

E-94 SERIES DIGITAL INDICATING CONTROLLERS



DESCRIPTION

E-94 Series controllers are designed using new generation micro-controllers for on/off and PID control. The unit has dimensions of 96x48 mm, conforming IEC 668.

E-94 Series have a 2x4 digits LED display range between -1999 and +9999, configurable universal inputs (T/C, R/T, mV, mA) with 16 bit resolution, low calibration drifts with environmental conditions.

E-94 Series controllers have easy programming facilities to provide on/off and PID forms and 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.

FEATURES

| | |
|------------------------|---|
| Set Adjustment | Between set point limits |
| Contact Forms | Low (LO), HIGH (HI) Lob, Hlb, Lod, Hld |
| Dead band (Hysteresis) | 0-999.9 (EU)* |
| Resolution | 0.1 or 1 |
| Proportional Band (Pb) | 0.1-999.9 (EU)* |
| Integral Time (It) | 0-9999 (seconds) |
| Derivative Time (Dt) | 0-2500 (seconds) |
| Bias | %0-100 |
| Control Form | On/Off, PID |
| Control Outputs | 0-20 mA, 4-20 mA, NO Contact, pulse |

* (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.

TECHNICAL SPECIFICATION

| | |
|-----------------------|---|
| Accuracy Class | 0.5 |
| Display Resolution | 1 / 9999 |
| Display | 2x4 Digit LED (7mm) |
| A/D Conversion | 16 Bit |
| S/A Conversion | 12 Bit |
| Reading Speed | 2 readings/second |
| Input Resistance | T/C, mV: $\geq 1M\Omega$ mA : $\leq 51\Omega$ |
| Noise Suppression | 120 dB 50 Hz |
| Operating Temperature | -10 ÷ 55 °C |
| Temperature Comp. | 0-50 C |
| Operating Voltage | 85-265 V AC, 85-375 V DC, 20-60 V AC, 20-85 V DC |
| Power Consumption | Max. 10 VA |
| Relay Output | SPST-NO 250 V AC 5 amp |
| Input Signal | T/C, R/T, mA, mV |
| Sensors | Thermocouple Resistance Thermometre Others= Standard and non-standart transmitters and converters |
| Memory | EEPROM max. 10^5 writing |
| Weight | 220 gr |

CE

- This controller complies with the European Low Voltage Directive 73/23/EEC, by the application safety standard TS 2418 EN 61010-1. (Pollution degree 2)
- This controller complies with the EMC Directive 89/336/EEC, by the application of EMC standart TS EN 61326.

STANDARD WORKING LIMITS

| Inputs | Type | Min. | Max. |
|----------------|----------|---------|---------|
| Cu-Const | Type -U* | -200 °C | 600 °C |
| Cu-Const | Type -T | -200 °C | 400 °C |
| Fe-Const | Type -L* | -200 °C | 900 °C |
| Fe-Const | Type -J | -200 °C | 1100 °C |
| Cr-Al | Type -K | -200 °C | 1300 °C |
| NiCr-Ni | Type -K | -200 °C | 1300 °C |
| Cr-Const | Type -E | -200 °C | 800 °C |
| Nicrosil-Nisil | Type -N | -200 °C | 1300 °C |

| Inputs | Type | Min. | Max. |
|------------|----------------|------------|-----------|
| Pt%10Rh-Pt | Type -S | 0 °C | 1760 °C |
| Pt%13Rh-Pt | Type -R | 0 °C | 1760 °C |
| Pt%18Rh-Pt | Type -B | 60 °C | 1800 °C |
| Pt-100 | $\alpha=0.385$ | -200 °C | 840 °C |
| mV | 0-1000mV | -1999 Unit | 9999 unit |
| mA | 0-20 mA | -1999 Unit | 9999 unit |

* DIN 43710 standards, others conform to IEC 584 E-94 Series instruments are general purpose and can be configured according to the application.

ORDERING GUIDE

E-94 Series Controllers

E-94 W X 0 Z

Standard Features

- Programmable universal inputs
 - Programmable universal outputs
 - Transmitter power supply 24 V DC
 - External set point
 - Motorised value feedback input
 - Heat - Cool
 - Auto-tune
- Configurable by the customer

Relay Outputs

| | |
|--|---|
| 2 Relays 2x(NO-O)..... | 2 |
| 3 Relays 3x(NO-O)..... | 3 |
| 4 Relays 4x(NO-O)..... | 4 |
| 1 Relay, pulse voltage to drive SSR, 24.V.DC./ 20.mA..... | 5 |
| 2 Relays, pulse voltage to drive SSR, 24.V.DC./ 20.mA..... | 6 |
| 3 Relays, pulse voltage to drive SSR, 24.V.DC./ 20.mA..... | 7 |

Analog Outputs

| | |
|--------------------------------|---|
| None..... | 0 |
| 0-20mA/4-20 mA (isolated)..... | 1 |

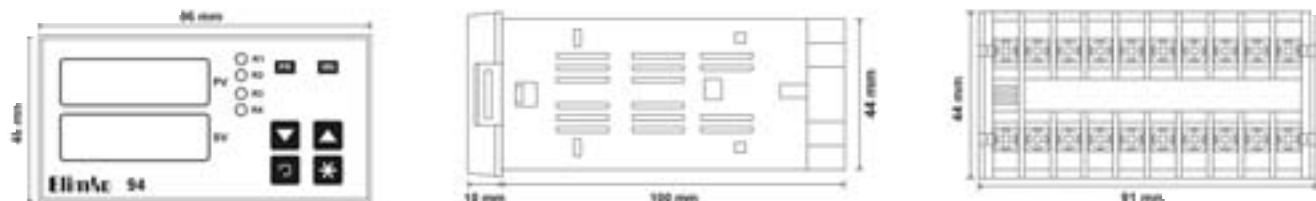
Communication

| | |
|-----------|---|
| None..... | 0 |
|-----------|---|

Power Supply

| | |
|--------------------------------|---|
| 85-265 V AC / 85-375 V DC..... | 0 |
| 20-60 V AC / 20-85 V DC..... | 1 |

DIMENSIONS



Panel cut-out = 45 x 92 mm

* The company's policy is one of continuous product improvement. We reserve the right to modify the information contained herein without notice.

Elimko

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