



TEMPERATURE GAUGE AND SWITCH

TEMPERATURE GAUGE AND SWITCH	MODEL	CAT. NO
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Industrial Bimetal Thermometer	T110	TD01-01
Industrial Bimetal Thermometer	T111	TD01-02
General Service Bimetal Thermometer	T114	TD01-03
Process Industrial Bimetal Thermometer with Steel Case	T120	TD01-04
Process Industrial Bimetal Thermometer with Al Case	T122	TD01-05
Process Industrial Bimetal Thermometer with Angel Stem	T140	TD01-06
Process Industrial Bimetal Thermometer with Adjustable Stem ...	T190	TD01-07
Remote Reading Thermometer	T210	TD02-01
Remote Reading Thermometer with Al Case	T212	TD02-02
Remote Reading Thermometer with Oil Filled	T219	TD02-03
Direct Reading Thermometer	T220	TD02-04
Direct Reading Thermometer with Aluminium Case	T222	TD02-05
Direct Reading Thermometer with Oil Filled	T229	TD02-06
Direct Reading Thermometer with Adjustable Stem	T290	TD02-07
Glass Thermometer	T400	TD04-01
Remote Reading Thermometer with Aluminium Case and Electrical Contact	T751, T752, T753, T754	TD07-01
Direct Reading Thermometer with Aluminium Case and Electrical Contact	T721, T722, T723, T724	TD07-02
Bimetal Thermometer with Electrical Contact	T721, T722, T723, T724	TD07-03
Remote Reading Thermometer with Electrical Contact	T721, T722, T723, T724	TD07-04
Temperature Recorder	T920	TD09-01
Indicating Temperature Switch	T931, T932	TD09-02
Weather Proof Temperature Switch	T941, T942	TD09-03
Explosion Proof Temperature Switch	T951, T952	TD09-04

BIMETAL THERMOETERS

Principle :

When a metallic element is submitted to temperature changes, its length varies.

This physical property has been used and developed to build temperature sensitive bimetallic measuring devices.

The bimetallic sensor is made of two coils twisted together, and welded at their end being selected on purpose with very different thermal expansion coefficients, the two materials will generate a torque at their free end when submitted to temperature changes.

Applications :

- Designed for standard industrial uses, bimetal thermometers are mainly used because :
 - they are easy to install and use
 - they are more rugged than glass thermometers
 - no power supply erquired
 - fairly large temperature range covered.

GAS EXPANSION THERMOMETERS

Principle :

A gas actuated thermometer is made of a cylindrical bulb filled with gas at high pressure (nitrogen) connected to a pressure sensitive. pressure gauge type, indicating device. Gas pressure changes inside the bulb due to temperature changes, are sensed by a special helicoil bourdon tube, which, connected to an amplifying device will give the pointer, movement proportional to the temperature.

The physical properties used will enable linear readings on the dial from the origin to full scale.

When the reading is remote from the sensing point, a capillary is then used for transmission between the bulb and the thermometer head. Capillary armoring is common practice in industrial environments.

Applications :

Gas expansion thermometers give a 1% accuracy, which is maintained at ambient temperatures between-10°C to +50°C due to a built-in temperature compensating device.

Designed for industrial use, where a good accuracy is required, these thermometers are the natural answer because of :

- no need for a power supply
- possibility for remote reading from temperature source
- rugged design.

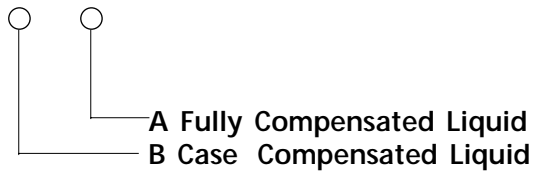
THERMAL SYSTEM

OPERATING PRINCIPLE		VOLUMETRIC PRINCIPLE			
TYPE & CLASS		LIQUID FILLED SYSTEM CLASS I		MERCURY FILLED SYSTEM CLASS V	
		CLASS IA	CLASS IB	CLASS VA	CLASS VB
LOW TEMP.LIMITED		-300°F (-184.4°C)		-38°F, -65°F (-38.9°C, -53.9°C)	
HIGH TEMP.LIMITED		600°F (315.6°C)		1200°F, 600°F (648.9°C, 315.6°C)	
LONGEST SPAN		600°F (315.6°C)		1000°F, 600°F (537.8°C, 315.6°C)	
SHORTEST SPAN		25°F (-3.9°C)		40°F (4.4°C)	
BULB SIZE	LONG SPAN	SMALLEST		INTERMEDIATE	
	SHORT SPAN	INTERMEDIATE		LARGE	
DIAL OR CHART DIVISION		EQUAL	EQUAL	EQUAL	EQUAL
MAX. CAPILLARY LENGTH		APPROX 61M	APPROX 4.5M	APPROX 67.1M	APPROX 7.6M
CAPILLARY TEMPERATURE COMPENSATION		DUAL CAPILLARY & BOURDON	NONE	COMPENSATED CAPILLARY OR DUAL CAPILLARY & BOURDON	NONE
CASE TEMPERATURE COMPENSATION		SECOND BOURDON	BIMETAL STRIP	SECOND BOURDON	BIMETAL STRIP
BATH ELEVATION ERROR OVERRANGE CAPACITY		NEGLIGIBLE VARIES WITH LENGTH 200% TO 0% RANGE	NEGLIGIBLE 100% OF RANGE	GENERALLY SMALL 100% OF RANGE	NEGLIGIBLE 100% OF RANGE
SPEED OF RESPONSE		SLOWEST IN WATER INTERMEDIATE		INTERMEDIATE IN WATER NEGLIGIBLE	
BAROMETRIC ERROR		NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

OPERATING PRINCIPLE		PRESSURE PRINCIPLE	
TYPE & CLASS		VAPOR FILLED SYSTEM CLASS II	GAS FILLED SYSTEM CLASS III
		CLASS IIA/B/C/D	CLASS IIIA/B
LOW TEMP.LIMITED		-40°F (-40°C)	-400°F (-240°C)
HIGH TEMP.LIMITED		500°F (260°C)	1500°F (815.6°C)
LONGEST SPAN		300°F (148.9°C)	1000°F (537.8°C)
SHORTEST SPAN		40°F (4.4°C)	100°F (37.9°C)
BULB SIZE	LONG SPAN	INTERMEDIATE	
	SHORT SPAN	INTERMEDIATE	
DIAL OR CHART DIVISION		LARGE AT RANGE TOP	
MAX. CAPILLARY LENGTH		APPROX 61M	
CAPILLARY TEMPERATURE COMPENSATION		NONE NECESSARY	GENERALLY NONE RARELY, DUAL CAPILLARY & BOURDON
CASE TEMPERATURE COMPENSATION		NONE NECESSARY	BIMETAL STRIP RARELY & SECOND NEGLIGIBLE
BATH ELEVATION ERROR OVERRANGE CAPACITY		FREQUENTLY LARGE GENERALLY SMALL	VARIES WITH RANGE UP TO 300% OF RANGE
SPEED OF RESPONSE		FASTEST TO INTERMEDIATE	
BAROMETRIC ERROR		USUALLY SMALL	

SAMA STANDARD THERMAL CLASS

CLASS



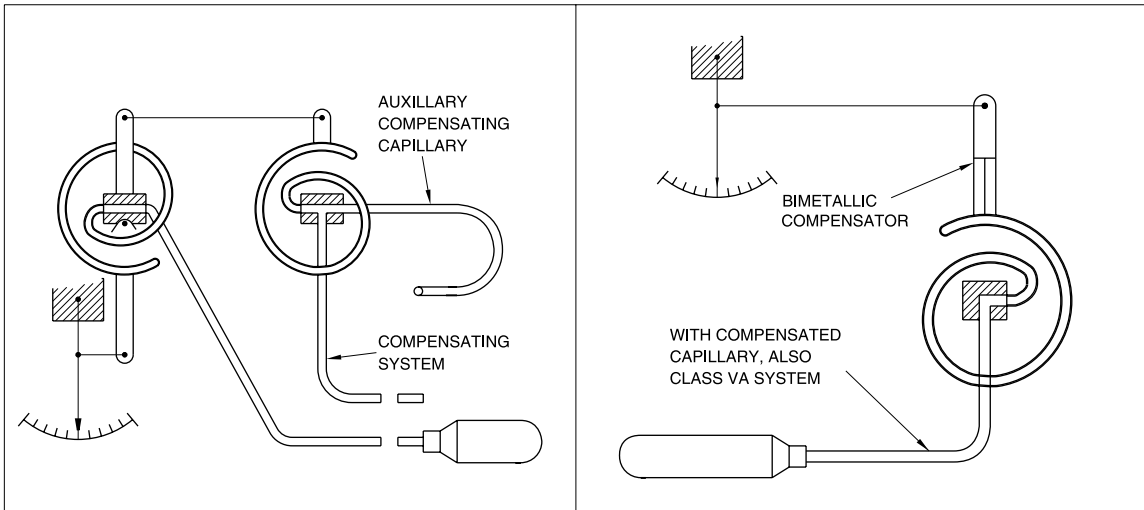
Volumetric Principle

CLASS	I Liquid	Filled System
CLASS	V Liquid	Filled System

Pressure Principle

CLASS	II Vapor	Filled System
CLASS	III Gas	Filled System

TEMPERATURE



Fully compensated Liquid, Mercury or Gas Filled Thermal System
- CLASS IA, IIIA or VA

Case compensated Liquid, Mercury or Gas Filled Thermal System
- CLASS IB, IIIB or VB

TEMPERATURE CONVERSION FORMULA

Fahrenheit Temperature (°F)	Celsius Temperature (°C)	Absolute Temperature Rankin Degree(°R) Kelvin Degree(°K)
$^{\circ}\text{F} = 1.8(^{\circ}\text{C}) + 32$ $^{\circ}\text{F} = ^{\circ}\text{R} - 459.69$	$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$ $^{\circ}\text{C} = ^{\circ}\text{K} - 273.16$	$0^{\circ}\text{R} = 0^{\circ}\text{K}$ $^{\circ}\text{K} = ^{\circ}\text{C} + 273.16$

TEMPERATURE CONVERSION TABLE

°C	°F	°C	°F	°C	°F	°C	°F
-200	-328	65	149	410	770	790	1454
-180	-292	70	158	420	788	800	1472
-160	-256	7	167	430	806	810	1490
-140	-220	80	176	440	824	820	1508
-120	-184	85	185	450	842	830	1526
-100	-148	94	194	460	860	850	1562
-95	-139	95	203	470	878	900	1652
-90	-130	100	212	480	896	950	1742
-85	-121	110	230	490	914	1000	1832
-80	-112	120	248	500	932	1050	1922
-75	-103	130	266	510	950	1100	2012
-70	-94	140	284	520	968	1150	2102
-65	-85	150	302	530	986	1200	2192
-60	-76	160	320	540	1004	1250	2282
-55	-67	170	338	550	1022	1300	2372
-50	-58	180	356	560	1040	1350	2462
-45	-49	190	374	570	1058	1400	2552
-40	-40	200	392	580	1076	1450	2642
-35	-31	210	410	590	1094	1500	2732
-30	-22	220	428	600	1112	1550	2822
-25	-13	230	446	610	1130	1600	2912
-20	-4	24	464	620	1148	1650	3002
-15	5	250	482	630	1166	1700	3092
-10	16	26	500	640	1184	1750	3182
-5	23	27	518	650	1202	1800	3272
0	32	28	536	660	1220	1850	3362
5	41	290	554	670	1238	1900	3452
10	50	300	572	680	1256	1950	3542
15	59	320	590	690	1274	2000	3632
20	68	320	608	700	1292	2050	3722
25	77	330	626	710	1310	2100	3812
30	86	340	644	720	1328	2150	3902
35	95	350	662	730	1346	2200	3992
40	104	360	680	740	1364	2250	4082
45	113	370	698	750	1382	2300	4172
50	122	380	716	760	1400	2350	4262
55	131	390	734	770	1418	2400	4352
60	140	400	752	780	1436	2450	4442

**INDUSTRIAL
BIMETAL THERMOMETER
MODEL : T110**

WISE[®]

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid, and meets the most stringent criteria on resistance to a corrosive atmosphere and exceptional climatic circumstance.

NOMINAL DIAMETER

75, 100, 125, and 150mm

ACCURACY

±1.0% of Full Scale
±2.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 1

Standard Features

LOCATION OF STEM

Centre Back Connection, Direct

CASE

304SS

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM

6.4, 8.0 and 10.0mm Diameter
304SS and 316SS
Max. Stem length : 2000mm

ZERO ADJUSTMENT

By resetting the pointer after removing
the cover.

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T110 : INDUSTRIAL BIMETAL THERMOMETER

NOMINAL DIAMETER

- 3 : 75mm
- 4 : 100mm
- 5 : 125mm
- 6 : 150mm

TYPE OF MOUNTING

- X : Centre Back Connection, Direct

STEM MATERIAL

- 0 : 304SS
- 1 : 316SS

PROCESS CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT

STEM OUT DIA.

- 1 : 6.4mm
- 2 : 8.0mm
- 3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

ACCESSORIES

- 0 : None
- 1 : Thermowell

T110

3

X

0

E

C

1

XXX

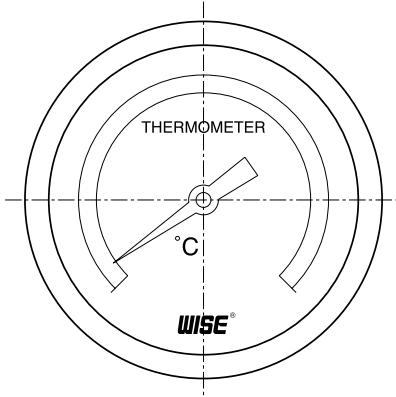
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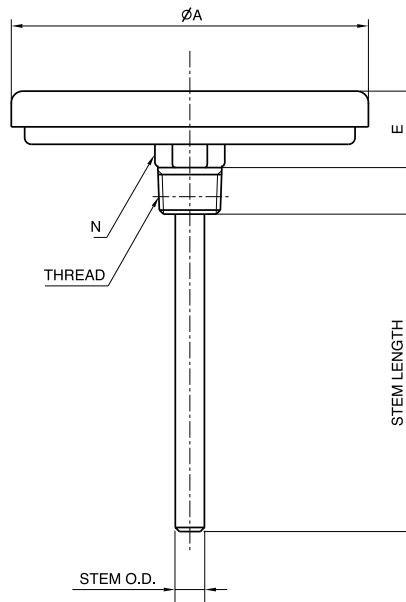
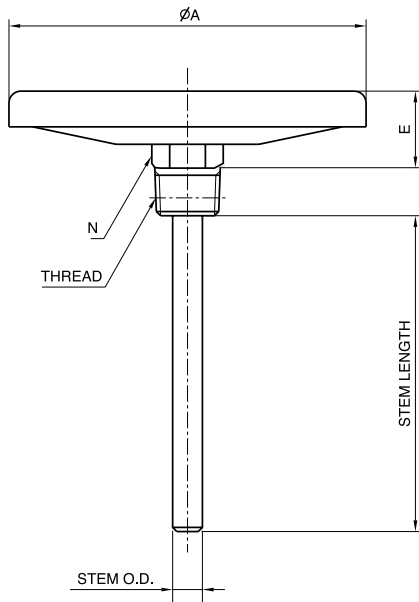
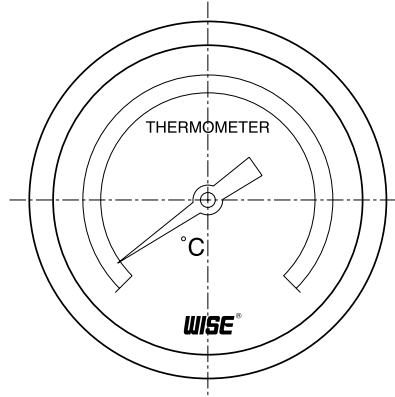
SAMPLE MODEL NUMBER

T110 : TYPE OF MOUNTING

CODE X



CODE X*



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	E	N
75	X	85.4	33	24x27.7 HEX
100	X	111	32	24x27.7 HEX
125	X	139	34	24x27.7 HEX
150	X*	168.5	41	24x27.7 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing(°C)	Minimum Stem Length (mm)	
			6.4	8.0 and 10.0
032	-50~50	2	55	50
037	-50~100	5	45	35
054	-30~50	2	70	60
059	-30~100	5	50	45
061	-30~120	2	45	35
069	-20~50	2	80	70
074	-20~100	2	45	45
079	-20~150	5	40	35
084	-10~50	1	95	80
099	0~50	1	110	70
100	0~60	1	95	80
101	0~70	2	80	60
102	0~80	1	70	90
104	0~100	2	55	50
106	0~120	2	50	45
109	0~150	2	45	35
114	0~200	5	35	35
119	0~250	5	35	30
124	0~300	5	35	25
129	0~350	5	30	25
134	0~400	5	80	65
144	0~500	10	70	60
000	Special Range	10	Please Contact to Technical Dept.	

