

FILLED TYPE THERMOMETERS

SM4/SA4(Ø100) & SM6/SA6(Ø150)

Technical Data

Remot mounting type

Material of case & cover: 316 stainless steel, option available

Material of sensor bulb capillary tube, flex tube: SS304, SS316, and others available

Lens: Glass, safety glass available

Temp range: -200~+650°C available

Housing enclosure: IP65, liquid filled available

Accuracy: ±1% (FS)

Capillary tube length limited:

liquid filled type: 10M

gas filled type: max. 50M

option available

Stem dimensions: Ø 6, 8, 10, 12mm available

Process connection: 1/2"NPT standard, other available

Over range protection: 130% F.S.

Contact type limit switch: available, 7 functions for usage.

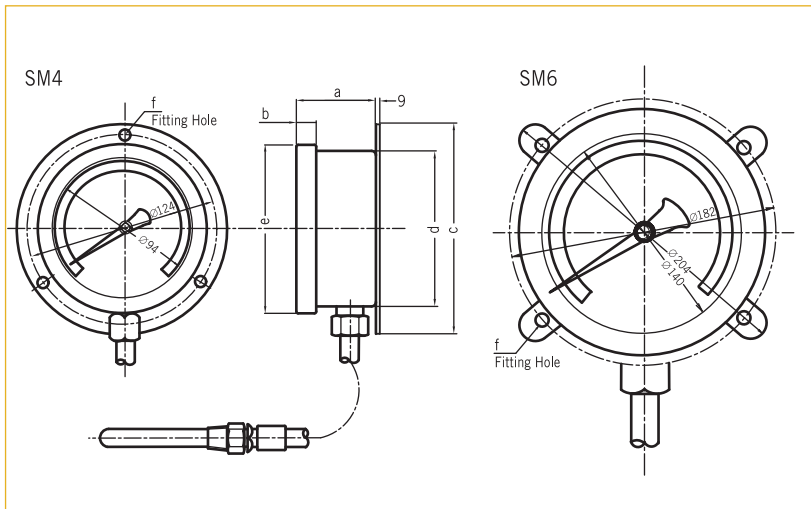


SM TYPE CE
(Wall mounting)



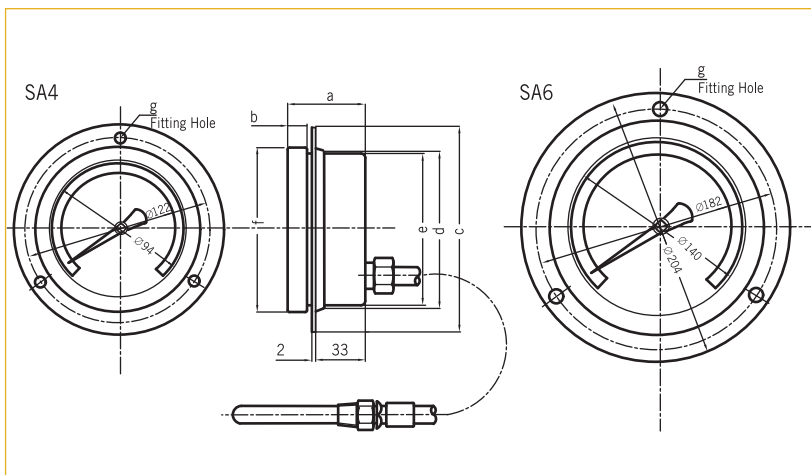
SA TYPE CE
(Panel mounting)

Dimensions



Symbol Model	a	b	c	d	e	f
SM4	51	13	138	103	113	3-Ø5.5
SM6	52	15	204	153	165	4-Ø8

*Sensor bulb and connection consult to factory.
*Remote capillary length:
Maximum length: 50M

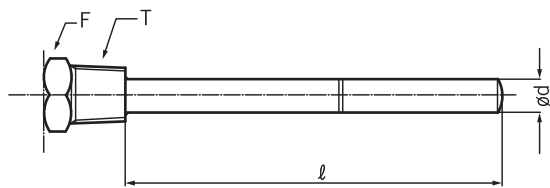


Symbol Model	a	b	c	d	e	f	g
SA4	54	13	134	107	102	113	3-Ø5.5
SA6	54	15	200	153	153	165	3-Ø7

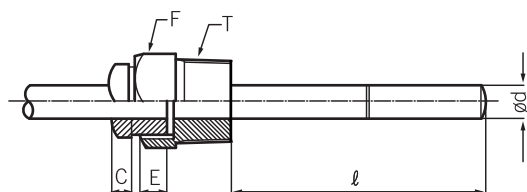
*Sensor bulb and connection consult to factory.
*Remote capillary length:
Maximum length: 50M

