

# SHEATH TYPE PLATINUM RESISTANCE THERMOMETER BULB

## DATA SHEET

FTH

This resistance thermometer bulb is firmly sealed with high-purity oxidized magnesium (insulating material) in a fine metallic protective tube. Unlike ordinary resistance thermometer bulbs, it provides excellent sensitivity and vibration resistance, and is designed to permit easy bending work.

## FEATURES

1. Resistance thermometer bulb is very small in size, providing excellent sensitivity.
2. Adoption of integrated structure has improved the vibration resisting characteristic.
3. Easy bending work allows fabricating a long-sized resistance thermometer bulb for easy measurement even in a place where ordinary type resistance thermometer bulb cannot be used.
4. Various types of terminals such as extension cable type, connector type, exposed type, terminal box type, etc., are also available for selection according to applications.
5. Measurement range covers -200 to +500°C.

## SPECIFICATIONS

• Applied standard:

JIS C 1604 -1997

• Resistance element:

Nominal resistance; Pt100

Class; A, B

Rated current; 2mA

Allowable error due to temperature;

Class	Allowable error
A	$\pm(0.15+0.002t)^{\circ}\text{C}$
B	$\pm(0.3+0.005t)^{\circ}\text{C}$

Note: 1) "t" is measured temperature expressed in (°C) independent of +/- symbols.

2) Allowable error is the maximum limit of resistance value of resistance thermometer bulb obtained by subtracting measured temperature from the temperature calculated according to the reference resistance table.

• Protective tube material:

SUS316

• Sheath outside diameter:

φ4.8mm or φ6.4mm

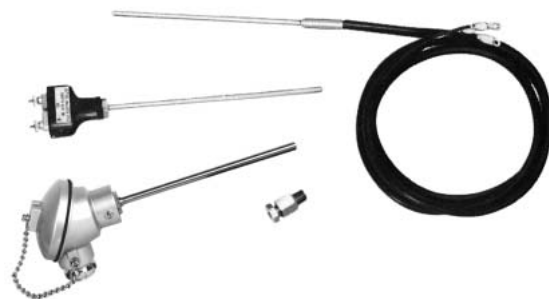
• Mounting method:

Insertion type or screw-in type (with mounting fitting)

Mounting fitting screw size; R<sup>1</sup>/<sub>8</sub>(PT<sup>1</sup>/<sub>8</sub>) or R<sup>1</sup>/<sub>4</sub>(PT<sup>1</sup>/<sub>4</sub>)

• Insertion length:

100 to 9000mm(specified in the unit of 10mm)



• Terminal structure:

Extension cable type, connector type, exposed terminal type, extension cable (with connector) type

• Operating temperature range:

-200 to +500°C

• Element structure:

Single-core, 3-wire system

• Minimum bending radius:

5 times the sheath outside diameter, not bent up to 100mm from tip

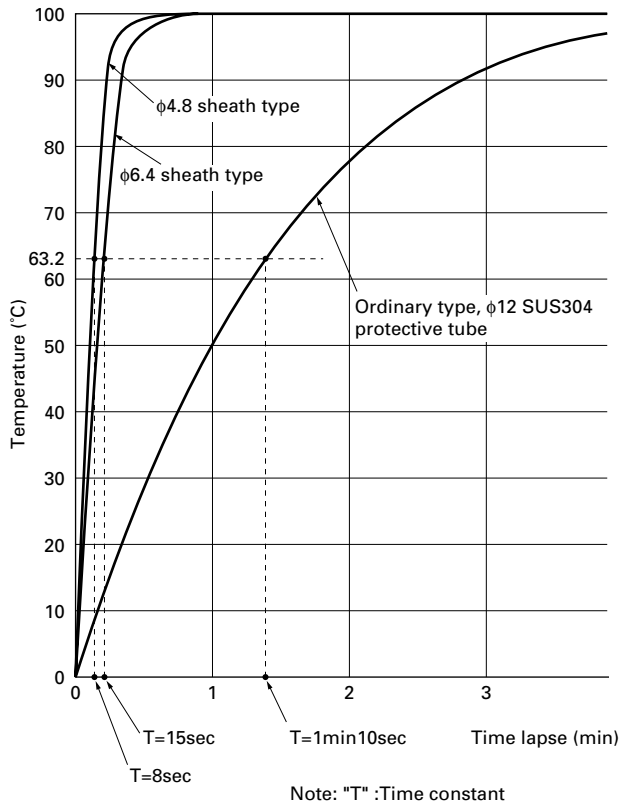
• Response characteristic:

See next page.

