■ MODEL AND SUFFIX CODES

Model	Suffix	Codes	Description
EJA310E			Absolute pressure transmitter
Output signal	-D		4 to 20 mA DC with digital communication (BRAIN protocol) 4 to 20 mA DC with digital communication (HART 5/HART 7 protocol)*1 Digital communication (FOUNDATION Fieldbus protocol, refer to GS 01C31T02-01EN) Digital communication (PROFIBUS PA protocol, refer to GS 01C31T04-01EN) Low Power, 1 to 5 V DC with digital communication (HART 7 protocol)
Measurement span (capsule)	L		0.67 to 10 kPa abs (0.2 to 2.95 inHg abs) 1.3 to 130 kPa abs (0.39 to 38 inHg abs) 0.03 to 3.5 MPa abs (4.3 to 500 psia) 0.14 to 16 MPa abs (20 to 2300 psia)
Wetted parts material *2	□		Refer to "Wetted Parts Material" Table.
Process connections See the table in the next page for the codes for a diaphragm seal system. 0			without process connector (Rc1/4 female on the cover flanges) with Rc1/4 female process connector with Rc1/2 female process connector with 1/4 NPT female process connector with 1/2 NPT female process connector without process connector (1/4 NPT female on the cover flanges)
Bolts and nuts ma	G		B7 carbon steel 316L SST 660 SST
Installation -3			Vertical piping, right side high pressure, and process connection down side Vertical piping, left side high pressure, and process connection down side Horizontal piping and right side high pressure Horizontal piping and left side high pressure Bottom Process Connection, left side high pressure *8 Universal flange *8
Amplifier housing 1			Cast aluminum alloy Cast aluminum alloy with corrosion resistance properties *3 ASTM CF-8M stainless steel *4 *3
Electrical connection 0		2	G1/2 female, one electrical connection without blind plugs 1/2 NPT female, two electrical connections without blind plugs M20 female, two electrical connections without blind plugs G1/2 female, two electrical connections and a blind plug *5 1/2 NPT female, two electrical connections and a blind plug *5 M20 female, two electrical connections and a blind plug *5 G1/2 female, two electrical connections and a 316 SST blind plug 1/2 NPT female, two electrical connections and a 316 SST blind plug M20 female, two electrical connections and a 316 SST blind plug
Integral indicator D E N		E	Digital indicator *6 Digital indicator with the range setting switch (push button) *7 (None)
Mounting bracket ■ B D J K M P N		D J K M P	304 SST 2-inch pipe mounting, flat type (for horizontal piping) 304 SST 2-inch pipe mounting, L type (for vertical piping) 316 SST 2-inch pipe mounting, flat type (for horizontal piping) 316 SST 2-inch pipe mounting, L type (for vertical piping) 316 SST 2-inch pipe mounting (for bottom process connection type) 316 SST 2-inch pipe mounting, position adjustable L type (for vertical piping)*9 (None)
Optional Codes			□/ Optional specification

The "▶" marks indicate the most typical selection for each specification.

- *1: HART 5 or HART 7 is selectable. Specify upon ordering.
- *2:

 Users must consider the characteristics of selected wetted parts material and influence of process fluids. Specifying inappropriate materials has the potential to cause serious damage to human body and plant facilities resulted from an unexpected leak of the corrosive process fluids.
- *3: Not applicable for electrical connection code 0, 5, 7, 9 and A.
- *4: Not applicable for electrical connection code 0, 5, 7 and 9.
- *5: Material of a blind plug; aluminum alloy for code 5 and 9, and SUS304 for code 7.
- *6: Not applicable for output signal code G.
- *7: Not applicable for output signal code F.
- *8: Applicable only for wetted parts material code S.
- *9: For position adjustable bracket, refer to SD 01C25B14-01EN.

Table. Wetted Parts Materials

Wetted parts material code	Cover flange and process connector	Capsule	Capsule gasket	Vent/Drain plug
S#	ASTM CF-8M *1*4	Hastelloy C-276 *2 (Diaphragm) F316L SST, 316L SST (Others)	Teflon-coated 316L SST	316 SST
L#	ASTM CF-3M *3*4	Hastelloy C-276 *2 (Diaphragm) F316L SST, 316L SST (Others)	Teflon-coated 316L SST	316L SST

- *1: Cast version of 316 SST. Equivalent to SCS14A.
- *2: Hastelloy C-276 or ASTM N10276.
- *3: Cast version of 316L SST. Equivalent to SCS16A.
- *4: Intergranular corrosion test passed according to ASTM A262 Practice E.

