

Explosion proof Non-metallic protection tube thermocouple

Model : R970 series

Spec. sheet no. RD09-08

Service intended

This thermocouple is the combination of a precious metal such as platinum and rhodium alloy with non-metallic materials such as alumina and ceramic which can withstand a high temperature. It is mainly used in a furnace, kilns, and a production line of glass and ceramic.

- Furnaces, kilns and ovens
- Furnaces with oxidizing and neutral atmosphere
- Glass, fiber and ceramic industries



Standard features

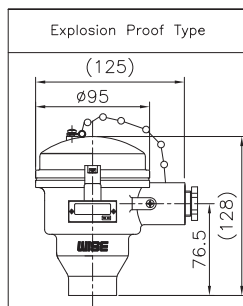
Element

- Type R (87 % Pt, 13 % Rh/Pt)
- Type S (90 % Pt, 10 % Rh/Pt)
- Type B (70 % Pt, 30 % Rh / 94 % Pt, 6 % Rh)
- Type K

Head material

ALDC (Standard)
316SS

Head type



Element outer diameter

"K" type : 3.2 mm
"R", "S" and "B" type : 0.5 mm

Tolerance on temperature reading

"K" type : Class 2 (0.75 %)
Standard (0.75 %)
"R", "S" type : Class 2 (0.25 %)
Standard (0.5 %)
"B" type : Class 3 (0.5 %)
Standard (0.5 %)

Protecting tube material and outer diameter

Material	Outer diameter (mm)
SSA-S (99.5 % Alumina)	8, 10, 13, 15, 17, 21, 25
HB (60 % Alumina, 40 % Silica)	8, 10, 13, 15, 17, 21, 25
GK-SiC (90 % SiC)	25, 30, 40

Certificates

KCS Ex d IIC T6 IP65

WISE[®]

I R970_01

Main order

Ordering information

1. Base model

- R971** Single element
R972 Double(Duplex) element

2. Head and tip shape type

- A** ALDC head and ungrounded
B 316SS head and ungrounded

3. Element

- K** K (0.75)
B B (0.5)
1 K (0.4)
R R (0.25)
S S (0.25)

4. Mounting type and extension length (mm)

- | | |
|-----------------------------|-------------------------------|
| A None | K Fixed flange (300) |
| B Support tube (100) | L Movable thread (100) |
| C Support tube (150) | M Movable thread (150) |
| D Support tube (300) | N Movable thread (300) |
| E Fixed thread (100) | P Movable flange (100) |
| F Fixed thread (150) | Q Movable flange (150) |
| G Fixed thread (300) | R Movable flange (300) |
| H Fixed flange (100) | Z Other |
| J Fixed flange (150) | |

5. Outer protection tube diameter (mm)

- | | |
|--------------|--------------|
| 00 8 | 40 21 |
| 10 10 | 50 25 |
| 20 13 | 60 30 |
| 25 15 | 70 40 |
| 30 17 | |

6. Outer protection tube material

- | | |
|----------------------------|----------------------|
| 0 316SS | 5 Inconel 600 |
| 1 SSA-S (8~25 mm) | 6 446SS |
| 3 HB (8~21 mm) | 7 Other |
| 4 GK-SiC (25~40 mm) | 8 310SS |

7. Inner tube material

- 0** None
1 SSA-S
3 HB
5 Inconel
9 Other

8. Connection type

- XX** Refer to connection type 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
6 Accessories and epoxy coated ALDC head

1	2	3	4	5	6	7	8	9	10
R971	A	K	A	00	0	0	XX	X	1

Sample
ordering code



© WISE Control Inc. All rights reserved. ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Mounting, connection type and insert length table - 12th thru 14th characters

12 th character		13 th character		14 th character	
Code	Connection size	Code	Connection type	Code	Insertion length (mm)
A	None	A	None	A	100
E	½" (15A)	B	PT	B	200
F	¾" (20A)	C	NPT	C	300
G	1" (25A)	D	PF	D	400
H	1¼" (32A)	K	B16.5 Class 150 RF	E	500
J	1½" (40A)	L	B16.5 Class 150 FF	F	600
K	2" (50A)	M	B16.5 Class 300 RF	G	700
L	2½" (65A)	N	B16.5 Class 300 FF	H	800
M	3" (80A)	P	B16.5 Class 600 RF	J	900
Z	Other	Q	B16.5 Class 600 FF	K	1,000
		R	JIS 5K RF	L	1,500
		S	JIS 5K FF	M	2,000
		T	JIS 10K RF		
		U	JIS 10K FF		
		V	JIS 20K RF		
		W	JIS 20K FF		
		Z	Other		

Note : Please choose a code of next higher length if applicable length is not. Actual length shall be specified.

A large, empty rectangular box with a thin black border, intended for writing a memo.