

General Specifications

GS 01C33F20-01EN

OpreX™ Pressure Transmitter EJX530S Gauge Pressure Transmitter for Hygienic

OVERVIEW

The hygienic pressure transmitter EJX530S is a gauge pressure transmitter with an ISO standard process connection. EJX530S features single crystal silicon resonant sensor and outputs 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 ² (/D4)	
		Range	Span	Range	Span	Range	Span	Range	Span
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

* The pressure resistance of the clamps supplied with EJX530S wetted material code 1 with the optional code /W31 or /W51 is 1 MPa (145 psi). For use in an environment where the applied pressure exceeds 1 MPa (145 psi), a clamp that can be used at 1 MPa (145 psi) or higher must be provided separately.

Pressure limits

Model	Capsule range code	Maximum Over Pressure	Burst Pressure Limits
EJX530S	A	4 MPa (580 psi)	30 MPa
	B	4 MPa (580 psi)	30 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.

Capsule range code	Reference Accuracy	
	Span $\geq$ X	Span<X
A, B	$\pm 0.2\%$ of Span	$\pm(0.05 + 0.015\text{URL}/\text{span})\%$ of Span

Capsule range code	A	B
X	20 kPa (2.9 psi)	0.2 MPa (29 psi)
URL (Upper range limit)	200 kPa (29 psi)	2 MPa (290 psi)

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

$\pm(0.28\%$ of Span + 0.28% of URL)

Power Supply Effects: For HART Communication

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

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 inH₂O) which can be corrected by the zero adjustment.

Working Pressure:

- Fill fluid Silicon oil (Code: B): 2.7 kPa abs to upper limit of measuring range.
Atmospheric pressure or lower, see Figure 1
- Fill fluid Propylene Glycol (Code: P): Atmospheric pressure to upper limit of measurement range

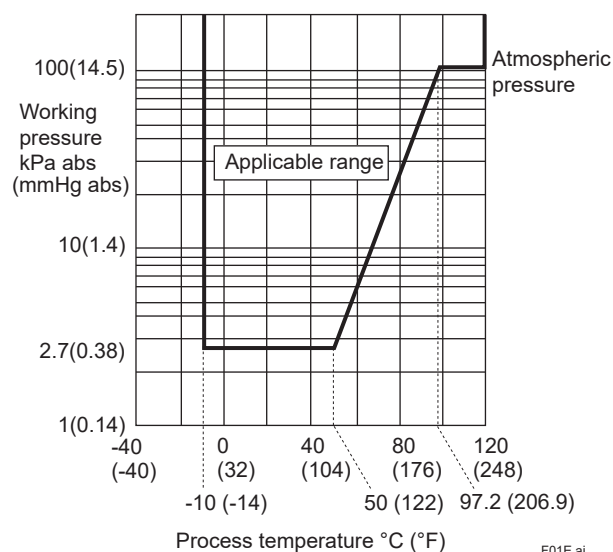


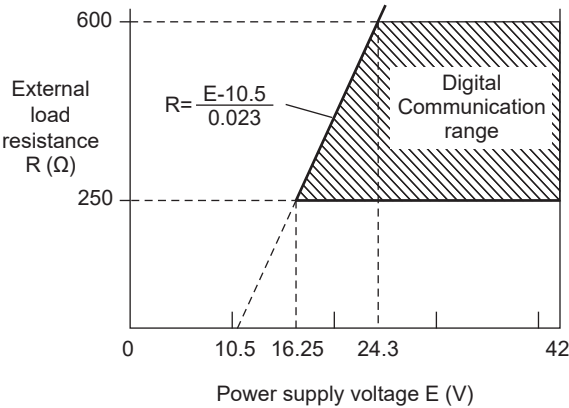
Figure 1. Working Pressure and Process Temperature [EJX530S Hygienic Silicone oil type(code: B)]

