



Elimko E-200 Series Universal Advanced Controller User Guide

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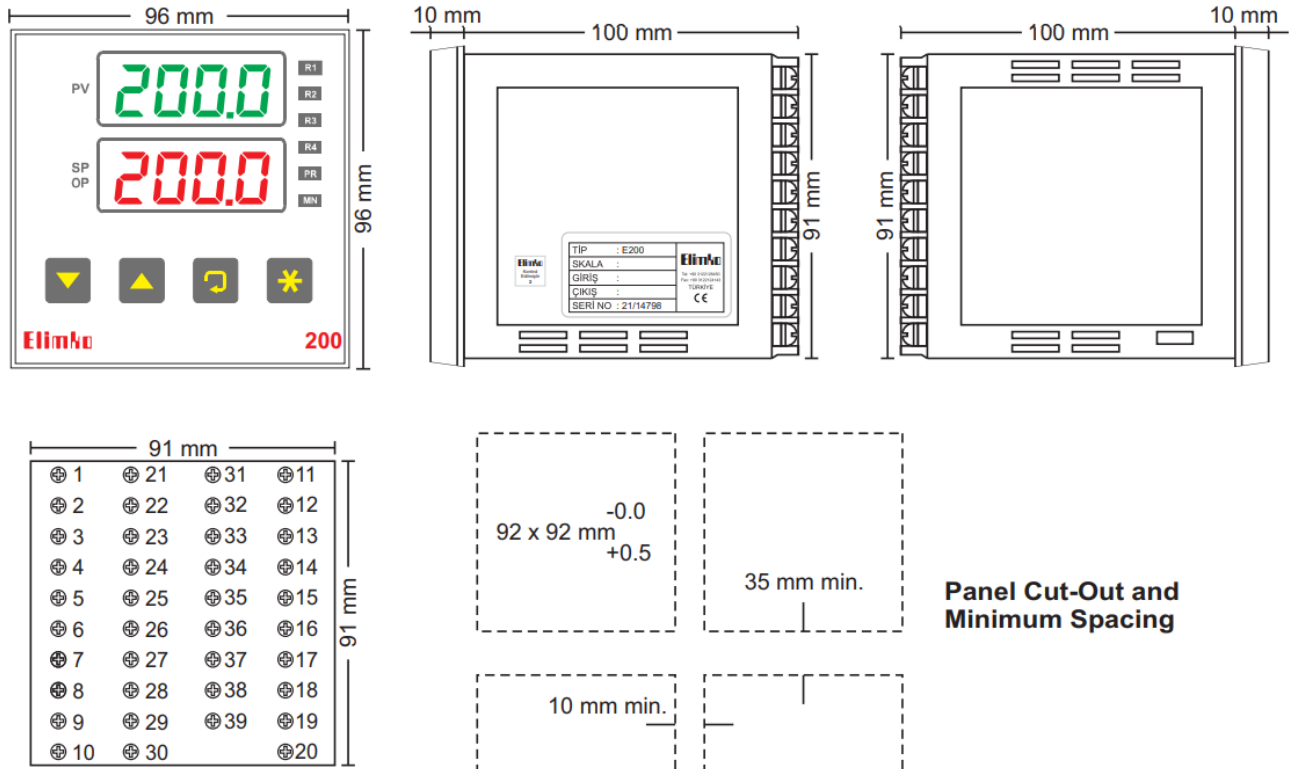
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DESCRIPTION

