

## E-200 SERIES UNIVERSAL-ADVANCED DIGITAL CONTROLLERS



### DESCRIPTION

E-200 Series universal-advanced controllers are designed using new generation micro-controllers. Unit dimensions are 96x96mm, conforming to IEC/TR 60668.

E-200 Series has a 2x4 digit LED display range from -1999 to 9999 and configurable universal inputs (R/T, T/C, mV, mA) with 16 bit resolution and ultra low calibration drifts with environmental conditions.

### TECHNICAL SPECIFICATIONS

Accuracy Class	0.5
Display Resolution	1/9999
Display	2x4 Digit LED (14 mm)
A/D Conversion	16 bit
D/A Conversion	12 bit
Reading Speed	10 readings/second
Input Resistance	T/C, mV $\geq 1 \text{ M}\Omega$ mA, $\leq 51 \Omega$
Noise Suppression	120 dB 50 Hz
Operating Temperature	-10 ... 55°C
Temperature Comp.	0 ... 50°C
Power Supply	85-265 V AC / 85-375 V DC 20-60 V AC / 20-85 V DC
Power Consumption	Max. 7 W
Relay Output	NA Contact 250 V AC 5 A
Input Signal	T/C, R/T, mA, mV
Sensors	Thermocouple Resistance thermometer Others= Standard and nonstandard transmitters and converters
Transmitter Power Supply	24 V DC 25 mA
Memory	EEPROM max. $10^5$ writing
Protection Class	IP66 front panel (NEMA 4X) IP20 rear panel
Weight	430 gr

E-200 Series controllers have advanced programming facilities to provide different control forms and functions. E-200 Series are used at different fields of industry such as iron & steel, chemical, petrochemical plants, cement, metallurgy, refineries, glass, food, tyre, plastic, ceramic and others.

### FEATURES

- Multi Control Set Points
- 3 alarm set points
- 1 analog input: T/C, R/T, 0-20mA, 4-20mA, 0-50mV, 0-1 V
- 1 external set point input: 0-20mA, 4-20 mA
- 3 digital input: Potential free contacts, auto/man, ext/int, set point select.
- 1 Servomotor supply potentiometer input
- 4 relay outputs: Contacts can be configured
- 2 analog outputs: Control output, re-transmission output can be configured
- Transmitter power supply (24 V DC)
- Communication port: RS485 Modbus
- Control forms: On/Off, PID, auto-manual station, heat/cool, ratio station
- Auto-tune

Set Adjustment	Between set point limits
Control Form	Low (LO), High (HI), Lob, Hlb, Lod, Hld
Dead Band (Hysteresis)	0-999.9 (EU)*
Proportional Band (Pb)	0.1-999.9 (EU)*
Integral Time (It)	0-3600 seconds
Derivative Time (Dt)	0-3600 seconds
Bias	0-100%
Control Outputs	0-20 mA, 4-20 mA, 0-10 V DC, Relay contact, SSR



- 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.

## 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	850°C
Fe-Const	Type-J	-200°C	1100°C
NiCr-Ni	Type-K	-200°C	1300°C
Cr-Const	Type-E	-200°C	1000°C
Nicrosil-Nisil	Type-N	-200°C	1200°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	0-1000 mV	-1999 unit	9999 unit
mA	0-20/4-20 mA	-1999 unit	9999 unit

\* DIN 43710 standards, others conform to IEC 60584-1. E-200 Series instruments are general purpose and can be configured according to the application.

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

## ORDERING GUIDE

E-200 Series Controllers

E-200 -W- X - Y - Z

### Standard Features

- Programmable universal inputs
- 2 relay outputs
- 1 analog outputs
- 3 digital inputs
- Programmable universal outputs (current output PID, time proportional PID, motorized valve drive)
- 1 external set point
- 1 motorised valve feedback input
- Transmitter power supply
- Heat / cool
- Auto-tune

### Relay Outputs

2 relays (2xNO-0) .....	2
3 relays (3xNO-0) .....	3
4 relays (4xNO-0) .....	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

### Analog Outputs

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

Analog outputs are non-isolated from each other

### Communication

None .....	0
RS485 Modbus .....	1

### Power Supply

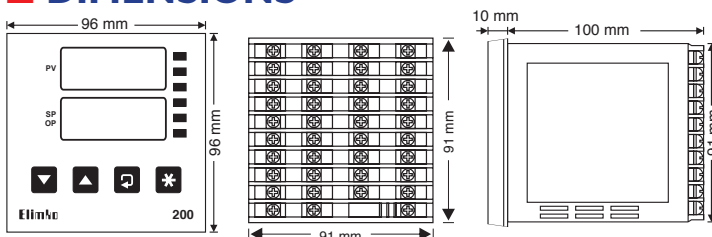
85-265 V AC / 85-375 V DC .....	0
20-60 V AC / 20-85 V DC .....	1

### Sample

E-200-2-1-0-0	Standard features, 2 relays, 1 analog output, 220 V AC
E-200-2-1-1-0	Standard features, 2 relays, 1 analog output, RS485, 220 V AC
E-200-3-2-1-0	Standard features, 3 relays, 2 analog outputs, RS485, 220 V AC

\*\*\* For orders outside the standard analog output, contact Elimko.

## DIMENSIONS



Panel cut-out = 92 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.



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