Unit: mm

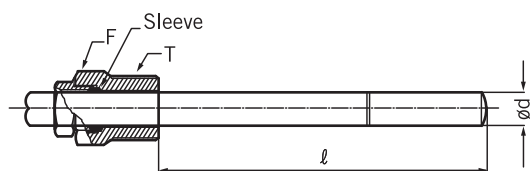
Connection Type



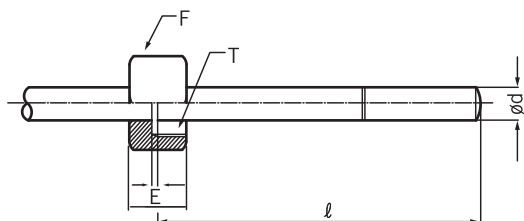
(A) Fixed Thread Type



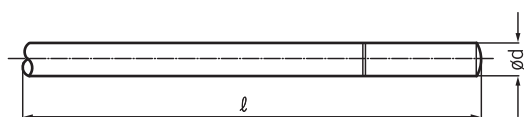
(B) Rotary Thread Type



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



(D) Female Thread Type
(Rotation Style)



(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 Stem

LIQUID FILLED TYPE						
Standard Scale Range (°C)	Minor Division (°C)		Minimum Stem Length (mm)			
			Outer Diameter of Stem			
	Ø100	Ø150	Ø6	Ø8	Ø10	Ø12
-70~+50	2	2		90	80	80
-50~+50	1	1		100	90	90
-30~+50	1	1	205	110	90	90
-30~+100	2	2	130	90	80	80
-10~+50	1	1	270	120	110	110
-10~+100	2	2	155	90	80	80
0~50	1	1	325	140	120	120
0~80	1	1	205	110	90	90
0~100	1	1	165	100	90	90
0~120	2	2	140	90	80	80
0~150	2	2	115	80	70	70
0~200	2	2	90	90	70	70
0~250	5	5	75	80	70	70
0~300	5	5	65	80	70	60
0~400	5	5	50	70	60	60

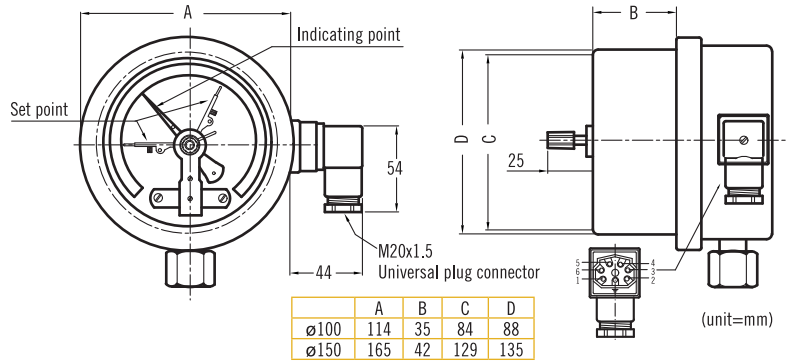
GAS FILLED TYPE		
Standard Scale Range (°C)	Minor Division (°C)	
	Ø100	Ø150
-200~+50	5	5
-200~+100	5	5
-200~+150	5	5
-200~+200	5	5
-100~+100	2	2
-100~+150	5	5
-100~+200	5	5
-50~+300	5	5
-50~+400	5	5
-50~+500	10	10
-50~+600	10	10
0~400	5	5
0~500	10	10
0~600	10	10

Minimum Stem Length		
mm	Ød	
Minimum length		270 200

OPTION.

1. Special range available upon request.
2. Special scale available upon request.
3. Special stem diameter and length available upon request.

Contact Type Limit Switch Assemblies



Limit Switch Contact Rating

CONTACT MODE	SL-SERIES SLIDING CONTACT				MS-SERIES MAGNETIC SNAP CONTACT			
	AC 220V	AC 110V	DC 200V	DC 100V	AC 220V	AC 110V	DC 200V	DC 100V
LOADING CURRENT	0.2A	0.4A	0.01A	0.02A	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
SPOT CONTACT		
	Common pole: 4 Connection 1 and 4: ON Connection 2 and 4: OFF When pointer clockwise reaches and passed set point meanwhile contacts change over at same set point.	MS3

Ordering Information

Model	SM4 (ø100)	SM6 (ø150)	SA4(ø100)	SA6(ø150)					
	Code Lens Material								
	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	O	Option			
	Code Capillary Length								
	Please fill in the requested length. (e.g. 3M)								
	Code Stem Diameter								
	(1) ø6 (2) ø8 (3)ø10 (4)ø12								
	Code Stem Length								
	Refer to table for range and stem, 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 Scale Range table. Fill in the requested length.								
	Code Contact Type Limit Switch								
	Please refer to limit switch function mode, or (O) for without limit switch.								
	Complete ordering code								

Ordering information Sample:

Model	Lens Material	Connection Type	Capillary Length	Stem Diameter	Stem Length	Process Connection	Scale Range	Contact Type Limit Switch
SM4	S	A	3M	ø6	100mm	B	0-100°C	SL1