

USER'S OPERATING MANUAL FOR PID DIGITAL TEMPERATURE CONTROLLER (Models: Px 428e / 728e / 928e / 628e / 828e)



Px - 428e
(48 X 48)



Px - 728e
(72 X 72)



Px - 928e
(96 X 96)



Px - 628e
(96 X 48)



Px - 828e
(48 X 96)

SPECIFICATIONS :-

1. DISPLAY TYPE

: Dual 4- Digit 7 Segment LED
4 Digit Bright White (PV)
4 Digit Luminous Green (SV)

Model no.	Px-428e	Px-728e	Px-928e	Px-628e	Px-828e	Colour
Display height (PV)	0.62"	0.70"	0.70"	0.62"	0.62"	White
Display height (SV)	0.33"	0.50"	0.50"	0.33"	0.33"	Green

STATUS LED'S

: 1 : Main Control Output
2 : Alarm Status
T : Tuning Status

2. INPUT

Sensor input : TC: J, K, R, S, N, T, B, RTD: Pt-100 & Pt-100 (RTD 0.1)
Range : Refer below table.

Sensor Type	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	
Pt-100(RTD)	-100 ~ 450°C	1 °C	

Sampling Time

: 125 msec.

Resolution

: 1°C/0.1°C (Only for RTD)

CJC for TC

: Built in automatic

LWC for Pt-100

: Built in upto 18E max.

Digital Filter

: 1 to 10 Sec.

3. RELAY OUTPUT

Contact type

: N/O, CM, N/C

Contact Rating

: 5A @ 250VAC or 30 VDC

Life expectancy

: > 5,00,000 operations

Isolation

: Inherent

4. SSR DRIVE OUTPUT

Drive Capacity

: 12V @ 30mA.

Isolation

: Non-Isolated.

5. FUNCTION

Output 1

: Main Control output

Output 2

: Programmable

1) Auxiliary control

2) Alarm

Control Action

: ON-OFF/PID (Select)

Control Mode

: Heat, Cool

Compliance

: ----

6. ENVIRONMENTAL

Operating Range

: 0 ~ 50°C, 5~90% Rh

Storage Humidity

: 95% Rh (Non-condensing)

7. POWER SUPPLY

Supply Voltage

: 90~270VAC, 50/60Hz.

Consumption

: 4W Maximum.

8. PHYSICAL

Housing

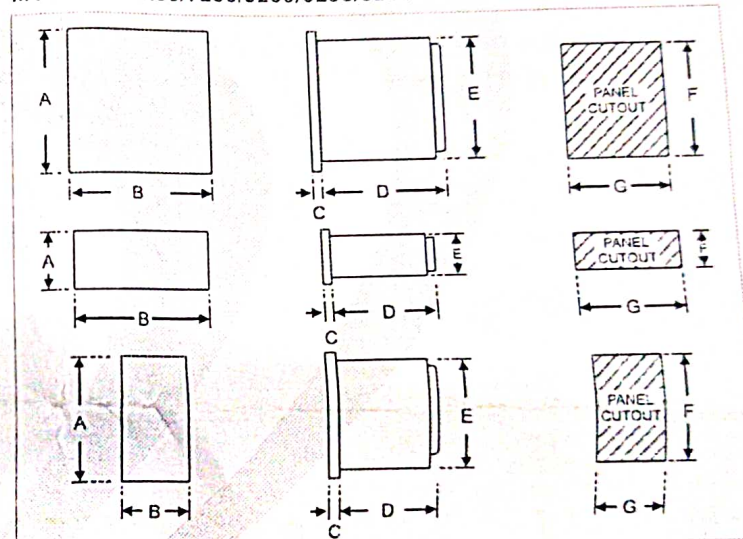
: ABS Plastic

General Description :-

Model no.	Px-428e	Px-728e	Px-928e	Px-628e	Px-828e
Weight (gms.)	130	230	260	200	200

OVER ALL DIMENSIONS & PANEL CUT OUT (IN MM)

MODEL: Px428e/728e/928e/628e/828e



Model	A	B	C	D	E	F	G
Px-428e	50	50	3	85	45	45	45
Px-728e	72	72	3	60	68	68	68
Px-928e	96	96	3	50	90	92	92
Px-628e	96	48	3	70	45	92	45
Px-828e	48	96	3	70	45	45	92

PROGRAMMING



Press and Hold SET & UP Key
Simultaneously for 3 Sec.

Press and Hold SET & DOWN Key
Simultaneously for 3 Sec.

