General Specifications

EJX510A and EJX530A
Absolute and Gauge Pressure Transmitter

GS 01C25F01-01E

[Style: S2]

The high performance absolute and gauge pressure transmitter EJX510A and EJX530A feature single crystal silicon resonant sensor and are suitable to measure liquid, gas, or steam pressure. EJX510A and EJX530A output a 4 to 20 mA DC signal corresponding to the measured pressure. It also features quick response, remote setup and monitoring via BRAIN or HART communications, diagnostics, and optional status output for pressure high/low alarm. The multi-sensing technology provides the advanced diagnostic function to detect such abnormalities as an impulse line blockage or heat trace breakage. FOUNDATION Fieldbus protocol type is also available.

All EJX series models in their standard configuration, with the exception of the Fieldbus type, are certified by TÜV as complying with SIL 2 for safety requirement.

■ STANDARD SPECIFICATIONS

Refer to GS 01C25T02-01E for Fieldbus communication type marked with "◇."

□ SPAN AND RANGE LIMITS

(For EJX510A, values are in absolute and lower range limits are 0.)

Measurement Span/Range		MPa	psi (/D1)	bar (/D3)	kgf/cm^2 (/D4)
A	Span	8 to 200 kPa	1.16 to 29	0.08 to 2	0.08 to 2
	Range	–100 to 200 kPa	–14.5 to 29	–1 to 2	–1 to 2
B	Span	0.04 to 2	5.8 to 290	0.4 to 20	0.4 to 20
	Range	–0.1 to 2	–14.5 to 290	–1 to 20	–1 to 20
C	Span	0.2 to 10	29 to 1450	2 to 100	2 to 100
	Range	–0.1 to 10	–14.5 to 1450	–1 to 100	–1 to 100
D	Span	1 to 50	145 to 7200	10 to 500	10 to 500
	Range	–0.1 to 50	–14.5 to 7200	–1 to 500	–1 to 500

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□ PERFORMANCE SPECIFICATIONS

Zero-based calibrated span, linear output, wetted parts material code 'S' and silicone oil, unless otherwise mentioned.
For Fieldbus communication type, use calibrated range instead of span in the following specifications.

Specification Conformance

EJX series ensures specification conformance to at least ±3σ.

Reference Accuracy of Calibrated Span

(includes the effects of terminal-based linearity, hysteresis, and repeatability)

Measurement span		A	B	C	D
Reference accuracy	Span ≧ X	±0.1% of Span			
	Span < X	±(0.01+0.009 URL/Span) % of Span			
X		20 kPa (2.9 psi)	0.2 MPa (29 psi)	1 MPa (145 psi)	5 MPa (720 psi)
URL (Upper range limit)		200 kPa (29 psi)	2 MPa (290 psi)	10 MPa (1450 psi)	50 MPa (7200 psi)

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Ambient Temperature Effects per 28˚C (50˚F) Change

±(0.15% of Span + 0.15% of URL)

Stability (All normal operating condition)

±0.1% of URL per 1 year

Power Supply Effects

±0.005% per Volt (from 21.6 to 32 V DC, 350 Ω)

Vibration Effects

Amplifier housing code 1:
Less than 0.1% of URL when tested per the requirements of IEC60770-1 field or pipeline with high vibration level (10-60 Hz, 0.21 mm peak to peak displacement/60-2000 Hz 3 g)
Amplifier housing code 2:
Less than ±0.1% of URL when tested per the requirements of IEC60770-1 field with general application or pipeline with low vibration level (10-60 Hz 0.15mm peak to peak displacement /60-500 Hz 2g)

Mounting Position Effects

Rotation in diaphragm plane has no effect. Tilting up to 90 degree will cause zero shift up to 0.21 kPa (0.84 inH_2O) which can be corrected by the zero adjustment.

Response Time (All capsules) "◇"

90 msec
When software damping is set to zero and including dead time of 45 msec (nominal)

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☐ FUNCTIONAL SPECIFICATIONS

Output
Two wire 4 to 20 mA DC output with digital communications, linear or square root programmable. BRAIN or HART FSK protocol are superimposed on the 4 to 20 mA signal.
Output range: 3.6 mA to 21.6 mA
Output limits conforming to NAMUR NE43 can be pre-set by option code C2 or C3.

Failure Alarm (Output signal code D and E)
Output status at CPU failure and hardware error;
Up-scale: 110%, 21.6 mA DC or more (standard)
Down-scale: −5%, 3.2 mA DC or less
Analog output status at process abnormality (Option code /DG6);
The result of process abnormality detected by the advanced diagnostic function can be reflected to an analog alert status. The following three setting modes are available.

