

# General Specifications

GS 01C27H01-01EN

EJX118B and EJX438B  
Diaphragm Sealed  
Differential Pressure and  
Gauge Pressure Transmitters



*Diaphragm seals are used to prevent process medium from entering directly into the pressure-sensing assembly of the differential pressure and pressure transmitters, they are connected to the transmitter using capillaries filled with fill fluid.*

*EJX118B Diaphragm Sealed Differential Pressure and EJX438B Diaphragm Sealed Gauge Pressure Transmitters can be used to measure liquid, gas, or steam flow, as well as liquid level, density and pressure.*

*EJX118B and EJX438B transmit not only process variables but also the setting parameters using wireless signal. The transmitters run on internal batteries, and the installation cost can be decreased since hard-wiring is not required. The communication protocol is compliant with ISA100.11a protocol specifications.*



## ■ FEATURES

### • Long Life Battery Design

Ultra low current consumption design using two high capacity lithium-thionyl chloride batteries provide wireless operation for years.

### • Security Assured Wireless Network Joining

Infrared communication between the devices for wireless network configuration and parameter setting.

### • Quick Update Time

Selectable from 0.5 second to 60 minutes for measured process value to publish wirelessly.

## ■ STANDARD SPECIFICATIONS

### ■ WIRELESS SPECIFICATIONS

#### Wireless Communication

Communication protocol: ISA100.11a protocol  
Data rate: 250 kbps  
Frequency: 2400 - 2483.5 MHz license free ISM band  
Radio security: AES 128 bit codified  
RF Transmitter power: Max. 11.6 dBm (fixed)  
Antenna: +2 dBi Omni directional monopole type  
Separately sold remote antenna and antenna cables can be used.

### ■ POWER SUPPLY SPECIFICATIONS

#### Battery:

Use the dedicated battery pack.  
Rated voltage: 7.2 V  
Rated capacity: 19 Ah

## ■ SPAN AND RANGE LIMITS

### EJX118B

Measurement Span/Range	kPa	inH <sub>2</sub> O(/D1)	mbar(/D3)	mmH <sub>2</sub> O(/D4)
M	Span	2 to 100	8 to 400	20 to 1000
	Range	-100 to 100	-400 to 400	-10000 to 10000
H	Span	10 to 500	40 to 2000	100 to 5000
	Range	-500 to 500	-2000 to 2000	-5000 to 5000

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### EJX438B

Measurement Span and Range		MPa	psi (/D1)	bar (/D2)	kgf/cm <sup>2</sup> (/D3)
A <sup>1</sup>	Span	0.035 to 3.5	5 to 500	0.35 to 35	0.35 to 35
	Range	-0.1 to 3.5	-14.5 to 500	-1 to 35	-1 to 35
B	Flush type <sup>*1</sup>	0.16 to 16	23 to 2300	1.6 to 160	1.6 to 160
	Range	-0.1 to 16	-14.5 to 2300	-1 to 160	-1 to 160
B	Extended type <sup>*1</sup>	0.16 to 7	23 to 1000	1.6 to 70	1.6 to 70
	Range	-0.1 to 7	-14.5 to 1000	-1 to 70	-1 to 70

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\*1: Measurement range is within the flange rating.

## ■ PERFORMANCE SPECIFICATIONS

Zero-based calibrated span, linear output, wetted parts material code SW for 3-inch flange flush type, fill fluid code B, capillary length of 5 m, and in the continuous measurement mode.

#### Specification Conformance

EJX series ensures specification conformance to at least  $\pm 3\sigma$ .

#### Reference Accuracy of Calibrated Span

(includes terminal-based linearity, hysteresis, and repeatability)

**EJX118B**

Measurement span		H
Reference accuracy	X ≤ span	±0.15% of Span
	X > span	±(0.085+0.013 URL/span)% of Span
	X	100 kPa (400 inH <sub>2</sub> O)
	URL (upper range limit)	500 kPa (2000 inH <sub>2</sub> O)

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Measurement span		M
Reference accuracy	X ≤ span	±0.15% of Span
	X > span	±(0.02+0.013 URL/span)% of Span
	X	10 kPa (40 inH <sub>2</sub> O)
	URL (upper range limit)	100 kPa (400 inH <sub>2</sub> O)

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**EJX438B**

Measurement span		A	B
Reference accuracy	X ≤ span	±0.15% of Span	
	X > span	±(0.1+0.005 URL/Span)% of Span	
	X	0.35 MPa (50 psi)	1.6 MPa (230 psi)
	URL (upper range limit)	3.5 MPa (500 psi)	16 MPa (2300 psi)

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**Square Root Output Accuracy (EJX118B)**

The square root accuracy is a percent of flow span.

Output	Accuracy
50% or Greater	Same as reference accuracy
50% to Dropout point	Reference accuracy×50 Square root output (%)

**Ambient Temperature Effects per 28°C (50°F) Change****EJX118B**

Capsule	Effect
M and H	±(0.25% Span +0.06% URL)

**EJX438B**

Capsule	Effect
A and B	±(0.5% Span +0.025% URL)

**Static Pressure Effects per 0.69 MPa (100 psi) Change (EJX118B)****Span Effects : ±0.02% of span****Effect on Zero : ±0.014% of URL****Battery Characteristic**

Battery pack with long life lithium-thionyl chloride batteries. With the intrinsically safe type, the battery pack is replaceable in hazardous area.

Typical battery life is 10 years at 60 seconds update time or 4 years at 10 seconds update time in the following conditions.\*

- Ambient temperature: 23±2°C
- Device role: IO mode
- LCD display: off
- \* Environmental condition such as vibration may affect the battery life.

**Response Time****EJX118B (Differential pressure)**

M and H capsule: 260 ms (approximate value at normal temperature)

**EJX438B**

200 ms (approximate value at normal temperature)

When software damping is set to zero and including dead time of 100 msec (nominal)

**Static Pressure Signal Range and Accuracy (EJX118B)****(EJX118B)**

**(Includes terminal-based linearity, hysteresis, and repeatability)**

**Range**

Upper Range Value and Lower Range Value of the static pressure can be set in the range between 0 and Maximum Working Pressure (MWP\*). The upper range value must be greater than the lower range value. Minimum setting span is 0.5 MPa (73 psi).

\*: Maximum Working Pressure (MWP) is within flange rating pressure.

**Accuracy****Absolute Pressure**

1 MPa or higher : ±0.2% of span

Less than 1 MPa: ±0.2%×(1 MPa/span) of span

**Gauge Pressure Reference**

Gauge pressure reference is 1013 hPa (1 atm)

Note : Gauge pressure variable is based on the above fixed reference and thus subject to be affected by the change of atmospheric pressure.

## ■ FUNCTIONAL SPECIFICATIONS

### Output

Wireless (ISA100.11a protocol) 2.4 GHz signal.  
Output mode for EJX118B, linear or square root, is selectable.

### Update Time

Measurement mode	Differential pressure	Pressure
Continuous	100 ms	100 ms
Intermittent	0.5 to 3600 s selectable	0.5 to 3600 s selectable

The transmitter shifts to the continuous mode when the update time is set to 0.5 second.

### Zero Adjustment Limits

Zero can be fully elevated or suppressed, within the lower and upper range limits of the capsule.

### External Zero Adjustment

External zero is continuously adjustable with 0.01% incremental resolution of span.

### Integral Indicator (LCD display)

5-digit numerical display, 6-digit unit display and bar graph.

The indicator is configurable to display one or up to three of the following variables periodically.; Differential pressure, static pressure, temperature.  
See also "Factory Setting."

### Self Diagnostics

Capsule failure, amplifier failure, configuration error, battery alarm, wireless communication alarm and over-range error for process variables.

### Software Download Function

Software download function permits to update wireless field device software via ISA100.11a wireless communication.

### Battery Pack

2x primary lithium-thionyl chloride batteries  
With battery case (batteries sold separately)

### Capillary Fill Fluid Density Compensation

Compensation of the zero shift by the ambient temperature effect on the capillary tube.

## ■ NORMAL OPERATING CONDITION

(Optional features or approval codes may affect limits.)

### Ambient Temperature Limits

-40 to 60°C (-40 to 140°F)  
-30 to 60°C (-22 to 140°F) LCD visible range  
(Note: The ambient temperature limits must be within the fill fluid operating temperature range, see table 1.)

### Process Temperature Limits

See table 1.

### Ambient Humidity Limits

0 to 100% RH

### Working Pressure Limits

See table 1.

For atmospheric pressure or below, see figure 1-1 and 1-2.

