# User's Manual

# EJA Series Differential Pressure and Pressure Transmitters

Manual Change No. 12-004

For the models EJA and EJA-A series with option code /KF21, /KU21, /KU22 or /KN26, please use this manual change for the manuals listed below. For those models, the contents in the attached sheet should be used to replace the original contents.

[ Applicable manuals, sections, and corresponding items ]

IM No. and Edition	Products	Applicable Sections of Each Manual	Crresponding Items in the Attached Pages
IM 01C22A01-01E (2nd)	EJA Series Installation Manual	2.4.4 (1) b 2.4.4 (1) c 2.4.4 (6) picture of tag plate	( I ) ( II ) or (III) ( V )
IM 01C21B01-01E (11th)	EJA110A, EJA120A, and EJA130A		(1) (II) or (III) (V)
IM 01C21C01-01E (11th)	EJA210A and EJA220A		
IM 01C21D01-01E (11th)	EJA310A, EJA430A and EJA440A		
IM 01C21F01-01E (8th)	EJA510A and EJA530A	2.9.4 (1) b 2.9.4 (1) c	
IM 01C22B01-01E (17th)	EJA110 and EJA120		
IM 01C22C01-01E (17th)	EJA210 and EJA220	2.9.4 (6) picture of tag plate	
IM 01C22D01-01E (17th)	EJA310 and EJA430		
IM 01C22H01-01E (17th)	EJA118W, EJA118N and EJA118Y		
IM 01C22J01-01E (17th)	EJA438W and EJA438N		
IM 01C22K01-01E (17th)	EJA115		
IM 01C22T02-01E (10th)	EJA Series Fieldbus Communication Type	2.1.3 (1) b	(1)
IM 01C22T03-00E (5th)	EJA Series PROFIBUS Communication Type	2.1.3 (6) picture of tag plate (for flameproof type alone)	( IV ) (V)

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#### (I) for code /KF21, /KU21 and /KU22

## b. ATEX Flameproof Type

Caution for ATEX flameproof type.

- Note 1. Model EJA Series differential, gauge, and absolute pressure transmitters with optional code /KF21 for potentially explosive atmospheres:
  - No. KEMA 02ATEX2148
  - Applicable Standard: EN60079-0:2006, EN60079-1:2004
  - Type of Protection and Marking Code: Ex d IIC T6...T4
  - Temperature Class: T6, T5, and T4
  - Enclosure: IP67
  - Maximum Process Temperature: 85°C (T6), 100°C (T5), and 120°C (T4)
  - Ambient Temperature: T4 and T6; –40\* to 75°C, T5; –40\* to 80°C
  - \*-15°C when /HE is specified.

#### 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 the "CAUTION" label to the transmitter.
   CAUTION: AFTER DE-ENERGIZING,
   DELAY 10 MINUTES BEFORE
   OPENING. WHEN THE AMBIENT
   TEMP.≧70°C, USE HEAT-RESISTING
   CABLES≧90°C.
- Take care not to generate mechanical sparking when accessing to the instrument and peripheral devices in a 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.

#### (II) for code /KU22

## c. ATEX Intrinsically Safe Type/ATEX Flameproof Type/ATEX Type n

Model EJA Series pressure transmitters with optional code /KU22 can be selected the type of protection ATEXIntrinsically Safe, Flameproof or ATEX Type 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 user's 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.

#### ATEX Type of Protection "n"



#### **WARNING**

When using a power supply not having a nonincendive 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.

- Applicable Standard: EN 60079-0:2009, EN60079-15:2005
- Type of Protection and Marking Code: Ex nL IIC T4 Gc
- Temperature Class: T4
- Enclosure: IP67
- Process Temperature: 120°C max.
- Ambient Temperature: -30\* to 60°C
- \*-15°C when /HE is specified.

# Note 1. Electrical Data

Ui = 30 V

Effective internal capacitance; Ci = 22.5 nFEffective internal inductance;  $Li = 730 \mu\text{H}$ 

#### Note 2. Installation

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

#### Note 3. Maintenance and Repair

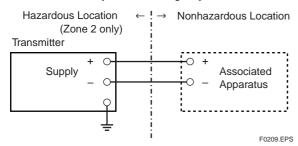
• The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void Type of Protection "n".



