

**Z** Series Digital Temperature Controller PXR4

**Socket Type version**



**SOCKET TYPE PXR MODEL NOW AVAILABLE FOR USE WITH STANDARD 8 PIN AND 11 PIN RELAY BASES**

**EASY MAINTENANCE**



**WATERPROOF FRONT DISPLAY**



**EXCELLENT READABILITY**



# SPECIFICATIONS

## PXR4 Socket Type

- Excellent visibility in 48x48mm format
- IP66 (NEMA 4X) Waterproof front display
- Terminal compatible with standard 8 pin and 11pin relay bases
- Side by side DIN rail mounting
- PID with Autotune, PID Fuzzy Logic and PID with self tuning selectable as standard
- Available output: Relay contact, Solid State Relay (SSR) drive, 4-20mA current and 1-5V or 0-10V voltage.

## MAINTENANCE BECOMES EASIER!



**SIMPLY PLUG THE CONTROLLER ON THE RELAY BASE**

- THE SOCKET CAN BE WIRED IN ADVANCE
- THE CONTROLLER CAN BE REPLACED WITHOUT REWIRING
- SAME CONFIGURATION PROCESS AS PXR SERIES

### Same configuration process as PXR series



Same Design & Performance as PXR series

### Waterproof front display as std (panel mounting)



The front display and buttons are waterproof and comply with IP66 standard (equivalent NEMA4X). The front display is washable with water (use of provided packing for Waterproof mounting is required).

### Type sockets

Terminal compatible with standard 11pin relay bases.



DIN rail mounting  
Without alarm  
TP48X



DIN rail mounting  
With alarm  
TP411X



Panel mounting  
Without alarm  
TP48SB



Panel mounting  
With alarm  
TP411X

### Large LED

Excellent visibility

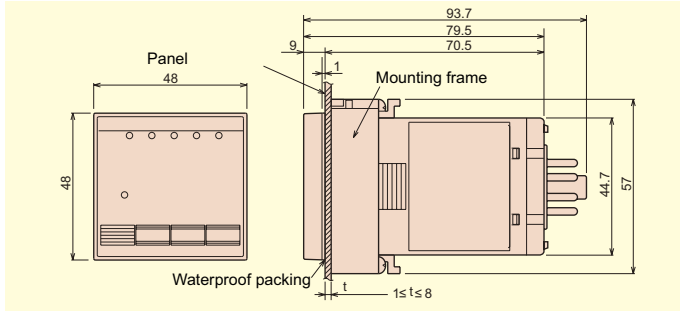


Character height :  
Process Value PV : 13mm  
Set Point SV : 11mm

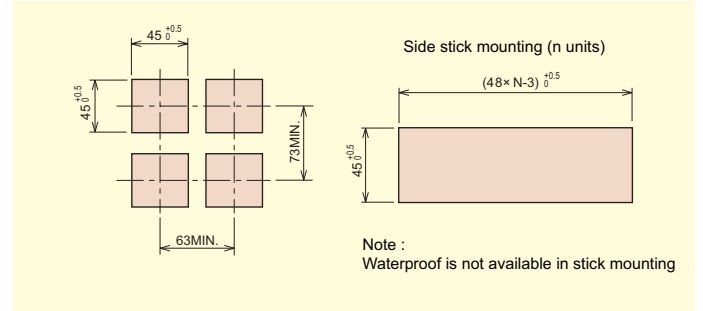


# Outline and Panel Cutout Dimensions

## Outline



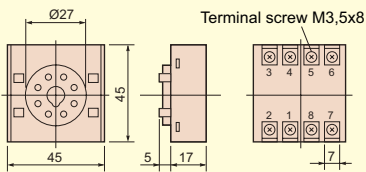
## Panel cut



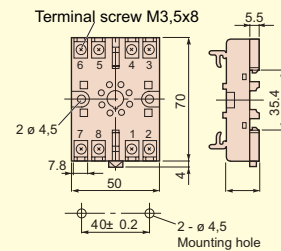
# Socket Outline Diagram

## Without alarm (8-pin socket)

Type TP48SB (for panel mounting)

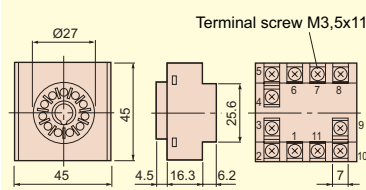


Type TP48X (for rail mounting)

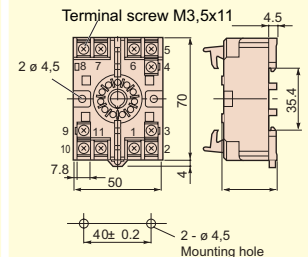


## With alarm (1-pin socket)

Type TP411SBA (for panel mounting)