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length(mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550 (mm)

**INDUSTRIAL
BIMETAL THERMOMETER
MODEL : T111**

WISE[®]

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid and meets the most stringent criteria on resistance to corrosive atmosphere and exceptional climatic circumstance.

NOMINAL DIAMETER

75, 100, 125 and 150mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 02

Standard Features

LOCATION OF STEM

Centre Back Connection, Direct

POINTER

Black Aluminium

CASE

304SS

STEM

6.4, 8.0mm and 10.0mm Diameter
304SS and 316SS

Max. Stem Length : 2000 mm

COVER

304SS

ZERO ADJUSTMENT

External at the Back of Case

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T111 : INDUSTRIAL BIMETAL THERMOMETER

NOMINAL DIAMETER

- 3 : 75mm
- 4 : 100mm
- 5 : 125mm
- 6 : 150mm

TYPE OF MOUNTING

- X : Centre Back Connection, Direct

STEM MATERIAL

- 0 : 304SS
- 1 : 316SS

CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT

STEM OUT DIA.

- 1 : 6.4mm
- 2 : 8.0mm
- 3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

ACCESSORIES

- 0 : None
- 1 : Thermowell

T110

4

X

0

E

C

1

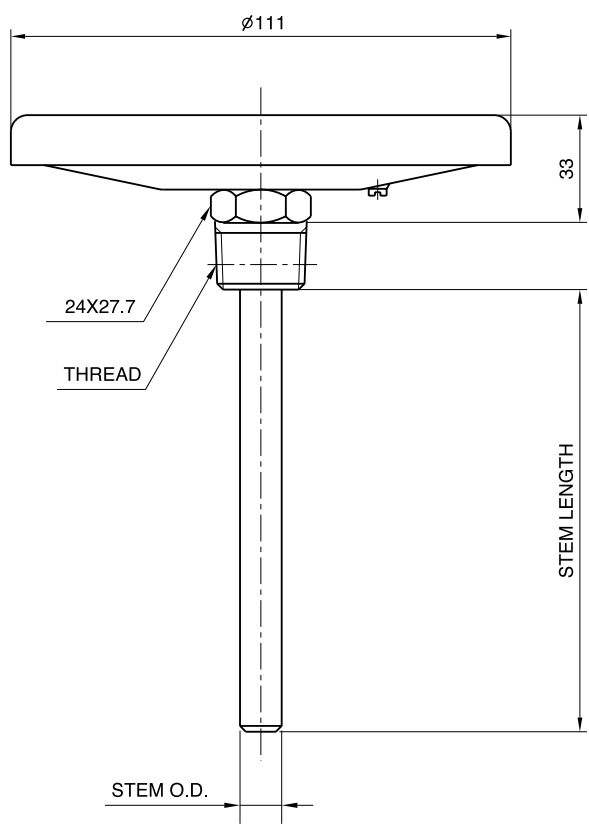
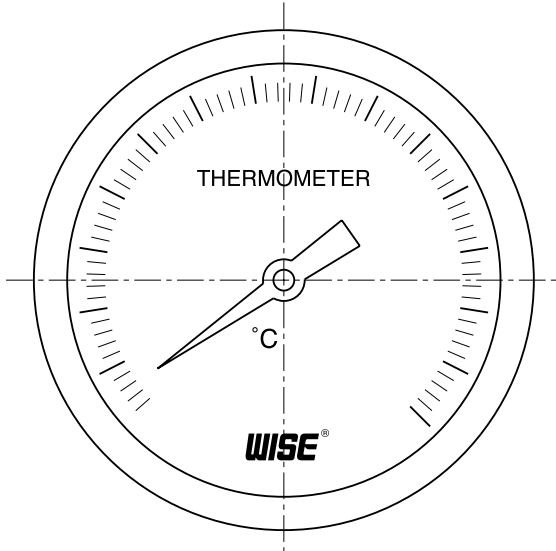
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X

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SAMPLE MODEL NUMBER

T111 : TYPE OF MOUNTING



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)	
			6.4	8.0 and 10.0
032	-50~50	2	55	50
037	-50~100	5	45	35
054	-30~50	2	70	60
059	-30~100	5	50	45
061	-30~120	2	45	35
069	-20~50	2	80	70
074	-20~100	2	45	45
079	-20~150	5	40	35
084	-10~50	1	95	80
099	0~50	1	110	90
100	0~60	1	95	80
101	0~70	2	80	70
102	0~80	2	70	60
104	0~100	2	55	50
106	0~120	2	50	45
109	0~150	5	45	35
114	0~200	5	35	35
119	0~250	5	35	30
124	0~300	5	35	25
129	0~350	5	30	25
000	Special Range	Please Contact to Technical Dept.		

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length (mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550mm

**GENERAL SERVICE
BIMETAL THERMOMETER
MODEL : T114**

WISE[®]

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid and meets the most stringent criteria on resistance to corrosive atmosphere and exceptionally climatic circumstance.

NOMINAL DIAMETER

75mm and 100mm

ACCURACY

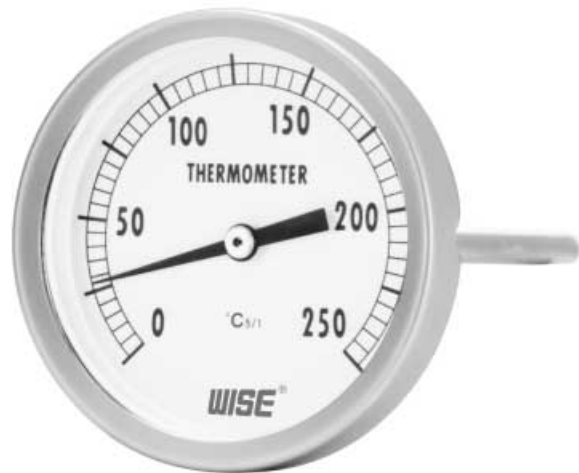
±1.0% of Full Scale
±2.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 03

Standard Features

LOCATION OF STEM

Centre Back Connection, Direct

CASE

Cr Plated Steel

COVER

Cr Plated Steel

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM

6.4 mm Diameter, 304SS
Max. Stem Length : 2000mm

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover.

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T114 : GENERAL SERVICE BIMETAL THERMOMETER

NOMINAL DIAMETER

3 : 75mm
4 : 100mm

TYPE OF MOUNTING

X : Centre Back Connection, Direct

STEM MATERIAL

0 : 304SS

CONNECTION

E : 1/2"

CONNECTION TYPE

C : PT
D : NPT

STEM OUT DIA.

1 : 6.4mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

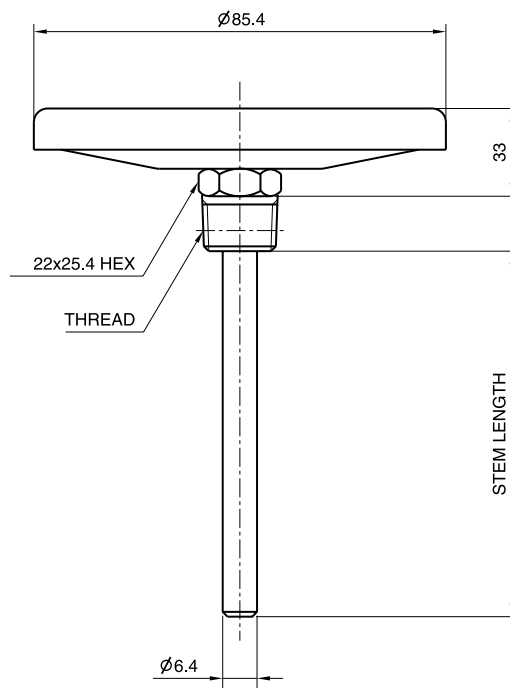
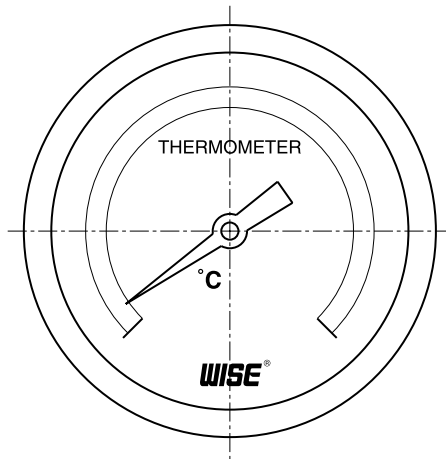
ACCESSORIES

0 : None
1 : Thermowell

T114	3	X	0	E	C	1	XXX	X	1	SAMPLE MODEL NUMBER
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T114 : TYPE OF MOUNTING

CODE X



SCALE RANGES

Code	Scale Range(°C)	Scale Spacing(°C)	Minimum Stem Length (mm)
099	0~50	1	110
101	0~70	2	80
102	0~80	2	70
104	0~100	2	55
109	0~150	5	45
114	0~200	5	35
119	0~250	5	35
124	0~300	5	35
000	Special Range	Please Contact to Technical Dept.	

STEM LENGTH

Code	2	4	5	7	8	A	C	Z
Length (mm)	60	80	100	130	150	200	250	Longer Than 250mm

**PROCESS INDUSTRY
BIMETAL THERMOMETER WITH STEEL CASE
MODEL : T120**

WISE[®]

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid, and meets the most stringent criteria on resistance to a corrosive atmosphere and exceptionally climatic circumstance.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale
±2.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 04

Standard Features

LOCATION OF STEM

Bottom Connection, Direct

CASE

304SS

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM OUT DIA.

6.4, 8.0 and 10.0mm Diameter
304SS and 316SS
Max. Stem Length : 2000mm

ZERO ADJUSTMENT

By resetting pointer after
removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T120 : PROCESS INDUSTRY BIMETAL THERMOMETER

NOMINAL DIAMETER

4 : 100mm

TYPE OF MOUNTING

W : Bottom Connection, Direct

STEM MATERIAL

0 : 304SS

1 : 316SS

CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

1 : 6.4mm

2 : 8.0mm

3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH

(Refer to Stem Length Table)

X

ACCESSORIES

0 : None

1 : Thermowell

T120

4

W

0

E

C

1

XXX

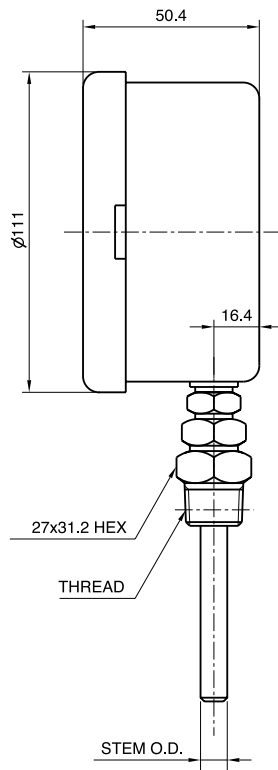
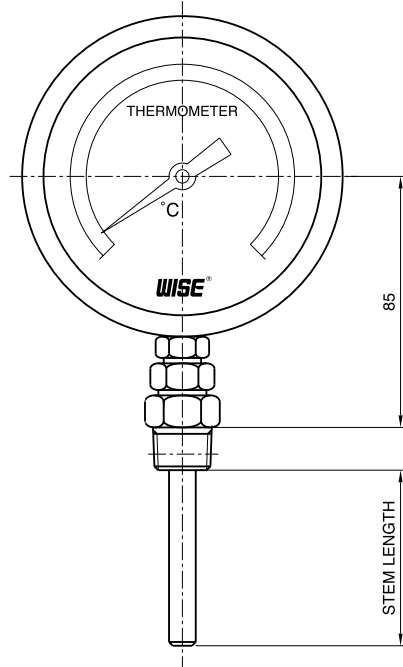
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SAMPLE MODEL NUMBER

T120 : TYPE OF MOUNTING

CODE W



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)	
			6.4	8.0 and 10.0
032	-50~50	2	55	50
037	-50~100	5	45	35
054	-30~50	2	70	60
059	-30~100	5	50	45
061	-30~120	2	45	35
069	-20~50	2	80	70
074	-20~100	2	45	45
079	-20~150	5	40	35
084	-10~50	1	95	80
099	0~50	1	110	90
100	0~60	1	95	80
101	0~70	2	80	70
102	0~80	2	70	60
104	0~100	2	55	50
106	0~120	2	50	45
109	0~150	5	45	35
114	0~200	5	35	35
119	0~250	5	35	30
124	0~300	5	35	25
129	0~350	5	30	25
134	0~400	10	80	65
144	0~500	10	70	60
000	Special Range	Please Contact to Technical Dept.		

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length (mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550mm

**PROCESS INDUSTRY
BIMETAL THERMOMETER WITH ALUMINIUM CASE
MODEL : T122**

WISE[®]

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid, and meets the most stringent criteria on resistance to corrosive atmosphere and exceptionally climatic circumstance.

NOMINAL DIAMETER

75mm

ACCURACY

±1.0% of Full Scale
±2.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 05

Standard Features

LOCATION OF STEM

Bottom Connection, Direct

CASE

Black Finished Aluminium

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM OUT DIA.