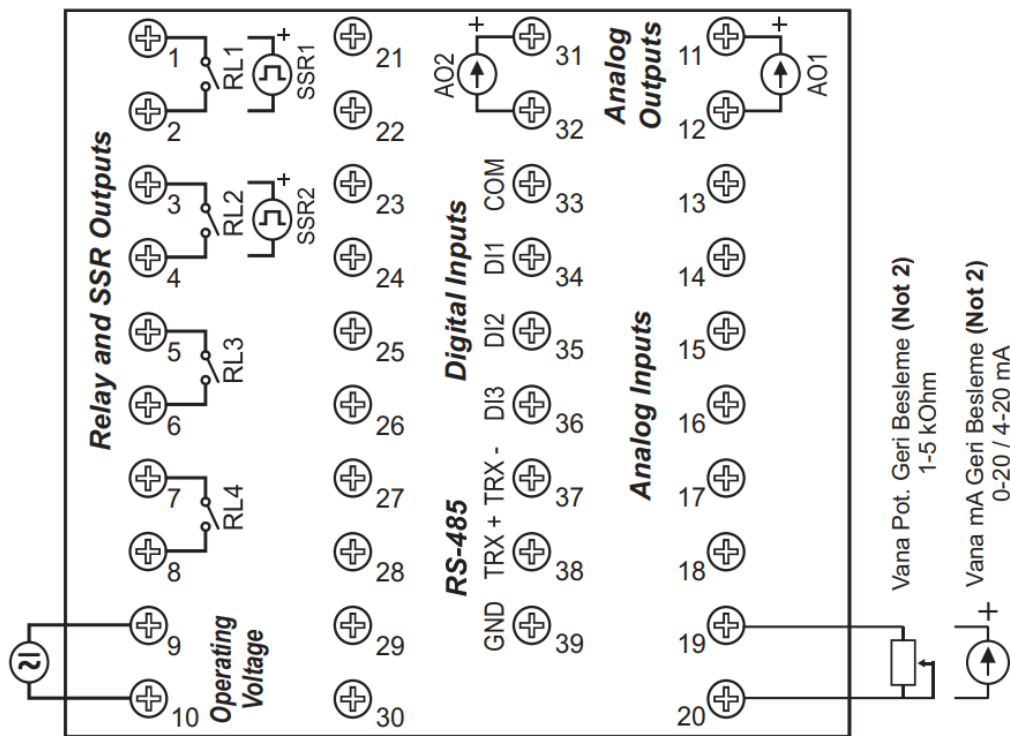
E-200 Series general purpose process controllers are industrial devices in 1/4 DIN (96×96 mm IEC/TR 60668) dimensions designed by using new generation microcontrollers with on/off, PID and other control forms. Inputs and outputs can be easily programmed by the user.

In E-200 Series controllers, set value and measured value can be displayed from -1999 to 9999 on two 4-digit displays and general purpose inputs (T/C, R/T, mV, mA) can be programmed.

DIMENSIONS and PANEL CUT-OUT



CONNECTION DIAGRAM

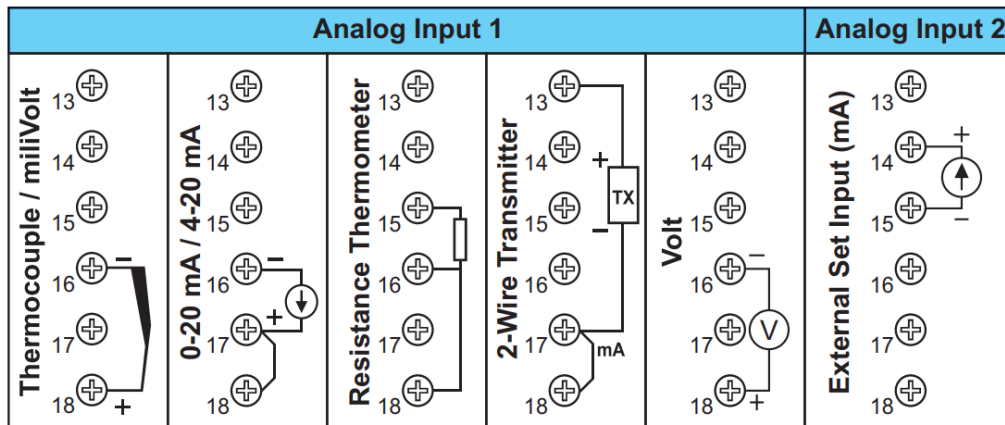


⚠ Operating voltage suitable for the device type shall be applied

1st and 2nd control outputs can be selected as either Relay (RL1, RL2) or SSR (SSR1, SSR2).

Analog outputs (AO1, AO2) can be selected as either mA or 0-10 V DC.

Digital inputs are used by connecting a dry contact output between the COM terminal and the desired input (DI1, DI2 or DI3)



WARNINGS

⚠ E-200 controller is designed for panel mounting and should be used in an industrial environment.

