

Z-TRAUQ INC.

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TEMPERATURE CONTROLLER



1/16 DIN

ESM-4420
48x48mm



1/8 DIN

ESM-7720
72x72mm



1/4 DIN

ESM-9920
96x96mm

FEATURES

- 4 digits process and 4 digits set display
- Thermocouple & RTD input
- Programmable ON/OFF and PID control forms
- Selftune (step response tuning)
- Bumpless transfer
- Heating, cooling and alarm functions
- Adjustable time delay from fault
- Adjustable time delay to reset
- Fully scalable input and reading
- High Limit Alarm (manual reset from fault)
- Password protection

SPECIFICATIONS:

PROCESS INPUT - same unit accepts any of the following

Input Types : Thermocouple (TC): L,J,K,R,S,T
Thermoresistances (RTD): PT 100

Measuring Range : Refer to Table 1

Accuracy : ± %0.25 of FS for TC's, RTD's

Cold Junction Compensation: Automatically ±0.1°C/1°C

Line Compensation: Maximum 10 Ohm

Sensor Break Protection: Within the operating scale

Sampling Cycle: 3 samples per second

Input Filter: 1 second

Time Delays: 0-9999 sec from fault ;
0-9998 sec or manual reset

CONTROL

Control Form: Programmable ON/OFF or PID

OUTPUT

Relay: one 5A@250Vac N.O.

Relay: SPDT 5A@250Vac

or **SSR:** one output 20mA @12 Vdc

DISPLAY

Process Display : 10 mm Red 4 digits LED display

Set Display : 8 mm Green 4 digits LED display

LED indicators : PS (Process set value), AS (Alarm set value), PO (Process Output), AO (Alarm output) , °C / °F

SUPPLY

Input: 24 Vac/Vdc -15% + 10%, 115Vac, 230 Vac ±15%
50/60Hz, others upon request.

Power Consumption: Maximum 3VA

CONDITIONS and SPECIFICATIONS

Operating Temperature: 0 to 50°C

Humidity : 0 to 90%RH (non condensing)

Protection Class: NEMA 4X (IP65) front, IP20 rear

Weight: 150 gr.

Dimensions: 48 x 48mm, Depth:95 mm

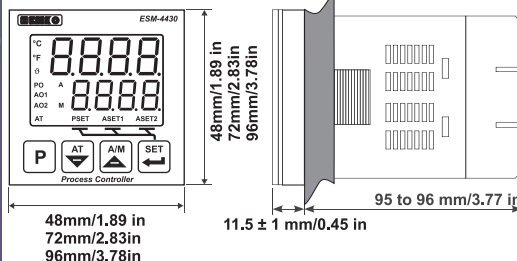
72 x 72mm, Depth:95.5 mm

96 x 96mm, Depth:96 mm

Panel Cut-Out: 46 x 46 / 69 x 69 / 92 x 92mm

Approvals: cURus, CE compliant

Dimensions



ORDERING INFORMATION

A	BC	D	E	/	FG	HI
	20	0		/	01	00

ESM-4420
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Complete the model number with the appropriate supply voltage suffix and process output type.

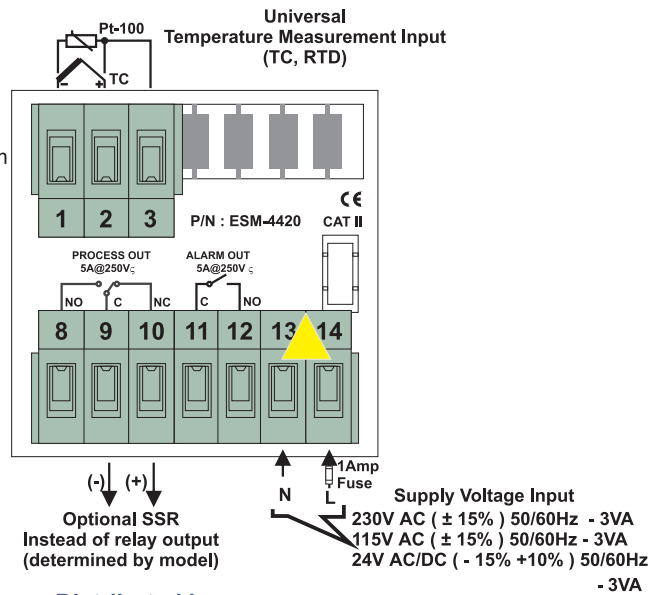
ESM xx20 can be programmed to recognize any of the inputs in table1

A	Supply Voltage	BC	Input Types	Scales
2	24Vac/Vdc	20	Configurable (Table-1)	Table-1
4	115Vac 50/60Hz	D	Serial Interface	
5	230Vac 50/60Hz	0	None	
9	Custom (please specify)	E	Output 1	
		1	SPDT Relay Output 5A @ 250Vac	
		2	SSR Output 20mA @12 Vdc	
		FG	Output 2	
01		01	Relay Output 5A @ 250Vac (NO)	

Table-1

BC	Input- any of:	Scale(°C)	Scale(°F)
20	L(FeConst DIN43710)	-100°C 850°C	-148°F 1562°F
	J(FeConst IEC-584)	-200°C 900°C	-328°F 1652°F
	K(NiCrNi DIN/IEC)	-200°C 1300°C	-328°F 2372°F
	R(Pt13%RhPt DIN/IEC)	0°C 1700°C	32°F 3092°F
	S(Pt10%RhPt DIN/IEC)	0°C 1700°C	32°F 3092°F
	T(CuConst DIN/IEC)	-200°C 400°C	-328°F 752°F
	PT 100 (2 or 3 wire)	-200°C 650°C	-328°F 1202°F

ELECTRICAL CONNECTIONS



Distributed by:

We offer a complete selection of thermocouples & RTD's