Head mouted temperature transmitter type GI-22-3
for use with thermoelectric sensors

- ✓ Galvanic separation (I/O)
- ✓ Programmable measuring range
- ✓ 4…20 mA two-wire output signal
- ✓ Error LED indicator

Application and function

GI-22-3 temperature transmitter is designed to convert the voltages of thermoelectric sensors of K, J, E, N, T, R, S types into a unified current signal of 4...20 mA. It has compensation for sensor signal nonlinearity.

The transmitter housing allows installation with sensors equipped with heads. The electrical connection can be made with a wire of up to 1.75 mm2. To comply with electromagnetic compatibility (EMC) requirements, the input wires must be shorter than 3 meters.

If the user specifies the type of sensor and the measurement range in the order, APLISENS will deliver the transmitter configured according to the order. Changes in the configuration of the transmitter can be commissioned by the user to APLISENS or can be made by a PC using a USB-AT-3 converter and special software.

In addition to the ability to change the measurement range, the software allows configuration of the transmitter's behaviour when the sensor circuit is interrupted.
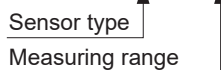
Technical data

Input signal

K	-200÷1370°C	±0,1% of range ±0,5°C
J	-100÷1200°C	±0,1% of range ±0,5°C
E	-200÷1000°C	±0,1% of range ±0,5°C
N	-180÷1300°C	±0,1% of range ±0,5°C
T	-200÷400°C	±0,2% of range ±0,5°C
R	-10÷1760°C	±0,1% of range ±0,5°C (for 800÷1600°C)
S	-10÷1760°C	±0,1% of range ±0,5°C (for 800÷1600°C)
mV	-10÷70 mV	±0,2% of range

Thermal compensation	-40…+85°C, accuracy ±0,5°C
Min. range width	25°C
Output signal	4 ÷ 20 mA two-wires
Response time	1 s
Sampling	each 500 ms
Power supply (U_{SUP})	10…30 V DC
Start-up time	4 s
Load resistance (R_O)	R_O [kΩ] ≤ (U_Z – 10 V) / 20 mA
Alarm signal (configurable)	3,9 mA or 21,5 mA
	factory setting 21,5 mA
Thermal error	±0,05°C/°C (for 20°C)
Voltage error	±0,2 μA/V
Ambient temperature	-40…+85°C

Ordering procedure

GI-22-3 /___/__÷__°C
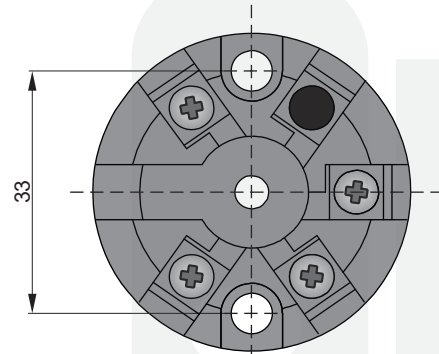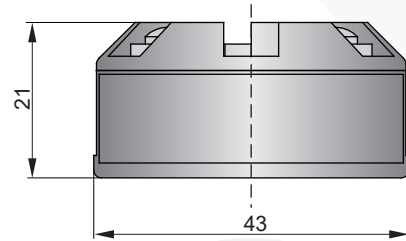
Sensor type
Measuring range

Factory settings:

GI-22-3

Sensor type: K
Measuring range: 0÷1000°C

Example : Temperature transmitetr type GI-22-3 for sensor TC type K, measuring range from 600 to 1000°C

GI-22-3 / K / 600 ÷ 1000°C

Electrical diagrams