□ Communication Specifications

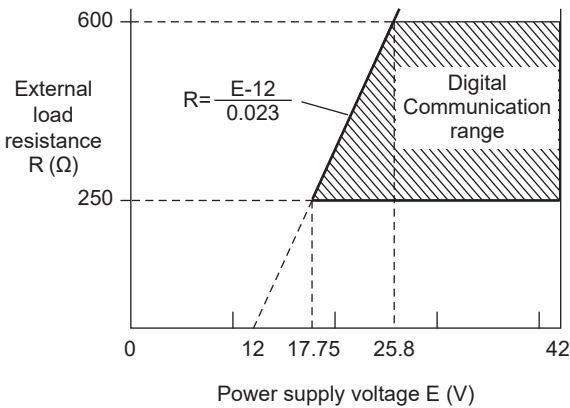
HART Communication:

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%) Output signal limits: 3.6 mA to 21.6 mA Output status Burnout Up-scale: 115% (22.4 mA DC) or more Factory default setting Down-scale: -5% (3.2 mA DC) or less With option code /C2 Output signal limits: 3.8 mA to 20.5 mA Output status Burnout Up-scale: 115% (22.4 mA DC) or more Factory default setting Down-scale: -5% (3.2 mA DC) or less
Output mode		Linear/Square root/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 1
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 (Linear/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 (Linear/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 (Based on 10BASE-T1L of IEEE 802.3) PROFINET Ver 2.45 (IEC 61158 Type 10, IEC 61784-2 CPF3) PA Profile 4.0
Output signal		Digital communication signal based on PROFINET
Output mode		Linear/Square root/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
Refer to "EXPLOSION PROTECTED TYPE" for details.

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:

Sound Engineering Practice

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.: TI 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 marking
- cFMUS marking

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

□ Normal Operating Condition

Supply Voltage:

Refer to "Communication Specifications."

Ambient Temperature Limits:

-10 to 60°C (14 to 140°F)

In case of explosion protected types, refer to "EXPLOSION PROTECTED TYPE."

Process Temperature Limits:

-10 to 120°C

In case of explosion protected types, refer to "EXPLOSION PROTECTED TYPE."

Temperature during cleaning

Fill fluid: silicone oil: 150°C(302°F), Until 60 minutes

Fill fluid: Propylene Glycol: 150°C(302°F), Until 30 minutes

Ambient Humidity Limits:

0 to 100 % RH

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:

- Housing: Low copper cast aluminum alloy
- Pipe: Polypropylene
- Name plate and tag: 316 SST
- Cover O-rings: Buna-N
- Transmitter pressure receiving part: Diaphragm: 316L SST, Other: 316 SST
- Clamp section (Hygienic type optional): Clamp: 316 SST
Gasket: EPDM(Ethylene-propylene) rubber

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

Weight:

For Hygienic

1.5 kg (3.3 lb): ISO38 Clamp connection type

1.7 kg (3.7 lb): ISO51 Clamp connection type

2.1 kg (4.6 lb): ISO51 Union connection type

■ MODEL AND SUFFIX CODES

● EJX530S For Hygienic

Model	SuffixCode	Description
EJX530S		In-line Gauge Pressure Transmitter (for hygienic)
Approval	-CS1	Canada intrinsically safe(*1)(*2)
	-CNN	Canada safety requirement(*1)(*2)
	-FS1	USA intrinsically safe(*2)
	-FNN	USA safety requirement(*1)(*2)
	-KS1	ATEX intrinsically safe(*2)
	-KNN	CE marking(*1)
	-SS1	IECEX intrinsically safe(*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(*9)
	N	Without display
Capsule range	-A	200 kPa / 29 psi
	-B	2 MPa / 290 psi
Wetted Parts Material(*4)	1	W-Clamp connection type for Hygienic, Diaphragm: 316L SST, Others: 316 SST
	2	Union connection type for Hygienic, Diaphragm: 316L SST, Others: 316 SST
Fill fluid	B	Silicone oil
	P	Propylene Glycol(*7)
Process Connection	C	For Hygienic: ISO38(*8)
	E	For Hygienic: ISO51
—	N	Always N
—	0	Always 0
Mounting Bracket	-N	None
—	N	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:

*6:

*7: When the fill fluid is propylene glycol, the operating pressure must be atmospheric pressure or higher (negative pressure is not allowed).

