General Specifications

GS 1C22H1-E

Model EJA118W, EJA118N and EJA118Y Diaphragm Sealed Differential Pressure Transmitters

DPharp

[Style: S2]

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

Model EJA118W, EJA118N and EJA118Y Diaphragm Sealed Differential Pressure Transmitters can be used to measure liquid, gas, or steam flow, as well as liquid level, density, and pressure. They output a 4 to 20 mA DC signal corresponding to the measured pressure differential.

The transmitters also feature remote setup and monitoring through communications with the model BT200/100 BRAIN TERMINAL, CENTUM CS/XL system etc.

■ STANDARD SPECIFICATIONS

Refer to GS 1C22T2-E for Fieldbus communication type marked with **"◇."**

Measurement Ranges:

Capsule	Measurement Span	Measurement Range
M	2.5 to 100 kPa {250 to 10000 mmH_2O}	-100 to 100 kPa {-10000 to 10000 mmH_2O}
H	25 to 500 kPa {0.25 to 5 kgf/cm^2}	-500 to 500 kPa {-5 to 5 kgf/cm^2}

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Output Signal "◇":
4 to 20 mA DC, 2-wire system with digital communication

Failure Alarm:
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
Note: Applicable for Output signal code D and E

Conditions of Communication Line "◇":
Power supply voltage;
16.4 to 42 V DC (16.4 to 30 V DC)
Load resistance; See Figure 1.
Note: In case of an intrinsically safe transmitter, external load resistance includes safety barrier resistance.
Communication distance;
2 km, when CEV polyethylene-insulated PVC-sheathed control cables are used.
Note: Communication distance varies depends on kind of cable.
Load capacitance; 0.22 ㎌ of less.
Load inductance; 3.3 mH or less.
Spacing from power line; 15 cm or more.
Input impedance of receiver connected receiving resistance;
10 kΩ or more at 2.4 kHz
( ) for Intrinsically safe type.

Accuracy:
See Table 2-1, 2-2 and 2-3.

Ambient Temperature Limits:
-40 to 85 °C (-40 to 185 °F) (general-use type)
-30 to 80 °C (-22 to 176 °F) (with integral indicator)
(Note : The ambient temperature limits must be within the fill fluid operating temperature range, see table 1.)
(See 'Optional Specifications' for Explosion-protected types)

Ambient Temperature Effect:
See Table 2-1, 2-2 and 2-3.

Process Temperature Limits:
See Table 1.
(See 'Optional Specifications' for Explosion-protected types)

Ambient Humidity Limits:
5 to 100 % R.H.(at 40 °C)

Working Pressure Range:
2.7 kPa abs{20 mmHg abs} to flange rating pressure.
For atmospheric pressure or below, see Figure 2.

Static Pressure Effect:
See Table 2-1, 2-2 and 2-3.

Power Supply Effect "◇":
±0.005 %/V(21.6 to 32 V DC, 350 Ω)

Mounting:
Transmitter; 2-inch pipe mounting
Diaphragm seals; flange mounting

Mounting Flange Rating:
See 'Model and Suffix Codes.'
Flanges conforming to ANSI are serrated on their gasket surfaces (ANSI B16.5).

Enclosure Classification:
JIS C0920 immersion proof (equivalent to IEC IP67 and MEMA4X)

Explosion-protected Construction:
See 'Optional Specifications.'

Electrical Connection:
See 'Model and Suffix Codes.'

Amplifier Housing:
Cast aluminum alloy or JIS SCS14A stainless steel (optional)

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Transmitter Material:
Cover flange; JIS SCS14A
Cover flange bolts; See 'Model and Suffix Codes.'

Diaphragm Seals Material:
Diaphragm and other wetted parts;
See 'Model and Suffix Codes.'
Capillary tubes; JIS SUS316
Protection tubes; JIS SUS304 PVC-sheathed
(Max, operating temperature of PVC, 100 °C (212 °F)) Fill fluid; See Table 1.

Damping Time Constant:
(Sum of time constants for amplifier assembly and capsule assembly including diaphragm seals)
Amplifier assembly time constant;
Can be set in 9 increments from 0.2 to 64 sec.
Capsule assembly time constant;

Capsule	M	H
Time Constant (sec)	Approx. 0.5	Approx. 0.5

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Approximate values obtained at normal temperature when the capillary length is 5 m, process flange size/ material code D, E, F and the fill fluid code is A.

Painting:
Polyurethane resin baked finish
Deep sea moss green (Munsell 0.6GY3.1/2.0)

Integral Indicator:
LCD digital indicator (optional)

External Zero Adjustment "◇":
Continuously adjustable Resolution; 0.01 % of span

Zero Adjustment Limits:
Zero can be fully elevated or suppressed as long as low and high range value are within the measurement range limits of the capsule.

Tag Plate:
JIS SUS304

Weight:
17.3 kg (38.2 lb) Model EJA118W with 80 mm JIS 10K flange, capillary length 5 m; with integral indicator and mounting bracket.
22.9 kg (50.6 lb) Model EJA118N with 100 mm JIS 10K flange, X_2=100, capillary length 5 m; with integral indicator and mounting bracket.
20.1 kg (44.4 lb) Model EJA118Y with 100 mm JIS 10K flange, X_2=100, capillary length 5 m; with integral indicator and mounting bracket.
Add 1.4 kg (3.1lb) for JIS SCS14A stainless steel amplifier housing.

EMC Conformity Standards: CE , N200
For EMI (Emission): EN55011, AS/NZS 2064 1/2
For EMS (Immunity): EN50082-2

< Settings When Shipped > "◇"

Tag Number	As specified in order *1
Output Mode	'Linear' unless otherwise specified in order
Display Mode	'Linear' unless otherwise specified in order
Operation Mode	'Normal' unless otherwise specified in order
Damping Time Constant *2	'2 sec.'

Calibration Range Lower Range Value	As specified in order
Calibration Range Higher Range Value	As specified in order
Calibration Range Units	Selected from mmH_2O, mmAq, mmWG, mmHg, Pa, hPa, kPa, MPa, mbar, bar, gf/cm^2, kgf/cm^2, inH_2O, inHg, ftH_2O, or psi. (Only one unit can be specified)

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*1: Up to 16 alphanumeric characters (including - and ·) will be entered in the amplifier memory.
*2: If using square root output, set damping time constant to 2 sec. or more.

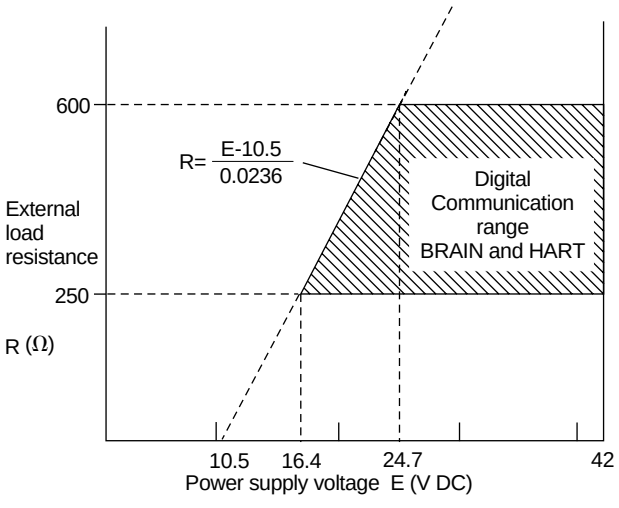

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Figure 1. Relationship Between Power Supply Voltage and External Load Resistance