6.4, 8.0 and 10.0mm Diameter
304SS and 316SS
MAX. Stem Length : 2000mm

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T122 : PROCESS INDUSTRY BIMETAL THERMOMETER WITH ALUMINIUM CASE

NOMINAL DIAMETER

3 : 75mm

TYPE OF MOUNTING

W : Bottom Connection, Direct

STEM MATERIAL

0 : 304SS

1 : 316SS

PROCESS CONNECTION

D : 3/8"

E : 1/2"

E : 3/4"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

1 : 6.4mm

2 : 8.0mm

3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH

(Refer to Stem Length Table)

X

STANDARD

0 : None

1 : Thermowell

T122

3

W

0

E

C

1

XXX

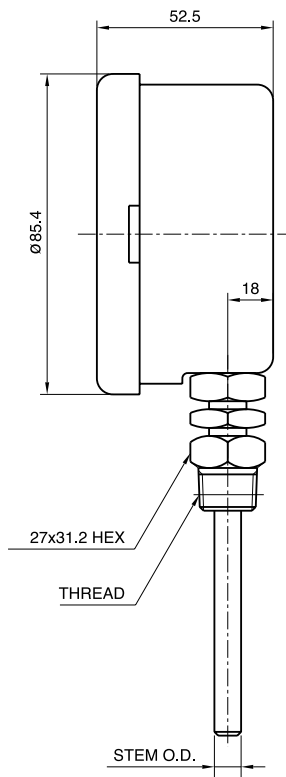
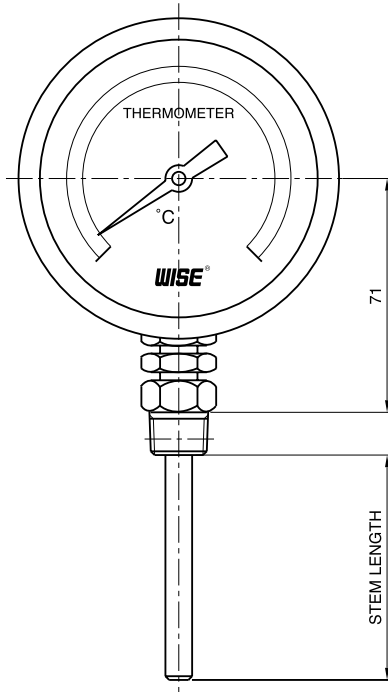
X

1

SAMPLE MODEL NUMBER

T122 : TYPE OF MOUNTING

CODE W



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)	
			6.4	8.0 and 10.0
032	-50~50	2	55	50
037	-50~100	5	45	35
054	-30~50	2	70	60
059	-30~100	5	50	45
061	-30~120	2	45	35
069	-20~50	2	80	70
074	-20~100	2	45	45
079	-20~150	5	40	35
084	-10~50	1	95	80
099	0~50	1	110	90
100	0~60	1	95	80
101	0~70	2	80	70
102	0~80	2	70	60
104	0~100	2	55	50
106	0~120	2	50	45
109	0~150	5	45	35
114	0~200	5	35	35
119	0~250	5	35	30
124	0~300	5	35	25
129	0~350	5	30	25
134	0~400	10	80	65
144	0~500	10	70	60
000	Special Range	Please Contact to Technical Dept.		

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length (mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550 (mm)

**PROCESS INDUSTRY
BIMETAL THERMOMETER WITH ANGLE STEM
MODEL : T140**

WISE®

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid and meets the most stringent criteria on resistance to corrosive atmosphere and exceptionally climatic circumstance.

NOMINAL DIAMETER

75, 100, 125 and 150mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 06

Standard Features

LOCATION OF STEM

Centre Back with Angle Stem

POINTER

Black Aluminium

CASE

304SS

STEM

6.4 and 8.0mm, 10mm Diameter
304SS and 316SS
Max. Stem Length : 2000 mm

COVER

304SS

ZERO ADJUSTMENT

External at the Back of Case

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

STEM CONNECTION

1/2", 3/8" PT or NPT

ORDERING INFORMATION

BASE MODEL

T140 : PROCESS INDUSTRY BIMETAL THERMOMETER WITH ANGLE STEM

NOMINAL DIAMETER

- 3 : 75mm
- 4 : 100mm
- 5 : 125mm
- 6 : 150mm

TYPE OF MOUNTING

- W : Centre Back with Angle Stem

STEM MATERIAL

- 0 : 304SS
- 1 : 316SS

CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 1 : 6.4mm
- 2 : 8.0mm
- 3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

ACCESSORIES

- 0 : None
- 1 : Thermowell

T140

4

W

0

E

C

1

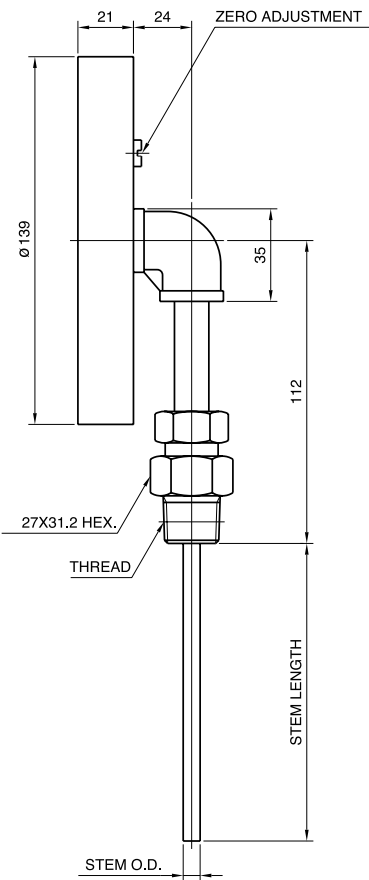
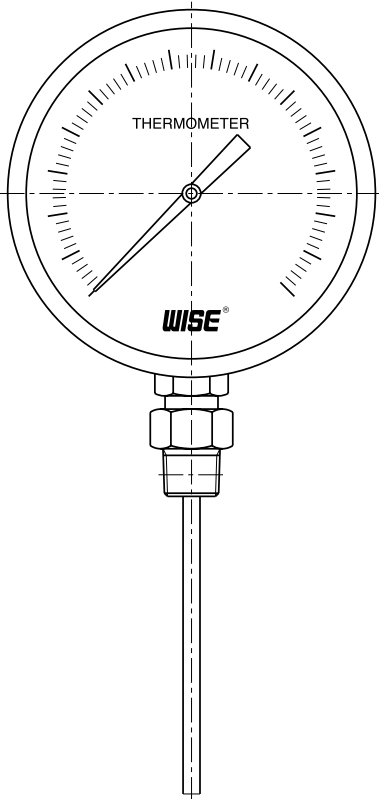
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X

1

SAMPLE MODEL NUMBER

T140 : TYPE OF MOUNTING



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)	
			6.4	8.0 and 10.0
032	-50~50	2	55	50
037	-50~100	5	45	35
054	-30~50	2	70	60
059	-30~100	5	50	45
061	-30~120	2	45	35
069	-20~50	2	80	70
074	-20~100	2	45	45
079	-20~150	5	40	35
084	-10~50	1	95	80
099	0~50	1	110	90
100	0~60	1	95	80
101	0~70	2	80	70
102	0~80	2	70	60
104	0~100	2	55	50
106	0~120	2	50	45
109	0~150	5	45	35
114	0~200	5	35	35
119	0~250	5	35	30
124	0~300	5	35	25
129	0~350	5	30	25
134	0~400	10	80	65
144	0~500	10	70	60
000	Special Range	Please Contact to Technical Dept.		

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length (mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550mm

**PROCESS INDUSTRY
BIMETAL THERMOMETER WITH ADJUSTABLE STEM
MODEL : T190**

WISE[®]

SERVICE INTENDED

Bimetal Thermometer is used for measuring temperature of gas or liquid fluid. This is suitable for measurement, regulation and direct monitoring of the fluid and meets the most stringent criteria on resistance to corrosive atmosphere and exceptionally climatic circumstance.

NOMINAL DIAMETER

100,125 and 150 mm

ACCURACY

±1.0% of Full Scale

TEMPERATURE ELEMENT

Coiled Bimetal

WORKING RANGE

Maximum Scale Value



TD01 - 07

Standard Features

LOCATION OF STEM

Centre Back with Adjustable Stem

POINTER

Black Aluminium

CASE

304SS, Adjustable on Stem 90°

STEM

6.4, 8.0 and 10.0mm Diameter
304SS and 316SS
Max. Stem Length : 2000 mm

COVER

304SS

ZERO ADJUSTMENT

External at the Back of Case

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

STEM CONNECTION

1/2", 3/8" PT or NPT

ORDERING INFORMATION

BASE MODEL

T190 : PROCESS INDUSTRY BIMETAL THERMOMETER WITH ADJUSTABLE STEM

NOMINAL DIAMETER

- 4 : 100mm
- 5 : 125mm
- 6 : 150mm

TYPE OF MOUNTING

- Y : Centre Back with Adjustable Stem

STEM MATERIAL

- 0 : 304SS
- 1 : 316SS

CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 1 : 6.4mm
- 2 : 8.0mm
- 3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

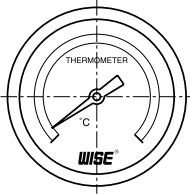
ACCESSORIES

- 0 : None
- 1 : Thermowell

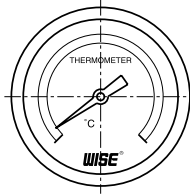
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T190 : TYPE OF MOUNTING

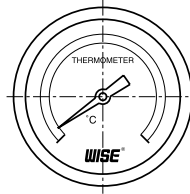
CODE Y



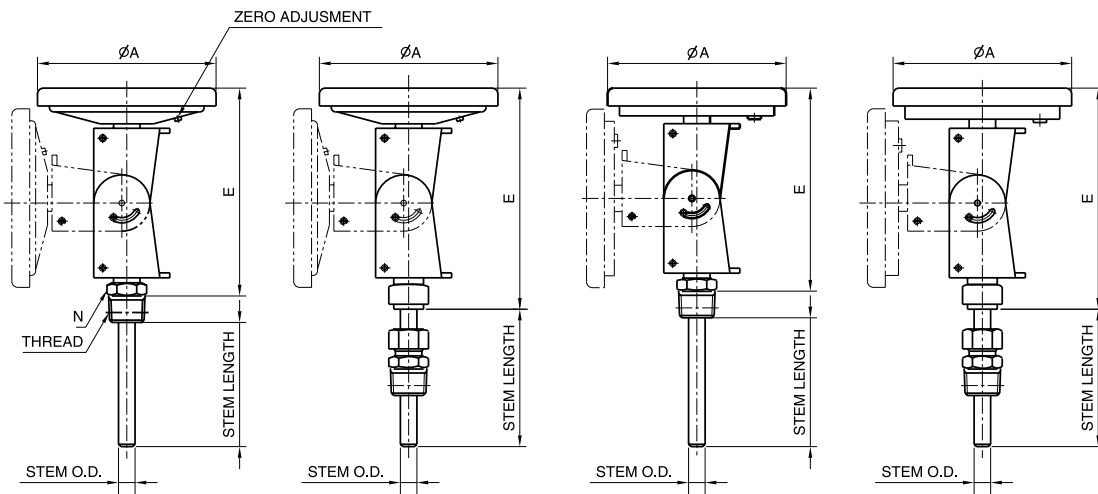
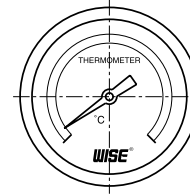
CODE Y*



CODE Y**



CODE Y***



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	E	N
100	Y	111	95	22x25.4 HEX
	Y*	111	93.5	22x25.4 HEX
125	Y	139	100	22x25.4 HEX
	Y*	139	98.5	22x25.4 HEX
150	Y**	168.5	104	22x25.4 HEX
	Y***	168.5	102.5	22x25.4 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)	
			6.4	8.0 and 10.0
032	-50~50	2	55	50
037	-50~100	5	45	35
054	-30~50	2	70	60
059	-30~100	5	50	45
061	-30~120	2	45	35
069	-20~50	2	80	70
074	-20~100	2	45	45
079	-20~150	5	40	35
084	-10~50	1	95	80
099	0~50	1	110	90
100	0~60	1	95	80
101	0~70	2	80	70
102	0~80	2	70	60
104	0~100	2	55	50
106	0~120	2	50	45
109	0~150	5	45	35
114	0~200	5	35	35
119	0~250	5	35	30
124	0~300	5	35	25
129	0~350	5	30	25
134	0~400	10	80	65
144	0~500	10	70	60
000	Special Range	Please Contact to Technical Dept.		

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length (mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550mm

REMOTE READING THERMOMETER MODEL : T210

WISE[®]

SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

100mm and 150mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)

±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled

Organic Gas : -50°C to 600°C

KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 01

Standard Features

LOCATION OF STEM AND MOUNTING

Bottom Connection, Surface, Case Mounting
Lower Back Connection, Flush, Case Centre Mounting

CASE

304SS

COVER

304SS

CAPILLARY

Capillary : 1.6/0.2mm, 316SS

Armored tube : 6.5/4.5mm, 304SS

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM

8.0, 10.0 and 12.0mm

316SS

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T210 : REMOTE READING THERMOMETER

NOMINAL DIAMETER

- 4 : 100mm
- 6 : 150mm

TYPE OF MOUNTING

- B : Bottom Connection, Surface, Case Mounting Plate
- M : Lower Back Connection, Flush, Case Centre Mounting Plate

STEM MATERIAL

- 1 : 316SS

PROCESS CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 2 : 8.0mm
- 3 : 10.0mm
- 4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

- P : 2 metre
- Q : 3 metre
- S : 5 metre
- V : 8 metre
- X : 10 metre
- Z : Other

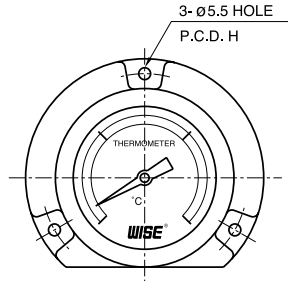
ACCESSORIES

- 0 : None
- 1 : Thermowell

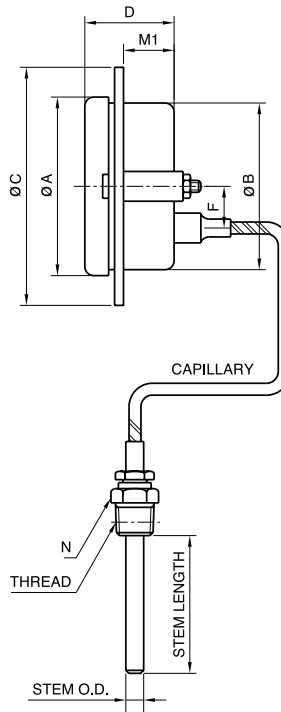
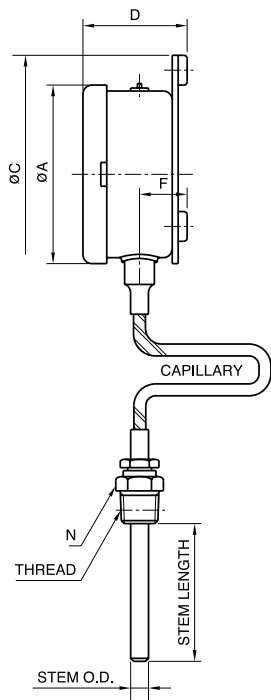
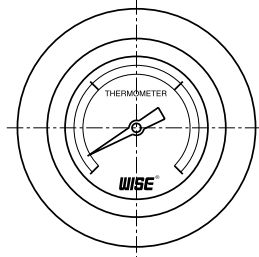
T210	4	B	1	E	C	2	XXX	P	1	SAMPLE MODEL NUMBER
------	---	---	---	---	---	---	-----	---	---	---------------------

T210 : TYPE OF MOUNTING

CODE B



CODE M



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	C	D	F	H	M1	N
100	B	111		128	52.5	23	115		27x31.2 HEX
	M	111	99.5	128	50.5	25		28.5	27x31.2 HEX
150	B	168.5		178	66	26	165		27x31.2 HEX
	M	168.5	153	195	62.5	56		38.5	27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)			
			8.0	10.0	12.0	8.0	10.0	12.0	
032	-50~50	2	100	85	65	200	130	130	
037	-50~100	5	100	88	65	200	130	130	
054	-30~50	2	100	85	65	200	150	130	
059	-30~100	2	100	85	65	200	130	130	
061	-30~120	5	100	85	65	200	130	130	
069	-20~50	2	100	85	65	200	130	130	
074	-20~100	2	100	85	65	200	130	130	
079	-20~150	5	100	85	65	200	130	130	
099	0~50	1	100	85	65	200	130	210	
100	0~60	1	100	85	65	200	130	190	
104	0~100	2	100	85	65	200	130	130	
106	0~120	2	100	85	65	200	130	130	
109	0~150	5	100	85	65	200	130	130	
114	0~200	5	100	85	65	200	130	130	
119	0~250	5	100	85	65	200	130	130	
124	0~300	5	100	45	40	200	130	130	
129	0~350	5	100	45	40	200	130	130	
134	0~400	10	100	45	40	200	130	130	
144	0~500	10	100	45	40	200	130	130	
154	0~600	10	100	45	40	200	130	130	
000	Special Range	Please Contact to Technical Dept.							