*8: It only can be combined with W-clamp connection type (wetted parts material code 1).

*9: Not applicable for approval code -CS1, -CU1, -FS1, -FU1, -KS1, -KU1, -SS1, -SU1 and -VU1.

■ 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
Additional blind plug(*3)	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; Metaric 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(*4)	/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(*9)	
	psi	/D1
	bar	/D3
	kgf/cm ²	/D4
High-humidity option(*11)	For high-humidity environments	/HE
Clamp and gasket	ISO 38 clamp with a gasket (for Flash type)	/W51
	ISO 51 clamp with a gasket (for Flash type)	/W31
	Gasket for ISO 51 union nut	/W41
Functional safety(*10)	Without functional safety SIL 2	/SLN

■ OPTIONAL SPECIFICATIONS / Software

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.(*6)	/CF	○	○

■ OPTIONAL SPECIFICATIONS / Documents

Item	Description	Code
Material certificate	Block	/MPW
	Block, diaphragm	/MQW
Material certificate list(*7)	Material certificate list	/YC
Parameter list(*8)	List of setting and adjustment parameters	/YP
Calibration certificate	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
Fill fluid certificate	Fill fluid certificate	/YF

■ 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.

*4: Not applicable with color change option.

*5: Not applicable with flameproof packing adapter option code /V11 and /V12.

*6: Not applicable for display and interface code N.

*7: Not applicable with material certificate option /M□□.

*8: Applicable for output signal code J.

*9: The MWP (maximum working pressure) unit indicated on the housing nameplate is displayed in the unit specified by option codes /D1, /D3 and /D4.

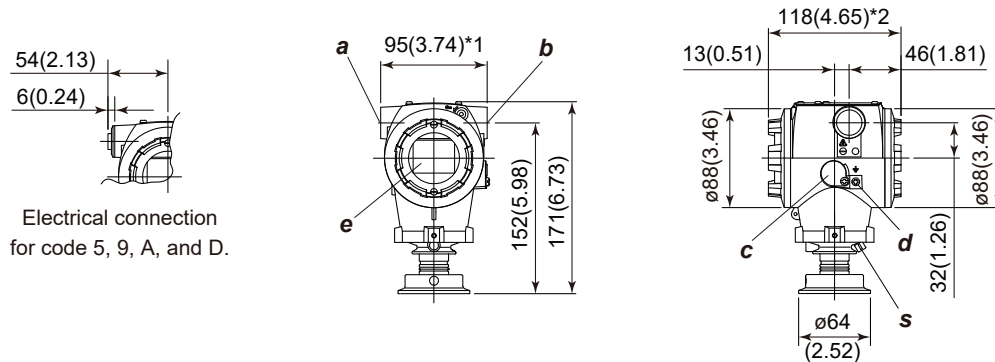
*10: Required if output signal code T is selected.

*11: Not applicable with flameproof packing adapter option code /V11 and /V12.

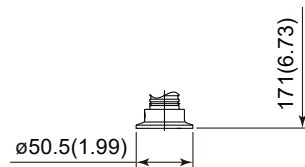
DIMENSIONS

Unit: mm (approx.inch)

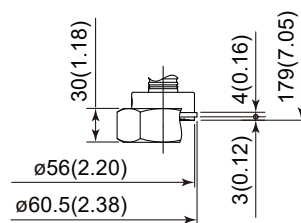
- ISO51 W-Clamp connection type (Wetted Parts Material Code: 1 and Process connections code: E)



- ISO38 W-Clamp connection type (Wetted Parts Material Code: 1 and Process connections code: C)



- ISO51 Union connection type (Wetted Parts Material Code: 2 and Process connections code: E)

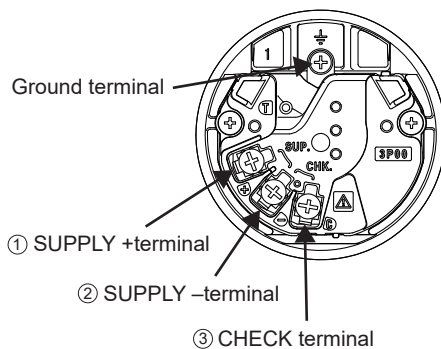


a	External indicator Conduit connection (optional)	c	Zero adjustment	e	Display (optional)
b	Conduit connection	d	Ground terminal	s	Open to atmosphere

*1: 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.

