

TH82

Temperature Transmitters

Outline

This transmitter consists of the temperature sensing portion, which converts temperature into an electric signal, and the conversion portion, which amplifies this signal and outputs it.

The temperature sensing portion, to which a platinum temperature sensor is applied, can be selected according to the range of measuring temperature.

Features

This is particularly designed to make temperature measurements in the field that sanitary care is required.

Ferrule size, mounting arrangement and type of power source are selectable.



Specifications

Fluid:

Gas, steam or liquid

Operating condition:

Under the normal condition, where there is no inflammable gas or liquid which cause the ignition or explosion.

Mounting:

Pipe mounting, Panel mounting

Temperature sensor:

Platinum thermo resistor
 JIS C 1604 -1997 A class
 Wetted parts material General type 304 st.st.
 Sheath type 316 st.st.

Temperature range:

0 to 50 → 300 to 500°C
 -50 to 50 → -20 to 100°C

Power source:

24V DC (Standard): 2 wire system
 100V AC, 110V AC, 200V AC, 220V AC: 4 wire system

Output:

4 to 20mA DC

Load resistance:

500Ω or less (At 24V DC)
 400Ω or less (At AC power source)

Transmission system:

2 or 4 wire system

Operating temperature:

-40 to 80°C

Accuracy:

±0.2%F.S.

Voltage variation of power source:

0.1%/10V

Ambient temperature variation:

±0.025%F.S./°C

Outlet for electric wire:

JIS 20b (gland)

Case material:

ADC12

Construction:

Drip-proof

Weight:

Approx. 2kg

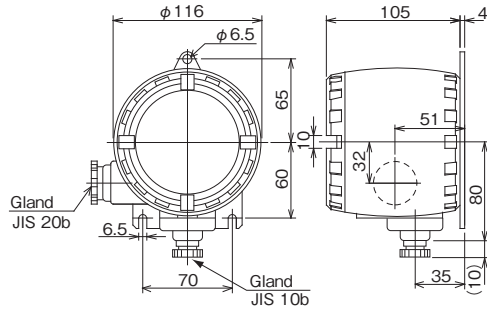
TH82

Temperature Transmitters

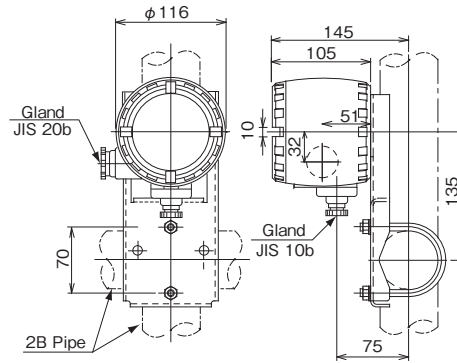
Dimensions

Transmitter

Panel mounting: TH82-B□□



Pipe mounting: TH82-C□□



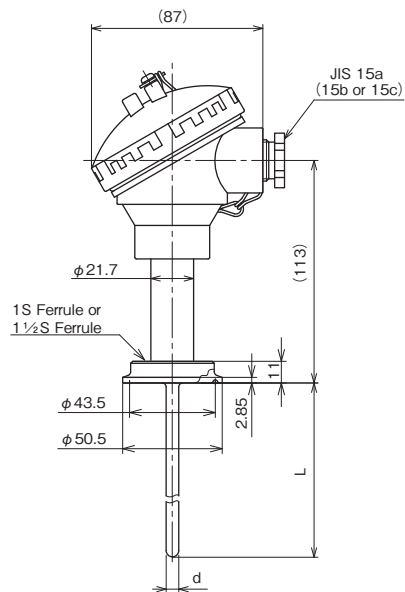
*Please contact us for outline drawing about other screw size.

Thermo resistor

Connection : Ferrule type

TH82-B1□

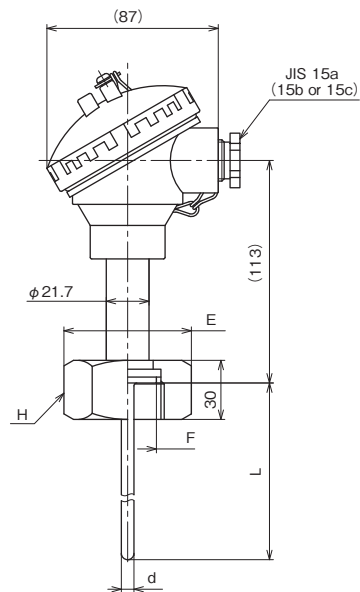
TH82-C1□



Connection : Nut type

TH82-B□□

TH82-C□□

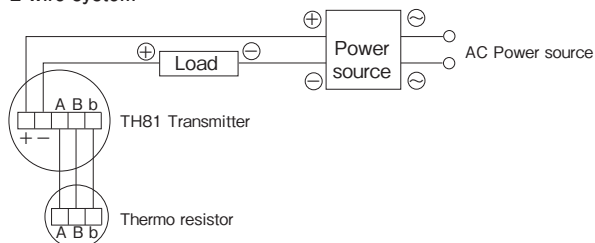


*Please refer to model number configuration about temperature sensor, material, length.

