

Sheathed type resistance temperature detector

Model : R220 series (R series)

Spec. sheet no. RD02-03

Service intended

Sheathed type RTD is constructed in a way that monolithic resistance element is connected with MI cable (MgO compacted metal sheathed lead wires), and has a longer life and a fast response time.

High purity white gold resistance wire is used to perform with a better accuracy.

Except the end tip length of 60 mm, it could be bent 2 times more than its out diameter so can be used in the process pipe where it is not easy to install due to the obstacles exist around the installation site.



Explosion proof type

General type

Standard features

Element

Pt 100 Ω at 0 °C
TCR : 3,850 ppm/k

Tolerances on temperature reading

Class A : $\pm (0.15 + 0.002 | t |)$
Class B : $\pm (0.3 + 0.005 | t |)$

Head material

ALDC (Standard)
304SS (Not available compact type)
316SS (Not available compact type)

Temperature range

-200 ~ 600 °C (Film type element)
• Class A (-90 ~ 300 °C)
• Class B (-200 ~ 600 °C)
-200 ~ 600 °C (Ceramic type element)

Sheath material

316L SS

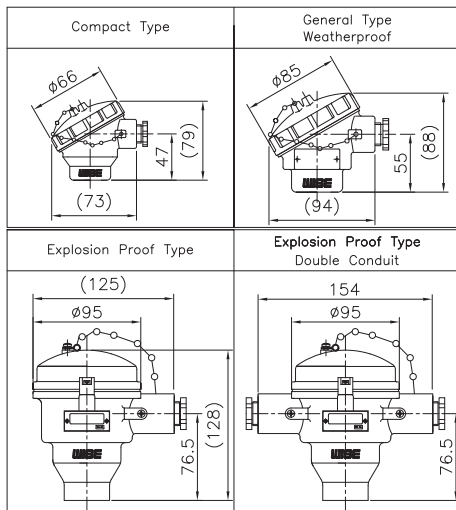
Sheath outer diameter

3.2, 4.8, 6.4 and 8.0 mm

Certificates

KCS Ex d IIC T6

Head type



1. Base model

- R221** Sheathed type resistance temperature detector
(Single element)
- R222** Sheathed type resistance temperature detector
(Double (Duplex) element)

2. Head type

- A** General (Weatherproof)
- B** General (Weatherproof) and spring - loaded
- F** Explosion proof
- L** Compact (Small)
- P** Explosion proof (Double conduit)

3. Element (Tolerance)

- Q** Pt 100 Ω (B)
- 9** Pt 100 Ω (A)

4. Sheath material

- 1** 316SS
- 7** 316L SS
- 9** Other

5. Sheath outer diameter (mm)

- D9** 3.2
- E9** 4.8
- F9** 6.4
- G9** 8.0

6. Conduit connection

- 3** ½" NPT
- 6** ¾" NPT
- 7** None
- 8** M20 x 1.5P
- 9** Other

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
(Not available for explosion proof-double conduit type)
- 7** Accessories and epoxy coated ALDC head
- 8** Accessories and head material : 304SS
(Only for weatherproof head)
- 9** Accessories and head material : 316SS

1	2	3	4	5	6	7	8	9	10
R221	A	Q	1	F9	3	X	XX	X	0

Sample
ordering code

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
	Fixed thread lag length	B	1/8" and 304SS	B	PT	B	200
B	80 mm	C	1/4" and 304SS	C	NPT	C	300
C	100 mm	D	3/8" and 304SS	D	PF	D	400
D	150 mm	E	1/2" and 304SS	E	NPS	E	500
E	200 mm	F	3/4" and 304SS	F	UNF	F	600
F	Other	G	1" and 304SS	G	BSPT	G	700
	Fixed flange lag length	H	1 1/4" and 304SS	H	BSPF	H	800
G	80 mm	J	1 1/2" and 304SS	J	MM	J	900
H	100 mm	K	2" and 304SS	K	B16.5 Class 150 RF	K	1,000
J	150 mm	L	3" and 304SS	L	B16.5 Class 150 FF	L	1,500
K	200 mm	M	7/16" and 304SS	M	B16.5 Class 300 RF	M	2,000
L	Other	N	1/2" and 316SS	N	B16.5 Class 300 FF	N	2,500
M	Movable thread	P	3/4" and 316SS	O	Sanitary	P	3,000
N	Movable flange	Q	5/8" and 316SS	P	B16.5 Class 600 RF	Q	3,500
P	Compression fitting	R	1/2" and 316SS	Q	B16.5 Class 600 FF	R	4,000
	Union and nipple length	S	3/4" 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	1 1/4" and 316SS	T	JIS 10K RF	U	6,000
S	Other	V	1 1/2" 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	B16.5 Class 1,500 RTJ	Y	10,000
V	150 mm	Z	Other	Y	B16.5 Class 2,500 RTJ	Z	Other
W	Other			Z	Other		
X	Fixed thread						
Z	Other						

- Note for 14th 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.