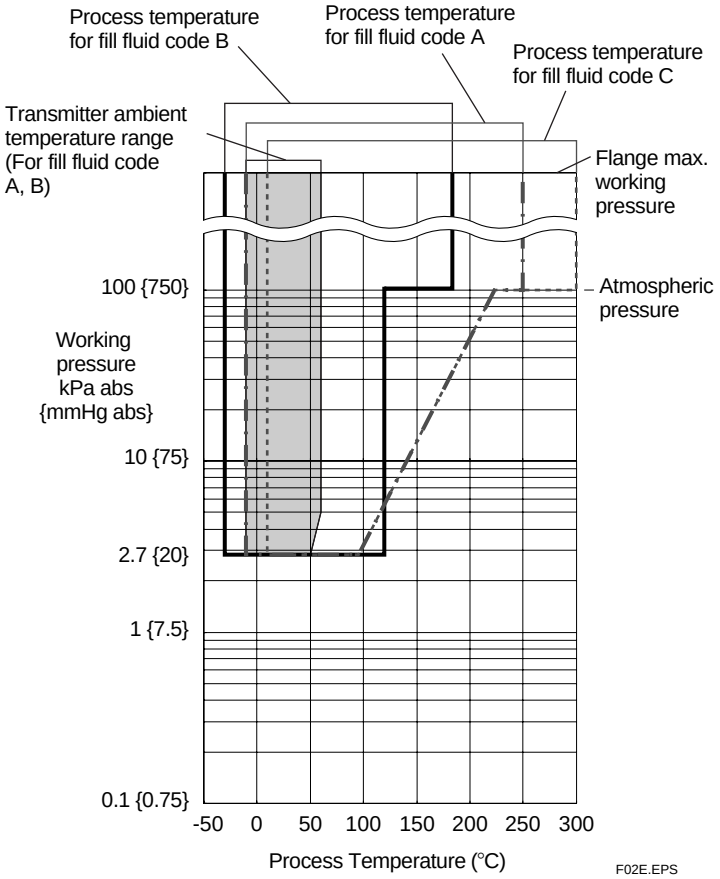

Figure 2. Woirking Pressure and Process Temperature

Table 1. Process Temperature and Ambient Temperature

	Silicone Oil			Fluorinated Oil	Ethylene Glycol
	Fill Fluid Code 'A'	Fill Fluid Code 'B'	Fill Fluid Code 'C'	Fill Fluid Code 'D'	Fill Fluid Code 'E'
Process Temperature *1	-10 to 250 °C (14 to 482 °F)	-30 to 180 °C (-22 to 356 °F)	10 to 300 °C (50 to 572 °F)	-20 to 120 °C (-4 to 248 °F)	-50 to 100 °C (-58 to 212 °F)
Ambient temperature *2	-10 to 60 °C (14 to 140 °F)	-15 to 60 °C (5 to 140 °F)	10 to 60 °C (50 to 140 °F)	-10 to 60 °C (14 to 140 °F)	-40 to 60 °C (-40 to 140 °F)
Working pressure	See Figure 2			51 kPa abs or more {380 mmHg abs}	Vacuum pressure not allowed
Specific gravity *3	1.07	0.94	1.09	1.90 to 1.92	1.09

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*1: See Figure 2 'Working Pressure and Process Temperature.'
*2: This ambient temperature is the transmitter ambient temperature.
*3: Approximate values at a temperature of 25 °C (77 °F)
Note: The differential pressure transmitter should be installed at least 600 mm below the high pressure (HP) process connection. However, this value (600 mm) may be affected by ambient temperature, operating pressure, fill fluid or material of the wetted diaphragm. Contact YOKOGAWA when the transmitter can not be installed at least 600 mm below the HP process connection.

Table 2-1. Accruacy, Ambient Temperature Effect, and Static Pressure Effect (With inear Output,As Percent of 'x') *1 *2 [For model EJA118W 3-inch flange, model EJA118N 4-inch flange and model EJA118Y, Wetted parts material code S]

Capsule		M, H	
Accuracy		± 0.2 %	For $x \geq$ Pref
		± (0.15 + 0.05 × Pref/x) %	For $x <$ Pref
Ambient temperature effect *3	Zero shift	± (0.2 + 0.5 × Pref/x) % / 50 °C	
	Total shift *5	± 1.4 % / 50 °C	For $x \geq$ Pref
		± (0.7 + 0.7 × Pref/x) % / 50 °C	For $x <$ Pref
Static pressure effect	Zero shift	± 0.1 % / 0.98 MPa{10 kgf/cm²}	For $x \geq$ Pref
		± (0.1 × Pref/x) % / 0.98 MPa{10 kgf/cm²}	For $x <$ Pref
	Total shift *4 *5	± 0.14 % / 0.98 MPa{10 kgf/cm²}	For $x \geq$ Pref
		± (0.04 + 0.1 × Pref/x) % /0.98 MPa{10 kgf/cm²}	For $x <$ Pref

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*1: '*x*' is the highest value among the absolute value of the lower range value (LRV) and higher rangevalue (HRV), and the span value in a calibration range. Accuracy of square root output is as shown in Table 4.
*2: In case of 6 to 10 m. for capillary length, values of ambient temperature effect and static pressure effect are twice that given in the table.
*3: The ambient temperature effect specification applies to the range of 0 to 60 °C (32 to140 °F). (Below 0 °C (32 °F), value is three times that given in the table.)
*4: Values for measurement span 4.9 kPa {500 mmH_2O} or below are estimated values.
*5: Combined zero and span shift

Table 2-2. Accuracy, Ambient Temperature Effect, and Static Pressure Effect (With Linear Output, As Percent of 'x') *1 [For Model EJA 118W 2-inch flange and EJA 118N 3-inch flange]

Capsule		M, H	
Accuracy		± 0.2 %	For $x \geq$ Pref
		± (0.15 + 0.05 × Pref/x) %	For $x <$ Pref
Ambient temperature effect *2	Zero shift	± (0.2 + 0.7 × Pref/x) % / 50 °C	
	Total shift *4	± 1.4 % / 50 °C	For $x \geq$ Pref
		± (1.4 × Pref/x) % / 50 °C	For $x <$ Pref
Static pressure effect	Zero shift	± 0.2 % / 0.98 MPa{10 kgf/cm²}	For $x \geq$ Pref
		± (0.2 × Pref/x) % / 0.98 MPa{10 kgf/cm²}	For $x <$ Pref
	Total shift *3 *4	± 0.25 % / 0.98 MPa{10 kgf/cm²}	For $x \geq$ Pref
		± (0.25 × Pref/x) % / 0.98 MPa{10 kgf/cm²}	For $x <$ Pref

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*1: '*x*' is the highest value among the absolute value of the lower range value (LRV) and higher range value (HRV), and the span value in a calibration range. Accuracy of square root output is as shown in Table 4.
*2: The ambient temperature effect specification applies to the range of 0 to 60 °C (32 to 140 °F). (Below 0 °C (32 °F), value is three times that given in the table.)
*3: Values for measurement span 4.9 kPa {500 mmH_2O} or below are estimated values.
*4: Combined zero and span shift

Table 2-3. Accuracy, Ambient Temperature Effect, and Static Pressure Effect (With Linear Output, As Percent of 'x') *1 [For Model EJA 118W wetted part material code H,T and U]

Capsule		M, H	
Accuracy		± 0.2 %	For $x \geq$ Pref
		± (0.15 + 0.05 × Pref/x) %	For $x <$ Pref
Ambient temperature effect *2	Zero shift	± (0.4 + 1.0 × Pref/x) % / 50 °C	
	Total shift *4	± 2.0 % / 50 °C	For $x \geq$ Pref
		± (1.0 + 1.0 × Pref/x) % / 50 °C	For $x <$ Pref
Static pressure effect	Zero shift	± 0.3 % / 0.98 MPa{10 kgf/cm²}	For $x \geq$ Pref
		± (0.3 × Pref/x) % / 0.98 MPa{10 kgf/cm²}	For $x <$ Pref
	Total shift *3 *4	± 0.4 % / 0.98 MPa{10 kgf/cm²}	For $x \geq$ Pref
		± (0.1 + 0.3 × Pref/x) % /0.98 MPa{10 kgf/cm²}	For $x <$ Pref

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*1: '*x*' is the highest value among the absolute value of the lower range value (LRV) and higher range value (HRV), and the span value in a calibration range. Accuracy of square root output is as shown in Table 4.
*2: The ambient temperature effect specification applies to the range of 0 to 60 °C (32 to 140 °F). (Below 0 °C (32 °F), value is three times that given in the table.)
*3: Values for measurement span 4.9 kPa {500 mmH_2O} or below are estimated values.
*4: Combined zero and span shift

Table 3. Value of 'Pref'

Capsule	Pref
M	20 kPa {2000 mmH_2O}
H	100 kPa {1 kgf/cm²}

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Table 4. Accuracy for Square Root Output

Square Root Output	Accuracy
50 % or greater	Same as accuracy for linear output
50 % down to dropout point	(linear output accuracy) × 50 / (square root output [%])

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■ MODEL AND SUFFIX CODES

● MODEL EJA118W [Flange size : 3-inch (80 mm)]

