

The YTA110 is the high performance temperature transmitter that accepts Thermocouple, RTD, ohms or DC millivolts inputs and converts it to a 4 to 20 mA DC signal for transmission. The YTA110 supports either BRAIN or HART communication protocol.

The YTA110 in its standard configuration is certified by TÜV as complying with SIL2 for safety requirement.



FEATURES

High performance

Microprocessor-based sensing technology ensures long-term accuracy and high reliability.

High reliability

Dual-compartment housing realizes high resistance capability to harsh environments, and YTA110 has SIL2 capability for safety requirement.

Variety of sensor inputs

The type of sensor input is user-selectable from thermocouples (T/C), RTDs, ohms, or DC millivolts.

Digital communication

BRAIN or HART® communication protocol is available. The instrument configuration can be changed by the user with using the BT200 or HART communicator.

Self-diagnostics function

Continuous self-diagnostics capability ensures long-term performance and lower cost of ownership.

LCD display with bargraph

The LCD display provides both a digital readout and percent bargraph simultaneously.

STANDARD SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

Accuracy

(A/D accuracy/span + D/A accuracy) or $\pm 0.1\%$ of calibrated span, whichever is greater. See Table 1. on page 3.

Cold Junction Compensation Accuracy

(For T/C only)
 $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)

Ambient Temperature Effect (per 10°C change)

$\pm 0.1\%$ or \pm (Temperature Coefficient /span), whichever is greater. See Table 2. for Temperature Coefficient.

Stability

RTD:
 $\pm 0.1\%$ of reading or $\pm 0.1^\circ\text{C}$ per 2 years, whichever is greater at $23\pm 2^\circ\text{C}$.

T/C:

$\pm 0.1\%$ of reading or $\pm 0.1^\circ\text{C}$ per year, whichever is greater at $23\pm 2^\circ\text{C}$.

5 Year Stability

RTD:

$\pm 0.2\%$ of reading or $\pm 0.2^\circ\text{C}$, whichever is greater at $23\pm 2^\circ\text{C}$.

T/sC:

$\pm 0.4\%$ of reading or $\pm 0.4^\circ\text{C}$, whichever is greater at $23\pm 2^\circ\text{C}$.

RFI Effect

Tested per EN 50082-2, field intensity up to 10 V/m.

Power Supply Effect

$\pm 0.005\%$ of calibration span per volt

Vibration Effect

10 to 60 Hz 0.21 mm peak displacement
60 to 2000 Hz 3G

Position Effect

None

FUNCTIONAL SPECIFICATIONS

Input

Input type is selectable: Thermocouples, 2-, 3-, and 4-wire RTDs, ohms and DC millivolts. See Table 1. on page 3.

Span & Range Limits

See Table 1. on page 3.

Input signal source resistance (for T/C, mV)

1 k Ω or lower

Input lead wire resistance (for RTD, ohm)

10 Ω per wire or lower

Output

Two wire 4 to 20 mA DC. Output range: 3.68 mA to 20.8 mA

BRAIN or HART® protocol is superimposed on the 4 to 20 mA signal.

Any single value from the followings can be selected as the analog output signal.

Sensor 1, Terminal Temperature.

Also, up to three of the above values can be displayed on LCD display or read via communication.

Isolation

Input/Output/GND isolated to 500 V DC

Sensor Burnout

High (21.6 mA DC) or Low (3.6 mA DC),
userselectable.

Output in Transmitter Failure

Up-scale: 110%, 21.6 mA DC or more (Standard or
Optional code /C3)
Down-scale: -5%, 3.2 mA DC or less (Optional code
/C1 or /C2)

Update Time

Approximately 0.5 seconds

Turn-on Time

Approximately 5 seconds

Damping Time Constant

Selectable from 0 to 99 seconds

Ambient Temperature Limits

Option code may affect limits.
-40 to 85 °C (-40 to 185 °F)
-30 to 80 °C (-22 to 176 °F) with Integral Indicator

Ambient Humidity Limits

5 to 100 % RH at 40 °C (104 °F)

EMC Conformity Standards CE , N200

EN61326-1 Class A, Table2 (For use in industrial
locations)
EN61326-2-3

SIL Certification

YTA110 temperature transmitter is certified by TÜV
NORD CERT GmbH in compliance with the following
standards;
IEC 61508: 2000; Part1 to Part 7 Functional Safety of
Electrical/electronic/programmable electronic related
systems;
SIL 2 capability for single transmitter use, SIL 3
capability for dual transmitter use.

