E-50 SERIES
DIGITAL INDICATING CONTROLLERS

DESCRIPTION

E-50 Series controllers are designed using new generation micro-controllers for on/off and PID control. The unit has dimensions of 48x48 mm, conforming IEC/TR 60668.

E-50 Series have a 4 digits LED display range between -1999 and +9999, configurable universal inputs (T/C, R/T, mA) with 16 bit resolution, low calibration drifts with enviromental conditions.

E-50 Series controllers have easy programing facilities to provide on/off and PID forms are used in every field of industry for measurement and control of temperature, pressure, level, current, voltage, resistance and other process parameters in industries such as iron & steel, cement, plastic, chemistry, metallurgy, petrochemical plants, refineries, ceramic, glass and others.

STANDARD WORKING LIMITS

Inputs	Type	Min.	Max.
Fe-Const	Type-J	-200°C	1100°C
NiCr-Ni	Type-K	-200°C	1300°C
Fe-Const	Type-L*	-200°C	850°C
Pt-100	Pt-100 ∝=0.385	-200°C	850°C
Pt10%Rh-Pt	Type-S	0°C	1600°C
Analog Inputs (mA)	4-20	-1999	9999

* DIN 43710 standards, others conform to IEC 60584-1. E-50 Series instruments are general purpose and can be configured according to the application.

TECHNICAL SPECIFICATIONS

Accuracy Class	0.5
Display Resolution	1/9999
Display	1x4 Digit LED (7 mm)
A/D Conversion	16 bit
Reading Speed	2 readings / second
Input Resistance	T/C, mV ≥ 1 MΩ mA, ≤ 51 Ω
Noise Suppression	120 dB 50 Hz
Operating Temperature	-10 ... 55°C
Temperature Comp.	0 ... 50°C
Power Supply	220 V AC 24 V AC
Power Consumption	Max. 1,5 W
Relay Output	NA Contact 250 V AC 5 A
Input Signal	T/C, R/T, mA
Sensors	Thermocouple Resistance thermometer
Protection Class	IP 66 front panel (NEMA 4X) IP 20 rear panel
Memory	EEPROM max. 10^5
Weight	215 gr

CE

- This controller complies with the European Low Voltage Directive 2006/95/EC, by the application of safety standard TS EN 61010-1. (Pollution degree 2)
- This controller complies with the EMC Directive 2004/108/EC by the application of EMC standard TS EN 61326.

FEATURES

Set Adjustment	Between span limits
Control Form	On/Off, PID
Control Outputs	NO-0-NC
Dead Band (Hysterisis)	0-999.9 (EU)*

Proportional Band (Pb)	0-999.9 (EU)*
Integral Time (It)	0-9999 seconds
Derivative Time (Dt)	0-9999 seconds
Ct (Cycle time)	PID control seconds period 1 ... 32 sec

* (EU) °C for the thermocouples and resistance thermometer inputs, for the linear inputs, same with the units which is controlled. Decimal point can be determined by parameter of dP.

ORDERING GUIDE

E-50 Series Controllers — E-50 -W- X - Y - Z

Standard Features

Relay Outputs

None	0
1 relay 1 x (NO-0-NC)	1
1 relay 1 x (NO-0-NC) + 1 relay 1 x (NO-0)	2
Pulse Voltage to drive SSR, 24 V DC/20 mA	3
Pulse Voltage to drive SSR, 24 V DC/20 mA + 1 relay 1 x (NO-0)	4

Input Types

Fe-Const (J) 0-400°C	1
Fe-Const (L) 0-400°C	2
NiCr-Ni (K) 0-1200°C	3
Pt%10Rh-Pt (S) 0-1600°C	4
Pt-100 (Pt) 0-200°C	5
4-20 mA, -1999/9999	6
Special	7

Note: Please specify your working range and input for orders outside the standard input and range.

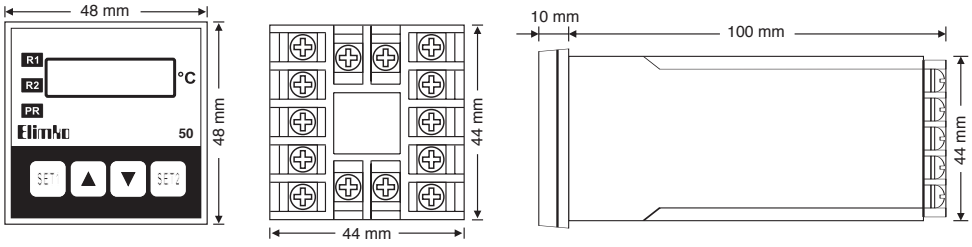
Analog Outputs

None	0

Power Supply

220 V AC ± %10	0
24 V AC ± %10	1

DIMENSIONS



Panel cut-out = 45 x 45 mm