Model	Suffix Codes	Description
EJA118W	·····	Diaphragm sealed differential pressure transmitter (Flush diaphragm type)
Output Signal	**-D** ·····	4 to 20 mA DC with digital communication (BRAIN protocol)
	-E ·····	4 to 20 mA DC with digital communication (HART protocol) *1
	-F ·····	Digital communication (FOUNDATION Fieldbus protocol) *6
Measurement span (capsule)	**M** ·····	2.5 to 100 kPa {250 to 10000 mmH_2O}
	H ·····	25 to 500 kPa {0.25 to 5 kgf/cm^2}
Wetted parts material		[Diaphragm] [Others]
	S ·····	JIS SUS316L JIS SUS316L
	H ·····	Hastelloy C-276 Hastelloy C-276
	T ·····	Tantalum Tantalum
	U ·····	Titanium Titanium
Process flange rating	**J1** ·····	JIS 10K
	J2 ·····	JIS 20K
	J4 ·····	JIS 40K
	A1 ·····	ANSI class 150 **P1** ····· JPI class 150
	A2 ·····	ANSI class 300 **P2** ····· JPI class 300
	A4 ·····	ANSI class 600 **P4** ····· JPI class 600
	D2 ·····	DIN PN10/16
	D4 ·····	DIN PN25/40
	D5 ·····	DIN PN64
Process flange size / material ☆	**D** ·····	3-inch (80 mm) / JIS S25C
	E ·····	3-inch (80 mm) / JIS SUS304
	F ·····	3-inch (80 mm) / JIS SUS316
Cover flange bolts material ☆	**A** ·····	JIS SCM435
	B ·····	JIS SUS630
Fill fluid		[Process temp.] [Ambient temp.]
☆	**-A** *2 ·····	For general use (silicone oil) -10 to 250 °C -10 to 60 °C
	-B ·····	For general use (silicone oil) -30 to 180 °C -15 to 60 °C
	-C *3 ·····	For high temperature use (silicone oil) 10 to 300 °C 10 to 60 °C
	-D *4 ·····	For oil-prohibited use (fluorinated oil) -20 to 120 °C -10 to 60 °C
	-E ·····	For low temperature use (ethylene glycol) -50 to 100 °C -40 to 60 °C
——	**A** ·····	Always A
Capillary length (m)	□ □ *5 ·····	Specify capillary length from 1 to 10m in □ □. (Example for 2 m : 02)
Installation	**-9** ·····	Horizontal impulse piping type, left side high pressure
Electrical connection	**0** ·····	G1/2 female, one electrical connection
☆	**2** ·····	1/2 NPT female, two electrical connections without blind plug
	3 ·····	Pg 13.5 female, two electrical connections without blind plug
	4 ·····	M20 female, two electrical connections without blind plug
	5 ·····	G1/2 female, two electrical connections and a blind plug
	7 ·····	1/2 NPT female, two electrical connections and a blind plug
	8 ·····	Pg 13.5 female, two electrical connections and a blind plug
	9 ·····	M20 female, two electrical connections and a blind plug
Integral indicator	**D** ·····	Digital indicator
	E ·····	Digital indicator with the range setting switch
☆	**N** ·····	(None)
Mounting bracket ☆	**A** ·····	JIS SECC 2-inch pipe mounting (flat type)
	B ·····	JIS SUS304 2-inch pipe mounting (flat type)
	N ·····	(None)
Optional codes	/□ Optional specification	

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The '☆' marks indicate the most typical selection for each specification. Example: EJA118W-DMSA1DA-AA02-92NA/□

*1: Refer to GS 1C22T1-E for HART Protocol version.
*2: In case of Wetted parts material code T (Tantalum), the process temperature limit is -10 to 200 °C.
*3: Wetted parts material code T (Tantalum) cannot be applied.
*4: Even in case where Fill fluid code D (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify Optional code K1 or K5.
*5: In case of Wetted parts material code H (Hastelloy C), T (Tantalum), and U (Titanium) or Fill fluid code C (for high temperature use), specify capillary length from 1 to 5 m.
*6: Refer to GS 1C22T2-E for Fieldbus communication.

● MODEL EJA118W [Flange size : 2-inch (50mm)]

Model	Suffix Codes	Description
EJA118W	· ·	Diaphragm sealed differential pressure transmitter (Flush diaphragm type)
Output Signal	**-D** ·	4 to 20 mA DC with digital communication (BRAIN protocol)
	-E ·	4 to 20 mA DC with digital communication (HART protocol) *1
	-F ·	Digital communication (FOUNDATION Fieldbus protocol) *2
Measurement span (capsule)	**M** ·	2.5 to 100 kPa {250 to 10000 mmH_2O}
	H ·	25 to 500 kPa {0.25 to 5 kgf/cm^2}
Wetted parts material		[Diaphragm] [Others]
	S ·	JIS SUS316L JIS SUS316L
Process flange rating	**J1** ·	JIS 10K
	J2 ·	JIS 20K
	J4 ·	JIS 40K
	A1 ·	ANSI class 150
	A2 ·	ANSI class 300
	A4 ·	ANSI class 600
	P1 ·	JPI class 150
	P2 ·	JPI class 300
	P4 ·	JPI class 600
	D2 ·	DIN PN10/16
	D4 ·	DIN PN25/40
	D5 ·	DIN PN64
Process flange size / material	**A** ·	2-inch (50 mm) / JIS S25C
	B ·	2-inch (50 mm) / JIS SUS304
	C ·	2-inch (50 mm) / JIS SUS316
Cover flange bolts material ☆	**A** ·	JIS SCM435
	B ·	JIS SUS630
Fill fluid		[Process temperature] [Ambient temperature]
☆	**-A** ·	For general use (silicone oil) -10 to 250 °C -10 to 60 °C
	-B ·	For general use (silicone oil) -30 to 180 °C -15 to 60 °C
——	**A** ·	Always A
Capillary length (m)	□ □ ·	Specify capillary length from 1 to 5 m in □ □. (Example for 2 m : 02)
Installation	**-9** ·	Horizontal impulse piping type, left side high pressure
Electrical connection	**0** ·	G1/2 female, one electrical connection
☆	**2** ·	1/2 NPT female, two electrical connections without blind plug
	3 ·	Pg 13.5 female, two electrical connections without blind plug
	4 ·	M20 female, two electrical connections without blind plug
	5 ·	G1/2 female, two electrical connections and a blind plug
	7 ·	1/2 NPT female, two electrical connections and a blind plug
	8 ·	Pg 13.5 female, two electrical connections and a blind plug
	9 ·	M20 female, two electrical connections and a blind plug
Integral indicator	**D** ·	Digital indicator
	E ·	Digital indicator with the range setting switch
☆	**N** ·	(None)
Mounting bracket ☆	**A** ·	JIS SECC 2-inch pipe mounting (flat type)
	B ·	JIS SUS304 2-inch pipe mounting (flat type)
	N ·	(None)
Optional codes	/□ Optional specification	

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The '☆' marks indicate the most typical selection for each specification. Example: EJA118W-DMSA1AA-AA02-92NA/□

*1: Refer to GS 1C22T1-E for HART Protocol version.
*2: Refer to GS 1C22T2-E for Fieldbus communication.

● MODEL EJA118N [Flange size : 4-inch (100 mm)]