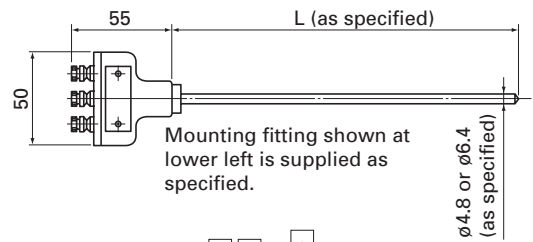
## Code symbols

F	T	H	W	5	Description		
1					<b>Element</b>		
	1				Single-core, 3-wire system (JPt100, class B)		
	7				Single-core, 3-wire system (JPt100, class A)		
		3			<b>Sheath outside diameter</b>		
		4			φ4.8mm		
			4		φ6.4mm		
			W		<b>Sheath material</b>		
					SUS316		
				0	<b>Mounting method</b>		
				1	Insertion type		
				2	With mounting fitting R <sup>1</sup> / <sub>8</sub> (PT <sup>1</sup> / <sub>8</sub> )		
				2	With mounting fitting R <sup>1</sup> / <sub>4</sub> (PT <sup>1</sup> / <sub>4</sub> )		
				0 1 0	<b>Insertion length</b>		
				1	Enter insertion length in cm unit (minimum length; 10cm, maximum length; 900cm).		
				9 0 0	Example: 055 → 55cm		
				L	<b>Terminal structure</b>		
				D	Extension cable type		
				G	Exposed terminal type		
				P	Terminal box type		
				Q	Connector type		
					Extension cable(with connector)type		
				0	<b>Cable length</b>		
				1	None (12th code D, G, P)		
				3	With 1m cable } (12th code L, Q)		
					With 3m cable }		

< Resistance bulb time-lag >



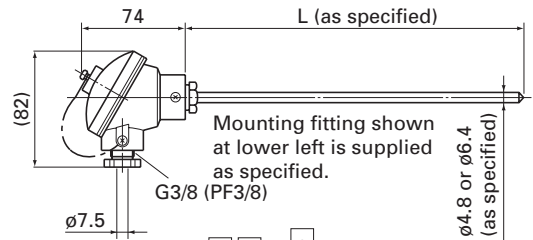
Resistance thermometer bulb time-lag largely varies with measurement conditions. The above shows an example of measurement in 100°C warm water with sheath type resistance thermometer bulb and ordinary type resistance thermometer bulb.



FTH 

1	3	0
7	4	1
	W	2

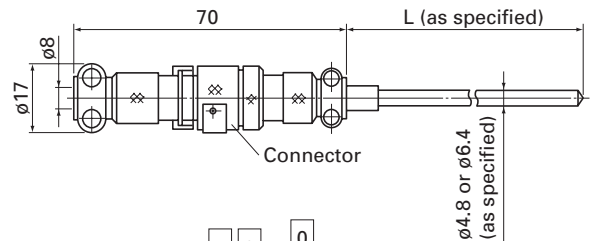
 5-□□□D0



FTH 

1	3	0
7	4	1
	W	2

 5-□□□G0

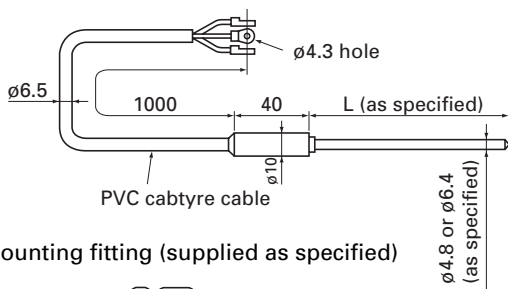


FTH 

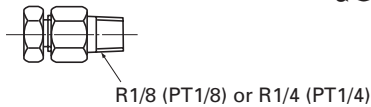
1	3	0
7	4	1
	W	2

 5-□□□P0

Outline diagram (Unit: mm):



Mounting fitting (supplied as specified)

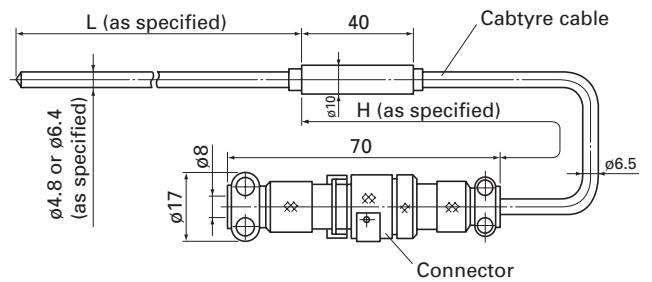


FTH 

1	3	0
7	4	1
	W	2

 5-□□□L 

1
3



FTH 

1	3	0
7	4	1
	W	2

 5-□□□Q 

1
3

⚠ Caution on Safety

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

Fuji Electric Systems Co., Ltd.

Head Office

Gate City Ohsaki, East Tower, 11-2, Osaki 1-chome, Shinagawa-ku, Tokyo 141-0032, Japan  
<http://www.fesys.co.jp/eng>

Instrumentation Div.

International Sales Dept.

No.1, Fuji-machi, Hino-city, Tokyo, 191-8502 Japan  
 Phone: 81-42-585-6201, 6202 Fax: 81-42-585-6187  
<http://www.fic-net.jp/eng>