EU DIRECTIVE COMPLIANCE

Low Voltage Directive: EN 61010-1

EMC Directive: EN 61326-1

TYPE CODING

E-200 Series Universal Advanced Controller

E-200 -	W	X	Y	Z
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
		1		
		2		
		3		
		4		
		5		
			0	
			1	
				0
				1

Relay Outputs

- 2 relays (RL1, RL2)
- 3 relays (RL1, RL2, RL3)
- 4 relays (RL1, RL2, RL3, RL4)
- 1 SSR (SSR1) + 1 relay (RL2)
- 1 SSR (SSR1) + 2 relays (RL2, RL3)
- 1 SSR (SSR1) + 3 relays (RL2, RL3, RL4)
- 2 SSR (SSR1, SSR2) + 1 relays (RL3)
- 2 SSR (SSR1, SSR2) + 2 relays (RL3, RL4)

Analog Outputs

- 1 adet 0-20 / 4-20 mA (AO1)
- 2 adet 0-20 / 4-20 mA (AO1, AO2)
- 1 adet 0-10 V DC (AO1)
- 2 adet 0-10 V DC (AO1, AO2)
- 1 adet 0-20 / 4-20 mA (AO1) + 1 adet 0-10 V DC (AO2)

Communication

None
RS-485 **

Operating Voltage

85-265 V AC / 85-375 V DC
20-60 V AC / 20-60 V DC

* Analog outputs are isolated from each other.

**When E-200 Series devices are ordered with communication, the E-IB-11 USB-RS485 converter can be used for PC connection. There are various control and monitoring software provided by Elimko.

TECHNICAL SPECIFICATION

Parameter	Description	
Control Type	On/Off, PID, Heat/Cool, Floating and Feedback Control of Valves	
Operating Voltage	20..60 V AC / 20..60 V DC or 85..265 V AC / 85..375 V DC	
Relays I SSR	4 Adet SPST – NO 250 V AC 5A relays or 24 V DC 25 mA (SSR) drives	
Dimensions (mm)	96 (Lenght) x 96 (Height) x 100 (Width)	
Panel Cut-Out (mm)	92 (Lenght) X 92 (Height)	
Analog Output	2 x 0..20 / 4-20 mA or 0..10 V DC optional	
Analog Giriş	Universal (Note 1),	1 x External set (mA)
Communication (RS-485)	Available (optional)	
Digital Input	3 inputs	
Valve Feedback	Available (Note 2)	
Transmitter Supply	Available	
Weight	430 g	
Power Consumption	Max. 7 W (10 VA)	
Operating Temperature	– 10 °C ... 55 °C	
Storage Temperature	– 25 °C ... 65 °C	
Memory	Maks. 100.000 write	
Protection Class	IP-65 Front Panel, IP-20 Rear Case	

Notes:

1. Universal Input:

Thermocouple: B, E, J, K, L, N, R, S, T, U

Resistance Thermometer: Pt-100

Current: 0-20 mA, 4-20 mA (Linear)

Voltage: 0-50 mV, 0-1 V, 0.2-1 V (Linear),

0-10 V DC, must be specified in the order.

Resolution: 16 bit

Accuracy: Thermocouple, Max. ± 1.0 °C (Conversion and CJC error)

Resistance Thermometer, Max. 10.5 °C (Conversion and wire resistance compensation)

Linear Input, Max. % 0.1

2. Valve Feedback are supplied as potentiometer input in standard controllers. If the feedback type is requested as mA, it must be specified in the order

PARAMETER TABLE

		Description	Min	Maks	Unit
INPUT SETTI NGS	g n	INP1 Analog Input 1 Type	Table 1		
		DP Decimal Point	0	3	
		S LO Analog Input 1 Linear Scale Lower Value	-199.9	999.9	EU
		S HI Analog Input 1 Linear Scale Upper Value	-199.9	999.9	EU
		UNI Temperature Unit	*	*	
		O S Analog Input 1 Offset Value	-100.0	100.0	EU
		L R Analog Input 1 Filter	1	15	s
		SNBR Analog Input 1 Sensor Broken Behaviour	LO	HI	
		INP2 Analog Input 2 Type	-2	-2	
		S2LO Analog Input 2 Linear Scale Lower Value	-199.9	999.9	EU
		S2HI Analog Input 2 Linear Scale Upper Value	-199.9	999.9	EU
		S2BR Analog Input 2 Sensor Broken Behaviour	LO	HI	
		DRS Modbus Adress	1	127	
		B UD Modbus Baud Rate [.8, . , 1 .2, 8. kbaud]	.8	8.	
		PR Y Modbus Parity [None, O , Even]			

