

Double Programmable Controller RT218

- ◆ Two RT18 controllers in one housing
- ◆ Self-tuning ON/OFF or PI control algorithm
- ◆ Fixed input
- ◆ Various power supplies
- ◆ Easy programming

RT218 combines two RT18 controllers in one 96x96 mm case. Thanks to its lower cost than the combined cost of 2 separate RT18 controllers, this model is often preferred when 2 technological parameters are controlled in one machine or installation or of separate adjacent processes. Typical applications include control of 2 temperatures, temperature and humidity, pressure and temperature, pH and temperature, and other combinations. Each of the 2 incorporated controllers controls its relay output through an ON/OFF or self-tuning PI algorithm, the latter being a convenient solution that saves installation time and costs and provides precise control eliminating temperature cycling and excessive start-up overshoot. The reliable operation even in the presence of electromagnetic disturbances and the attractive price also account for the success of the RT218 controller.



Technical specifications

Input (for each controller)

Pt50 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Pt100 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Pt500 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Pt1000 (w=1.385); 3-wire	-9.9(-50)...90.0(500) °C
Cu100; 3-wire	-9.9(-50)...90.0(200) °C
Cu50; 3-wire	-9.9(-50)...90.0(200) °C
Other RTD ⁽¹⁾	min. -99...max. 500 °C
Thermocouple "J"	0...999(600) °C ⁽²⁾
Thermocouple "K"	0...999(850) °C ⁽²⁾
Thermocouple "L"	0...900(600) °C ⁽²⁾
Thermocouple "L-GOST"	0...650(550) °C ⁽²⁾
Other thermocouple ⁽¹⁾	min. -99(0)...max. 900(999) °C ⁽²⁾
Linear voltage 0...10 V	-99...900 (0...999) ^(2,3,4)
Linear current 0(4)...20 mA	-99...900 (0...999) ^(2,3,4)
Custom linear voltage; max. 40 V	min. -99...max. 999 ^(2,3,4)
Custom linear current; max. 80 mA	min. -99...max. 999 ^(2,3,4)

Output (for each controller)

Relay electromechanical	5A/250V w/ NO/NC contact
Solid state relay ⁽⁵⁾	1A/250VAC
MOS gate ⁽⁵⁾	0.1A/60V, optically isolated
Output for external SSR	5...24 V, 30 mA
Control algorithm	ON/OFF, self-tuning PI
Set point	within input range limits
Programmable parameters	according to control algorithm

Accuracy (for each controller)

Measurement error	0.4% from span
Temperature drift	0.005% from span for 1 °C
Cold junction compensation	± 1 °C
RTD line compensation (option)	0.01% from span for 1 Ω
Power supply	(for each controller)
Mains supply voltage	230 VAC or 115 VAC
SMPS voltage	90...250 V
Isolated low voltage	12...24 V or 24 VAC
Non-isolated low voltage	12...24 V
Consumption	max. 3 VA

Indication and controls (for each controller)

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	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)	IP65

⁽¹⁾ Custom; specify range within the limits stated.
⁽²⁾ For self-tuning PI algorithm, ONLY the alternative ranges are applicable.
⁽³⁾ Specify lower and upper display limits.
⁽⁴⁾ Provides loop supply voltage - 24 VDC (only w/ isolated power supply)
⁽⁵⁾ Ask for availability!

Ordering code RT218 - G1(G1).G3(G3).G5(G5).G6'6"(G6'6").G8(G8) - #1(#1).#2 ⁽⁶⁾

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	
G3	Resolution	B - 1, C - 0.1 ⁽²⁾	
G5	Relay output	X - none, C - relay NO/NC, D - SSR ⁽⁵⁾ , J - for external SSR, M - isolated MOS gate ⁽⁵⁾	
G6'	Input signal	B - thermoresistance, C - thermocouple, D - linear, Z - other on request	
G6"	Sensor	RTD	B - Pt50, D - Pt100, F - Pt500, G - Pt1000, H - Cu50, K - Cu100, Z - other ⁽¹⁾
		T/C	J - "J", K - "K", L - "L", M - "L-GOST", Z - other ⁽¹⁾
		linear	B - 0...20 mA ⁽³⁾ , C - 4...20 mA ⁽³⁾ , K - 0...10 V ⁽³⁾ , Z - other ⁽³⁾
G8	Control algorithm	A - ON/OFF, C - self-tuning PI ⁽⁷⁾	
#1	Compensation for 3-wire RTD line	X - none, LC - built-in line resistance compensation	
#2	Increased front protection	X - none, P - IP65 front protection	

⁽⁶⁾ Second controller values are in brackets.
⁽⁷⁾ Specify the direction of control action (heating or cooling relay action).