Model	Suffix Codes	Description
EJA118N	· ·	Diaphragm sealed differential pressure transmitter (Extended diaphragm type)
Output Signal	**-D** ·	4 to 20 mA DC with digital communication (BRAIN protocol)
	-E ·	4 to 20 mA DC with digital communication (HART protocol) *1
	-F ·	Digital communication (FOUNDATION Fieldbus protocol) *4
Measurement span (capsule)	**M** ·	2.5 to 100 kPa {250 to 10000 mmH_2O}
	H ·	25 to 500 kPa {0.25 to 5 kgf / cm^2}
Wetted parts material		[Diaphragm] [Pipe] [Others]
	S ·	JIS SUS316L JIS SUS316 JIS SUS316
Process flange rating	**J1** ·	JIS 10K
	J2 ·	JIS 20K
	A1 ·	ANSI class 150
	A2 ·	ANSI class 300
	P1 ·	JIP class 150
	P2 ·	JIP class 300
	D2 ·	DIN PN10/16
	D4 ·	DIN PN25/40
Diaphragm extension length (X_2)	**2** ·	X_2 = 50 mm
	4 ·	X_2 = 100 mm
	6 ·	X_2 = 150 mm
Process flange size / material ☆	**G** ·	4-inch (100 mm) / JIS S25C
	H ·	4-inch (100 mm) / JIS SUS304
	J ·	4-inch (100 mm) / JIS SUS316
Cover flange bolts material ☆	**A** ·	JIS SCM435
	B ·	JIS SUS630
Fill fluid		[Process temperature] [Ambient temperature]
☆	**-A** ·	For general use (silicone oil) -10 to 250 °C -10 to 60 °C
	-B ·	For general use (silicone oil) -30 to 180 °C -15 to 60 °C
	-C ·	For high temperature use (silicone oil) 10 to 300 °C 10 to 60 °C
	-D *2. ·	For oil-prohibited use (fluorinated oil) -20 to 120 °C -10 to 60 °C
	-E ·	For low temperature use (ethylene glycol) -50 to 100 °C -40 to 60 °C
—	**B** ·	Always B
Capillary length (m)	□ □ *3. ·	Specify capillary length from 1 to 10 m in □ □. (Example for 2 m : 02)
Installation	**-9** ·	Horizontal impulse piping type, left side high pressure
Electrical connection	**0** ·	G1/2 female, one electrical connection
☆	**2** ·	1/2 NPT female, two electrical connections without blind plug
	3 ·	Pg 13.5 female, two electrical connections without blind plug
	4 ·	M20 female, two electrical connections without blind plug
	5 ·	G1/2 female, two electrical connections and a blind plug
	7 ·	1/2 NPT female, two electrical connections and a blind plug
	8 ·	Pg 13.5 female, two electrical connections and a blind plug
	9 ·	M20 female, two electrical connections and a blind plug
Integral indicator	**D** ·	Digital indicator
	E ·	Digital indicator with the range setting switch
☆	**N** ·	(None)
Mounting bracket ☆	**A** ·	JIS SECC 2-inch pipe mounting (flat type)
	B ·	JIS SUS304 2-inch pipe mounting (flat type)
	N ·	(None)
Optional codes	/□ Optional specification	

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The '☆' marks indicate the most typical selection for each specification. Example: EJA118N-DMSA12GA-AB02-92NA/□

*1: Refer to GS 1C22T1-E for HART Protocol version.
*2: Even in case where Fill fluid code D (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify Optional code K1 or K5.
*3: In case of Fill fluid code C (for high temperature use), specify capillary length from 1 to 5 m.
*4: Refer to GS 1C22T2-E for Fieldbus communication.

● MODEL EJA118N [Flange size : 3-inch (80mm)]

Model	Suffix Codes	Description
EJA118N	· ·	Diaphragm sealed differential pressure transmitter (Extended diaphragm type)
Output Signal	**-D** ·	4 to 20 mA DC with digital communication (BRAIN protocol)
	-E ·	4 to 20 mA DC with digital communication (HART protocol) *1
	-F ·	Digital communication (FOUNDATION Fieldbus protocol) *2
Measurement span (capsule)	**M** ·	2.5 to 100 kPa {250 to 10000 mmH_2O}
	H ·	25 to 500 kPa {0.25 to 5 kgf / cm^2}
Wetted parts material	**S** ·	[Diaphragm] JIS SUS316L; [Pipe] JIS SUS316; [Others] JIS SUS316
Process flange rating	**J1** ·	JIS 10K
	J2 ·	JIS 20K
	A1 ·	ANSI class 150
	A2 ·	ANSI class 300
	P1 ·	JPI class 150
	P2 ·	JPI class 300
	D2 ·	DIN PN10/16
	D4 ·	DIN PN25/40
Diaphragm extension length (X_2)	**2** ·	X_2 = 50 mm
	4 ·	X_2 = 100 mm
	6 ·	X_2 = 150 mm
Process flange size / material ☆	**D** ·	3-inch (80 mm) / JIS S25C
	E ·	3-inch (80 mm) / JIS SUS304
	F ·	3-inch (80 mm) / JIS SUS316
Cover flange bolts material ☆	**A** ·	JIS SCM435
	B ·	JIS SUS630
Fill fluid		[Process temperature] / [Ambient temperature]
☆	**-A** ·	For general use (silicone oil) -10 to 250 °C -10 to 60 °C
	-B ·	For general use (silicone oil) -30 to 180 °C -15 to 60 °C
——	**B** ·	Always B
Capillary length (m)	□ □ ·	Specify capillary length from 1 to 5 m in □ □. (Example for 2 m : 02)
Installation	**-9** ·	Horizontal impulse piping type, left side high pressure
Electrical connection	**0** ·	G1/2 female, one electrical connection
☆	**2** ·	1/2 NPT female, two electrical connections without blind plug
	3 ·	Pg 13.5 female, two electrical connections without blind plug
	4 ·	M20 female, two electrical connections without blind plug
	5 ·	G1/2 female, two electrical connections and a blind plug
	7 ·	1/2 NPT female, two electrical connections and a blind plug
	8 ·	Pg 13.5 female, two electrical connections and a blind plug
	9 ·	M20 female, two electrical connections and a blind plug
Integral indicator	**D** ·	Digital indicator
	E ·	Digital indicator with the range setting switch
☆	**N** ·	(None)
Mounting bracket ☆	**A** ·	JIS SECC 2-inch pipe mounting (flat type)
	B ·	JIS SUS304 2-inch pipe mounting (flat type)
	N ·	(None)
Optional codes	/□ Optional specification	

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The '☆' marks indicate the most typical selection for each specification. Example: EJA118N-DMSA12DA-AB02-92NA/□

*1: Refer to GS 1C22T1-E for HART Protocol version.
*2: Refer to GS 1C22T2-E for Fieldbus communication.

● MODEL EJA118Y

Model	Suffix Codes	Description
EJA118Y	·····	Diaphragm sealed differential pressure transmitter (Combination of extended diaphragm and flush diaphragm type)
Output Signal	**-D** ·····	4 to 20 mA DC with digital communication (BRAIN protocol)
	-E ·····	4 to 20 mA DC with digital communication (HART protocol) *1
	-F ·····	Digital communication (FOUNDATION Fieldbus protocol) *5
Measurement span (capsule)	**M** ·····	2.5 to 100 kPa {250 to 10000 mmH_2O}
	H ·····	25 to 500 kPa {0.25 to 5 kgf/cm^2}
High pressure side (extended diaphragmtype) wetted partsmaterial	**S** *2 ·····	[Diaphragm] JIS SUS316L; [Pipe] JIS SUS316; [Others] JIS SUS316
Process flange rating	**J1** ·····	JIS 10K
	J2 ·····	JIS 20K
	A1 ·····	ANSIclass 150
	A2 ·····	ANSIclass 300
	D2 ·····	DIN PN10/16
	D4 ·····	DIN PN25/40
	P1 ·····	JPI class 150
	P2 ·····	JPI class 300
Diaphragm extension length (X_2)	**2** ·····	X_2 = 50 mm
	4 ·····	X_2 = 100 mm
	6 ·····	X_2 = 150 mm
Process flange size / material ☆	**P** ·····	High pressure side 4-inch (100 mm) / JIS S25C Low pressure side 3-inch (80 mm) / JIS S25C
	Q ·····	High pressure side 4-inch (100 mm) / JIS SUS304 Low pressure side 3-inch (80 mm) / JIS SUS304
	R ·····	High pressure side 4-inch (100 mm) / JIS SUS316 Low pressure side 3-inch (80 mm) / JIS SUS316
Cover flange bolts material ☆	**A** ·····	JIS SCM435
	B ·····	JIS SUS630
Fill fluid		[Process temp.][Ambient temp.]
	-A ·····	For general use (silicone oil) -10 to 250 °C -10 to 60 °C
☆	**-B** ·····	For general use (silicone oil) -30 to 180 °C -15 to 60 °C
	-C ·····	For high temperature use (silicone oil) 10 to 300 °C 10 to 60 °C
	-D *3 ·····	For oil-prohibited use (fluorinated oil) -20 to 120 °C -10 to 60 °C
	-E ·····	For low temperature use (ethylene glycol) -50 to 100 °C -40 to 60 °C
——	**C** ·····	Always C
Capillary length (m)	□□ *4 ·····	Specify capillary length from 1 to 10 m in □□. (Example for 2 m : 02)
Installation	**-9** ·····	Horizontal impulse piping type, left side high pressure
Electrical connection	**0** ·····	G1/2 female, one electrical connection
☆	**2** ·····	1/2 NPT female, two electrical connections without blind plug
	3 ·····	Pg 13.5 female, two electrical connections without blind plug
	4 ·····	M20 female, two electrical connections without blind plug
	5 ·····	G1/2 female, two electrical connections and a blind plug
	7 ·····	1/2 NPT female, two electrical connections and a blind plug
	8 ·····	Pg 13.5 female, two electrical connections and a blind plug
	9 ·····	M20 female, two electrical connections and a blind plug
Integral indicator	**D** ·····	Digital indicator
	E ·····	Digital indicator with the range setting switch
☆	**N** ·····	(None)
Mounting bracket ☆	**A** ·····	JIS SECC 2-inch pipe mounting (flat type)
	B ·····	JIS SUS304 2-inch pipe mounting (flat type)
	N ·····	(None)
Optional codes	/□	Optional specification