**Table 1. Process temperature, Ambient temperature, and Working pressure**

	Code	Process temperature <sup>*1</sup>	Ambient temperature <sup>*2</sup>	Working pressure	Specific gravity <sup>*3</sup>
Silicone oil (general use)	A	-10 to 250°C <sup>*4</sup> (14 to 482°F)	-10 to 60°C (14 to 140°F)	2.7 kPa abs (0.38 psi abs) to flange rating pressure	1.07
Silicone oil (general use)	B	-30 to 180°C (-22 to 356°F)	-15 to 60°C (5 to 140°F)		0.94
Silicone oil (high temperature use)	C	10 to 310°C (50 to 590°F)	10 to 60°C (50 to 140°F)		1.09
Fluorinated oil (oil-prohibited use)	D	-20 to 120°C (-4 to 248°F)	-10 to 60°C (14 to 140°F)	51 kPa abs (7.4 psi abs) to flange rating pressure	1.90 to 1.92
Ethylene glycol (low temperature use)	E	-50 to 100°C (-58 to 212°F)	-40 to 60°C (-40 to 140°F)	100 kPa abs (atmospheric pressure) to flange pressure rating	1.90

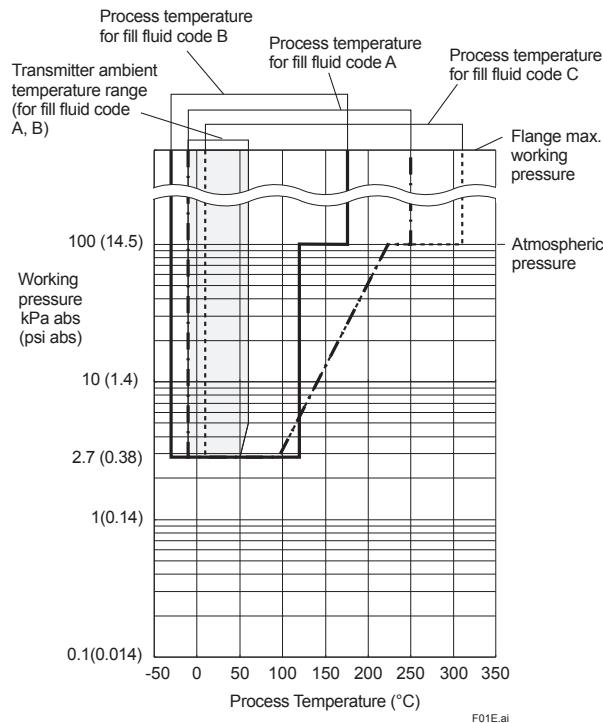
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<sup>\*1:</sup> See figure 1-1 and 1-2 'Working Pressure and Process Temperature.'<sup>\*2:</sup> This ambient temperature is the transmitter ambient temperature.<sup>\*3:</sup> Approximate values at a temperature of 25°C (77°F)<sup>\*4:</sup> In case of wetted parts material code TW (Tantalum), process temperature limit is up to 200°C (392°F).

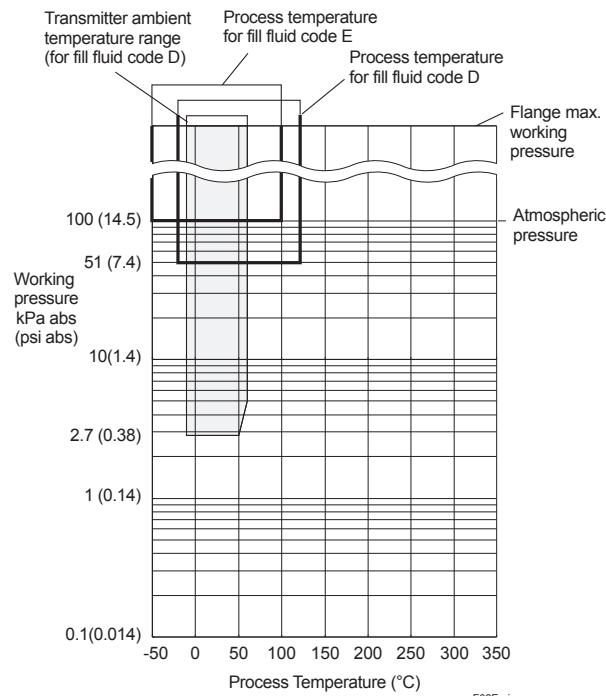
Note: The differential pressure transmitter should be installed at least 600 mm below the high pressure (HP) process connection.

However, this value (600 mm) may be affected by ambient temperature, operating pressure, fill fluid or material of the wetted diaphragm.

Contact YOKOGAWA when the transmitter can not be installed at least 600 mm below the HP process connection.



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**Figure 1-1. Working Pressure and Process Temperature (Fill fluid : silicone oil for general and high temperature use)**

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**Figure 1-2. Working Pressure and Process Temperature (Fill fluid : fluorinated oil for oil-prohibited use and ethylene glycol for low temperature use)**

## ■ REGULATORY COMPLIANCE STATEMENTS

This device contains the wireless module which satisfies the following standards.

- \* Please confirm that an installation region fulfills an applicable standard. If additional regulatory information and approvals are required, contact a Yokogawa representative.

### EMC Conformity Standards

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

### Radio Equipment Directive (RE)

ETSI EN 300 328, ETSI EN 301 489-1,  
ETSI EN 301 489-17, EN61010-1, EN61010-2-030,  
EN62311  
• Indoor/Outdoor use

### European Pressure Equipment Directive

2014/68/EU  
Sound Engineering Practice

### EU RoHS Directive

EN50581

### Safety Requirement Standards

EN61010-1, EN61010-2-030

- Installation category: I  
(Anticipated transient overvoltage 330 V)
- Pollution degree: 2
- Indoor/Outdoor use

### Regulation Conformity of the Wireless Module

- FCC Approval
- IC Approval

## ■ PHYSICAL SPECIFICATIONS

### Process connections

See the following table.

**Table 2. Flange size and rating**

Process connection style	Size	Flange
Flush type	3-inch 2-inch 1½-inch*1	JIS 10K, 20K, 40K, 63K*2 ANSI Class 150, 300, 600 JPI Class 150, 300, 600 DIN PN10/16, 25/40, 64
Extended type	4-inch 3-inch	JIS 10K, 20K, 40K*2 ANSI Class 150, 300 JPI Class 150, 300 DIN PN10/16, 25/40
Combination type (Extended and Flush)*3	High pressure side: 4-inch Low pressure side: 3-inch	JIS 10K, 20K ANSI Class 150, 300 JPI Class 150, 300 DIN PN10/16, 25/40

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\*1: Flushing connection rings are always attached.

\*2: Applicable for EJX438B only.

\*3: Applicable for EJX118B only.

### Gasket Contact Surface

See the following table.

**Table 3. Gasket contact surface**

Flange		JIS/JPI/DIN		ANSI	
Wetted parts material code		SW, SE, SY	HW, TW, UW	SW, SE, SY	HW, TW, UW
Gasket contact Surface	Serration*1	—	—	●	—
	Flat (No serration)	●	●	●	●

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●: Applicable, —: Not applicable

\*1: ANSI B16.5

### Electrical Connections

See "MODEL AND SPECIFICATIONS."

### Transmitter Mounting

2-inch pipe mounting

### Wetted Parts Material

#### Diaphragm seal

Diaphragm and other wetted parts;  
Refer to "MODEL AND SUFFIX CODES."

#### Flushing connection ring (optional)

Ring and Vent / Drain plugs;  
Refer to "MODEL AND SUFFIX CODES."  
(Spiral) gasket for transmitter side  
316 SST (Hoop), PTFE Teflon (Filler)

### Non-wetted Parts Material

#### Transmitter body section:

##### Cover flange

ASTM CF-8M

##### Cover flange bolting

B7 carbon steel, 316L SST, or 660 SST

##### Housing

Low copper cast aluminum alloy

##### Coating of housing

[for aluminum housing]  
Urethane curing type polyester resin powder coating  
Mint-green paint (Munsell 5.6BG 3.3/2.9 or its  
equivalent)  
[for option code /P□ or /X2]  
Epoxy and polyurethane resin solvent coating

##### Degrees of Protection

IP66/IP67, NEMA4X

##### Name plate and tag

316 SST tag plate wired onto transmitter

### Diaphragm seal section:

#### Process Flange

JIS S25C, 304 SST, or 316 SST

#### Capillary tube

316 SST

#### Protection tube

304 SST PVC-sheathed  
(Max. operating temperature of PVC, 100°C (212°F))

#### Fill fluid

See table 1.

### Weight

#### EJX118B

Flush type: 18.2 kg (40.1 lbs)  
(3-inch ANSI Class150 flange, capillary length 5 m;  
without integral indicator and mounting bracket.)

Extended type: 23.8 kg (52.5 lbs)

(4-inch ANSI Class150 flange, extention length  
(X<sub>2</sub>)=100 mm, capillary length 5 m; without integral  
indicator and mounting bracket.)

Combination type: 21.0 kg (46.3 lbs)

(4-inch and 3-inch ANSI Class150 flange, extention  
length (X<sub>2</sub>) =100 mm, capillary length 5 m; without  
integral indicator and mounting bracket.)

