

CZAKI THERMO-PRODUCT

05-090 Raszyn ul.19 Kwietnia 58

Poland

tel. +48 22 7202302 fax. +48 22 7202305

handlowy@czaki.pl

www.czaki.pl



Temperature transmitter

TCD-21xx -TC

Instruction Manual



Version 18.08



CE

1. Safety rules

- read the Instruction Manual before using the transmitter
- check the connections before power on
- ensure environmental conditions according to specification

2. Description

TCD temperature transmitter with 4-20mA output works with resistive temperature sensors (TC) **J, K, N, S, R, B** wg according to EN 60751.

It converts resistance of RTD temperature sensor to standard current signal 4...20mA.

The output signal is a linear function of a sensor temperature.

The transmitter has a plastic enclosure suitable for mounting in 35mm rail (DIN EN 50022-35).

3. Specification

ordering code	measuring range (°C)
TCD-2130-J/K	0 ... 200
TCD-2135-J/K	0 ... 300
TCD-2140-J/K	0 ... 400
TCD-2145-J/K/N	0 ... 500
TCD-2150-J/K/N	0 ... 600
TCD-2155-J/K/N	0 ... 700
TCD-2160-J/K/N	0 ... 800
TCD-2165-K/N	0 ... 1000
TCD-2170-K/N	0 ... 1200
TCD-2175-S/R/B	0 ... 1400
TCD-2180-S/R/B	0 ... 1600
TCD-2100-x	other according to customer's requirements

Input:

- temperature sensor **TC** acc. to EN 60751

Accuracy (for ambient temperature 23°C±5°C): ±0,15% of measuring range

- temperature drift ±0,02% of measuring range/°C

Sensor bias current ca. 0.0055mA

Minimum range value (URV-LRV) 100°C

Time constant 100 ms

Output:

Range 4-20mA, 2-wire

Sensor failure indication:

opened ~ 24mA

Power supply (Vs) 12...36VDC / 25mA

Maximum load $R_o(\Omega) < (U_z - 12) / 0,022$

Output signal limit ~ 60mA

Protection against reverse polarity

General:

Ambient temperature: 0°C...+60°C

Housing 90 x 17,5 x 58mm (50g)

- mounting rail 35mm

- case material self-extinguishing Noryl

Case ingress protection IP20 (terminals ... IP00)

Relative humidity: 0 - 90% RH without condensation

Electromagnetic compatibility (EMC): industrial environment

- resistance acc. to EN 61000-6-2:2002(U)

- emissivity acc. to EN 61000-6-4:2002(U)

4. Installation and connection

- the transmitter should be mounted in rail 35mm.
- connect TC temperature sensor with input terminals + -.
- connect the copper wires of the power supply (current loop) to the two + - terminals
- after correct installation, the transmitter is ready for use
- does not require periodic maintenance

Transmitter adjustment

The transmitter is calibrated for lower and upper range values: T_{min} and T_{max}.

You can fine the transmitter via multi-turn potentiometer knobs **ZERO** and **SPAN** (see figure).

