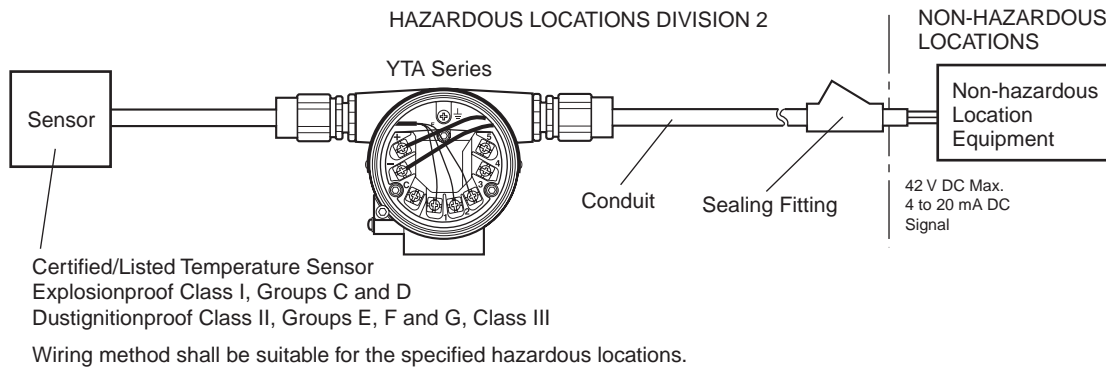
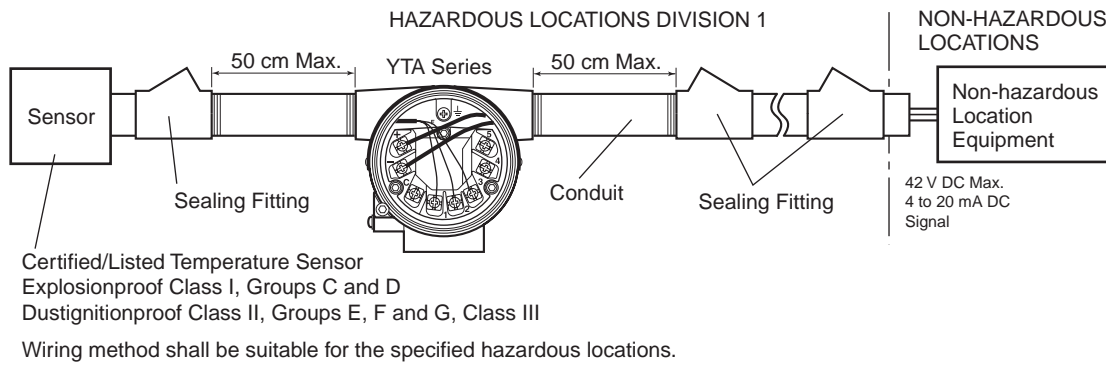


Please use the attached sheets for the pages listed below in the following manuals.

IM 01C50B01-01E (12th)

Page and Item	Contents of Correction
Page 2-6, 7-6 ■ ATEX Documentation	Change Marking Code for CENELEC ATEX Type of Protection "n".



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2.7.2 CENELEC ATEX (KEMA) Certification

Model YTA110/KU2, YTA310/KU2 and YTA320/KU2 temperature transmitters can be selected the type of protection (CENELEC ATEX(KEMA) Intrinsically Safe or CENELEC ATEX(KEMA) Flameproof or CENELEC ATEX Type of Protection “n”) for use in hazardous locations.

Note 1. For the installation of this transmitter, once a particular type of protection is selected, any other type of protection cannot be used. The installation must be in accordance with the description about the type of protection in this instruction manual.

Note 2. In order to avoid confusion, unnecessary marking is crossed out on the label other than the selected type of protection when the transmitter is installed.