*2: 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.

■ EXPLOSION PROTECTED TYPE

Item	Code	Description																		
Canadian Standards Association (CSA)	-CS1	Canada Intrinsically safe																		
		Output signal Code:J HART	Intrinsically safe approval Certificate: FM25CA0015X																	
			Applicable standard: CSA C22.2 No.0 C22.2 No. 94.2, C22.2 No.213, C22.2 No. 60079-0 CSA-C22.2 No. 60079-11, CSA-C22.2 No. 61010-1-12, CSA C22.2 No. 60079-40																	
			Marking: IS Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1; Temperature Code: T5...T4 Ex ia IIC T5...T4 Ga																	
			Ambient and Process temperature																	
			<table><tr><th>Type</th><th>output</th><th>Temperature class</th><th>Ambient temperature</th><th>Process temperature</th></tr><tr><td rowspan="2">Gas</td><td rowspan="2">-J</td><td>T5</td><td>-55°C≤Ta≤+40°C</td><td>Tp≤+95°C</td></tr><tr><td>T4</td><td>-55°C≤Ta≤+60°C</td><td>Tp≤+120°C</td></tr></table>				Type	output	Temperature class	Ambient temperature	Process temperature	Gas	-J	T5	-55°C≤Ta≤+40°C	Tp≤+95°C	T4	-55°C≤Ta≤+60°C	Tp≤+120°C	
			Type	output	Temperature class	Ambient temperature	Process temperature													
			Gas	-J	T5	-55°C≤Ta≤+40°C	Tp≤+95°C													
					T4	-55°C≤Ta≤+60°C	Tp≤+120°C													
			<table><tr><th>Type</th><th>output</th><th>Maximum surface temperature</th><th>Ambient temperature</th><th>Process temperature</th></tr><tr><td rowspan="3">Dust</td><td rowspan="3">-</td><td>T85°C</td><td rowspan="3">-40°C≤Ta≤+60°C</td><td>Tp≤+80°C</td></tr><tr><td>T100°C</td><td>Tp≤+95°C</td></tr><tr><td>T120°C</td><td>Tp≤+115°C</td></tr></table>				Type	output	Maximum surface temperature	Ambient temperature	Process temperature	Dust	-	T85°C	-40°C≤Ta≤+60°C	Tp≤+80°C	T100°C	Tp≤+95°C	T120°C	Tp≤+115°C
			Type	output	Maximum surface temperature	Ambient temperature	Process temperature													
			Dust	-	T85°C	-40°C≤Ta≤+60°C	Tp≤+80°C													
					T100°C		Tp≤+95°C													
					T120°C		Tp≤+115°C													
			Electrical parameter: Ui=30 V, Ii=200 mA, Pi=1.0 W, Ci=22 nF, Li=0 mH																	
Non-incendive approval Certificate: FM25CA0015X																				
Applicable standard: CSA C22.2 No.0 C22.2 No. 94.2, C22.2 No.213, C22.2 No. 60079-0 CSA-C22.2 No. 60079-11, CSA-C22.2 No. 61010-1-12, CSA C22.2 No. 60079-40																				
Marking: NIFW Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 1; Temperature Code: T6...T4 CL I Zone 2, Group IIC T6...T4																				
Ambient and Process temperature																				
<table><tr><th>Type</th><th>output</th><th>Temperature class</th><th>Ambient Temperature</th><th>Process Temperature</th></tr><tr><td rowspan="3">Gas Dust</td><td rowspan="3">-J</td><td>T6</td><td>-40°C≤Ta≤+53°C</td><td>-40°C≤Tp≤+80°C</td></tr><tr><td>T5</td><td>-40°C≤Ta≤+66°C</td><td>-40°C≤Tp≤+95°C</td></tr><tr><td>T4</td><td>-40°C≤Ta≤+80°C</td><td>-40°C≤Tp≤+130°C</td></tr></table>				Type	output	Temperature class	Ambient Temperature	Process Temperature	Gas Dust	-J	T6	-40°C≤Ta≤+53°C	-40°C≤Tp≤+80°C	T5	-40°C≤Ta≤+66°C	-40°C≤Tp≤+95°C	T4	-40°C≤Ta≤+80°C	-40°C≤Tp≤+130°C	
Type	output	Temperature class	Ambient Temperature	Process Temperature																
Gas Dust	-J	T6	-40°C≤Ta≤+53°C	-40°C≤Tp≤+80°C																
		T5	-40°C≤Ta≤+66°C	-40°C≤Tp≤+95°C																
		T4	-40°C≤Ta≤+80°C	-40°C≤Tp≤+130°C																
Electrical parameter Ui=42 V, Ci=22 nF, Li=0 mH																				

