

# General Specifications

## OpreX™ Pressure Transmitter EJX510S/EJX530S Absolute and Gauge Pressure Transmitter

GS 01C33F30-01EN

### OVERVIEW

The high performance absolute and gauge pressure transmitter EJX510S and EJX530S feature single crystal silicon resonant sensor and is suitable to measure liquid, gas, or steam flow as well as liquid level, density and pressure. EJX510S and EJX530S output a 4 to 20 mA DC signal corresponding to the measured pressure. Its highly accurate and stable sensor can be shown on the integral indicator or remotely monitored via HART or PROFINET communications.

Other key features include quick response, backlit Graphic display,

EJX S series are certified as complying with SIL 2 for safety requirement.



### STANDARD SPECIFICATIONS

#### Span and Range Limits

Model	Capsule range code	MPa		psi (/D1)		bar (/D3)		kgf/cm <sup>2</sup> (/D4)	
		Range	Span	Range	Span	Range	Span	Range	Span
EJX510S	A	0 to 200 kPa abs	2 to 200 kPa abs	0 to 29	0.29 to 29	0 to 2	0.02 to 2	0 to 2	0.02 to 2
	B	0 to 2	0.01 to 2	0 to 290	1.45 to 290	0 to 20	0.1 to 20	0 to 20	0.1 to 20
	C	0 to 10	0.05 to 10	0 to 1450	7.25 to 1450	0 to 100	0.5 to 100	0 to 101	0.5 to 101
	D	0 to 70	0.35 to 70	0 to 10152	50 to 10152	0 to 700	3.5 to 700	0 to 713	3.5 to 713
EJX530S	A	-100 to 200 kPa	2 to 200 kPa	-14.5 to 29	0.29 to 29	-1 to 2	0.02 to 2	-1 to 2	0.02 to 2
	B	-0.1 to 2	0.01 to 2	-14.5 to 290	1.45 to 290	-1 to 20	0.1 to 20	-1 to 20	0.1 to 20
	C	-0.1 to 10	0.05 to 10	-14.5 to 1450	7.25 to 1450	-1 to 100	0.5 to 100	-1 to 101	0.5 to 101
	D	-0.1 to 70	0.35 to 70	-14.5 to 10152	50 to 10152	-1 to 700	3.5 to 700	-1 to 713	3.5 to 713

#### Pressure limits

Model	Measurement Span	Maximum Over Pressure	Burst Pressure Limits
EJX510S	A	4 MPa abs (580 psia)	30 MPa abs
	B	4 MPa abs (580 psia)	30 MPa abs
	C	20 MPa abs (2900 psia)	30 MPa abs
	D	105 MPa abs (15200 psia)	182 MPa abs
EJX530S	A	4 MPa (580 psig)	30 MPa
	B	4 MPa (580 psig)	30 MPa
	C	20 MPa (2900 psig)	30 MPa
	D	105 MPa (15200 psig)	182 MPa

□ **Performance Specifications**

Zero-based calibrated span, linear output, wetted parts material code “S” and silicone oil, unless otherwise mentioned.

**Specification Conformance:**

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

**Reference Accuracy of Calibrated Span:**

These specifications include terminal-based linearity, hysteresis, and repeatability.

Model	Capsule Range code	Wetted Parts Material code	Optional Code	Reference Accuracy		X	URL (Upper Range Limit)
				Span $\geq$ X	Span<X		
EJX510S	A	S	-	$\pm 0.04\%$	$\pm(0.004 \text{ URL}/\text{span})\%^{*1}$	20 kPa abs (2.9 psia)	200 kPa abs (29 psia)
	B					0.2 MPa abs (29 psia)	2 MPa abs (290 psia)
	C			$\pm 0.035\%$	$\pm(0.0035 \text{ URL}/\text{span})\%$	1 MPa abs (145 psia)	10 MPa abs (1450 psia)
	D					7 MPa abs (1015 psia)	70 MPa abs (10152 psia)
EJX530S	A	S	-	$\pm 0.04\%$	$\pm(0.004 \text{ URL}/\text{span})\%^{*1}$	20 kPa (2.9 psi)	200 kPa (29 psi)
	B					0.2 MPa (29 psi)	2 MPa (290 psi)
	C			$\pm 0.035\%$	$\pm(0.0035 \text{ URL}/\text{span})\%$	1 MPa (145 psi)	10 MPa (1450 psi)
	D					7 MPa (1015 psi)	70 MPa (10152 psi)
	A	F, H	/HAC	$\pm 0.025\%$	$\pm(0.008+0.006 \text{ URL}/\text{span})\%^{*2}$	70 kPa (10 psi)	200 kPa (29 psi)
	B				$\pm(0.005+0.002 \text{ URL}/\text{span})\%$	0.2 MPa (29 psi)	2 MPa (290 psi)
	C					1 MPa (145 psi)	10 MPa (1450 psi)
	D					7 MPa (1015 psi)	70 MPa (10152 psi)

\*1: In instances where the span falls below 8 kPa, the calculation is to be multiplied by a factor of two.

\*2: In instances where a negative pressure is included or where the span falls below 70 kPa, the accuracy is equivalent to that of the /HAC-less.