REMOTE READING THERMOMETER WITH ALUMINIUM CASE MODEL : T212

WISE[®]

SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

75, 100mm and 150mm

ACCURACY

±1.0% of Full Scale(0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 02

Standard Features

LOCATION OF STEM AND MOUNTING

Bottom Connection, Surface, Case Mounting
Lower Back Connection, Flush, Case Lower Mounting
Lower Back Connection, Flush, Case Centre Mounting

DIAL

Black Finished Aluminium

COVER

Black Finished Aluminium

CAPILLARY

Capillary : 1.6/0.2 mm, 316SS
Armored tube : 6.5/4.5 mm, 304SS

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM

8.0, 10.0 and 12.0mm
316SS

ZERO ADJUSTMENT

Please take out the pointer
and reset it

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T212 : REMOTE READING THERMOMETER WITH ALUMINIUM CASE

NOMINAL DIAMETER

- 3 : 75mm
- 4 : 100mm
- 6 : 150mm

TYPE OF MOUNTING

- B : Bottom Connection, Surface, Case Mounting Plate, Not available with diameter 75 mm
- K : Lower Back Connection, Flush, Case Mounting Plate, Only available with diameter 100mm
- L : Lower Back Connection, Flush, Case Centre Mounting Plate, Not available with diameter 150mm

STEM MATERIAL

- 1 : 316SS

PROCESS CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 2 : 8.0mm
- 3 : 10.0mm
- 4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

- P : 2 metre
- Q : 3 metre
- S : 5 metre
- V : 8 metre
- X : 10 metre
- Z : Other

ACCESSORIES

- 0 : None
- 1 : Thermowell

T212

4

B

1

E

C

3

XXX

P

1

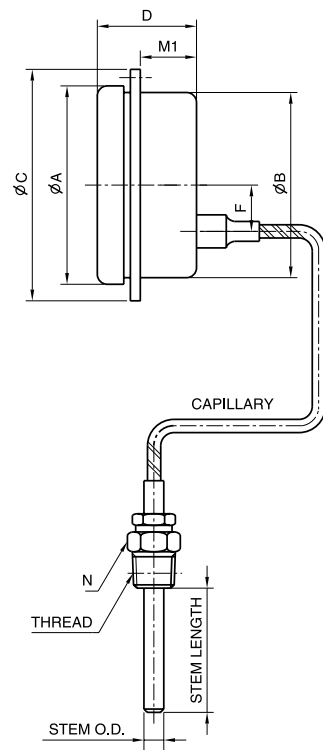
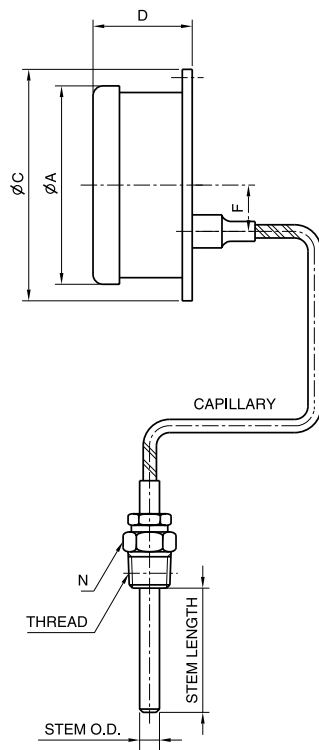
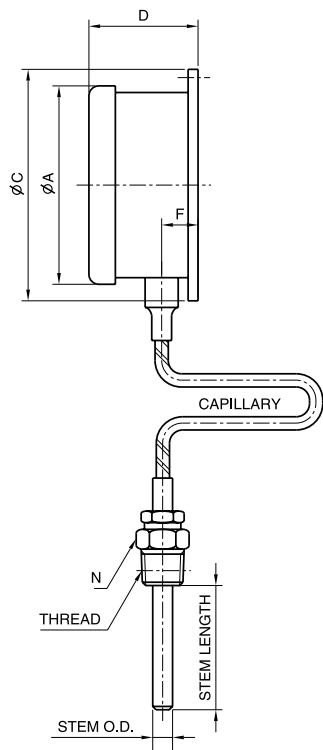
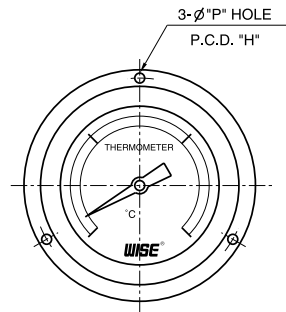
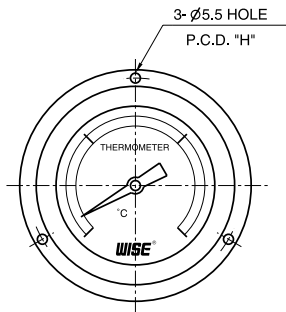
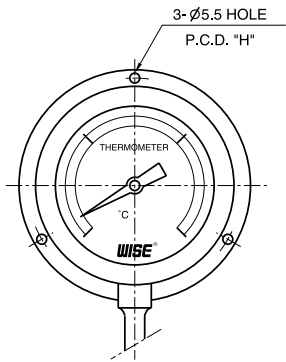
SAMPLE MODEL NUMBER

T212 : TYPE OF MOUNTING

CODE B

CODE K

CODE L



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	C	D	F	H	M1	P	N
75	L	85	80	105	46	25	95	24.5	4.5	27x31.2 HEX
100	B	110		128	52	20.5	115			27x31.2 HEX
	K	110		128	52	25	115			27x31.2 HEX
	L	110	105	135	46.5	25	122	26	5.5	27x31.2 HEX
150	B	172		185	62	19.5	174			27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

**REMOTE READING THERMOMETER
WITH OIL FILLED
MODEL : T219**



SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale(0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 03

Standard Features

LOCATION OF STEM AND MOUNTING

Bottom Connection, Surface, Case Mounting
Lower Back Connection, Flush, Case Centre Mounting Bracket

STEM

8.0, 10.0 and 12.0mm
316SS

CASE

304SS

WINDOW

Glass

FILLED FLUID IN CASE

Glycerine

COVER

304SS

DIAL

White Aluminium with
Black Graduations

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

CAPILLARY

Capillary : 1.6/0.2mm, 316SS
Armored Tube : 6.5/4.5mm, 304SS

POINTER

Black Aluminium

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T219 : REMOTE READING THERMOMETER WITH OIL FILLED

NOMINAL DIAMETER

4 : 100mm

TYPE OF MOUNTING

B : Bottom Connection, Surface, Case Mounting Plate

M : Lower Back Connection, Flush, Case Centre Mounting Bracket

STEM MATERIAL

1 : 316SS

PROCESS CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm

3 : 10.0mm

4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

P : 2 metre

Q : 3 metre

S : 5 metre

V : 8 metre

X : 10 metre

Z : Other

ACCESSORIES

0 : None

1 : Thermowell

T219

4

B

1

E

C

3

XXX

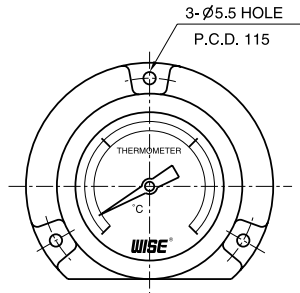
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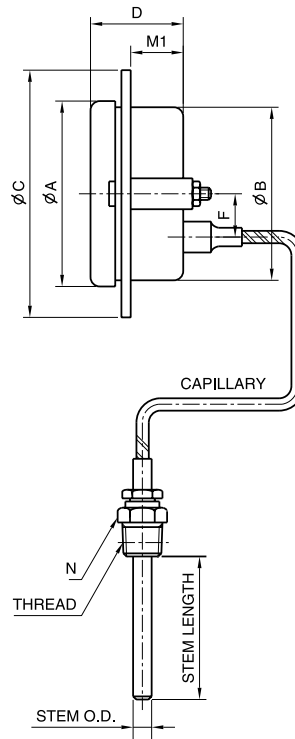
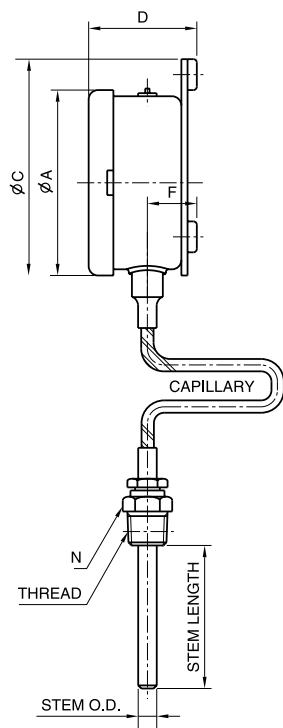
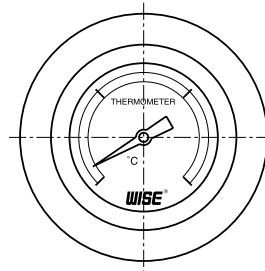
SAMPLE MODEL NUMBER

T219 : TYPE OF MOUNTING

CODE B



CODE M



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	C	D	F	M1	N
100	B	111		128	52.5	23		27x31.2 HEX
	M	111	99.5	128	50.5	25	28.5	27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

DIRECT READING THERMOMETER MODEL : T220

WISE®

SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 04

Standard Features

LOCATION OF STEM

Bottom Connection, Direct
Lower Back Connection, Direct

CASE

304SS

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with
Black graduations

POINTER

Black Aluminium

STEM

8.0, 10.0 and 12.0mm
316SS

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T220 : DIRECT READING THERMOMETER

NOMINAL DIAMETER

4 : 100mm

TYPE OF MOUNTING

A : Bottom Connection, Direct
G : Lower Back Connection, Direct

STEM MATERIAL

1 : 316SS

PROCESS CONNECTION

D : 3/8"
E : 1/2"

CONNECTION TYPE

C : PT
D : NPT
E : CF + PT
E : CF + NPT
(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm
3 : 10.0mm
4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

ACCESSORIES

0 : None
1 : Thermowell

T220

4

A

1

E

C

3

XXX

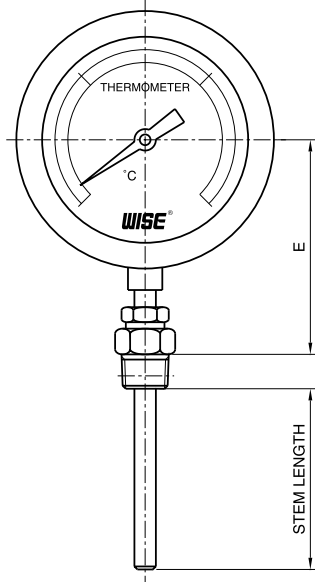
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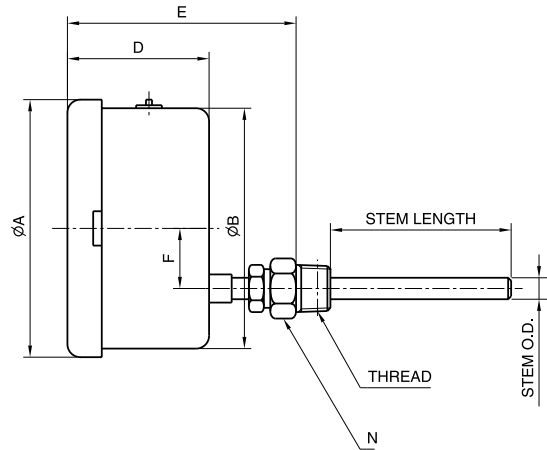
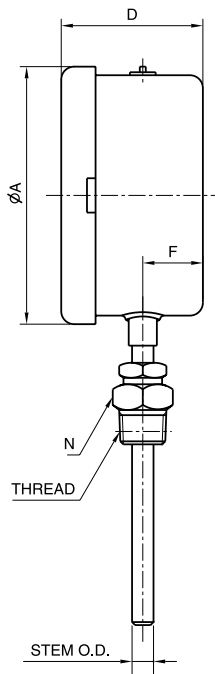
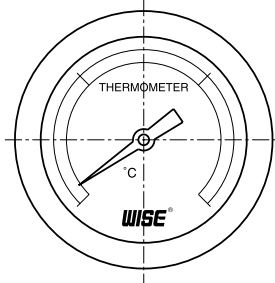
SAMPLE MODEL NUMBER

T220 : TYPE OF MOUNTING

CODE A



CODE G



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	D	E	F	N
100	A	111		48.5	135	20	27x31.2 HEX
	G	111	99.5	48.5	132.3	25	27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

DIRECT READING THERMOMETER WITH ALUMINIUM CASE MODEL : T222

WISE[®]

SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

100mm and 150mm

ACCURACY

±1.0% of Full Scale(0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 05

Standard Features

LOCATION OF STEM

Bottom Connection, Direct
Bottom Connection, Surface, Case Mounting
Lower Back Connection, Direct

CASE

Black Finished Aluminium

COVER

Black Finished Aluminium

WINDOW

Glass

DIAL

White Aluminium with
Black Graduations

POINTER

Black Aluminium

STEM

8.0, 10.0 and 12.0mm
316SS

ZERO ADJUSTMENT

By resetting the pointer
after removing the cover.