**EJX438B**

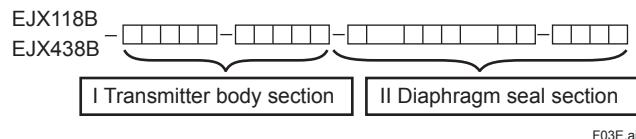
Flush type: 9.2 kg (20.3 lbs)  
 (3-inch ANSI Class 150 flange, capillary length 5 m;  
 without integral indicator and mounting bracket.)  
 Extended type: 14.3 kg (31.5 lbs)  
 (4-inch ANSI Class 150 flange, extention length  
 $X_2=100$  mm, capillary length 5 m; without integral  
 indicator and mounting bracket.)

**< Related Instruments>**

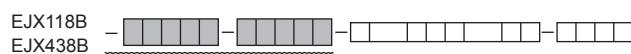
Field Wireless System: Refer to GS 01W01A01-01EN  
 Field Wireless Management Station YFGW410:  
 GS 01W02D01-01EN  
 Field Wireless Access Point YFGW510:  
 GS 01W02E01-01EN  
 Field Wireless Media Converter YFGW610:  
 GS 01W02D02-01EN

**■ MODEL AND SUFFIX CODES****● Instruction**

The model and suffix codes for EJX118B and EJX438B consist of two parts; a transmitter body section (I) and a diaphragm seal section (II). This specification sheet introduces these two parts separately. The transmitter body section is shown in one table, and the diaphragm seal section specifications are listed according to the process connection style. First select the model and suffix codes of transmitter body section and then continue on one of the diaphragm seal section.



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**I. Transmitter body section**

Model	Suffix codes		Description
EJX118B	.....		Diaphragm sealed differential pressure transmitter
EJX438B	.....		Diaphragm sealed Gauge Pressure transmitter
Output signal	- L .....		Wireless communication (ISA100.11a protocol)
Measurement span (capsule)	M <sup>*2</sup> .....		2 to 100 kPa (8 to 400 inH <sub>2</sub> O)
	H <sup>*2</sup> .....		10 to 500 kPa (40 to 200 inH <sub>2</sub> O)
	A <sup>*3</sup> .....		0.035 to 3.5 MPa (5 to 500 psi)
	B <sup>*3</sup> .....		0.16 to 16 MPa (23 to 2300 psi) <sup>*1</sup>
—	S .....		Always S
—	C .....		Always C
Coverflange bolts and nuts material	J .....		B7 carbon steel
	G .....		316L SST
	C .....		660 SST
Installation	-9 .....		Horizontal piping type and left side high pressure
Amplifier housing	8 .....		Cast aluminum alloy with detachable antenna (2 dBi) <sup>*5</sup>
	9 .....		Cast aluminum alloy without antenna (N connector) <sup>*4*5</sup>
Electrical connection	J .....		No electrical connection, battery-powered type (battery case only; battery cells not included)
Integral Indicator	D .....		Digital indicator
Mounting braket	B .....		304 SST 2-inch pipe mounting, flat type (for horizontal piping)
	► N .....		None
Diaphragm seal section	- [ ] - [ ] - [ ] - [ ] - [ ]		Continued on diaphragm seal section (II)

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The “►” marks indicate the most typical selection for each specification.

\*1: When specified process connection style code E, maximum range and span are 7 MPa (1000 psi).

\*2: Applicable for EJX118B

\*3: Applicable for EJX438B

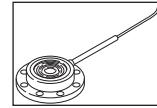
\*4: Order the antenna separately from accessory option.

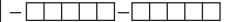
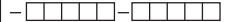
\*5: Remote antenna cables can be attached. Order separately from accessory option.

## II. Diaphragm seal section (Flush type)

- Precess connection size: 3-inch (80 mm) / 2-inch (50 mm)

EJX118B - 



Model	Suffix codes		Description		EJX118B	EJX438B
EJX118B			Transmitter body section (I)			
EJX438B						
Process connection style	<b>-W</b> .....		Flush type			
Flange rating	J1 .....	JIS 10K				
	J2 .....	JIS 20K			O	O
	J4 .....	JIS 40K			O	O
	J6 .....	JIS 63K			O	O
	A1 .....	ANSI class 150	P1 .....	JPI class 150	O	O
	A2 .....	ANSI class 300	P2 .....	JPI class 300	O	O
	A4 .....	ANSI class 600	P4 .....	JPI class 600	O	O
	D2 .....	DIN PN10/16			O	O
	D4 .....	DIN PN25/40			O	O
	D5 .....	DIN PN64			O	O
Process connection size (Process flange size)	3 .....	3-inch (80 mm)			O	O
	2 .....	2-inch (50 mm)			O	O
Flange material	A .....	JIS S25C			O	O
	► B .....	304 SST <sup>*11</sup>			O	O
	C .....	316 SST <sup>*11</sup>			O	O
Gasket contact surface <sup>*1</sup>	1 .....	Serration (for ANSI flange with wetted parts material SW only)			O	O
	2 .....	Flat (no serration)			O	O
Wetted parts material <sup>*10</sup>	SW .....	[Diaphragm] 316L SST	[Others] 316L SST		O	O
	HW .....	Hastelloy C-276 <sup>*9#</sup>	Hastelloy C-276 <sup>*9#</sup>		O	O
	TW .....	Tantalum <sup>*7</sup>	Tantalum <sup>*7</sup>		O	O
	UW .....	Titanium	Titanium		O	O
Flushing connection ring <sup>*2</sup>	► 0 .....	[Ring] None	[Vent/Drain plugs]	[Material]		
	1 .....	Straight type	R 1/4 connections <sup>*8</sup>	316 SST #	O	O
	2 .....	Straight type	1/4 NPT connections	316 SST #	O	O
	A .....	Straight type	R 1/4 connections <sup>*8</sup>	316 SST #	O	O
	B .....	Straight type	1/4 NPT connections	316 SST #	O	O
Extension	0 .....	None			O	O
Fill fluid	► -A .....	[Process temp.] [Ambient temp.]				
	-B .....	For general use (silicone oil) <sup>*3</sup>	-10 to 250°C	-10 to 60°C	O	O
	-C .....	For general use (silicone oil)	-30 to 180°C	-15 to 60°C	O	O
	-D .....	For high temperature use (silicone oil) <sup>*4 *7</sup>	10 to 310°C	10 to 60°C	O	O
	-E .....	For oil-prohibited use (fluorinated oil) <sup>*5</sup>	-20 to 120°C	-10 to 60°C	O	O
		For low temperature use (ethylene glycol)	-50 to 100°C	-40 to 60°C	O	O
Capillary connection	A .....	Side of diaphragm seal unit			O	O
—	2 .....	Always 2			O	O
Capillary length <sup>*6</sup>	1 .....	1 m	6 .....	6 m	O	O
	2 .....	2 m	7 .....	7 m	O	O
	3 .....	3 m	8 .....	8 m	O	O
	4 .....	4 m	9 .....	9 m	O	O
	5 .....	5 m	A .....	10 m	O	O
Option codes	<input type="checkbox"/> Optional specification					

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The "►" marks indicate the most typical selection for each specification. Example: EJX118B-LMSCG-98JDN-WA13B1SW00-BA25/□ EJX438B-LASCG-98JDN-WA13B1SW00-BA25/□

\*1: See table 3 'Gasket contact surface.'

\*2: When specified flushing connection ring code 1, 2, A, or B, exclusive gasket is provided for transmitter side.

\*3: In case of wetted parts material code TW (Tantalum), the process temperature limit is -10 to 200°C.

\*4: Wetted parts material code TW (Tantalum) cannot be applied.

\*5: Even in case where fill fluid code D (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify option code K1 or K5.

\*6: In case of wetted parts material code HW (Hastelloy C), TW (Tantalum), and UW (Titanium) for 2-inch pressure flange, specify capillary length from 1 to 5 m.

\*7: Not applicable for flushing connection ring code 1 and 2.

\*8: Not applicable for gasket contact surface code 1.

\*9: Hastelloy C-276 or N10276.

\*10: ▲ Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the diaphragm itself can be damaged and that material from the broken diaphragm and the fill fluid can contaminate the user's process fluids.

Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150°C [302°F] or above). Contact Yokogawa for detailed information of the wetted parts material.

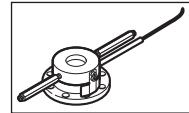
\*11: Forged version of the material may be used.

The #marks indicate the construction materials conform to NACE material recommendations per MR0175/ISO15156. Please refer to the latest standards for details. Selected materials also conform to NACE MR0103.