Measurement span	A	B	C	D
X	20 kPa (2.9 psi)	0.2 MPa (29 psi)	1 MPa (145 psi)	7 MPa (1015 psi)
URL (Upper range limit)	200 kPa (29 psi)	2 MPa (290 psi)	10 MPa (1450 psi)	70 MPa (10150 psi)

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

- A capsule:  $\pm(0.04\%$  of Span +  $0.075\%$  of URL)
- B capsule:  $\pm(0.04\%$  of Span +  $0.018\%$  of URL)
- C and D capsule:  $\pm(0.04\%$  of Span +  $0.009\%$  of URL)

**Stability (All normal operating condition):**

- EJX530S:  $\pm 0.1\%$  of URL for 15 years
- EJX510S:  $\pm 0.2\%$  of URL for 15 years

**Power Supply Effects: For HART Communication**

$\pm 0.005\%$  per Volt (from 21.6 to 32 V DC, 350Ω)

**Vibration Effects:**

Less than  $0.1\%$  of URL (10-60 Hz, 0.21 mm displacement/60-2000 Hz 3 G)

**Mounting Position Effects:**

Rotation in diaphragm plane has no effect. Tilting up to 90 degrees will cause zero shift up to 0.21 kPa (0.84 inH<sub>2</sub>O) which can be corrected by the zero adjustment.

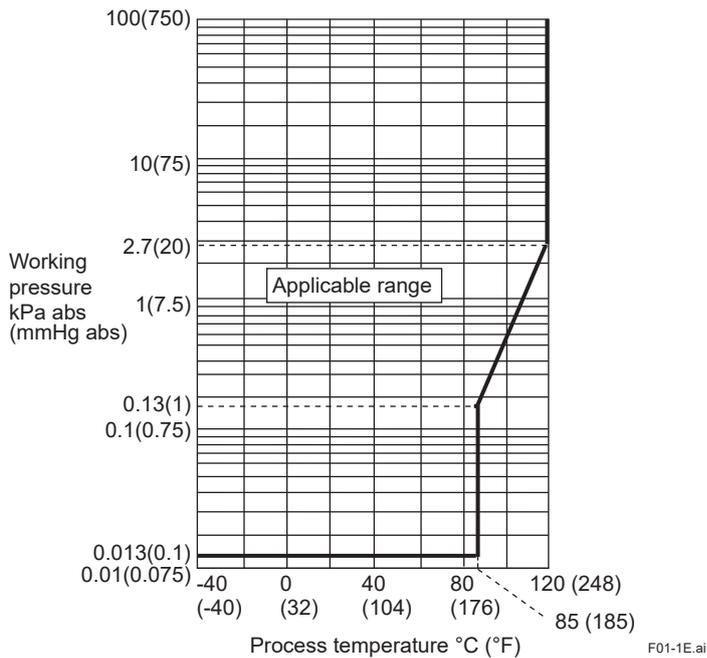
**Working Pressure:**

For Standard type

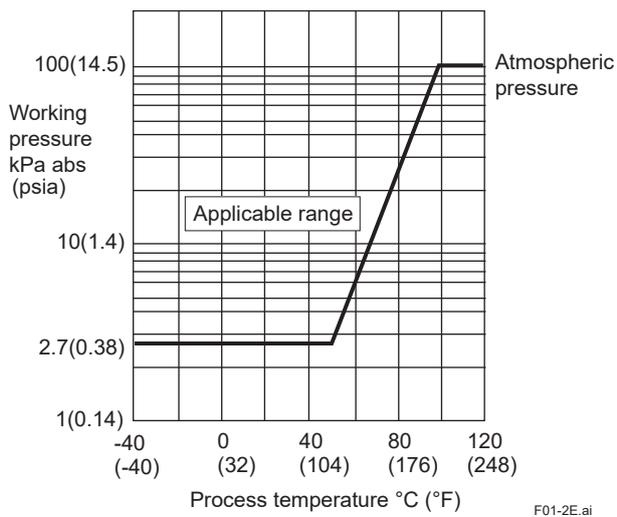
- Working Pressure Limits (Silicone oil) Maximum Pressure Limits

Pressure		
Capsule	EJX510S	EJX530S
A	200 kPa abs (29 psia)	200 kPa (29 psig)
B	2 MPa abs (290 psia)	2 MPa (290 psig)
C	10 MPa abs (1450 psia)	10 MPa (1450 psig)
D	70 MPa abs (10150 psia)	70 MPa (10150 psig)

