

UNIJIN® INDUSTRIAL BI-METAL THERMOMETER (BACK)

Model : T110

T110 models are designed for use for direct indicating and measuring temperature in various industrial plants such as oil refinery, sugar refinery, chemical and rubber plant, food industries, refrigeration, process, engineering, general industry and etc. Pocket Thermowell must be used on all applications where thermometer bulb sensor is subjected to pressure, corrosive fluid or flow rate. Thermowell will make thermometer disassemble for calibration or replacement easier as the process will not disturbed.



Standard Specification

Dial Size

63, 75, 100, 150mm

Connection

63, 75mm : 3/8" BSPT
100, 150, 200mm : 1/2" BSPT

Scale Range (°C & °F)

-50 ~ 50°C to -50 ~ 100°C,
-30 ~ 50°C to -30 ~ 120°C,
-20 ~ 50°C to -30 ~ 150°C,
0 ~ 50°C to 0 ~ 500°C

Working Range

Max 100% of Full Scale

Accuracy

± 2.0% of Full Scale

Zero Adjustment

At back case or at pointer

Material

Case & Cover : 304SS
Window : Glass
Sensing Element : Coiled bimetallic
Connection : 304SS
Stem : 304SS, max 2000mm
Stem OD : 6, 8, 10mm

Thermometer Ordering Information

Model

T110

Dial Size

63, 75, 100, 150mm

Scale Range

Stem Length

63, 75, 100mm

Connection Type

3/8" BSPT

Options

Thermowell

Example of Order

Model

T110

Dial Size

75mm

Range

0 ~ 100°C

Stem Length

100mm

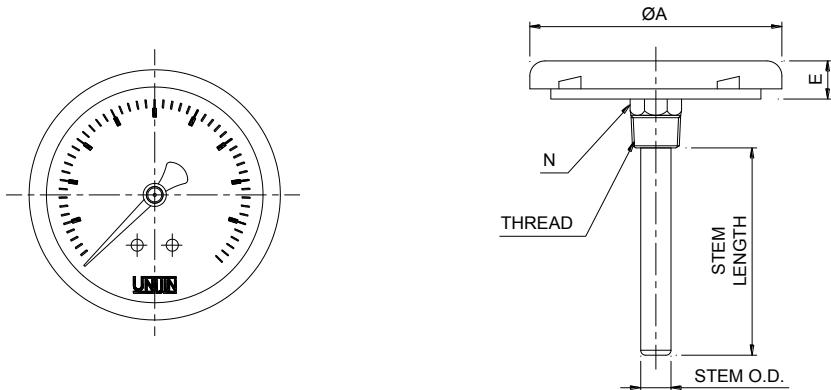
Connection

3/8" BSPT

Options

316SS Thermowell

Basic Dimensions



Unit : mm

	ø 65	ø 75	ø 100	ø 150
A	65.3	84.2	117.8	160.0
E	29.5	28.0	36.0	37.0
N	17.0	17.0	21.0	21.0

UNIJIN® INDUSTRIAL BI-METAL THERMOMETER (BOTTOM)

Model : T120

T120 is used for measuring temperature of gas or fluid liquid. 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.



Standard Specification

Dial Size

63, 75, 100mm

Connection

63, 75mm : 3/8" BSPT
100mm : 1/2" BSPT

Scale Range (°C & °F)

-50 ~ 50°C to -50 ~ 100°C,
-30 ~ 50°C to -30 ~ 120°C,
-20 ~ 50°C to -30 ~ 150°C,
0 ~ 50°C to 0 ~ 500°C

Working Range

Max 100% of Full Scale

Accuracy

± 2.0% of Full Scale

Zero Adjustment

At pointer

Material

Case & Cover : 304SS
Window : Glass
Sensing Element : Coiled bimetallic
Connection : 304SS
Stem : 304SS, max 2000mm
Stem OD : 6, 8, 10mm