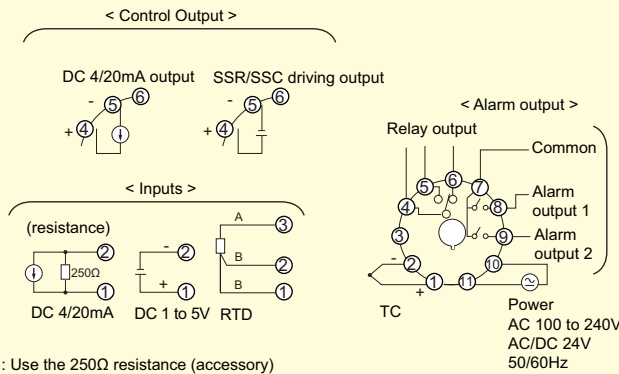
Type TP411X (for rail mounting)



# External Connection Diagram

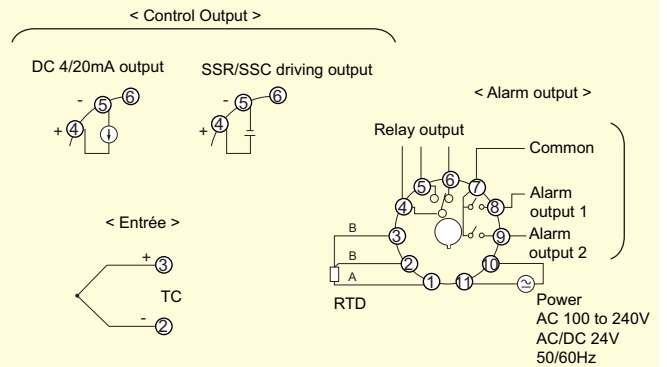
## With alarm functions (11-pin socket)

When compatible with PXW4/PXZ4/PXV4 thermocouple input terminal 5th digit = "T", "W", "J", "H", "A", "B"



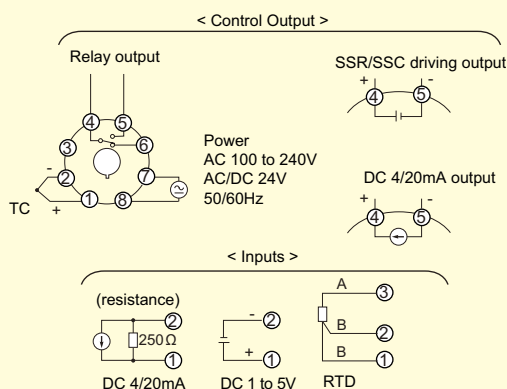
Note 1 : Use the 250Ω resistance (accessory)

When compatible with PXW4/PXZ4/PXV4 resistance bulb input terminal 5th digit = "N", "P"

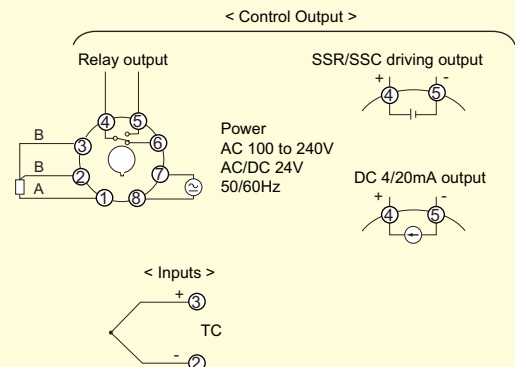


## Without alarm functions (8-pin socket)

When compatible with PXW4/PXZ4/PXV4 thermocouple input terminal 5th digit = "T", "W", "J", "H", "A", "B"



When compatible with PXW4/PXZ4/PXV4 resistance bulb input terminal 5th digit = "N", "P"



# Specification

## 1. General specifications

<b>Power supply voltage</b>	100 V (-15%) to 240V (+10%) AC, 50/60Hz or 24 V (±10%) AC 50/60Hz, 24V (±10%) DC
<b>Power consumption</b>	When using 100 V AC : 8 VA or less, 220 V CA : 10 VA and 24 V AC/DC : 10 VA
<b>Ambient temperature</b>	- 10°C to 50°C
<b>Mounting method</b>	Panel or DIN rail
<b>External terminal</b>	8 or 11 pins terminal (separately available)
<b>Dimensions</b>	48 x 48 x 93.7 mm pour 200g
<b>Structure</b>	NEMA4X (IEC standard IP66 equivalent)

## 2. Control function of standard type

<b>Control action</b>	PID control (with auto tuning and self tuning) Fuzzy control (with auto tuning) Self tuning
<b>Proportionnal band (P)</b>	0 to 999.9% of measuring range settable in 0,1% step
<b>Intégral time (I)</b>	0 to 3200 sec, settable in 1 sec step
<b>Differential time (D)</b>	0 to 999.9 sec, settable in 0,1 sec step
ON/OFF action if P=0, proportionnal action when I, D = 0	
<b>Proportionnal cycle</b>	1 to 150 sec, settable in 1 sec step Only for relay contact output or SSR/SSC drive output
<b>Control cycle</b>	0.5 sec

## 3. Inputs

<b>Input signal</b>	Thermocouple ; J, K, R, S, T, E, N, PL2 Resistance bulb : Pt100 Voltage, current : 1 to 5 V DC, 4 to 20 mA DC (apply current input after connecting the furnished 250Ω resistor or input terminal)
<b>Measuring range</b>	See measuring range table "Measuring range"
<b>Burnout</b>	For thermocouple or resistance bulb input, control output upper/lower are selectable

