



Features

- Universal sensor input
- Control Action : PID Control / ON-OFF
- Input Signal Conditioning (Digital Filter & Zero Offset)
- Overshoot Control Protection
- Single Step Ramp Soak
- Soft Start Time for 4-20 mA and 0-10 VDC
- Alarm Acknowledge & Inhibit function
- Programmable soak timer with four start modes
- Battery Backup for soak timer
- Universal supply voltage (90 to 270 VAC)
- 24 VDC Available on Request

Display Specification

Digits	: 4 Digits Dual Row 7 Segment LED Display
LED Indication	: 1 - Control Output Status 2 - Output 2 Status 3 - Output 3 Status S - Soak Time Status
	T - Tune Status R - Retransmission Status
Height \ Model	Fx-438
PV (White)	0.36"
SV (Green)	0.24"

Input Specification

Sensor Input	: Thermocouple - J, K, R, S, N, T, B RTD - Pt-100
Analog Input	: 0-1 VDC, 0-3.3 VDC, 0-5 VDC, 0-10 VDC, 0-20 mA, 4-20 mA
Resolution	: T/C - 1°C Pt-100 - 1°C / 0.1°C Analog - 1 / 0.1 / 0.01 / 0.001°C
Accuracy	: 0.3% FS
Temperature Unit	: °C
Sampling Rate	: 250msec

Output Specification

Control Output	: Relay / SSR Drive / 4-20 mA / 0 - 10 VDC (Factory Set)
Output 2	: Relay / SSR Drive (Factory Set)
Output 3	: Relay / SSR Drive (Factory Set)
Relay	: 5A @ 250VAC / 30VDC
SSR Drive	: 12 VDC @ 30mA
mA (4~20/0~20)	: 500Ω Max.

Environmental Specification

Temperature	: Operating - 0 to 50°C
Storage	: -20° to 75°C
Humidity	: 95% RH (Non-condensing)

Functional Specification

Control Action	: PID Control / ON-OFF
Control Logic	: Heat / Cool
Proportional Band	: 0.5 to 99.9°C
Integral Time	: 0 to 3600 sec
Derivative Time	: 0 to 300 sec
Cycle Time	: 1.0 to 100.0sec
Overshoot Control Point	: 0 to 100%
Output Power Limit	: 0 to 100%
Hysteresis	: 1 to 100°C
Delay	: 0 to 500 sec
Soft Start Time	: 5 to 1000 sec
Output2 Function	: Auxiliary / Alarm / None
Output3 Function	: Auxiliary / Alarm / Soak Timer / Alarm Soak / None
Alarm modes	: Low / High / Band / Deviation
Soak Timer	: Heater off / Alarm / Both

Auxiliary Supply Specification

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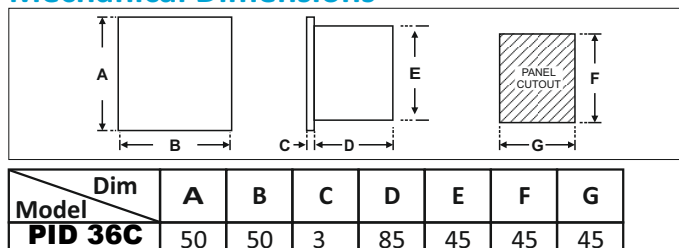
General Description

Model	Fx-438
Weight (Gms)	200

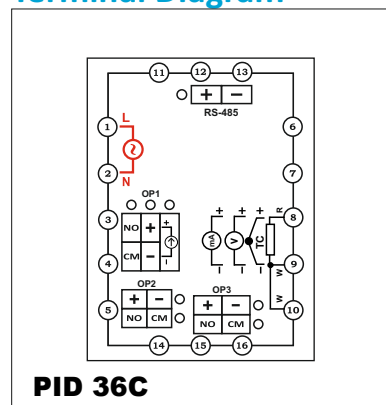
Certification

None

Mechanical Dimensions



Terminal Diagram



Order Code : Fx-Series

Size	No. Of Outputs	No. Of Digits	O/P1 Type	O/P2 Type	O/P3 Type	RS-485
4 (48X48X85)	Three	8 Digits	R ---->> Relay	R ---->> Relay	R ---->> Relay	000---->>None
			S ---->> SSR	S ---->> SSR	S ---->> SSR	00B---->>Available
			C ---->> Current	N ---->> None	N ---->> None	

Example : Fx-438-R-R-R-00B

Size	No. Of Outputs	No. Of Digits	O/P1 Type	O/P2 Type	O/P3 Type	RS-485
4	3	8	R	R	R	000
4 (48X48X85)	Three	8 Digits	R (Relay)	R (Relay)	R (Relay)	None

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
TC - N	-99 ~ 1300 °C	1 °C	± 1 °C
TC - T	-99 ~ 400 °C	1 °C	± 1 °C
TC - B	0 ~ 1800 °C	1 °C	± 1 °C
Pt-100(RTD)	-100 ~ 450 °C	1 °C	± 1 °C
Pt-100(RTD 0.1)	-100.0 ~ 450.0 °C	0.1 °C	± 0.3 °C
0 ~ 20 mA	-1999 to 9999 °C	1 / 0.1 / 0.01 / 0.001 °C	± 0.1 % of Full Scale
4 ~ 20 mA	-1999 to 9999 °C	1 / 0.1 / 0.01 / 0.001 °C	
0 ~ 1 VDC	-1999 to 9999 °C	1 / 0.1 / 0.01 / 0.001 °C	
0 ~ 3.3 VDC	-1999 to 9999 °C	1 / 0.1 / 0.01 / 0.001 °C	
0 ~ 5 VDC	-1999 to 9999 °C	1 / 0.1 / 0.01 / 0.001 °C	
0 ~ 10 VDC	-1999 to 9999 °C	1 / 0.1 / 0.01 / 0.001 °C	