Thermometer Ordering Information

Model

T120

Dial Size

63, 75, 100mm

Scale Range

Stem Length

63, 75, 100mm

Connection Type

1/2" BSPT
3/8" BSPT

Options

Thermowell

Example of Order

Model

T120

Dial Size

75mm

Range

0 ~ 100°C

Stem Length

100mm

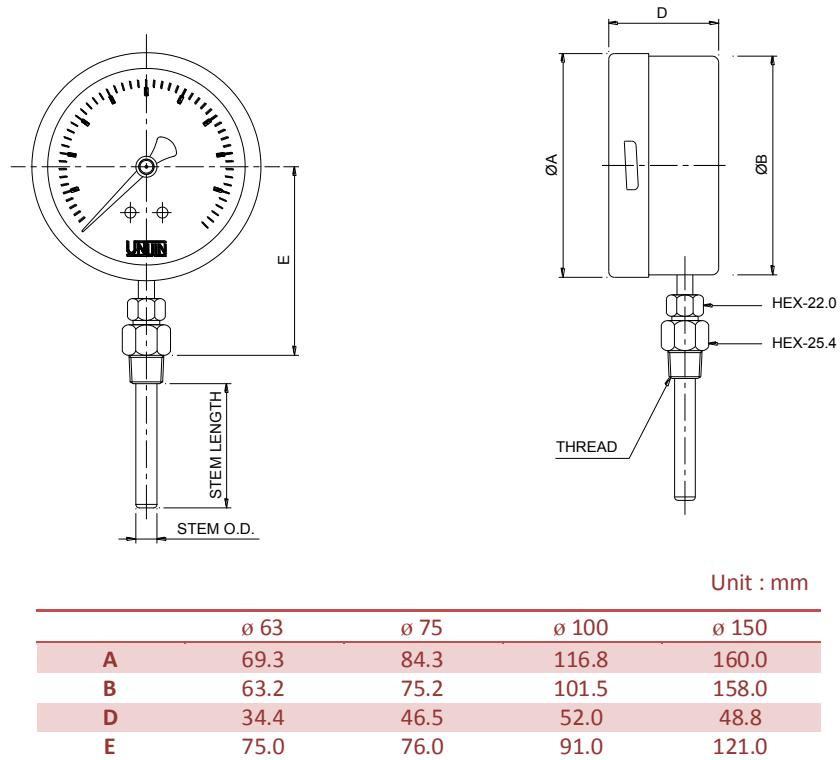
Connection

3/8" BSPT

Options

316SS Thermowell

Basic Dimensions



UNIJIN® FREE ANGLE BI-METAL THERMOMETER

Model : T190

T190 models are designed for use for direct indicating and measuring temperature in various industrial plants such as oil refinery, sugar refinery, chemical and rubber plant, food industries, refrigeration, process, engineering, general industry and etc. Pocket Thermowell must be used on all applications where thermometer bulb sensor is subjected to pressure, corrosive fluid or flow rate. Thermowell will make thermometer disassemble for calibration or replacement easier as the process will not disturbed. Systems or equipment with strong vibration are apparent, the Capillary Thermometer model is recommended.



Standard Specification

Dial Size

100mm / 4"

Connection

1/2" NPT / BSPT

Scale Range (°C & °F)

-30~ 50°C;	0 ~ 60°C ;
0~ 100°C;	0~ 120°C;
0~ 150°C;	0~ 200°C;
0~ 300°C;	0~ 400°C;
0~ 500°C	

Working Range

Max 100% of Full Scale

Stem OD

Ø6.00mm, Ø8.00mm

IP Protection

IP65

Accuracy

± class 1.5 ≤ 300 °C,

± class 2.5 > 300 °C,

Option : Class 1

Zero Adjustment

At back case

Material

Case & Cover : 304SS / 316SS (option)

Window : Mineral; Tempered Glass

Sensing Element : Coiled bimetallic

Connection : 304SS / 316SS (Option)

Stem : 304SS / 316SS (Option)

Option

Thermowell available on request

Liquid Filled

Example of Order

Thermometer Ordering Information

Model

T190

Dial Size

100mm

Scale Range

refer Table above

Stem Length (mm)

80, 100, 150, 230

(Others available on request)

Connection Type

1/2" NPT / BSPT

Options

Thermowell

Model

T190

Dial Size

4"

