

# FILLED TYPE THERMOMETERS

## SH4/SH4-QS(Ø100) & SH6/SH6-QS(Ø150)

### Technical Data

**Direct mounting**  
**Liquid, Gas filled available**  
**Dial size:** Ø100, Ø150 available  
**Material of case & cover:** 316 stainless steel  
**Material of stem:** 316 stainless steel  
**Lens:** Glass, safety glass available  
**Housing enclosure:** IP66, liquid filled available  
**Range limit:** -50 to 600°C  
**Stem dimensions:** Ø 6, 8, 10, 12 mm available  
**Stem length limit:** 65~1000 mm, option available  
**Accuracy:** ±1% (FS)  
**Process connection:** 1/2" NPT standard, Other available  
**Over range protection:** 130%(FS)  
**Contact type limit switch:** available 7 functions for usage.



SH-QS

(Every Angle Connection)



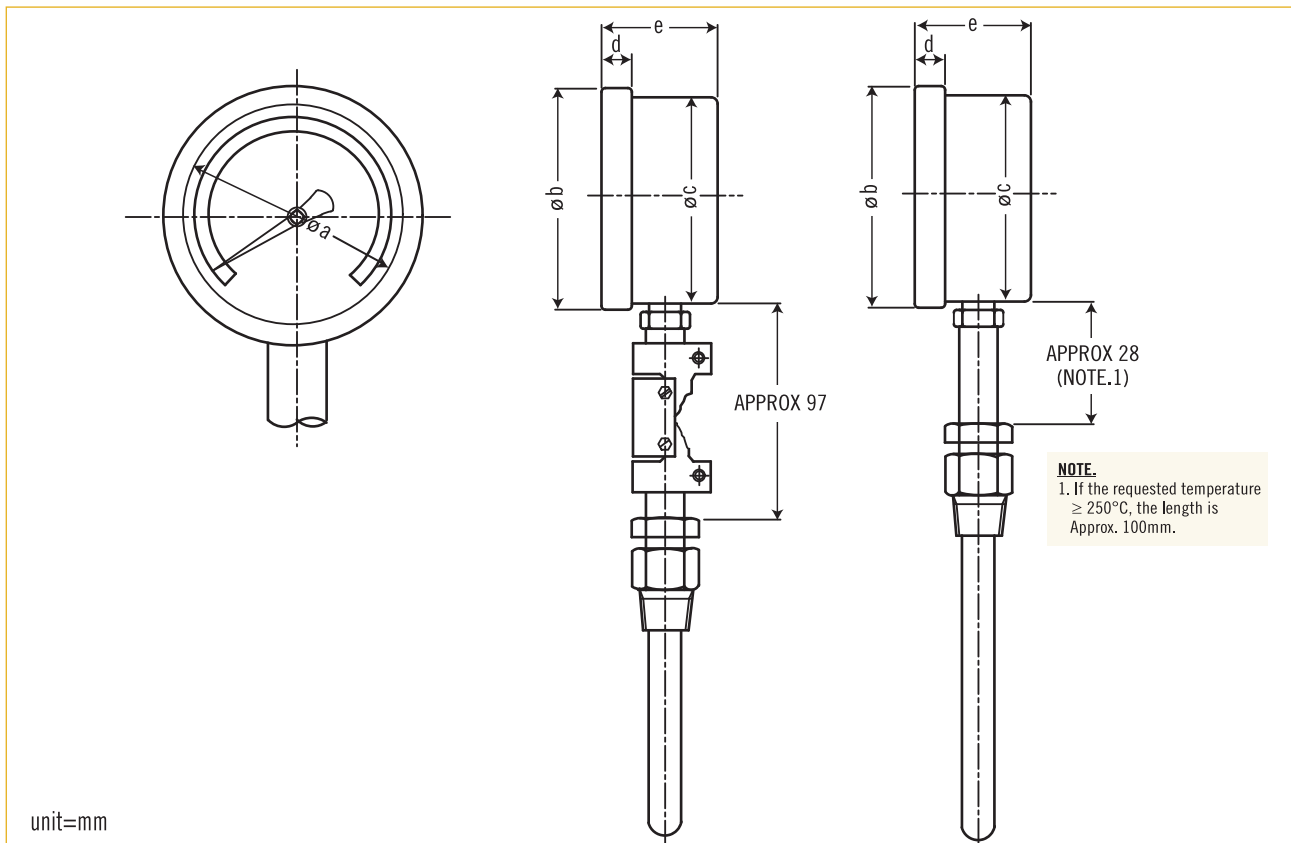
SH

(Bottom Connection)