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The '☆' marks indicate the most typical selection for each specification. Example: EJA118Y-DMSA12PA-AC02-92NA/□

*1: Refer to GS 1C22T1-E for HART Protocol version.
*2: Low pressure side (Flush diaphragm) wetted parts material: Diaphragm; SUS316L, Others; SUS316L.
*3: Even in case where Fill fluid code D (fluorinated oil) is selected, if degrease cleansing treatment or both degrease cleansing and dehydrating treatment for the wetted parts is required, specify Optional code K1 or K5.
*4: In case of Fill fluid code C (for high temperature use), specify capillary length from 1 to 5 m.
*5: Refer to GS 1C22T2-E for Fieldbus communication.

■ OPTIONAL SPECIFICATIONS

Item		Description		Code
Painting	Color change	Amplifier cover only		P□
	Coating change	Epoxy resin-baked coating		X1
Lightning protector		Transmitter power supply voltage : 10.5 to 32 V DC (10.5 to 28 V DC for JIS intrinsically safe type, 10.5 to 30 V DC for intrinsically safe type other than JIS, or 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		A
Oil-prohibited use		Degrease cleansing treatment		K1
Oil-prohibited use with dehydrating treatment		Degrease cleansing treatment and dehydrating treatment		K5
Calibration units *1		P calibration (psi unit)	(See Table 5. on page 16)	D1
		bar calibration (bar unit)		D3
		M calibration (kgf/cm^2 unit)		D4
Sealing treatment to JIS SUS630 nuts		Sealant (liquided silicone rubber) is coated on surfaces of JIS SUS630 nuts used for cover flange mounting.		Y
No serration *2		No serration work on the flange gasket surface (for ANSI flange only)		Q
Teflon film *3		With FEP film and fluorinated oil Working range : 20 to 150°C, 0 to 2 MPa {0 to 20 kgf/cm^2} (Not usable under vacuum)		T
Operating temperature correction *4		Adjusting range : 80 to 300°C		R
Capillary without PVC sheaths		When ambient temperature exceeds 100°C, or use of PVC is prohibited		V
Fast response *11		Update time: 0.125 sec or less Amplifier assembly damping time constant: 0.1 to 64 sec in 9 increments. Response time (with min. damping time constant): max. 0.5 sec (excluding diaphragm seal units)		F1
Failure alarm down-scale *5		Output status at CPU failure and hardware error. When combining with Optional code F1, output signal is -2.5%, 3.6 mA DC or less.		C1
Stainless steel amplifier housing *6		Amplifier housing material : JIS SCS14A stainless steel (equivalent to JIS SUS316 cast stainless steel or ASTM CF-8M)		E1
Gold-plate *7		Gold-plated diaphragm		A1
Mill Certificate		Process flange, Block	(For model EJA118W)	M05
		Process flange, Block, Pipe, Base	(For model EJA118N)	M06
		High pressure side: Process flange, Block, Pipe, Base Low pressure side: Process flange, Block	(For model EJA118Y)	M07
Pressure test/Leak test Certificate		(Flange rating)	(Test pressure)	
		JIS 10K	2 MPa {20 kgf/cm^2}	T31
		JIS 20K	5 MPa {50 kgf/cm^2}	T32
		JIS 40K *8	10 MPa {100 kgf/cm^2}	T33
		ANSI/JPI Class 150	3 MPa {29.8 kgf/cm^2}	T36
		ANSI/JPI Class 300 *8	7.7 MPa {77 kgf/cm^2}	T37
		ANSI/JPI Class 300 *9	7 MPa {70 kgf/cm^2}	T38
		ANSI/JPI Class 600 *8	14 MPa {140 kgf/cm^2}	T39

Nitrogen (N_2) Gas*10
Retention time: 10 minutes

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*1: The unit of MWP (Max. working pressure) on name plate of a housing is the same unit as specified by Optional code D1, D3, and D4.
*2: This item cannot be applied to model EJA118W Wetted part material code H, T, or U.
*3: Teflon film can only be specified for model EJA118W.
*4: Specify the process operating temperature for zero correction. Example: Zero correction by process temperature 90°C.
*5: Applicable for Output signal code D and E. The hardware error indicates faulty amplifier or capsule.
*6: Applicable for Electrical connection code 2, 3, 4 and 7. Not applicable for optional Code P□ and X1.
*7: Applicable for Wetted parts material code S.
*8: Applicable for model EJA118W.
*9: Applicable for model EJA118N and EJA118Y.
*10: Pure nitrogen gas is used for oil-prohibited use (Optional code K1 and K5).
*11: Applicable for Output signal code D and E. Consult Yokogawa when combining with Optional code for explosion protected type.

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

For FOUNDATION Fieldbus explosion protected type, see GS 1C22T2-E.

Item	Description		Code
Factory Mutual (FM)	FM Explosion proof Approval *4 Explosion proof for Class I, Division 1, Groups B, C and D Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G Hazardous (classified) locations, indoors and outdoors (NEMA 4X) Division 2, 'SEALS NOT REQUIRED', Temp. Class : T6 Amb. Temp. :-40 to 60°C (-40 to 140°F) Electrical connection : 1/2 NPT female *1		**FF1**
	FM Intrinsically safe Approval *4 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 Hazardous Locations. Nonincendive for Class I, Division 2, Groups A, B, C & D, Class II, Division. 2, Groups E, F & G, and Class III, Division 1 Hazardous Locations. Enclosure : "NEMA 4X", Temp. Class : T4, Amb. Temp. : -40 to 60°C (-40 to 140°F) Intrinsically Safe Apparatus Parameters [Groups A, B, C, D, E, F and G]Vmax=30 V, Imax=165 mA, Pmax=0.9 W, Ci=22.5 nF, Li=730 µH [Groups C, D, E, F and G] Vmax=30 V, Imax=225 mA, Pmax=0.9 W, Ci=22.5 nF, Li=730 µH Electrical connection : 1/2 NPT female *1		**FS1**
	Combined FF1and FS1 *4 Electrical connection : 1/2 NPT female *1		**FU1**
CENELEC (KEMA)	CENELEC (KEMA) Flameproof Approval *4 EExd IIC T4, T5, T6 Amb. Temp. : T4 and T5 ; -40 to 80°C (-40 to 176°F), T6 ; -40 to 75°C(-40 to 167°F) Max. process Temp. : T4 ; 120°C(248°F), T5 ; 100°C(212°F), T6 ; 85°C(185°F) Electrical connection : 1/2 NPT female, Pg 13.5 female and M20 female *2		**KF1**
	CENELEC (KEMA) Intrinsically safe Approval *4 EEx ia IIC T4, Amb. Temp. : -40 to 60°C(-40 to 140°F) Ui=30 V, Ii=165 mA, Pi=0.9 W, Ci=22.5 nF, Li=730 µH Electrical connection : 1/2 NPT female, Pg 13.5 female and M20 female *2		**KS1**
	Combined KF1, KS1 and Type N Approval *4 Type N Approval Ex nA IIC T4, Amb. Temp. : -40 to 60°C(-40 to 140°F) U=30 V, I=165 mA Electrical connection : 1/2 NPT female, Pg 13.5 female and M20 female *2		**KU1**
Canadian Standards Association (CSA)	CSA Explosion proof Approval *4 Explosion proof for Class I, Division 1, Groups B, C and D Dustignitionproof for Class II/III, Division 1, Groups E, F and G Division2 'SEALS NOT REQUIRED' , Temp. Class : T4, T5, T6 Encl Type 4x Max. Process Temp. : T4 ; 120°C (248°F), T5 ; 100°C (212°F), T6 ; 85°C (185°F) Amb. Temp. :-40 to 80°C (-40 to 176°F) Electrical connection : 1/2 NPT female *1		**CF1**
	CSA Intrinsically safe Approval *4 Class I, Groups A, B, C and D Class II and III, Groups E, F and G Encl Type 4x, Temp. Class : T4, Amb. Temp. : -40 to 60°C (-40 to 140°F) Vmax=30 V, Imax=165 mA, Pmax=0.9 W, Ci=22.5 nF, Li=730 µH Electrical connection : 1/2 NPT female *1		**CS1**
	Combined CF1 and CS1 *4 Electrical connection : 1/2 NPT female *1		**CU1**
Standards Association of Australia (SAA)	SAA Flameproof, Intrinsically safe and Non-sparking Approval *4 Ex d IIC T4/T5/T6, IP67 class I, Zone 1, Amb. Temp. : -40 to 80°C (-40 to 176°F) Max. Process Temp. : T4 ; 120°C (248°F), T5 ; 100°C (212°F), T6 ; 85°C (185°F) Ex ia IIC T4, IP67 class I, Zone 0 Ex n IIC T4, IP67 class I, Zone 2 Ui=30 V DC, Ii=165 mA DC, Wi=0.9 W, Amb. Temp. : -40 to 60°C (-40 to 140°F) Electrical connection : 1/2 NPT female, Pg 13.5 female and M20 female *2		**SU1**
Japanese Industrial Standards (JIS)	JIS Flameproof Approval, Ex do IIC T4X *3 *4 *6 Amb. Temp. :-20 to 60°C , Process Temp. : -20 to 120°C		**JF3**
	JIS Intrinsically safe Approval, Ex ia IIC T4 *5 Amb. Temp. :-20 to 60°C , Process Temp. : -20 to 120°C		**JS3**
Attached flameproof packing adapter *3	Electrical connection : G1/2 female Applicable cable : O.D. 8 to 12 mm	1 pc.	**G11**
		2 pcs.	**G12**

