

ALARM SETTER WITH DIGITAL DISPLAY

DATA SHEET

PCP

This product is a digital type alarming indicator whose front face measures 48 x 48 mm.

FEATURES

1. Eight alarm modes are selectable for a variety of applications.
2. Front-face waterproof structure (NEMA-4X) is available.
3. SPDT contact relay output is provided in a pair.
4. Input signal and measurable range are changeable by key operation.

SPECIFICATIONS

Operational specifications

Input section: No. of inputs: 1 point
 Input signal: See table 1.
 Measuring range: See table 1.
 Burnout function: Upscale or downscale burnout settable
 The instrument with burnout releasing function can also be specified.
 Input sampling period: 0.5 sec
 Input impedance:
 Voltage input; 1M Ω or 450k Ω or more
 Current input; 250 Ω (external mounted resistor)
 Thermocouple; 1M Ω or more
 Allowable resistance of signal supply:
 Thermocouple input; 100 Ω or less
 Voltage input; 1k Ω or less

Alarm output: No. of outputs 2 points of SPDT contact
 Kinds of alarm: See table 2. each point independently settable
 Contact capacity: 220V AC/30V DC, 3A (resistance load) 220V AC/30V DC, 1A (inductive load)
 Alarm value settable range:
 -5 to 105% FS (each point independently settable)
 Hysteresis settable range:
 0 to 102% FS (each point independently settable)
 Alarm action delay time:
 Settable within 1 to 10 sec
 Alarm action delay time at power-on:
 Settable within 0 to 20 sec

Indicating section:
 Numerical indication:
 7-segment, 4-digit LED
 (upper stage red, lower stage green)
 Indicated contents: Alarm set value 1, alarm set value 2, measured value



Status indication: Red/green LED lamp. alarm occurrence, power ON, measured value indication

Indicating accuracy:

Thermocouple input: $\pm 0.5\%$ FS ± 1 digit $\pm 3^\circ\text{C}$
 (For B thermocouple 0 to 400 $^\circ\text{C}$, $\pm 5\%$ FS ± 1 digit $\pm 3^\circ\text{C}$)
 (For R thermocouple 0 to 500 $^\circ\text{C}$, $\pm 1\%$ FS ± 1 digit $\pm 3^\circ\text{C}$)
 Resistance bulb input: $\pm 0.5\%$ FS ± 1 digit
 Voltage/current input: $\pm 0.5\%$ FS ± 1 digit

Rated voltage: 100 (-15%) to 240 (+10%)V AC 50/60Hz
 24V AC ($\pm 10\%$) 50/60Hz
 24V DC ($\pm 10\%$)

Power consumption: 6VA max. (at 100V AC or 24V AC)
 8VA max. (at 200V AC)
 3W max. (at 24V DC)

Ambient temperature: -10 to 50 $^\circ\text{C}$

External dimensions: 48 (W) x 48 (H) x 93 (D) mm

Casing color: White or black (when front is waterproof)

Mass : Approx. 150 g

Mounting method: Panel flush mounting or rail mounting
 (According to specified socket)
 (Note) For socket, see OUTLINE DIAGRAM

Input signal and measuring range

• Table 1

Input signal			Measurable range ($^\circ\text{C}$) (Note 2)	Minimum span ($^\circ\text{C}$)
Group I (Note 1)	Resistance bulb JIS (IEC)	Pt100 Ω	-150 to 800	150
		JPt100 Ω	-150 to 600	150
	Thermocouple	J	0 to 800	400
		K	0 to 1200	400
		R	0 to 1600	1600
		B	0 to 1800	1800
		T	0 to 1600	1600
		E	-199 to 400	599
		S	-199 to 800	800
		N	0 to 1300	1300
		PL-II	0 to 1300	1300
Group II	DC voltage	DC1 to 5V DC0 to 5V	Scalable range -1999 to 9999	
	DC current	DC4 to 20mA		
Group III	Thermistor	Fuji-made thermistor	-50 to 100	150
			0 to 150	150

Note 1) Input signal can be changed by key operation within the same group, but cannot be changed between different groups.

Note 2) When the measuring range exceed 1000 $^\circ\text{C}$, decimal point cannot be used.

