TRM202

2-channel controller

TRM202 is a 2-channel process controller available in different enclosure variants: for wall and for panel mounting. This device is intended for measuring, displaying and controlling different physical process variables such as pressure, temperature, humidity, etc. Universal analog inputs and optional outputs provide particular flexibility when using this device for creating automatic control and regulation systems of various technological processes in different areas of industry, agriculture and utilities.

Functions and features:

- Measuring the process value and its transformation according to the sensor type
- Displaying the process values and configuration parameters on two 4-digit LED displays
- Scaling and filtering the input signal
- Signal correction, square root function
- Calculation of the difference between two signals
- Independent on-off control of two process variables or three-step control of one process variable
- Network control (RS485 interface) with akYtec, Modbus RTU and Modbus ASCII protocols as a Slave
- Signal retransmission using analog output 4-20 mA or 0-10 V
- Alarm output
- Sensor / input error detection
- Error indication
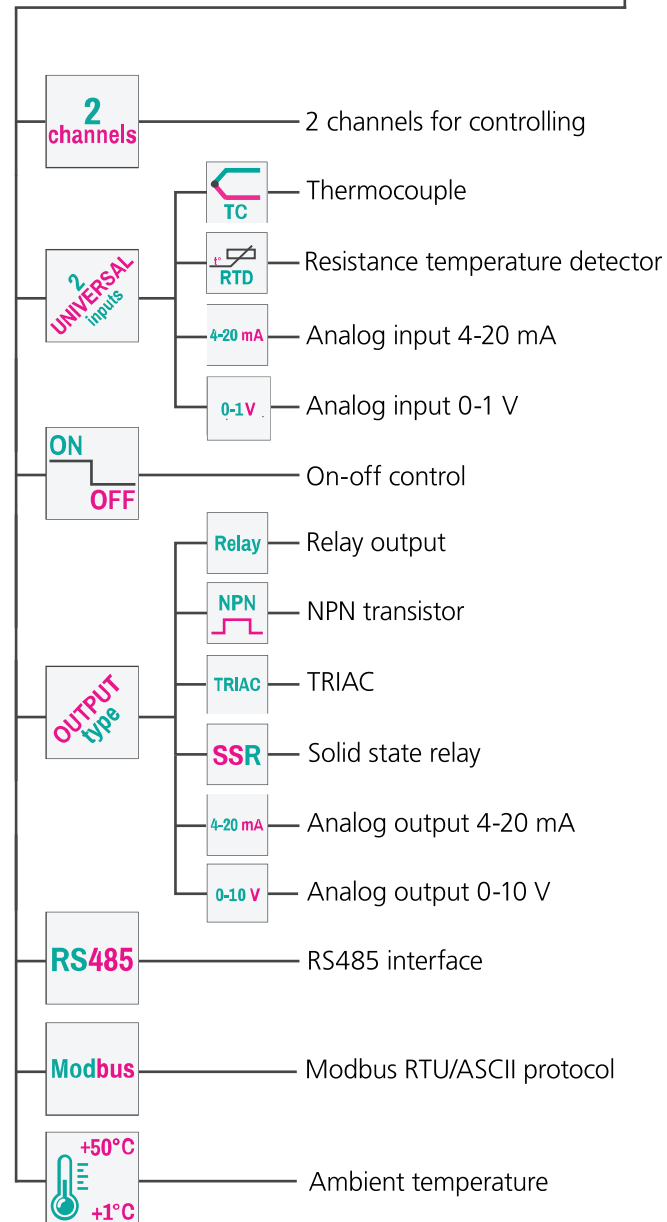- Configuration via the functional keys

Enclosure:

H1
(96 x 96 x 70 mm)

H3
(105 x 130 x 65 mm)

H2
(96 x 48 x 100 mm)

2 channels	2 channels for controlling
2 UNIVERSAL inputs	TC — Thermocouple
	RTD — Resistance temperature detector
	4-20 mA — Analog input 4-20 mA
	0-1 V — Analog input 0-1 V
ON OFF	On-off control
OUTPUT type	Relay — Relay output
	NPN — NPN transistor
	TRIAC — TRIAC
	SSR — Solid state relay
	4-20 mA — Analog output 4-20 mA
	0-10 V — Analog output 0-10 V
RS485	RS485 interface
Modbus	Modbus RTU/ASCII protocol
+50°C +1°C	Ambient temperature

OUTPUT type Output type on request

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Areas of application:

The TRM202 process controller is especially recommended to be used for temperature measurement and control of mediums in refrigeration equipment, drying cabinets, various ovens, pasteurizers and in other process equipment.