## II. Diaphragm seal section (Flush type)

- Precess connection size: 1 1/2-inch (40 mm)

EJX118B - □□□□□-□□□□□-W □ 8 □□□□□-□□□□□



Model	Suffix codes		Description		
					EJX118B EJX438B
EJX118B EJX438B	- □□□□□-□□□□□ .....		Transmitter body section (I)		
Process connection style	<b>-W</b> .....		Flush type		
Flange rating	J1 .....	J1 .....	JIS 10K		O
	J2 .....	J2 .....	JIS 20K		O
	J4 .....	J4 .....	JIS 40K		O
	A1 .....	A1 .....	ANSI class 150		O
	A2 .....	A2 .....	ANSI class 300		O
	A4 .....	A4 .....	ANSI class 600		O
	P1 .....	P1 .....	JPI class 150		O
	P2 .....	P2 .....	JPI class 300		O
	P4 .....	P4 .....	JPI class 600		O
Process connection size (Process flange size)	<b>8</b> .....		1 1/2-inch (40 mm)		O O
Flange material	A .....	A .....	JIS S25C		O O
	► B .....	B .....	304 SST <sup>*6</sup>		O O
	C .....	C .....	316 SST <sup>*6</sup>		O O
Gasket contact surface <sup>*1</sup>	1 .....	1 .....	Serration (for ANSI flange only)		O O
	2 .....	2 .....	Flat (no serration)		O O
Wetted parts material <sup>*5</sup>	<b>SW</b> .....		[Diaphragm] 316L SST	[Others] 316L SST	O O
Flushing connection ring <sup>*2</sup>	3 .....		[Ring] Reducer type	[Vent/Drain plugs] R 1/4 connections <sup>*4</sup>	[Material] 316 SST #
	4 .....		Reducer type	1/4 NPT connections	316 SST #
	C .....		Reducer type	R 1/4 connections <sup>*4</sup>	316 SST #
	D .....		Reducer type	1/4 NPT connections	316 SST #
Extension	<b>0</b> .....		None		
Fill fluid	-A .....		[Process temp.]		
	► B .....		-10 to 250°C		
	-D .....		-30 to 180°C		
	-E .....		-20 to 120°C		
	For general use (silicone oil)		-10 to 60°C		
	For general use (silicone oil)		-15 to 60°C		
	For oil-prohibited use (fluorinated oil) <sup>*3</sup>		-10 to 60°C		
	For low temperature use (ethylene glycol)		-50 to 100°C		
Capillary connection	<b>A</b> .....		[Ambient tempe.]		
—	2 .....		-40 to 60°C		
Capillary length	1 .....	1 m	6 .....	6 m	O O
	2 .....	2 m	7 .....	7 m	O O
	3 .....	3 m	8 .....	8 m	O O
	4 .....	4 m	9 .....	9 m	O O
	5 .....	5 m	A .....	10 m	O O
Option codes	<input type="checkbox"/> Optional specification				

T11E.ai

The “►” marks indicate the most typical selection for each specification. Example: EJX118B-LMSCG-98JDN-WA18B1SW40-BA25/□  
EJX438B-LASCG-98JDN-WA18B1SWD0-BA25/□

\*1: See table 3 'Gasket contact surface.'

\*2: When specified flushing connection ring code **3**, **4**, **C**, or **D**, exclusive gasket is provided for transmitter side.

\*3: Even in case where fill fluid code **D** (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify option code **K1** or **K5**.

\*4: Not applicable for gasket contact surface code **1**.

\*5: ▲ Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the diaphragm itself can be damaged and that material from the broken diaphragm and the fill fluid can contaminate the user's process fluids.

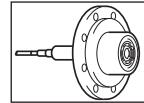
Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150°C [302°F] or above). Contact Yokogawa for detailed information of the wetted parts material.

\*6: Forged version of the material may be used.

## II. Diaphragm seal section (Extended type)

- Precess connection size: 4-inch (100 mm) / 3-inch (80 mm)

EJX118B - □□□□ - □□□□ - E 4  
EJX438B - □□□□ - □□□□ - E 3



Model	Suffix codes		Description			
EJX118B	- □□□□ - □□□□		Transmitter body section (I)			EJX118B
EJX438B	- □□□□ - □□□□					EJX438B
Process connection style	-E		Extended type			
Flange rating	J1	.....	JIS 10K			O O
	J2	.....	JIS 20K			O O
	J4	.....	JIS 40K			O O
	A1	.....	ANSI class 150			O O
	A2	.....	ANSI class 300			O O
	P1	.....	JPI class 150			O O
	P2	.....	JPI class 300			O O
	D2	.....	DIN PN10/16			O O
	D4	.....	DIN PN25/40			O O
Process connection size (Process flange size)	4	.....	4-inch (100 mm)			O O
	3	.....	3-inch (80 mm)			O O
Flange material	A	.....	JIS S25C			O O
	► B	.....	304 SST <sup>*5</sup>			O O
	C	.....	316 SST <sup>*5</sup>			O O
Gasket contact surface <sup>*1</sup>	1	.....	Serration (for ANSI flange only)			O O
	2	.....	Flat (no serration)			O O
Wetted parts material <sup>*4</sup>	SE		[Diaphragm] 316L SST	[Pipe] 316 SST	[Others] 316 SST	O O
Flushing connection ring	0		None			O O
Extension	1	.....	Length (X <sub>2</sub> ) = 50 mm			- O
	2	.....	Length (X <sub>2</sub> ) = 50 mm			O -
	3	.....	Length (X <sub>2</sub> ) = 100 mm			- O
	4	.....	Length (X <sub>2</sub> ) = 100 mm			O -
	5	.....	Length (X <sub>2</sub> ) = 150 mm			- O
	6	.....	Length (X <sub>2</sub> ) = 150 mm			O -
Fill fluid	-A		[Process temp.] For general use (silicone oil) -10 to 250°C			[Ambient temp.] -10 to 60°C
	► -B	.....	For general use (silicone oil) -30 to 180°C			-15 to 60°C
	-C	.....	For high temperature use (silicone oil) 10 to 310°C			10 to 60°C
	-D	.....	For oil-prohibited use (fluorinated oil) <sup>*2</sup> -20 to 120°C			-10 to 60°C
	-E	.....	For low temperature use (ethylene glycol) -50 to 100°C			-40 to 60°C
Capillary connection	B		Back of diaphragm seal unit			O O
—	—		Always 2			O O
Capillary length <sup>*3</sup>	1	.....	1 m	6	.....	6 m
	2	.....	2 m	7	.....	7 m
	3	.....	3 m	8	.....	8 m
	4	.....	4 m	9	.....	9 m
	5	.....	5 m	A	.....	10 m
Option codes	/□ Optional specification					

T12E.ai

The “►” marks indicate the most typical selection for each specification. Example: EJX118B-LMSCG-98JDN-EA14B1SE02-BB25/□  
EJX438B-LASCG-98JDN-EA14B1SE01-BB25/□

\*1: See table 3 'Gasket contact surface.'

\*2: Even in case where fill fluid code D (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify option code K1 or K5.

\*3: The specified capillary length includes the extension length (X<sub>2</sub>) and the flange thickness (t).

\*4: ▲ Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the diaphragm itself can be damaged and that material from the broken diaphragm and the fill fluid can contaminate the user's process fluids.

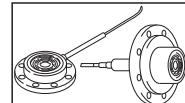
Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150°C [302°F] or above). Contact Yokogawa for detailed information of the wetted parts material.

\*5: Forged version of the material may be used.

## II. Diaphragm seal section (Combination type)

- Precess connection size: High pressure side; 4-inch (100 mm) ... Extended type  
Low pressure side; 3-inch (80 mm) ... Flush type

EJX118B - □□□□□-□□□□□-Y □ W □□□□□-□□□



Model	Suffix codes		Description				
EJX118B - □□□□□-□□□□□-Y	Transmitter body section (I)						
Process connection style	-Y		Combination type (Extended and Flush)				
Flange rating	J1 ..... J2 ..... A1 ..... A2 ..... P1 ..... P2 ..... D2 ..... D4 .....		JIS 10K JIS 20K ANSI class 150 ANSI class 300 JPI class 150 JPI class 300 DIN PN10/16 DIN PN25/40				
Process connection size (Process flange size)	W		High pressure side 4-inch (100 mm) Low pressure side 3-inch (80 mm)				
Flange material	A ..... <b>► B</b> ..... C .....		JIS S25C 304 SST <sup>*5</sup> 316 SST <sup>*5</sup>				
Gasket contact surface <sup>*1</sup>	1 ..... 2 .....		Serration (for ANSI flange only) Flat (no serration)				
Wetted parts material <sup>*4</sup>	SY		[Diaphragm]	[Pipe]	[Others]		
			High pressure side: 316L SST	316 SST	316 SST		
			Low pressure side: 316L SST	—	316L SST		
Flushing connection ring	0		None				
Extension	1 ..... 3 ..... 5 .....		Length (X <sub>2</sub> ) = 50 mm Length (X <sub>2</sub> ) = 100 mm Length (X <sub>2</sub> ) = 150 mm				
Fill fluid	<b>►</b> -A ..... -B ..... -C ..... -D ..... -E .....		[Process temperature] [Ambient temperature]				
			For general use (silicone oil) For general use (silicone oil) For high temperature use (silicone oil) For oil-prohibited use (fluorinated oil) <sup>*2</sup> For low temperature use (ethylene glycol)				
Capillary connection	C		High pressure side: Back of diaphragm seal unit Low pressure side: Side of diaphragm seal unit				
—	2		Always 2				
Capillary length <sup>*3</sup>	1 ..... 2 ..... 3 ..... 4 ..... 5 .....		1 m	6 .....	6 m		
			2 m	7 .....	7 m		
			3 m	8 .....	8 m		
			4 m	9 .....	9 m		
			5 m	A .....	10 m		
Option codes	<input type="checkbox"/> Optional specification						

T13E.ai

The “►” marks indicate the most typical selection for each specification. Example: EJX118B-LMSCG-98JDN-YA1WB1SY01-BC25/□

\*1: See table 3 ‘Gasket contact surface.’