Range

0 ~ 200°C

Stem Length

150mm

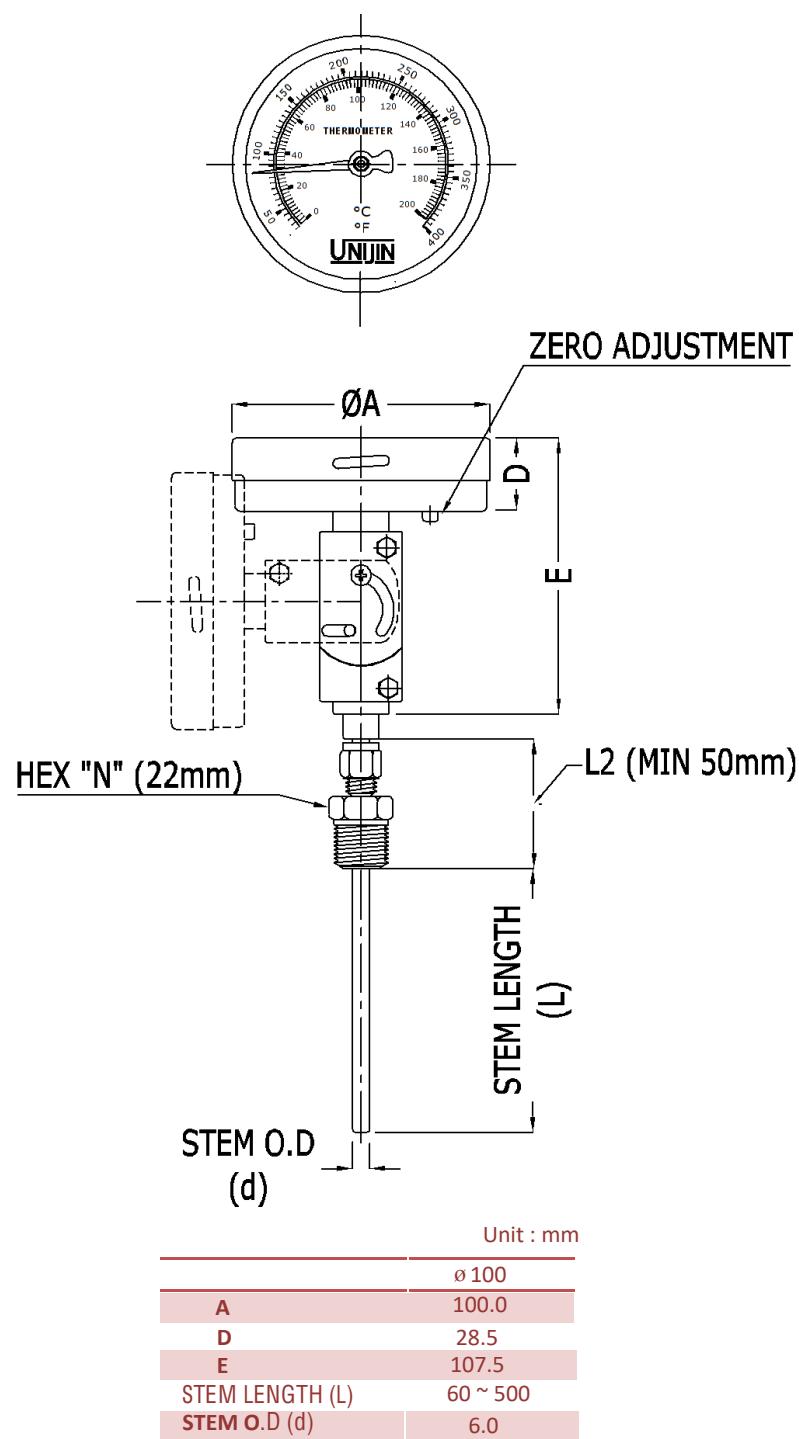
Connection

1/2" NPT

Options

316SS
Thermowell

Basic Dimensions



UNIJIN® FULLY STAINLESS STEEL CAPILLARY THERMOMETER

Model : T210

T210 (Dry) and T211 (Oil Filled) models are designed for use in measuring temperature of corrosive and non-corrosive fluid in all industries, operated in aggressive and non-aggressive environment. Thermowell will make thermometer disassemble for calibration or replacement easier as the process will not disturbed.