		Mode		
		Burnout	Fall back	Off
Standard		110 %, 21.6mA or more	Holds to a specified value within the output range from 3.6mA to 21.6mA	Not Available (normal output)
Option Code	/C1	-2.5%, 3.6mA or less		
	/C2	-1.25%, 3.8mA or less		
	/C3	103.1%, 20.5mA or more		

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Damping Time Constant (1st order)
Amplifier's damping time constant is adjustable from 0.00 to 100.00 sec by software and added to response time.

Note: For BRAIN protocol type, when the software damping is set to less than 0.5 sec, communication may occasionally be unavailble during the operation, especially while output changes dynamically. The default setting of damping ensures stable communication.

Update Period "◇"
Pressure: 45 msec

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. Re-range can be done locally using the digital indicator with range-setting switch.

Integral Indicator (LCD display, optional) "◇"
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;
pressure in %, scaled pressure, measured pressure.
See also "Factory Settings."

Burst Pressure
A, B and C capsule : 30 MPa
D capsule : 132 MPa

Self Diagnostics
CPU failure, hardware failure, configuration error, process alarm for pressure or capsule temperature.
User-configurable process high/low alarm for pressure is also available, and its status can be output when optional status output is specified.

Advanced Diagnostics (optional) "◇"
Applicable for Output signal code E and F.
• Impulse line blockage detection
The impulse line condition can be calculated and detected by extracting the fluctuation component from the static pressure signal.
• Heat trace monitoring
The change of the flange temperature calculated by using the two temperature sensors built in the EJX enables to detect the heat trace breakage or the abnormal temperature due to the failure.

Signal Characterizer (Output signal code D and E)
User-configurable 10-segment signal characterizer for 4 to 20 mA output.

Status Output (optional, output signal code D and E)
One transistor contact output (sink type) to output the status of user configurable high/low alarm for pressure.
Rating: 10.5 to 30 V DC, 120 mA DC max.
Note: A check meter cannot be connected when status output option (/AL) is specified.
Refer to 'Wiring Example for Analog Output and Status Output.'

SIL Certification
EJX series transmitters except Fieldbus communication type are certified by TÜV in compliance with the following standards;
IEC 61508: 2000; Part1 to Part 7
Functional Safety of Electrical/electronic/programmable electronic related systems; SIL 2 capability for single transmitter use, SIL 3 capability for dual transmitter use.

☐ NORMAL OPERATING CONDITION

(Optional features or approval codes may affect limits.)

Ambient Temperature Limits
−40 to 85˚C (−40 to 185˚F)
−30 to 80˚C (−22 to 176˚F) with LCD display

Process Temperature Limits
−40 to 120˚C (−40 to 248˚F)

Ambient Humidity Limits
0 to 100% RH

Maximum Over Pressure

Capsule	Pressure EJX510A	EJX530A
A and B	4 MPa abs (580 psia)	4 MPa (580 psig)
C	20 MPa abs (2900 psia)	20 MPa (2900 psig)
D	75 MPa abs (10800 psia)	75 MPa (10800 psig)

Working Pressure Limits (Silicone oil)

Maximum Pressure Limits

Capsule	Pressure EJX510A	EJX530A
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	50 MPa abs (7200 psia)	50 MPa (7200 psig)

Minimum Pressure Limit
See graph below

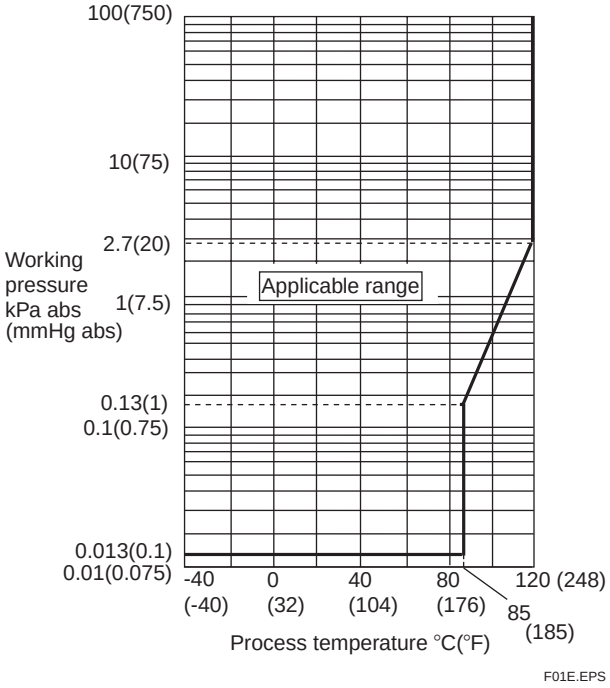

Figure 1-1. Working Pressure and Process Temperature [For EJX510A]

