Extension lead wire thermocouple and resistance temperature detector

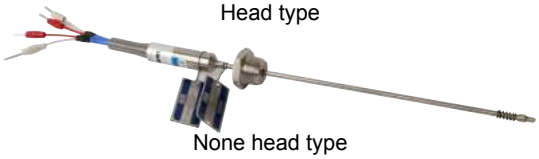
Model : R300 series

Spec. sheet no. RD03-01

Service intended

This type of detector does not use terminal head, rather it directly connects to an indicator or a transmitter. It is very useful where the distance between measuring parts and the location of its head is too far. The measuring parts and its head can be connected by using an extension wire. Extension wire can be selected according to its installation site condition, its protection shape of armored tube, and its wire covering material.

Head type



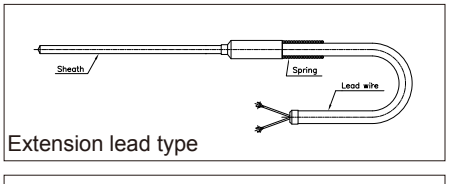
None head type

Standard features

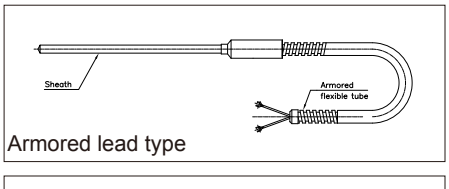
Element

Thermocouple : K, E, J, T, N, R, S, B
RTD : Pt 100Ω at 0℃ (Ceramic and Mica type)

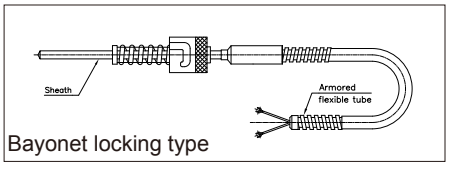
Basic outline drawing



Extension lead type



Armored lead type



Bayonet locking type

Tolerances on temperature reading

■ Thermocouple
Class 1, Class 2 (DIN/IEC584-2, BS/EN60584-2, JIS C1602)
Special, Standard (ASTM E230 E988 ISA-MC96.1)

■ R.T.D.
Class A : ± (0.15 + 0.002 l t l)
Class B : ± (0.3 + 0.005 l t l)

Sheath outer diameter

■ Thermocouple
1.0, 1.6, 2.3, 3.2, 4.8, 6.4, 8.0, 9.5 and 12.7 mm
* Double element is not available for 1.0 and 1.6 mm sheath outer diameter

■ R.T.D.
3.2, 4.8, 6.4 and 8.0 mm

Sensing element structure

Protection tube or sheathed

Protecting tube outer diameter

6.4, 8.0, 10.0, 12.0 and 15.0 mm

1. Base model

R311	Extension lead type single element
R312	Extension lead type double element
R321	Armored lead type single element
R322	Armored lead type double element
R331	Bayonet locking type single element
R332	Bayonet locking type double element

2. Head type

A	General (Weatherproof)
P	None head

3. Element (Tolerance)

K	K (0.75)	**3**	T (0.4)
J	J (0.75)	**4**	E (0.4)
T	T (0.75)	**5**	N (0.4)
N	N (0.75)	**R**	R (0.25)
E	E (0.5)	**S**	S (0.25)
B	B (0.5)	**Q**	Pt 100Ω (B)
1	K (0.4)	**9**	Pt 100Ω (A)
2	J (0.4)	**Z**	Other

4. Sheath or protecting tube material

0	304SS
1	316SS
2	Inconel 600
3	310SS
4	446SS
5	347SS
6	321SS
7	316L SS
9	Other

5. Sheath or protecting tube outer diameter (mm)

A9	1.0 (Sheath / Single TC only)
B9	1.6 (Sheath / Single TC only)
C9	2.3 (Sheath / TC only)
D9	3.2 (Sheath)
E9	4.8 (Sheath)
F9	6.4 (Sheath)
G9	8.0 (Sheath)
H9	9.5 (Sheath / TC only)
L9	12.7 (Sheath / TC only)
E8	4.8 (Tube / Not available for double RTD)
F8	6.4 (Tube)
G8	8.0 (Tube)
J0	10.0 (Tube)
K9	12.0 (Tube)
M9	15.0 (Tube)