Standard Specification

Dial Size

100, 150mm

Connection

1/2" BSPT

Scale Range (°C & °F)

-50 ~ 50°C to -50 ~ 100°C,
 -30 ~ 50°C to -30 ~ 120°C,
 -20 ~ 50°C to -30 ~ 150°C,
 0 ~ 50°C to 0 ~ 500°C

Working Range

Max 100% of Full Scale

Accuracy

± 2.0% of Full Scale

Zero Adjustment

At back case or at pointer

Material

Case & Cover	: 304SS
Window	: Glass
Connection	: 304SS
Stem	: 304SS, max 2000mm
Capillary	: 304SS
Stem OD	: 6, 8, 10mm

Thermometer Ordering Information

Model

T210

Mounting Type

B : Bottom connection with surface mounting plate
 M: lower back with panel mounting plate

Dial Size

100mm

Scale Range

Stem Length

Connection Type

1/2" BSPT

Options

Thermowell

Oil Filled

Example of Order

Model

T211

Dial Size

100mm

Range

0 ~ 100°C

Stem Length

100mm

Connection

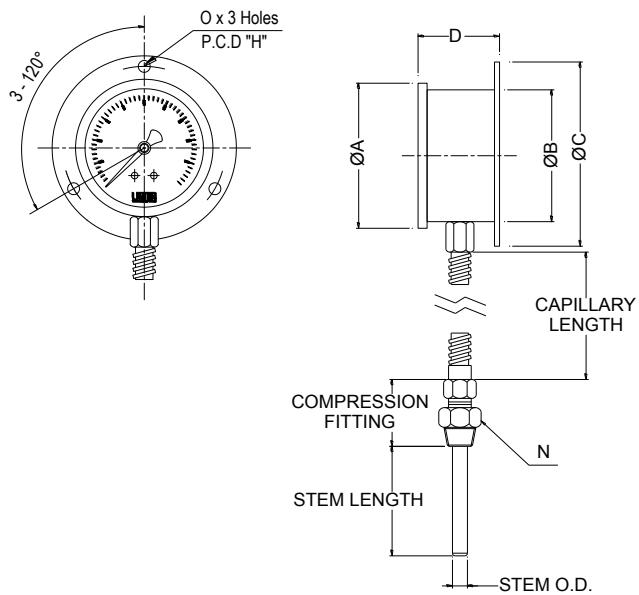
1/2" BSPT

Options

Oil Filled

Basic Dimensions

CODE B

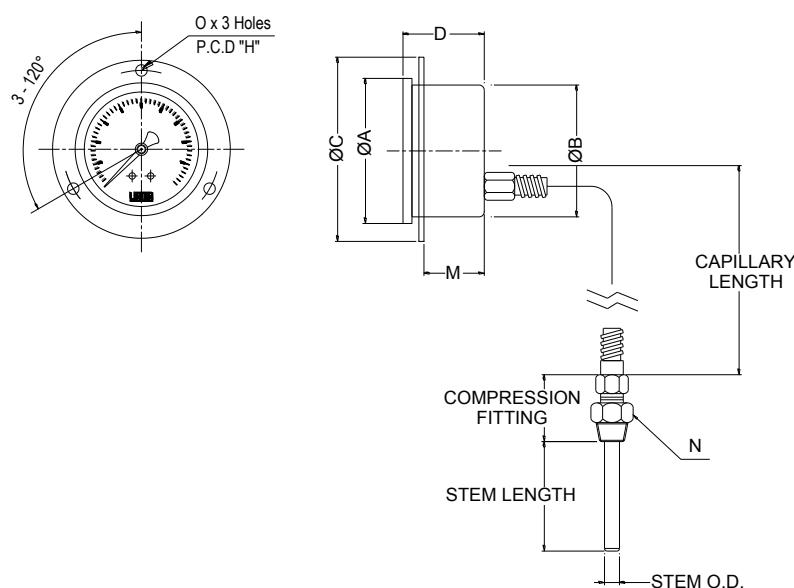


B: Bottom with surface mounting plate

Unit : mm

	Ø 100	Ø 150
A	111.0	160.0
B	99.5	158.0
C	132.7	210.0
D	40.0	51.6
H	118.0	185.0
N	21.0	21.0
O	5.5	8.0

CODE M



M: Lower back with panel mounting plate

Unit : mm

	Ø 100	Ø 150
A	111.0	160.0
B	99.5	158.0
C	132.7	210.0
D	40.0	51.6
H	118.0	185.0
M	28.5	30.0
N	21.0	21.0
O	5.5	8.0

UNIJIN® GLASS THERMOMETER

Model : T400

T400 models are designed for corrosive environment which media do not corrode the brass and which do not have high viscosity or do not crystallize with applicable on general industry, chemical, petrochemical and etc.



