



# E-220 SERIES

## UNIVERSAL ADVANCED DIGITAL CONTROLLERS



### DESCRIPTION

E-220 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 display, 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
- 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 display, 320×240 resolution, colored
Control	On/Off, PID
Relay Outputs	Relay: SPST-NO 250V AC, 5A Current: 0-20 mA, 4-20 mA, 0-10 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- 220 Series Advanced Control Devices

E- 220 - 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 + 24V DV/20 mA .....	5
Pulse Voltage to drive SSR, 2 relay + 24V DV/20 mA .....	6
Pulse Voltage to drive SSR, 3 relay + 24V DV/20 mA .....	7
Pulse Voltage to drive SSR, 1 relay + 2x24V DV/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.

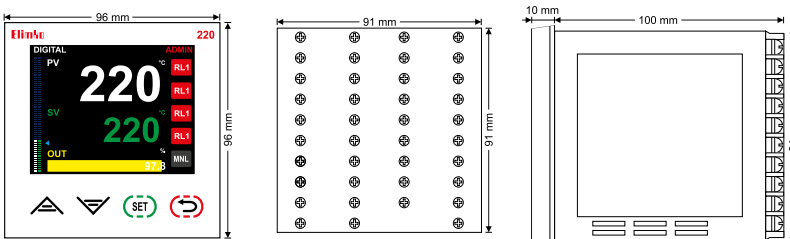
### Communication

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

## DIMENSIONS



Panel Cut-Out = 92x92 mm

# Elimko

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