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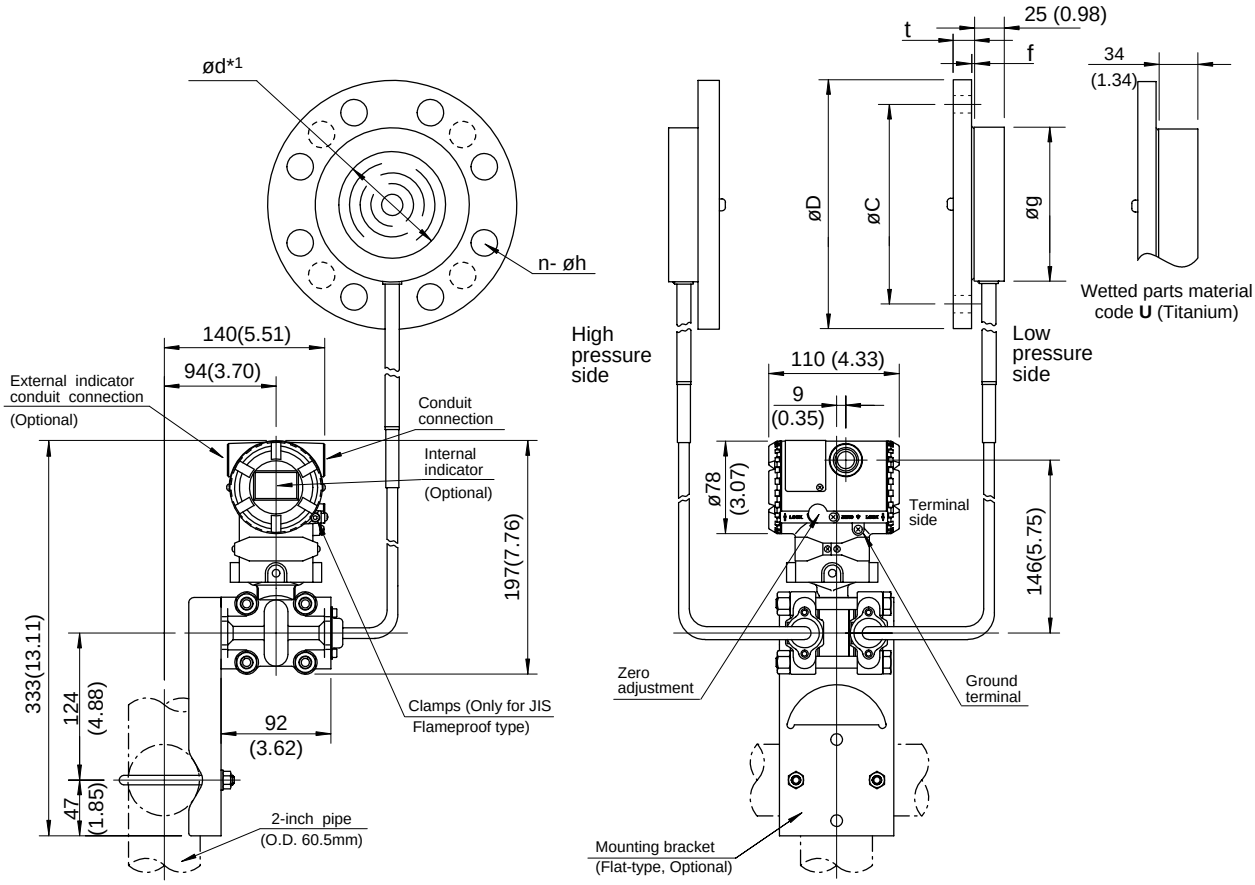
*1: Applicable for Electrical connection code 2 and 7.
*2: Applicable for Electrical connection code 2, 3, 4, 7, 8, and 9.
*3: If cable wiring is to be used to a JIS flameproof type transmitter, add the YOKOGAWA-assured flameproof packing adapter.
*4: Applicable for Output signal code D and E. For intrinsically safe approval, use the safety barrier certified by the testing laboratories (BARD-400 is not applicable).
*5: Applicable for output signal code D. See <Related Instruments> on page 16 for JIS-approved safety barrier selection.
*6: In case the ambient temperature exceeds 50°C, use heat-resistant cables with maximum allowable temperature of 75°C or above.

DIMENSIONS

Model EJA118W

Unit : mm (approx.inch)



*1: Indicates inside diameter of gasket contact surface.

Process flange size : 3 inch (80 mm)

Flange Rating	øD	øC	øg	ød	t	f *	n	øh
JIS 10K	185(7.28)	150(5.91)	130(5.12)	90(3.54)	18(0.71)	0	8	19(0.75)
JIS 20K	200(7.87)	160(6.30)	130(5.12)	90(3.54)	22(0.87)	0	8	23(0.91)
JIS 40K	210(8.27)	170(6.69)	130(5.12)	90(3.54)	32(1.26)	0	8	23(0.91)
ANSI Class 150	190.5(7.50)	152.4(6)	130(5.12)	90(3.54)	23.9(0.94)	1.6(0.06)	4	19.1(0.75)
ANSI Class 300	209.6(8.25)	168.1(6.62)	130(5.12)	90(3.54)	28.5(1.12)	1.6(0.06)	8	22.4(0.88)
ANSI Class 600	209.6(8.25)	168.1(6.62)	130(5.12)	90(3.54)	38.2(1.50)	6.4(0.25)	8	22.4(0.88)
JPI Class 150	190(7.48)	152.4(6)	130(5.12)	90(3.54)	24(0.94)	1.6(0.06)	4	19(0.75)
JPI Class 300	210(8.27)	168.1(6.62)	130(5.12)	90(3.54)	28.5(1.12)	1.6(0.06)	8	22(0.87)
JPI Class 600	210(8.27)	168.1(6.62)	130(5.12)	90(3.54)	38.4(1.51)	6.4(0.25)	8	22(0.87)
DIN PN 10/16	200(7.78)	160(6.30)	130(5.12)	90(3.54)	20(0.79)	0	8	18(0.71)
DIN PN 25/40	200(7.78)	160(6.30)	130(5.12)	90(3.54)	24(0.94)	0	8	18(0.71)
DIN PN 64	215(8.46)	170(6.69)	130(5.12)	90(3.54)	28(1.10)	0	8	22(0.87)

Process flange size : 2 inch (50 mm)