Press & Hold Shift Key
for 3 Sec. in Run Mode

Configuration			
Display	Default	Parameter Name	Range
LOCK	15	Lock Code	1 ~ 9999
INPT	J	Input Type	J, K, RTD
LSPL	0	Lower Set Point Limit	Ref Table 1
HSPH	400	Higher Set Point Limit	Ref Table 1
QFSE	0	Process Value Offset	-25 ~ 25 -25.0 ~ 25.0 (RTD.1)
FLTR	5	Input Filter	1 ~ 10
MODE	PID	Control Mode	TP, On-Off
LOGC	HEAT	Control Logic	Heat, Cool
OP2	AUX	Output 2 Function	Auxiliary, Alarm Control

Configuration			
Display	Default	Parameter Name	Range
SP	EnbL	Setpoint 1	Enable, Disable
SP2	ABS	Output 2 Mode	Absolute, Deviation
OP2L	HEAT	Output 2 Logic	Heat, Cool
SP2	EnbL	Setpoint 2	Enable, Disable
ALTY	LOW	Alarm Type	Low, High, Deviation, Band
* ALLO	dir	Alarm Logic	Direct, Reverse
* ALIH	n0	Alarm Inhibit	Yes, No
* ALAP	AUTO	Alarm ACK.	Auto, Manual, Both
ULOC	15	User Lock Code	1 ~ 9999

Control List			
Display	Default	Parameter Name	Range
LOCK	15	Lock Code	1 ~ 9999
⊗ Pbnd	5.0	Proportional Band	0.5 ~ 99.9 °C
⊗ Int	240	Integral Time	0 ~ 3600 Sec.
⊗ dt	60	Derivative Time	0 ~ 300 Sec.
⊗ CYCt	160	Cycle Time	1.0 ~ 100.0 Sec.
■ HYS1	2	Control Hysteresis	1 ~ 100 0.1 ~ 100.0 (RTD.1)
■ dLY1	0	Delay 1	0 ~ 500 Sec.
HYS2	2	Control 2 Hysteresis	1 ~ 100 °C
dLY2	0	Delay 2	0 ~ 500 Sec.
SPOF	0	Manual Offset	-25 ~ 25 °C

Auto Tunning Mode			
Display	Default	Parameter Name	Range
⊗ tUNE	n0	Auto Tunning Mode	Yes, No

Parameter will display according to below symbols

⊗	Control Mode = PID
■	Control Mode = ON-OFF
▲	Rate is Enable
★	OP2 = Alarm & Alarm Soak

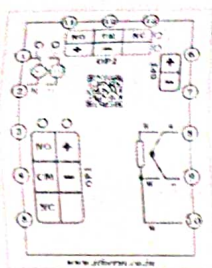
CAUTION: To prevent the risk of electrical shock, switch off the power before making/removing any connection or removing the controller from its enclosure.

MECHANICAL INSTALLATION

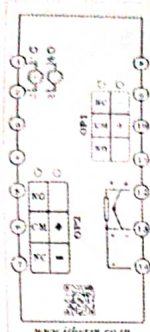
The label on the controller identifies the serial number, wiring connections and batch number.

ELECTRICAL INSTALLATION

The electrical connection diagram is shown on the controller enclosure as below.



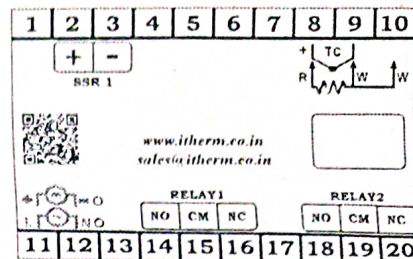
Px-428e



Px-728e



Px-628e / 828e



Px-928e

FRONT PANEL LAYOUT

FRONT PANEL LAYOUT DESCRIPTION :

Sr.	NAME	FUNCTION
1	OP1 LED	Glows when OP1 is ON & flashes when delay time (dly1) is in operation (if selected mode is ON-OFF)
	OP2 LED	Glows when OP2 is ON & flashes when alarm condition persists even after acknowledged OR delay time (dly2) is in operation & selected mode is ON-OFF.
2	UPPER DISPLAY	It will display (1) Measured value of selected input or Error messages in run mode. (2) Parameters value in program mode.
3	LOWER DISPLAY	It will display (1) SP (Main set point) / SP2 (Auxiliary/Alarm) set value / Set Soak time value/ balance or elapsed soak time in run mode. (2) Parameter code in program mode.
4	SET KEY	(1) For SP programming. (2) To access Control mode. (3) To access Configuration mode along with UP key (4) To scroll the parameter & to store its value
5	SHIFT KEY	(1) To increase/alter parameter value in program mode with Up / Dn key. (2) Press for 3sec in programming, this will help to go back to previous parameter.
6	UP KEY	(1) To increase/alter parameter value in program mode. (2) To enter in configuration mode (with SET key). (3) To acknowledge Alarm. (4) To enter in tune mode (with DOWN key).
7	DOWN KEY	(1) To decrease/alter parameter value in program mode. (2) To enter in tune mode (with UP key).



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