CONTROL SET SETTINGS	SE P	SPSR	Control Set Point Source	Table 2		
		SPLL	Control Set Point Lower Limit	-199.9	SPHL	EU
		SPHL	Control Set Point Upper Limit	SPLL	999.9	EU
		SPRR	Control Set Point Ramping Rate	O	60.0	EU/min
		S-1	1. Step Set Value	SPLL	SPHL	EU
		-1	1. Step Time	O	999.9	min
		S-2	2. Step Set Value	SPLL	SPHL	EU
		-2	2. Step Time	O	999.9	min
		S-3	3. Step Set Value	SPLL	SPHL	EU
		-3	3. Step Time	O	999.9	min
		SE 1	Digital Input Selectable Set 1	SPLL	SPHL	EU
		SE 2	Digital Input Selectable Set 2	SPLL	SPHL	EU
		SE	Digital Input Selectable Set 3	SPLL	SPHL	EU
		SE	Digital Input Selectable Set 4	SPLL	SPHL	EU

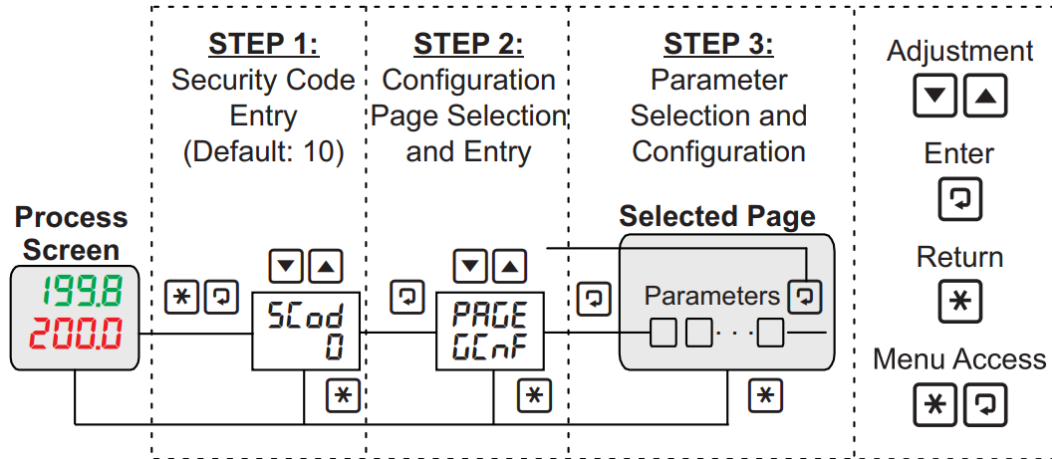
ALARMS	1 d U J B	R 1LP	Alarm 1 Type	Table 3		
		R ISP	Alarm 1 Set Point	-199.9	999.9	EU
		R 11-N	Alarm 1 Hysteresis	0.0	999.9	EU
		R ILE	Alarm 1 Lock	dSb	Enb	
		RaP	Alarm 2 Type	Table 3		
		R2SP	Alarm 2 Set Point	-199.9	999.9	EU
		1121-1	Alarm 2 Hysteresis	0.0	999.9	EU
		Rab	Alarm 2 Lock	dSb	Enb	
		R3LP	Alarm 3 Type	Table 3		
		R3SP	Alarm 3 Set Point	-199.9	999.9	EU
		R3tiy	Alarm 3 Hysteresis	0.0	999.9	EU
		R3LL	Alarm 3 Lock	dSb	Enb	
		R4hp	Alarm 4 Type	Table 3		
		F1'iSP	Alarm 4 Set Point	-199.9	999.9	EU
		R'iti3	Alarm 4 Hysteresis	0.0	999.9	EU
		IT-ILL	Alarm 4 Lock	dSb	Enb	