6. Conduit connection

1	½" PF
2	½" PT
3	½" NPT
4	¾" PF
5	¾" PT
6	¾" NPT
7	None
8	M20 x 1.5P
9	Other

7. Lead wire length (m)

A	300 mm (Standard), Lead wire type only
B	1 (Lead wire type only)
C	2 (Lead wire type only)
D	3 (Lead wire type only)
E	4 (Lead wire type only)
F	5 (Lead wire type only)
G	Other

8. Mounting type

X	Refer to mounting table (12th character)

9. Connection type

XX	Refer to mounting table (13th and 14th character)

10. Insert length

X	Refer to insert length table (15th character)

11. Option

00	None
01	Accessories
1A	Epoxy coated ALDC head
1B	Head material : 304SS
1C	Head material : 316SS
1D	Accessories and epoxy coated ALDC head
1E	Accessories and head material : 304SS
1F	Accessories and head material : 316SS

1	2	3	4	5	6	7	8	9	10	11	
R311	**P**	**K**	**1**	**F9**	**1**	**A**	**X**	**XX**	**X**	**00**	**Sample ordering code**

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

12th character		13th character		14th character		15th character	
Code	Mounting	Code	Connection size and connector material	Code	Connection type	Code	Insert length (mm)
A	None	A	None	A	None	A	100
	Fixed thread lag length	B	⅛" and 304SS	B	PT	B	200
B	80 mm	C	¼" and 304SS	C	NPT	C	300
C	100 mm	D	⅜" and 304SS	D	PF	D	400
D	150 mm	E	½" and 304SS	E	NPS	E	500
E	200 mm	F	¾" and 304SS	F	UNF	F	600
F	Other	G	1" and 304SS	G	BSPT	G	700
	Fixed flange lag length	H	1¼" and 304SS	H	BSPF	H	800
G	80 mm	J	1½" and 304SS	J	MM	J	900
H	100 mm	K	2" and 304SS	K	ANSI 150 Lb RF	K	1,000
J	150 mm	L	3" and 304SS	L	ANSI 150 Lb FF	L	1,500
K	200 mm	M	7/16" and 304SS	M	ANSI 300 Lb RF	M	2,000
L	Other	N	⅛" and 316SS	N	ANSI 300 Lb FF	N	2,500
M	Movable thread	P	¼" and 316SS	O	Sanitary	P	3,000
N	Movable flange	Q	⅜" and 316SS	P	ANSI 600 Lb RF	Q	3,500
P	Compression fitting	R	½" and 316SS	Q	ANSI 600 Lb FF	R	4,000
	Union and nipple length	S	¾" and 316SS	R	JIS 5K RF	S	4,500
Q	100 mm length	T	1" and 316SS	S	JIS 5K FF	T	5,000
R	150 mm length	U	1¼" and 316SS	T	JIS 10K RF	U	6,000
S	Other	V	1½" and 316SS	U	JIS 10K FF	V	7,000
	Nipple length	W	2" and 316SS	V	JIS 20K RF	W	8,000
T	50 mm	X	3" and 316SS	W	JIS 20K FF	X	9,000
U	100 mm	Y	7/16" and 316SS	X	ANSI 1,500 Lb RTJ	Y	10,000
V	150 mm	Z	Other	Y	ANSI 2,500 Lb RTJ	Z	Other
W	Other			Z	Other		
X	Fixed thread						
Z	Other						

- Note for 15th character, please choose a code of next higher length if applicable length is not. Actual length shall be specified.
- Note for *Y code (Oil sealing type), only available with spring-loaded head type.

Memo