#### **WARNING**

 Electrostatic charge may cause an explosion hazard. Avoid any action that cause the generation of electrostatic charge, such as rubbing with a dry cloth on coating face of the product.

#### [Installation Diagram]



Ratings of the Power Supply as follows; Maximum Voltage: 30 V

## ATEX Type of Protection "Dust"

[When combined with II 2G]

Follow the installation instructions described in 'b. ATEX Flameproof Type.'

- Applicable Standard: EN61241-0:2006, EN61241-1:2004
- Type of Protection and Marking Code: II 2D Ex tD A21 IP6X
- Maximum Surface Temperature: T85°C (Tamb.: -40\* to 75°C, Tp:85°C), T100°C (Tamb.: -40\* to 80°C, Tp:100°C), and T120°C (Tamb.: -40\* to 75°C, Tp:120°C)
- \*-15°C when /HE is specified.

#### Note 1. Installation instructions

The cable entry devices and blanking elements shall be of a certificated type providing a level of ingress protection of at least IP6X, suitable for the conditions of use and correctly installed.

#### [When combined with II 1G]

Follow the installation instructions described in 'a. CENELEC ATEX Intrinsically Safe Type.'

- Applicable Standard: EN50281-1-1:1997
- Type of Protection and Marking Code: II 1D
- Maximum Surface Temperature: T65°C (Tamb.: 40°C), T85°C (Tamb.: 60°C), and T105°C (Tamb.: 80°C)

# Note 1. Installation instructions

The cable entry devices and blanking elements shall be of a certificated type providing a level of ingress protection of at least IP6X, suitable for the conditions of use and correctly installed.



#### WARNING

- OPEN CIRCUIT BEFORE REMOVING COVER. INSTALL IN ACCORDANCE WITH THIS USER'S MANUAL
- Take care not to generate mechanical sparking when access to the instrument and peripheral devices in hazardous locations.

#### (III) For code /KU21

# c. ATEX Intrinsically Safe Type/ATEX Flameproof Type/ATEX Type n

Model EJA Series pressure transmitters with optional code /KU21 can be selected the type of protection ATEX Intrinsically Safe, Flameproof or ATEX Type 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 user's 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.

# • ATEX Type of Protection "n"



## **WARNING**

When using a power supply not having a nonincendive 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.

• Applicable Standard: EN60079-15

• Referential Standard: IEC60079-0, IEC60079-11

• Type of Protection and Marking Code: Ex nL IIC T4

• Temperature Class: T4

• Enclosure: IP67

• Process Temperature: 120°C max.

• Ambient Temperature: -40\* to 60°C

\*-15°C when /HE is specified.

#### Note 1. Electrical Data

Ui = 30 V

Effective internal capacitance; Ci = 22.5 nFEffective internal inductance;  $Li = 730 \mu\text{H}$ 

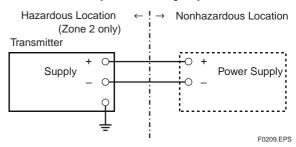
#### Note 2. Installation

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

#### Note 3. Maintenance and Repair

• The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void Type of Protection "n".

#### [Installation Diagram]



Ratings of the Power Supply as follows; Maximum Voltage: 30 V

#### ATEX Type of Protection "Dust"

[When combined with II 2G]

Follow the installation instructions described in 'b. ATEX Flameproof Type.'

- Applicable Standard: EN61241-0:2006, EN61241-1:2004
- Type of Protection and Marking Code: II 2D Ex tD A21 IP6X
- Maximum Surface Temperature: T85°C (Tamb.: -40\* to 75°C, Tp:85°C), T100°C (Tamb.: -40\* to 80°C, Tp:100°C), and T120°C (Tamb.: -40\* to 75°C, Tp:120°C)

\*-15°C when /HE is specified.

#### Note 1. Installation instructions

The cable entry devices and blanking elements shall be of a certificated type providing a level of ingress protection of at least IP6X, suitable for the conditions of use and correctly installed.

