



**Documents corresponding to the product:** Standard EN 61010-1

Type	Packing/Box (pcs)	Catalogue number
CD - 701	1	<b>50124</b>

### Digital Temperature Controller Type CD - 701

**3** YEAR WARRANTY

The device is intended for industrial control and monitoring of temperature. It allows monitoring and adjustment of temperatures of up to 1999°C depending on the used sensor – thermocouple or thermoresistor. The device allows programming of the used type of sensor (K (CA) ; J (IC) PT 100, etc.) and the controller working range. It also allows selection of the control algorithm, error adjustment, indication hysteresis curve adjustment and alarm settings. The controller is intended for mounting on control panels. It is user friendly and can be set through the push buttons on the device front panel. The program can be password protected. When operational, the display shows the set temperature and the current temperature.

#### Technical Specifications:

- Rated voltage: 230V, 50 Hz
- Permissible voltage deviation: 85 - 110% Un
- Input signal: from thermocouple, thermoresistor or unified signal (4-20mA; 0-10VDC)
- Output: Relay
- Emergency Output: Relay
- Electrical life: 1 000 000 cycles.
- Indication:
  - Green LED – indicates the measured (current) temperature
  - Red LED – indicates the set temperature
- Insulation resistance: 20 MΩ /min (500V)
- Impulse voltage stability: 2000V, 50Hz
- Operating temperature: -5°C ÷ +65°C
- Relative Humidity: 35 - 85%RH

#### Mounting:

- on the front panel



### Thermocouple and thermo resistance

**3** YEAR WARRANTY

The thermo-measuring elements are designed for measuring the temperature in the point of contact between the surface (warmed or cooled) and the thermo-element. They are a comparatively cheap and the most wide-spread method for temperature measurement. The thermocouples are produced by accumulating two conductors from a special measuring alloy in one common head. Each of these elements has a specific electromotive voltage at a specific temperature. The temperature measuring is based on the difference in the electromotive powers between the hot and the cool end of the thermocouple, while this difference in the form of voltage of several millivolts is supplied at the input of the thermoregulator, which displays the measured temperature. Each thermocouple is produced and calibrated for measuring of specific temperature ranges depending on the alloys of which it is made. When thermocouples measuring great distances from the thermoregulators are used (more than 15 points), it is obligatory to use compensatory cable corresponding to the type of the thermocouple. The thermo-resistant elements action is based on the capacity of specific alloys, very often Pt100 to change their resistance when the temperature is changed. For each temperature value is specified a value of resistance. This value is supplied at the input of the thermoregulator, which displays the measured temperature.

**Each thermoregulator operates with a specific type of thermo-element.**

Type of thermo-element	Symbol	Temperature range	Type of catching	Sizes of the head	Size of the free end	Packing/Box (pcs)	Catalogue number
K	WRNT - 01	0 ÷ 400°C	nut	30 x 35	1m	1 / 300	<b>50K40G</b>
K	WRNT - 31	0 ÷ 400°C	Bayonet	30 x 35	0.5m	1 / 200	<b>50K40B</b>
K	WRNT - 13	0 ÷ 400°C	explosion-proof	Ø6	2m	1 / 200	<b>50K40EX</b>
J	WRKT - 01	0 ÷ 400°C	nut	30 x 35	1m	1 / 300	<b>50J40G</b>
J	WRKT - 13	0 ÷ 400°C	explosion-proof	Ø6	2m	1 / 300	<b>50J40EX</b>