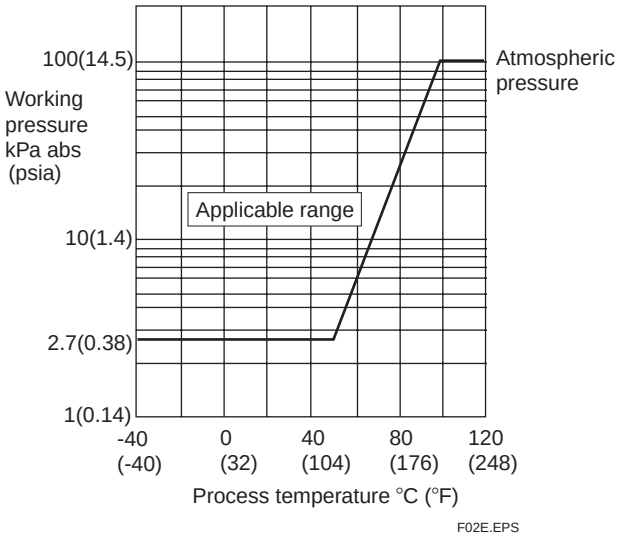

Figure 1-2. Working Pressure and Process Temperature [For EJX530A]

Supply & Load Requirements

(Output signal code D and E. Optional features or approval codes may affect electrical requirements.)
With 24 V DC supply, up to a 550 Ω load can be used. See graph below.

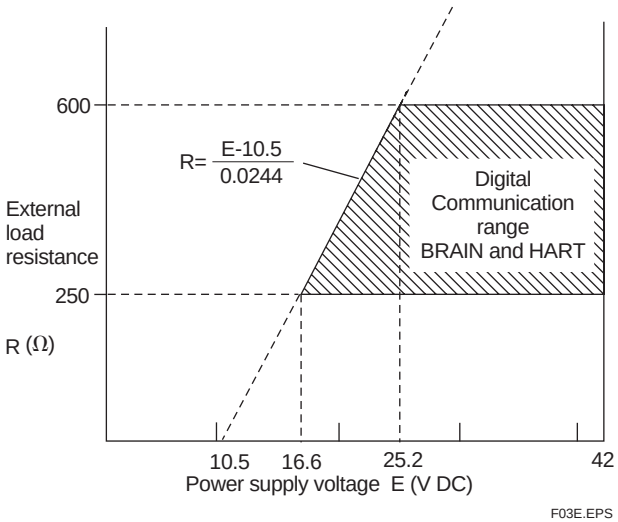

Figure 2. Relationship Between Power Supply Voltage and External Load Resistance

Supply Voltage "◇"
10.5 to 42 V DC for general use and flameproof type.
10.5 to 32 V DC for lightning protector (option code A).
10.5 to 30 V DC for intrinsically safe, type n, non-incendive or non-sparking type.
Minimum voltage limited at 16.6 V DC for digital communications, BRAIN and HART

Load (Output signal code D and E)
0 to 1290 Ω for operation
250 to 600 Ω for digital communication

Communication Requirements "◇"

(Approval codes may affect electrical requirements.)

BRAIN

Communication Distance
Up to 2 km (1.25 miles) when using CEV polyethylene-insulated PVC-sheathed cables. Communication distance varies depending on type of cable used.

Load Capacitance
0.22 μF or less

Load Inductance
3.3 mH or less

Input Impedance of communicating device
10 kΩ or more at 2.4 kHz.

EMC Conformity Standards CE , N200
EN61326-1 Class A, Table2 (For use in industrial locations)
EN61326-2-3

European Pressure Equipment Directive 97/23/EC
Sound Engineering Practice (for all capsules)

With option code /PE3 (for D capsule)
CE 0038
Category III, Module H, Type of Equipment: Pressure Accessory-Vessel, Type of Fluid: Liquid and Gas, Group of Fluid: 1 and 2

☐ PHYSICAL SPECIFICATIONS

Wetted Parts Materials

Diaphragm, Process Connector
Refer to “MODEL AND SUFFIX CODE.”

Non-wetted Parts Materials

Housing
Low copper cast aluminum alloy with polyurethane, mint-green paint (Munsell 5.6BG 3.3/2.9 or its equivalent) or ASTM CF-8M Stainless Steel

Degrees of Protection
IP67, NEMA4X, JIS C0920

Pipe
Polypropylene

Cover O-rings
Buna-N

Name plate and tag
304 SST, 316 SST (optional)

Fill Fluid
Silicone, fluorinated oil (optional)

Weight
Capsule A, B and C: 1.2 kg (2.6 lb)*
Capsule D: 1.4 kg (3.1 lb)*
*: Without integral indicator and mounting bracket.
Add 1.5 kg (3.3 lb) for Amplifier housing code 2.

Connections
Refer to “MODEL AND SUFFIX CODE.”