Item	Code	Description																																											
FM explosion protection (USA)	-FS1	USA intrinsically safe																																											
		Output signal Code: J HART	Intrinsically safe approval Certificate: FM25US0031X Applicable standard: FM 3600, FM 3610, FM 3611, FM 3810, ANSI/UL 60079-0, ANSI/UL 60079-11, UL 60079-47, ANSI/UL 61010-1, ANSI/UL 121201, ANSI/UL 122701, ANSI/UL 50E Marking: IS Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1; Temperature Code: T5...T4 CL I Zone 0, AEx ia IIC T5...T4 Ga Enclosure: Type 4X Ambient and Process temperature <table border="1"> <thead> <tr> <th>Type</th><th>output</th><th>Temperature class</th><th>Ambient temperature</th><th>Process temperature</th></tr> </thead> <tbody> <tr> <td rowspan="2">Gas</td><td rowspan="2">-J</td><td>T5</td><td>-55°C≤Ta≤+40°C</td><td>Tp≤+95°C</td></tr> <tr> <td>T4</td><td>-55°C≤Ta≤+60°C</td><td>Tp≤+120°C</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Type</th><th>output</th><th>Maximum surface temperature</th><th>Ambient temperature</th><th>Process temperature</th></tr> </thead> <tbody> <tr> <td rowspan="3">Dust</td><td rowspan="3">-</td><td>T85°C</td><td rowspan="3">-40°C≤Ta≤+60°C</td><td>Tp≤+80°C</td></tr> <tr> <td>T100°C</td><td>Tp≤+95°C</td></tr> <tr> <td>T120°C</td><td>Tp≤+115°C</td></tr> </tbody> </table> Electrical parameter: Ui=30 V, Ii=200 mA, Pi=1.0 W, Ci=22 nF, Li=0 mH Non-incendive approval Certificate: FM25US0031X Applicable standard: FM 3600, FM 3610, FM 3611, FM 3810, ANSI/UL 60079-0, ANSI/UL 60079-11, ANSI/UL 61010-1, ANSI/UL 121201, ANSI/UL 122701, ANSI/UL 50E Marking: NIFW Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 1; Temperature Code: T6...T4 CL I Zone 2, Group IIC T6...T4 Enclosure: Type 4X Ambient and Process temperature <table border="1"> <thead> <tr> <th>Type</th><th>output</th><th>Temperature class</th><th>Ambient Temperature</th><th>Process Temperature</th></tr> </thead> <tbody> <tr> <td rowspan="3">Gas Dust</td><td rowspan="3">-J</td><td>T6</td><td>-40°C≤Ta≤+53°C</td><td>-40°C≤Tp≤+80°C</td></tr> <tr> <td>T5</td><td>-40°C≤Ta≤+66°C</td><td>-40°C≤Ta≤+95°C</td></tr> <tr> <td>T4</td><td>-40°C≤Ta≤+80°C</td><td>-40°C≤Tp≤+130°C</td></tr> </tbody> </table> Electrical parameter: Ui=42 V, Ci=22 nF, Li=0 mH		Type	output	Temperature class	Ambient temperature	Process temperature	Gas	-J	T5	-55°C≤Ta≤+40°C	Tp≤+95°C	T4	-55°C≤Ta≤+60°C	Tp≤+120°C	Type	output	Maximum surface temperature	Ambient temperature	Process temperature	Dust	-	T85°C	-40°C≤Ta≤+60°C	Tp≤+80°C	T100°C	Tp≤+95°C	T120°C	Tp≤+115°C	Type	output	Temperature class	Ambient Temperature	Process Temperature	Gas Dust	-J	T6	-40°C≤Ta≤+53°C	-40°C≤Tp≤+80°C	T5	-40°C≤Ta≤+66°C	-40°C≤Ta≤+95°C	T4