(1) Technical Data

a) CENELEC ATEX (KEMA) Intrinsically Safe Type

Caution for CENELEC ATEX (KEMA) Intrinsically safe type

Note 1. Model YTA110/KU2, YTA310/KU2 and YTA320/KU2 temperature transmitters for potentially explosive atmospheres:

- No. KEMA 02ATEX1026X

- Applicable Standard: EN 50014, EN 50020, EN 50284
- Type of Protection and Marking code: II 1G EEx ia IIC T5, T4
- Temperature Class: T5, T4
- Ambient Temperature: -40 to 70°C for T4, -40 to 50°C for T5
- Enclosure: IP67

Note 2. Electrical Data

- In type of explosion protection intrinsic safety II 1G EEx ia IIC only for connection to a certified intrinsically safe circuit with following maximum values:
 - [Supply circuit]

$U_i = 30 \text{ V}$	$I_i = 165 \text{ mA}$
$P_i = 900 \text{ mW}$	
Effective internal capacitance, $C_i = 20 \text{ nF}$	
Effective internal inductance, $L_i = 660 \text{ } \mu\text{H}$	
 - [Sensor circuit]

$U_o = 8.6 \text{ V}$	$I_o = 30 \text{ mA}$
$P_o = 70 \text{ mW}$	
Max. allowed external capacitance, $C_o = 3 \text{ } \mu\text{F}$	
Max. allowed external inductance, $L_o = 20 \text{ mH}$	

Note 3. Installation

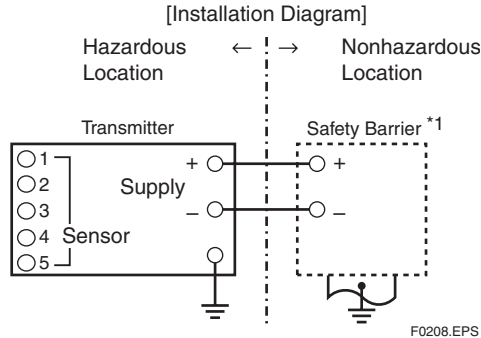
- All wiring shall comply with local installation requirements. (Refer to the installation diagram)

Note 4. Maintenance and Repair

- The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void KEMA Intrinsically safe Certification.

Note 5. Special condition for safe use

- Because the enclosure of the Temperature Transmitter is made of aluminium, if it is mounted in an area where the use of category 1G apparatus is required, it must be installed such, that, even in the event of rare incidents, ignition source due to impact and friction sparks are excluded.



*1: In any safety barriers used the output current must be limited by a resistor "R" such that $I_{maxout} < U_z/R$.

b) CENELEC ATEX (KEMA) Flameproof Type and Dust Ignition Proof Type

Caution for CENELEC ATEX (KEMA) Flameproof Type and Dust Ignition Proof Type

Note 1. Model YTA110/KU2, YTA310/KU2 and YTA320/KU2 temperature transmitters are applicable for use in hazardous locations:

- No. KEMA 07ATEX0130
- Applicable Standard: EN 60079-0, IEC 60079-1, EN 61241-0, EN 61241-1
- Type of Protection and Marking Code: 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 (T6), -40 to 80°C (T5)
- Ambient Temperature for Dust Atmospheres: -40 to 65°C (T70°C), -40 to 80°C (T90°C)
- Enclosure: IP67

Note 2. Electrical Data

- Supply voltage: 42 V dc max.
- Output signal: 4 to 20 mA

Note 3. Installation

- All wiring shall comply with local installation requirement.
- The cable entry devices shall be of a certified flameproof type, suitable for the conditions of use.

Note 4. Operation

- Keep strictly the "WARNING" on the label on the transmitter.

WARNING: AFTER DE-ENERGIZING, DELAY 5 MINUTES BEFORE OPENING. WHEN THE AMBIENT TEMP. \cong 70°C, USE THE HEATRESISTING CABLES OF HIGHER THAN 90°C.

- Take care not to generate mechanical spark when access to the instrument and peripheral devices in hazardous location.

Note 5. Maintenance and Repair

- The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void KEMA Flameproof Certification.

c) CENELEC ATEX Type of Protection "n"



WARNING

When using a power supply not having a non-incendive circuit, please pay attention not to ignite in the surrounding flammable atmosphere. In such a case, we recommend using wiring metal conduit in order to prevent the ignition.

