

All Purpose Analog Controller TC56



- ♦ Very good protection against EMI
- ♦ USER-FRIENDLY controls
- ♦ Analog retransmission outputs
- ♦ 4-digit display

The TC56 family is a range of electronic analog controllers featuring very good protection from electromagnetic disturbances. TC 56 controllers are used for automatic control of various processes by means of relay type control or alarm outputs employing ON-OFF control algorithms. A number of input signal types are available such as thermoresistive, thermoelectrical, or for standard signal from relative humidity, pressure, flow etc. transmitters. TC56 devices may be used with all types of standard sensors and transmitters whether produced by COMECO or other companies. The controllers may generate standard analog output signals to external chart recorders controllers and indicators and provide supply for input signal transmitters.



Technical specifications

TC

Inputs (2 or 3 - wire)

Pt46 (GOST)	-50 to +199.9(600) °C
Pt50 (w=1.385 or w=1.391)	-50 to +199.9(600) °C
Pt100 (w=1.385 or w=1.391)	-50 to +199.9(600) °C
Pt500 (w=1.385)	-50 to +199.9(600) °C
Pt1000 (w=1.385)	-50 to +199.9(600) °C
Cu100 (w=1.426 or w=1.428)	-50 to +199.9(200) °C
Cu50 (w=1.426 or w=1.428)	-50 to +199.9(200) °C
Cu53 (GOST)	-50 to +199.9(200) °C
Other thermoresistive ⁽¹⁾	min. -99 to max.+600 °C
Thermocouple "J"	0 to +700 °C
Thermocouple "K"	0 to +700(1200) °C
Linear voltage ^(2,3)	0 to 1(2, 5 or 10) V ⇒
Linear current ^(2,3)	-199.9(1999) to +199.9(1999) mA ⇒
Custom linear voltage ^(2,3)	0 to 5 or 0(4) to 20 mA ⇒
Custom linear current ^(2,3)	-199.9(1999) to +199.9(1999) mA ⇒
	max. 10 V ⇒ 4000 points
	max.50 mA ⇒ 4000 points

Outputs (to 2 relay type and 1 analog)

relay electromechanical	5A/250V - NO/NC or NO
Solid state relay (optional)	SSR - 1A/250 VAC
Transistor gate (optional)	Open collector - 40mA/40V or TTL
Control algorithm	ON/OFF
Set point	Within input range limits
Analog retransmission	0(4) to 20 mA or 0 to 1(2) V

Accuracy

Measurement error	0.5 % from span
Temperature drift	0.007 % from span for 1 °C
Cold junction compensation	Auto hardware ± 1 °C

Power supply

Supply voltage	220(110) VAC ± 10%
Low voltage supply (optional)	12 to 24 VAC/DC
Consumption	Max. 4 VA

Indication and controls

Digital display	3.5 LCD(LED) - 13(14) mm
LEDs	LED for relay outputs
Set Point control ⁽⁴⁾	Potentiometer or 2 trimmers
Hysteresis and dead band	Trimmer on front panel
Alarm limits	Trimmers on the side

Operating conditions

Operating temperature	-10 to 65 °C
Operating humidity	0 to 85 %RH

Design and materials

Case material	Plastic
Mounting	In panel cut-out
Wiring	Screw terminals
Dimensions	96x48x120 ⁽⁵⁾ mm
Weight	Max. 380 g
Protection front/terminals	IP-40 / IP-20

⁽¹⁾ Custom – specify the range within the limits stated

⁽²⁾ High and low display range limits are specified by the customer

⁽³⁾ Provides supply voltage for external transmitter - 12(24)VDC/30mA

⁽⁴⁾ Displayed while the SP button is pressed

⁽⁵⁾ Front panel controls not included

Ordering code



TC56 - G1.G2.G3.G4.G5G5.G6'6".G10.G11

Code	Feature or option	Code values
G1	Power Supply type	A - 220 VAC, B - 110 VAC, D - low voltage-DC ⁽⁶⁾ , E - low voltage -AC ⁽⁶⁾
G2	Display type	A - LCD, B - LED normal, C - LED bright
G3	Resolution	B - 1, C - 0.1
G4	Set point adjustment controls	B - 2 trimmers, D - 10 turn potentiometer
G5	Relay output type	X - none, A - relay NO, C - relay NO/NC, D - SSR, E - open collector NPN, G – TTL
G6'	Input signal type	B - thermoresistance, C - Thermocouple, D – linear
G6"	Sensor type	Thermoresistor
		Thermocouple
	Linear ⁽²⁾	A - Pt46, B,C - Pt50, D,E - Pt100, F - Pt500, G - Pt1000, H,I - Cu50, J - Cu53, K,L - Cu100, Z - other
		J - "J", K - "K"
		A - 0..0.5 mA, B - 0..0.20 mA, C - 4..20 mA, H - 0..0.1V, I - 0..0.2 V, J - 0..0.5 V, K - 0..10 V, Z - other
G10	Alarm type	X - none, A - absolute upper, B - absolute lower, C - absolute mixed, D - relative above set point, E - relative below set point
G11	Analog retransmission output ⁽⁷⁾	X - none, E - 0÷20mA, F - 4÷20mA, G - 0÷1V, H - 0÷2V, Z - other

⁽⁶⁾ Specified by the customer

⁽⁷⁾ May be ordered when there are 2 NO relay type outputs or 1 NO/NC relay output

For detailed instructions on ordering coding see chapter "ORDERING CODES"!