PROCESS INDICATOR

Z-TRAUQ INC.

ESM9900
96x96mm

FEATURES:

- Large 4 digit display - 14mm high digits
- Plug-in Output module design
- On-board sensor power supply
- Fully scalable input and reading
- Standard SPDT Relay Output included
- Universal process input (TC, RTD, Vdc, mA)
- Dual or multi-point calibration for Vdc and mA inputs
- Bumpless transfer
- Alarm functions
- Standard RS-232 or optional RS-485 serial interface
- High Limit Certified (manual reset from fault)
- Password protection

SPECIFICATIONS:

PROCESS INPUT - same unit accepts any of the following
Input Types : TC, RTD, DC Voltage/Current
Thermocouple (TC): L,J,K,R,S,T,B,E,N,C
Thermoresistances (RTD): PT 100
DC Voltage: 0 - 50mV, 0 - 5V, 0 - 10V
DC Current: 0 - 20mA (incl. 4-20mA)
Measuring Range : Refer to Table 1
Accuracy: ± %0.25 of FS for TC's, RTD's, voltage and current.
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: Selectable 0.0 to 900.0 Seconds
Time Delays: 0-9999 sec from fault ; 0-9998 sec or manual reset

OUTPUTS
Standard Relay Output: 5A@250Vac (Control or Alarm)

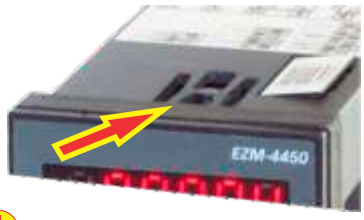
OUTPUT MODULES: Two can be field ınstalled
Output Modules:
-Relay output module 5A @ 250Vac
-SSR drive output module (Max 20mA@18Vdc)
-Transistor output module (Max 40mA@18Vdc)
-DC voltage/current output module

DISPLAY
Process Display : 14 mm Red 4 digits LED display
LED indicators : OP1/2/3(Outputs),°C/°F/V

SUPPLY
Input: 100-240 Vac, 24 Vac/Vdc, others upon request.
Power Consumption: Maximum 6VA
Sensor Power Supply:24Vdc 50mA

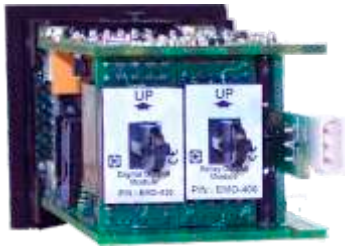
CONDITIONS and SPECIFICATIONS
Operating Temperature: 0 to 50°C
Humidity : 0 to 90%RH (non condensing)
Protection Class: NEMA 4X (IP65) front, IP20 rear
Weight: 340 gr.
Dimensions: 96 x 96mm, Depth:76 mm)
Panel Cut-Out: 92 x 92mm
Approvals: UL and cUL Listed, CE compliant

INSTALLING OUTPUT MODULES



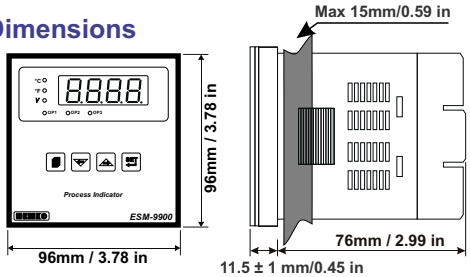
1 **Remove power. Depress the locking pins located top and bottom and extract the unit from its case.**
Wiring remains intact!

2 **Slide output module(s) into cavity.**

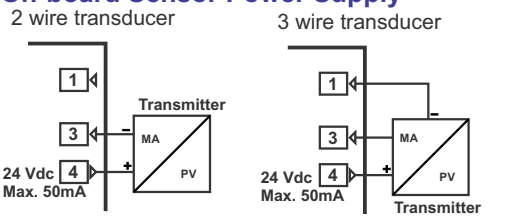


3 **Possibility for 2 modules.**
Re-insert unit into case.
No re-programming!

Dimensions

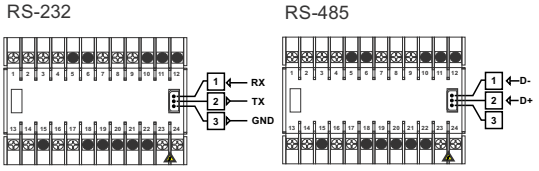


On-board Sensor Power Supply



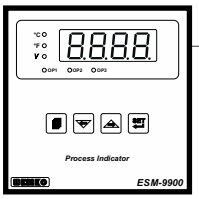
NB. On board sensor power supply rated 24Vdc ± 10%
50mA max. With short circuit protection.
Input Resistance is 2R7 W.

