General Specifications

YTA Series
Temperature Transmitter
With HART® Communication

GS 01C50T01-00EN

YTA Series temperature transmitters can perform remote setting and monitoring of measuring ranges, damping time constant, etc. through HART® Communicator.

A self-diagnostic can also be performed on the transmitter.

■ FEATURES

● **Remote Ranging And Monitoring Functions**
  Sensor type and ranges can be remotely set and monitored through HART® Communicator.

● **On-line Communication**
  Output signal and communication signal do not interfere making on-line communication possible.

● **Self-Diagnostic**
  Loss of input, excessive ambient temperature, incorrect span setting etc. can be diagnosed through HART® Communicator.

■ STANDARD SPECIFICATIONS

For items other than those described below, refer to each General Specifications sheet.
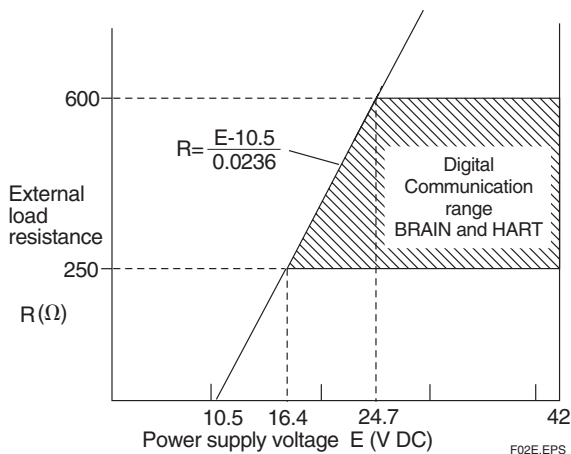
Applicable Model:
  Model YTA320, YTA310 and YTA110 Temperature Transmitters

Conditions of Communication Line:
  Supply Voltage;
    16.4 to 42 V DC
  Load resistance; See figure 1.

$$R= \frac{E-10.5}{0.0236}$$

Digital Communication range BRAIN and HART

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

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YOKOGAWA ◆

■ FUNCTIONAL SPECIFICATIONS

Example of parameters for remote setting and monitoring
(operated from HART® Communicator)

Item	Display	Setting	Summary	Initial Setting
Tag Number	O	O	Up to 8 alphanumeric characters	None, or as specified.
Process Variable (PV,SV,TV,QV)	O	O	Sensor1, Terminal Temp., Sensor1-Terminal Temp. For YTA320, same as above plus ; Sensor2, Sensor2-Terminal Temp., Average Temp., Differential Temp.	PV : Sensor 1 For YTA320, Sensor 1, or as specified.
Sensor type	O	O	Input sensor type. See General Specifications of each model.	Pt100, 3-wire, or as specified.
Lower limit of range	O	O	Temperature equal to 4mA	0, or as specified
Upper limit of range	O	O	Temperature equal to 20mA	100, or as specified
Unit of calibration	O	O	°C, K, °F ^{*1}, °R^{*1}	°C, or as specified
Sensor burn-out	O	O	High or Low	High^{*2}
Damping adjustment	O	O	1 to 99 s	2 s
Display Items *3	O	O	Items to be displayed on a digital display.	PV
Write Protect	O	O	Write protect on/off	off
Sensor Buckup Mode	O	O	For YTA320 only. Enable/Disable sensor backup mode	Disable
Self-diagnostics	O	–	Ambient temperature error, loss of input error, range limit warning, minimum span warning, etc.	–
Burst Mode	–	O	Continuous transmission of the values selectable from followings (1) PV (2) % and 4 to 20 mA output values. (3) mA, PV, SV, TV and QV	–
Multidrop communication	O	–	Up to 15 transmitters can be connected.	–

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*1 : When Optional specification /D2 is specified.
*2 : When Optional specification /C1 is specified, initial setting is 'Low'.
*3 : When Integral Indicator is specified.

■ MODEL AND SUFFIX CODES

YTA☐☐☐ - E☐☐☐☐ / ☐

└── Output signal . . . 4 to 20 mA DC with digital communication (HART® protocol)

Example: YTA110-EA0NA

< Ordering Information >

Specify the following when ordering.
1. Model, suffix codes, and optional codes

The instrument is shipped with the initial setting as above.
If necessary, following items can be specified when ordering.
1. Sensor type
   Specify the input sensor type. For RTD and ohm input, specify the number of the wire together. For YTA320, specify the sensor type for both two inputs.
2. Calibration range and units:
   1) Specify upper and lower range limit to be calibrated. Please see the General Specifications of each model for details.
   2) Specify the calibration unit. Note that °F and °R is available only when optional specification /D2 is specified.

3. Tag Number
   Specified Tag Number is engraved on the stainless steel plate and also entered in the amplifier memory.
   - For engraving on the stainless steel plate: Up to 16 letters using capital letters of alphanumerics and symbols of [–], [.], and [/].
   - For entry in the amplifier memory: Up to 8 letters using of alphanumerics and symbols of [–] and [.].
4. Output type for PV [for YTA320 only]
   Specify the PV to be output from the list in the above table.