Self-calibration

The analog-to-digital measurement circuitry automati-
cally self-calibrates for temperature update by
comparing the dynamic measurement to extremely
stable and accurate internal reference elements.

Self-diagnostics

Loss of input error, ambient temperature error,
EEPROM error, and CPU error. Up to four error
history can be stored in the memory.

Manual Output Function

The output value can be set manually.

Supply & Load Requirements**Supply Voltage**

10.5 to 42 V DC for general use and flameproof type
10.5 to 32 CV DC for lightning protector (Optional
code /A)
10.5 to 30 V DC for intrinsically safe, Type n,
nonincendive, or non-sparking type
Minimum voltage limited at 16.4 V DC for digital
communications, BRAIN and HART®
protocols

Load

0 to 1335 Ω for operation
250 to 600 Ω for digital communication
See Figure 1. on page 4.

Communication Requirements**BRAIN:****Communication Distance**

Up to 2 km (1.25 miles) when using CEV polyethyl-
ene-insulated PVC-sheathed cables. Communication
distance varies depending on type of cable used.

Load Capacitance

0.22 μF or less

Load Inductance

3.3 mH or less

Input Impedance of communicating device

10 kΩ or more at 2.4 kHz.

□ PHYSICAL SPECIFICATIONS**Enclosure****Material**

Low copper cast-aluminum alloy

Coating

Polyurethan resin baked finish
Color: Deep-sea moss green (Munsell 0.6GY3.1/2.0)

Degrees of Protection

IP67, NEMA4X, JIS C0920 immersion proof

Data and tag plate

SUS304 Stainless steel

Mounting

Optional mounting brackets can be used either for
two-inch pipe or flat panel mounting.

Terminal Screws

M4 screws

Integral Indicator

Optional LCD digital indicator includes 5-digit numeri-
cal display with °C, K, °F, °R, % and mV, 0 to 100 %
bargraph and dot-matrix display.

Weight

1.2 kg(2.6 lb) without Integral indicator and Mounting
bracket. Integral indicator weights 0.2 kg(0.4 lb).

Electrical Connections

Refer to 'MODEL AND SUFFIX CODES' on page 5.

Table 1. Sensor type, measurement range, and accuracy.