- Minimum Pressure Limit: See graph below figure1-1 and 1-2



**Figure 1-1. Working Pressure and Process Temperature [EJX510S]**



**Figure 1-2. Working Pressure and Process Temperature [EJX530S]**

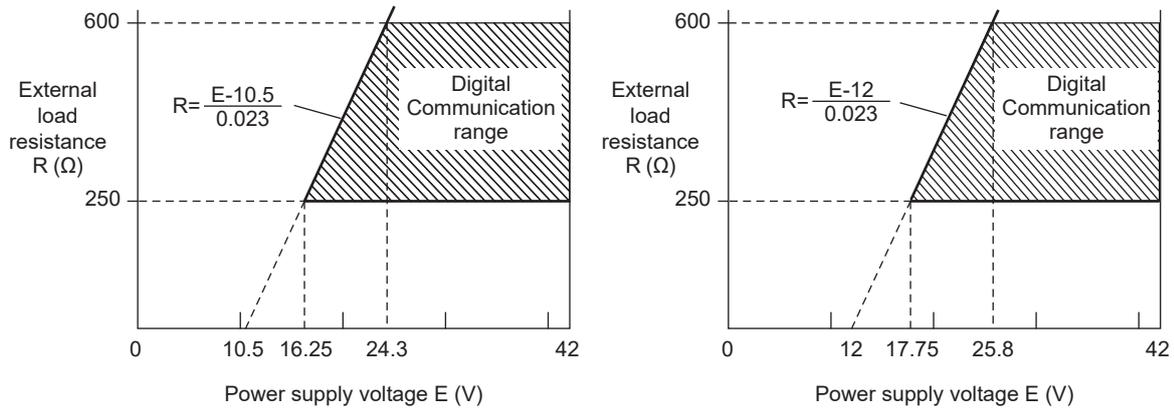
□ **Communication Specifications**

**HART Communication:**

Item		Description
Communication protocol		Two wire 4 to 20 mA DC output with digital communications HART
Output signal		Digital communication signal based on HART. 3.6 to 21.6 mA (-2.5 to 110%) Normal output range (default setting): 3.6 to 21.6 mA Burnout High side (default setting): 115% (22.4 mA DC) Burnout Low side (default setting): -5% (3.2 mA DC)  For optional code /C2 Normal output range (default setting): 3.8 to 20.5 mA Burnout High side (default setting): 115% (22.4 mA DC) Burnout Low side (default setting): -5% (3.2 mA DC)
Output mode		Linear/Signal Characterizer (Max 30-segment)
Communication Requirements	Supply Voltage	For LCD Display and without display (Display and interface code : E,N) 10.5 to 42 V DC for general use and flameproof type. 10.5 to 30 V DC for intrinsically safe type. Minimum voltage limited at 16.4 V DC for digital communications For Graphic display (Display and interface code : F) 12 to 42 V DC for general use and flameproof type. Minimum voltage limited at 17.75 V DC for digital communications.
	Load	250 to 600Ω (including cable resistor) Working Pressure and Process Temperature for Figure 2
Response time (Typical)		90 ms
Measurement period	Gauge Pressure	35 ms
	Capsule Temperature	2 s
	Main module Temperature	1 s
Output signal at Failure Alarm		Output current value (Burnout), Communication, Indicator (Support for NAMUR NE107)
External Zero Adjustment		External zero is continuously adjustable with 0.01% incremental resolution of span.
Zero Adjustment Limits		Zero can be fully elevated or suppressed, within the lower and upper range limits of the capsule.
Display	LCD Display	Process value (5-digit, up to 4 different process values) Unit display (6-digit), Bar graph, Alarm message, NE107 status is displayed
	Graphic Display	Graphical LCD display(128×80 pixels display) with a color backlight, Process value (5-digit, up to 4 different process values), Unit display (6-digit), Bar graph, Alarm message, NE107 status is displayed, Display rotation selection Display language: English, French, German, Italian, Spanish, Portuguese, Russian, Chinese, Japanese
Local Parameter Setting	LCD Display	Loop test (test output), Tag number setting, Measurement range unit setting, Lower limit (LRV) and Upper limit (URV) of measurement range, Damping time constant setting, Output mode (proportional/square root) setting, Display content selection, Range resetting using actual pressure (LRV/URV), Burnout direction setting, setting of write-protect, Display of device information.
	Graphic Display	Loop test (test output), Tag number setting, Measurement range unit setting, Lower limit (LRV) and Upper limit (URV) of measurement range, Damping time constant setting, Output mode (proportional/square root) setting, Display content selection, Range resetting using actual pressure (LRV/URV), Burnout direction setting, setting of write-protect, Display of device information, Multiple display selection, Backlight color selection, Display rotation selection, language selection, LCD contrast selection
Diagnostics function		The following items are detected and output current value, communication, and indicator. Sensor error, Module error, Process error (out of equipment specification range, out of measurement range), Parameter setting value error, High/Low alarm for measured pressure.
Advanced functions		Heat trace monitoring: The change of the process connection temperature calculated by using the two temperature sensors built enables to detect the heat trace breakage or the abnormal temperature due to the failure.
		Impulse line blockage detection: The impulse line condition can be calculated and detected by extracting the fluctuation component from the static pressure signal.

