User's Manual

Digital Remote Sensor

DPharp EJX®

Manual Change No.21-30E

Please use this manual change for the manuals as listed in below.

1. Applicable User's Manual and Page

IM No. (Ed.)	Product Model, IM Title	Applicable section
IM 01C25W05-01EN (6)	EJXC40A Digital Remote Sensor	Appendix 1 Safety Instrumented Systems Installation

2. Information to be replaced

Please replace the existing descriptions by the following updated descriptions.

Applicable part	Page	Before Change	After Change
A1.2.5 Proof Testing	A1-2	Table A1.2 Proof Testing **Expected outcome** Proof Test Coverage =68%	Table A1.2 Proof Testing **Expected outcome** Proof Test Coverage =81.3%
A1.2.9 Reliability Data	A1-2	SFF 92.4%	SFF 92.3%

User's Manual

EJXC40A Digital Remote Sensor

DPharp EJX®

Manual Change No.21-36E

The following information in regards of EEA description and New IECEx option is revised/added for EJXC40A. Please use this manual change for the manuals as listed in below.

1. Applicable Users' Manuals

IM No.(Edition)	Product model	Applicable Part	Applicable item
IM 01C25W05-01EN (6)	EJXC40A	Safe Use of This Product	2-1 (revise) The underlined part is the revised part.
		Installation of an Explosion Protected Instrument	2-2 (new addition)

2. Contents of change

2-1 Authorized Representative in EEA and the importer into the EU/EEA market

In relation to the CE Marking, the authorized representative for this product in the EEA (European Economic Area) is:

Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,The Netherlands

and the importer for this product into the EU/EEA market via the YOKOGAWA sales channel is:

Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,The Netherlands

2-2 Installation of an Explosion Protected Instrument

a. IECEx Flameproof type

Caution for IECEx flameproof type.

Note 1. EJX/EJA-E Series pressure transmitters with optional code **/SF22** or **/SU34** are applicable for use in hazardous locations:

- No. IECEx DEK 14.0046X
- Applicable Standard: IEC60079-0, IEC60079-1, IEC 60079-31
- Type of Protection and Marking Code:
  - □Ex db IIC T6...T4 Gb
  - □Ex tb IIIC T85°C Db
- Enclosure: IP66/IP67
- Temperature Class for gas-poof: T6, T5, and T4
- Ambient Temperature for gas-proof: –50 to 75°C (T6), –50 to 80°C (T5), and –50 to 75°C (T4)
- Process Temperature (Tp.) for gas-proof: –50 to 85°C (T6), –50 to 100°C (T5), and –50 to 120°C (T4)
- Maximum Surface Temperature for dust-proof: T85°C (Tamb.: –30* to 75°C, Tp.: –30* to 85°C)
  * –15°C when /HE is specified.

Note 2. Electrical Data

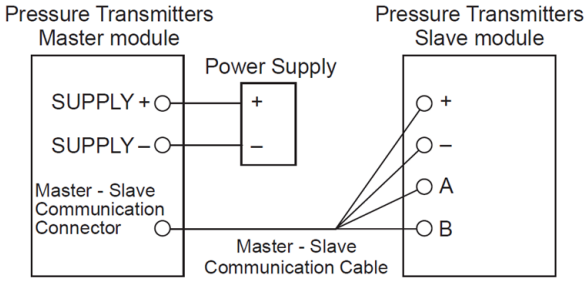
- Supply voltage: 42 V dc max.
- Slave module type, output signal code "S", is only to be connected to Master module type, output signal code "P", for power supply and communication by a 4-wire connection.

Note 3. For combined approval types Once a device of multiple approval type is installed, it should not be re-installed using any other approval types. Apply a permanent mark in the check box of the selected approval type on the ertification label on the transmitter to distinguish it from unused approval types.

Note 4. Installation

- All wiring shall comply with local installation requirement.
- In order to prevent the earthing conductor from loosening, the conductor must be secured to the terminal, tightening the screw with appropriate torque. Care must be taken not to twist the conductor.

• Wiring connection
Cable glands, adapters and/or blanking elements with a suitable IP rating shall be of Ex d IIC/Ex tb IIIC certified by IECEx and shall be installed so as to maintain the specific degree of protection (IP Code) of the equipment.