| Sensor Type | Reference Standard | Measurement Range | | Minimum Span (Recommended) | Accuracy | | | | D/A Accuracy | |
|-------------|--------------------|-------------------|--------------|----------------------------|--------------|--------------|--------------|--------|--------------------|--------|
| | | °C | °F | | Input range | | A/D Accuracy | | | |
| | | | | | °C | °F | °C | °F | | |
| T/C | IEC584 | 100 to 1820 | 212 to 3308 | 25 °C (45 °F) | 100 to 300 | 212 to 572 | ± 3.0 | ± 5.4 | ± 0.02% of span | |
| | | | | | 300 to 400 | 572 to 752 | ± 1.0 | ± 1.8 | | |
| | | | | | 400 to 1820 | 752 to 3308 | ± 0.75 | ± 1.35 | | |
| | | -200 to 1000 | -328 to 1832 | | -200 to -50 | -328 to -58 | ± 0.35 | ± 0.63 | | |
| | | | | | -50 to 1000 | -58 to 1832 | ± 0.16 | ± 0.29 | | |
| | | -200 to 1200 | -328 to 2192 | | -200 to -50 | -328 to -58 | ± 0.40 | ± 0.72 | | |
| | | | | | -50 to 1200 | -58 to 2192 | ± 0.20 | ± 0.36 | | |
| | | -200 to 1372 | -328 to 2502 | | -200 to -50 | -328 to -58 | ± 0.50 | ± 0.90 | | |
| | -50 to 1372 | | | | -58 to 2502 | ± 0.25 | ± 0.45 | | | |
| | -200 to 1300 | -328 to 2372 | -200 to -50 | | -328 to -58 | ± 0.80 | ± 1.44 | | | |
| | | | -50 to 1300 | | -58 to 2372 | ± 0.35 | ± 0.63 | | | |
| | R | ASTM E988 | -50 to 1768 | | -58 to 3214 | -50 to 0 | -58 to 32 | ± 1.0 | | ± 1.8 |
| | | | | | | 0 to 100 | 32 to 212 | ± 0.80 | | ± 1.44 |
| | | | 100 to 600 | | 212 to 1112 | 100 to 600 | 212 to 1112 | ± 0.60 | | ± 1.08 |
| 600 to 1768 | | | | 1112 to 3214 | | ± 0.40 | ± 0.72 | | | |
| S | DIN43710 | -50 to 1768 | -58 to 3214 | -50 to 0 | -58 to 32 | ± 1.0 | ± 1.8 | | | |
| | | | | 0 to 100 | 32 to 212 | ± 0.80 | ± 1.44 | | | |
| T | ASTM E988 | -200 to 400 | -328 to 752 | -200 to -50 | -328 to -58 | ± 0.25 | ± 0.45 | | | |
| | | | | -50 to 400 | -58 to 752 | ± 0.14 | ± 0.25 | | | |
| W3 | ASTM E988 | 0 to 2300 | 32 to 4172 | 0 to 400 | 32 to 752 | ± 0.80 | ± 1.44 | | | |
| | | | | 400 to 1400 | 752 to 2552 | ± 0.50 | ± 0.90 | | | |
| | | | | 1400 to 2000 | 2552 to 3632 | ± 0.60 | ± 1.08 | | | |
| | | | | 2000 to 2300 | 3632 to 4172 | ± 0.90 | ± 1.62 | | | |
| | | | | 0 to 400 | 32 to 752 | ± 0.70 | ± 1.26 | | | |
| | | | | 400 to 1400 | 752 to 2552 | ± 0.50 | ± 0.90 | | | |
| W5 | DIN43710 | 0 to 2300 | 32 to 4172 | 1400 to 2000 | 2552 to 3632 | ± 0.70 | ± 1.26 | | | |
| | | | | 2000 to 2300 | 3632 to 4172 | ± 0.90 | ± 1.62 | | | |
| | | | | -200 to -50 | -328 to -58 | ± 0.30 | ± 0.54 | | | |
| | | | | -50 to 900 | -58 to 1652 | ± 0.20 | ± 0.36 | | | |
| L | DIN43710 | -200 to 900 | -328 to 1652 | -200 to -50 | -328 to -58 | ± 0.50 | ± 0.90 | | | |
| | | | | -50 to 600 | -58 to 1112 | ± 0.25 | ± 0.45 | | | |
| RTD | IEC751 | -200 to 850 | -328 to 1562 | 10 °C (18 °F) | -200 to 850 | -328 to 1562 | ± 0.14 | ± 0.25 | | |
| | | | | | -200 to 850 | -328 to 1562 | ± 0.30 | ± 0.54 | | |
| | | | | | -200 to 850 | -328 to 1562 | ± 0.20 | ± 0.36 | | |
| | | | | | -200 to 850 | -328 to 1562 | ± 0.16 | ± 0.29 | | |
| | Cu | SAMA RC21-4 | -70 to 150 | | -94 to 302 | -70 to -40 | -94 to -40 | ± 1.35 | ± 2.43 | |
| | | | | | | -40 to 150 | -40 to 302 | ± 1.0 | ± 1.8 | |
| | Ni120 | — | -70 to 320 | | -94 to 608 | -70 to 320 | -94 to 608 | ± 0.11 | ± 0.19 | |
| mV | — | -10 to 100 [mV] | | 3 [mV] | — | | ± 12 [μV] | | | |
| ohm | — | 0 to 2000 [Ω] | | 20 [Ω] | — | | ± 0.35 [Ω] | | | |

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Total Accuracy = (A/D Accuracy / Span + D/A Accuracy) or (± 0.1% of calibrated span), whichever is greater.

For T/C input, add Cold Junction Compensation Accuracy (± 0.5 °C) to the total accuracy.

Example; when selecting Pt100 with measurement range of 0 to 200 °C.

$$\frac{0.14^{\circ}\text{C}}{200^{\circ}\text{C}} \times 100\% \text{ of span} + 0.02\% \text{ of span} = 0.09\% \text{ of span}$$

Since the value is smaller than ± 0.1% of span, the total accuracy is ± 0.1%.