< Related Instruments>

Power Distributor: Refer to GS 01B04T01-02E or GS 01B04T02-02E
BRAIN TERMINAL: Refer to GS 01C00A11-00E

< Reference >

1. Hastelloy; Trademark of Haynes International Inc.
2. HART; Trademark of the HART Communication Foundation.
3. FOUNDATION Fieldbus; Trademark of Fieldbus Foundation.

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■MODEL AND SUFFIX CODES

Model	Suffix Codes	Description
EJX510A		Absolute pressure transmitter
EJX530A		Gauge pressure transmitter
Output signal	**-D**	4 to 20 mA DC Output with digital communication (BRAIN protocol)
	-E	4 to 20 mA DC Output with digital communication (HART protocol)
	-F	Digital communication (FOUNDATION Fieldbus protocol, refer to GS 01C25T02-01E)
Measurement span (Capsule)	**A**	8 to 200 kPa (1.16 to 29 psi)
	B	0.04 to 2 MPa (5.8 to 290 psi)
	C	0.2 to 10 MPa (29 to 1450 psi)
	D	1 to 50 MPa (145 to 7200 psi)
Wetted parts material *4		Process connection / Diaphragm
	S	316L SST# / Hastelloy C-276 *1#
	H	Hastelloy C-276 *1# / Hastelloy C-276 *1#
Process connections	**4**	1/2 NPT female
	7	1/2 NPT male
	8	G1/2 DIN 16 288 male *2
	9	M20×1.5 DIN 16 288 male *2
—	**N**	Always N
—	**-0**	Always 0
Amplifier housing ☆	**1**	Cast alluminum alloy
	2	ASTM CF-8M Stainless Steel *5
Electrical connection	**0**	G1/2 female, one electrical connection without blind plugs
☆	**2**	1/2 NPT 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*6
	7	1/2 NPT female, two electrical connections with a blind plug*6
	9	M20 female, two electrical connections with a blind plug*6
	A	G1/2 female, two electrical connections and a 316 SST blind plug
	C	1/2 NPT female, two electrical connections and a 316 SST blind plug
	D	M20 female, two electrical connections and a 316 SST blind plug
Integral indicator	**D**	Digital indicator
	E	Digital indicator with the range setting switch *3
☆	**N**	None
Mounting bracket	**F**	304 SST 2-inch pipe mounting
	L	316 SST 2-inch pipe mounting
☆	**N**	None
Optional code		/□ Optional specification

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The "☆" marks indicates the most typical selection for each specification. Example: EJX530A-DAS4N-012NN/□.

*1: Hastelloy C-276 or ASTM N10276.

*2: Not applicable for combination of capsule code **D** and wetted parts material code **H**.

*3: Not applicable for output signal code **F**.

*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: Not applicable for electrical connection code **0**, **5**, **7** or **9**.

*6: Material of a blind plug is aluminum alloy or 304 SST.

The '#'marks indicate the construction materials conform to NACE material recommendations per MR01-75. For the use of 316 SST material, there may be certain limitations for pressure and temperature. Please refer to NACE standards for details.

■OPTIONAL SPECIFICATIONS (For Explosion Protected type) "◇"