The '#'marks indicate the construction materials conform to NACE material recommendations per MR0175/ISO15156.

Please refer to the latest standards for details. Selected materials also conform to NACE MR0103.

[Process Connections Code for Diaphragm Seal System]

The table below shows the codes dedicated for the combination with a diaphragm seal system. They are only available when the transmitter is ordered in combination with a diaphragm seal system. Please also refer to GS 01C25W01-01EN.

Process Connections Code	High Pressure Side
В	With C80F□ or C82F□ diaphragm seal
G	With C80F□ or C82F□ diaphragm seal for high vacuum use

C80F and C82F stand for C80FW or C80FE remote mount flanged diaphragm seal, C82FA inner diaphragm adapter connection seal, and C82FD inner diaphragm flanged seal respectively.

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

For other agency approvals and marine approvals, please refer to GS 01C25A20-01EN.

Please select appropriate equipment in accordance with the laws and regulations of the relevant country/region, when it is used in a location where explosive atmospheres may be present.

Item	Description	Code
Factory Mutual (FM)	FM Explosionproof Approval *1 Applicable Standard: FM3600, FM3615, FM3810, NEMA 250, ANSI/UL 61010-1, ANSI/UL 61010-2-30 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 (Enclosure: Type 4X) "FACTORY SEALED, CONDUIT SEAL NOT REQUIRED." Temperature class: T6, Amb. Temp.: –40 to 60°C (–40 to 140°F)	FF1
	FM Intrinsically safe Approval *1*3 Applicable Standard: FM 3600, FM 3610, FM 3611, FM 3810, ANSI/ISA-60079-0, ANSI/ISA-60079-11,	FS1
ATEX	ATEX Flameproof Approval *1 Applicable Standard: EN IEC 60079-0, EN 60079-1, EN 60079-31 Certificate: KEMA 07ATEX0109 X II 2 G Ex db IIC T6T4 Gb, II 2 D Ex tb IIIC T85°C Db Degree of protection: IP66/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) Process Temp. for gas-proof (Tp): T4; -50 to 120°C (-58 to 248°F), T5; -50 to 100°C (-58 to 212°F), T6; -50 to 85°C (-58 to 185°F) Max. surface Temp. for dust-proof: T85°C (Tamb: -30 to 75°C, Tp: -30 to 85°C) *2	KF22
	ATEX Intrinsically safe Approval *1*3 Applicable Standard: EN IEC 60079-0, EN 60079-11 Certificate: DEKRA 11ATEX0228 X II 1 G Ex ia IIC T4 Ga, II 2 D Ex ia IIIC T85°C T100°C T120°C Db Degree of protection: IP66/IP67 Amb. Temp. (Tamb) for EPL Ga: –50 to 60°C (–58 to 140°F) Maximum Process Temp. (Tp) for EPL Ga:120°C Electrical data: Ui=30 V, Ii=200 mA, Pi=0.9 W, Ci=27.6 nF, Li=0 µH Amb. Temp. for EPL Db: –30 to 60°C *2 Max. surface Temp. for EPL Db: T85°C (Tp: 80°C), T100°C (Tp: 100°C), T120°C (Tp: 120°C)	KS21
	Multiple types of protection (KF22, KS21 or Intrinsically safe Ex ic) *1*3 Applicable Standard: EN IEC 60079-0, EN 60079-11 II 3 G Ex ic IIC T4 Gc, Amb. Temp.: –30 to 60°C (–22 to 140°F) *2 Ui=30 V, Ci=27.6 nF, Li=0 µH	KU22