<i>ELF</i>	Control Type	Table 4		
<i>CFrFf</i>	Control Form [d Jr. rEu]	<i>d tr</i>	<i>rEu</i>	
<i>[Prd</i>	Control Period	1	250	s
<i>FnPr</i>	Manual Mode Selection	d5b	Enb	
<i>hrha;</i>	Floating Control Valve Travel Time	10	2500	s
<i>dbnd</i>	Dead Band	0.1	25.0	°A
<i>oLL</i>	Control Output Lower Limit	0.0	<i>oHL</i>	°A
<i>ofIL</i>	Control Output Upper Limit	<i>oLL</i>	100.0	°A
<i>°Fir</i>	Control Output Manual Reset	<i>oLL</i>	<i>oHL</i>	°rA
<i>Pon[</i>	PID Power On Behaviour	0	4	
<i>ErLL</i>	Retransmission Scale Lower Value	-199.9	<i>ErIL</i>	EU
<i>Er HL</i>	Retransmission Scale Upper Value	bra	999.9	EU
<i>rL Id</i>	Relay 1 Function	Table 5		
<i>r L 2d</i>	Relay 2 Function	Table 5		
<i>r L3d</i>	Relay 3 Function	Table 5		
<i>r L 9d</i>	Relay 4 Function	Table 5		
<i>Ro Id</i>	Analog Output 1 Function	Table 6		
<i>Ro Ir</i>	Analog Output 1 Type	Table 7.1 ve Table 7.2		
<i>Ro2d</i>	Analog Output 2 Function	Table 6		
<i>Ro2r</i>	Analog Output 2 Type	Table 7 1 ve Table 7.2		
<i>SruL</i>	Feedback Valve Fully-Closed Position			
<i>Sro1-1</i>	Feedback Valve Fully-Open Position			

S D N I 1 3 S a i d	3 1 1 1 1 3	RE	PID Auto Tune	<i>oFF</i>	on	
		P Id	PID Parameter Type	SE d	Rdu	
		Pb- I	Proportional Band +	0.1	999.9	EU
		Pb-2	Proportional Band –	0.1	999.9	EU
		ILH	Integral Time +	<i>oFF</i>	9999	S
		ILL	Integral Time –	<i>oFF</i>	9999	S
		dEH	Derivative Time +	<i>oFF</i>	2500	S
		dEE	Derivative Time –	<i>oFF</i>	2500	S
		PN5	Hysteresis	0.0	999.9	EU

n a n o s	2	5Cod	Security Code	0	9999	
	3	dPr l	Parameter Access Level	0	9	
	3	RPr l	Parameter Setting Level	0	9	
		FESb	Factory Settings [oFF. LoRd. SR,, E. dab]			

ACCESSING PARAMETERS



APPLICATION EXAMPLES

1. **Input:** Pt-100 Relay / Alarm1: 50 °C Low, Relay2 / Alarm2: 55 °C High A01: 4-20 mA PID Control Output

InP 1	A 1tP	A 1SP	A2tP	A2SP	CtYP	rL 1d	rL2d	Ro 1d	Ro 1r
Pt	Lo	50.0	H 1	55.0	SCo	AL-1	AL-2	Co-1	4-20

2. **Input:** TC Type J, Relay1: On-Off Control Output, Relay2 / Alarm2: 350 °C High

InP 1	A2tP	A2SP	CtYP	rL 1d	rL2d
J	H 1	350.0	SCo	do-1	AL-2

3. **Input:** TC Type K, Profile Control (Ramp up to 400°C in 10 minutes and wait for 60 minutes), Relay1: PID Control Output, A01: Retransmission Output (4-20 mA, 0-1200 °C)

InP 1	SP5r	S-1	t-1	S-2	t-2	CtYP	trLL	trHL	rL 1d	rL2d	Ro 1d	Ro 1r
K	PrFL	400	10.0	400	60.0	SCo	0	1200	Co-1	AL-2	PuTr	4-20

4. **Input:** 4-20 mA, Scale: 0-600, External Set Point: 4-20 mA, Scale: 0-600, Floating Valve Control (Travel Time 30 s), Relay1: Valve Open, Relay2: Valve Close InP SCLO SCH! InP2 52L 52H CEYP Erth Lid L2d

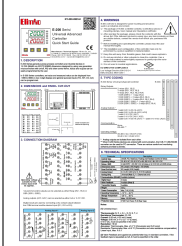
InP 1	SCLo	SCH 1	InP2	52Lo	52H 1	CtYP	trtñ	rL 1d	rL2d
4-20	0.0	600.0	4-20	0.0	600.0	bnd	30	Co-1	Co-2

For detailed information, you can access the comprehensive user manual of the device under the heading “User Manuals” at www.elimko.com.tr.

You can also use the QR Code on the front for this.



Documents / Resources



[Elimko E-200 Series Universal Advanced Controller](#) [pdf] User Guide
E200_rev0_eng_Quick_Start_Guide.pdf, H z l _E200_rev0_eng11, E-200 Series, E-200 Series
Universal Advanced Controller, Universal Advanced Controller, Advanced Controller, Controller

References

- [Elimko - Otomatik Kontrol'da Güvenilir İsim](#)

[Manuals+](#).