



Digital ON / OFF Temperature Controller

ESM-3710



- Heating / Cooling Applications
- Economical
- Easy to Use
- 3 Digits display
- PTC input or
J Type Thermocouple Input or
K Type Thermocouple Input or
2-wire Pt-100 or Pt-1000 Input (It must be determined in order)
- ON / OFF Temperature Control
- Selectable Heating or Cooling function
- Adjustable temperature offset value
- Limited Set value
- Relay or SSR Driver output
- Operation selection of compressor operates continuously,
stops or operates periodically in case of probe defect
- Compressor Protection Times

SPECIFICATIONS

INPUT

PTC: PTC1000 (1000Ω@25°C)

Thermocouple (TC): J, K (IEC 584.1) (ITS90)

Thermoresistance (RTD): 2-wire Pt-100, Pt-1000 (IEC 751)(ITS90)

Measurement Range: It is in ordering information

Accuracy: ± 1% of scale

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

Sensor Break Protection: Upscale

Sampling Cycle: 3 samples per second

CONTROL

Control Form: ON/OFF

ON/OFF hysteresis: It can be configured by the user

OUTPUT

Control Output:

Relay (10A@250V==“for resistive load”) or SSR Driver

output (Maximum 20mA@12V==)

Supply Voltage:

- 230V \sim ($\pm 15\%$) 50/60 Hz - 1.5VA
 - 115V \sim ($\pm 15\%$) 50/60 Hz - 1.5VA
 - 24V \sim ($\pm 15\%$) 50/60 Hz - 1.5VA
 - 12V \sim ($\pm 15\%$) 50/60 Hz - 1.5VA
 - 12V \sim ($\pm 15\%$) 50/60 Hz - 1.5VA (with 230V \sim external transformer)
- (Supply voltage must be determined in order)

ENVIRONMENTAL RATINGS and PHYSICAL SPECIFICATIONS

- Operating Temperature:** 0...50°C
- Humidity:** 0-90%RH (none condensing)
- Protection Class:** IP65 at front, IP20 at rear
- Dimension:**
ESM-3710: 77 x 35mm, Depth:62.5 mm

Ordering Information

ESM-3710 (77x35 DIN Size)	A	BC	D	E	/	FG	HI	/	U	V	W	Z
			0		/	00	00	/	1		0	0

A	Supply Voltage
3	24V \sim ($\pm 15\%$) 50/60Hz
4	115V \sim ($\pm 15\%$) 50/60Hz
5	230V \sim ($\pm 15\%$) 50/60Hz
6	12V \sim ($\pm 15\%$) 50/60Hz
9	Customer

BC	Input Type	Scale(°C)
05	J, Fe CuNi IEC584.1(ITS90)	0°C 800°C
10	K, NiCr Ni IEC584.1(ITS90)	0°C 999°C
11	PT 100, IEC751(ITS90)	-50°C 400°C
09	PT 100, IEC751(ITS90)	-19.9°C 99.9°C
12	PTC (Note-1)	-50°C 150°C
15	PTC (Note-1)	-19.9°C 99.9°C
14	PT 1000, IEC751(ITS90)	-50°C 400°C
13	PT 1000, IEC751(ITS90)	-19.9°C 99.9°C

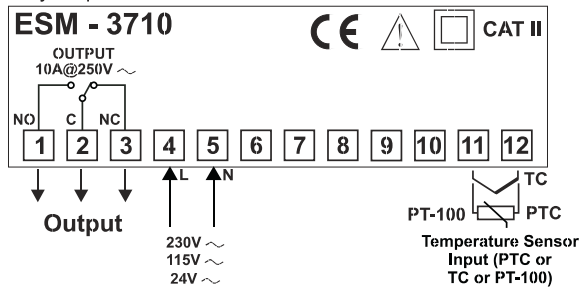
Note-1: If input type is selected PTC (BC = 12 or BC = 15), PTC Temperature sensor is given with the device. For this reason, PTC sensor type (V) must be determined in ordering information.

E	Output-1
1	Relay Output (10A@250V \sim at resistive load, 1 NO + 1NC)
2	SSR Driver Output (Maximum 20mA@ 12V ---)

V	Temperature Sensor that is given with ESM-3710
0	None
1	PTC-M6L50.K1.5 (PTC Air probe with 1.5mt silicon cable)
2	PTCS-M6L30.K1.5.1/8" (PTC liquid probe with 1.5mt silicon cable)
9	Customer

Electrical Wiring

For 230V \sim , 115V \sim , 24V \sim supply voltages and with Relay output



For 230V \sim , 115V \sim , 24V \sim supply voltages and with SSR Driver Output