• Display and interface code: E or N

• Display and interface code: F



F02E.ai

Figure 2. Relationship Between Power Supply Voltage and External Load Resistance

**PROFINET Communication:**

Item		Description
Communication protocol		Ethernet-APL Port Profile Specification Ver 1.1 (IEEE 802.3cg-2019) PROFINET Ver 2.45 (IEC 61158 Type 10, IEC 61784-2 CPF3) PROFIBUS PA Ver 4.0
Output signal		Digital communication signal based on PROFINET
Output mode		LINEAR/Signal Characterizer (Max 30-segment)
Communication Requirements	Supply Voltage	9 to 15 V DC for intrinsically safe type.
	Load	N/A
Response time (Typical)		150 ms
Measurement period	Gauge Pressure	35 ms
	Capsule Temperature	2 s
	Main module Temperature	1 s
Function Block		AI × 3, Totalizer × 1
Output signal at Failure Alarm		Communication, Indicator (Support for NAMUR NE107)
External Zero Adjustment		External zero is continuously adjustable with 0.01% incremental resolution of span.
Zero Adjustment Limits		Zero can be fully elevated or suppressed, within the lower and upper range limits of the capsule.
Display	LCD Display	Process value (5-digit, up to 4 different process values) Unit display (6-digit), Bar graph, Alarm message, NE107 status is displayed
	Graphic Display	Graphical LCD display (128×80 pixels display) with a color backlight, Process value (5-digit, up to 4 different process values), Unit display (6-digit), Bar graph, Alarm message, NE107 status is displayed, Display rotation selection Display language: English, French, German, Italian, Spanish, Portuguese, Russian, Chinese, Japanese
Local Parameter Setting	LCD Display	Display of device information (VendorID, DeviceID, Station name, IP address)
	Graphic Display	Display of device information (VendorID, DeviceID, Station name, IP address) Setting can be changed. Multiple display selection, Backlight color selection, Display rotation selection, language selection, LCD contrast selection
Diagnostics function		The following items are detected and communication, and indicator: Sensor error, Module error, Process error (out of equipment specification range, out of measurement range), Parameter setting value error.
Advanced functions		Heat trace monitoring: The change of the process connection temperature calculated by using the two temperature sensors built enables to detect the heat trace breakage or the abnormal temperature due to the failure.
		Impulse line blockage detection: The impulse line condition can be calculated and detected by extracting the fluctuation component from the static pressure signal.

□ **Conformity Standards**

**Degrees of protection:**

IP66/IP67/IP68 (maximum depth of 20 meters up to 168 hours),  
Type 4X

**Explosion Protected type:**

Canada, US, ATEX, IECEx  
See MODEL AND SUFFIX CODES.

**EMC Conformity Standards:**

EN 61326-1: Class A, Table 2\*1  
EN 61326-2-3

\*1: Tested in accordance with IEC 61000-4 series, as specified in EN 61326-1

**European Pressure Equipment Directive 2014/68/EU:**

With option code /PE3 (for D capsule)

Category III, Module H, Type of Equipment: Pressure Accessory-Vessel, Type of Fluid: Liquid and Gas, Group of Fluid: 1 and 2

Sound Engineering Practice (for A, B and C capsules)

**Environmental regulations:**

- EU RoHS Directive: EN IEC 63000
- REACH Statement: Regulation EC 1907/2006
- China RoHS: GB 26572
- Toxic Substances Control Act: TSCA: US Toxic Substances Control Act (TSCA) Section 6(h)

**Safety Requirement Standards:**

EN61010-1

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

**SIL Certification:**

Compliant with conformity standard IEC 61508 (Functional Safety of Electrical/Electronic/Programmable Electronic Safety-related Systems).

Compliant with SIL 2. Compliant with SIL 3 if two instruments are used in a redundant configuration.

The safety data varies depending on the hardware/software revision.

Read the Safety Manual for details. (Document No.: T1 01C33A01-01ZN)

The Functional Safety Manual can be downloaded from our website.

URL: <https://www.yokogawa.com/solutions/products-platforms/field-instruments/>

**Marking:**

- CE marking
- RCM marking
- Morocco conformity mark
- cFMUS marking

Approval code	CE	RCM	Morocco conformity	cFMUS
-C□□, -F□□		✓	✓	✓
-KF1, -KS1, -KU1, -KNN	✓	✓	✓	
-SF1, -SS1, -SU1		✓	✓	
-VU1	✓	✓	✓	✓
-NNN		✓	✓	

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□ **Normal Operating Condition**

**Supply Voltage:**

Refer to “Communication Specifications”.

**Ambient Temperature Limits:**

-40 to 85°C (-40 to 185°F)

-30 to 80°C (-22 to 176°F) with Display

In case of explosion protected types, limits may be different.

**Process Temperature Limits:**

-40 to 120°C

In case of explosion protected types, limits may be different.

**Ambient Humidity Limits:**

0 to 100% RH

**Vibration Resistance:**

0.21 mm (10-60 Hz), 3 G (60-2000 Hz)

**Shock Resistance:**

50 G 11 ms (de-energized, with half-sine wave pulse in three directions)

**Noise Resistance:**

EN61326, NAMUR NE21

**Grounding:**

Class-C grounding (Ground resistance 10Ω or less)

□ **Physical Specifications**

**Electrical connection:**

Refer to “MODEL AND SUFFIX CODES.”

**Process connections:**

Refer to “MODEL AND SUFFIX CODES.”

**Material:**

- Wetted Parts Materials: Refer to “MODEL AND SUFFIX CODES.”
- Housing: Low copper cast aluminum alloy
- Pipe: Polypropylene
- Name plate and tag: 316 SST
- Cover O-rings: Buna-N,
- Fill fluid: Silicone, Fluorinated oil (optional)

**Coating of housing:**

[for aluminum housing]

Polyester resin powder coating Mint-green paint (RAL190 30 15)

[for option code /P□ or /X2]

Epoxy and polyurethane resin solvent coating

**Mounting:**

2 inch pipe mounting

**Weight:**

Capsule A, B and C: 1.4 kg (3.1 lb)\*

Capsule D: 1.6 kg (3.5 lb)\*

\*: Without integral indicator and mounting bracket.