• Table 2 Kind of alarm

Alarm method	Set value	Hold value at startup	Relay and LED action	Action diagram
Without alarm	—	—	—	
Upper limit	Absolute value	Not provided	LED lit, relay excited	
Lower limit	Absolute value	Not provided	LED lit, relay excited	
Upper limit	Absolute value	provided	LED lit, relay excited	
Lower limit	Absolute value	provided	LED lit, relay excited	
Upper limit	Absolute value	Not provided	LED lit, relay unexcited	
Lower limit	Absolute value	Not provided	LED lit, relay unexcited	
Upper limit	Absolute value	provided	LED lit, relay unexcited	
Lower limit	Absolute value	provided	LED lit, relay unexcited	

How to read action diagram

- area : Range in which front LED is lit
 area : Range in which alarm relay is excited
 : Alarm set value

CODE SYMBOLS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	Description
P	C	P												Front size (W x H) 48 x 48mm
			4											Input signal Note 1 Thermocouple Resistance bulb Pt100, 3-wire type Resistance bulb JPt, 3-wire type Thermistor Note 2 DC1 to 5V (Input impedance: 1MΩ) DC4 to 20mA Note 3 DC1 to 5V (Input impedance: 450Ω)
			T											
			N											
			P											
			H											
			C											Revision No. Alarm With 2 alarm points Instruction manual/power supply Not provided/100 to 240 V AC, 50/60 Hz Japanese version/100 to 240 V AC, 50/60 Hz English version/100 to 240 V AC, 50/60 Hz Not provided/ 24V DC Japanese version/ 24V DC English version/ 24V DC
			B											
			A											
														Socket Not provided For rail mounting, type: TP411X Note 4 For panel flush mounting, type: TP411SBA Note 4 With burnout releasing function For rail mounting, type: TP411X Note 4 For panel flush mounting, type: TP411SBA Note 4 Without socket
														Non-standard specification White casing without front waterproof structure Black casing with front waterproof structure (NEMA-4X) Note 5

Note 1) Input signal has been factory-set as follows.

Thermocouple input: K thermocouple 0 to 400°C

Resistance bulb input: 0 to 150°C

Thermistor input: 0 to 150°C

Voltage/current input: Scaling 0 to 100%

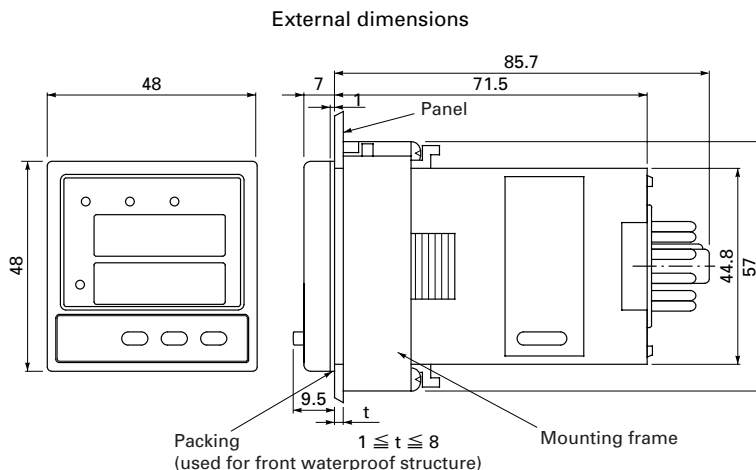
Note 2) Use a thermistor that matches Fuji Electric's specifications.

Note 3) Before use, attach the accessory 250 Ω resistor between input terminals.

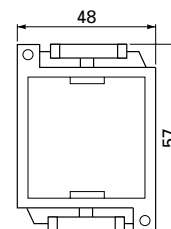
Note 4) If a socket of any type other than specified is used, input accuracy cannot be guaranteed.

Note 5) Contact us to select P for the 11th digit, because it is nonstandard.