Standard Specification

Model

T400 S (Direct bottom connection)

T400 L (Lower back connection)

Connection

1/2" BSPT

Casing Dimension

V-shape, 150mm x 35mm

Scale Range (°C & °F)

-30 ~ 50 °C,

0 ~ 100 °C,

0 ~ 120 °C,

0 ~ 150 °C,

0 ~ 200 °C

Special Range

Accuracy

± 2.0% of Full Scale

Working Range

Maximum Scale Value

Material

Case : Nylon Fiber

Temperature Element : Alcohol

Stem : Brass

Stem OD : 10mm

Thermometer Ordering Information

Model

T400 S : Straight

T400 L : Lower back

Scale Range

Stem Length

2½",

4",

6"

Connection Type

1/2" BSPT

Options

Thermowell

Example of Order

Model

T400S

Range

0 ~ 100°C

Stem Length

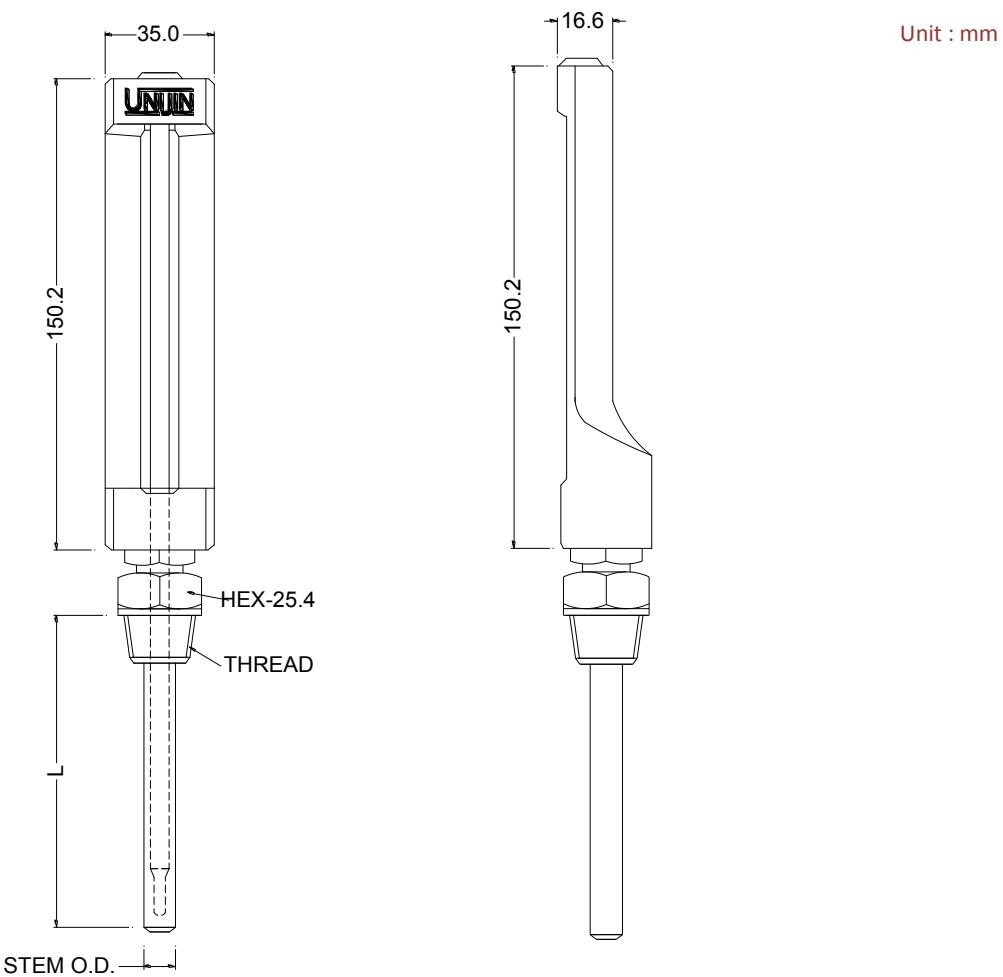
4"