Master module and Slave module Connection

• Electrical Connection
A mark indicating the electrical connection type is stamped near the electrical connection port. These marks are as followed.

Screw Size	Marking
ISO M20 × 1.5 female	⚠M
ANSI 1/2 NPT female	⚠N or ⚠W



Note 5. Operation
• Keep the “WARNING” label attached to the transmitter.
• WARNING:
- AFTER DE-ENERGIZING, DELAY 10 MINUTES BEFORE OPENING. WHEN THE AMBIENT TEMP.≥65°C,USE HEAT-RESISTING CABLE AND CABLE GLAND ≥90°C.

• Take care not to generate mechanical sparking when accessing to the instrument and peripheral devices in a hazardous location.

Note 6. Maintenance and Repair
• WARNING:
- When maintenance and repair are performed, confirm the following conditions and the then perform works Confirm the power supply is cut off and the voltage of power supply terminal is not supplied.

• Only personnel authorized by Yokogawa Electric Corporation can repair the equipment in accordance with the relevant standards: IEC 60079-19 (Equipment repair, overhaul and reclamation) and IEC 60079-17 (Electrical installation inspection and maintenance); otherwise the certification will be voided.

Note 7. Specific Conditions of Use
• WARNING:
- Electrostatic charge may cause an explosion hazard. Avoid any actions that cause the generation of electrostatic charge, such as rubbing with a dry cloth on coating face of the product.
- The flame paths differ from the standard values in IEC 60079-1. Repair of the equipment is only allowed when done by the manufacturer or an authorizedrepresentative. the property class of it is A2-50(A4-50) or more.
- For transmitters with a membrane made of titanium, ignition hazard due to impact and friction on the membranes shall be avoided.
- Maximum Surface Temperature for dust-proof: T85°C (Tamb.: –30* to 75°C, Tp.: –30* to 85°C)
  * –15°C when /HE is specified.

b. IECEx Intrinsically Safe Type/IECEx Flameproof Type

EJX/EJA-E Series pressure transmitters with optional code /SU24 or /SU34 can be selected the type of protection IECEx Flameproof or Intrinsically Safe. Ex ia for use in hazardous area.
SU24 : Combined SF2 and SS24
SU34 : Combined SF22 and SS24

User's Manual

EJXC40A Digital Remote Sensor

DPharp EJX®

Manual Change No.22-22E

The following information in regards of wiring through a Cable Gland is added for EJXC40A. Please use this manual change for the manuals as listed in below.

1. Applicable Users' Manuals

IM No.(Edition)	Products	Contens of Change
IM 01C25W05-01EN (6)	EJXC40A	・Wiring through a Cable gland (In case of electrical connection code 2,7,C) ・Removing DRS Cable with Cable Gland

2. Contents of change

5.5 DRS Cable Connection
5.5.1 Wiring through a Cable Gland

● In The Case of Electrical Connection Code 2, 7, C (1/2 NPT Female) or 4, 9, D (M20 Female)

- **Components of the cable gland**
  This cable gland consists of an entry, seal, running coupler, and back nut. Check that the wiring port thread standard and the cable gland entry's thread standard are matched.

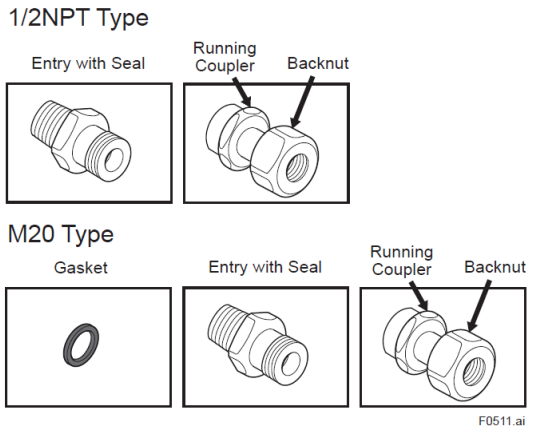


Figure 5.11 Components of the Cable Gland

- **Installing the cable gland**

(1) Pass the DRS cable through the cable gland from the cable end of the wire rods side (opposite side of connector).Since the internal diameter of rubber packing has restriction, connector can not pass through it, please keep this order.