Caution for CENELEC ATEX Type of Protection "n"

Note 1. Model YTA110/KU2, YTA310/KU2 and YTA320/KU2 temperature transmitters for potentially explosive atmospheres:

- Applicable standard: EN60079-15:2005
- Referential standard: IEC60079-0:2004, IEC60079-11:1999, EN60529:1991
- Type of Protection and Marking Code: II 3G Ex nL IIC T5, T4
- Temperature Class: T5, T4
- Ambient Temperature: -40 to 50°C for T5, -40 to 70°C for T4
- Enclosure: IP67

Note 2. Electrical Data

[Supply circuit]

$$U_i = 30 \text{ V}$$

$$\text{Effective internal capacitance, } C_i = 20 \text{ nF}$$

$$\text{Effective internal inductance, } L_i = 660 \text{ } \mu\text{H}$$

[Sensor circuit]

$$U_o = 8.6 \text{ V} \quad I_o = 30 \text{ mA} \quad P_o = 70 \text{ mW}$$

$$\text{Max. allowed external capacitance, } C_o = 3 \text{ } \mu\text{F}$$

$$\text{Max. allowed external inductance, } L_o = 20 \text{ mH}$$

Note 3. Installation

- All wiring shall comply with local installation requirements. (refer to the installation diagram)

Factory setting (◇)

Tag No.	Left blank if not specified in order
Input sensor type	"Pt100, 3-wire" if not specified in order
Lower bound of calibration range	"0" if not specified in order
Upper bound of calibration range	"100" if not specified in order
Unit of calibration range	"°C" if not specified in order
Damping constant	2 seconds
Sensor burnout	High side (110%, 21.6 mA DC) *1
Output when transmitter fails	High side (110%, 21.6 mA DC) *2

*1: When option code C1 is specified, Low takes effect (-2.5%, 3.6mADC).^{T0705.EPS}

*2: When option code C1 is specified, Low takes effect (-5%, 3.2mADC or less).

7.2 Model and Suffix Codes

Model	Basic Specification Codes	Description
YTA110	Temperature transmitter (1 input type)
YTA310	High precision temperature transmitter (1 input type)
YTA320	High precision temperature transmitter (2 input type)
Output signal	-D	4 to 20mA DC output, BRAIN communication type
	-E	4 to 20mA DC output, HART communication type
	-F	FOUNDATION Fieldbus communication type *1
—	A	Always A
Electrical connection	0	G1/2 female
	2	1/2 NPT female
	3	Pg13.5 female
	4	M20 female
Built-in indicator	D	Digital indicator
	N	None
Mounting bracket	B	SUS304 Stainless steel 2-inch horizontal pipe mounting *2
	D	SUS304 Stainless steel 2-inch vertical pipe mounting *2
	N	None
Additional specifications		/ <input type="checkbox"/> Additional specifications

*1: Applicable for YTA320 only.

*2: Use bolts for wall mounting.

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7.3 Optional Specifications

Item	Descriptions	Code	YTA110	YTA310	YTA320	
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 renotation code: NI1.5 Black	P1	○	○
			Munsell renotation code: 7.5BG4/1.5, Jade green	P2	○	○
		Metallic silver	P7	○	○	
Amplifier and Terminal covers	Munsell renotation code: 7.5R4/14 Red	PR	○	○		
Stainless Steel Housing*1	Housing Material: SCS14A Stainless steel	E1	○	○		
Calibration Unit	Addition of Degree F and Degree R unit	D2	○	○		
Output signal low-side in Transmitter failure*2	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*2	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	C2	○	○	
		Failure alarm up-scale: output status at CPU failure and hardware error is 110%, 21.6 mA or more. Sensor burnout is also set to 'High': 110%, 21.6 mA	C3	○	○	
Data Configuration*2	Description into "Descriptor" parameter of HART protocol. (max. 16 characters)	CA	○	○		
Sensor matching function*2	RTD Sensor matching function	CM1	×	○		

*1 : Not applicable with other option codes, except for A, C1, D2 and CM1.

*2 : Not applicable for output signal code F.

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[For Explosion Protected Types]

For FOUNDATION Fieldbus explosion protected type, see IM 01C50T02-01E.

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, EN60529:1991 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*3 [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: T4 Ambient Temperature: -40 to 60°C Electrical Connection: 1/2 NPT female*1</p>	CU1
Factory Mutual (FM)	<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
	<p>FM Intrinsically safe, non-incendive and Explosionproof approval combination*3 [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, E, 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 SEALD, 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

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

*2 : Applicable for Electrical Connection Code 2.

*3 : Not applicable for Output Signal Code F.

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