

Temperature Input

1/2: GS8576-EX / GS8576-EX.RTD
GS8576-EX.TC / GS8576-EX.R
2/2: GS8579-EX / GS8579-EX.RTD
GS8579-EX.TC / GS8579-EX.R

Temperature input isolated barriers, converter RTD/TC/mV/potentiometer signals in hazardous area into 0/4~20mA or 0/1~5V signals and output to safe area. It can be configured by computer. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage: 20~35V DC

Current Consumption: ≤65mA(Supply voltage: 24V;Output: 20mA)

Safe-area Output:

Output Current: 0~20mA/4~20mA; Load resistance: $R_L \leq 300\Omega$

Output Voltage: 0~5V/1~5V; Load resistance: $R_L \geq 35k\Omega$

(Customers need specify current output or voltage output when ordering.)

Hazardous-area Input:

Input Signal: please see the table 'Input Signal and Range'.

Temperature Drift: 0.01%F.S./°C

CJC: ±1°C(Compensation range: -20°C~+60°C)

Response Time(0~90%): ≤1s

Power Supply Protection: Power supply reverse protection

EMC: According to IEC 61326-1(GB/T 18268)

Ambient Temperature: -20°C~+60°C

Dielectric Strength:

Between non-intrinsically safe part and intrinsically safe part ≥2500V AC

Between power supply part and output part ≥500V AC

Insulation Resistance:

Between non-intrinsically safe part and intrinsically safe part ≥100MΩ

Between power supply part and output part ≥100MΩ

Structure: GS8500 range structure customized by Phoenix Contact

Weight: Approx.150g

Suitable Location: Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

Suitable Field Apparatus: 2-wire or 3-wire RTD, TC, mV signal, Potentiometer

Input Signal and Range

	Type	Range	Min.Span	Accuracy
TC	T	-200°C~+400°C	50°C	0.5°C / 0.1%
	E	-200°C~+900°C	50°C	0.5°C / 0.1%
	J	-200°C~+1200°C	50°C	0.5°C / 0.1%
	K	-200°C~+1372°C	50°C	0.5°C / 0.1%
	N	-200°C~+1300°C	50°C	0.5°C / 0.1%
	R	-40°C~+1768°C	500°C	1.5°C / 0.1%
	S	-40°C~+1768°C	500°C	1.5°C / 0.1%
	B	+320°C~+1820°C	500°C	1.5°C / 0.1%
mV signal		-100mV~+100mV	10mV	20μV / 0.1%
RTD	Pt100	-200°C~+850°C	20°C	0.2°C / 0.1%
	Cu50	-50°C~+150°C	20°C	0.2°C / 0.1%
	Cu100	-50°C~+150°C	20°C	0.2°C / 0.1%
Potentiometer		0kΩ~5kΩ		0.1%
		0kΩ~10kΩ		0.1%

Note: 1、The “%” of conversion accuracy is relative to its range. Take the larger value between the range error and the absolute error when applying.

2、Allow a maximum wire resistance of 50Ω/line for RTD input(3-wire).

3、When the thermocouple is input, the conversion accuracy does not include the CJC.

For every 100Ω increase in the compensation wire, the cold junction error increases by 0.2°C.

4、When the Type B thermocouple is input, the temperature range is required to be greater than 680 °C to ensure the accuracy index.

5、When the Type S thermocouple is input, the temperature measurement accuracy is 0.6% below 10°C.

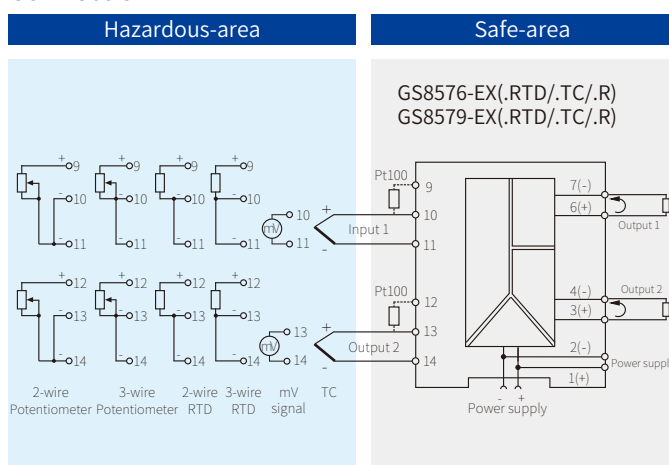
6、mV signal input needs to be customized.



Dimensions: 118.9mm×106.0mm×17.5mm



Connection



Note: a) GS8576-EX only contains input1, output1, output2;

b) GS8576-EX/GS8579-EX: RTD, TC input;

c) GS8576-EX.RTD/GS8579-EX.RTD: RTD input;

d) GS8576-EX.TC/GS8579-EX.TC: TC, mV input;

e) GS8576-EX.R/GS8579-EX.R: Potentiometer input;

f) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

Explosion-proof Certificate

Certifying Authority: NEPSI(China)

Ex Marking: [Ex ia Ga] II C

[Ex iaD]

Maximum Voltage: $U_m=250V$

Intrinsic Safety Parameters(9、10、11; 12、13、14 terminals):

$U_o=8.5V$, $I_o=20mA$, $P_o=43mW$

II C: $C_o=6.5\mu F$, $L_o=3.6mH$

*II B: $C_o=60\mu F$, $L_o=10.8mH$

II A: $C_o=1000\mu F$, $L_o=28.8mH$

*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]