General Specifications

Model YTA50
Temperature Transmitter

GS 1C50C1-E

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

STANDARD SPECIFICATIONS

Accuracy
See Table 1. on page 2.

Cold JunctionCompensation Accuracy
± 1˚C (± 1.8˚F) (For T/C only)

Ambient Temperature Effects
See Table 1. on page 2.

Power Supply Effects
± 0.005% of FS per Volt

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

EMC Conformity CE
Emission: EN50 081-1
Immunity: EN50 082-2

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
±50% of the maximum temperature

Input Signal Source Resistance
10 MΩ, or 3 kΩ 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 affects limit)
-40 to 85˚C (-40 to 185˚F)

Ambient humidity limits
5 to 90% RH at 40˚C (104˚F)

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

Load Resistance
Limitation: 0 to {43 × (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 lbs.)

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4th Edition Feb. 1, 2000

Table 1. Input type, range and accuracy

Sensor type	Standard	Input ranges °C	Input ranges °F	Minimum span °C	Minimum span °F	Accuracy (value whichever is greater)	Temp. effects/10°C (value whichever is greater)
<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	IEC584	-100 to 1000	-148 to 1832	50	90	± 0.1% of span or ±1.0°C	± 0.1% of span or ±0.5°C
J	IEC584	-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	IEC584	-180 to 1372	-292 to 2502	50	90	± 0.1% of span or ±1.0°C	± 0.1% of span or ±0.5°C
N	IEC584	-180 to 1300	-292 to 2372	100	180	± 0.1% of span or ±1.0°C	± 0.1% of span or ±0.5°C
R	IEC584	-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	IEC584	-50 to 1760	-58 to 3200	200	360	± 0.1% of span or ± 2.0°C	± 0.1% of span or ±2.0°C
T	IEC584	-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	± 0.1% of span or ± 1.0°C	± 0.1% of span or ±0.5°C
U	DIN43710	-200 to 600	-328 to 1112	75	135	± 0.1% of span or ± 1.0°C	± 0.1% of span or ±0.5°C
W3	ASTM E988-90	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	ASTM E988-90	0 to 2300	32 to 4172	200	360	± 0.1% of span or ± 2.0°C	± 0.1% of span or ±2.0°C
<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	± 0.1% of span or ± 0.2°C	
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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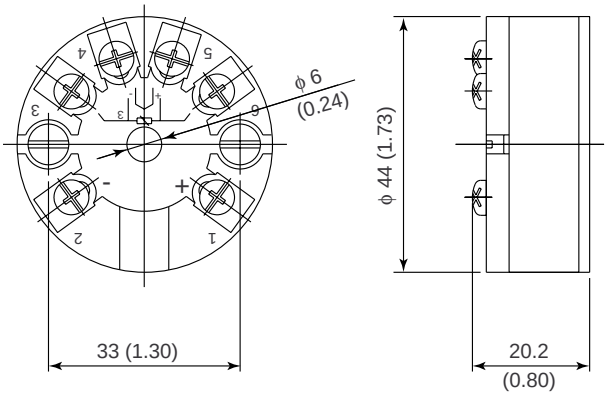
■ DIMENSIONS

Unit : mm (approx. inch)



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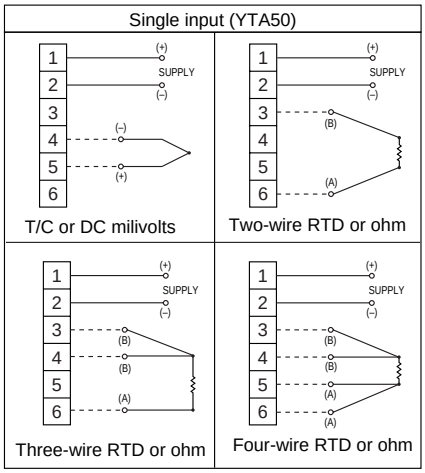
● Sensor Connections



■ MODEL AND SUFFIX CODES

Model	Suffix code	Descriptions
YTA50	·····	Temperature Transmitter (Head Mount Type)
Output Signal	**- A** ·····	4 to 20mA DC
Optional Specifications	**/ KS1**	CENELEC intrinsically safe approval EEx ia IIC T1-6 Amb. Temp. T1 - 4 : -40 to 85°C (-40 to 185°F) T5 - 6 : -40 to 60°C (-40 to 140°F) Supply : Umax=28V, Imax=120mA, Pmax=0.84W, Cequ≤1nF, Lequ≤10µH Sensor : Umax=28V, Imax=93mA, Cequ≤0.12µF, Lequ≤2.0mH
	/ DS1	FM intrinsically safe and CENELEC intrinsically safe approval combination (For CENELEC Intrinsically safe approval, see /KS1) [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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< 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 .)

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