



## HGTT Temperature transmitter



HGTT temperature transmitter is the new generation of intelligent field bus transmitter with HART technology. HGTT transmitter integrates abundant function block and utilize not only normal measurement function but also complicated control strategy.

HGTT can use manifold resistance thermometer sensor with digital technology to broaden the measuring range and provide easier connection between field and control room, and reduce the expense on maintenance.

HGTT broadly used in chemical industry, metallurgy and oil field, etc.

### Main features:

#### 1. Superior performance

—High accuracy:  $\pm 0.1\%$

—Low temperature drift:  $< 50\text{ppm}/^\circ\text{C}$

#### 2. Flexibility

—Support for multiple thermal resistance and thermocouple sensors;

—Thermal resistance supports 2,3 wire connection mode;

—equipped with the cold end compensation function.

#### 3. Support HART Protocol

## Basic parameters

Bus power	HART 11.9~42VDC/11.9~30VDC ( intrinsically safe )
Load Resistance	0~1500Ω ( 4~20mA) 230~1100Ω (HART)
Bus Protocol	Two-wire 4~20mA DC +HART
Isolation	Between the end and shell:500Vrms(707VDC)
Display	6-digit numeric and 5-digit alphabet LCD module or without display( optional)
Temperature range	Operation temperature: -40℃~85℃ ( without LCD ) -30℃~70℃ ( with LCD ) Storage temperature: -40℃~100℃ ( without LCD ) -40℃~85℃ ( with LCD )
Explosive Type	Intrinsically safe type, Explosion separation type
Electromagnetic Compatibility	Conforming to GB/T 18268-2000
Protection Level	IP65
Humidity Range	0%RH~100%RH

## Performance

Input signal	Resistance: Pt100、 Cu50、 Cu100、 0~500Ω 、 0~2000Ω Thermocouple: B,E,J,N,K,R,S,T Voltage Signal : -100 mV ~100mV
Channel numbers	2
Connection method	2, 3 wire
Accuracy of cold end compensation	±0.1℃
Temperature effect	<±50ppm/℃

## RTD Accuracy Index at normal temperature

Signal type	Suggest using range	Accuracy
Resistance signal	0~500Ω、 0~2000Ω	±0.1%
Pt100	-200~850℃	±0.1℃
Pt1000	-200~250℃	±0.1℃
Cu50	-50~150℃	±0.4℃
Cu100	-50~150℃	±0.3℃

## Thermocouple Accuracy Index at normal temperature

Signal type	Recommend using range	Accuracy
mV	-100mV~+100mV	±0.1%
B	500°C~1810°C	±0.1°C
E	-200°C~1000°C	±0.4°C
J	-190°C~1200°C	±0.4°C
K	-200°C~1372°C	±0.4°C
N	-190°C~1300°C	±0.8°C
R	0°C~1768°C	±1.0°C
S	0°C~1768°C	±1.0°C
T	-200°C~400°C	±0.4°C

