

HGTT TEMPERATURE TRANSMITTER



MODEL CODE : ETT

SPECIAL FEATURES

- NEW GENERATION OF INTELLIGENT FIELD BUS TRANSMITTER WITH HART TECHNOLOGY
- INTEGRATES ABUNDANT FUNCTION BLOCK
- REALIZES NOT ONLY NORMAL MEASUREMENT FUNCTION BUT ALSO COMPLICATED CONTROL STRATEGY
- RESISTANCE THERMOMETER SENSOR WITH DIGITAL TECHNOLOGY TO BROADEN THE MEASURE RANGE
- PROVIDE EASIER CONNECTION BETWEEN FIELD AND CONTROL ROOM, AND REDUCE THE EXPENSE ON DEPLOYMENT AND MAINTENANCE

APPLICATIONS

- PETROCHEMICAL
- POWER INSTAURATION
- CHEMICAL PLANTS
- OIL & GAS
- WATER & WASTE WATER



SPECIFICATIONS - STANDARD VERSION

| | |
|--------------------------|---|
| 1). Superior Performance | : High accuracy: $\pm 0.1\%$ Low temperature drift: 50ppm/ $^{\circ}\text{C}$ |
| 2). Flexibility | : Support for multiple thermal resistance and thermocouple sensor Thermal resistance supports 2, 3 wire connection mode equipped with the cold end compensation function. |
| 3). Protocol | : HART |

BASIC PARAMETERS

| | |
|-------------------------------|---|
| Bus Power | : HART 11.9~42VDC / 11.9~30VDC (intrinsically safe) |
| Load Resistance | : 0~1500 Ω (4~20mA) 230~1100 Ω (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 $^{\circ}\text{C}$ ~85 $^{\circ}\text{C}$ ~ (without LCD) -30 $^{\circ}\text{C}$ ~70 $^{\circ}\text{C}$ (with LCD) Storage temperature: -40 $^{\circ}\text{C}$ ~100 $^{\circ}\text{C}$ (without LCD) -40 $^{\circ}\text{C}$ ~85 $^{\circ}\text{C}$ (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 |

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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°C |
| Temperature effect | : | ±50ppm/°C |

RTD ACCURACY INDEX AT NORMAL TEMPERATURE

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

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.

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HOW TO ORDER

| | | Example |
|-------------------------------------|---|---------|
| BASIC MODEL | | ETT |
| REMARKS | | |
| 0 | Conventional | X |
| K | Armored | |
| DESIGN NO. | | X |
| 0 | Φ16 Protection Tube | |
| 1 | Φ12 Protection Tube | |
| JUNCTION BOX | | X |
| 2 | Water Proof | |
| MOUNTING & FIXING | | X |
| 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 | | X |
| 0 | Conventional | |
| 1 | Smart | |
| CIRCUIT TYPE | | X |
| 8 | Non-isolation type with measuring element | |
| SENSOR | | X |
| 0 | Durable Type | |
| THERMOCOUPLE | | X-X |
| 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 | |
| 4 | Pt100 | |
| OUTPUT | | X |
| 2 | Output in linearity to corresponding temperature | |
| 5 | Output in linearity to corresponding input signal | |
| NO) GENERAL TYPE | | X |
| R | Thermocouple | |
| Z | RTD | |
| TEMPERATURE TRANSMITTER UNIT | | |
| DDZ-S | | |

Ordering Example : ETT - X - X - X - X - X - X - X - X-X - X - X -X

Note : Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.