Item	Description	Code
Factory Mutual (FM)	FM Explosionproof Approval *1 Applicable Standard: FM3600, FM3615, FM3810, ANSI/NEMA 250 Explosionproof for Class I, Division 1, Groups B, C and D, Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G, in Hazardous locations, indoors and outdoors (NEMA 4X) Temperature class: T6, Amb. Temp.: –40 to 60°C (–40 to 140°F)	**FF1**
	FM Intrinsically safe Approval *1*2 Applicable Standard: FM3600, FM3610, FM3611, FM3810 Intrinsically Safe for Class I, Division 1, Groups A, B, C & D, Class II, Division 1, Groups E, F & 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 & D, Class II, Division. 2, Groups F & G, and Class III, Division 1, Class I, Zone 2, Group IIC, in Hazardous Locations Enclosure: "NEMA 4X", Temp. Class: T4, Amb. Temp.: –60 to 60°C (–75 to 140°F) Intrinsically Safe Apparatus Parameters [Groups A, B, C, D, E, F and G] Vmax=30 V, Imax=200 mA, Pmax=1 W, Ci=6 nF, Li=0 μH [Groups C, D, E, F and G] Vmax=30 V, Imax=225 mA, Pmax=1 W, Ci=6 nF, Li=0 μH	**FS1**
	Combined FF1 and FS1 *1*2	**FU1**
CENELEC ATEX	CENELEC ATEX (KEMA) Flameproof Approval *1 Applicable Standard: EN 60079-0, EN 60079-1, EN 61241-0, EN 61241-1 Certificate: KEMA 07ATEX0109 II 2G, 2D Exd IIC T4, T5, T6 Ex tD A21 IP6X T85, T100, T120 Degree of protection : IP66 and IP67 Amb. Temp. (Tamb) for gas-proof : T4 ; –50 to 75°C (–58 to 167°F), T5; –50 to 80°C (–58 to 176°F), T6; –50 to 75°C (–58 to 167°F) Max. process Temp.(Tp): T4; 120°C (248°F), T5; 100°C (212°F), T6; 85°C (185°F) Max. surface Temp. for dust-proof : T85°C (Tamb: –40 to 40°C, Tp:85°C), T100°C (Tamb: –40 to 60°C, Tp:100°C), T120°C (Tamb: –40 to 80°C, Tp:120°C)	**KF21**
	CENELEC ATEX (KEMA) Intrinsically safe Approval *1*2 Applicable Standard: EN 50014, EN 50020, EN 50284, EN 50281-1-1 Certificate: KEMA 03ATEX1544X II 1G, 1D EEx ia IIC T4 Degree of protection : IP66 and IP67 Amb. Temp.(Tamb) for gas-proof: –50 to 60°C (–58 to 140°F) Maximum Process Temp.(Tp) for gas-proof :120°C Electrical data : Ui=30 V, Ii=200 mA, Pi=0.9 W, Ci=10 nF, Li=0 mH Max. surface Temp. for dust-proof : T85°C (Tamb: –40 to 60°C, Tp:80°C), T100°C (Tamb: –40 to 60°C, Tp:100°C), T120°C (Tamb: –40 to 60°C, Tp:120°C)	**KS2**
	Combined KF21, KS2 and Type n *1*2 Type n Applicable standard: EN60079-15 Referential standard: IEC60079-0, IEC60079-11 II 3G Ex nL IIC T4, Amb. Temp.: –50 to 60°C (–50 to 140°F) Ui=30 V DC, Ci=10 nF, Li=0 mH	**KU21**

T05E.EPS

*1: Applicable for Electrical connection code **2**, **4**, **7**, **9**, **C** and **D**.
*2: Not applicable for option code **/AL**.

Item	Description	Code
Canadian Standards Association (CSA)	CSA Explosionproof Approval *1 Certificate: 2014354 Applicable Standard: C22.2 No.0, C22.2 No.0.4, C22.2 No.0.5, C22.2 No.25, C22.2 No.30, C22.2 No.94, C22.2 No.60079-0, C22.2 No.60079-1, C22.2 No.61010-1-01 Explosion-proof for Class I, Groups B, C and D. Dustignition-proof for Class II/III, Groups E, F and G. When installed in Division 2, “SEAL NOT REQUIRED” Enclosure: TYPE 4X, Temp. Code: T6...T4 Ex d IIC T6...T4 Enclosure: IP66 and IP67 Max.Process Temp.: T4;120°C(248°F), T5;100°C(212 °F), T6; 85°C(185°F) Amb.Temp.:–50 to 75°C(–58 to 167°F) for T4, –50 to 80°C(–58 to 176°F) for T5, –50 to 75°C(–58 to 167°F) for T6 Process Sealing Certification Dual Seal Certified by CSA to the requirement of ANSI/ISA 12.27.01 No additional sealing required Primary seal failure annunciation: at the zero adjustment screw	**CF1**
	CSA Intrinsically safe Approval *1*2 Certificate: 1606623 [For CSA C22.2] Applicable Standard: C22.2 No.0, C22.2 No.0.4, C22.2 No.25, C22.2 No.94, C22.2 No.154, C22.2 No.213, C22.2 No.1010.1 Intrinsically Safe for Class I, Division 1, Groups A, B, C & D, Class II, Division 1, Groups E, F & G, Class III, Division 1, Nonincendive for Class I, Division 2, Groups A, B, C & D, Class II, Division 2, Groups E, F & G, Class III, Division 1 Enclosure: Type 4X, Temp. Code: T4 Amb. Temp.:–50 to 60°C(–58 to 140°F) Electrical Parameters: [Intrinsically Safe] Vmax=30V, Imax=200mA, Pmax=0.9W, Ci=10nF, Li=0 [Nonincendive] Vmax=30V, Ci=10nF, Li=0 [For CSA E60079] Applicable Standard: CAN/CSA E60079-0, CAN/CSA E60079-11, CAN/CSA E60079-15, IEC 60529:2001-02 Ex ia IIC T4, Ex nL IIC T4 Enclosure: IP66 and IP67 Amb. Temp.:–50 to 60°C(–58 to 140°F), Max. Process Temp.: 120°C(248°F) Electrical Parameters: [Ex ia] Ui=30V, Ii=200mA, Pi=0.9W, Ci=10nF, Li=0 [Ex nL] Ui=30V, Ci=10nF, Li=0 Process Sealing Certification Dual Seal Certified by CSA to the requirement of ANSI/ISA 12.27.01 No additional sealing required Primary seal failure annunciation: at the zero adjustment screw	**CS1**
	Combined CF1 and CS1 *1*2	**CU1**
IECEx Scheme *3	IECEx Flameproof Approval *1 Applicable Standard: IEC 60079-0:2004, IEC60079-1:2003 Certificate: IECEx CSA 07.0008 Flameproof for Zone 1, Ex d IIC T6...T4 Enclosure: IP66 and IP67 Max.Process Temp.: T4;120°C(248°F), T5;100°C(212°F), T6; 85°C(185°F) Amb.Temp.:–50 to 75°C(–58 to 167°F) for T4, –50 to 80°C(–58 to 176°F) for T5, –50 to 75°C(–58 to 167°F) for T6	**SF2**
	IECEx Intrinsically safe, type n and Flameproof Approval *1*2 Intrinsically safe and type n Applicable Standard: IEC 60079-0:2000, IEC 60079-11:1999, IEC 60079-15:2001 Certificate: IECEx CSA 05.0005 Ex ia IIC T4, Ex nL IIC T4 Enclosure: IP66 and IP67 Amb. Temp.:–50 to 60°C(–58 to 140°F), Max. Process Temp.: 120°C(248°F) Electrical Parameters: [Ex ia] Ui=30V, Ii=200mA, Pi=0.9W, Ci=10nF, Li=0 [Ex nL] Ui=30V,Ci=10nF, Li=0 Flameproof Applicable Standard: IEC 60079-0:2004, IEC60079-1:2003 Certificate: IECEx CSA 07.0008 Flameproof for Zone 1, Ex d IIC T6...T4 Enclosure: IP66 and IP67 Max.Process Temp.: T4;120°C(248°F), T5;100°C(212°F), T6; 85°C(185°F) Amb.Temp.:–50 to 75°C(–58 to 167°F) for T4, –50 to 80°C(–58 to 176°F) for T5, –50 to 75°C(–58 to 167°F) for T6	**SU2**
Combination of approval	Combination of KU21, FU1 and CU1 *1*2	**V1U**