\*2: Even in case where fill fluid code D (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify option code K1 or K5.

\*3: The specified capillary length of high pressure side (extended side) includes the extension length (X<sub>2</sub>) and the flange thickness (t).

\*4: △ Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the diaphragm itself can be damaged and that material from the broken diaphragm and the fill fluid can contaminate the user's process fluids.

Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150°C [302°F] or above). Contact Yokogawa for detailed information of the wetted parts material.

\*5: Forged version of the material may be used.

## ■ OPTIONAL SPECIFICATIONS (For Explosion Protected type)

Item	Description	Code
Factory Mutual (FM)	<p>FM Intrinsically safe Approval            Applicable Standard: Class 3600, Class 3610, Class 3611, Class 3810, NEMA 250, ANSI/ISA-60079-0, ANSI/ISA-60079-11</p> <p>Intrinsically Safe for Class I, Division 1, Groups A, B, C &amp; D, Class II, Division 1, Groups E, F &amp; G and Class III, Division 1, Class I, Zone 0, in Hazardous Locations, AEx ia IIC Nonincendive for Class I, Division 2, Groups A, B, C &amp; D, Class II, Division 2, Groups F &amp; G and Class III, Division 1, Class I, Zone 2, Group IIC, in Hazardous Locations            Enclosure: "NEMA 4X", Temp. Class: T4, Amb. Temp.: -50 to 70°C (-58 to 158°F)</p>	FS17
ATEX	<p>ATEX Intrinsically safe Approval            Applicable Standard: EN60079-0, EN60079-11, EN60079-26            Certificate: KEMA 10ATEX0164 X            II 1 G Ex ia IIC T4 Ga Degree of protection: IP66/IP67            Maximum Process Temp.(Tp):120°C(248°F)            Amb. Temp.(Tamb): -50 to 70°C (-58 to 158°F)</p>	KS27
Canadian Standards Association (CSA)	<p>CSA Intrinsically safe Approval            Certificate: 2325443            Applicable standard: CAN/CSA-C22.2 No.0, CAN/CSA-C22.2 No.0.4, C22.2 No.25, CAN/CSA-C22.2 No.94,CAN/CSA-C22.2 No.157, C22.2 No.213, CAN/CSA-C22.2 No.61010-1, CAN/CSA-C22.2 No.60079-0, CAN/CSA-E60079-11, IEC60529            Ex ia IIC T4            Intrinsically Safe for Class I, Division 1, Groups A, B, C &amp; D, Class II, Division 1, Groups E, F &amp; G, Class III, Division 1.            Nonincendive for Class I, Division 2, Groups A, B, C &amp; D, Class II, Division 2, Groups F &amp; G, Class III, Division 1            Enclosure: IP66/IP67 and Type 4X Temperature Code: T4            Maximum Process Temp.(Tp):120°C (248°F)            Amb. Temp.(Tamb): -50 to 70°C (-58 to 158°F)</p>	CS17
IECEx	<p>IECEx Intrinsically safe Approval            Applicable Standard: IEC60079-0:2011, IEC60079-11:2011, IEC60079-26:2006            Certificate: IECEx KEM 10.0074 X            Ex ia IIC T4 Ga Enclosure: IP66/IP67            Maximum Process Temp.(Tp) :120°C(248°F)            Amb. Temp.(Tamb): -50 to 70°C (-58 to 158°F)</p>	SS27

## ■ OPTIONAL SPECIFICATIONS

Item		Description		Code
Painting	Color change	Amplifier cover only		P□
	Coating change	Anti-corrosion coating *1		X2
Oil-prohibited use		Degrease cleansing treatment		K1
Oil-prohibited use with dehydrating treatment		Degrease cleansing treatment and dehydrating treatment		K5
Calibration units *3	P calibration (psi unit)	(See table for Span and Range Limits.)	D1	
	bar calibration (bar unit)		D3	
	M calibration (kgf/cm <sup>2</sup> unit)		D4	
Teflon film *2 *7		Diaphragm protection from sticky process fluid by FEP Teflon film attached with fluorinated oil. Operation range: 20 to 150°C, 0 to 2 MPa (Not applicable for vacuum service).		TF1
Operating temperature correction *4		Adjusting range: 80°C to Maximum temperature of specified fill fluid		R
Capillary without PVC sheaths		When ambient temperature exceeds 100°C, or use of PVC is prohibited		V
Gold-plated diaphragm *5		Inside of isolating diaphragms (fill fluid side) are gold plated, effective for hydrogen permeation.		A1
Material certificate	Process flange, Block		M2W	
	Process flange, Block, Ring *6		M5W	
	Process flange, Block, Pipe, Base		M2E	
	High Pressure side: Process flange, Block, Pipe, Base *12 Low Pressure side: Process flange, Block		M2Y	
Pressure test/ Leak test Certificate *11	EJX118B	(Flange rating)	(Test pressure)	
		JIS 10K	2 MPa (290 psi)	T51
		JIS 20K	5 MPa (720 psi)	T54
		JIS 40K *8	10 MPa (1450 psi)	T57
		ANSI/JPI Class 150	3 MPa (430 psi)	T52
		ANSI/JPI Class 300 *8	8 MPa (1160 psi)	T56
		ANSI/JPI Class 300 *9	7 MPa (1000 psi)	T55
		ANSI/JPI Class 600 *8	16 MPa (2300 psi)	T58
	EJX438B	For A-Capsule	JIS 10K	T51
		JIS 20K, 40K, 63K	3.5 MPa (500 psi)	T53
		ANSI/JPI Class 150	3 MPa (430 psi)	T52
		ANSI/JPI Class 300, 600	3.5 MPa (500 psi)	T53
		For B-Capsule	JIS 10K	T51
		JIS 20K	5 MPa (720 psi)	T54
		JIS 40K *8	10 MPa (1450 psi)	T57
		JIS 40K *9	7 MPa (1000 psi)	T55
		JIS 63K *8	16 MPa (2300 psi)	T58
		ANSI/JPI Class 150	3 MPa (435 psi)	T52
		ANSI/JPI Class 300 *8	8 MPa (1160 psi)	T56
		ANSI/JPI Class 300 *9	7 MPa (1000 psi)	T55
		ANSI/JPI Class 600 *8	16 MPa (2300 psi)	T58
		Nitrogen (N <sub>2</sub> ) Gas *10 Retention time: 10 minutes		

\*1: Not applicable with color change option.

\*2: Applicable for flush type (process connection style code W.)

\*3: The unit of MWP (Max. working pressure) on the name plate of a housing is the same unit as specified by option code D1, D3, and D4.

\*4: Specify the process operating temperature for zero correction. Example: Zero correction by process temperature 90°C.

\*5: Applicable for wetted parts material code SW, SE, SY, and HW.

\*6: Applicable for flushing connection ring code 1, 2, 3, 4, A, B, C, and D.

\*7: Applicable for flushing connection ring code 0.

\*8: Applicable for flush type (process connection style code W.)

\*9: Applicable for extended type and Combination type (process connection style code E and Y.)

\*10: Pure nitrogen gas is used for oil-prohibited use (option code K1 and K5.)

\*11: The unit on the certificate is always MPa regardless of selection of option code D1, D3, or D4. A flushing connection ring will not be applied when conducting the pressure test or leak test.

\*12: Applicable for model EJX118B.

## ■ OPTIONAL ACCESSORIES

Product	Part number	Specification
Battery pack assembly	F9915NQ <sup>*1</sup>	Battery case, Lithium-thionyl chloride batteries 2 pieces
Batteries <sup>*2</sup>	F9915NR	Lithium-thionyl chloride batteries, 2 pieces
Battery case	F9915NK <sup>*3</sup>	Battery case only
Remote antenna cable	F9915KU	3 m with mounting bracket
	F9915KV	13 m (3 m+10 m), with arrester and mounting bracket
Antenna	F9915KW	2 dBi standard antenna
	F9915KY	6 dBi high gain antenna <sup>*4</sup>

\*1: If you need F9915MA, please purchase F9915NQ. F9915NQ is a set of F9915MA and instruction manual.