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T222 : DIRECT READING THERMOMETER WITH ALUMINIUM CASE

NOMINAL DIAMETER

- 4 : 100mm
- 6 : 150mm

TYPE OF MOUNTING

- A : Bottom Connection, Direct
- B : Bottom Connection, Surface, Case Mounting
- G : Lower Back Connection, Direct

STEM MATERIAL

- 1 : 316SS

PROCESS CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 2 : 8.0mm
- 3 : 10.0mm
- 4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

ACCESSORIES

- 0 : None
- 1 : Thermowell

T222

4

A

1

E

C

3

XXX

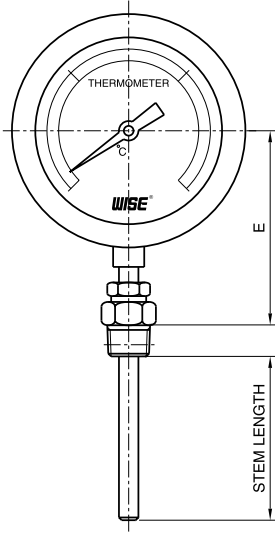
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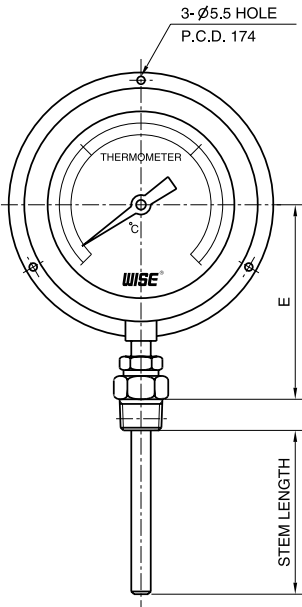
SAMPLE MODEL NUMBER

T222 : TYPE OF MOUNTING

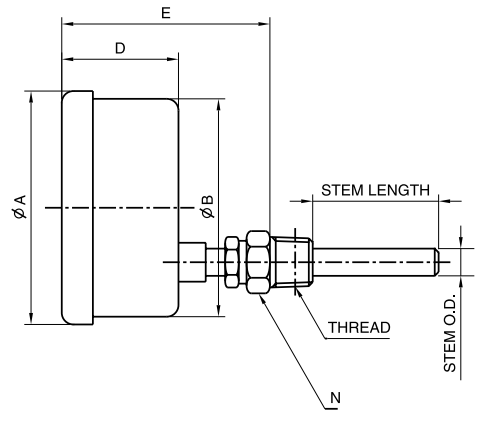
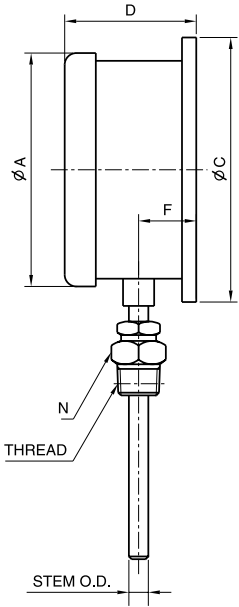
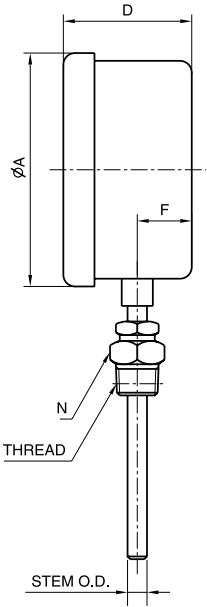
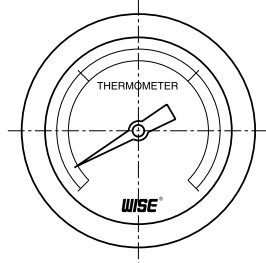
CODE A



CODE B



CODE G



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	C	D	E	F	N
100	A	110			52	135	20.5	27x31.2 HEX
	G	110	105		52	134.5	25	27x31.2 HEX
150	B	172		185	62	180	19.5	27x31.2 HEX
	G	172	159		62	162.5	25	27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

**DIRECT READING THERMOMETER
WITH OIL FILLED
MODEL : T229**

WISE[®]

SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

100 mm

ACCURACY

±1.0% of Full Scale(0 up to 200°C)

±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled

Organic Gas : -50°C to 600°C

KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 06

Standard Features

LOCATION OF STEM

Bottom Connection, Direct
Lower Back Connection, Direct

CASE

304SS

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with
Black graduations

POINTER

Black Aluminium

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

FILLED FLUID CASE

Glycerine

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T229 : DIRECT READING THERMOMETER WITH OIL FILLED

NOMINAL DIAMETER

4 : 100mm

TYPE OF MOUNTING

A : Bottom Connection, Direct
G : Lower Back Connection, Direct

STEM MATERIAL

1 : 316SS

PROCESS CONNECTION

D : 3/8"
E : 1/2"

CONNECTION TYPE

C : PT
 D : NPT
 E : CF + PT
E : CF + NPT
 (CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm
 3 : 10.0mm
4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

ACCESSORIES

0 : None
1 : Thermowell

T229

4

A

1

E

C

3

XXX

X

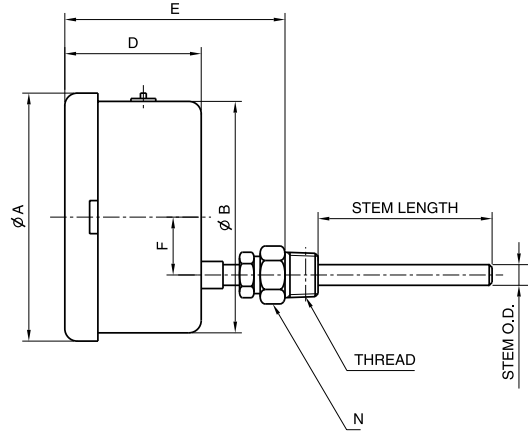
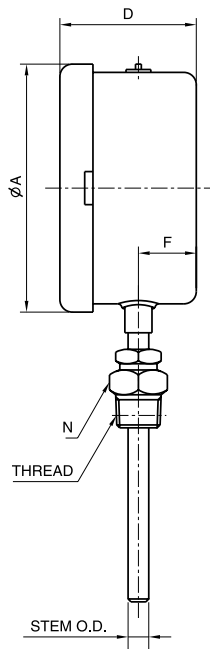
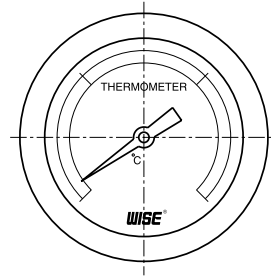
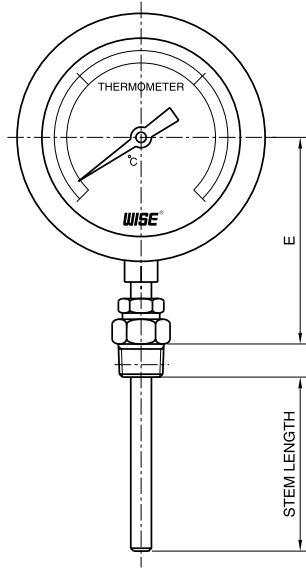
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SAMPLE MODEL NUMBER

T229 : TYPE OF MOUNTING

CODE A

CODE G



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	D	E	F	N
100	A	111		48.5	135	20	27x31.2 HEX
	G	111	99.5	48.5	132.3	25	27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

DIRECT READING THERMOMETER WITH ADJUSTABLE STEM MODEL : T290

WISE[®]

SERVICE INTENDED

Liquid Filled thermometer is used for measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Linear dials and temperature compensate line assure an accurate temperature indication at varying ambient conditions.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale(0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD02 - 07

Standard Features

LOCATION OF STEM

Lower Back with Adjustable Stem

CASE

304SS, Adjustable on stem 90°

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with
Black graduations

POINTER

304SS, Black painted

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

ZERO ADJUSTMENT

External at the back of case

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T290 : DIRECT READING THERMOMETER WITH ADJUSTABLE STEM

NOMINAL DIAMETER

4 : 100mm

TYPE OF MOUNTING

Y : Lower Back with Adjustable Stem

STEM MATERIAL

1 : 316SS

CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm

3 : 10.0mm

4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH

(Refer to Stem Length Table)

X

ACCESSORIES

0 : None

1 : Thermowell

T290

4

Y

1

E

C

3

XXX

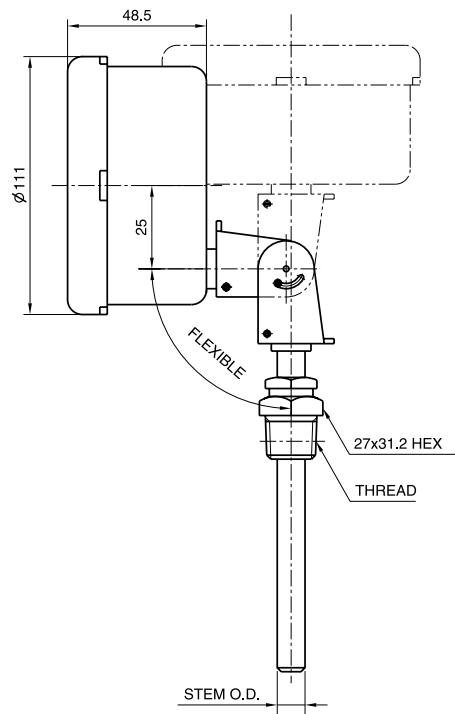
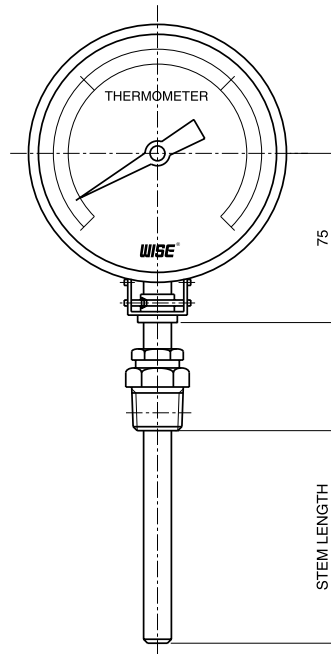
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1

SAMPLE MODEL NUMBER

T290 : TYPE OF MOUNTING

CODE Y



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

GLASS THERMOMETER MODEL : T400



SERVICE INTENDED

Glass Thermometer is suitable for applied to on temperature measurement in various industrial plants such as oil refinery, sugarrefinery, chemical industry, rubber plant etc.

FORM

Rectangular

ACCURACY

$\pm 2.0\%$ of Full Scale

TEMPERATURE ELEMENT

Liquid

WORKING RANGE

Maximum Scale Value



TD04 - 01

Standard Features

LOCATION OF STEM

Bottom Connection, Direct , "I" Type
Lower Back Connection, Direct, "L" Type

STEM CONNECTION

1/2" PT or NPT

CASE

Aluminium Alloy

STEM

8.0, 10.0 and 12.0mm
Brass, 304SS, 316SS

ORDERING INFORMATION

BASE MODEL

T400 : GLASS THERMOMETER

NOMINAL DIAMETER

9 : Rectangular

TYPE OF MOUNTING

V : Bottom Connection, Direct, " I " Type

W : Lower Back Connection, Direct, " L " Type

STEM MATERIAL

0 : 304SS

1 : 316SS

2 : Brass

CONNECTION SIZE

D : 3/8"

E : 1/2"

M : 22mm, Only available with connection type MM (Standard)

CONNECTION TYPE

C : PT

D : NPT

M : MM - Only available with connection size 22mm

STEM OUT DIA.

2 : 8.0mm

3 : 10.0mm (Standard)

4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH

(Refer to Stem Length Table)

X

ACCESSORIES

0 : None

1 : Thermowell

T400

9

V

0

E

C

3

XXX

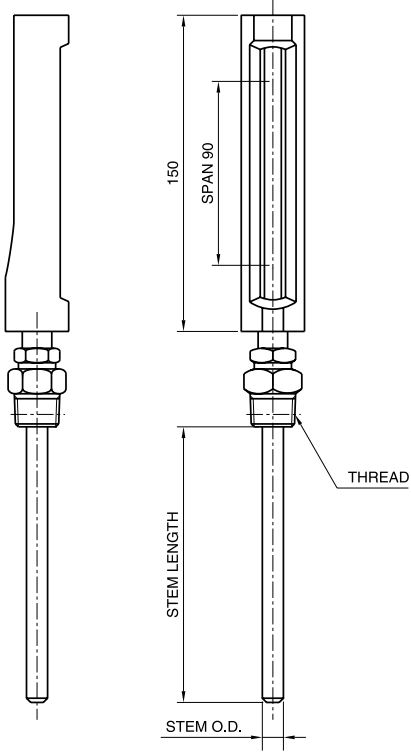
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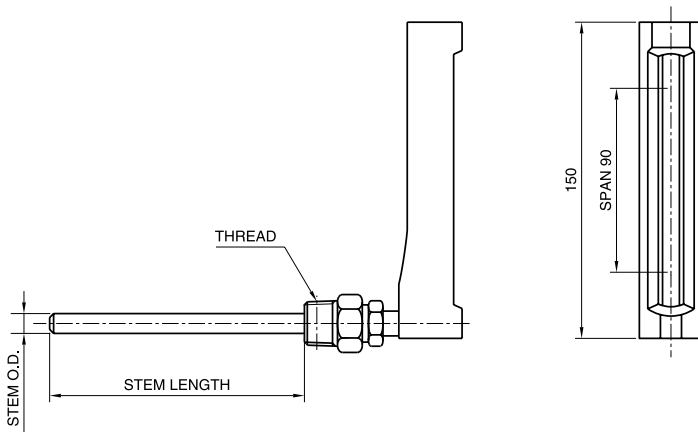
SAMPLE MODEL NUMBER

T400 : TYPE OF MOUNTING

CODE V



CODE W



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)		
			8.0	10.0	12.0
032	-50~50	2	205	116	95
037	-50~100	5	143	84	73
054	-30~50	2	255	140	125
059	-30~100	2	170	110	80
061	-30~120	5	130	75	75
069	-20~50	2	295	155	110
074	-20~100	2	180	104	88
079	-20~150	5	125	180	65
099	0~50	1	495	267	198
100	0~60	1	365	200	177
104	0~100	2	205	116	95
106	0~120	2	180	104	88
109	0~150	5	143	84	73
114	0~200	5	107	65	57
119	0~250	5	88	55	48
124	0~300	5	83	53	43
129	0~350	5	75	48	40
134	0~400	10	65	45	35
144	0~500	10	55	38	33
154	0~600	10	50	35	30
000	Special Range	Please Contact to Technical Dept.			

STEM LENGTH

Code	1	2	3	4	5
Length (mm)	50	60	70	80	100
Code	6	7	8	9	A
Length (mm)	120	130	150	175	200
Code	B	C	D	E	F
Length (mm)	225	250	275	300	350
Code	G	H	J	K	L
Length (mm)	375	400	450	500	550
Code	Z	Longer than 550mm			

**REMOTE READING THERMOMETER
WITH ALUMINIUM CASE AND ELECTRIC CONTACT
MODEL : T711, T712, T713, T714**



SERVICE INTENDED

Contact Type Thermometer is installed with electric contacts actuated by pointer. It provides the function which electrical circuit can be open or close by manual set point. It is applicable where signal is required (audible or visual alarm) for control of resistance or any other application with auxiliary relay and contact.

