

E-KC-102 SERIES HEAD MOUNTED TYPE TEMPERATURE CONVERTER USER MANUAL

Elimko

KY-KC102-0825-1

The E-KC-102 converter is designed for use in an industrial environment.

- The package of the E-KC-102 converter contains; the Converter, user manual and guarantee certificate.
- After opening the package, please visually check whether the type of the transmitter is suitable for the order, whether the above-mentioned parts are missing and whether the transmitter has been damaged during shipment.
- Before installing and operating the controller, please read the user manual thoroughly.
- The installation and configuration of the controller must only be performed by a person qualified in instrumentation.
- Keep the unit away from flammable gases, that could cause explosions.
- Do not use alcohol or other solvents to clean the transmitter. Use a clean cloth soaked in water tightly squeezed to gently wipe the outer surface of the transmitter.
- It is not used in medical applications.



1. DESCRIPTION

E-KC-102 series two wire transmitters are microprocessor based industrial instruments in plastic case. E-KC-102 transmitters are used to convert the resistance thermometer signals into standard 4-20 mA. The configuration of the transmitter is done by PC, using a software programme supplied by Elimko. The USB connection hardware is also available from Elimko.



2.2. General Specifications

| Electrical: | |
|--|--|
| Supply Voltage | 10.0 - 30 V DC |
| Voltage Drop | 10.0 V |
| Environmental Conditions: | |
| Operating Temperature | -10°C to +55°C |
| Protection Class | IP 00, IP 66 (DIN 43729 mounted on type B head) |
| Calibration Temp. | 25°C ±3°C |
| Mechanical: | |
| Dimensions | Ø 44.0 mm x 21.5 mm |
| Weight (approx.) | 40 g |
| Connection Cables | Max. 1.5 mm² (AWG 16) |
| Resistance Thermometer (RTD) / Resistance Input: | |
| Sensor Connection | 3-wire or 4-wire (Configurable) |
| Maximum Wire Resistance | 100 Ω |
| Error Signaling | Wire Break (Output current can be configured Up / Down.) |
| Output: | |
| Output Signal | 4 - 20 mA or 20 - 4 mA |
| Load Resistance | [V _{supply} -10]× 50 Ω (600 Ω at 22 V DC) |
| Operating Influences: | |
| Ambient Temperature | < ± 0.01% / °C |
| CJC Error (For TC Inputs) | < ± 1.0 °C |
| EMC Immunity | < ± 0.5% Span |

2. TECHNICAL SPECIFICATIONS

2.1. OPERATING RANGE and MEASURING ACCURACY (at 24 V supply voltage and 25°C ± 3°C ambient temperature)

| SENSOR | | STANDARD | LOWER LIMIT | UPPER LIMIT | MINIMUM SPAN | ACCURACY | |
|--------|---------|-----------|-------------|-------------|--------------|----------|------------|
| | | | | | | A/D | D/A |
| RTD | Pt-50 | IEC 60751 | -200°C | 850°C | 50°C | ±0.5°C | ±0.1% Span |
| | Pt-100 | | -200°C | 850°C | 50°C | ±0.25°C | |
| | Pt-500 | | -200°C | 850°C | 50°C | ±0.25°C | |
| | Pt-1000 | | -200°C | 850°C | 50°C | ±0.25°C | |
| | Ni-50 | DIN 43760 | -60°C | 180°C | 50°C | ±0.25°C | |
| | Ni-100 | | -60°C | 180°C | 50°C | ±0.25°C | |
| | Ni-120 | | -60°C | 180°C | 50°C | ±0.25°C | |
| | Ni-200 | | -60°C | 180°C | 50°C | ±0.25°C | |
| | Ni-500 | | -60°C | 180°C | 50°C | ±0.25°C | |
| | Ni-1000 | | -60°C | 180°C | 50°C | ±0.25°C | |

If the input type and scale is not specified while ordering, factory settings are;
For KC-102-R **Input Type** : Pt-100, and **Scale** : 0-200°C,

Electromagnetic Compatibility:

The E-KC-102 meets the requirements of
TS EN 61326-1.

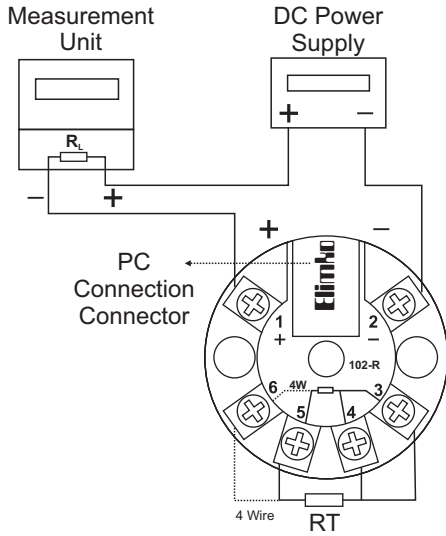
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3. CONNECTION DIAGRAM

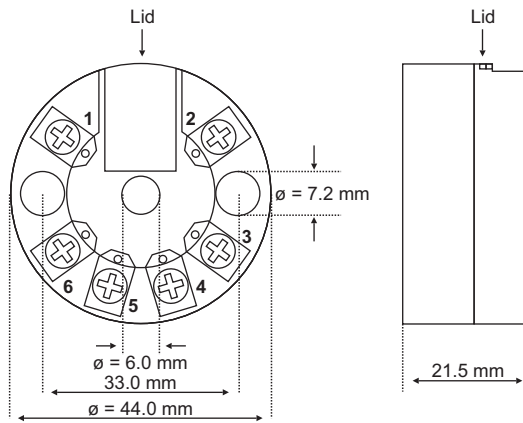


E-KC-102-R Connection Diagram

- Before operating the converter, ensure that the converter is correctly configured. Incorrect configuration could result in damage to the process being controlled.
- To minimize the pick-up of electrical noise, the wiring of low voltage lines, particularly the sensor input should be routed away from the high-current power cables. Where it is not possible, use shielded cable and ground the shielded cable.
- The cables used for powering the transmitter and the power outputs must conform to the standards IEC 60245 and IEC 60227.



4. DIMENSIONS



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Manufacturer / Technical Support :
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