Technical Data:

Power supply			230 (90...264) V AC; 50 (47...63) Hz		
Power consumption, max.			6 VA		
Analog inputs			2 (ADC resolution 16 bit)		
Optional outputs			2		
Sampling rate, max.			1 s		
Interface			RS485		
Protocols			Modbus RTU / ASCII, akYtec		
Baud rate			2.4...115.2 kbit/s		
Ambient temperature			+1...+50 °C		
Enclosure		Type	H1	H2	H3
		Dimensions	96 x 96 x 70 mm	96 x 48 x 100 mm	105 x 130 x 65 mm
		IP Code	front IP54	front IP54	IP44
Input signal	RTD	IEC	Pt50, Pt100		
		GOST	50P, 100P, 50M, 100M, Cu50, Cu100		
	TC	IEC	B,J, N, K, S, R, A, T		
		GOST	L, A-2, A-3		
	Standard signals		0-5 mA, 0-20 mA, 4-20 mA, -50...+50 mV, 0-1 V		
Outputs	R	Relay	8 A, 230 V AC / 30 V DC		
	T	NPN	200 mA, 40 V DC		
	C	TRIAC	50 mA (240 V AC, constantly open), 500 mA (f ≤ 50 Hz, pulse duration ≤ 5 ms)		
	S	SSR	100 mA, 4…6 V DC		
	I	4-20 mA	10…30 V, max. 1 kohm (DAC resolution 10 bit)		
	U	0-10 V	15…30 V, min. 2 kohm (DAC resolution 10 bit)		

Ordering code:

TRM202. X . X

Enclosure

96 x 96 x 70 mm, panel mount	H1
96 x 48 x 100 mm, panel mount	H2
105 x 130 x 65 mm, wall mount	H3

Output type

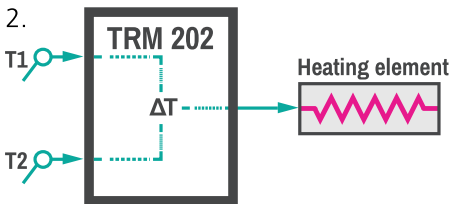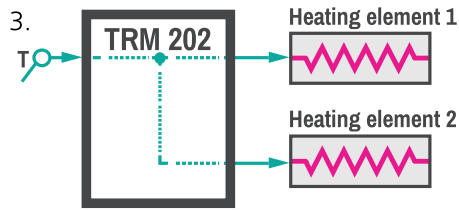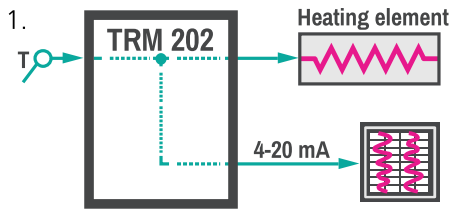|	
Relay output*	R
NPN transistor*	T
TRIAC*	C
Solid state relay*	S
Analog output 4-20 mA	I
Analog output 0-10 V	U

* For three-step control the device should be equipped with two digital outputs.

Standard variants	Description	Enclosure
TRM202-H1.RR	2DO (Relay)	96 x 96 x 70 mm, panel mount
TRM202-H2.RR	2DO (Relay)	96 x 48 x 100 mm, panel mount
TRM202-H3.RR	2DO (Relay)	105 x 130 x 65 mm, wall mount
TRM202-H1.RI	1DO (Relay)+1AO (4-20 mA)	96 x 96 x 70 mm, panel mount
TRM202-H2.RI	1DO (Relay)+1AO (4-20 mA)	96 x 48 x 100 mm, panel mount
TRM202-H3.RI	1DO (Relay)+1AO (4-20 mA)	105 x 130 x 65 mm, wall mount

akYtec

We will be glad to assist you! Tel.: +49 (0) 511 16 59 672-0

TRM202

Typical application cases

1.

3.

2.

1. Regulation with signal retransmission over the analog output 4-20 mA or 0-10 V.
2. Regulation of the difference between two measured values.
3. One-channel three-step control (with two different setpoints).