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ATEX	-KS1	ATEX intrinsically safe																																						
		Output signal Code:J HART Intrinsically safe ia Certificate: FM25ATEX0009X Applicable standard: EN IEC 60079-0, EN 60079-11 Marking: II 1 G Ex ia IIC T5...T4 Ga, II 2 D Ex ia IIIC T85°C...T120°C Db, II 3 G Ex ic IIC T5...T4 Gc Ambient and Process temperature <table><thead><tr><th>Type</th><th>output</th><th>Temperature class</th><th>Ambient temperature</th><th>Process temperature</th></tr></thead><tbody><tr><td rowspan="2">Gas</td><td rowspan="2">~J</td><td>T5</td><td>-55°C≤Ta≤+40°C</td><td>Tp≤+95°C</td></tr><tr><td>T4</td><td>-55°C≤Ta≤+60°C</td><td>Tp≤+120°C</td></tr></tbody></table> <table><thead><tr><th>Type</th><th>output</th><th>Maximum surface temperature</th><th>Ambient temperature</th><th>Process temperature</th></tr></thead><tbody><tr><td rowspan="3">Dust</td><td rowspan="3">-</td><td>T85°C</td><td rowspan="3">-40°C≤Ta≤+60°C</td><td>Tp≤+80°C</td></tr><tr><td>T100°C</td><td>Tp≤+95°C</td></tr><tr><td>T120°C</td><td>Tp≤+115°C</td></tr></tbody></table> Electrical Parameter: Ui=30 V, Ii=200 mA, Pi=1.0 W, Ci=22 nF, Li=0 mH Intrinsically safe ic Declaration of conformity Applicable standard: EN IEC 60079-0, EN 60079-11 Marking: II 3 G Ex ic IIC T5...T4 Gc Ambient and Process temperature <table><thead><tr><th>Type</th><th>output</th><th>Temperature class</th><th>Ambient Temperature</th><th>Process Temperature</th></tr></thead><tbody><tr><td rowspan="2">Gas</td><td rowspan="2">~J</td><td>T5</td><td>-40°C≤Ta≤+40°C</td><td>Tp≤+95°C</td></tr><tr><td>T4</td><td>-40°C≤Ta≤+60°C</td><td>Tp≤+120°C</td></tr></tbody></table> Electrical Parameter: Ui=42 V, Ci=22 nF, Li=0 mH	Type	output	Temperature class	Ambient temperature	Process temperature	Gas	~J	T5	-55°C≤Ta≤+40°C	Tp≤+95°C	T4	-55°C≤Ta≤+60°C	Tp≤+120°C	Type	output	Maximum surface temperature	Ambient temperature	Process temperature	Dust	-	T85°C	-40°C≤Ta≤+60°C	Tp≤+80°C	T100°C	Tp≤+95°C	T120°C	Tp≤+115°C	Type	output	Temperature class	Ambient Temperature	Process Temperature	Gas	~J	T5	-40°C≤Ta≤+40°C	Tp≤+95°C	T4
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< 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. Display scale, unit and display mode (for transmitters equipped with integral indicator 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.
For PROFINET communication, the display unit is selected from the options.
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	Selected from mmH ₂ O, mmH ₂ O(68°F), mmAq(*2), mmWG(*2), mmHg, Pa, hPa, kPa, MPa, mbar, bar, gf/cm ² , kgf/cm ² , inH ₂ O, inH ₂ O(68°F), inHg, ftH ₂ O, ftH ₂ O(68°F) or psi. (Only one unit can be specified)
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.

< 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.