

## Programmable Process Indicator TC660

- ◆ 20 mm or 32 mm digit height
- ◆ Universal programmable input
- ◆ 2 programmable alarm outputs
- ◆ Programmable digital filter
- ◆ Calibration and self-calibration
- ◆ Isolated current output
- ◆ RS485 serial interface available



TC660 is a multifunctional programmable process indicator with a 4-digit, 20 mm or 32 mm programmable display that provides excellent visibility in many applications. The device has a universal input for the most common thermoresistances, thermocouples, and linear signals. The input has a built-in automatic software compensation of line resistance and cold junction temperature as well as automatic software compensation of temperature drift, and can be calibrated manually. A programmable input filter and various options for access restriction are available. TC660 can also have up to 2 programmable alarm outputs (2 relays or 1 relay and 1 analog output) and can be equipped with an isolated RS485 serial interface.

### Technical specifications

Input	(programmable)
Pt100 (w=1.385, 1.391); 3-wire	-100...600 °C
Cu100 (w=1.426, 1.428); 3-wire	-50...200 °C
Thermocouple "J"	0...1000 °C
Thermocouple "K"	0...1300 °C
Thermocouple "S"	0...1700 °C
Thermocouple "R"	0...1700 °C
Thermocouple "B"	100...1800 °C
Thermocouple "C"	0...2300 °C
Thermocouple "L - GOST"	0...600 °C
Linear voltage 0...50 mV <sup>(1)</sup>	-1999...9999, programmable
Linear current 0...20 mA	-1999...9999, programmable
Linear current 4...20 mA	-1999...9999, programmable <sup>(2)</sup>
Input type selection	programmable
Decimal point selection	programmable
Digital filter	programmable
Input calibration	programmable
Outputs	(up to 2 outputs)
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
Operation modes	manual and automatic
Control algorithms	ON/OFF, PID-pulse, and PID for motor valves, programmable
Auto-tuning	programmable
Alarms	programmable
Other control features	BUMPLESS and ANTI-WINDUP
Analog output <sup>(3)</sup>	4(0)...20 mA or 0...10 V, isolated
Serial interface	RS485, isolated

Accuracy		
Measurement error	0.3% <sup>(4)</sup> from span	
Temperature drift	0.01% from span for 1 °C	
Self-calibration	automatic software	
Cold junction compensation	automatic software	
RTD line compensation	automatic software	
Power supply		
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. 5 VA	
Indication and controls		
Digital display	4 LED indicators	
LEDs	2 LEDs for output state	
Keyboard	3 membrane keys	
Operating conditions		
Operating temperature	-10...55 °C	
Operating humidity	0...85 %RH	
Design and materials	'H'	'D' <sup>(5)</sup>
Front dimensions [mm]	96x48	144x72
Mounting	panel	panel
Panel cutout [mm]	90x42	136x66
Mounting depth [mm]	98	92
Display digit height [mm]	20	32
Maximum weight [g]	400	600
Protection, front/terminals	IP54 / IP20	IP54 / IP20
Increased front IP (option)	IP65	-
Case material	plastic	plastic
Wiring	plug-in terminals	plug-in terminals

<sup>(1)</sup> Other voltage ranges can be obtained by the means of 2 external resistors.  
<sup>(2)</sup> Provides loop supply voltage - 24 VDC (only w/ isolated power supply)  
<sup>(3)</sup> Instead of 1<sup>st</sup> relay! If mounted, it can be programmed as control or retransmission!  
<sup>(4)</sup> 0.5% for T/Cs "S", "R", "B", and "C"  
<sup>(5)</sup> Ask for availability!

### Ordering code TC660 - G0.G1.G5G5.G9'9".G11 - #1

Code	Feature or option	Code values
G0	Case (front size)	H - 96x48 mm, D - 144x72 mm <sup>(5)</sup>
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"
G11	Analog output <sup>(3)</sup>	X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V
#1	Increased front protection	X - none, P - IP65 front protection <sup>(6)</sup>

<sup>(6)</sup> Available ONLY for case 'H'