## 4. Output of standard type (control output)

<b>Control output</b>	Select one as follows : Relay contact : SPDT contact 220VAC / 30V AC, 3A (resistive load) Mechanical lif : 10 millions operations (no load) Electrical life : 100 000 operations (rated load) Minimum switching current 100mA (24V DC) SSR/SSC drive (voltage pulse) : ON : 17 to 25V DC OFF : 0,5V DC or less Max current : 20mA or less 4 to 20mA : Allowable load resistance 600Ω or less
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## 5. Operation and display section

<b>Setting accuracy</b>	0.1% or less of measuring range
<b>Indication accuracy (at 23°C)</b>	Thermocouple : ± (0.5% of measuring range) ± 1digit ± 1°C Thermocouple R at 0 to 500°C...± (1% of measuring range) ± 1 digit ± 1°C Thermocouple B at 0 to 400°C... ±(5% of measuring range) ± 1 digit ± 1°C Resistance bulb, voltage/current : ± (0.5% of measuring range) ± 1 digit

## 6. Alarm (option)

<b>Alarm kind</b>	Absolute alarm, deviation alarm, zone alarm with upper and lower for each Hold function available, Alarm latch, Excitation/non-excitation selecting function provided.
<b>Alarm output</b>	Relay contact (SPST contact) : 220V CA / 30V DC, 1A (resistive load) Mechanical lif : 10 millions operations (no load) Electrical life : 100 000 operations (rated load) Minimum switching current 100mA (5V DC)
<b>Number</b>	2 alarms max

## 7. Other functions

<b>Parameter mask function</b>	Parameter display is disabled by software
<b>Ramp/soak function (option)</b>	2 program pattern of 4 steps each, or 1 program pattern x 8steps, digital input allows to start/reset the action
<b>Applicable std</b>	UL, C-UL, CE

# Ordering code

Specification	PXR socket type											
	4	5	6	7	8	9	10	11	12	13		
<b>4 Front dimensions</b> 48 x 48mm												
<b>5 Input signal</b> Thermocouple (°C) Thermocouple (°F) Resistance bulb Pt100 3-wire type I (°C) Note3 Resistance bulb Pt100 3-wire type I (°F) Note3 Resistance bulb Pt100Ω 3-wire type II (°C) Note4 Voltage 1 to 5V DC Current 4 to 20mA DC Note1		T	R	N	S	W	A	B				
<b>6 Control output 1</b> Relay contact output Note2 Voltage pulse output Note2 4 to 20mA DC output Note2						A	C	E				
<b>7 Terminal form</b> Socket type						S						
<b>8 Revision code</b>							1					
<b>9 Optional specifications</b> Sans Alarm (1 pc.) Ramp / soak Alarm (1 pc.) + Ramp / soak Alarm (2 pcs.) Alarm (2 pcs.) + Ramp / soak									0	1	4	5
<b>10 Instruction manual / Power supply voltage</b> None / 85 to 265V AC 50/60Hz English - French / 85 to 265V AC 50/60Hz None / 24V DC or 24V AC 50/60Hz English - French / 24V DC or 24V AC 50/60Hz									N	V	C	B
<b>11 Socket</b> 12 None											0	0
<b>13 For rail mounting (8 pin-screw terminal) : TP48X</b>											1	0
<b>For panel mounting (8 pin-screw terminal) : TP48SB</b>											2	0
<b>For rail mounting (11 pin-screw terminal) : TP411X</b>											4	0
<b>For panel mounting (11 pin-screw terminal) : TP411SB</b>											5	0

Note 1 : Connect to terminal 250Ω resistor supplied before power ON.

Note 2 : Control action is set to reverse action when delivered. The reverse action and normal action can be switched by key operation on the front panel.

Note 3 : Input terminal (Pt100 input) assignment is same as PXV4, PXW4 and PXZ4

Note 4 : Input terminal (Pt100 input) assignment is different from PXV4, PXW4 and PXZ4 but in case of the thermocouple input terminal assignment is same.

Note 5 : In cas the controller is equipped with 1 or 2 alarms (option 1, 5, F and G for digit 9), 11-pins screw terminal TP411X type must be used (option 4 for digit 11) and TP411SBA (option 5 for digit 11).

## Measuring range table

Category	Input signal	Range T° (°C)	Range T° (°F)	
I	Resistance bulb	Pt100	-199 to 850	
			-326 to 1562	
	Thermo-couple	J	0 to 800	32 to 1472
		K	0 to 1200	32 to 2192
		R	0 to 1600	32 to 2912
		B	0 to 1800	32 to 3272
		S	0 to 1600	32 to 2972
		T	-150 to 400	-238 to 752
		E	-150 to 800	-238 to 1472
		N	0 to 1300	32 to 2372
III	Voltage	1 to 5 Vcc	Scaling range -1999 to 9999	
	Current	4 to 20 mA		

Note 1 : For current input connect the supplied 250Ω resistor at the terminal

Note 2 : When the measuring range exceeds 1000°C (1832°F), decimal point can not be used.

## По вопросам продаж и поддержки обращайтесь:

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