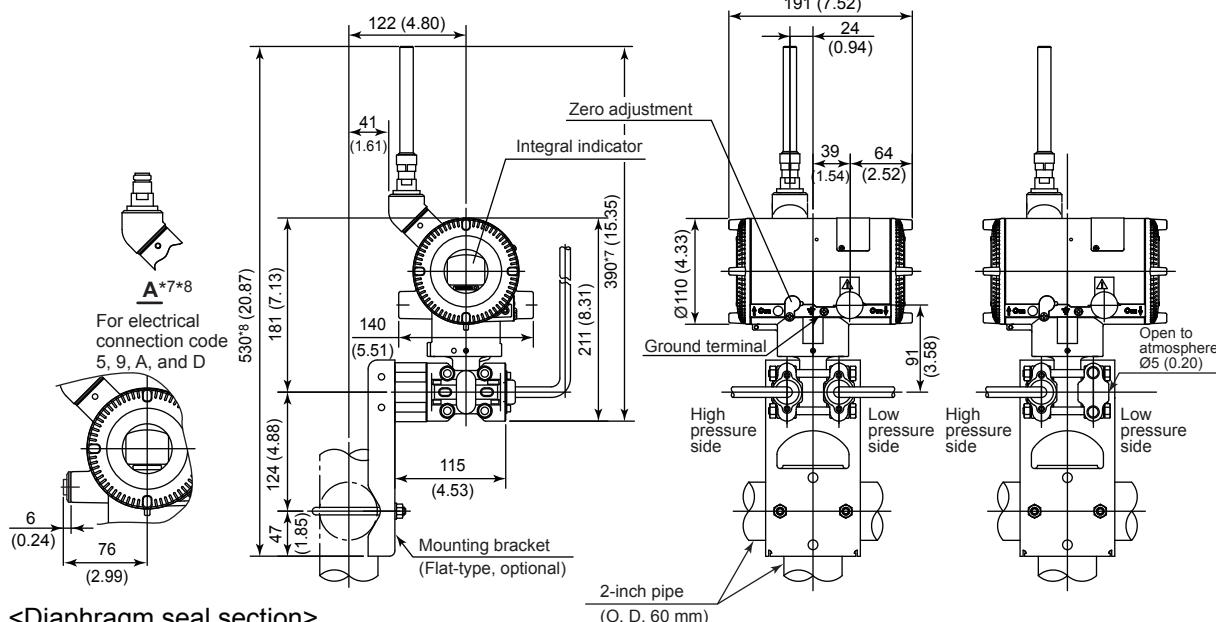
\*2: Alternatively, Tadiran SL-2780/S or TL-5930/S batteries can be purchased from your local distributor.

\*3: If you need F9915NS, please purchase F9915NK. F9915NK is a set of F9915NS and instruction manual.

\*4: Use of high gain antenna is limited by local regulation of radio and telecommunication law. Consult Yokogawa for details.

## DIMENSIONS

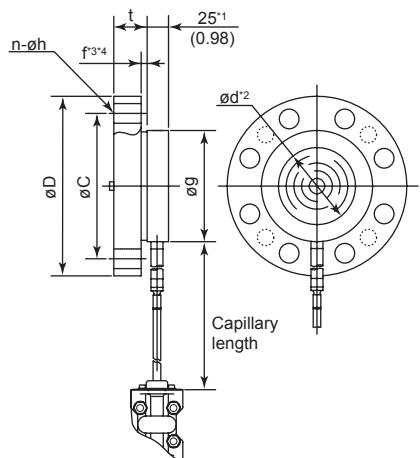
<Transmitter body section> (Amplifier housing code 8)



<Diaphragm seal section>

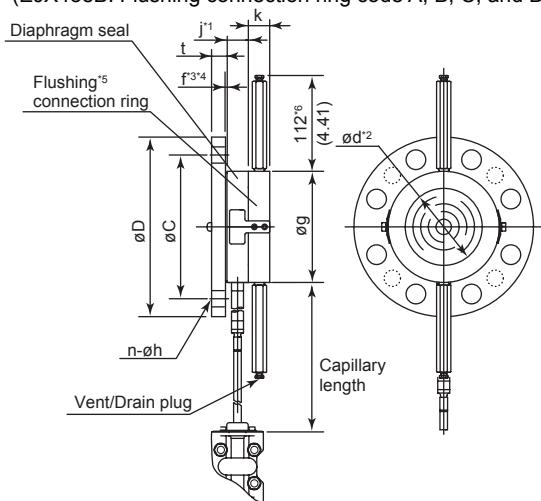
### ● Flush type

- ◆ No ring (Flushing connection ring code 0)



### ◆ With ring

(EJX118B: Flushing connection ring code 1, 2, 3, and 4)  
(EJX438B: Flushing connection ring code A, B, C, and D)

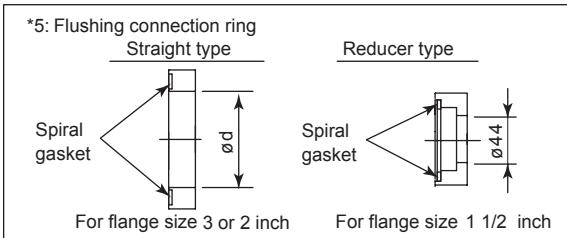


\*1: When wetted parts material code UW (titanium), value is 34 (1.34).

\*2: Indicates inside diameter of gasket contact surface

\*3: In case where process flange material is JIS S25C, value of f is 0.

\*4: In case where process flange material is JIS SUS304 in ANSI/JPI flange, value of f is included in t.



\*6: When option code K1 or K5 is selected, add 11 mm (0.28 inch).

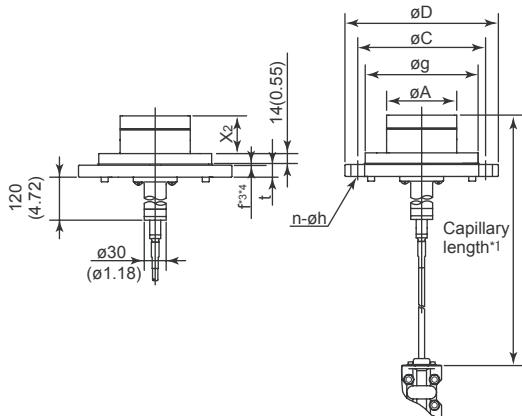
\*7: When amplifier housing code 9 is selected, the value is 270 mm (10.63 inch). In this case, the figure is shown as A.

\*8: When amplifier housing code 9 is selected, the value is 410 mm (16.14 inch). In this case, the figure is shown as A.

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Unit: mm (approx. inch)

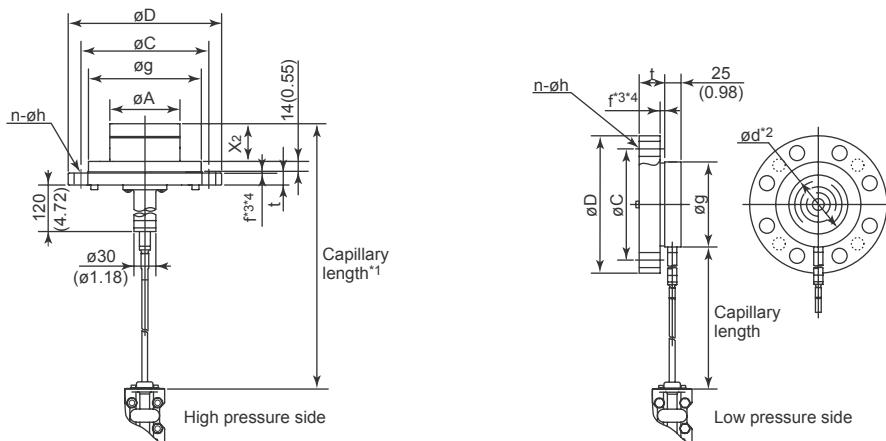
● Extended type



● Extension length (X<sub>2</sub>)

Extension code	X <sub>2</sub>
2	50(1.97)
4	100(3.94)
6	150(5.91)

● Combination type for EJX118B



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\*1: The specified capillary length includes the extension length (X<sub>2</sub>) and the flange thickness (t).

\*2: Indicates inside diameter of gasket contact surface.

\*3: In case where process flange material is JIS S25C, value of f is 0.

\*4: In case where process flange material is 304 SST in ANSI/JPI flange, value of f is included in t.