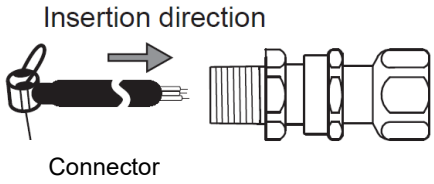


Figure 5.12 DRS Cable Connection 1

(2) Remove the protection cap over the transmitter electrical connection and install the entry on the electrical connection. Note that a sealant should be applied to the threads for a 1/2 NPT connection and a gasket should be used for an M20 connection.

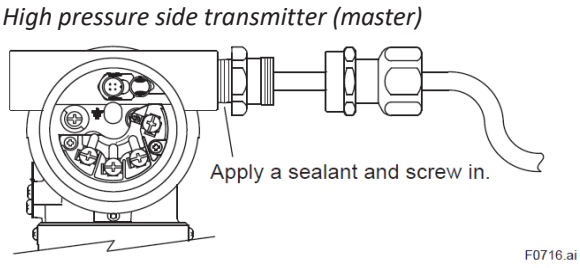


Figure 5.13 DRS Cable Connection 2

(3) Insert the DRS cable through the entry mounted on the wiring port, and insert the connector into the DRS connection port.

High pressure side transmitter (master)

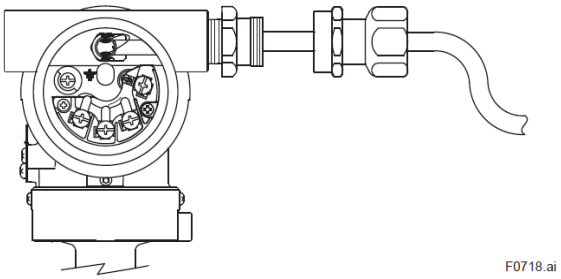


Figure 5.14 DRS Cable Connection 3

(4) Position the running coupler so that it is along a straight line with the entry.

(5) Screw the running coupler until the seal touches the DRS cable.

High pressure side transmitter (master)

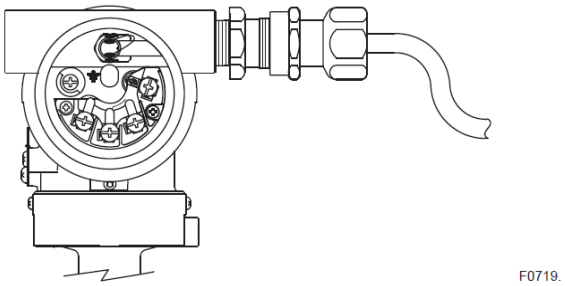


Figure 5.15 DRS Cable Connection 4

(6) After the seal touches the DRS cable, turn the running coupler another half turn to securely tighten.

(7) If a wiring metal conduit for cable protection is necessary, run the DRS cable through the conduit, and then screw it into the back nut.

CAUTION

After fixing the DRS cable in place, do not apply excessive mechanical shock to the DRS connector section, such as by screwing the running coupler further or pulling on the cable.

5.5.3 Removing DRS Cable with Cable Gland

(1) By pulling out the string attached to the connector, carefully unplug the connector from the transmitter's connecting port.

(2) In the case of using 1/2 NPT Type or M20 Type cable gland, remove the running coupler and backnut assembly by turning the running coupler.
In the case of using G1/2 Type cable gland, loosen the lock nut screwed into the union cover and remove the union cover. DRS cable can be pulled out together with the packing box. Loosen the clamp nut and the gland if necessary.

(3) Pull the DRS cable out carefully.

(4) In the case of 1/2NPT or M20 Type cable gland, remove the entry from the DRS electrical connection by turning the entry before (3).
In the case of G1/2 Type cable gland, loosen the lock nut screwed into the adapter body and remove the adapter body and remove the adapter body.

NOTE

In the case of G1/2 Type cable gland, remove the rubber packing, washer, gland, clamp ring clamp nut, union coupling and union cover from the opposite side of DRS connector in order to take out the cable gland from the DRS cable.