NOMINAL DIAMETER

100mm and 150mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD07 - 01

Standard Features

LOCATION OF STEM

Bottom Connection, Surface, Case Mounting
Lower Back Connection, Flush, Case Lower Mounting
Lower Back Connection, Flush, Case Centre Mounting

CASE

Black Finished Aluminium

WINDOW

Glass

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

CONTACTS

Maximum Voltage : 250V AC
Contact Rating : AC 220V, 0.25A/DC 100V, 0.5A
Max. No of Contact : 2 Sets per Gauge

COVER

Black Finished Aluminium

DIAL

White Aluminium with
Black graduations

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

CAPILLARY

Capillary : 1.6/0.2mm, 316SS
Armored tube : 6.5/4.5mm, 304SS

POINTER

Black Finished Brass

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

- T711 : REMOTE READING THERMOMETER WITH ALUMINIUM CASE AND HIGH ALARM CONTACT
- T712 : REMOTE READING THERMOMETER WITH ALUMINIUM CASE AND HIGH AND LOW ALARM CONTACT
- T713 : REMOTE READING THERMOMETER WITH ALUMINIUM CASE AND LOW ALARM CONTACT
- T714 : REMOTE READING THERMOMETER WITH ALUMINIUM CASE AND HIGH AND HIHIGH ALARM CONTACT

NOMINAL DIAMETER

- 4 : 100mm
- 6 : 150mm

MOUNTING

- B : Bottom Connection, Surface, Case Mounting Plate
- K : Lower Back Connection, Flush, Case Lower Mounting Plate, Not available with diameter 150mm
- L : Lower Back Connection, Flush, Case Centre Mounting Plate, Not available with diameter 150mm

STEM MATERIAL

- 1 : 316SS

CONNECTION

- D : 3/8"
- E : 1/2"
- E : 3/4"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 2 : 8.0mm
- 3 : 10.0mm
- 4 : 12.0mm (Standard)

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

- P : 2 metre
- Q : 3 metre
- S : 5 metre
- V : 8 metre
- X : 10 metre
- Z : Other

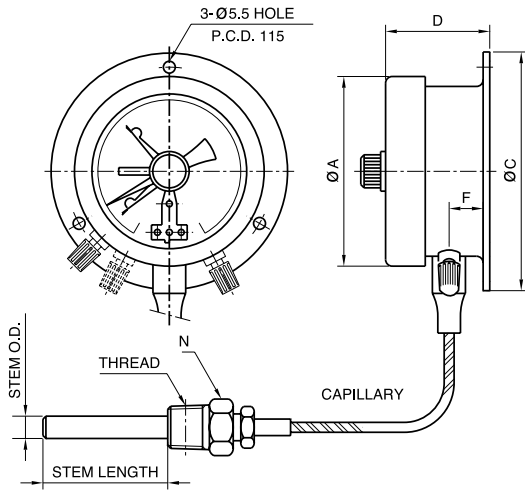
ACCESSORIES

- 0 : None
- 1 : Thermowell

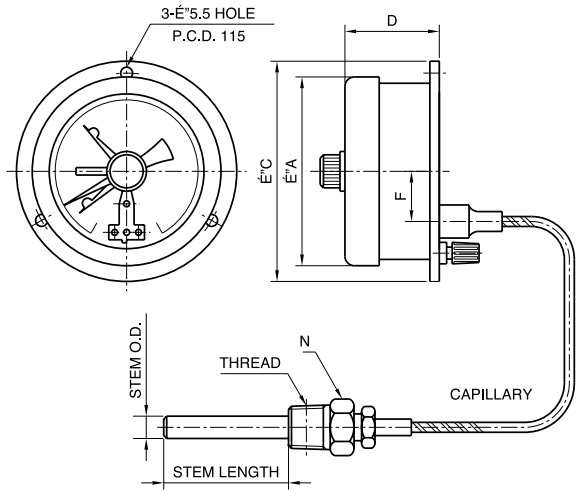
T711 4 B 1 E C 3 XXX P 1 SAMPLE MODEL NUMBER

T710 : TYPE OF MOUNTING

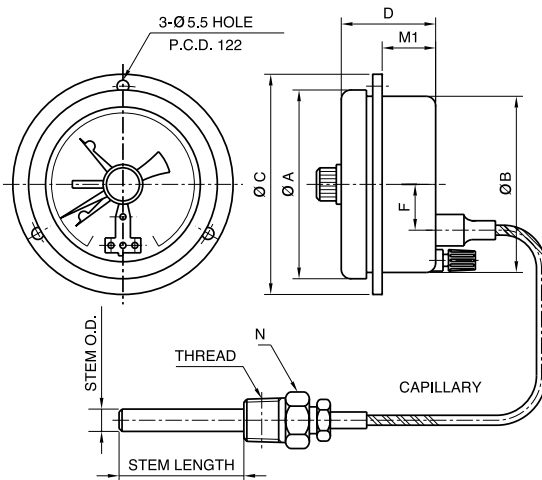
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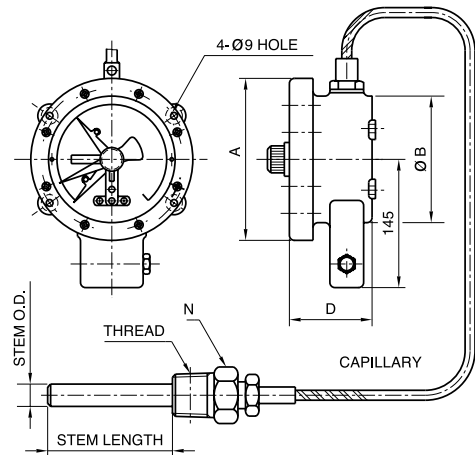
CODE K



CODE L



CODE B*



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	C	D	F	M1	N
100	T711,T713	B	110	128	73.8	20.5		27x31.2 HEX
	T712,T714			128	83.7	20.5		27x31.2 HEX
	T711,T713	K	110	128	73.8	25		27x31.2 HEX
	T712,T714			128	83.7	25		27x31.2 HEX
150	T711,T713	L	110	105	135	73.8	32	27x31.2 HEX
	T712,T714			105	135	83.7		25
	T711,T713	B*	186	158	90			27x31.2 HEX
	T712,T714				90			27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

**DIRECT READING THERMOMETER WITH
ALUMINUM CASE AND ELECTRICAL CONTACT
MODEL : T721, T722, T723, T724**



SERVICE INTENDED

Contact Type Thermometer is installed with electric contact actuated by pointer. It provides the function which electrical circuit can be open or close by manual set point. It is applicable where signal is required (audible or visual alarm) for control of resistance or any other application with auxiliary relay and contact.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD07 - 02

Standard Features

LOCATION OF STEM

Bottom Connection, Surface,
Case Mounting
Lower Back Connection, Direct

CASE

Black Finished Aluminium

COVER

Black Finished Aluminium

WINDOW

Glass

DIAL

White Aluminium with
Black graduations

POINTER

Black Finished Brass

STEM

8.0, 10.0 and 12.0mm
316SS

CONTACTS

Maximum Voltage : 250V AC
Contact Rating : AC 220V, 0.25A/DC
100V, 0.5A
Max. No of Contact : 2 Sets per Gauge

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

- T721 : DIRECT READING THERMOMETER WITH ALUMINIUM CASE AND HIGH ALARM CONTACT
- T722 : DIRECT READING THERMOMETER WITH ALUMINIUM CASE AND HIGH AND LOW ALARM CONTACT
- T723 : DIRECT READING THERMOMETER WITH ALUMINIUM CASE AND LOW ALARM CONTACT
- T724 : DIRECT READING THERMOMETER WITH ALUMINIUM CASE AND HIGH AND HIHIGH ALARM CONTACT

NOMINAL DIAMETER

- 4 : 100mm
- 6 : 150mm

TYPE OF MOUNTING

- B : Bottom Connection, Surface, Case Mounting Plate
- G : Lower Back Connection, Direct

STEM MATERIAL

- 1 : 316SS

CONNECTION

- D : 3/8"
- E : 1/2"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 2 : 8.0mm
- 3 : 10.0mm
- 4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH (Refer to Stem Length Table)

X

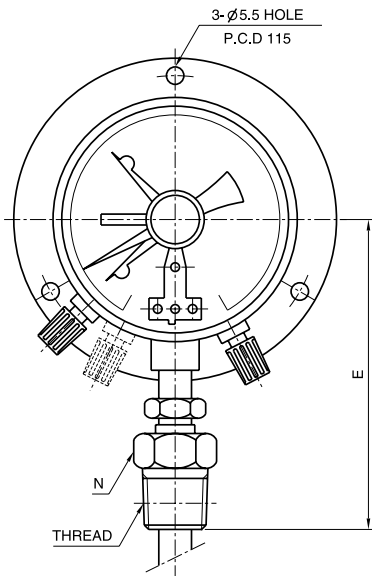
ACCESSORIES

- 0 : None
- 1 : Thermowell

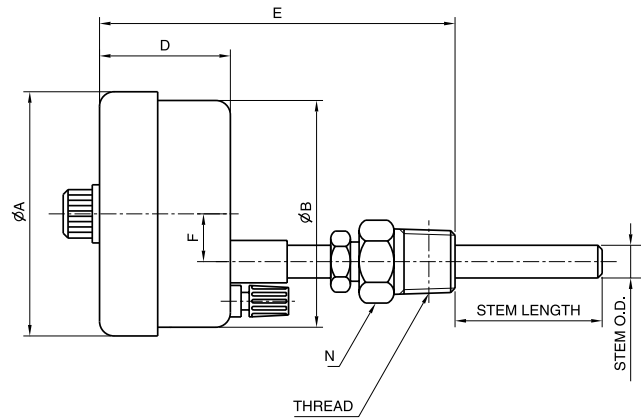
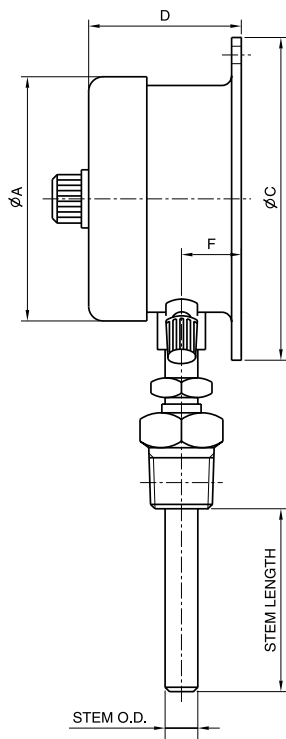
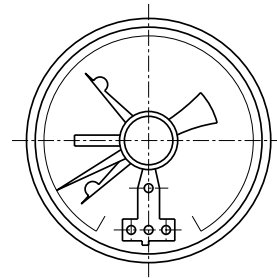
T721 4 B 1 E C 3 XXX X 1 SAMPLE MODEL NUMBER

T720 : TYPE OF MOUNTING

CODE B



CODE G



Dimensions (mm)

DIAL SIZE	AVAILABLE CODE	A	B	C	D	E	F	N	
100	T721,T723	B	110		128	72.5	148	20.5	27x31.2 HEX
	T722,T724		110		128	82.5	148	20.5	27x31.2 HEX
	T721,T723	G	110	105		72.5	157.5	25	27x31.2 HEX
	T722,T724		110	105		82.5	167.5	25	27x31.2 HEX

SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

**DIRECT READING THERMOMETER WITH
ELECTRICAL CONTACT AND DIN CONNECTOR
MODEL : T751, T752, T754**



SERVICE INTENDED

Contact Type Thermometer is installed with electric contact actuated by pointer. It provides the function which electrical circuit can be open or close by manual set point.

It is applicable where signal is required (audible or visual alarm) for control of resistance or any other application with auxiliary relay and contact.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)

±2.0% of Full Scale

TEMPERATURE ELEMENT

Bimetal

WORKING RANGE

Maximum Scale Value



TD07 - 03

Standard Features

LOCATION OF STEM AND MOUNTING

- Bottom Connection, Direct
- Centre Back Connection, Direct

CASE

304SS

COVER

304SS

WINDOW

Glass

DIAL

White Aluminium with Black graduations

POINTER

304SS, Black painted

STEM

6.4, 8.0 and 10.0mm
304SS and 316SS

CONTACTS

Maximum Voltage : 250V AC

Contact Rating : AC 220V, 0.25A/DC
100V, 0.5A

Max. No of Contact : 2 Sets per Gauge

ZERO ADJUSTMENT

By resetting the pointer after removing the cover

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T751 : DIRECT READING THERMOMETER WITH HIGH ALARM CONTACT

T752 : DIRECT READING THERMOMETER WITH HIGH AND LOW ALARM CONTACT

T754 : DIRECT READING THERMOMETER WITH HIGH AND HIHIGH ALARM CONTACT

NOMINAL DIAMETER

4 : 100mm

TYPE OF MOUNTING

W: Bottom Connection, Direct

X : Centre Back Connection, Direct

STEM MATERIAL

0 : 304SS

1 : 316SS

CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

1 : 6.4mm

2 : 8.0mm

3 : 10.0mm

RANGE(Refer to Scale Range Table)

XXX

STEM LENGTH

(Refer to Stem Length Table)

X

ACCESSORIES

0 : None

1 : Thermowell

T751

4

W

0

E

C

3

XXX

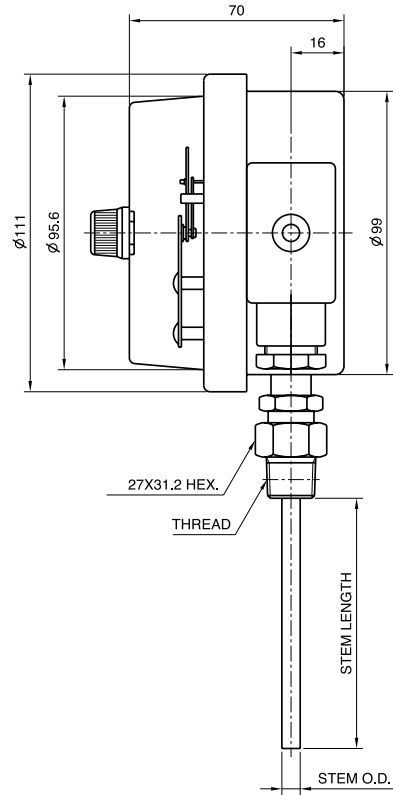
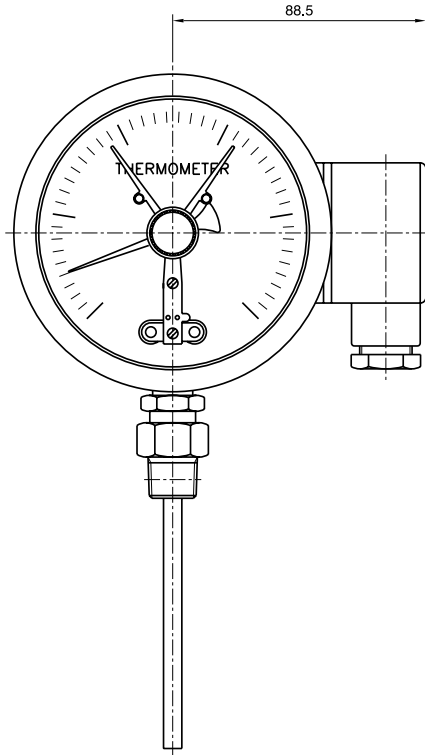
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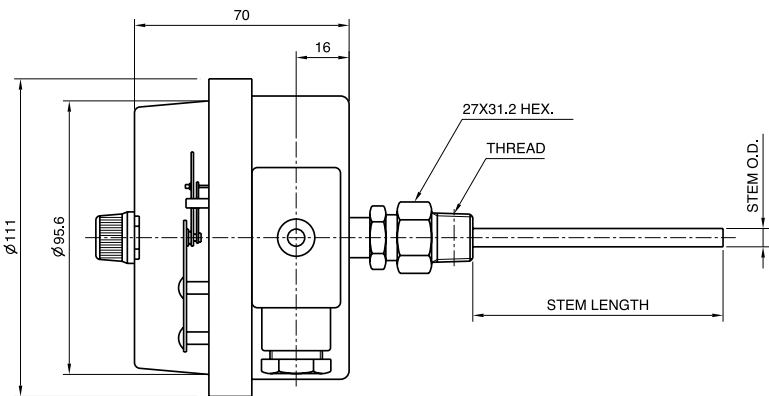
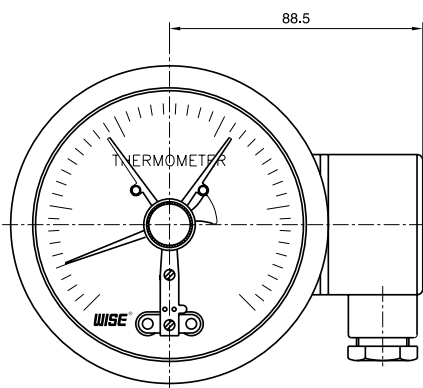
SAMPLE MODEL NUMBER

T750 : TYPE OF MOUNTING

CODE W



CODE X



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing(°C)	Minimum Stem Length (mm)		Remark
			6.4	8.0 and 10.0	
032	-50~50	2	55	50	
037	-50~100	5	45	35	
054	-30~50	2	70	60	
059	-30~100	5	50	45	
061	-30~120	2	45	35	
069	-20~50	2	80	70	
074	-20~100	2	45	45	
079	-20~150	5	40	35	
084	-10~50	1	95	80	
099	0~50	1	110	70	
100	0~60	1	95	80	
101	0~70	2	80	60	
102	0~80	2	70	90	
104	0~100	2	55	50	
106	0~120	2	50	45	
109	0~150	5	45	35	
114	0~200	5	35	35	
119	0~250	5	35	30	
124	0~300	5	35	25	
129	0~350	5	30	25	
134	0~400	10	80	65	
144	0~500	10	70	60	
000	Special Range	Please Contact to Technical Dept.			