Approvals:



### Dimensions

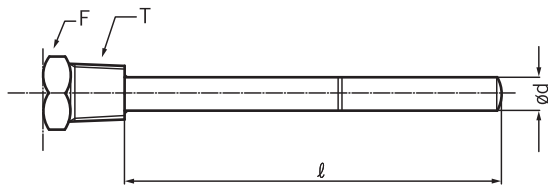


	a	b	c	d	e
SH4 SH4-QS	94	113	102	13	54
SH6 SH6-QS	140	165	153	15	54

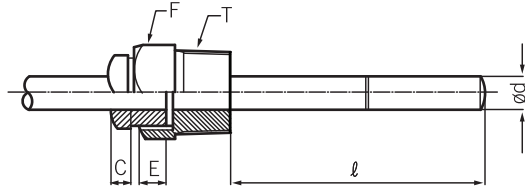
NOTE  
Performance Technical Data are effective with date of issue and are subject to change without prior notice.

\*Sensor bulb and connection, consult to factory.

## Connection Type

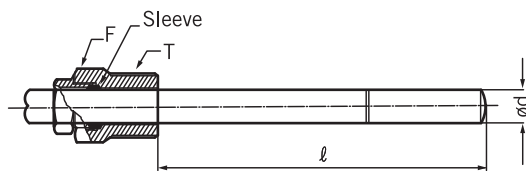


**(A) Fixed Thread Type**



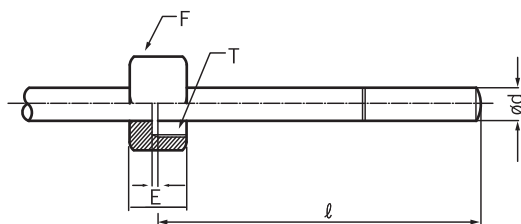
**(B) Rotary Thread Type (Male thread)**

(The male thread position is immobile, but rotation 360° available.)



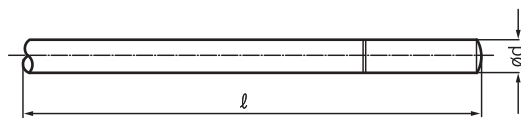
**(C) Slide Thread Type**  
(Length "l" changed available.)

(The slide threaded can be moved up and down, and the length of sensor can be adjusted by user.)



**(D) Rotary Thread Type (Female thread)**

(The female thread position is immobile, but rotation 360° available.)



**(E) Non Thread Type**

T: Process connection  
E: Stop plate for (rotary & rotation style)  
F: Hexagonal head  
l: Sensor length  
d: Sensor dimension

## Table for Range and Insertion

LIQUID FILLED TYPE						
Standard Scale Range (°C)	Minor Division (°C)		Minimum Insertion Length (mm)			
			Outer Diameter of Stem			
	Ø100	Ø150	Ø6	Ø8	Ø10	Ø12
-30~+50	1	1	135	91	53	37
-30~+100	2	2	89	61	38	28
-10~+50	1	1	175	116	66	45
-10~+100	2	2	102	70	42	31
0~50	1	1	207	137	76	52
0~80	1	1	135	91	53	37
0~100	1	1	111	75	45	33
0~120	2	2	95	65	40	29
0~150	2	2	79	55	34	26
0~200	2	2	63	44	29	23
0~250	5	5	53	38	26	21
0~300	5	5	47	34	24	20
0~400	5	5	39	29	21	18

