Head mounting type temperature transmitter (RTD only) Model : R912 (with T990)

Spec. sheet no. RD09-02

Service intended

These transmitters are recommended be used in the situation where the application of RTD signals to carry to a long distance or to guard against the heavy electrical field noise. The transmitters convert RTD inputs to an analog signal for a direct interface with indicators, recorders, controllers, PLC, DCS systems, and these can be used for a wide range of applications in process control, automatic machinery and hydraulic or pneumatic system design.

Advantages

- Two wire 4 20 mA current output signal
- RTD input
- Measuring range from -50 ~ 400 °C
- Fixed range
- Excellent accuracy and long term stability
- Low cost
- Miniature design



Specification

Electrical specification

Excitation voltage : $18 \sim 30 \text{ V}$ Load resistance : Max. 500Ω at 24 VInfluence of excitation : 0.01 % FSO/V Burnout : Upscale (Approx. 23 mA DC) or Down scale (Approx. 4 mA DC) Reverse polarity : Protected Shock resistance : No change in performance after 10Gs for 11msVibration : $5g (10 \sim 2,000 \text{ Hz})$ Response time $(10 \sim 90 \%)$: ± 0.5 seconds Adjustment range : $\pm 15 \%$ of full scale / Zero and span

Performance specification

Accuracy : ± 0.2 % of full scale Non - linearity : Better than 0.10 % of full scale Repeatability : Better than 0.05 % of full scale Long term stability : Better than 0.05 % of full scale per month Ambient temperature limits : $-20 \sim 70$ °C Ambient humidity limits : $5 \sim 95$ % R.H

Input

Measuring element : Pt 100 Ω at 0 °C

Output

Current output Electrical connection type : 2-wire technique Full scale output signal : 20 mA ± 0.2 % Zero measured output : 4 mA ± 0.03 % Other output signals available on request

Certificates

KCS Ex d IIC T6 KCS Ex tD A21 T85°C



Main order

1. Base model

R912 Temperature transmitter (RTD only)

2. Head and tip shape type

- F Explosion proof and ungrounded
- G Explosion proof and spring loaded
- P Explosion proof (Double conduit) and ungrounded
- S Explosion proof (Double conduit) and spring loaded

3. Element

- **Q** Pt 100 Ω(B)
- **9** Pt 100 Ω(A)

4. Sheath or tube material

- **0** 304SS
- **1** 316SS
- 7 316L SS
- 9 Other

5. Sheath or tube outer diameter (mm)

She	ath type	Tube	Tube type			
D9	3.2	E8	4.8			
E9	4.8	F8	6.4			
F9	6.4	G8	8.0			
G9	8.0	JO	10.0			
N9	6.0					

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 Connection 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 Head material : 316SS
- 7 Accessories and epoxy coated ALDC head
- 9 Accessories and head material : 316SS
- A Ex tD Certi.
- B Accessories and Ex tD Certi.
- C Epoxy coated and Ex tD Certi.
- D Head material : 316SS and Ex tD Certi.
- E Accessories, Epoxy coated and Ex tD Certi.
- F Accessories and Head material : 316SS and Ex tD Certi.

1	2	3	4	5	6	7	8	9	10	
R912	F	Q	7	F9	3	X	XX	X	4	Sampl orderi

Sample ordering code



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Main order

1. Base model

T990 Temperature transmitter

2. Input type

RJ Pt 100 Ω

3. Measuring range (°ℂ)

- 05 0~50
- 10 0~100
- 0~150 15
- 0~200 20
- 25 0~250
- 30 0~300
- 40 0 ~ 400
- 50 0~500
- 51 50~150
- 55 50 ~ 150
- 100 ~ 200 12
- 13 100 ~ 300
- **N0** -50 ~ 50
- N1 -50 ~ 100
- -50 ~ 150
- N5
- -50 ~ 200 N2
- Special ΖZ

4. Burn-out

- Up scale U
- D Down scale

1	2	3	4	
T990	RJ	05	U	Sa oro

mple dering code

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R912 : Type of mounting





Head

Electrical connection









	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)	
А	None	А	None	А	None	А	100	
	Fixed thread lag length	В	1⁄%" and 304SS	В	PT	В	200	
В	80 mm	С	1⁄4" and 304SS	С	NPT	С	300	
С	100 mm	D	3⁄8" and 304SS	D	PF	D	400	
D	150 mm	E	1⁄2" and 304SS	Е	NPS	Е	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	Н	1¼" and 304SS	Н	BSPF	Н	800	
G	80 mm	J	11⁄2" and 304SS	J	MM	J	900	
Н	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‰" and 304SS	M	B16.5 Class 300 RF	М	2,000	
L	Other	Ν	1⁄8" and 316SS	N	B16.5 Class 300 FF	Ν	2,500	
М	Movable thread	Р	1⁄4" and 316SS	0	Sanitary	Р	3,000	
N	Movable flange	Q	3⁄8" and 316SS	Р	B16.5 Class 600 RF	Q	3,500	
Р	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	Т	1" and 316SS	S	JIS 5K FF	Т	5,000	
R	150 mm length	U	1¼" and 316SS	Т	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	
Т	50 mm	Х	3" and 316SS	W	JIS 20K FF	Х	9,000	
U	100 mm	Y	7‰" and 316SS	Х	B16.5 Class 1,500 RTJ	Y	10,000	
V	150 mm	Ζ	Other	Y	B16.5 Class 2,500 RTJ	Ζ	Other	
W	Other			Z	Other			
Х	Fixed thread							
Ζ	Other		[

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

 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.



Memo