STEM LENGTH

Code	2	4	5	7	8	A	C	E	F	H	J	K	L	Z
Length (mm)	60	80	100	130	150	200	250	300	350	400	450	500	550	Longer Than 550mm

**REMOTE READING THERMOMETER
WITH ELECTRIC CONTACT
MODEL : T761, T762, T763, T764**



SERVICE INTENDED

Contact Type Thermometer is installed with electric contact actuated by pointer. It provides the function which electrical circuit can be open or close by manual set point.

It is applicable where signal is required (audible or visual alarm) for control of resistance or any other application with auxiliary relay and contact.

NOMINAL DIAMETER

100mm

ACCURACY

±1.0% of Full Scale (0 up to 200°C)
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD07 - 04

Standard Features

LOCATION OF STEM

Bottom Connection, Surface, Case Mounting
Lower Back Connection, Flush, Case Lower Mounting
Lower Back Connection, Flush, Case Centre Mounting

CASE

304SS

WINDOW

Glass

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

CONTACTS

Maximum Voltage : 250V AC
Contact Rating : AC 220V, 0.25A/DC
100V, 0.5A
Max. No of Contact : 2 Sets per Gauge

COVER

304SS

DIAL

White Aluminium with
Black graduations

ZERO ADJUSTMENT

By resetting the pointer after
removing the cover

CAPILLARY

Capillary : 1.6/0.2mm, 316SS
Armored tube : 6.5/4.5mm, 304SS

POINTER

Black Finished Brass

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

- T761 : REMOTE READING THERMOMETER WITH HIGH ALARM CONTACT
- T762 : REMOTE READING THERMOMETER WITH HIGH AND LOW ALARM CONTACT
- T763 : REMOTE READING THERMOMETER WITH LOW ALARM CONTACT
- T764 : REMOTE READING THERMOMETER WITH HIGH AND HIHIGH ALARM CONTACT

NOMINAL DIAMETER

4 : 100mm

MOUNTING

- B : Bottom Connection, Surface, Case Mounting Plate
- K : Lower Back Connection, Flush, Case Lower Mounting Plate
- L : Lower Back Connection, Flush, Case Centre Mounting Plate

STEM MATERIAL

1 : 316SS

CONNECTION

- D : 3/8"
- E : 1/2"
- E : 3/4"

CONNECTION TYPE

- C : PT
- D : NPT
- E : CF + PT
- E : CF + NPT
- (CF : COMPRESSION FITTING)

STEM OUT DIA.

- 2 : 8.0mm
- 3 : 10.0mm
- 4 : 12.0mm (Standard)

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

- P : 2 metre
- Q : 3 metre
- S : 5 metre
- V : 8 metre
- X : 10 metre
- Z : Other

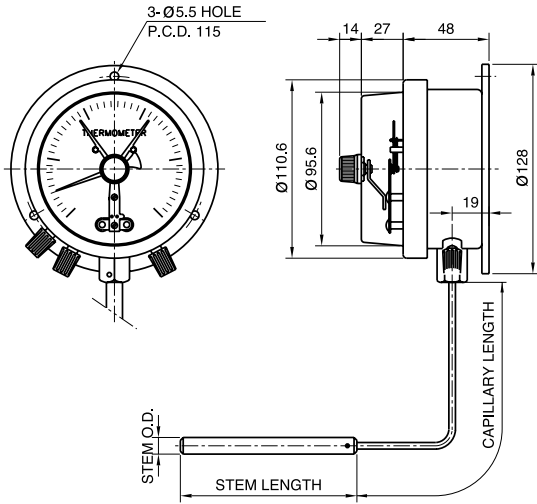
ACCESSORIES

- 0 : None
- 1 : Thermowell

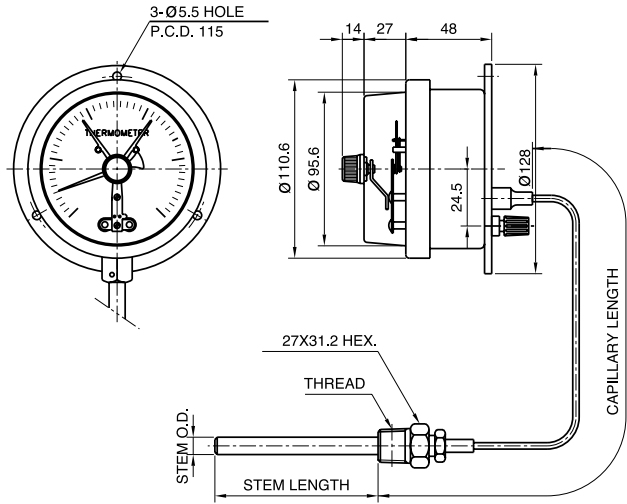
T761 4 B 1 E C 3 XXX P 1 SAMPLE MODEL NUMBER

T760 : TYPE OF MOUNTING

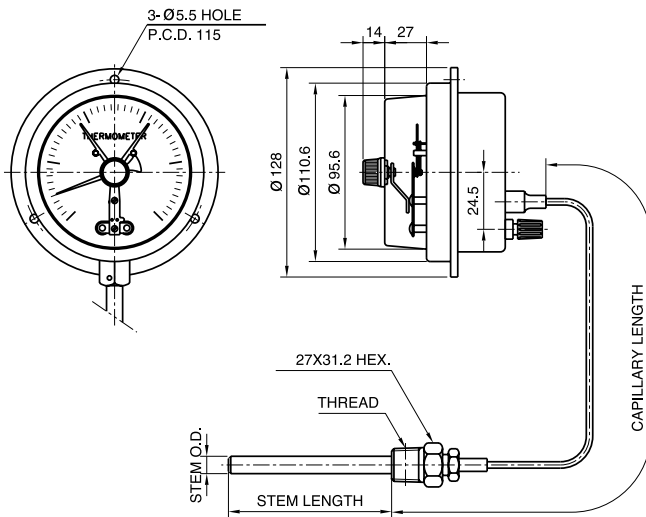
CODE B



CODE K



CODE L



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

TEMPERATURE RECORDER MODEL : T920

WISE®

SERVICE INTENDED

T920 Series Temperature Recorder provide single pen and 10 inch circular chart recorder with the function of measurement and record. It is suitable for hazardous environment such as gas or chemical process.

NOMINAL DIAMETER

250mm

ACCURACY

±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled

Organic Gas : -50°C to 600°C

KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD09 - 01

Standard Features

LOCATION OF STEM

Bottom Connection, Surface, Case Mounting

CASE

Black Finished Aluminium

COVER

Black Finished Aluminium
Hinged Door

WINDOW

Glass

CHART DRIVE

Spring Wound type
24 Hours Rotation

CHART PAPER

10 inch circular
30 inch furnished with
each instrument.

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T920 : TEMPERATURE RECORDER

NOMINAL DIAMETER

8 : 250mm

TYPE OF MOUNTING

B : Bottom Connection, Surface, Case Mounting Plate

STEM MATERIAL

1 : 316SS

CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm

3 : 10.0mm

4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

P : 2 metre

Q : 3 metre

S : 5 metre

V : 8 metre

X : 10 metre

Z : Other

ACCESSORIES

0 : None

1 : Thermowell

T920

8

B

1

E

C

3

XXX

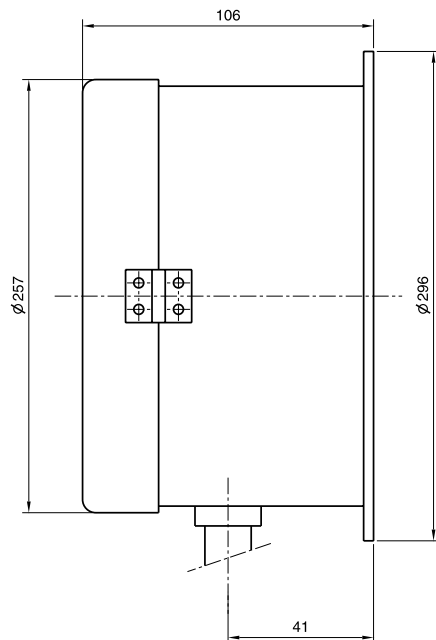
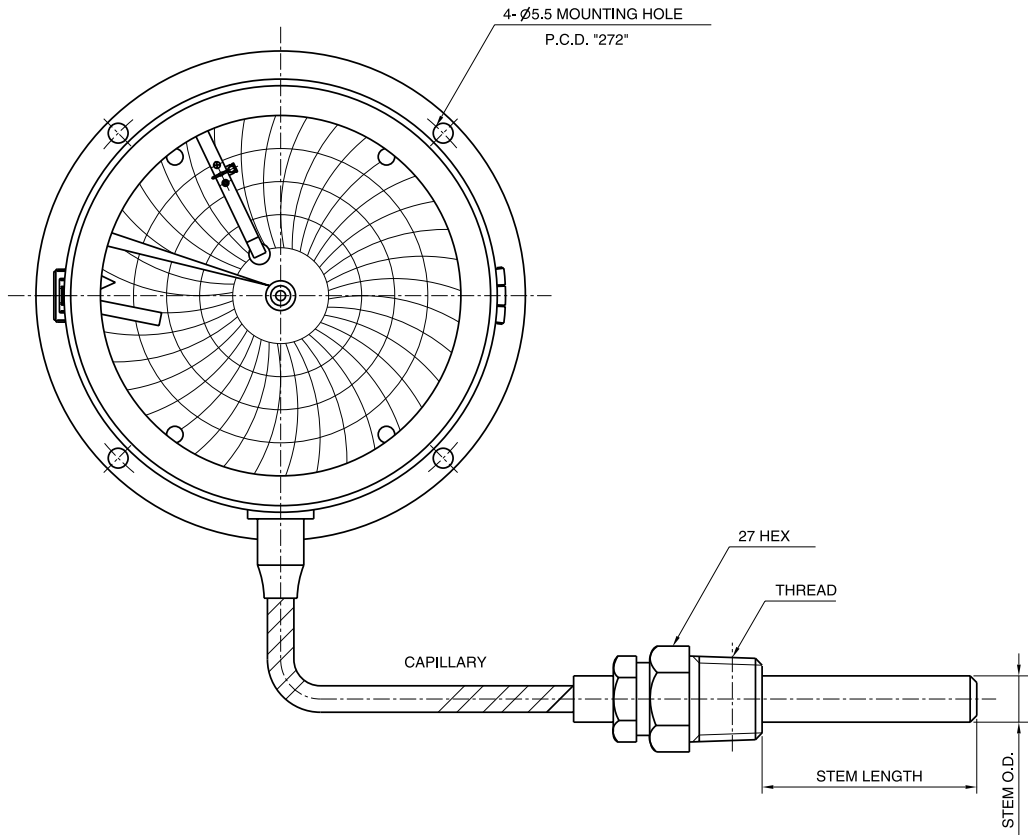
Q

1

SAMPLE MODEL NUMBER

T920 : TYPE OF MOUNTING

CODE B



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)			
			8.0	10.0	12.0	8.0	10.0	12.0	
032	-50~50	2	100	85	65	200	130	130	
037	-50~100	5	100	88	65	200	130	130	
054	-30~50	2	100	85	65	200	150	130	
059	-30~100	2	100	85	65	200	130	130	
061	-30~120	5	100	85	65	200	130	130	
069	-20~50	2	100	85	65	200	130	130	
074	-20~100	2	100	85	65	200	130	130	
079	-20~150	5	100	85	65	200	130	130	
099	0~50	1	100	85	65	200	130	210	
100	0~60	1	100	85	65	200	130	190	
104	0~100	2	100	85	65	200	130	130	
106	0~120	2	100	85	65	200	130	130	
109	0~150	5	100	85	65	200	130	130	
114	0~200	5	100	85	65	200	130	130	
119	0~250	5	100	85	65	200	130	130	
124	0~300	5	100	45	40	200	130	130	
129	0~350	5	100	45	40	200	130	130	
134	0~400	10	100	45	40	200	130	130	
144	0~500	10	100	45	40	200	130	130	
154	0~600	10	100	45	40	200	130	130	
000	Special Range	Please Contact to Technical Dept.							

INDICATING TEMPERATURE SWITCH MODEL : T931, T932

WISE®

SERVICE INTENDED

T930 Series, Temperature Switch, are installed with micro contact type suitable for corrosive fluid. Temperature measurement deadband is fixed.