Table 2. Temperature Coefficient

| Sensor Type | | Temperature Coefficient |
|-----------------------------|-------------------------|---------------------------------|
| Thermocouples E,J,K,N,T,L,U | | 0.08°C + 0.02% of abs.reading |
| Thermocouples R,S,W3,W5 | | 0.25°C + 0.02% of abs.reading |
| T/C B | 100°C ≤ Reading < 300°C | 1°C + 0.02% of abs.reading |
| | 300°C ≤ Reading | 0.5°C + 0.02% of abs.reading |
| RTD | | 0.08°C + 0.02% of abs.reading |
| mV | | 0.002 mV + 0.02% of abs.reading |
| ohm | | 0.1 Ω + 0.02% of abs.reading |

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Note1: Ambient Temperature Effect per 10°C change is ±0.1% or ±(temperature coefficient/span), whichever is greater.

Note2: The “abs.reading” on Table2 means the absolute value of the reading in °C.

Example of abs reading;

When the temperature value is 250 Kelvin, abs reading is 23.15, absolute (250–273.15).

Example of Ambient Temperature Effect;

Conditions;

- 1) Input Sensor: Pt100
- 2) Calibration Range: –100 to 100°C
- 3) Reading value: –50°C

Ambient Temperature Effect per 10°C;

$$\text{Temperature Coefficient/Span} = (0.08^\circ\text{C} + 0.02/100 \times |-50^\circ\text{C}|) / \{100^\circ\text{C} - (-100^\circ\text{C})\} = 0.00045 \rightarrow 0.045\%$$

Therefore, Ambient Temperature Effect is ±0.1%/10°C

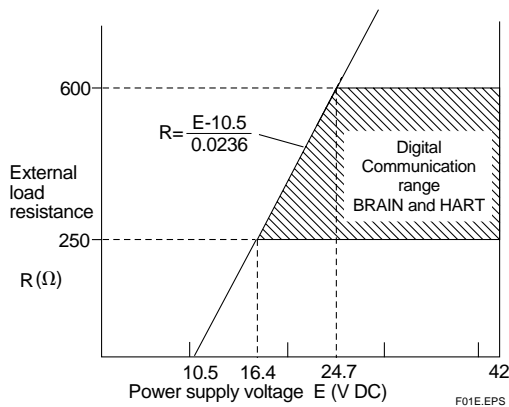


Figure 1. Relationship Between Power Supply Voltage and External Load Resistance.

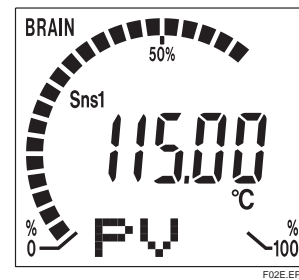


Figure 2. Integral Indicator Display Example.

MODEL AND SUFFIX CODES

| Model | Suffix Codes | Descriptions |
|-----------------------|--|---|
| YTA110 | | Temperature Transmitter |
| Output Signal | -D | 4 to 20mA DC with digital communication (BRAIN protocol) |
| | -E | 4 to 20mA DC with digital communication (HART protocol, refer to GS 01C50T01-00E) |
| — | A | Always A |
| Electrical Connection | 0 | G1/2 female |
| | 2 | 1/2 NPT female |
| | 3 | Pg 13.5 female |
| | 4 | M20 female |
| Integral Indicator | D | with digital indicator |
| | N | None |
| Mounting Bracket | B | SUS304 Stainless steel 2-inch horizontal pipe mounting *1 |
| | D | SUS304 Stainless steel 2-inch vertical pipe mounting *1 |
| | N | None |
| Optional Codes | / <input type="checkbox"/> Optional Specifications | |

*1: For flat-panel mounting, please prepare bolts and nuts.

