Intelligent and explosion proof temperature transmitter

Model: WR/WRB-207

ZHYQ

Description

WR-207 is integrated temperature transmitter uses PT100, N, K, J and other temperature sensing components, through the circuit processing module to convert the resistance signal into a standard 4-20mA current signal, widely used in chemical automatic control systems, and transmitted to Indicators, recorders and regulators for monitoring, regulating and controlling industrial systems. It not only saves expensive compensation wires cost , but also improves the anti-interference ability of signals during long-distance transmission. The transmitter is high precision, low power consumption, wide temperature range, stable and reliable operation, and is resistant to shock and moisture due to the silicone rubber sealing structure, which is suitable for use in harsh field environments.

Explosion-proof Principle

It uses the gap flameproof principle and designs the sufficient strength junction box and other part. All the components which can cause a spark, arc and dangerous temperature are sealed in the junction box When it happen explosion in the cavity, the joint side can make flameout and cool, to prevent the flame and temperature after explosion from spreading out of the cavity.

Application

In chemical plant, there are various flammable and explosive chemical gases around the production site. It's unsafe and easy to cause environmental gas explosion if use common thermocouples, it needs to use flameproof thermocouple as temperature measurement instrument in these cases.

Main technical indexes of thermocouple

Material	Type	Temperature Range	Error/ t
Ni/Ch-Ni/Si	K	800-1600℃	±2.5 or±0.75%t
Ni/Ch-Cu	E	600-800℃	±2.5 or ±0.75%t
Cu	T	350-400℃	±2.5 or ±0.75%t
Fe-Cu	J	600-700℃	±2.5 or ±0.75%t
Pt	PT100	-200-600℃	±1 or ±0.75%t
Cu	CU50	-50~100℃	±2.5 or ±0.75%t

Feature

Easy assembly and easy replacement

Good shakeproof and high precision

Wide measuring range (-200 ° C ~ 1600 ° C)

Fast thermal response time and long service life

High mechanical strength and good pressure resistance

Suitable Explosion proof area
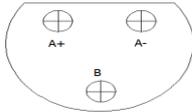
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Specification

Temperature Sensing element:	N,R,K,E,J,T,PT100,CU50
Temperature range:	-200℃~0℃~1600℃
Output:	mV/V (for WR-207) 4-20mA, HART optional (for WRB-207)
Local display:	none
Power supply:	10VDC (mV/V) for WR-207 24VDC (4-20mA /HART) for WRB-207
Accuracy class:	Class A: +/- (0.15+0.2%t); Class B: +/- (0.3+0.5%t)
Electrical connector:	waterproof, explosion-proof
Process connection:	M20*1.5, G1/2 , G1/4 ,flange, customized
Probe tube diameter (D):	6mm ,8mm ,12mm ,customized
Probe tube length (L):	8mm<L<800mm
Insert tube material	SS304 ,SS316L optional

Wiring diagram

For WRB-207
4~20mA Output

for WR-207
PT100 Output

Terminal	4-20mA (2 wires)	PT100(3 Wires)
A+	P+	A+(Red)
A-	P-	A-（Red）
B		B（White）

Order Guide

Model	Sensing element	Temperature range	Output	Insert Diameter	Insert Length	Process connection	Accuracy	Others
WRB-207	---	---	---	---	---	----		---

Example：WRB-207-PT100-(-50~200)℃-4-20mA-8-50-M20*1.5-A

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