T05Eb.EPS

*1: Applicable for Electrical connection code **2**, **4**, **7**, **9**, **C** and **D**.
*2: Not applicable for option code /**AL**.
*3: Applicable only for Australia, New Zealand, Singapore and India.

■ OPTIONAL SPECIFICATIONS

Item		Description		Code
Painting	Color change	Amplifier cover only *14		**P□**
		Amplifier cover and terminal cover, Munsell 7.5 R4/14		**PR**
	Coating change	Anti-corrosion coating *1*14		**X2**
316 SST exterior parts		316 SST name plate, tag plate and zero-adjustment screw *16		**HC**
Lightning protector		Transmitter power supply voltage: 10.5 to 32 V DC (10.5 to 30 V DC for intrinsically safe type, 9 to 32 V DC for Fieldbus communication type.) Allowable current: Max. 6000 A (1×40 μs), Repeating 1000 A (1×40 μs) 100 times Applicable Standards: IEC 61000-4-4, IEC 61000-4-5		**A**
Status output *2		Transistor output (sink type) Rating: 10.5 to 30 V DC, 120 mA DC (max) Low level: 0 to 2 V DC		**AL**
Oil-prohibited use *13		Degrease cleansing treatment		**K1**
		Degrease cleansing treatment with fluorinated oilfilled capsule. Operating temperature –20 to 80°C (–4 to 176°F)		**K2**
Capsule fill fluid		Fluorinated oil filled in capsule Operating temperature –20 to 80°C (–4 to 176°F)		**K3**
Calibration units *3		P calibration (psi unit)	(See Table for Span and Range Limits.)	**D1**
		bar calibration (bar unit)		**D3**
		M calibration (kgf/cm^2 unit)		**D4**
Output limits and failure operation *4		Failure alarm down-scale: Output status at CPU failure and hardware error is –5%, 3.2mA DC or less.		**C1**
		NAMUR NE43 Compliant Output signal limits: 3.8mA to 20.5 mA	Failure alarm down-scale: Output status at CPU failure and hardware error is –5%, 3.2mA DC or less.	**C2**
			Failure alarm up-scale: Output status at CPU failure and hardware error is 110%, 21.6 mA or more.	**C3**
Gold-plated diaphragm *19		Surface of isolating diaphragms are gold plated, effective for hydrogen permeation.		**A1**
Wired tag plate		304 SST tag plate wired onto transmitter. (316 SST when /HC is specified)		**N4**
Data configuration at factory *5		Data configuration for HART communication type	Software damping, Descriptor, Message	**CA**
		Data configuration for BRAIN communication type	Software damping	**CB**
Advanced diagnostics *17		Multi-sensing process monitoring • Impulse line blockage detection *18 • Heat trace monitoring		**DG6**
European Pressure Equipment Directive *15		PED 97/23/EC Category III, Module H, Type of Equipment: Pressure Accessory-Vessel, Type of Fluid: Liquid and Gas, Group of Fluid: 1 and 2		**PE3**
Material certificate*6		Process Connector		**M15**
Pressure test /Leak test certificate *12		Test Pressure: 200 kPa (29 psi) *7	Nitrogen(N_2) Gas or Water *11 Retention time: one minute	**T05**
		Test Pressure: 2 MPa (290 psi) *8		**T06**
		Test Pressure: 10 MPa (1450 psi) *9		**T07**
		Test Pressure: 50 MPa (7200 psi) *10		**T08**