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OPTIONAL SPECIFICATIONS

| Item | Descriptions | | Code | |
|---|---|---|--------------------------------------|-----------|
| Lightning protector | Power supply voltage: 10.5 to 32 V DC Allowable current: Max. 6000A(1×40μs), repeating 1000A(1×40μs) 100 times | | A | |
| Painting | Coating change | Epoxy resin coating | X1 | |
| | Color change | Amplifier cover only | Munsell code: N1.5 Black | P1 |
| | | | Munsell code: 7.5BG4/1.5, Jade green | P2 |
| | | Metallic silver | P7 | |
| | Amplifier and terminal Covers | Munsell code: 7.5 R4/14 Red | PR | |
| Calibration Unit | Degree F/Degree R unit | | D2 | |
| Output signal low-side in Transmitter failure | Output signal low-side: -5%, 3.2 mA DC or less. Sensor burnout is also set to 'LOW': -2.5%, 3.6 mA DC. | | C1 | |
| NAMUR NE43 Compliant | Output signal limits: 3.8 mA to 20.5 mA | Failure alarm down-scale: output status at CPU failure and hardware error is -5%, 3.2 mA or less. Sensor burnout is also set to LOW: -2.5%, 3.6 mA DC. | C2 | |
| | | Failure alarm up-scale: output status at CPU failure and hardware error is 110%, 21.6 mA or more. In this case Sensor burnout is High: 110%, 21.6 mA DC. | C3 | |
| Data Configuration | Description into "Descriptor" parameter of HART protocol (max. 16 characters) | | CA | |
| Stainless steel housing *1 | Housing Material: SCS14A stainless steel (equivalent to SUS316 cast stainless steel and ASTM CF-8M) | | E1 | |

*1: Not applicable for optional code JF3, G11, G12, P1, P2, P7, PR, and X1.

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OPTIONAL SPECIFICATIONS (For Explosion Protected Types)

| Item | Descriptions | Code |
|--------------------------------------|--|------|
| CENELEC ATEX (KEMA) | <p>CENELEC ATEX (KEMA) Intrinsically safe, Flameproof approval and Type n combination [Intrinsically safe approval] Applicable standard: EN 50014, EN 50020, EN 50284 Certificate: KEMA 02ATEX1026X II 1G EEx ia IIC T4,T5 Ambient Temperature: -40 to 70°C for T4, -40 to 50°C for T5 Supply/Output circuit: Ui=30V, Ii=165mA, Pi=900mW, Ci=20nF, Li=660μH Input circuit: Uo=8.6V, Io=30mA, Po=70mW, Co=3μF, Lo=20mH Electrical Connection: 1/2 NPT female and M20 female*1</p> <p>[Flameproof and Dust Ignition Proof Approval] Applicable Standard: EN 60079-0, IEC 60079-1, EN 61241-0, EN 61241-1 Certificate: KEMA 07ATEX0130 II 2G Ex d IIC T6/T5, II 2D Ex tD A21 IP67 T70°C, T90°C Ambient Temperature for Gas Atmospheres: -40 to 75°C for T6, -40 to 80°C for T5 Ambient Temperature for Dust Atmospheres: -40 to 65°C for T70°C, -40 to 80°C for T90°C Enclosure: IP67 Electrical Connection: 1/2 NPT female and M20 female*1</p> <p>[Type n approval] Applicable standard: EN60079-15 Referential standard: IEC60079-0, IEC60079-11 II 3G Ex nL IIC T4, T5 Ambient Temperature: -40 to 70°C for T4, -40 to 50°C for T5 Supply/Output circuit: Ui=30V, Ci=20nF, Li=660μH Input circuit: Uo=8.6V, Io=30mA, Po=70mW, Co=3μF, Lo=20mH Electrical Connection: 1/2 NPT female and M20 female*1</p> | KU2 |
| Canadian Standards Association (CSA) | <p>CSA Intrinsically safe, non-incendive and Explosionproof approval combination [Intrinsically safe/non-incendive approval] Applicable standard: C22.2 No0, C22.2 No0.4, C22.2 No25, C22.2 No94, C22.2 No142, C22.2 No157, C22.2 No213 Certificate: 172608-0001053837 Intrinsically safe for Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III, Division 1: Non-incendive for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups E, F and G; Class III, Division 1: Enclosure Type 4X Temperature Class: T4, Ambient Temperature: -40 to 60°C, Supply: Vmax=30V, Imax=165mA, Pmax=0.9W, Ci=18nF, Li=730μH Sensor input: Voc=9V, Isc=40mA, Po=0.09W, Ca=1μF, La=10mH Electrical Connection: 1/2 NPT female*1</p> <p>[Explosionproof approval] Applicable standard: C22.2 No0, C22.2 No0.4, C22.2 No25, C22.2 No30, C22.2 No94, C22.2 No142, C22.2 No157, C22.2 No213, C22.2 No1010.1 Certificate: 1089576 Explosionproof Class I, Div.1, Groups B, C and D, Class II, Groups E, F and G, Class III. For Class I, Div.2 Locations "FACTORY SEALED, CONDUIT SEAL NOT REQUIRED" Enclosure Type 4X Temperature Class: T6 Ambient Temperature: -40 to 60°C Electrical Connection: 1/2 NPT female*2</p> | CU1 |
| Factory Mutual (FM) | <p>FM Intrinsically safe, non-incendive and Explosionproof approval combination [Intrinsically safe/non-incendive approval] Applicable standard: FM 3600, FM 3610, FM 3611, FM 3810 Intrinsically safe for Class I, II, III Division 1 Groups A, B, C, D, E, F and G. Non-incendive for Class I, II, Division 2 Groups A, B, C, D, F and G Class III, Division 1. Enclosure Type: 4X Temperature Class: T4 Ambient Temperature: -40 to 60°C (-40 to 140°F) Supply: Vmax=30V, Imax=165mA, Pmax=0.9W, Ci=18nF, Li=730μH Sensor: Voc=9V, Isc=40mA, Po=90mW, Ca=1μF, La=10mH</p> <p>[Explosionproof approval] Applicable standard: FM 3600, FM 3615, FM 3810, NEMA250 Class I, Division 1, Groups A, B, C and D; Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G. "FACTORY SEALED, CONDUIT SEAL NOT REQUIRED." Enclosure Ratings: NEMA4X Temperature Class: T6 Ambient Temperature: -40 to 60°C (-40 to 140°F) Electrical Connection: 1/2NPT female*2</p> | FU1 |
| | <p>FM Explosionproof approval Applicable standard: FM 3600, FM 3615, FM 3810, NEMA250 Explosionproof Class I, Division 1, Groups A, B, C and D; Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G. "FACTORY SEALED, CONDUIT SEAL NOT REQUIRED." Enclosure Rating: NEMA 4X Temperature Class: T6 Ambient Temperature: -40 to 60°C (-40 to 140°F) Electrical Connection: 1/2 NPT female*2</p> | FF1 |