## ■ MODEL AND SUFFIX CODES

### ● EJX510S and EJX530S

Model	SuffixCode	Description
EJX510S EJX530S		In-line Gauge Pressure Transmitter In-line Abusorute Pressure Transmitter
Approval	-CF1*13	Canada explosion-proof*1*2
	-CS1	Canada intrinsically safe*2
	-CU1*13	Canada explosion-proof and intrinsically safe*1*2
	-CNN	Canada safety requirement*1*2
	-FF1*13	USA explosion-proof*1*2
	-FS1	USA intrinsically safe*2
	-FU1*13	USA explosion-proof and intrinsically safe*1*2
	-FNN	USA safety requirement*1*2
	-KF1*13	ATEX flameproof*1*2
	-KS1	ATEX intrinsically safe*2
	-KU1*13	ATEX flameproof and intrinsically safe*1*2
	-KNN	CE marking*1
	-SF1*13	IECEX flameproof approval*1*2
	-SS1	IECEX intrinsically safe*2
	-SU1*13	IECEX flameproof and intrinsically safe*1*2
	-VU1*13	IECEX, ATEX, USA and Canada explosion-proof, intrinsically safe combination*1*2
-NNN	None*1	
Output signal	-J	4 to 20 mA DC with digital communication (HART protocol)
	-T	PROFINET over Ethernet-APL*3
Housing	1	Material: Cast-aluminum alloy
Electrical Connection	0	G1/2 female, one electrical connection without blind plugs
	2	1/2NPT female, two electrical connections without blind plugs
	4	M20 female, two electrical connections without blind plugs
	5	G1/2 female, two electrical connections with a blind plug
	7	1/2NPT female, two electrical connections with a blind plug
	9	M20 female, two electrical connections with a blind plug
	A	G1/2 female, two electrical connections with a 316 SST blind plug
	C	1/2NPT female, two electrical connections with a 316 SST blind plug
	D	M20 female, two electrical connections with a 316 SST blind plug
	F	G1/2 female, two electrical connections without blind plugs
P	M20 female and 1/2NPT female dual connection without blind plugs	
Display and interface	E	LCD display
	F	Graphic display*12
	N	Without display
Capsule range	-A	200 kPa / 29 psi / 2 bar / 2 kgf/cm <sup>2</sup>
	-B	2 MPa / 290 psi
	-C	10 MPa / 1450 psi
	-D	70 MPa / 10150 psi
Wetted Parts Material*4	S	Process connector: 316L SST equiv*5, Diaphragm: Hastelloy C-276*6, Others: 316L SST
	H	Process Connector: Hastelloy C-276 equiv, Diaphragm: Hastelloy C-276*6, Others: Hastelloy C-276 equiv*6
	F	Process Connector: 316L SST equiv*5, Diaphragm: Gold-plated/Hastelloy C-276*6, Others: 316L SST
Fill fluid	S	Silicone oil (EJX530S: Capsule range code: A, B, and C)
	D	Fluorinated oil*7 Operating temperature -20 to 80°C (-4 to 176°F) (EJX530S)
	B	Silicone oil for high-pressure (EJX510S/530S: Capsule range code: D)
	H	Silicone oil for absolute (EJX510S: Capsule range code: A, B, and C)
	F	Fluorinated oil for absolute*7 Operating temperature -20 to 80°C (-4 to 176°F)(EJX510S)

Model	SuffixCode	Description
Process Connection	<b>2</b>	Rc1/2 female
	<b>4</b>	1/2NPT female
	<b>6</b>	R1/2 male
	<b>7</b>	1/2NPT male
	<b>8</b>	G1/2 DIN 16 288 male* <sup>8</sup>
	<b>9</b>	M20 x 1.5 DIN 16 288 male* <sup>8</sup>
	<b>A</b>	G1/2 male* <sup>9</sup>
	<b>W</b>	Welding joint for diaphragm seal unit* <sup>10</sup>
—	<b>N</b>	Always N
—	<b>0</b>	Always 0
Mounting Bracket	<b>-L</b>	316 SST 2-inch pipe mounting
	<b>-N</b>	None
—	<b>N</b>	Always N
Optional codes		/□ Optional specifications

- \*1: Not applicable for output signal code T.
- \*2: Not applicable for electrical connection code 0, 5, 9, A and F.
- \*3: Not applicable for display and interface code F and N.  
The approval code -FS1,-KS1 or -SS1 must be selected.
- \*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: Intergranular corrosion test passed according to ASTM A262 Practice E.
- \*6: Hastelloy C-276 or Hastelloy C276 equivalent.
- \*7: Oil-prohibited use (degreasing cleaning) or dehydrating treatment, select the additional specification code for oil-prohibited use (/K01, /K41) or oil-prohibited use with dehydrating treatment (/K05, /K45).
- \*8: Not applicable when combining capsule range code D and wetted part material code H.
- \*9: Not applicable for wetted parts material code H.
- \*10: Applicable for capsule range code A and B; wetted parts material code S and F; fill fluid code S, D, H and F.
- \*11: For hygienic type refer to GS 01C33F20-01EN
- \*12: Not applicable for approval code -CS1,-CU1,-FS1,-FU1,-KS1,-KU1,-SS1,-SU1 and -VU1
- \*13: Applicable for EJX510S

