Metallic protection tube thermocouple
Model : R110 Series

Service intended
Protection tube type thermocouple is constructed with the insulator which insulates the element wire, and with the protection tube which protects the insulator. To install this thermocouple on the process pipe or on the container, it normally attaches to a connector, a flange, or a compression fitting on the protection tube. It can be manufactured as it is required for its use. As its special features, it does not have any resistance issues with a lead wire, and its immediate response to a temperature change leads to a less error rate of temperature change in a broad range.

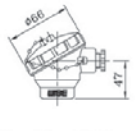
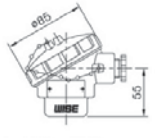
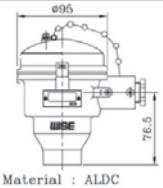
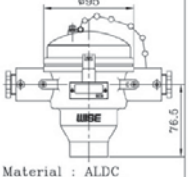
Standard features

Element type
K, E, J, T, N

Accuracy
Standard : 0.75% (for Reading Temp.)
Special : 0.4% (for Reading Temp.)

Head material
ALDC (Standard)
304SS (Not available Compact Type)
316SS (Not available Compact Type)

Head type

Compact Type	General type Weatherproof
 Material : ALDC	 Material : ALDC 304SS, 316SS
Explosion Proof Type	**Explosion Proof Type Double Conduit**
 Material : ALDC 316SS	 Material : ALDC 316SS
EXd IIC T6 (KGS)	EXd IIC T6 (KGS)

Tube & element wire size

Out Dia.(mm)	
Tube	Element Wire
6.4	0.65 (1.0)
8.0	0.65 (1.0)
10.0	1.0 (1.6)
12.0	1.0 (1.6)
15.0	1.0 1.6 (2.3)
17.3	1.6 (2.3) (3.2)
21.7	2.3 (3.2)

※ ( ) standard

Ordering information

Base model

R111: Single element
R112: Double(Duplex) element

Head type

A : General(Weatherproof)
F : Explosion Proof
L : Compact(small)

Element

K : K E : E
J : J N : N
T : T Z : Other

Tube material

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

Tube & element out dia.(mm)

F0 : 6.4 & 0.65 J1 : 10.0 & 1.0 M1 : 15.0 & 1.0 P3 : 17.3 & 2.3
F1 : 6.4 & 1.0 J2 : 10.0 & 1.6 M2 : 15.0 & 1.6 P4 : 17.3 & 3.2
G0 : 8.0 & 0.65 K1 : 12.0 & 1.0 M3 : 15.0 & 2.3 Q3 : 21.7 & 2.3
G1 : 8.0 & 1.0 K2 : 12.0 & 1.6 P2 : 17.3 & 1.6 Q4 : 21.7 & 3.2

Conduit connection

1 : 1/2 PF
2 : 1/2 PT
3 : 1/2 NPT
4 : 3/4PF
5 : 3/4PT
6 : 3/4NPT
9 : Other

Mounting type

Refer to Mounting table (11th Character)

Connection type

Refer to Connection table (12 & 13th Character)

Insert length

Refer to Insert Length table (14th Character)

Option

0 : None
1 : Accessories

R111	A	K	1	G1	1	U	EC	A	0	**Sample model number**

Mounting, Connection Type and Insert Length Table -11th thru 14th characters

11th Character		12th Character		13th Character		14th Character	
CODE	Mounting	**CODE**	Connection Size & Connector Material	**CODE**	Connection Type	**CODE**	Insert Length(mm)
A	None	A	None	A	None	A	100mm
B	Fixed Thread Lag Length 80mm	B	1/8"&304SS	B	PT	B	200mm
C	100mm	C	1/4"&304SS	C	NPT	C	300mm
D	150mm	D	3/8"&304SS	D	PF	D	400mm
E	200mm	E	1/2"&304SS	E	NPS	E	500mm
F	Other	F	3/4"&304SS	F	UNF	F	600mm
G	Fixed Flange Lag Length 80mm	G	1"&304SS	G	BSPT	G	700mm
H	100mm	H	1 1/4"&304SS	H	BSPF	H	800mm
J	150mm	J	1 1/2"&304SS	J	MM	J	900mm
K	Fixed Flange Lag Length 200mm	K	2"&304SS	K	ANSI 150# RF	K	1000mm
L	Other	L	3"&304SS	L	ANSI 150# FF	L	1500mm
M	Movable Thread	M	7/16"&304SS	M	ANSI 300# RF	M	2000mm
N	Movable Flange	N	1/8"&316SS	N	ANSI 300# FF	N	2500mm
P	Compression Fitting	P	1/4"&316SS	O	SANITARY	P	3000mm
				P	ANSI 600# RF		
Q	Union & Nipple Length 100mm Length	Q	3/8"&316SS	Q	ANSI 600# FF	Q	3500mm
R	150mm Length	R	1/2"&316SS	R	JIS 5K RF	R	4000mm
S	Other	S	3/4"&316SS	S	JIS 5K FF	S	4500mm
T	Nipple Length 50mm	T	1"&316SS	T	JIS 10K RF	T	5000mm
U	100mm	U	1 1/4"&316SS	U	JIS 10K FF	U	6000mm
V	150mm	V	1 1/2"&316SS	V	JIS 20K RF	V	7000mm
W	Other	W	2"&316SS	W	JIS 20K FF	W	8000mm
X	Fixed Thread	X	3"&316SS	X	ANSI 1500#RTJ	X	9000mm
		Y	7/16"&316SS	Y	ANSI 2500#RTJ	Y	10000mm
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.