Canadian Standards Association (CSA)	CSA Explosionproof Approval *1 Certificate: 2014354 Applicable Standard: C22.2 No. 25, C22.2 No. 30, CAN/CSA-C22.2 No. 94, CAN/CSA-C22.2 No. 61010-1, CAN/CSA-C22.2 No. 61010-2-030, CAN/CSA-C22.2 No. 60079-0, CAN/CSA-C22.2 No. 60079-1, CAN/CSA-C22.2 No. 60529 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: T6T4 Ex d IIC T6T4 Enclosure: IP66/IP67 Max.Process Temp.: T4;120°C(248°F), T5;100°C(212°F), T6; 85°C(185°F)	CF1
	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 *2 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	
	CSA Intrinsically safe Approval *1*3 Certificate: 1606623 [For Division System] Applicable Standard: C22.2 No.0, C22.2 No.94, C22.2 No.157, C22.2 No.213, C22.2 No.61010-1, C22.2 No.61010-2-030 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 III, Division 2, Groups F & G, Class III, Division 1 Enclosure: Type 4X, Temp. Code: T4 Amb. Temp.: –50 to 60°C(–58 to 140°F) *2 Electrical Parameters: [Intrinsically Safe] Vmax=30V, Imax=200mA, Pmax=0.9W, Ci=10nF, Li=0 μH [Nonincendive] Vmax=30V, Ci=10nF, Li=0 μH [For Zone System] Applicable Standard: CAN/CSA-C22.2 60079-0, CAN/CSA-E60079-11, CAN/CSA-E60079-15, CAN/CSA-C22.2 No.60529 Ex ia IIC T4, Ex nL IIC T4 Enclosure: IP66/IP67 Amb. Temp.: –50 to 60°C(–58 to 140°F)*2, Max. Process Temp.: 120°C(248°F) Electrical Parameters: [Ex ia] Ui=30V, Ii=200mA, Pi=0.9W, Ci=10nF, Li=0 μH [Ex nL] Ui=30V, Ci=10nF, Li=0 μH 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*3	CU1
IECEx	IECEx Flameproof Approval *1 Applicable Standard: IEC 60079-0, IEC60079-1 Certificate: IECEx CSA 07.0008 Flameproof for Zone 1, Ex d IIC T6T4 Gb Enclosure: IP66/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 and Flameproof Approval *1*3 Intrinsically safe Ex ia Certificate: IECEx DEK 11.0081X Applicable Standard: IEC 60079-0, IEC 60079-11 Ex ia IIC T4 Ga Enclosure: IP66/IP67 Amb. Temp.: –50 to 60 °C(–58 to 140 °F), Max. Process Temp.: 120 °C(248 °F) Electrical Parameters: Ui=30 V, Ii=200 mA, Pi=0.9 W, Ci=27.6 nF, Li=0 μH Intrinsically safe Ex ic Certificate: IECEx DEK 13.0061X Applicable Standard: IEC 60079-0, IEC 60079-11 Ex ic IIC T4 Gc IP code: IP66 Amb. Temp.: –30 to 60°C(–22 to 140°F) *2, Max. Process Temp.: 120°C(248°F) Electrical Parameters: Ui=30V,Ci=27.6 nF, Li=0 μH Flameproof Certificate: IECEx CSA 07.0008 Applicable Standard: IEC 60079-0, IEC60079-1 Flameproof for Zone 1, Ex d IIC T6T4 Gb Enclosure: IP66/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	SU21

IECEx	IECEx Flameproof Approval *1 Applicable Standard: IEC 60079-0, IEC 60079-1, IEC 60079-31 Certificate: IECEx DEK 14.0046X Enclosure: IP66/IP67 Ex db IIC T6T4 Gb, Ex tb IIIC T85°C Db 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) Process Temp. for gas-proof (Tp): T4; -50 to 120°C (-58 to 248°F), T5; -50 to 100°C (-58 to 212°F), T6; -50 to 85°C (-58 to 185°F) Max. surface Temp. for dust-proof: T85°C (Tamb: -30 to 75°C, Tp: -30 to 85°C) *2	SF22
	IECEx Intrinsically safe and SF22 *1*3 Intrinsically safe Ex ia Certificate: IECEx DEK 11.0081X Applicable Standard: IEC 60079-0, IEC 60079-11 Ex ia IIC T4 Ga Enclosure: IP66/IP67 Amb. Temp.: –50 to 60°C (–58 to 140°F), Max. Process Temp.: 120°C (248°F) Electrical Parameters: Ui=30V, Ii=200mA, Pi=0.9W, Ci=27.6nF, Li=0 μH Intrinsically safe Ex ic Certificate: IECEx DEK 13.0061X Applicable Standard: IEC 60079-0, IEC 60079-11 Ex ic IIC T4 Gc IP code: IP66 Amb. Temp.: –30 to 60°C (–22 to 140°F) *2, Max. Process Temp.: 120°C (248°F) Electrical Parameters: Ui=30V,Ci=27.6 nF, Li=0 μH Flameproof Refer to SF22	SU22

^{*1:}

Applicable for Electrical connection code 2, 4, 7, 9, C and D. Lower limit of temperature is -15° C (5°F) when /HE is specified. Not applicable for output signal code Q. *2:

^{*3:}

■ OPTIONAL SPECIFICATIONS

	Item		Des	cription		Code
Painting	Color change	Amplifier cover only*1				P□
		Amplifier cover and terminal cov	er, Munsell 7	.5 R4/14		PR
Coating change		Anti-corrosion coating*2				X2
316 SST exterior parts		316 SST zero-adjustment screw	and setscre	ws ^{*3}		НС
Fluoro-rubbe	er O-ring	All O-rings of amplifier housing.	Lower limit o	f ambient tem	perature: –15°C (5°F)	HE
Lightning pro	otector	Transmitter power supply voltag Allowable current: Max. 6000 A Applicable Standards: IEC 6100	(1×40 µs), Re	epeating 1000	0 30 V DC for intrinsically safe type.) 0 A (1×40 μs) 100 times	Α
Oil-prohibite	d use*5*27	Degrease cleansing treatment				K1
		Degrease cleansing treatment a Operating temperature −20 to 80			sule.	K2
		Degrease cleansing treatment				K41
		Degrease cleansing treatment a capsule. Operating temperature –20 to 80			With certificates	K42
Oil-prohibite		Degrease cleansing and dehydr	ating treatme	ent		K5
dehydrating	treatment*5*27	Degrease cleansing and dehydr Operating temperature −20 to 80			nated oilfilled capsule.	K6
		Degrease cleansing and dehydr	ating treatme	ent		K45
		Degrease cleansing and dehydr fluorinated oilfilled capsule. Operating temperature –20 to 80		ng treatment with With certificates		K46
Capsule fill f	luid ^{*27}	Flourinated oil filled in capsule Operating temperature –20 to 80	0°C (−4 to 17	'6°F)		К3
Calibration u	ınits*6	P calibration (psi unit)		D1		
		bar calibration (bar unit) (See Table for Span and Range Limits.)		D3		
		M calibration (kgf/cm² unit)			D4	
Plug option*23*24*27		Long vent*7: Total length: 119 mm (standard: 34 mm); Total length when combining with optional code K1, K2, K5, and K6: 130 mm. Material: 316 SST U1.			U1	
		Without vent and drain plugs				UN
	capsule gasket*4*27	Gold-plated 316L SST capsule gasket. Without drain and vent plugs.		GS		
Gold-plated	diaphragm*21*27	Surface of isolating diaphragms are gold plated, effective for hydrogen permeation. Gold plate thickness: 3 µm Gold plate thickness: 10 µm			A1 A2	
Output limits	and failure	for hydrogen permeation. Gold plate thickness: 10 µm Output status at CPU failure and hardware error.			72	
option*8		When combining with Optional code F1, output signal is –5%, 3.2 mA DC or less for 4 to 20 mA output type, and –5%, 0.8V DC or less for 1 to 5 V output type.			C1	
		NAMUR NE43 Compliant Output signal limits:	Failure alarm down-scale: Output status at CPU failure and hardware error is −5%, 3.2 mA DC or less.		C2	
		3 8 mA to 20 5 mA *20 Failure ala		e alarm up-scale: Output status at CPU and hardware error is 110%, 21.6 mA or more.		С3
Calibration *		Minimum input pressure: 130 Pa abs(1 mmHg abs) at range calibrating testing			S 1	
Body option	*9*27	Without drain and vent plugs			N1	
Terminal Side H F03E.ai		N1 and Process connection, based on IEC61518 with female thread on both sides of cover flange, with blind kidney flanges on back			N2	
		N2, and Material certificate for cover flange, diaphragm, capsule body, and blind kidney flange			N3	
Wired tag plate		316 SST tag plate wired onto transmitter			N4	
Data configuration at factory*10		Data configuration for HART communication type Software damping, Descriptor, Message		CA		
		Data configuration for BRAIN communication type		Software da		СВ
		Data configuration for HART communication type		External zer	mping, Descriptor, Message, o adjustment prohibition setting	CJ
		Data configuration for BRAIN communication type		Software da prohibition s	mping, External zero adjustment etting	СК

Material certificate*12*27	Cover flange *14		M01
	Cover flange, Process connector *15		
	Cover flange, Diaphragm, Capsule body*14*28		MA1
	Cover flange, Process connector, Diaphragm, Capsule boo	ly*15*25	MC1
	Cover flange, Bolt and Nut for cover flange, Diaphragm, Capsule body, Vent and Drain plug, Vent screw, Capsule gasket*14*22*24		MG1
	Cover flange, Process connector, Bolt and nut for cover flange, Bolt for process connector, Diaphragm, Capsule body, Vent and Drain plug, Vent screw, Capsule gasket*15*22*24		MH1
Calibration certificate	Text, Traceability		L4
	Text, Traceability, Primary standards list		
	Text, Traceability, Primary standards list, Calibration equipment list		
	Text, Traceability, Primary standards list, Calibration equipment list, Calibration equipment certificate		L9
Pressure test/	Test Pressure: 50 kPa (200 inH ₂ O)*16	***	T04
Leak test certificate*13*27	Test Pressure: 3.5MPa (500 psi)*17	Nitrogen Gas* ¹⁹ Retention time: one minute	T01
	Test Pressure: 16 MPa (2300 psi)*18	Treterition time: one minute	T12
Parameter list*26	List of setting and adjustment parameters		YP
Additional blind plug*29	Additional blind plug is attached to the conduit connection on both sides for storing transmitter		PP