T05.EPS

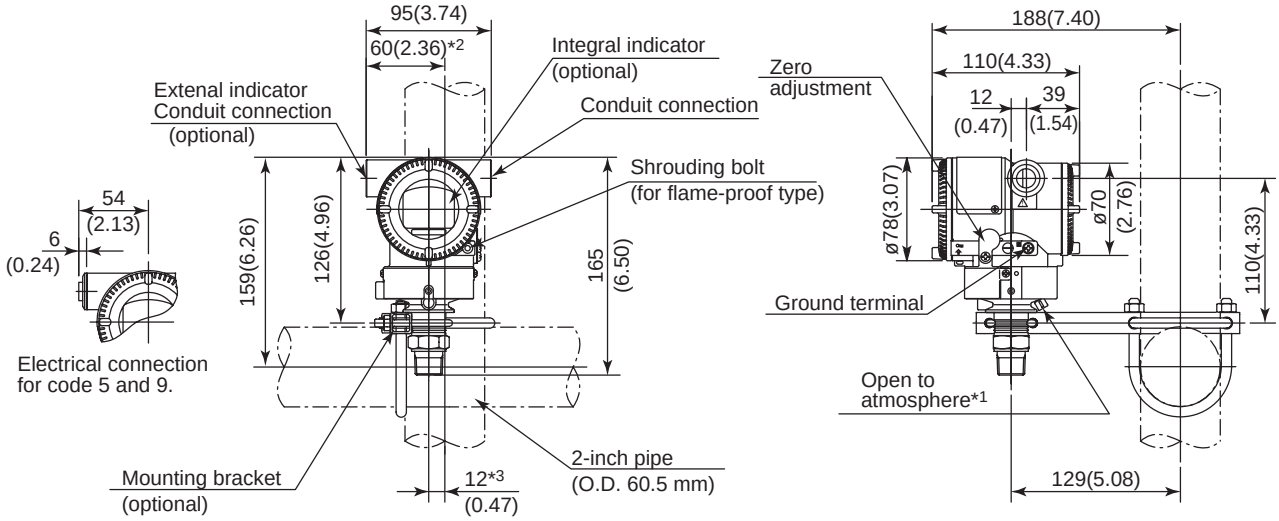
*1: Not applicable with color change option.
*2: Check/External indicator terminals cannot be used when this option code is specified. Not applicable for output signal code **F**.
*3: The unit of MWP (Max. working pressure) on the name plate of a housing is the same unit as specified by option codes **D1**, **D3**, and **D4**.
*4: Applicable for output signal codes **D** and **E**. The hardware error indicates faulty amplifier or capsule.
*5: Also see 'Ordering Information'.
*6: Material traceability certification, per EN 10204 3.1 B.
*7: Applicable for capsule code **A**.
*8: Applicable for capsule code **B**.
*9: Applicable for capsule code **C**.
*10: Applicable for capsule code **D**.
*11: Pure nitrogen gas or pure water is used for oil-prohibited use (option codes **K1** and **K2**).
*12: The unit on the certificate is always kPa/MPa regardless of selection of option code **D1**, **D3** and **D4**.
*13: Applicable for wetted parts material code **S**.
*14: Not applicable for amplifier housing code **2**.
*15: Applicable for measurement span code **D**. If compliance with category III is needed, specify this option code.
*16: 316 or 316L SST. The specification is included in amplifier code **2**.
*17: Applicable only for output signal code **-E**.
*18: The change of pressure fluctuation is monitored and then detects the impulse line blockage. See TI 01C25A31-01E for detailed technical information required for using this function.
*19: Applicable for wetted parts material code **S**.

■ DIMENSIONS

● Model EJX510A and EJX530A

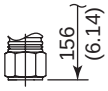
● With process connections code 7

Unit: mm (Approx. inch)

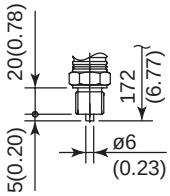


*1: Only for EJX530A whose measurement span code is A, B, or C.
*2: 58 mm(2.28 inch) for measurement span code D.
*3: 11 mm (0.43 inch) for measurement span code D.

