



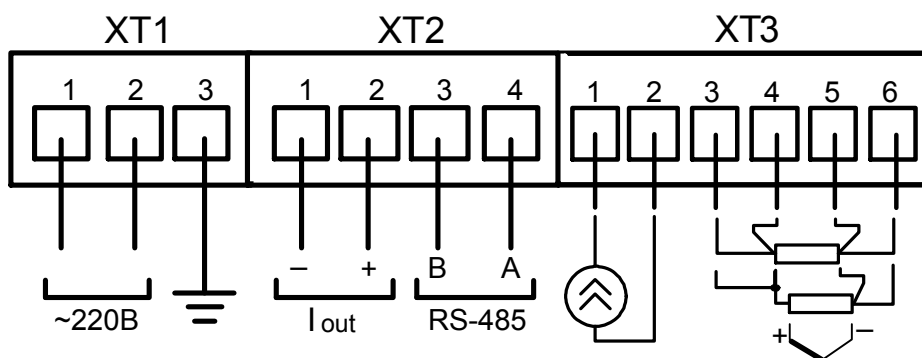
Digital measuring device IP-6-TK-U is designed for measurement and conversion of electrical signals generated by thermocouples, RTDs, and sensors with DC-current output.

- Three-wire or four-wire RTD connection.
- Device conversion function – linear or square-root extracting.
- Cold junction temperature compensation (internal sensor).
- Continuous sensor fault detection.
- The configurable analog input.
- Programmable DC-current output 0..5, 0..20 or 4..20 mA.
- Interface RS-485, protocol Modbus (RTU).
- Four-digit green LED display with 100 mm symbol height.

SPECIFICATION

- Thermocouples K, L, S, B
- RTDs:
 - platinum ($W_{100}=1.3850$ и $W_{100}=1.3910$) Pt50, Pt100, Pt500
 - copper ($W_{100}=1.4260$ и $W_{100}=1.4280$) Cu50, Cu100
- Instrument shunt (75mV nominal), mV 0..90
- DC-current input signal range, mA 0..5; 0..20; 4..20
- Temperature measurement error (for thermocouples), °C:
 - L, K in the range of -150..0°C $\pm(0.25 \cdot 10^{-2} \times |t| + 2.5)$
 - L, K in the range of 0..800 (1300)°C $\pm(0.1 \cdot 10^{-2} \times |t| + 2.5)$
 - S, B ± 7.0
- Temperature measurement error (for RTDs), °C $\pm(0.2 \cdot 10^{-2} \cdot (t+273) + 0.1)$
- Reduced DC-current signal measurement error, %:
 - for input signal range 0..5 mA ± 0.5
 - for input signal range 0..20, 4..20 mA ± 0.25
- DC-current output error, mA ± 0.05
- Least significant digit value 0.001; 0.01; 0.1; 1

WIRING DIAGRAM



ADDITIONAL INFORMATION

- Operating temperature range +5°C..+50°C
- Protection type (IP code)..... IP41
- 4 relays, able to switch 30 VDC / 5 A to 125 VDC / 0.3 A circuits with resistive or reactive ($\tau \leq 40$ ms) load and up to 270 VAC / 3 A ($\cos \varphi \geq 0.4$) circuits. 220 VDC / 0.15 A circuits allowed with relay endurance reduced to 10000 operations.
- Current output load resistance, Ohm, up to:
 - output signal 0..5 mA..... 2000
 - output signal 0..20 mA, 4..20 mA..... 600
- Supply voltage (depends on model) 220VAC 50Hz / 24VDC
- Power consumption, VA, up to 8
- Overall dimensions (W×H×D), mm 144×74×120
- Mounting dimensions, mm:
 - cutout size 137×68
 - mounting depth 140

ORDERING DESIGNATION

Digital measuring device **IP-6-TK-XXX**:

XXX – supply voltage variants:

«24V» – 24 VDC;

no marking – 220 VAC 50Hz.

Example. Digital measuring device IP-6-TK – single-channel digital device with configurable input, 220 VAC 50Hz supply voltage, single RS-485 interface, 4 relay outputs and DC-current output.