Flange Rating	øD	øC	øg	ød	t	f *	n	øh
JIS 10K	155(6.10)	120(4.72)	100(3.94)	61(2.40)	16(0.63)	0	4	19(0.75)
JIS 20K	155(6.10)	120(4.72)	100(3.94)	61(2.40)	18(0.71)	0	8	19(0.75)
JIS 40K	165(6.50)	130(5.12)	100(3.94)	61(2.40)	26(1.02)	0	8	19(0.75)
ANSI Class 150	152.4(6.00)	120.7(4.75)	100(3.94)	61(2.40)	19.1(0.75)	1.6(0.06)	4	19.1(0.75)
ANSI Class 300	165.1(6.50)	127.0(5.00)	100(3.94)	61(2.40)	22.4(0.88)	1.6(0.06)	8	19.1(0.75)
ANSI Class 600	165.1(6.50)	127.0(5.00)	100(3.94)	61(2.40)	31.8(1.25)	6.4(0.25)	8	19.1(0.75)
JPI Class 150	152(6.10)	120.6(4.75)	100(3.94)	61(2.40)	19.5(0.77)	1.6(0.06)	4	19(0.75)
JPI Class 300	165(6.50)	127.0(5.00)	100(3.94)	61(2.40)	22.5(0.89)	1.6(0.06)	8	19(0.75)
JPI Class 600	165(6.50)	127.0(5.00)	100(3.94)	61(2.40)	31.9(1.26)	6.4(0.25)	8	19(0.75)
DIN PN 10/16	165(6.50)	125(4.92)	100(3.94)	61(2.40)	18(0.71)	0	4	18(0.71)
DIN PN 25/40	165(6.50)	125(4.92)	100(3.94)	61(2.40)	20(0.78)	0	4	18(0.71)
DIN PN 64	180(7.09)	135(5.31)	100(3.94)	61(2.40)	26(1.02)	0	4	22(0.87)

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

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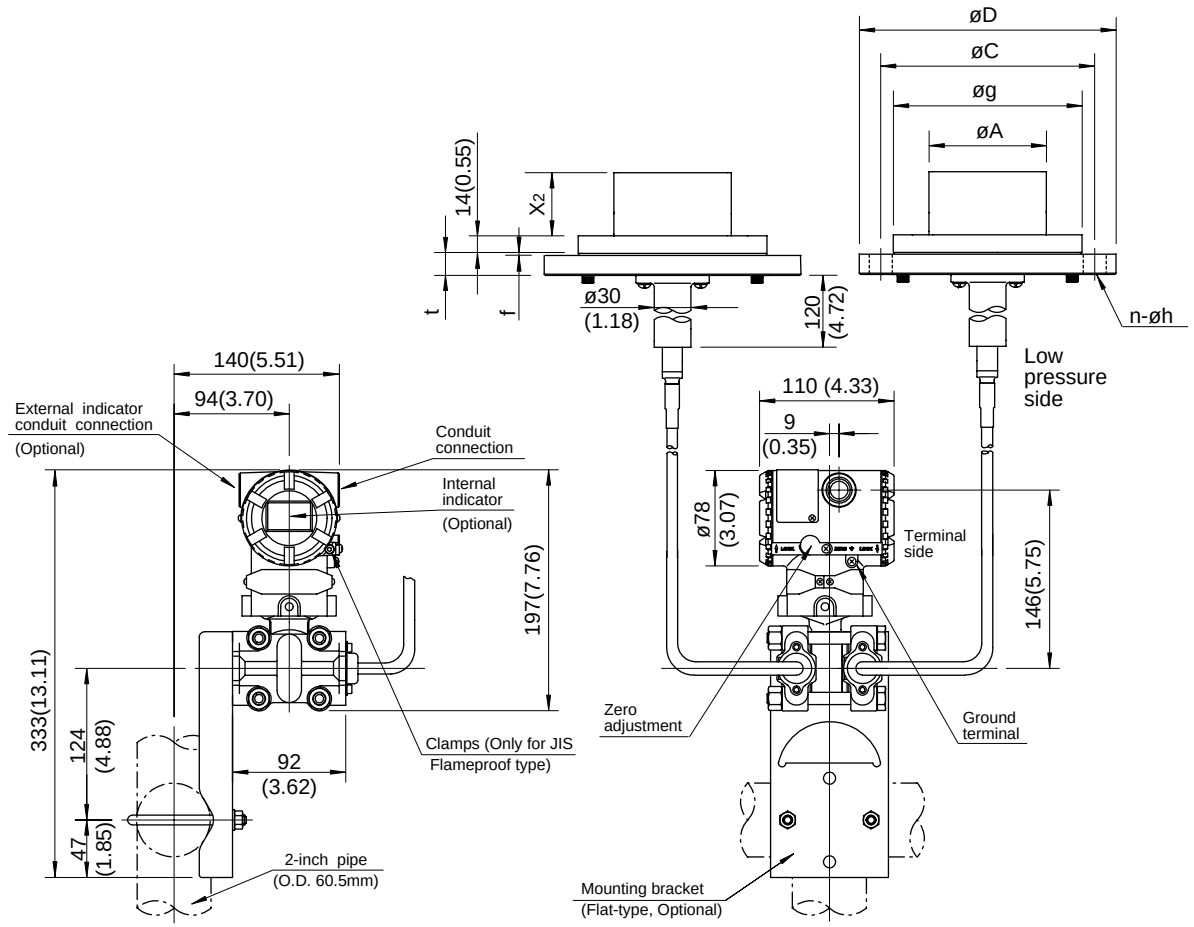
● Model EJA118N

Unit : mm (approx.inch)



Diaphramg extension length code
2 : X_2 = 50 mm (2 inch)
4 : X_2 = 100 mm (4 inch)
6 : X_2 = 150 mm (6 inch)

Process flange size : 4 inch (100 mm)

Flange Rating	øD	øC	øg	øA	t	f *	n	øh
JIS 10K	210(8.72)	175(6.89)	155(6.10)	96(3.78)	18(0.71)	0	8	19(0.75)
JIS 20K	225(8.86)	185(7.28)	155(6.10)	96(3.78)	24(0.94)	0	8	23(0.91)
ANSI Class 150	228.6(9.00)	190.5(7.50)	155(6.10)	96(3.78)	23.9(0.94)	1.6(0.06)	8	19.1(0.75)
ANSI Class 300	254(10.00)	200.2(7.88)	155(6.10)	96(3.78)	31.8(1.25)	1.6(0.06)	8	22.4(0.88)
JPI Class 150	229(9.02)	190.5(7.50)	155(6.10)	96(3.78)	24(0.94)	1.6(0.06)	8	19(0.75)
JPI Class 300	254(10.00)	200.2(7.88)	155(6.10)	96(3.78)	32(1.26)	1.6(0.06)	8	22(0.87)
DIN PN 10/16	220(8.66)	180(7.09)	155(6.10)	96(3.78)	20(0.79)	0	8	18(0.71)
DIN PN 25/40	235(9.25)	190(7.48)	155(6.10)	96(3.78)	24(0.94)	0	8	22(0.87)

Process flange size : 3 inch (80 mm)

Flange Rating	øD	øC	øg	øA	t	f *	n	øh
JIS 10K	185(7.28)	150(5.91)	130(5.12)	71(2.80)	18(0.71)	0	8	19(0.75)
JIS 20K	200(7.87)	160(6.30)	130(5.12)	71(2.80)	22(0.87)	0	8	23(0.91)
ANSI Class 150	190.5(7.50)	152.4(6)	130(5.12)	71(2.80)	23.9(0.94)	1.6(0.06)	4	19.1(0.75)
ANSI Class 300	209.6(8.25)	168.1(6.62)	130(5.12)	71(2.80)	28.5(1.12)	1.6(0.06)	8	22.4(0.88)
JPI Class 150	190(7.48)	152.4(6)	130(5.12)	71(2.80)	24(0.94)	1.6(0.06)	4	19(0.75)
JPI Class 300	210(8.27)	168.1(6.62)	130(5.12)	71(2.80)	28.5(1.12)	1.6(0.06)	8	22(0.87)
DIN PN 10/16	200(7.78)	160(6.30)	130(5.12)	71(2.80)	20(0.79)	0	8	18(0.71)
DIN PN 25/40	200(7.78)	160(6.30)	130(5.12)	71(2.80)	24(0.94)	0	8	18(0.71)