*1 : Applicable for Electrical Connection Code 2 and 4.

*2 : Applicable for Electrical Connection Code 2.

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| Item | Descriptions | Code |
|---------------------------------------|---|--------------|
| IECEX Scheme*5*6 | IECEx Intrinsically safe, Flameproof and Dust ignition proof Approval [Intrinsically safe approval] Applicable standard: IEC60079-11:2006, IEC60079-0:2004, IEC60079-26:2006 Certificate No.: IECEx KEM 09.0032 Ga Ex ia IIC T4, T5, Ex ic IIC T4, T5 Ambient Temperature: -40 to 70°C for T4, -40 to 50°C for T5 Enclosure: IP67 Supply circuit : Ui = 30 V li = 165 mA Pi = 900 mW, Ci = 20 nF, Li = 730μH Sensor circuit: Uo = 8.6 V lo = 30 mA Po = 70 mW, Co = 0.7 μF, Lo = 20 mH [Flameproof and Dust ignition proof] Applicable Standard: IEC 60079-0, IEC 60079-1, IEC 61241-0, IEC 61241-1 Certificate: IECEx KEM 07.0044 Ex d IIC T6/T5, Ex tD A21 IP67 T70°C, T90°C Ambient Temperature for Gas Atmospheres: -40 to 75°C (-40 to 167°F) for T6, -40 to 80°C (-40 to 176°F) for T5 Ambient Temperature for Dust Atmospheres: -40 to 65°C (-40 to 149°F) for T70°C, -40 to 80°C (-40 to 176°F) for T90°C Enclosure: IP67 Electrical Connection: 1/2 NPT female and M20 female*6 | SU2 |
| Japanese Industrial Standards (TIIS) | TIIS Flameproof approval Ex ds IIC T6 X Amb. Temp.: -20 to 60°C | JF3 |
| Attached flameproof packing adapter*3 | Electrical connection: G1/2 female Applicable cable: O.D. 8.5 to 11 mm | 2 pc. G12 |

*3 : If cable wiring is to be used to a TIIS flameproof type transmitter, do not fail to add the YOKOGAWA-assured flameproof packing adapter. T05E-2.EPS

*4 : Applicable for Electrical connection code 2, 3 and 4.

