



## Features

- Selectable sensor Input (T/C & RTD)
- Control action : T.P. control / ON-OFF
- Input Signal Conditioning (Digital Filter & Zero Offset)
- Programmable Lower and Higher Setpoint Limit
- Program Lock function
- Alarm Acknowledge function
- Alarm Inhibit function
- Time Delay for Compressor
- Universal supply voltage 90 to 270 VAC
- 24 VDC Available on Request

## Display Specification

Digits : 4 Digits Single Row  
7 Segment LED Display

LED Indication : OP1 - Control Output Status  
OP2 - Output 2 Status

Model	AI-5442	AI-5742	AI-5942
Height			
PV (White)	0.36"	0.56"	0.56"

## Input Specification

Sensor Input : Thermocouple - J, K, R, S  
RTD - Pt-100

Resolution : T/C - 1°C & Pt-100 - 1°C / 0.1°C

Accuracy : 0.3% FS

Temperature Unit : °C

Sampling Rate : 250msec

## Output Specification

Control Output : Relay / SSR Drive (Factory Set)

Output 2 : Relay / SSR Drive (Factory Set)

Relay : 5A @ 250VAC / 30VDC

SSR Drive : 12 VDC @ 30mA

## Functional Specification

Control Action : T.P. Control / ON-OFF

Control Logic : Heat / Cool

Proportional Band : 0.5 to 999.9°C

Cycle Time : 1.0 to 100.0 sec

Hysteresis : J, K, R, S, RTD - 1 to 100°C  
RTD.1 - 0.1 to 100.0°C

Delay : 0 to 500 sec

Output2 Function : Auxiliary / Alarm

Alarm Modes : Low / High / Deviation / Band

## Auxiliary Supply Specification

Supply Voltage : 90 - 270 VAC  
(24 VDC Available on Request)

## Environmental Specification

Temperature : Operating - 0 to 50°C  
Storage : -20° to 75°C

Humidity : 95% RH (Non-condensing)

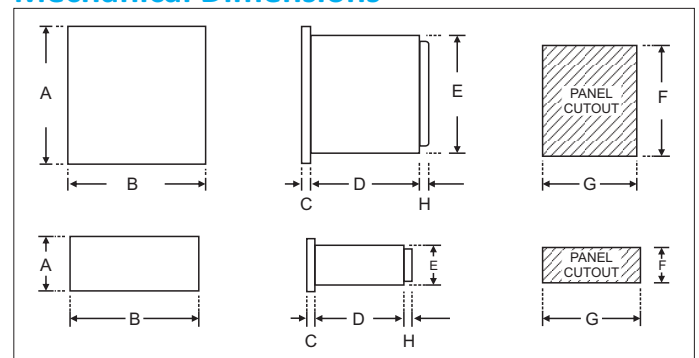
## General Specification

Model	AI-5442	AI-5742	AI-5942
Weight (Gms)	160	240	250

## Certification

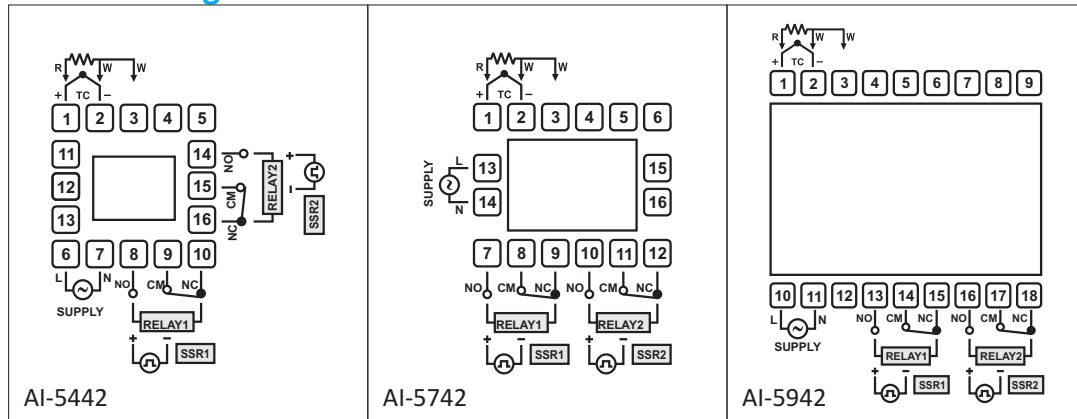
None

## Mechanical Dimensions



Dim Model	A	B	C	D	E	F	G	H
AI-5442	48	48	8	78	43	44	44	9
AI-5742	72	72	10	65	66	68	68	9
AI-5942	96	96	10	53	89	92	92	9

## Terminal Diagram



## Order Code : AI-5XXX Series

Control Action	Size	No. Of Digits	No. Of Outputs	O/P1 Type	O/P2 Type
5 (ON-OFF / TP)	4 (48X48X78)	4 Digits	One	R (Relay)	R (Relay)
	6 (96X48X53)	8 Digits	Two	S (SSR Drive)	S (SSR Drive)
	7 (72X72X65)				N (None)
	8 (48X96X53)				
	9 (96X96X53)				

## Example : AI-5742-R-R

Control Action	Size	No. Of Digits	No. Of Outputs	O/P1 Type	O/P2 Type
5	7	4	2	R	R
ON-OFF / TP	7 (72X72X65)	4 Digits	Two	R (Relay)	R (Relay)

## Input Sensor Range

Sensor Input	Range	Resolution	Accuracy
Fe-k(J) T/C	0 ~ 760 °C	1 °C	± 1 °C
Cr-AL(K) T/C	-99 ~ 1300 °C	1 °C	± 1 °C
(R) T/C	0 ~ 1700 °C	1 °C	± 1 °C
(S) T/C	0 ~ 1700 °C	1 °C	± 1 °C
Pt-100(RTD)	-100 ~ 450 °C	1 °C	± 1 °C
Pt-100(RTD.1)	-99.9 ~ 450.0 °C	0.1 °C	± 0.3 °C