**Process flange size: 4 inch (100 mm)**

Unit: mm (Approx.: inch)

Code	Flange rating	$\phi D$	$\phi C$	$\phi g$	$\phi d$	t	$f^{3*4}$	Bolt holes		j	k	$\phi A$
								No.(n)	Dia.( $\phi h$ )			
J1	JIS 10K	210 (8.27)	175 (6.89)	155 (6.10)	—	18 (0.71)	0	8	19 (0.75)	—	—	96±0.5 (3.78±0.02)
J2	JIS 20K	225 (8.86)	185 (7.28)	155 (6.10)	—	24 (0.94)	0	8	23 (0.91)	—	—	96±0.5 (3.78±0.02)
A1	ANSI class 150	228.6 (9.00)	190.5 (7.50)	155 (6.10)	—	23.9 (0.94)	1.6 (0.06)	8	19.1 (0.75)	—	—	96±0.5 (3.78±0.02)
A2	ANSI class 300	254 (10.00)	200.2 (7.88)	155 (6.10)	—	31.8 (1.25)	1.6 (0.06)	8	22.4 (0.88)	—	—	96±0.5 (3.78±0.02)
P1	JPI class 150	229 (9.02)	190.5 (7.50)	155 (6.10)	—	24 (0.94)	1.6 (0.06)	8	19 (0.75)	—	—	96±0.5 (3.78±0.02)
P2	JPI class 300	254 (10.0)	200.2 (7.88)	155 (6.10)	—	32 (1.26)	1.6 (0.06)	8	22 (0.87)	—	—	96±0.5 (3.78±0.02)
D2	DIN PN10/16	220 (8.66)	180 (7.09)	155 (6.10)	—	20 (0.79)	0	8	18 (0.71)	—	—	96±0.5 (3.78±0.02)
D4	DIN PN25/40	235 (9.25)	190 (7.48)	155 (6.10)	—	24 (0.94)	0	8	22 (0.87)	—	—	96±0.5 (3.78±0.02)

**Process flange size: 3 inch (80 mm)**

Code	Flange rating	$\phi D$	$\phi C$	$\phi g$	$\phi d^2$	t	$f^{3*4}$	Bolt holes		j <sup>1</sup>	k	$\phi A$
								No.(n)	Dia.( $\phi h$ )			
J1	JIS 10K	185 (7.28)	150 (5.91)	130 (5.12)	90 (3.54)	18 (0.71)	0	8	19 (0.75)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
J2	JIS 20K	200 (7.87)	160 (6.30)	130 (5.12)	90 (3.54)	22 (0.87)	0	8	23 (0.91)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
J4	JIS 40K	210 (8.27)	170 (6.69)	130 (5.12)	90 (3.54)	32 (1.26)	0	8	23 (0.91)	25 (0.98)	27 (1.06)	—
A1	ANSI class 150	190.5 (7.50)	152.4 (6.00)	130 (5.12)	90 (3.54)	23.9 (0.94)	1.6 (0.06)	4	19.1 (0.75)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
A2	ANSI class 300	209.6 (8.25)	168.1 (6.62)	130 (5.12)	90 (3.54)	28.5 (1.12)	1.6 (0.06)	8	22.4 (0.88)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
A4	ANSI class 600	209.6 (8.25)	168.1 (6.62)	130 (5.12)	90 (3.54)	38.2 (1.50)	6.4 (0.25)	8	22.4 (0.88)	25 (0.98)	27 (1.06)	—
P1	JPI class 150	190 (7.48)	152.4 (6.00)	130 (5.12)	90 (3.54)	24 (0.94)	1.6 (0.06)	4	19 (0.75)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
P2	JPI class 300	210 (8.27)	168.1 (6.61)	130 (5.12)	90 (3.54)	28.5 (1.12)	1.6 (0.06)	8	22 (0.87)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
P4	JPI class 600	210 (8.27)	168.1 (6.61)	130 (5.12)	90 (3.54)	38.4 (1.51)	6.4 (0.25)	8	22 (0.87)	25 (0.98)	27 (1.06)	—
D2	DIN PN10/16	200 (7.87)	160 (6.30)	130 (5.12)	90 (3.54)	20 (0.79)	0	8	18 (0.71)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
D4	DIN PN25/40	200 (7.87)	160 (6.30)	130 (5.12)	90 (3.54)	24 (0.94)	0	8	18 (0.71)	25 (0.98)	27 (1.06)	71±0.5 (2.8±0.02)
D5	DIN PN64	215 (8.46)	170 (6.69)	130 (5.12)	90 (3.54)	28 (1.10)	0	8	22 (0.87)	25 (0.98)	27 (1.06)	—

**Process flange size: 2 inch (50 mm)**

Code	Flange rating	$\phi D$	$\phi C$	$\phi g$	$\phi d^2$	t	$f^{3*4}$	Bolt holes		j	k
								No.(n)	Dia.( $\phi h$ )		
J1	JIS 10K	155 (6.10)	120 (4.72)	100 (3.94)	61 (2.40)	16 (0.63)	0	4	19 (0.75)	25 (0.98)	27 (1.06)
J2	JIS 20K	155 (6.10)	120 (4.72)	100 (3.94)	61 (2.40)	18 (0.71)	0	8	19 (0.75)	25 (0.98)	27 (1.06)
J4	JIS 40K	165 (6.50)	130 (5.12)	100 (3.94)	61 (2.40)	26 (1.02)	0	8	19 (0.75)	25 (0.98)	27 (1.06)
A1	ANSI class 150	152.4 (6.00)	120.7 (4.75)	100 (3.94)	61 (2.40)	19.1 (0.75)	1.6 (0.06)	4	19.1 (0.75)	25 (0.98)	27 (1.06)
A2	ANSI class 300	165.1 (6.50)	127.0 (5.00)	100 (3.94)	61 (2.40)	22.4 (0.88)	1.6 (0.06)	8	19.1 (0.75)	25 (0.98)	27 (1.06)
A4	ANSI class 600	165.1 (6.50)	127.0 (5.00)	100 (3.94)	61 (2.40)	31.8 (1.25)	6.4 (0.25)	8	19.1 (0.75)	25 (0.98)	27 (1.06)
P1	JPI class 150	152 (5.98)	120.6 (4.75)	100 (3.94)	61 (2.40)	19.5 (0.77)	1.6 (0.06)	4	19 (0.75)	25 (0.98)	27 (1.06)
P2	JPI class 300	165 (6.50)	127.0 (5.00)	100 (3.94)	61 (2.40)	22.4 (0.88)	1.6 (0.06)	8	19 (0.75)	25 (0.98)	27 (1.06)
P4	JPI class 600	165 (6.50)	127.0 (5.00)	100 (3.94)	61 (2.40)	31.9 (1.26)	6.4 (0.25)	8	19 (0.75)	25 (0.98)	27 (1.06)
D2	DIN PN10/16	165 (6.50)	125 (4.92)	100 (3.94)	61 (2.40)	18 (0.71)	0	4	18 (0.71)	25 (0.98)	27 (1.06)
D4	DIN PN25/40	165 (6.50)	125 (4.92)	100 (3.94)	61 (2.40)	20 (0.79)	0	4	18 (0.71)	25 (0.98)	27 (1.06)
D5	DIN PN64	180 (7.09)	135 (5.31)	100 (3.94)	61 (2.40)	26 (1.02)	0	4	22 (0.87)	25 (0.98)	27 (1.06)

**Process flange size: 1 1/2 inch (40 mm)**

Code	Flange rating	$\phi D$	$\phi C$	$\phi g$	$\phi d^2$	t	$f^{3*4}$	Bolt holes		j	k
								No.(n)	Dia.( $\phi h$ )		
J1	JIS 10K	140 (5.51)	105 (4.13)	86 (3.39)	44 (1.73)	16 (0.63)	0	4	19 (0.75)	27 (1.06)	30 (1.18)
J2	JIS 20K	140 (5.51)	105 (4.13)	86 (3.39)	44 (1.73)	18 (0.71)	0	4	19 (0.75)	27 (1.06)	30 (1.18)
J4	JIS 40K	160 (6.30)	120 (4.72)	86 (3.39)	44 (1.73)	24 (0.94)	0	4	23 (0.91)	27 (1.06)	30 (1.18)
A1	ANSI class 150	127 (5.00)	98.6 (3.88)	86 (3.39)	44 (1.73)	17.5 (0.69)	1.6 (0.06)	4	15.9 (0.63)	27 (1.06)	30 (1.18)
A2	ANSI class 300	155.4 (6.12)	114.3 (4.50)	86 (3.39)	44 (1.73)	20.6 (0.81)	1.6 (0.06)	4	22.4 (0.88)	27 (1.06)	30 (1.18)
A4	ANSI class 600	155.4 (6.12)	114.3 (4.50)	86 (3.39)	44 (1.73)	28.8 (1.13)	6.4 (0.25)	4	22.4 (0.88)	27 (1.06)	30 (1.18)
P1	JPI class 150	127 (5.00)	98.6 (3.88)	86 (3.39)	44 (1.73)	17.6 (0.69)	1.6 (0.06)	4	16 (0.63)	27 (1.06)	30 (1.18)
P2	JPI class 300	155 (6.10)	114.3 (4.50)	86 (3.39)	44 (1.73)	20.6 (0.81)	1.6 (0.06)	4	22 (0.87)	27 (1.06)	30 (1.18)
P4	JPI class 600	155 (6.10)	114.3 (4.50)	86 (3.39)	44 (1.73)	28.9 (1.14)	6.4 (0.25)	4	22 (0.87)	27 (1.06)	30 (1.18)

\*1: When wetted parts material code UW (titanium) is selected, value is 34 (1.34).

\*2: Indicates inside diameter of gasket contact surface.

\*3: In case where process flange material is JIS S25C, value of f is 0.

\*4: In case where process flange material is 304 SST in ANSI/JPI flange, value of f is included in t.