## ■ OPTIONAL SPECIFICATIONS / Approval for Explosion-proof

Item	Description		Code
Flameproof packing adapter*1*2	Electrical connection: G1/2 female, Applicable cable outline: Ø8 to Ø12	1 pcs	/V11
		2 pcs	/V12

## ■ OPTIONAL SPECIFICATIONS / Hardware

Item	Description	Code	
High Accuracy type*8	Reference accuracy: ±0.025% of Span	/HAC	
Additional blind plug*3*4	Additional blind plug is attached to the conduit connection on both sides for storing transmitter	/PP	
Painting	Color change	Color change, amplifier cover; Black	/P1
		Color change, amplifier cover; Jade green	/P2
		Color change, amplifier cover; Metallic silver	/P7
		Color change, amplifier and terminal covers Munsell code; 7.5 R4/14, Red	/PR
	Coating Change	High anti-corrosion coating: Housing, amplifier and terminal covers*5	/X2
Surge protective device	UL1449, UL497B compliant device (SPD). • 3 kA crest (8 x 20 microseconds) • 6 kV crest (1.2 x 50 microseconds) Exchangeable	/A	
Oil-prohibited use	Degrease cleansing treatment	/K01	
	Degrease cleansing treatment with certificates	/K41	
Oil-prohibited use with dehydrating treatment	Degrease cleansing and dehydrating treatment	/K05	
	Degrease cleansing and dehydrating treatment with certificates	/K45	
Wired tag plate	316 SST tag plate wired onto transmitter: up to 22 characters	/N4	
Nameplate Indication	Range field	Blank the calibration range on the nameplate	/N5
	MWP unit Maximum Pressure Limits (MWP) unit*17	psi	/D1
		bar	/D3
		kgf/cm <sup>2</sup>	/D4
High-humidity option*7	For high-humidity environments	/HE	
Functional safety*16	Without functional safety SIL 2	/SLN	

## ■ OPTIONAL SPECIFICATIONS / System

Item	Description	Code	Output signal code		
			J	T	
Failure operation	Analog output levels compliant with NAMUR NE43 (Output signal limits: 3.8 mA to 20.5 mA Output status)	/C2	○		
Date configuration at factory	Parameter Setting	For HART communication type: Software damping, Descriptor and Message	/CA	○	
		For HART communication type: Disabling external zero adjustment, Software damping, Descriptor and Message	/CJ	○	
		For PROFINET communication type: Software damping, Descriptor and Memo	/CB		○
		For PROFINET communication type: Disabling external zero adjustment, Software damping, Descriptor and Memo	/CK		○
	Display Setting	Two engineering values are alternately displayed on the LCD.*9	/CF	○	○

## OPTIONAL SPECIFICATIONS / Standards and Regulations

Item	Description	Code
European Pressure Equipment Directive*10	PED 2014/68/EU Category: III, Module: H, Type of Equipment: Pressure Accessory-Vessel, Type of Fluid: Liquid and Gas, Group of Fluid: 1 and 2	/PE3

## OPTIONAL SPECIFICATIONS / Documents

Item	Description	Code	
Material certificate	Process connector	/M15	
	Process connector, diaphragm, capsule body	/MA2	
Material certificate list*4*15	Material certificate list	/YC	
Parameter list*4*12	List of setting and adjustment parameters	/YP	
Pressure test/ Leak test certificate*6	A-Capsule Test pressure: 200 kPa (800 inH <sub>2</sub> O)	Nitrogen Gas*13 or Water*14 Retention time: one minute	/T05
	B-Capsule Test pressure: 2 MPa (290 psi)		/T06
	C-Capsule Test pressure: 10 MPa (1450 psi)		/T07
	D-Capsule Test pressure: 70 MPa (10150 psi)		/T15
Pressure test/ Leak test certificate*4*15	Submit pressure test certificate and leak test certificate separately. Test pressure: According to the test pressure on the Pressure and Leak Test certificate.	Pressure test: Test Fluid: Water*14 Test time: ten minutes  Leakage test: Test Fluid: Nitrogen Gas*13 or Water*14 Test time: ten minutes	/YT
Calibration certificate*4	Yokogawa measuring instruments control system	/L4	
	Yokogawa measuring instruments control system, and primary standards list	/L5	
	Yokogawa measuring instruments control system, primary standards list, and calibration equipments list	/L6	
	Yokogawa measuring instruments control system, primary standards list, calibration equipments list and their test cert.	/L9	

