



E-230 SERIES

UNIVERSAL ADVANCED DIGITAL CONTROLLERS



DESCRIPTION

E-230 Series universal process control devices are designed for on/off and PID control using an advanced new generation micro-controller. These 96x96 mm industrial devices have a TFT touchscreen, conform to the IEC/TR 60668 standard, and the universal inputs and outputs are easily programmable by the user. A special software is used for manual and automatic adjustment of PID parameters which include the latest technological developments. This allows much more precise adjustments.

They are used in all fields of industry including measurement and control of temperature, pressure, level, speed, current, voltage, resistance and other physical units in iron and steel, cement, chemistry, food, plastics, petrochemistry, refinery, ceramics, glass and other industries.

- 320x240 TFT Color Display
- Capacitive Touchscreen
- High-Precision Reading
- Ease of Use
- Calibration Unaffected by Time and External Factors
- Broken Sensor Detection



Compliance with EU Directives

- Low Voltage Directive EN 61010-1
- EMC Directive EN 61326

TECHNICAL SPECIFICATIONS

| | |
|---------------------------|--|
| Accuracy Class | (±0.5% or ±1°C of read value) max. ±1 digit |
| Display | 3.5" TFT touchscreen, 320×240 resolution, colored |
| Control | On/Off, PID |
| Relay Outputs | Relay: SPST-NO 250V AC, 5A Current: 0-20 mA, 4-20 mA, -10 V DC (Isolated) Pulse: 24V DC, 25 mA (for SSR) |
| Alarm Outputs | Relay: SPST-NO 250V AC, 5A |
| A/D Conversion | 16 bit |
| D/A Conversion | 16 bit |
| Input Signals | TC (B, E, J, K, L, N, R, S, T, U), RT (Pt-100), Current: 0-20 mA, 4-20 mA (Linear) Voltage: 0-50 mV, 0-1 V, 0.2-1 V (Linear) |
| Power Consumption | 7W (10 VA) |
| Protection Class | Front Panel: IP65 (NEMA 4X), Back Panel: IP20 |
| Operating Temperature | -10°C, +50 °C (+14 °F, +131 °F) |
| Storage Temperature | -25°C, +65 °C (+13 °F, +149 °F) |
| Mechanical Life of Relays | 10.000.000 on-off cycles |
| Electrical Life of Relays | >1.000.000 on-off cycles (at 1/10 load) |
| Power Supply | 85-265 V AC; 85-375 V DC 0-50 V AC; 20-70 V DC |
| Communication | RS485 Modbus |
| Weight | 430 gr |



STANDARD WORKING LIMITS

TEMPERATURE SENSORS

| Inputs | Standard | Temperature Range | |
|--------|----------|-------------------|------------|
| | | (°C) | (°F) |
| TIP-B | IEC584-I | 60, 1820 | 140, 3308 |
| TIP-E | IEC584-I | -200, 840 | -328, 1544 |
| TIP-J | IEC584-I | -200, 1120 | -328, 1562 |
| TIP-K | IEC584-I | -200, 1360 | -328, 2480 |
| TIP-L | DIN43710 | -200, 900 | -328, 1652 |
| TIP-N | IEC584-I | -200, 1300 | -328, 2372 |
| TIP-R | IEC584-I | -40, 1760 | 104, 3200 |
| TIP-S | IEC584-I | -40, 1760 | 104, 3200 |
| TIP-T | IEC584-I | -200, 400 | -328, 752 |
| TIP-U | DIN43710 | -200, 600 | -328, 1112 |
| PT-100 | IEC751 | -200, 840 | -328, 1544 |

LINEAR INPUTS

| Type | Measurement Range |
|-----------------|-------------------|
| Current 0-20 mA | 0-20 mA DC |
| Current 4-20 mA | 4-20 mA DC |
| Voltage 0-50 mV | 0-50 mV DC |
| Voltage 0-1 V | 0-1 V DC |
| Voltage 0.2-1 V | 0.2-1 V DC |

ORDERING GUIDE

E- 230 Series Advanced Control Devices

E- 230 - W - X - Y - Z

Standard Features

- Programmable universal inputs
- 2 relay outputs
- 1 analog output
- Programmable universal outputs (current output PID, time proportional PID, motorized valve drive)
- 1 external set point
- 1 position feedback input
- Transmitter power supply
- Heating/cooling
- Automatic tuning (Auto-tune)
- 10 programs, profile control of 100 steps total

Relay Outputs

| | |
|---|---|
| 2 relay (2xNA-O) | 2 |
| 3 relay (3xNA-O) | 3 |
| 4 relay (4xNA-O) | 4 |
| Pulse Voltage to drive SSR, 1 relay + 24 V DC/20 mA | 5 |
| Pulse Voltage to drive SSR, 2 relay + 24 V DC/20 mA | 6 |
| Pulse Voltage to drive SSR, 3 relay + 24 V DC/20 mA | 7 |
| Pulse Voltage to drive SSR, 2 relay + 2x24 V DC/20 mA | 8 |

Analog Output

| | |
|---|---|
| 1 analog output 0-20/4-20 mA (isolated) | 1 |
| 2 analog output 0-20/4-20 mA (isolated) | 2 |
| 1 analog output 0-10 V DC (isolated) | 3 |
| 2 analog output 0-10 V DC (isolated) | 4 |

Analog outputs are not isolated from each other.

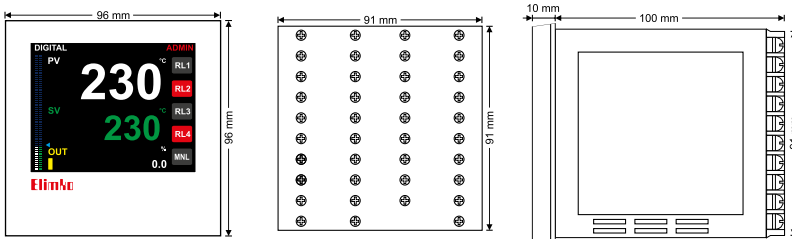
Communication

| | |
|--------------------------------------|---|
| None | 0 |
| RS485 Modbus | 1 |
| 3 Digital Input | 2 |
| 3 Digital Input + RS485 Modbus | 3 |

Operating Voltage

| | |
|------------------------------------|---|
| 85 - 265 V AC; 85 - 375 V DC | 0 |
| 0 - 50 V AC; 20 - 70 V DC | 1 |

CIHAZ EBATLARI



Panel Cut-Out = 92x92 mm

Elimko

Elimko Elektronik İmalat ve Kontrol Ticaret Ltd. Şti.
8. Cadde 21. Sokak No: 16 Emek 06510 ANKARA
Tel: 0312 212 6450 (Pbx) • Faks: 0312 212 4143
e-mail: elimko@elimko.com.tr • www.elimko.com.tr



[in](#) /elimkoldsti
[f](#) /elimkoldsti
[v](#) /elimkoldsti