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

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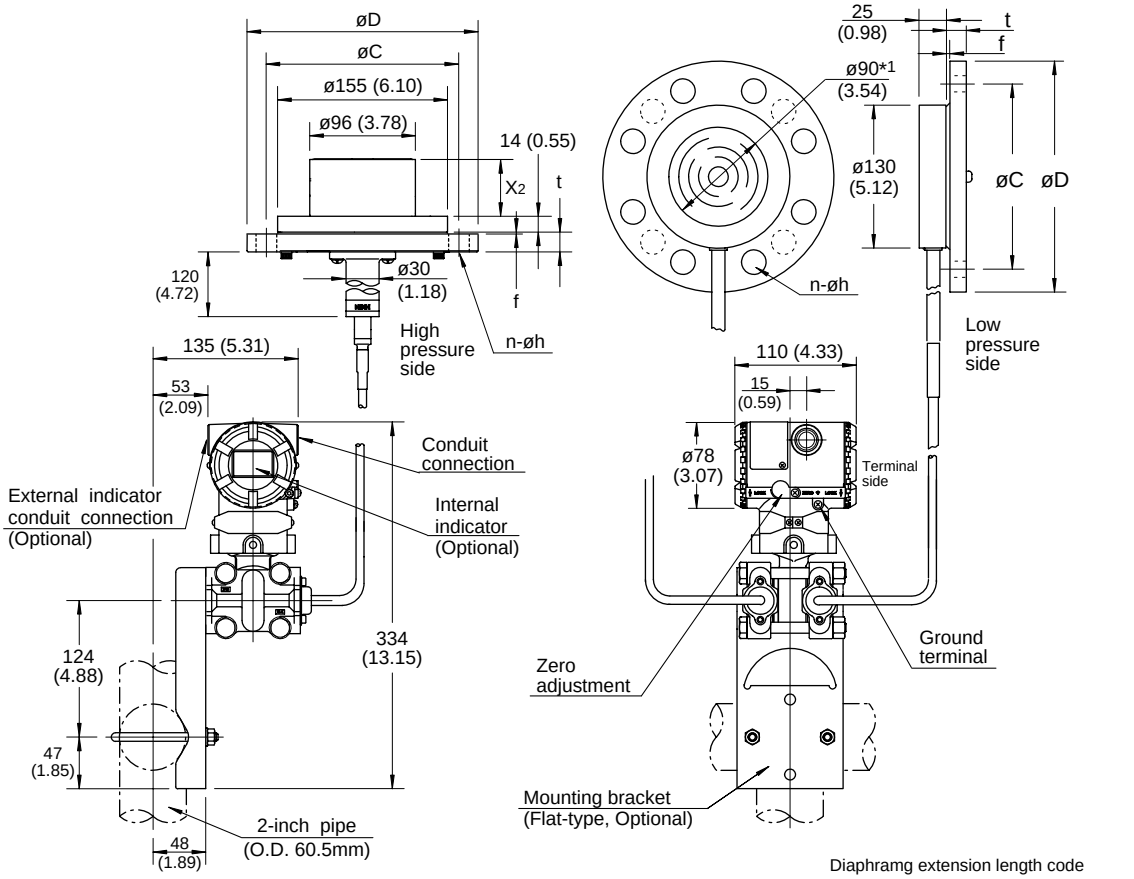
● Model EJA118Y

Unit : mm (approx.inch)



*1: Indicates inside diameter of gasket contact surface.

Diaphramg extension length code
2 : X_2 = 50 mm (2 inch)
4 : X_2 = 100 mm (4 inch)
6 : X_2 = 150 mm (6 inch)

High pressure side Process flange size : 4 inch (100 mm)

Flange Rating	øD	øC	t	f *	n	øh
JIS 10K	210(8.72)	175(6.89)	18(0.71)	0	8	19(0.75)
JIS 20K	225(8.86)	185(7.28)	24(0.94)	0	8	23(0.91)
ANSI Class 150	228.6(9.00)	190.5(7.50)	23.9(0.94)	1.6(0.06)	8	19.1(0.75)
ANSI Class 300	254(10.00)	200.2(7.88)	31.8(1.25)	1.6(0.06)	8	22.4(0.88)
JPI Class 150	229(9.02)	190.5(7.50)	24(0.94)	1.6(0.06)	8	19(0.75)
JPI Class 300	254(10.00)	200.2(7.88)	32(1.26)	1.6(0.06)	8	22(0.87)
DIN PN 10/16	220(8.66)	180(7.09)	20(0.79)	0	8	18(0.71)
DIN PN 25/40	235(9.25)	190(7.48)	24(0.94)	0	8	22(0.87)

Low pressure side Process flange size :3 inch (80 mm)

Flange Rating	øD	øC	t	f *	n	øh
JIS 10K	185(7.28)	150(5.91)	18(0.71)	0	8	19(0.75)
JIS 20K	200(7.87)	160(6.30)	22(0.87)	0	8	23(0.91)
ANSI Class 150	190.5(7.50)	152.4(6)	23.9(0.94)	1.6(0.06)	4	19.1(0.75)
ANSI Class 300	209.6(8.25)	168.1(6.62)	28.5(1.12)	1.6(0.06)	8	22.4(0.88)
JPI Class 150	190(7.48)	152.4(6)	24(0.94)	1.6(0.06)	4	19(0.75)
JPI Class 300	210(8.27)	168.1(6.62)	28.5(1.12)	1.6(0.06)	8	22(0.87)
DIN PN 10/16	200(7.78)	160(6.30)	20(0.79)	0	8	18(0.71)
DIN PN 25/40	200(7.78)	160(6.30)	24(0.94)	0	8	18(0.71)

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

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Table 5. Calibration Units

Measurement Span and Range		Optional Code		
		D1 (psi Unit)	D3 (bar Unit)	D4 (kgf/cm^2 Unit)
M	Span	10 to 400 inH_2O	25 to 1000 mbar	250 to 10000 mmH_2O
	Range	-400 to 400 inH_2O	-1000 to 1000 mbar	-10000 to 10000 mmH_2O
H	Span	100 to 2000 in H_2O	250 to 5000 mbar	0.25 to 5 kgf/cm^2
	Range	-2000 to 2000 in H_2O	-5000 to 5000 mbar	-5 to 5 kgf/cm^2

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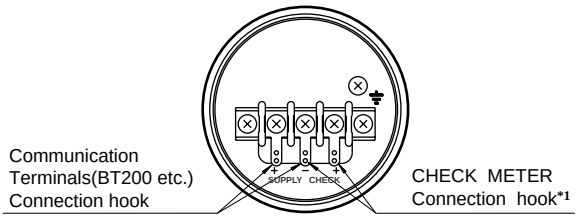
● Terminal Configuration



● Terminal Wiring

SUPPLY + −	Power supply and output terminal
CHECK + −	External indicator(ammeter) terminal*1
⏚	Ground terminal

*1: When using an external indicator or a check meter, the internal resistance must be 10 Ω or less. Not available for Fieldbus communication(Output signal code F).

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< Ordering Information >

Specify the following when ordering
1. Model, suffix codes, and optional 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.
   2) Specify only one unit from the table, 'Settings when shipped.'
3. Select linear or square root for output mode and display mode.
   Note: If not specified, the instrument is shipped set for linear mode.
4. Select normal or reverse for operation mode
   Note: If not specified, the instrument is shipped in normal operation mode.
5. 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 -19999 to 19999.
6. Tag Number (if required)
7. Process fluid temperature for zero compensation (if required)

< Related Instruments >

Power Distributor: Refer to GS 1B4T1-E,1B4T2-E.
BRAIN TERMINAL: Refer to GS 1C0A11-E
Safety Barrier for JIS Intrinsicaly Safe Type

Supplier	Type	Model
MTL	Isolator	MTL3046B
		MTL4041B
P+F	Isolator	KFD2-STC3-Ex 1
		KFD2-STV3-Ex 1-1, 2, 3

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Note : Requirements of capacitance and inductance for cable wiring.
Cw ≤ Co – 11[nF]
Lw ≤ Lo – 730[μH]
(Co : Max.external capacitance)
(Lo : Max.external inductance)

< Reference >

1. JIS SUS316L stainless steel; Equivalent to AISI 316L.
2. JIS SUS316 stainless steel; Equivalent to AISI 316.
3. JIS SUS304 stainless steel; Equivalent to AISI 304.
4. JIS S25C carbon steel; Equivalent to AISI 1025.
5. JIS SECC; Carbon steel.
6. Teflon; Trademark of E.I. DuPont de Nemours & Co.
7. JIS SUS630 stainless steel; Equivalent to ASTM 630.
8. Hastelloy; Trademark of Haynes International Inc.
9. JIS SCS14A stainless steel; Equivalent to JIS SUS316 case stainless steel or ASTM CF-8M.
10. HART; Trademark of the HART Communication Foundation.
11. FOUNDATION; Trademark of Fieldbus Foundation.