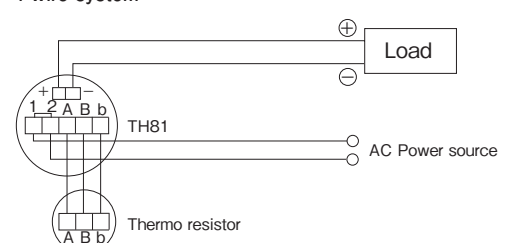
Screw size (H)	E	F
1S Nut type	46×53.1 Hex.	φ29.2
1½S Nut type	56×64.7 Hex.	φ42.7

Wiring-diagram

2 wire system



4 wire system



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Model number configuration

Please specify the model number, each specs and the range for ordering.

Model

T H 8 2 — (1) (2) (3) — (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15)

Sanitary type temperature transmitter

Model number		Selective spec.			Additional spec. (Option)	
① Mounting	B	Panel mounting + thermo resistor (threaded connection)				
	C	Pipe mounting + thermo resistor (threaded connection)				
② Connection	1	Size : 1S, 1½S (Sanitary fitting) Ferrule type				
	2	Size : 1S (Sanitary fitting) Nut type				
	3	Size : 1½S (Sanitary fitting) Nut type				
③ Temperature sensor construction, Out dia., Material	1	Standard type	φ 4.8	SUS304		
	2	Standard type	φ 6	SUS304		
	3	Standard type	φ 8	SUS304		
	A	Sheath type	φ 4.8	SUS316		
	B	Sheath type	φ 6.4	SUS316		
	C	Sheath type	φ 8	SUS316		
④ Range °C	A	-50 to 50	H	0 to 200	P	50 to 200
	B	-30 to 50	I	0 to 250	R	100 to 200
	C	-20 to 100	J	0 to 300	S	100 to 300
	D	-10 to 50	K	0 to 400	T	200 to 400
	E	0 to 50	L	0 to 500	U	300 to 500
	F	0 to 100	M	50 to 100	9	Other
	G	0 to 150	N	50 to 150		
⑤ L length, Temperature sensor	1	50 to 100mm	Standard type	φ 4.8, φ 6, φ 8		
	2	110 to 200mm	Standard type	φ 4.8, φ 6, φ 8		
	3	210 to 300mm	Standard type	φ 4.8, φ 6, φ 8		
	A	50 to 100mm	Sheath type	φ 4.8		
	B	110 to 200mm	Sheath type	φ 4.8		
	C	210 to 300mm	Sheath type	φ 4.8		
	G	50 to 100mm	Sheath type	φ 6.4		
	H	110 to 200mm	Sheath type	φ 6.4		
	J	210 to 300mm	Sheath type	φ 6.4		
	N	50 to 100mm	Sheath type	φ 8		
	9	Other (Please specify separately.)				
⑥ Accuracy	6	±0.2%F.S.				
⑦ Power supply	1	24V DC (2 wire)	4	200V AC (4 wire)		
	2	100V AC (4 wire)	5	220V AC (4 wire)		
	3	110V AC (4 wire)	9	Other		
⑧ Output	1	4 to 20mA DC (2 wire system)				
⑨ Outlet for electric wire	4	JIS20b (Gland)				
⑩ Documents	0	Nil				
	1	Required (Please specify the desired documents separately.) Submission drawings, instruction manual, inspection procedure, mill sheet, test report (1 pc 1 copy), inspection / traceability certificate, strength calculation, attended inspection				

Please specify the temperature range and units separately besides selection of range code.

[Manufacturing range]

- Range A to D recommends a sheath type to prevent condensation in the temperature sensor.
- Wetted parts material for φ 4.8, φ 6, φ 8 of temperature sensor is 316 st.st. only
- 24V DC type suits for 18 to 45V DC.

* When ordering, please specify temperature sensor. (10mm step)

* Specify "X" if there is no specification item.