Communications



We offer a complete selection of thermocouples & RTD's

FRONT PANEL DESCRIPTION



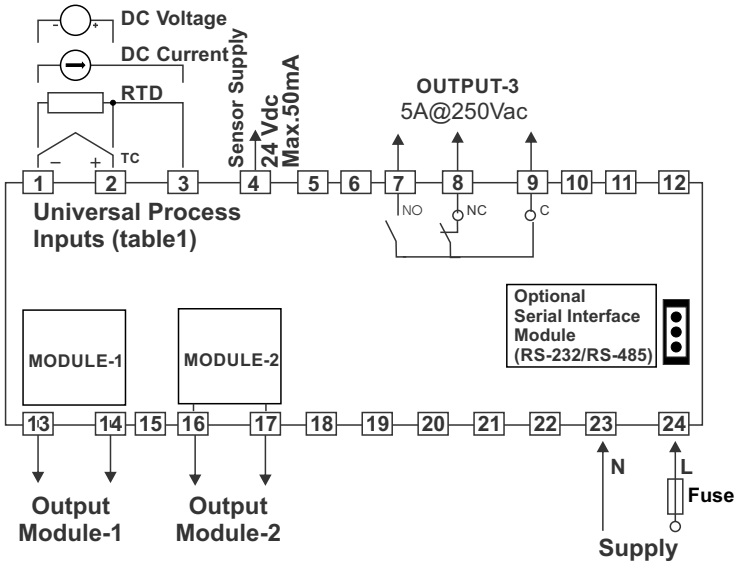
Display & Indicators

°C	Indicates the value displayed is in °C when lit.
°F	Indicates the value displayed is in °F when lit.
%	Indicator for other than °C and °F values
OP1	Alarm-1 output LED
OP2	Alarm-2 output LED
OP3	Alarm-3 output LED

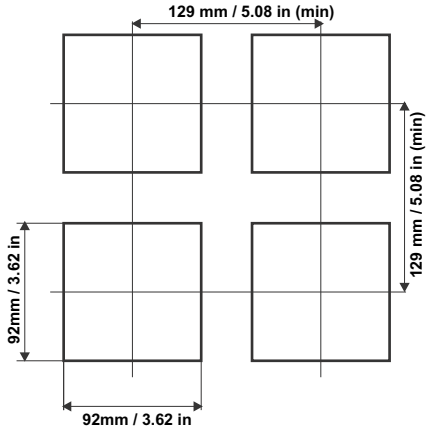
Keyboard

	Accesses all menus and moves through the menu list.
SET	Access Set Values and used as OK button when in the program mode.
	Increases the parameter values and accesses the program menus.
	Decreases the parameter values and accesses the program menus.

ELECTRICAL CONNECTIONS

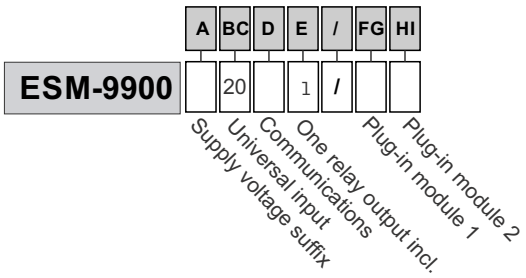


PANEL CUTOUT



ORDERING INFORMATION

Complete the model number with the appropriate suffix.
Eg. ESM 9900-12011/01.04 is a 48 x 48mm indicator with supply voltage of 100 - 240vac, universal input, RS232, standard relay output plus a second relay module and 4 - 20mA module



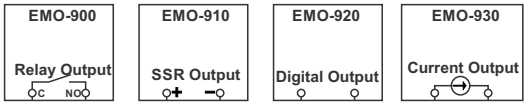
ESM 9900 can be programmed to recognize any of the inputs in table1

A	Supply Voltage	
1	100-240Vac 50/60Hz	
2	24Vac/Vdc	
3	Custom (please specify)	
BC	**Input Types**	**Scales**
20	Configurable **(Table-1)**	**Table-1**
D	**Serial Interface**	**Product Code**
1	RS-232	Supplied on all units
2	RS-485 MODBUS	Specify at time of order
E	**Output**	
1	One Relay Output 5A @ 250Vac included as standard feature	
FG	**Module-1**	**Product Code**
00	None	-
01	Relay Output 5A @ 250Vac	EMO-900
02	SSR Output 20mA@18Vdc	EMO-910
03	Transistor Output 40mA@18Vdc	EMO-920
04	Volt/Current Out (0 to 20mA, 0 to 10V)	EMO-930
HI	**Module-2**	**Product Code**
00	None	-
01	Relay Output 5A @ 250Vac	EMO-900
02	SSR Output 20mA@18Vdc	EMO-910
03	Transistor Output 40mA@18Vdc	EMO-920
04	Volt/Current Out (0 to 20mA, 0 to 10V)	EMO-930

Please use these product codes when ordering modules separately.

Table-1

BC	Input- all of the following	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
	B(Pt18%RhPt DIN/IEC)	-200°C 400°C	-328°F 752°F
	E(CrConst DIN/IEC)	-150°C 700°C	-238°F 1292°F
	N(NikrosilNisil DIN/IEC)	-200°C 1300°C	-328°F 2372°F
	C(DIN/IEC)	0°C 2300°C	32°F 4172°F
	PT 100 (2 or 3 wire)	-200°C 650°C	-328°F 1202°F
	0...50 mV	-1999 ... 9999	
	0...5 V	-1999 ... 9999	
	0...10 V	-1999 ... 9999	
	0...20 mA	-1999 ... 9999	
	4...20 mA	-1999 ... 9999	

any T/C, RTD (2 / 3 wire) or process input

OUTPUT MODULES (Any two of the following can be added in the field)