#### [When combined with II 1G]

Follow the installation instructions described in 'a. ATEX Intrinsically Safe Type.'

- Applicable Standard: EN50281-1-1:1997
- Type of Protection and Marking Code: II 1D
- Maximum Surface Temperature: T65°C (Tamb.: 40°C), T85°C (Tamb.: 60°C), and T105°C (Tamb.: 80°C)

#### Note 1. Installation instructions

The cable entry devices and blanking elements shall be of a certificated type providing a level of ingress protection of at least IP6X, suitable for the conditions of use and correctly installed.



#### **WARNING**

- OPEN CIRCUIT BEFORE REMOVING COVER. INSTALL IN ACCORDANCE WITH THIS USER'S MANUAL
- Take care not to generate mechanical sparking when access to the instrument and peripheral devices in hazardous locations.

# ( IV ) for /KN26

# c. ATEX Type of Protection "n"

Model EJA Series differential, gauge, and absolute pressure transmitters with optional code /KN26.



# WARNING

When using a power supply not having a nonincendive 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.



# **WARNING**

- Electrostatic charge may cause an explosion hazard. Avoid any action that cause the generation of electrostatic charge, such as rubbing with a dry cloth on coating face of the product.
- Applicable standard: EN 60079-0:2009, EN60079-15:2005
- Type of Protection and Marking Code: Ex nL IIC T4 Gc
- Group: II
- Category: 3G
- Ambient Temperature: -30\* to 60°C
  - \*-15°C when /HE is specified
- Ambient humidity: 0 to 100% RH (No condensation)
- · Enclosure: IP67

# Note 1. Electrical Data

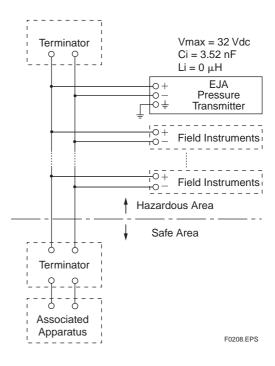
Ui = 32 Vdc

Ci = 3.52 nF

 $Li = 0 \mu H$ 

# Note 2. Installation

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



### Note 3. Maintenance and Repair

 The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void Type of Protection "n".

# (V)

■ Tag plate for flameproof type



 Tag plate for flameproof, intrinsically safe type, type n protection, and Dust (for /KU22)



 Tag plate for flameproof, intrinsically safe type, type n protection, and Dust (for /KU21)



# User's Manual

# EJA Series Differential Pressure and Pressure Transmitters

Manual Change No. 10-007

Please use this manual change for the manuals listed below.

# 1. Items to be Changed and Applicable Manuals

IM No. and Edition	Products	Item to be applied (Refer to '2.Contents of Changes')
IM 01C22A01-01E (2nd)	EJA Series Installation Manual	(1)
IM 01C21B01-01E (11th)	EJA110A, EJA120A, and EJA130A	(1), (2)
IM 01C21C01-01E (11th)	EJA210A and EJA220A	(1), (2)
IM 01C21D01-01E (11th)	EJA310A, EJA430A and EJA440A	(1), (2)
IM 01C21F01-01E (8th)	EJA510A and EJA530A	(1), (2)
IM 01C22H01-01E (17th)	EJA118W, EJA118N and EJA118Y	(1), (2)
IM 01C22J01-01E (17th)	EJA438W and EJA438N	(1), (2)
IM 01C22K01-01E (17th)	EJA115	(1), (2)
IM 01C22T02-01E (10th)	EJA Series Fieldbus Communication Type	(1)
IM 01C22T03-00E (5th)	EJA Series PROFIBUS Communication Type	(1)

10-007-1.EPS

# 2. Contents of Changes



For all the statements for the ambient temperataure limit of the prodcut in the applicable manuals, add the following condition;

The lower ambient temperature limit shall be -15°C (5°F) for option code /HE unless other specifications restrict the llimit.



Add the following item in the "Optional Specifications" table in the chapter of "General Specifications" in each manual.

Item	Description	
Fluoro-rubber O-ring	All O-rings of amplifier housing. Lower limit of ambient temperature : -15°C(5°F)	HE

10-007-2.EPS