## OPTIONAL SPECIFICATIONS / Warranty

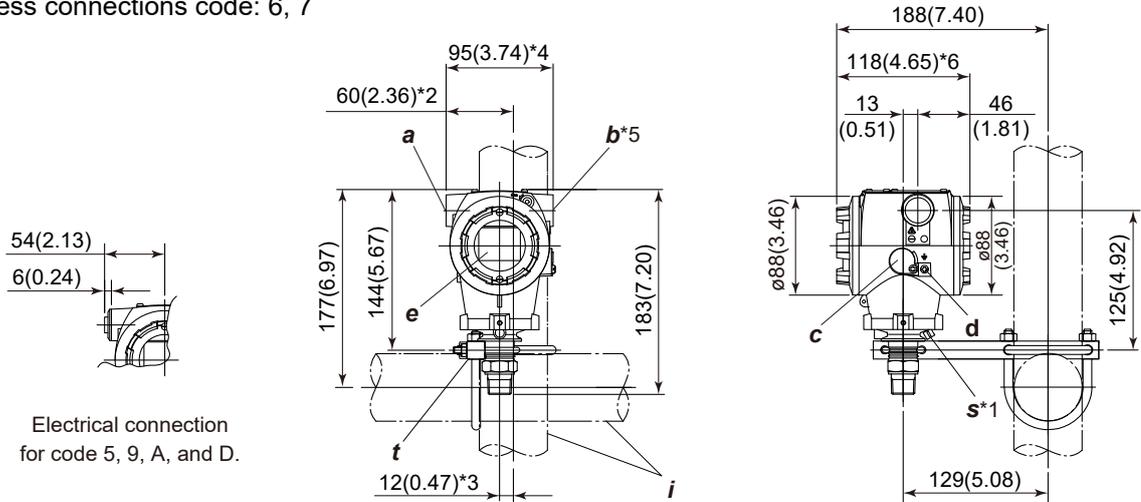
Item	Description	Code
Warranty	3-years warranty	/WP3
	5-years warranty	/WP5

- \*1: Applicable for approval code -KNN and -NNN.
- \*2: Applicable for electrical connection code 0, 5, A and F.
- \*3: Applicable for electrical connection code 5, 7, 9, A, C and D. Not applicable for approval code -CF1,-CU1,-FF1,-FU1,-KF1,-KU1,-SF1,-SU1 and -VU1.
- \*4: Not applicable for process connection code W.
- \*5: Not applicable with color change option.
- \*6: The unit on the certificate is always Pa unit regardless of selection of option code D1, D3 or D4.
- \*7: Not applicable with flameproof packing adapter option code /V11 and /V12.
- \*8: Refer to "PERFORMANCE SPECIFICATIONS." Applicable for EJX530S. Not applicable for combinations of capsule range code A, and wetted parts material code H.  
When the specified range values for A capsule include negative value, the accuracy shall be the standard accuracy, even if /HAC is specified.
- \*9: Not applicable for display and interface code N.
- \*10: Applicable for capsule range code D and process connection code 4, 6, 7, 8, 9 and A. If compliance with category III is needed, specify this option code.
- \*11: Applicable for material certificate option /M□□.
- \*12: Applicable for output signal code J.
- \*13: Dry nitrogen gas is used for oil-prohibited use (option codes /K01, /K05, /K41 and /K45).
- \*14: Pure water is used for oil-prohibited use (option codes /K01, /K05, /K41 and /K45).
- \*15: Applicable for pressure test/leak test certificate code /T□□.
- \*16: Required if output signal code T is selected.
- \*17: The MWP (maximum working pressure) unit indicated on the housing nameplate is displayed in the unit specified by option codes D1, D3, and D4.

**■ DIMENSIONS**

Unit: mm (approx.inch)

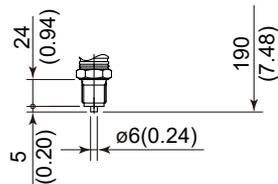
- Process connections code: 6, 7



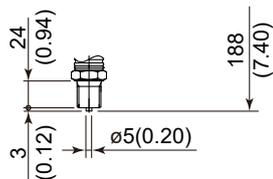
- Process connections code: 2, 4



- Process connections code: 8, 9



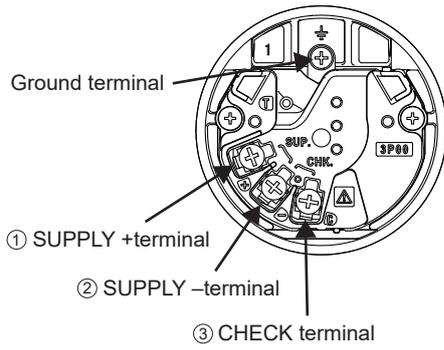
- Process connections code: A



<b>a</b>	External indicator Conduit connection (optional)	<b>d</b>	Ground terminal	<b>s</b>	Open to atmosphere
<b>b</b>	Conduit connection	<b>e</b>	Display (optional)	<b>t</b>	Mounting bracket
<b>c</b>	Zero adjustment	<b>i</b>	2-inch pipe (O.D. 60.5 mm)		

- \*1: Only for EJX530S, Capsule range code: A, B and C.
- \*2: 58 mm (2.28 inch) for capsule range code: D.
- \*3: 11 mm (0.43 inch) for capsule range code: D.
- \*4: In case of electrical connection code 7 or C is specified, a blind plug is protruded by up to 8 mm (0.31 inch) from conduit connection.
- \*5: In case of optional code /PP specified, a blind plug is attached to conduit connection on both sides.
- \*6: In case of Display and interface code N specified, it is 113 mm (4.45 inch).

