Universal input for 4 RTDs, 6 T/Cs, and 3 linear types
- ◆ RS485 serial interface available

RT228U combines two RT28U controllers in one 96x96 mm case. Thanks to its lower cost than the combined cost of 2 separate RT28U controllers, this model is often preferred when 2 technological parameters are controlled in one machine or installation or of separate adjacent processes. Typical applications are control of 2 temperatures, temperature and humidity, pressure and temperature, pH and temperature, and other combinations. Each of the 2 incorporated controllers is equipped with universal input and controls its relay outputs by an ON/OFF algorithm. Thanks to its programmable inputs and displays as well as relay duplex outputs (2 relays per controller, 4 relays per whole device), RT228U is a widely applicable device.



### Technical specifications

| Input                                 | <i>(for each controller, programmable)</i>          |                              |
|---------------------------------------|---|------------------------------|
| Pt100 (w=1.385); 3-wire               |   | -100...850 °C                |
| Pt1000 (w=1.385); 3-wire              |   | -100...600 °C                |
| PTC (1k at 25 °C); 3-wire             |   | -50...150 °C                 |
| PTC (2k at 25 °C); 3-wire             |   | -50...150 °C                 |
| Thermocouple "T"                      |   | -40...400 °C                 |
| Thermocouple "J"                      |   | -20...1000 °C                |
| Thermocouple "K"                      |   | -20...1000 °C                |
| Thermocouple "S"                      |   | 0...1000 °C                  |
| Thermocouple "R"                      |   | 0...1000 °C                  |
| Thermocouple "B"                      |   | 100...1000 °C                |
| Linear voltage 0...10 V               |   | -199...999, programmable     |
| Linear current 0(4)...20 mA           |   | -199...999, programmable     |
| Custom linear (option) <sup>(1)</sup> |   | -199...999, 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                               | <i>(for each controller, up to 2 relay outputs)</i> |                              |
| Relay electromechanical               |   | 5A/250V w/ NO/NC contact     |
| Solid state relay                     |   | 1A/250VAC                    |
| MOS gate                              |   | 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                 |
| 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> Ask for availability!

| Accuracy                                   | <i>(for each controller)</i> |                           |
|--|------------------------------|---------------------------|
| Measurement error                          |                              | 0.3% from span            |
| Temperature drift                          |                              | 0.02% from span for 1 °C  |
| Cold junction compensation                 |                              | automatic, -10...80 °C    |
| RTD line compensation                      |                              | automatic, up to 2 x 25 Ω |
| Power supply                               | <i>(for each controller)</i> |                           |
| Mains supply voltage                       |                              | 230 VAC or 115 VAC        |
| SMPS voltage                               |                              | 90...250 VAC/DC           |
| Isolated low voltage                       |                              | 12...24 VAC/DC or 24 VAC  |
| Non-isolated low voltage                   |                              | 12...24 VAC/DC            |
| Consumption                                |                              | max. 1.5 VA               |
| Indication and controls                    | <i>(for each controller)</i> |                           |
| Digital display                            |                              | 3 LED indicators, 14 mm   |
| LEDs                                       |                              | 2 LEDs for output state   |
| Keyboard                                   |                              | 3 membrane keys           |
| Operating conditions                       |                              |                           |
| Operating temperature                      |                              | -10...65 °C               |
| Operating humidity                         |                              | 0...85 %RH                |
| Design and materials                       |                              |                           |
| Case material                              |                              | plastic                   |
| Mounting                                   |                              | in 90x90 mm panel cut-out |
| Wiring                                     |                              | plug-in terminals         |
| Dimensions                                 |                              | 96x96(front)x107 mm       |
| Mounting depth                             |                              | 98 mm                     |
| Weight                                     |                              | max. 600 g                |
| Protection, front/terminals                |                              | IP54 / IP20               |
| Increased front IP (option) <sup>(3)</sup> |                              | IP65                      |

### Ordering code RT228U - G1(G1).G5G5(G5G5).G9'9"(G9'9") - #1.#2(#2) <sup>(4)</sup>

| Code | Feature or option               | Code values  |
|------|---------------------------------|--|
| 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, J - for external SSR, M - isolated MOS gate                            |
| G9'  | Serial interface                | X - none, B - RS485  |
| G9"  | Protocol                        | A - ASCII, C - ASCII for "PolyMonitor"   |
| #1   | Increased front protection      | X - none, P - IP65 front protection <sup>(3)</sup>   |
| #2   | Customer specified input signal | X - none, Z - custom linear signal (specify!) <sup>(1)</sup>   |

<sup>(4)</sup> Second controller values are in brackets.