

General Specifications

Model YTA50
Temperature Transmitter

YTA SERIES

GS 01C50C01-00E

The YTA50 is a head mount type of temperature transmitter that accepts thermocouple, RTD, ohms or DC millivolts input and converts it to a 4 to 20 mA DC signal for transmission. The YTA50 conforms to the standard DIN form B head mounting.



■ STANDARD SPECIFICATIONS

Accuracy

See Table 1. on page 2.

Cold Junction Compensation Accuracy

$\pm 1^{\circ}\text{C}$ ($\pm 1.8^{\circ}\text{F}$) (For T/C only)

Ambient Temperature Effects

See Table 1. on page 2.

Power Supply Effects

$\pm 0.005\%$ of FS per Volt

RFI Effects

Tested per EN 50 082-2, field intensity up to 10 V/m.

EMC Conformity CE

EN61326

Input Type, Span and Range

Selection from thermocouples (T/C), 2-, 3-, and 4-wire RTDs. See Table 1 on page 2.

Maximum Zero offset

$\pm 50\%$ of the maximum temperature

Input Signal Source Resistance

10 M Ω , or 3 k Ω at power-off

Input Lead Wire Resistance

5 Ω per wire or lower

Burnout

High or Low

Output

Two wire 4 to 20 mA DC

Response Time

1 to 60 seconds (programmable)

Ambient Temperature Limits

(Option code may affect limit)
-40 to 85 $^{\circ}\text{C}$ (-40 to 185 $^{\circ}\text{F}$)

Ambient humidity limits

5 to 90% RH at 40 $^{\circ}\text{C}$ (104 $^{\circ}\text{F}$)

Supply Voltage

7 to 35 V DC
7 to 28 V DC for Intrinsically safe type

Load Resistance

Limitation: 0 to $\{43 \times (E-7)\}$ [Ω]
where E is power supply voltage.
Typical; 731 Ω @ 24 V DC

Isolation

Input/output isolated to 1500 V AC.

Enclosure:

Material

Polycarbonate

Color of the case

Red

Mounting

DIN form B head mounting

Terminals

M3 screws

Weight

50 g (0.11 lb)

Table 1. Input type, range and accuracy

| Sensor type | Standard | Input ranges | | Minimum span | | Accuracy (value whichever is greater) | Temp. effects/10°C (value whichever is greater) |
|-----------------|-------------|-----------------|--------------|--------------|---------------------------|--|--|
| | | °C | °F | °C | °F | | |
| <T/C> | | | | | | | |
| B | IEC584 | 400 to 1820 | 752 to 3308 | 200 | 360 | ± 0.1% of span or ±2.0°C | ± 0.1% of span or ±2.0°C |
| E | | -100 to 1000 | -148 to 1832 | 50 | 90 | | |
| J | | -100 to 1200 | -148 to 2192 | 50 | 90 | ± 0.1% of span or ±1.0°C | ± 0.1% of span or ±0.5°C |
| K | | -180 to 1372 | -292 to 2502 | 50 | 90 | | |
| N | | -180 to 1300 | -292 to 2372 | 100 | 180 | | |
| R | | -50 to 1760 | -58 to 3200 | 200 | 360 | ± 0.1% of span or ± 2.0°C | ± 0.1% of span or ±2.0°C |
| S | | -50 to 1760 | -58 to 3200 | 200 | 360 | | |
| T | -200 to 400 | -328 to 752 | 50 | 90 | ± 0.1% of span or ± 1.0°C | ± 0.1% of span or ±0.5°C | |
| L | DIN43710 | -100 to 900 | -148 to 1652 | 50 | | | 90 |
| U | | -200 to 600 | -328 to 1112 | 75 | 135 | | |
| W3 | ASTM | 0 to 2300 | 32 to 4172 | 200 | 360 | ± 0.1% of span or ± 2.0°C | ± 0.1% of span or ±2.0°C |
| W5 | E988-90 | 0 to 2300 | 32 to 4172 | 200 | 360 | | |
| <RTD> | | | | | | | |
| Pt100 | IE751 | -200 to 850 | -328 to 1562 | 10 | 18 | ± 0.1% of span or ± 0.2°C | ± 0.1% of span or ± 0.1°C |
| Ni100 | DIN43760 | -60 to 250 | -76 to 482 | 10 | 18 | | |
| DC Voltage [mV] | | -10 to 800 [mV] | | 5 [mV] | | ± 0.1% of span or ± 0.01mV | ± 0.1% of span or ± 10µV |
| Resistance [Ω] | | 0 to 5000 [Ω] | | 30 [Ω] | | ± 0.1% of span or ± 0.1Ω | ± 0.1% of span or ± 0.1Ω |