DIAL SIZE

150mm

REPEATABILITY

±1.0% of Adjustable Range

ACCURACY

±1.0% of Full Scale

±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled

Organic Gas : -50°C to 600°C

KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD09 - 02

Standard Features

LOCATION OF STEM

Bottom Connection, Surface,
Case Mounting

CASE

Silver Gray Finished Aluminium

COVER

Silver Gray Finished Aluminium

SWITCH TYPE

Micro Switch Snap Action

SWITCH FORM

One SPDT or Two SPDT
DPDT

CONTACT RATING

-AC 125V/250V, 15A and DC 30V, 2A
DC 125V, 0.5A for Resistance Load
-AC 125V/250V, 15A and DC 30V, 1A
DC 125V, 0.05A for Inductive Load

CONDUIT CONNECTION

1/2", 3/4" PF

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T931 : INDICATING TEMPERATURE SWITCH (SINGLE SET-POINT)

T932 : INDICATING TEMPERATURE SWITCH (DUAL SET-POINT)

NOMINAL DIAMETER

6 : 150mm

MOUNTING

B : Bottom Connection, Surface, Case Mounting Plate

STEM MATERIAL

1 : 316SS

PROCESS CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

E : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm

3 : 10.0mm

4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH (If direct mounting, Specify Stem Length Code)

P : 2 metre

Q : 3 metre

S : 5 metre

V : 8 metre

X : 10 metre

Z : Other

ACCESSORIES

0 : None

1 : Thermowell

T931

6

B

1

E

C

3

XXX

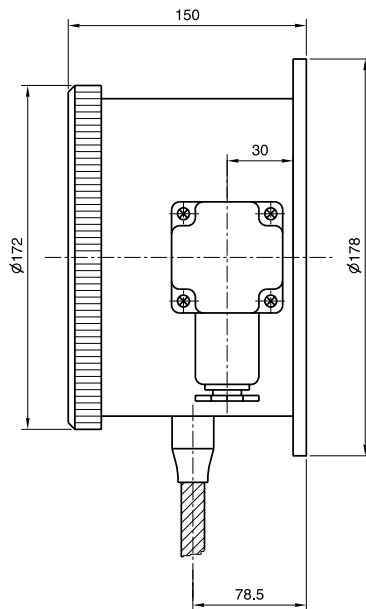
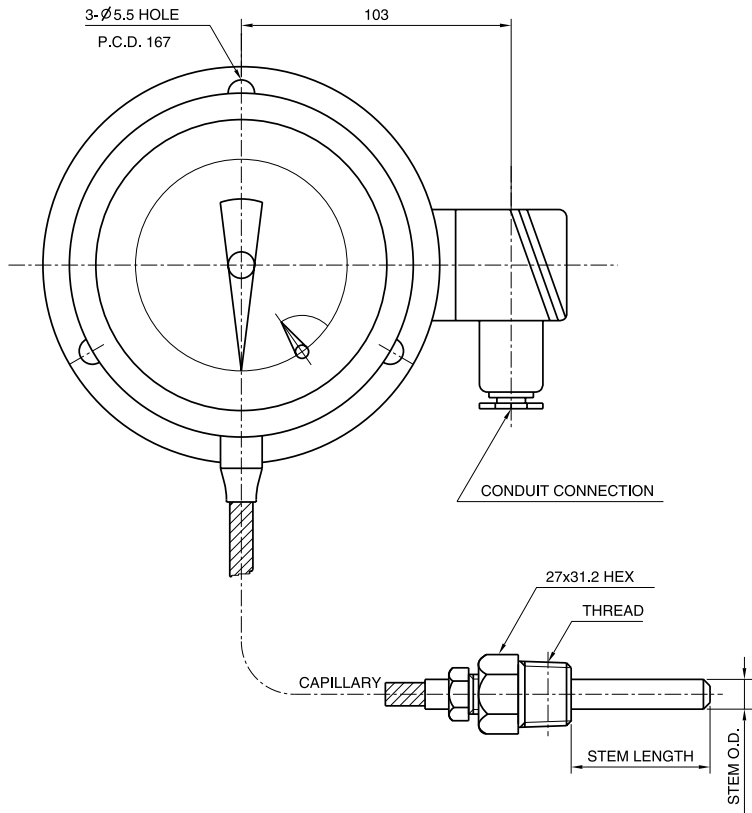
P

1

SAMPLE MODEL NUMBER

T931, T932 : TYPE OF MOUNTING

CODE B



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range	Please Contact to Technical Dept.						

WEATHER PROOF TEMPERATURE SWITCH MODEL : T941, T942



SERVICE INTENDED

T940 Series, Temperature Switch, are installed with micro contact type suitable for corrosive fluid. Temperature measurement deadband is fixed.

DIMENSIONS

Refer to Drawings Dimensions

REPEATABILITY

±1.0% of Adjustable Range

ACCURACY

±1.0% of Full Scale
±2.0% of Full Scale

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD09 - 03

Standard Features

LOCATION OF STEM

Bottom Connection, Surface,
Case Mounting

CASE

Silver gray Finished (ALDC)

COVER

Silver gray Finished (ALDC)

SWITCH TYPE

Micro Switch Snap Action

SWITCH FORM

One SPDT or Two SPDT
DPDT

CONTACT RATING

-AC 125V/250V, 15A and DC 30V, 2A
DC 125V, 0.5A for Resistance Load
-AC 125V/250V, 15A and DC 30V, 1A
DC 125V, 0.05A for Inductive Load

CONDUIT CONNECTION

1/2" or 3/4" PF

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T941 : WEATHER PROOF TEMPERATURE SWITCH (SINGLE SET-POINT)

T942 : WEATHER PROOF TEMPERATURE SWITCH (DUAL SET-POINT)

UNUSED CHARACTER

9B

STEM MATERIAL

1 : 316SS

PROCESS CONNECTION

D : 3/8"

E : 1/2"

CONNECTION

C : PT

D : NPT

E : CF + PT

F : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0 mm

3 : 10.0 mm

4 : 12.0 mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH (If direct mounting, Specify Stem Length Code)

P : 2 metre

Q : 3 metre

S : 5 metre

V : 8 metre

X : 10 metre

Z : Other

ACCESSORIES

0 : None

1 : Thermowell

T941

9B

1

D

C

3

XXX

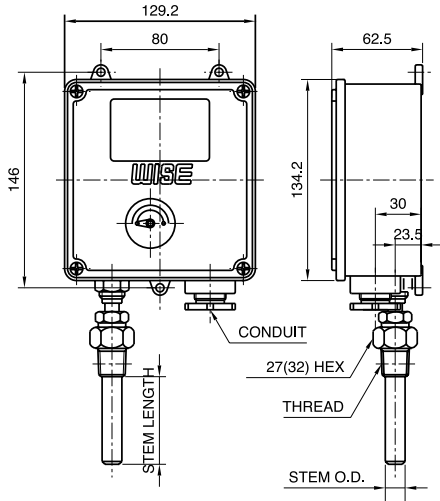
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1

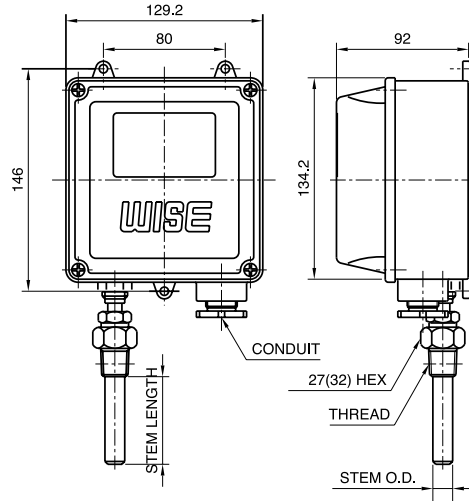
SAMPLE MODEL NUMBER

T941, T942 : TYPE OF MOUNTING

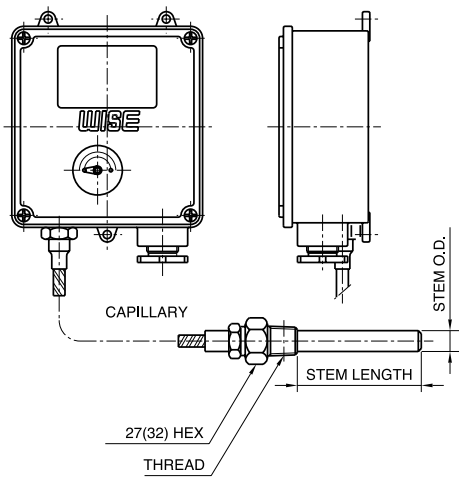
CODE P941



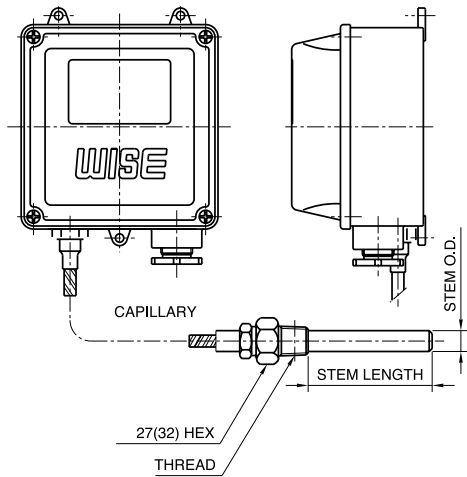
CODE P942



CODE P941*



CODE P942*



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range		Please Contact to Technical Dept.					

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000

**EXPLOSION PROOF
TEMPERATURE SWITCH
MODEL : T951, T952**



SERVICE INTENDED

T950 Series, Temperature Switch are installed with micro contact type suitable for corrosive fluid. Temperature measurement deadband is fixed.

DIMENSIONS

Refer to Drawings Dimensions

REPEATABILITY

±1.0% of Adjustable Range

ACCURACY

±1.0% of Full Scale
±2.0% of Full Scale

DEGREE OF PROTECTION

Explosion Proof

TEMPERATURE ELEMENT

Liquid Filled
Organic Gas : -50°C to 600°C
KEROSENE : -50°C to 200°C

WORKING RANGE

Maximum Scale Value



TD09 - 04

Standard Features

LOCATION OF STEM AND MOUNTING

Bottom Connection, Surface, Case Mounting

CASE

Silver Gray Finished Aluminium

COVER

Silver Gray Finished Aluminium

SWITCH TYPE

Micro Switch, Snap Action

SWITCH FORM

One SPDT or Two SPDT
DPDT

CONTACT RATING

-AC 125V/250V, 15A and DC 30V, 2A
DC 125V, 0.5A for Resistance Load
-AC 125V/250V, 15A and DC 30V, 1A
DC 125V, 0.05A for Inductive Load

CONDUIT CONNECTION

1/2" or 3/4" PF

STEM OUT DIA.

8.0, 10.0 and 12.0mm
316SS

STEM CONNECTION

1/2" PT or NPT

ORDERING INFORMATION

BASE MODEL

T951 : EXPLOSION PROOF TEMPERATURE SWITCH (SINGLE SET-POINT)

T952 : EXPLOSION PROOF TEMPERATURE SWITCH (DUAL SET-POINT)

UNUSED CHARACTER

9B

STEM MATERIAL

0 : 304SS

1 : 316SS

PROCESS CONNECTION

D : 3/8"

E : 1/2"

CONNECTION TYPE

C : PT

D : NPT

E : CF + PT

F : CF + NPT

(CF : COMPRESSION FITTING)

STEM OUT DIA.

2 : 8.0mm

3 : 10.0mm

4 : 12.0mm

RANGE(Refer to Scale Range Table)

XXX

CAPILLARY LENGTH

(If direct mounting,
Specify Stem Length Code)

P : 2 metre

Q : 3 metre

S : 5 metre

V : 8 metre

X : 10 metre

Z : Other

ACCESSORIES

0 : None

1 : Thermowell

T951

9B

1

E

C

3

XXX

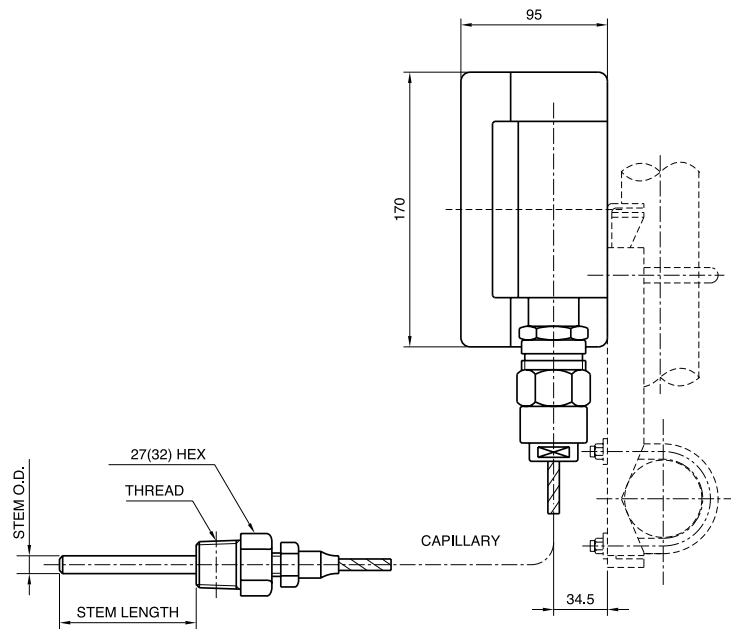
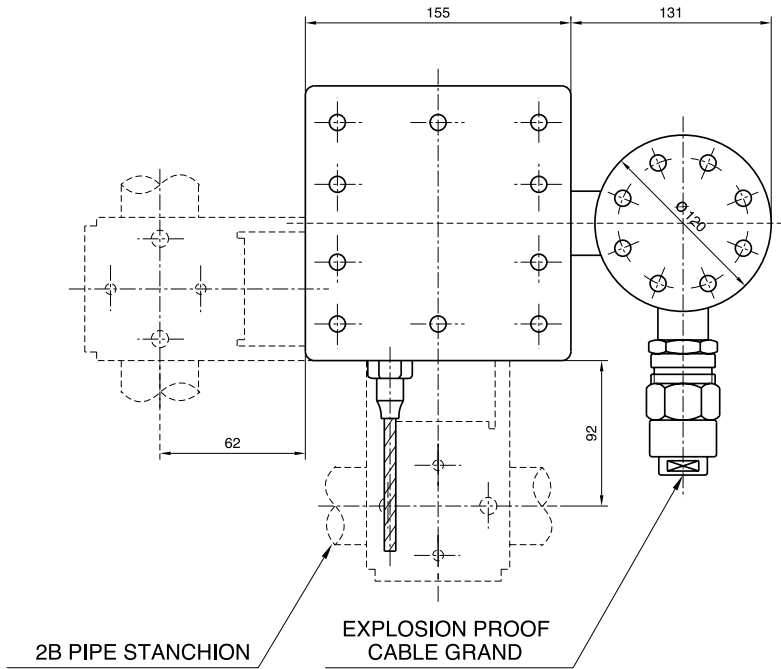
P

1

SAMPLE MODEL NUMBER

T951, T952 : TYPE OF MOUNTING

CODE T951,T952



SCALE RANGES

Code	Scale Range (°C)	Scale Spacing (°C)	Minimum Stem Length (mm)			Standard Stem Length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50~50	2	100	85	65	200	130	130
037	-50~100	5	100	88	65	200	130	130
054	-30~50	2	100	85	65	200	150	130
059	-30~100	2	100	85	65	200	130	130
061	-30~120	5	100	85	65	200	130	130
069	-20~50	2	100	85	65	200	130	130
074	-20~100	2	100	85	65	200	130	130
079	-20~150	5	100	85	65	200	130	130
099	0~50	1	100	85	65	200	130	210
100	0~60	1	100	85	65	200	130	190
104	0~100	2	100	85	65	200	130	130
106	0~120	2	100	85	65	200	130	130
109	0~150	5	100	85	65	200	130	130
114	0~200	5	100	85	65	200	130	130
119	0~250	5	100	85	65	200	130	130
124	0~300	5	100	45	40	200	130	130
129	0~350	5	100	45	40	200	130	130
134	0~400	10	100	45	40	200	130	130
144	0~500	10	100	45	40	200	130	130
154	0~600	10	100	45	40	200	130	130
000	Special Range		Please Contact to Technical Dept.					

STEM LENGTH

Code	4	5	6	7	8	9	A	B	C	D
Length (mm)	80	100	120	130	150	175	200	225	250	275
Code	E	F	G	H	J	K	L	M	N	P
Length (mm)	300	350	375	400	450	500	550	1000	1500	2000