Connection

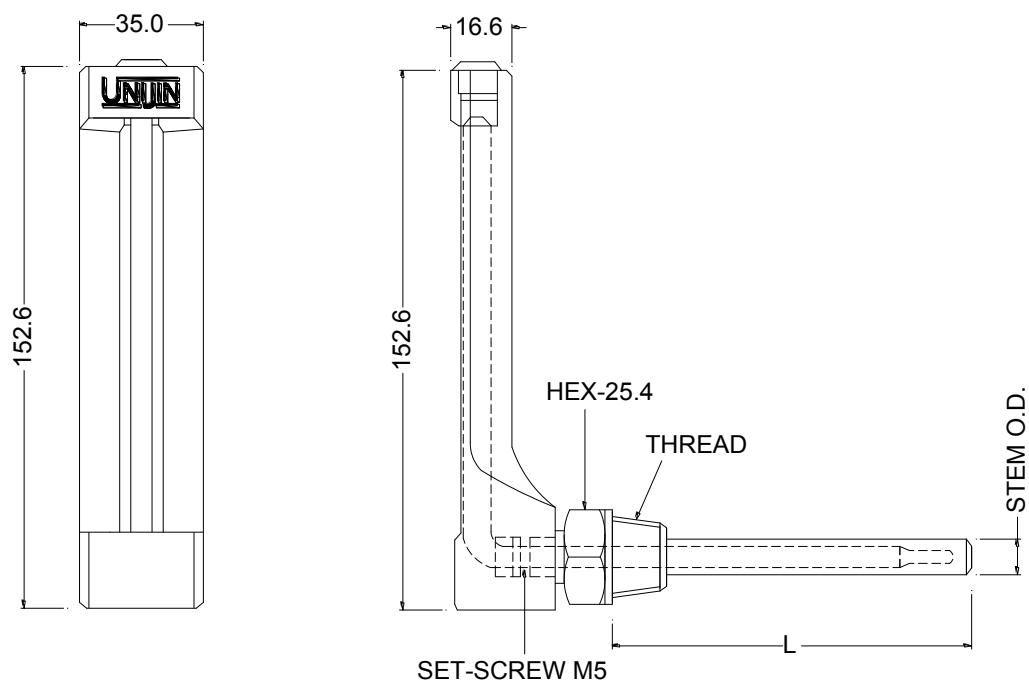
1/2" BSPT

Basic Dimensions

CODE S



CODE L



Metallic protection tube resistance temperature detector

Model : R210 series

Spec. sheet no. URD02-02

Service intended

Among temperature sensors, it is the most stable and accurate sensor.
It has a better repeatability, and shows more dependable outputs than thermocouple.
It is possible to perform an area measuring, and has a better resistance against the containment.
However, it has a slow response time due to its complexity of the resistance element and its big size.
It is constructed with an insulated lead wire and with protection tube which is designed to protect the insulated lead wire.



Standard features

Element

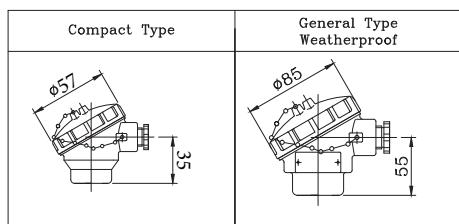
Pt 100Ω at 0°C

Tolerances on temperature reading

Class A : $\pm (0.15 + 0.002 |t|)$

Class B : $\pm (0.3 + 0.005 |t|)$

Head type



Head material

ALDC (Standard)

304SS (Not available compact type)

316SS (Not available compact type)

Temperature range

-200 ~ 250°C (Mica type element)

-200 ~ 600°C (Film type element)