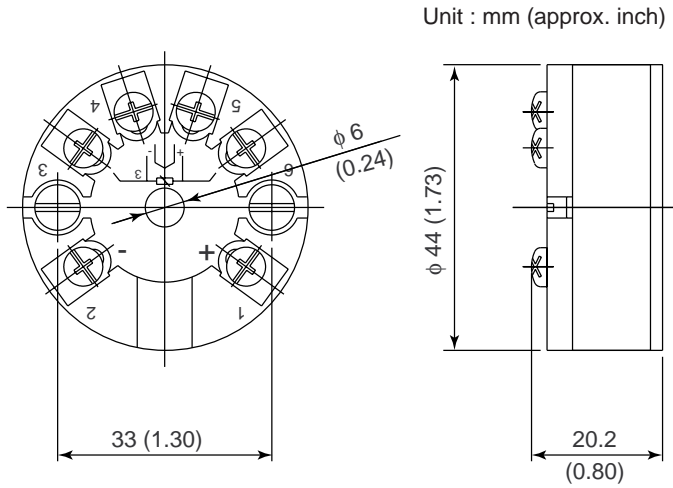
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■ MODEL AND SUFFIX CODES

| Model | Suffix code | Descriptions |
|-------------------------|------------------|--|
| YTA50 | | Temperature Transmitter (Head Mount Type) |
| Output Signal | - A | 4 to 20mA DC |
| Optional Specifications | / KS2 | CENELEC ATEX intrinsically safe approval II 1G EEx ia IIC T4/T6 Amb. Temp. T4 : -40 to 85°C (-40 to 185°F) T6 : -40 to 60°C (-40 to 140°F) Supply : Ui=28V, Ii=120mA, Pi=0.84W, Ci≤1nF, Li≤10µH |
| | / DS2 | FM intrinsically safe and CENELEC ATEX intrinsically safe approval combination (For CENELEC ATEX Intrinsically safe approval, see /KS2) [FM Intrinsically safe approval] Class I Division 1 Groups A, B, C and D Ambient Temperature : -40 to 60°C (-40 to 140°F) Supply : Vmax=28V, Imax=120mA, Pmax=0.84W, Ci≤1nF, Li≤10µH |

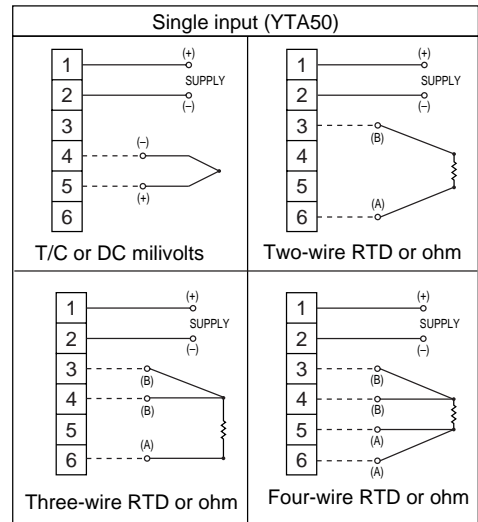
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DIMENSIONS



F01.EPS

● Sensor Connections



< Ordering Information >

Specify the following when ordering.

1. Model, suffix codes, and optional specification codes
2. Sensor type. For RTD input, specify the number of wire together. For example; Pt100, 4-wire

3. Calibration range. Specify upper and lower range value, so as to make the span wider than the minimum span limit.
4. Sensor burnout. Specify high or low.
5. Response time. Specify an integral number from 1 through 60. ("1" is recommended.)