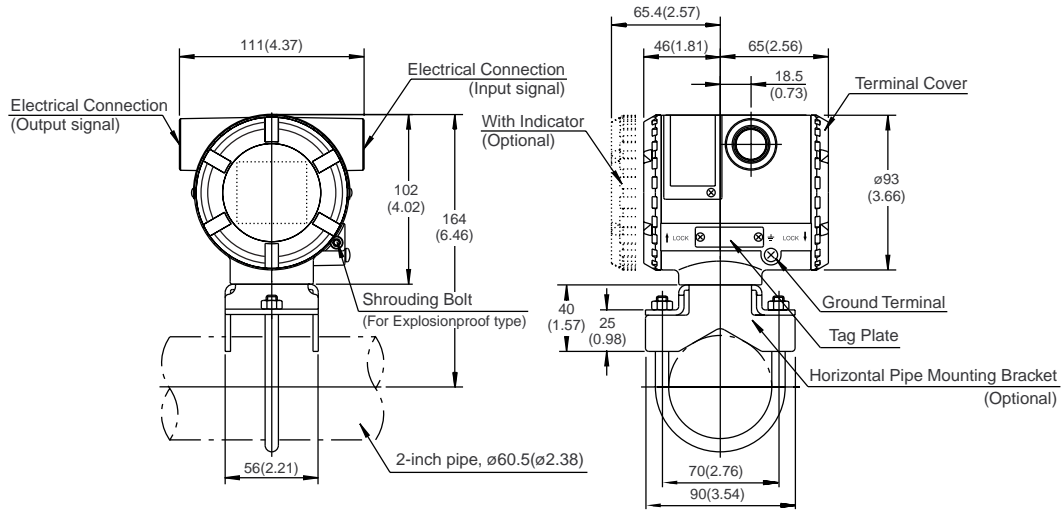
*5 : Applicable only for Australia, New Zealand, Singapore and India.

*6 : Applicable for Electrical connection code 2 and 4.

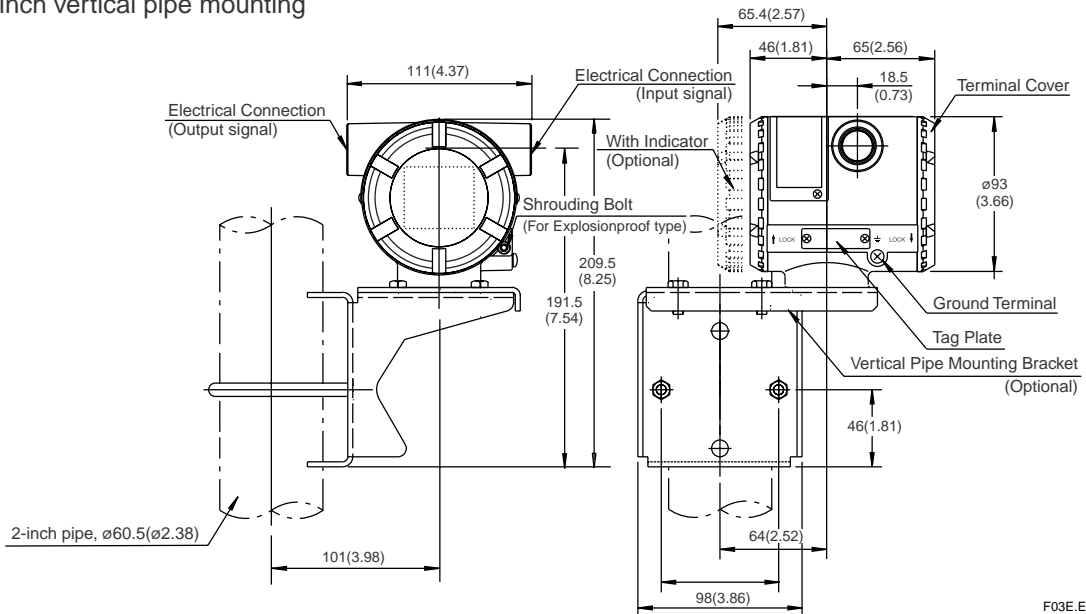
DIMENSIONS

Unit: mm (Approx. inch)