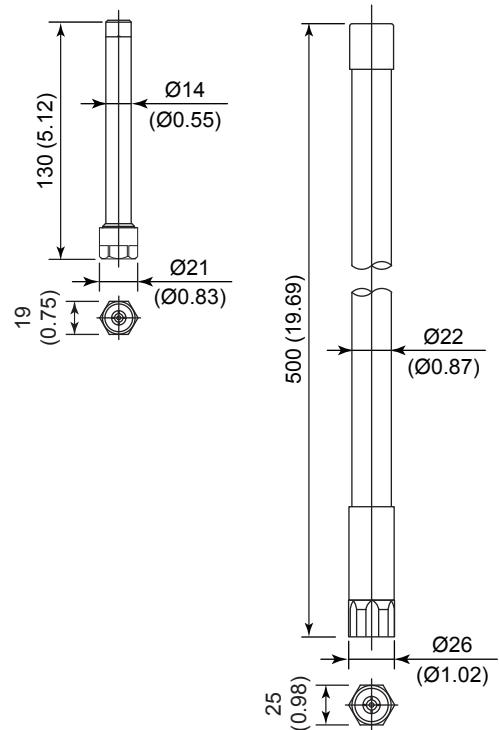
## ● Antenna/Cable

Unit: mm (approx. inch)

### □ Non-directional antenna

- Gain: 2 dBi
- Gain: 6 dBi

Part number: F9915KW      Part number: F9915KY



### □ Antenna cable

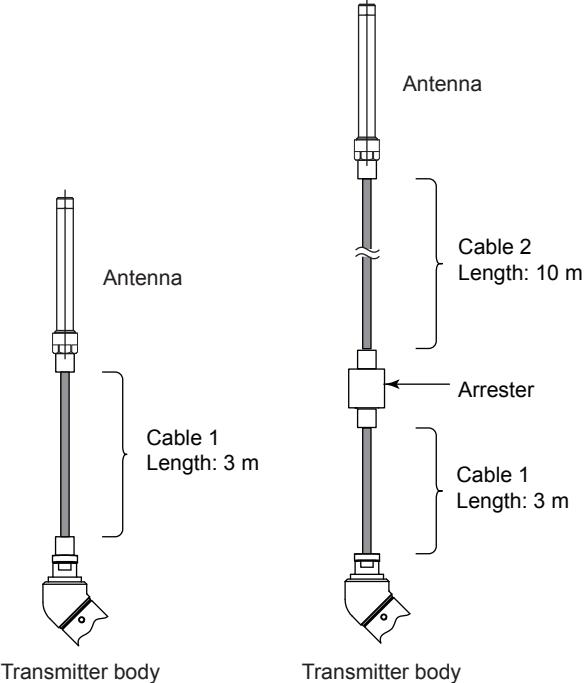
- Sheath diameter: 11.2 mm

&lt; Without arrester &gt;

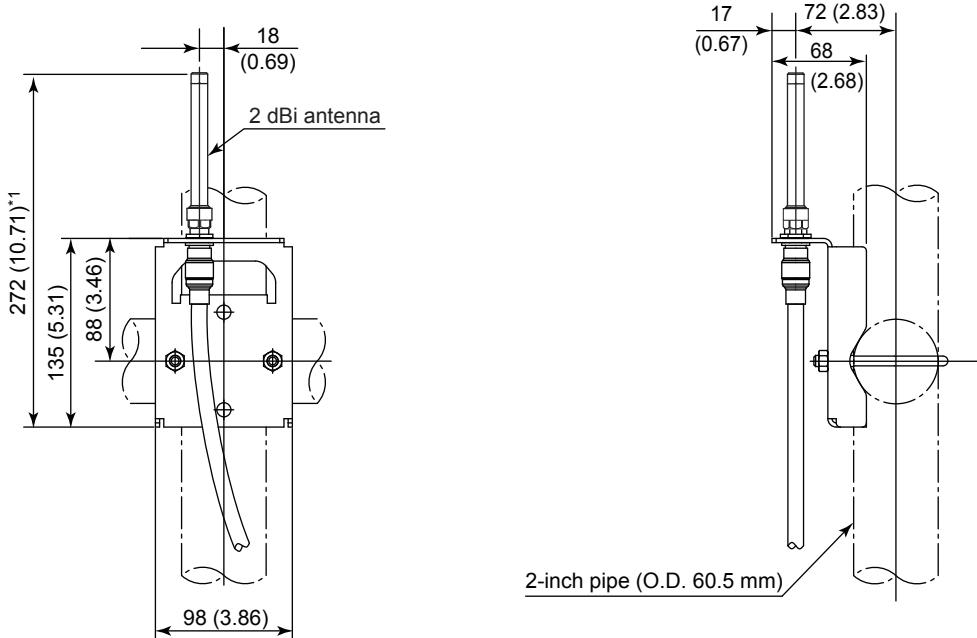
Part number: F9915KU

&lt; With arrester &gt;

Part number: F9915KV



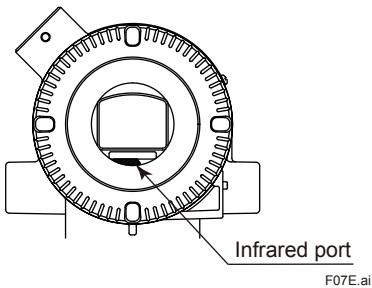
## ● Antenna mounting bracket



\*1: When 6 dBi antenna is selected, the value is 642 mm (25.28 inch).

F06E.ai

## • Infrared Configuration



### <Ordering Information>

Specify the following when ordering

1. Model, suffix codes, and option codes
2. Calibration range and unit

#### 1) Range

Calibration range can be specified with range value specifications up to 5 digits for low or high range limits within the range of -32000 to 32000. When reverse range is designated, specify Lower Range Value (LRV) as greater than Upper Range Value (URV). When Square root Output mode in EJX118B is specified, LRV must be "0 (zero)".

#### 2) Unit

Specify only one unit from Table A.

**Table A. Available Range Unit**

EJX118B, EJX438B	mmH <sub>2</sub> O, mmH <sub>2</sub> O (68°F), mmHg, Pa, kPa, MPa, mbar, bar, gf/cm <sup>2</sup> , kgf/cm <sup>2</sup> , inH <sub>2</sub> O, inH <sub>2</sub> O (68°F), inHg, ftH <sub>2</sub> O, ftH <sub>2</sub> O (68°F) or psi.
---------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

#### 3. Output mode

For choices, refer to Table B.

- For EJX118B, select Linear or Square root. Specify the same mode as that of "Display mode".
- For EJX438B, select Linear.

#### 4. Display setting (SCALE)

##### 1) Display scale and unit

Specify either "0 to 100 %" or "Desired Range and Unit" for engineering unit scale:

- When "Desired Range and Unit" is specified, scale range can be specified with range limit specifications up to 5 digits for low or high range limits within the range of -32000 to 32000. Unit display consists of 6-digit, therefore, if the specified scaling unit excluding "/" is longer than 6-characters, the first 6 characters will be displayed on the unit display. When Square root Output mode in EJX118B is specified, LRV must be "0 (zero)".

##### 2) Display mode

For choices, refer to Table B.

- For EJX118B, select either Linear or Square root. Specify the same mode as that of Display mode.
- For EJX438B, select Linear.

**Table B. Output mode and display mode**

Output mode Display mode	LINEAR	SQUARE ROOT
LINEAR	●	—
SQUARE ROOT	—	●: EJX118B —: EJX438B

●: Applicable, —: Not applicable

#### 5. Tag Number (if required)

Specify Tag number (up to 16 letters) to be engraved on the tag plate. The specified letters are written on TAG\_Name (16 letters) in the amplifier memory.

#### 6. Software tag (if required)

Specify this software tag when tag number which is different from the tag number specified in the "TAG NUMBER" is required. The tag number specified in "SOFTWARE TAG" will be entered on "TAG" (up to 16 letters) in the amplifier memory.

#### 7. Network ID (if required)

Specify the number from 2 to 65535. When not specified, it will use 1 as the default.

#### 8. Other Items related with options

- 1) When option code /R is selected;  
[COMPENSATION TEMPERATURE]  
Specify the process operating temperature for the compensation of zero shift by fill fluid density change. The specified value must be within the range from 80 degC to a maximum temperature applicable for the fill fluid. When combined with option code TF1, the value is limited to 150 degC. Note that the unit for this value is degC. Specifying of unit is unnecessary.

### < Factory Setting >

Tag No.	Blank unless otherwise specified in order
Software tag	Blank unless otherwise specified in order
Network ID	'1' unless otherwise specified in order.
Static pressure display range (For EJX118B only)	'0 to 25 MPa' for M and H capsule, absolute value. Measuring low pressure side.

### < Reference >

1. *DPharp EJX* is a registered trademark of Yokogawa Electric Corporation.
  2. Teflon; Trademark of E.I. DuPont de Nemours & Co.
  3. Hastelloy; Trademark of Haynes International Inc.
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