● With Process connections code 4

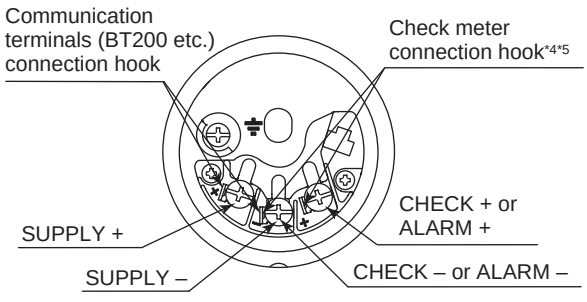


● With Process connections code 8 and 9



F04.EPS

● Terminal Configuration



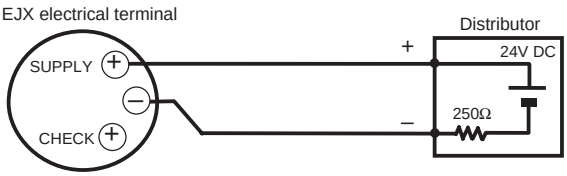
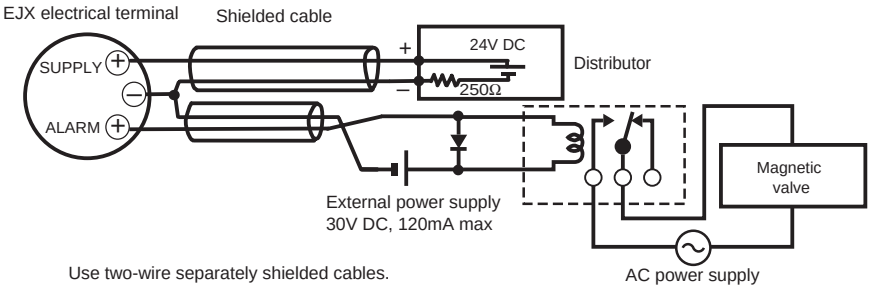
● Terminal Wiring

SUPPLY	+ –	Power supply and output terminal
CHECK or ALARM	+ –	External indicator (ammeter) terminal*4*5 or Status contact output terminal*5 (when /AL is specified)
⏚		Ground terminal

*4: When using an external indicator or check meter, the internal resistance must be 10 Ω or less. A check meter or indicator cannot be connected when /AL option is specified.
*5: Not available for fieldbus communication type.

F05.EPS

● Wiring Example for Analog Output and Status Output

Connection	Description
Analog output	
Analog and status output (when /AL is specified) If shield cable is not used, communication is not possible.	

F06.EPS

< Ordering Information > "◇"

Specify the following when ordering
1. Model, suffix codes, and option codes
2. Calibration range and units
   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 -32000 to 32000. 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 and units (for transmitters equipped with integral indicator only)
   Specify either 0 to 100 % or engineering unit scale and 'Range and Unit' for engineering 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 -32000 to 32000. 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.
4. Tag Number (if required)
   For BRAIN communication type, specify upto 16 letters. The specified letters will be written in the amplifier memory and engraved on the tag plate.
   For HART communication type, specify software tag (up to 8 letters) to be written on the amplifier memory and Tag number(up to 16 letters) to be engraved on the tag plate seperately.
5. Other factory configurations (if required)
   Specifying option code CA or CB will allow further configuration at factory. Following are configurable items and setting range.
   [/CA: For HART communication type]
   1) Descriptor(up to 16 characters)
   2) Message (up to 30 characters)
   3) Software damping in second (0.00 to 100.00)
   [/CB: For BRAIN communication type]
   1) Software damping in second (0.00 to 100.00)

< Factory Setting > "◇"

Tag number	As specified in order
Software damping *1	'2.00 sec' 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	[EJX530A] Selected from mmH_2O, $mmH_2O(68^\circ F)$, mmAq*2, mmWG*2, mmHg, Pa, hPa*2, kPa, MPa, mbar, bar, gf/cm^2, kgf/cm^2, inH_2O, $inH_2O(68^\circ F)$, inHg, ftH_2O, $ftH_2O(68^\circ F)$ or psi. (Only one unit can be specified) [EJX510A] Torr, Pa abs*2, kPa abs, MPa abs, mbar abs, bar abs, kgf/cm^2 abs, mmH_2O abs, mmH_2O abs(68°F), mmHg abs, inH_2O abs, inH_2O abs(68°F), inHg abs, ftH_2O abs, ftH_2O abs(68°F), psia, atm.
Display setting	Designated value specified in order. (% or user scaled value.)

T06E.EPS

*1: To specify these items at factroy, /CA or /CB option is required.
*2: Not available for HART protocol type.