

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 ⁽¹⁾ | -1999...9999, programmable |
| Linear current 0...20 mA | -1999...9999, programmable |
| Linear current 4...20 mA | -1999...9999, programmable ⁽²⁾ |
| 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, 50 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 ⁽³⁾ | 4(0)...20 mA or 0...10 V, isolated |
| Serial interface ⁽⁴⁾ | RS485, isolated |

| Accuracy | | |
|-----------------------------|-------------------|--------------------------|
| Measurement error | | 0.3% from span |
| Temperature drift | | negligible |
| 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...65 °C |
| Operating humidity | | 0...85 %RH |
| Design and materials | 'H' | 'D' |
| 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 |

⁽¹⁾ Other voltage ranges can be obtained by the means of 2 external resistors.
⁽²⁾ Provides loop supply voltage - 24 VDC (only w/ isolated power supply)
⁽³⁾ Instead of 1st relay! If mounted, it can be programmed as control or retransmission!
⁽⁴⁾ 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 |
| 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 ⁽⁴⁾ |
| G9" | Protocol | A - ASCII, C - ASCII for "PolyMonitor" |
| G11 | Analog output ⁽³⁾ | X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V |
| #1 | Increased front protection | X - none, P - IP65 front protection ⁽⁵⁾ |

⁽⁵⁾ Available ONLY for case 'H'