

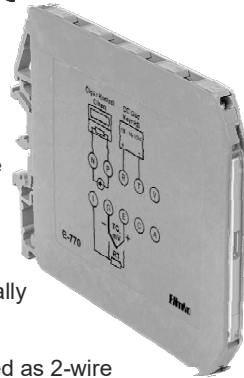
KY-770-1123-1

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1. DESCRIPTION



E-770 series devices are rail-mountable industrial devices in a plastic case designed to be used as signal converters. E-770 series converters convert resistance thermometer (RTD) and thermocouple (TC) type temperature sensors, resistance and DC mV signals to standard 4 - 20 mA output signals. The input and output signals of the E-770 series devices are not galvanically isolated.



E-770 series converters can be ordered as 2-wire or 4-wire types. In 2-wire types, the operating voltage and output signal are not galvanically isolated, in 4-wire types, the operating voltage and output signal are galvanically isolated.

E-770 series converters can be configured with special PC software provided by Elimko.

E-770 device control units are designed for rail mounting and should be used in an industrial environment.



- The package of E-770 device contains; Device, User manual, Guarantee certificate.
- After opening the package, please check the contents with the above list. If the delivered product is wrong type, any item is missing or there are visible defects, contact the vendor from which you purchased the product.
- Before installing and operating the device, 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 feamable gases, that could cause explosion.
- Do not use alcohol or other solvents to clean the device. Use a clean cloth soaked in water tightly squeezed to gently wipe the outer surface of the device.
- It is not used in medical applications.

2. TECHNICAL SPECIFICATIONS

2.1. General

Electrical :	
Operating Voltage	10 - 30 V DC (2-wire types) 18 - 36 V DC (4-wire types)
Voltage Drop	10.0 V
Environmental Conditions:	
Operating Temperature	-10°C to +70°C
Operating Humidity	< 95% RH (non-condensing)
Protection Class	IP20
Calibration Temperature	25°C ±3°C
Mechanical:	
Dimensions	90 mm x 112 mm x 65 mm
Weight (approx.)	60 g
Connection Cables	Maximum 1.5 mm ² (AWG 16)
Resistance Thermometer (RTD) / Resistance Input :	
Sensor Connection Type	3-wire
Maximum Wire Resistance	100 Ω
Error Signaling	Sensor Break
Thermocouple (TC) / Millivolt Input :	
Input Impedance	> 10 MΩ
Maximum Wire Resistance	100 Ω
Error Signaling	Sensor Break
Linearization	Yes / No
Output :	
Output Signal	4 - 20 mA or 20 - 4 mA
Load Resistance	< ((V _{operation} - 10) / 0.020) Ω 2-wire types Maximum 600 Ω (4-wire types)
Operation Influences :	
Ambient Temperature	< ± 0.01% / °C
CJC Error (For TC input)	< ± 1.0 °C
EMC Immunity	< ± 0.5% Span

**2.2. Measurement Accuracy
(Operating Voltage = 24 V and
Ambient Temperature = 25°C ± 3°C)**

SENSOR	STANDARD	LOWER LIMIT	UPPER LIMIT	MINIMUM RANGE	ACCURACY		
					A/D	D/A	
RTD	Pt-50	IEC 60751	-200°C	840°C	25°C	±0.50°C	±0.1% Full Scale
	Pt-100	IEC 60751	-200°C	840°C	25°C	±0.25°C	
	Pt-500	IEC 60751	-200°C	840°C	25°C	±0.25°C	
	Pt-1000	IEC 60751	-200°C	840°C	25°C	±0.25°C	
	Ni-100	DIN 43760	-60°C	180°C	25°C	±0.25°C	
	Ni-200	DIN 43760	-60°C	180°C	25°C	±0.25°C	
	Ni-500	DIN 43760	-60°C	180°C	25°C	±0.25°C	
	Ni-1000	DIN 43760	-60°C	180°C	25°C	±0.25°C	
T/C	B	IEC 60584	100°C	1800°C	100°C	±2.00°C	
	E		-200°C	840°C	50°C	±0.50°C	
	J		-200°C	1120°C	50°C	±0.50°C	
	K		-200°C	1360°C	50°C	±0.50°C	
	N		-200°C	1300°C	50°C	±0.50°C	
	R		-40°C	1760°C	100°C	±1.00°C	
	S		-40°C	1760°C	100°C	±1.00°C	
	T		-200°C	400°C	50°C	±0.50°C	
	L		DIN 43710	-200°C	900°C	50°C	±0.50°C
	U			-200°C	600°C	50°C	±0.50°C
	mV			-200mV	1000mV	25mV	±0.075mV
	ohm			0 Ω	500 Ω	50 Ω	±0.50°C