● Terminal Configuration



● Terminal Wiring

SUPPLY	+	①	] Power supply and output terminals
	-	②	
CHECK	+	③	] External indicator (ammeter) terminals *1
	-	②	
⏏			Ground terminal

\*1: When using an external indicator or check meter, the internal resistance must be 10Ω or less. Not available for PROFINET communication type.

**< Ordering Information >**

1. Model, suffix codes, and option codes
2. Calibration range, unit and output mode
  - 1) Calibration range can be specified with range value specifications up to 5 digits (excluding any decimal point) for low or high range limits within the range of -99999 to 99999. When reverse range is designated, specify Lower Range Value (LRV) as greater than Upper Range Value (URV)
  - 2) Specify only one unit from the table, 'Factory Settings' when shipped.
  - 3) Specify output mode from LINEAR or SQUARE ROOT. When SQUARE ROOT is selected, the smaller value of the range limit must be zero.
3. Display scale, unit and display mode (for transmitters equipped with Display only)
 

Specify either 0 to 100 % or unit scale and 'Range and Unit' for units scale: Scale range can be specified with range limit specifications up to 5 digits (excluding any decimal point) for low or high range limits within the range of -99999 to 99999. The unit display consists of 6-digit, therefore, if the specified unit is longer than 7 characters excluding '/', the first 6 characters will be displayed on the unit display.

Select either LINEAR or SQRT for the display mode.

For PROFINET communication, select from the display unit options and select LINEAR when the output mode is LINEAR, and select SQRT when the output mode is SQUARE ROOT.

When SQUARE ROOT is selected for display mode, the smaller value of the scale limit must be zero.
4. TAG NO (if required)
5. Parameter Setting (Optional code /CB, /CA, /CK, /CJ)
  - Software damping in second (0.00 to 100.00)
  - Descriptor (up to 16 characters)
  - Message (Optional code: /CA and /CJ): up to 32 characters
  - Memo (Optional code /CB and /CK) up to 32 character
6. Burnout direction setting (for HART protocol) High or Low
7. Network setting (for PROFINET protocol)
 

Specify the IP ADDRESS, SUBNET MASK, DEFAULT GATEWAY, and STATION NAME.

If you specify it, please specify a combination of settings that can be communicated.

**< Factory Setting >**

Tag number. (*1)	As specified in order: up to 22 characters (SOFTWARE TAG: up to 32 characters)
Software damping	Default 2.00 seconds or as specified in order
Calibration range lower range value	As specified in order
Calibration range upper range value	As specified in order
Calibration range units	[EJX530S] Selected from mmH <sub>2</sub> O, mmH <sub>2</sub> O(68°F), mmAq(*2), mmWG(*2), mmHg, Pa, hPa, 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. (Only one unit can be specified) [EJX510S] Torr, Pa abs, hPa abs, kPa abs, MPa abs, mbar abs, bar abs, kgf/cm <sup>2</sup> abs, mmH <sub>2</sub> O abs, mmH <sub>2</sub> O abs(68°F), mmHg abs, inH <sub>2</sub> O abs, inH <sub>2</sub> O abs(68°F), inHg abs, ftH <sub>2</sub> O abs, ftH <sub>2</sub> O abs(68°F), psia, atm.
Display setting	Designated value specified in order. (% , or user scaled value.)
Burnout (for HART protocol)	'High' unless otherwise specified in order
Network setting (for PROFINET protocol)	Unless otherwise specified, - IP ADDRESS: 192.168.1.210 - SUBNET MASK: 255.255.255.0 - DEFAULT GATEWAY: 0.0.0.0 - STATION NAME: pressure-transmitter-ejx-s (*3)

\*1: The specified characters will be engraved on the tag plate and written into the main unit (communication parameters) before shipping.  
If you want to specify characters different from the tag plate, please specify it separately in the software tag.  
Available characters include uppercase and lowercase letters, numbers, spaces, and the following symbols.

!	#	(	)	+	-	.	/	:	=	_
---	---	---	---	---	---	---	---	---	---	---

For HART communication type, the tag parameter will be written using the first 8 characters. If lowercase letters are included, they will be converted to uppercase.

\*2: Not available for HART protocol type.

\*3: The STATION NAME can be a combination of lowercase letters, numbers, and hyphens, up to 40 characters long.

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**< Related Instruments >**

FieldMate Versatile Device Management Wizard: Refer to GS 01R01A01-01E.

**< Reference >**

1. FieldMate; Trademark of Yokogawa Electric Corporation.
2. Hastelloy; Trademark of Haynes International Inc.
3. HART®: Registered trademark of the FieldComm Group.

Other company names and product names used in this material are registered trademarks or trademarks of their respective owners.

**< Information on EU WEEE Directive >**

EU WEEE (Waste Electrical and Electronic Equipment) Directive is only valid in the EU.

This instrument is intended to be sold and used only as a part of equipment which is excluded from WEEE Directive, such as large-scale stationary industrial tools, a large-scale fixed installation and so on, and, therefore, subjected to the exclusion from the scope of the WEEE Directive. The instrument should be disposed of in accordance with local and national legislation/regulations.