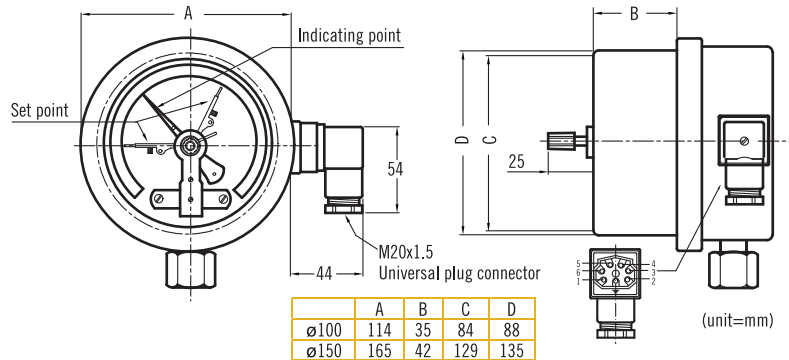
GAS FILLED TYPE		
Standard Scale Range (°C)	Minor Division (°C)	
	Ø100	Ø150
-200~+50	5	5
-200~+100	5	5
-200~+150	5	5
-200~+200	5	5
-100~+100	2	2
-100~+150	5	5
-100~+200	5	5
-50~+300	5	5
-50~+400	5	5
-50~+500	10	10
-50~+600	10	10
0~400	5	5
0~500	10	10
0~600	10	10

Minimum Stem Length			
mm	Ød	Ø10	Ø12
Minimum length		270	200

### OPTION.

- Please note the minimum insertion length is not including the thread.
- Special Range / Scale / Stem Diameter / Length are available upon request.

## Contact Type Limit Switch Assemblies



## Limit Switch Contact Rating

CONTACT MODE	MS-SERIES MAGNETIC SNAP CONTACT			
	VOLTAGE	AC 220V	AC 110V	DC 200V
LOADING CURRENT	0.2A	0.4A	0.01A	0.02A

LIMIT SWITCH FUNCTION MODE		
WIRE DRAWING	CONTACT FUNCTION	CONTACT TYPE
	SINGLE CONTACT	MAGNETIC SNAP-ACTION
	Contact ON When pointer clockwise reaches and passed set point.	MS1
	Contact OFF When pointer clockwise reaches and passed set point.	MS2
TWO CONTACTS		
	Common pole: 4 1st and 2nd contact ON When pointer clockwise reaches and passed each set point.	MS11
	Common pole: 4 1st contact ON 2nd contact OFF When pointer clockwise reaches and passed each set point.	MS12
	Common pole: 4 1st contact OFF 2nd contact ON When pointer clockwise reaches and passed each set point.	MS21
	Common pole: 4 1st and 2nd contact OFF When pointer clockwise reaches and passed each set point.	MS22
SPDT CONTACT		
	Common pole: 4 Connection 1 and 3: ON Connection 2 and 3: OFF When pointer clockwise reaches and passed set point meanwhile contacts change over at same set point.	MS3

## Ordering Information

Model	SH4	SH6	SH4-QS(∅100)	SH6-QS(∅150)				
	Code	Lens Material						
	A	Acrylic (only for C/W limit switch type)			G	Glass	S	Safety Glass
	Code	Connection Type						
	A	Fixed Thread Type	C	Slide Thread Type	E	Non Thread Type		
	B	Rotary Thread Type	D	Female Thread Type	0	Option		
	Code	Stem Diameter						
		(1) ∅6 (2) ∅8 (3)∅10 (4)∅12						
	Code	Stem Length						
		Refer to the Table for Range and Insertion, directly fill in request length (mm)						
	Code	Process Connection						
	(A) 3/8" NPT (B) 1/2" NPT (C) 1/4" NPT (D) 3/8"PF (E) 1/2"PF (F)1/4"PF (O) Option							
Code	Scale Range							
	Please refer to the Scale Range Table. Fill in the request range.							
Code	Contact Type Limit Switch							
	Please refer to limit switch function mode, or (0) for without limit switch.							
							<b>Complete ordering code</b>	

### Ordering information Sample:

Model	Lens Material	Connection Type	Stem Diameter	Stem Length	Process Connection	Scale Range	Contact Type Limit Switch
SH4-QS	S	A	∅6	100mm	B	0-100°C	MS12