Factory default settings if not specified in the order; **Input Type:** Pt-100, **Scale:** 0-100°C.

3. TYPE CODING

E - 770 - W - X - Y - Z

Operating Voltage
0: 2-wire (10 – 30 V DC)
1: 4-wire (18 – 36 V DC)

Communication
0: None

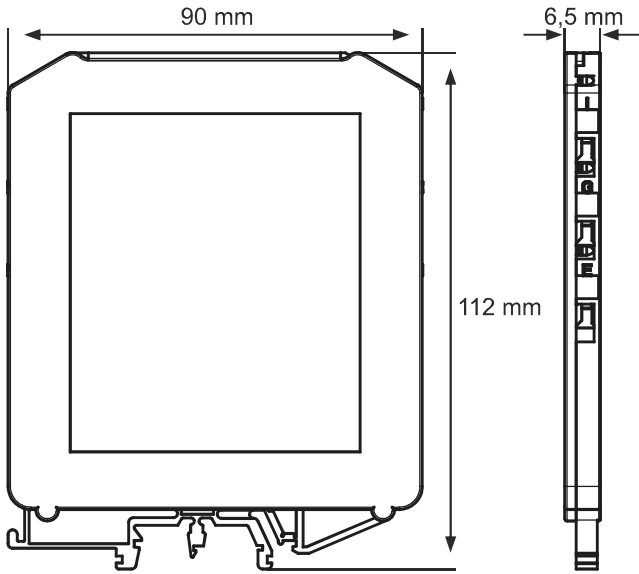
Output Signal
1: 4 - 20 mA

Input Signal
1: Resistance Thermometer (RTD), Thermocouple (TC), mV and Resistance

EU Directive Compliance;

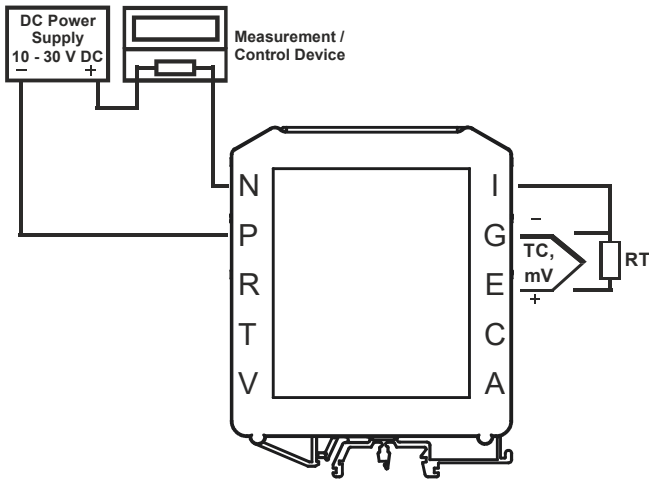
Electromagnetic Compatibility Directive
EN 61326-1
Low Voltage Directive
EN 61010-1

4. DIMENSIONS



5. CONNECTION DIAGRAM

Connection Diagram for 2-Wire Types



Connection Diagram for 4-Wire Types