## Specification

### Temperature Transmitter with Thermocouple or RTD

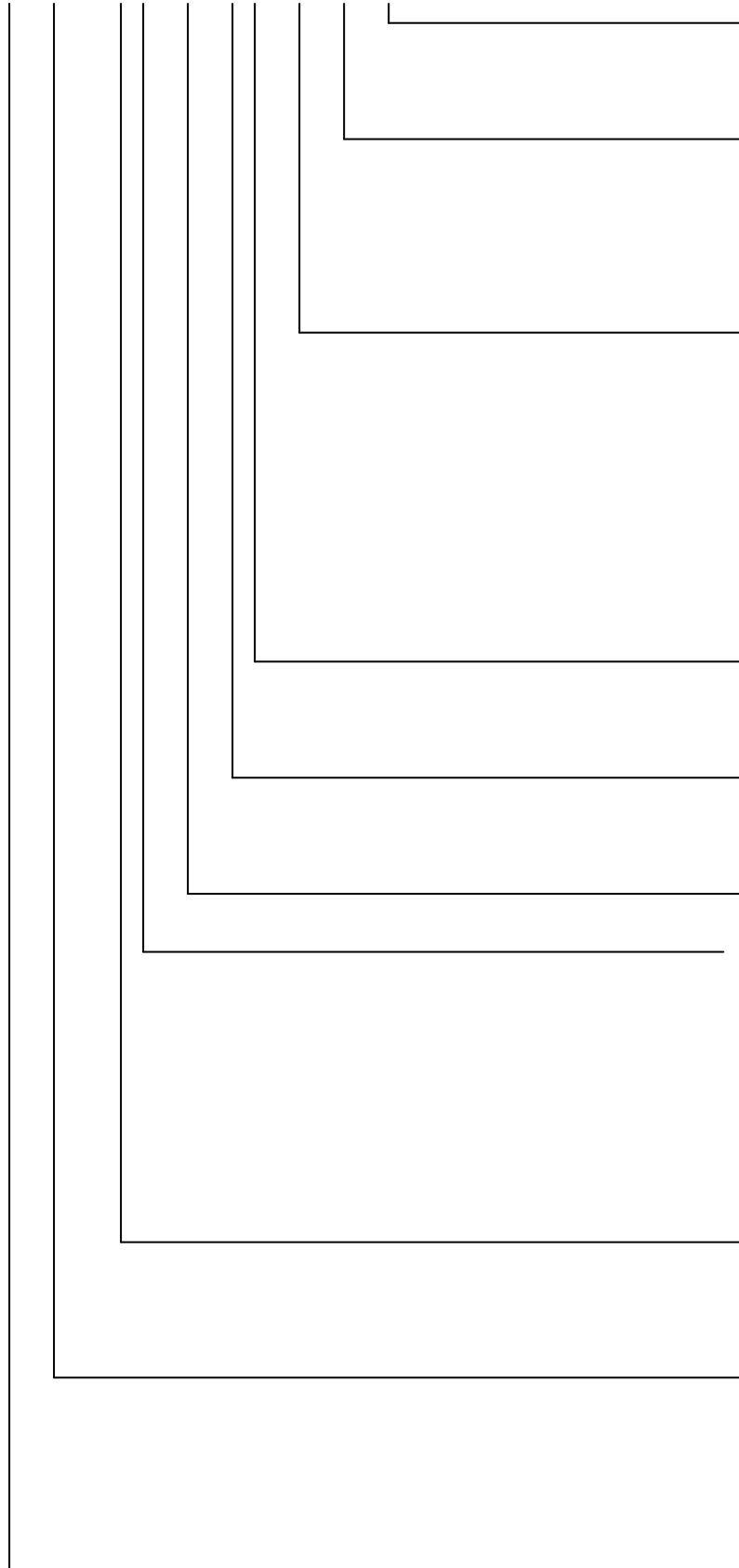
Model	Graduation	Measuring Temperature (°C)
SBWR-2180	E	0 – 400 0 – 600
SBWR-2280	K	0 – 400 0 – 600 0 – 800 0 – 1000
SBWR-2380	S	600 – 1600
SBWR-2880	N	0 – 400 0 – 600 0 – 800 0 – 1000 0 – 1200
SBWR-4180	E	0 – 600
SBWR-4280	K	0 – 1100
SBWR-4380	S	0 – 1600
SBWR-4480	B	0 – 1600
SBWR-4580	T	0 – 400
SBWR-4880	N	0 – 1200
SBWZ-2180	Cu50	-50 – 150
SBWZ-2280	Cu100	-50 – 150
SBWZ-2480	Pt100	0 – 500 -200 – 500
SBWZ-4480	Pt100	-200 – 500

**Remarks: Please specify in case of different requirements.**



## Model

**S B W** -



### Remarks

- 0) Conventional
- K) Armored

### Design No.

- 0)  $\Phi$ 16 Protection Tube
  - 1)  $\Phi$  12 Protection Tube
- Junction Box

- 2) Water Proof

### Mounting & Fixing

- 1) No fixed device
- 2) Fixed Thread
- 3) Movable Flange
- 4) Fixed Flange
- 5) Angle square type
- 6) Taper Protection Tube with Fixed Thread
- 7) Thermowell

### Device Type

- 0) Conventional
- 1) Smart

### Circuit Type

- 8) Non-isolation type with measuring element

### Sensor

- 0) Durable type

### Thermocouple

- 1) E NiCr-CuNi
- 2) K NiCr-NiSi
- 3) P PtRh10-Pt
- 4) B PtRh30-PtRh6
- 5) T Cu-CuNi
- 8) N NiCrSi-NiSi

### RTD

- 1) Cu50
- 2) Cu100
- 3) Pt100

### Output

- 2) Output in linearity to corresponding temperature
- 4) Output in linearity to corresponding input signal

### No) General Type

- R) Thermocouple
- Z) RTD

### Temperature

### Transmitter Unit

### DDZ-S