- *1: Not applicable for amplifier housing code 2 and 3.
- *2: Not applicable with color change option.
- *3: 316 or 316L SST. The specification is included in amplifier code 2.
- *4: Applicable for wetted parts material code S; process connection code 0 and 5; and installation code 8 and 9. Not applicable for option code U1, N2, N3 and M11. No PTFE is used for wetted parts.
- *5: Applicable for wetted parts material code S.
- *6: The unit of MWP (Max. working pressure) on the name plate of a housing is the same unit as specified by option code D1, D3, and D4.
- *7: Applicable for vertical impulse piping type (Installation code 7) and wetted parts material code S. Long vent material is 316 SST
- *8: Applicable for output signal code D and J. The hardware error indicates faulty amplifier or capsule.
- *9: Applicable for wetted parts material code S, process connection code 3, 4, and 5; Installation code 9; and mounting bracket code N. Process connection faces on the other side of zero adjustment screw.
- *10: Also see 'Ordering Instructions'.
- *11: Applicable for Capsule code M and A with upper range value smaller than 53.3 kPa (400 mmHg abs). If not specified, minimum input pressure for calibration testing will be 2.7 kPa abs (20 mmHg abs) even if the smaller range value is specified for customer's range.
- *12: Material traceability certification per EN 10204 3.1B.
- *13: The unit on the certificate is always Pa unit regardless of selection of option code D1, D3 or D4.
- *14: Applicable for Process connections code 0 and 5.
- *15: Applicable for Process connections code 1, 2, 3, and 4.
- *16: Applicable for capsule code M and L.
- *17: Applicable for capsule code A.
- *18: Applicable for capsule code B.
- *19: Dry nitrogen gas is used for oil-prohibited use (option codes K1, K2, K5, K6, K41, K42, K45, and K46.)
- *20: The 1 to 5 V voltage output corresponding to 4 to 20 mA current output is applied to output signal code Q which is non-compliant to NAMUR NE43.
- *21: /A2 is not applicable with FM approval.
- *22: Not applicable with plug option code UN.
- *23: Not applicable for installation code -U.
- *24: Not applicable with option code N1, N2, N3 and GS.
- *25: Applicable for option code UN and N1.
- *26: Applicable for output signal code D and J.
- *27: Not applicable with process connections code for diaphragm seal system B and G.
- *28: Applicable for option code UN, N1 and GS.
- *29: Not applicable for electrical connection codes 0, 2, and 4.

■ OPTIONAL SPECIFICATIONS (FOR DIAPHRAGM SEAL SYSTEM)

The table below shows the codes dedicated for the combination with a diaphragm seal system. It is only available when the transmitter is ordered in combination with a diaphragm seal system. Please also refer to GS 01C25W01-01EN

Item	Descriptions	Code
Material certificate	Bolt and nut for cover flange	M51





Indicator with LPS



Basic Indicator



No Indicator

Local Display















Product Certification







Ultra-low Copper



Stainless Steel

Housing

4 to 20mA

1 to 5VDC (Low Power)

Output Signal









Digital Communication

EJA310E Overview

Refer to the General Specification sheet located under the 'Downloads' tab for detailed specifications.

Measurement Types		
Primary Variable	Absolute Pressure	
Reference Accuracy		
Primary Variable	±0.15% of Span (L-Capsule) ±0.1% of Span (M, A, and B Capsule)	
Stability (All Normal Operating Conditions)		
Primary Variable	±0.2% of URL per 10 year	
Response Time		
Primary Variable	90ms	
Rangeability		
Primary Variable	L-Capsule: 15:1 M-Capsule: 100:1 A and B Capsule: 115:1	
Burst Pressure (Absolute)		
All Capsules	10,000 psi	
Specification Conformance		
EJA-A Series	±3σ	



帆子多扬 原装横河川仪EJA系列压力/差压变送器





EJA110E系列带显示

EJA430E系列带显示