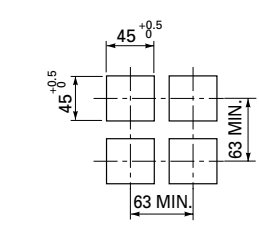
OUTLINE DIAGRAM (Unit:mm)



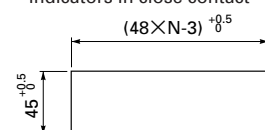
Mounting frame



Panel cutout



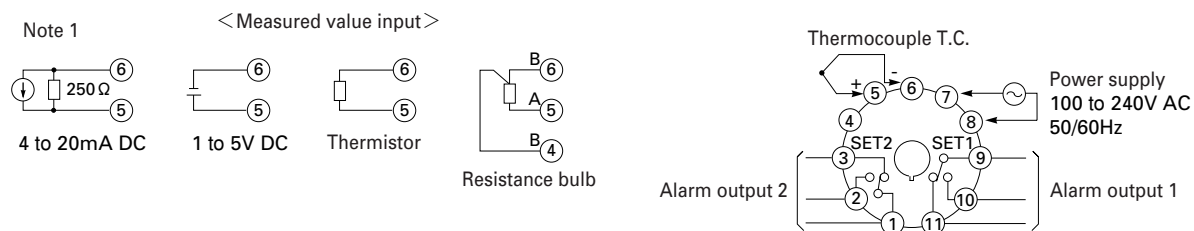
Lateral installation of multiple indicators in close contact



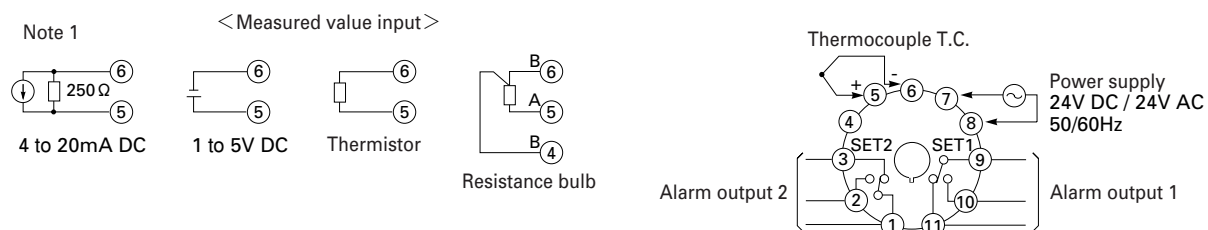
(Note) Impossible for front waterproof structure

CONNECTION DIAGRAM

- For AC power supply



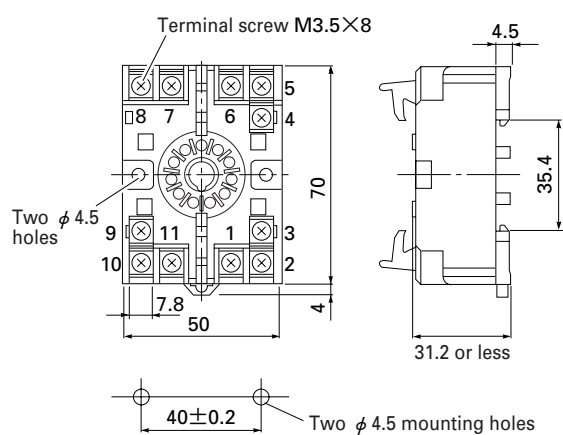
- For 24V DC power supply



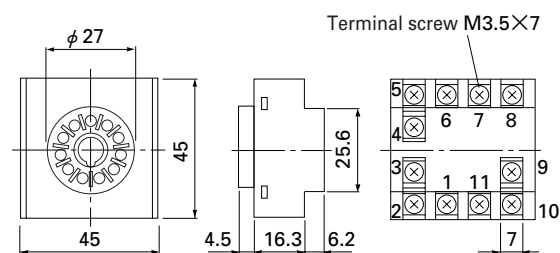
Note 1) For 4 to 20mA DC input, attach the accessory 250 Ω resistor between terminals ⑤ and ⑥.

APPLICABLE SOCKET (Unit:mm)

TP411X type (rail mounting)



TP411SBA type (panel mounting)



SCOPE OF DELIVERY

Indicator main frame, fixture set, instruction manual (as specified in code), socket (as specified in code), shunt resistor (250Ω) (for current input), panel face packing (for front waterproof structure)

⚠ Caution on Safety

*Before using this product, be sure to read its instruction manual in advance.

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