● 2-inch horizontal pipe mounting

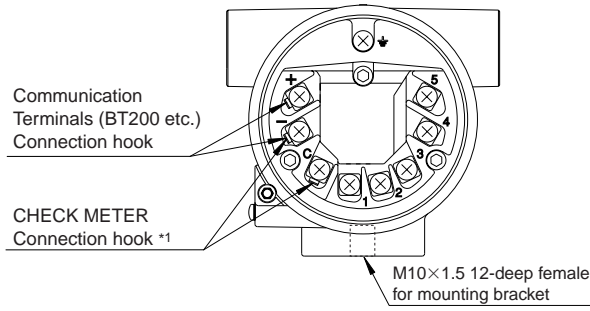


● 2-inch vertical pipe mounting



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Terminals



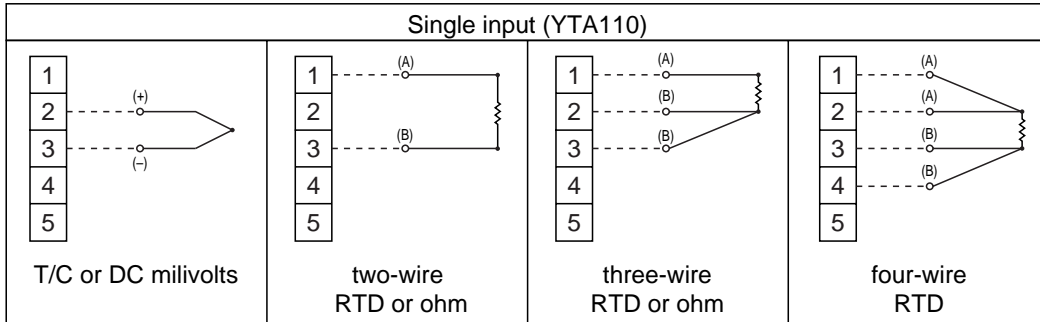
Terminal Configuration

| | |
|---|--|
| + | Power Supply and output terminal |
| - | |
| C | External Indicator (ammeter) terminal *1 |
| ⏏ | Ground terminal |

*1: When using an external indicator or check meter, the internal resistance must be 10Ω or less. This hook is not available for Fieldbus communication type(output signal code F).

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Input Wiring



F05E.EPS

< Ordering Information >

Specify the following when ordering

Model, suffix codes, and optional codes

The instrument is shipped with the settings shown in Table A. Specify the following when necessary.

1. Sensor type.
For RTD and resistance input, specify the number of wire as well.
(Example; Pt200 3-wire system)
2. Calibration range and unit
1) Calibration range can be specified within the measurement range shown in Table 1. on page 3.
2) Specify one range from °C, K, °F or °R for temperature input. °F and °R are available when Optional code D2 is specified. It is not necessary to specify the unit of mV and ohm inputs, for these units automatically will be mV or Ω.
3. Tag Number
4. Other Items related with options
/CA option allows specifying the setting Descriptor for HART protocol type at factory.
Specify upto 16 characters to be entered in the Descriptor parameter.

Table A. Settings upon shipment.

| | |
|----------------------------------|--|
| Input sensor type | Pt100 three-wire system, or as specified |
| Calibration range lower limit | "0" or as specified |
| Calibration range upper limit | "100" or as specified |
| Calibration unit | "°C" or as specified |
| Damping time constant | 2 seconds |
| Sensor burnout *1 | High (110%, 21.6 mA DC) |
| Output in Transmitter failure *1 | High (110%, 21.6 mA DC or more) |
| Integral Indicator *2 | PV |
| Output type | Sensor 1 |
| Tag number | As specified in order |

*1: Except when Optional code C1 or C2 is specified.

*2: When Integral indicator is specified.

T07E.EPS

< Related Instruments >

Power Distributor: Refer to GS 01B04T01-02E or GS 01B04T02-00E

BRAIN TERMINAL: Refer to GS 01C00A11-00E

< Reference >

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Material Cross Reference Table

| | |
|--------|----------|
| SUS304 | AISI 304 |
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T08E.EPS