

# PID Temperature Controller



## Features

- Selectable sensor Input (T/C & RTD)
- Control Action : PID Control / ON-OFF
- Input Signal Conditioning (Digital Filter & Zero Offset)
- Programmable Lower and Higher Setpoint Limit
- Program Lock function
- Selectable Control Output (Relay / SSR Drive)
- Selectable Alarm / Soak Timer Output (Except 48x48 size)
- Alarm Acknowledge function
- Alarm Inhibit function
- Programmable soak timer
- Four different start modes for soak timer
- Battery Backup for Soak Timer
- Timer Hold Strategy
- Settable soak time delay
- Overshoot Control Protection
- Single Step Ramp Soak
- Time Delay for Compressor
- 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 - Alarm Status S - Soak Timer T - Tuning Status	
Model	Px-428	Px-728
Height		
PV (White)	0.39"	0.70"
SV (Green)	0.24"	0.50"

## Input Specification

Sensor Input	: Thermocouple - J, K, R, S, N, T, B 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 (User Selectable)
Output 2	: Relay / SSR Drive (User Selectable, Except 48x48)
Relay	: 5A @ 250VAC / 30VDC
SSR Drive	: 12 VDC @ 30mA

## Auxiliary Supply Specification

Supply Voltage	: 90 - 270 VAC (24 VDC Available on Request)
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## 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 100.0 sec
Overshoot Control Point	: 0 to 100%
Output Power Limit	: 0 to 100%
Hysteresis	: J, K, R, S, N, T, B, RTD - 1 to 100°C RTD.1 - 0.1 to 100.0°C
Delay	: 0 to 500 sec
Output2 Function	: None / Auxiliary / Alarm / Soak Timer / Alarm Soak
Alarm Modes	: Low / High / Deviation / Band
Soak Timer	: Heater Off / Alarm / Both

## Environmental Specification

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

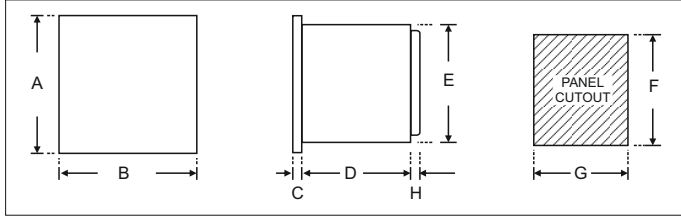
## General Description

Model	Px-428	Px-728
Weight (Gms)	130	200

## Certification

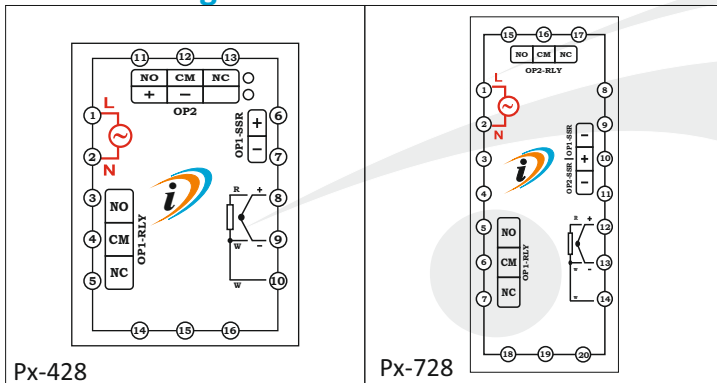
None
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## Mechanical Dimensions



Dim Model	A	B	C	D	E	F	G
Px-428	48	48	3	70	45	45	45
Px-728	72	72	3	60	68	68	68

## Terminal Diagram



## Order Code : Px-XXX Series

Size	No. Of Outputs	No. Of Digits	O/P1 Type	O/P2 Type
4 (48X48X70)	2 (Two)	8 Digits	R (Relay)	R (Relay)
7 (72X72X60)			S (SSR Drive)	S (SSR Drive)

## Example : Px-428-R-R

Size	No. Of Outputs	No. Of Digits	O/P1 Type	O/P2 Type
4	2	8	R	R
4 (48X48X70)	Two	8 Digits	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
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.1)	-99.9 ~ 450.0 °C	0.1 °C	± 0.3 °C