Protecting tube material

304SS and 316SS

Protecting tube outer diameter

6.4, 8.0 and 10 mm

Main order

Ordering information

1. Base model

R211 Metallic protection tube resistance temperature detector

(Single element)

R212 Metallic protection tube resistance temperature detector

(Double (Duplex) element)

2. Head type

A General (Weatherproof)

L Compact (Small)

3. Element

P Pt 100Ω (B)

9 Pt 100Ω (A)

4. Tube material

0 304SS

1 316SS

9 Other

5. Protecting tube and sheath outer diameter (mm)

F9 6.4 (Double elements is not available)

G9 8.0

J9 10.0

6. Conduit connection

1 1/2" PF

2 1/2" PT

3 1/2" NPT

4 3/4" PF

5 3/4" PT

6 3/4" NPT

9 Other

A None (Extended lead wire type only)

7. Mounting type

X Refer to mounting table (11th character)

8. Connection type

XX Refer to mounting table (12th and 13th character)

9. Insert length

X Refer to insert length table (14th character)

10. Option

0 None

1 Accessories

4 Epoxy coated ALDC head

5 Head material : 304SS (Only for weatherproof head)

6 Head material : 316SS (Only for weatherproof head)

7 Accessories and epoxy coated ALDC head

8 Accessories and head material : 304SS

(Only for weatherproof head)

9 Accessories and head material : 316SS

(Only for weatherproof head)

1	2	3	4	5	6	7	8	9	10	Sample ordering code
R211	A	P	1	F9	1	X	XX	X	0	

Mounting, connection type and insert length table - 11th thru 14th characters

11 th character		12 th character		13 th character		14 th character	
Code	Mounting	Code	Connection size and connector material	Code	Connection type	Code	Insert length (mm)
A	None	A	None	A	None	A	100 mm
	Fixed thread lag length						
B	80 mm	B	1/8" and 304SS	B	PT	B	200 mm
C	100 mm	C	1/4" and 304SS	C	NPT	C	300 mm
D	150 mm	D	3/8" and 304SS	D	PF	D	400 mm
E	200 mm	E	1/2" and 304SS	E	NPS	E	500 mm
F	Other	F	3/4" and 304SS	F	UNF	F	600 mm
	Fixed flange lag length						
G	80 mm	G	1" and 304SS	G	BSPT	G	700 mm
H	100 mm	H	1 1/4" and 304SS	H	BSPF	H	800 mm
J	150 mm	J	1 1/2" and 304SS	J	MM	J	900 mm
	Fixed flange lag length						
K	200 mm	K	2" and 304SS	K	ANSI 150 Lb RF	K	1,000 mm
L	Other	L	3" and 304SS	L	ANSI 150 Lb FF	L	1,500 mm
M	Movable thread	M	7/16" and 304SS	M	ANSI 300 Lb RF	M	2,000 mm
N	Movable flange	N	1/8" and 316SS	N	ANSI 300 Lb FF	N	2,500 mm
P	Compression fitting	P	1/4" and 316SS	O	Sanitary	P	3,000 mm
				P	ANSI 600 Lb RF		
	Union and nipple length						
Q	100 mm length	Q	3/8" and 316SS	Q	ANSI 600 Lb FF	Q	3,500 mm
R	150 mm length	R	1/2" and 316SS	R	JIS 5K RF	R	4,000 mm
S	Other	S	3/4" and 316SS	S	JIS 5K FF	S	4,500 mm
	Nipple length						
T	50 mm	T	1" and 316SS	T	JIS 10K RF	T	5,000 mm
U	100 mm	U	1 1/4" and 316SS	U	JIS 10K FF	U	6,000 mm
V	150 mm	V	1 1/2" and 316SS	V	JIS 20K RF	V	7,000 mm
W	Other	W	2" and 316SS	W	JIS 20K FF	W	8,000 mm
X	Fixed thread	X	3" and 316SS	X	ANSI 1,500 Lb RTJ	X	9,000 mm
		Y	7/16" and 316SS	Y	ANSI 2,500 Lb RTJ	Y	10,000 mm
Z	Other	Z	Other	Z	Other	Z	Other

Note for 14th character, please choose a code of next higher length if applicable length is not. Actual length shall be specified.