GS 01C21F01-00E

General Specifications

Model EJA510A and EJA530A Absolute and Gauge Pressure Transmitters

DPharp

[Style: S2]

The absolute and gauge pressure transmitter model EJA510A and EJA530A can be used to measure

liquid, gas, or steam pressure. Both output a 4 to 20 mA DC signal corresponding to the measured pressure, and also feature remote setup and monitoring through communications with the BRAIN[™] terminal and CENTUM CS[™] or µXL[™] or HART[®] 275 host.

STANDARD SPECIFICATIONS

Refer to GS 01C22T02-00E for FOUNDATION Fieldbus communication type and GS 01C22T03-00E for PROFIBUS PA communication type marked with " \diamond ".

□ PERFORMANCE SPECIFICATIONS

Zero-based calibrated span, linear output, wetted parts material code 'S' and silicone oil.

Reference Accuracy of Calibrated Span

(including the effects of zero-based linearity, hysteresis, and repeatability, values are in absolute for EJA510A)

 ± 0.2 % of Span

 ± 0.075 % of Span, when/ HAC is specified (EJA530A: A, B and C capsule)

 ± 0.12 % of Span, when/ HAC is specified (EJA530A: D capsule)

For spans below X,

 \pm [0.05+0.15 $\frac{X}{\text{Span}}$] % of Span

 \pm [0.025+0.05 $\frac{X}{\text{Span}}$] % of span, when/ HAC is specified (EJA530A: A, B and C capsule)

$$\pm [0.03+0.09 \frac{X}{\text{Span}}]$$
 % of span, when/ HAC is

specified (EJA530A: D capsule)

Where X equals:

| Capsule | X MPa {psi} |
|-------------|--------------|
| A | 20 kPa {2.9} |
| A with/ HAC | 40 kPa {5.8} |
| В | 0.2 {29} |
| С | 1 {145} |
| D | 8 {1160} |

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

±[0.15% Span + 0.15% URL]

Stability

±0.1% of URL per 12 months

Vibration Effects

 ± 0.1 % of URL (5 to 15Hz; 4mm peak-to-peak constant displacement, 15 to 150Hz; 2g, 150 to 2000Hz; 1g)



Power Supply Effects "◊" ±0.005 % per Volt (from 21.6 to 32 V DC, 350 Ω)

□ FUNCTIONAL SPECIFICATIONS

Span & Range Limits

(Values are in absolute for EJA510A)

| Sp | asurement ban and Range | MPa | psi (/D1) | bar (/D3) | kgf/cm ² (/D4) |
|------|-------------------------------|------------------|--------------|-----------|---------------------------|
| Span | | 10 to 200 kPa | 1.45 to 29 | 0.1 to 2 | 0.1 to 2 |
| A | Range | 0 to 200 kPa | 0 to 29 | 0 to 2 | 0 to 2 |
| Span | | 0.1 to 2 | 14.5 to 290 | 1 to 20 | 1 to 20 |
| В | Range | 0 to 2 | 0 to 290 | 0 to 20 | 0 to 20 |
| С | Span | 0.5 to 10 | 72.5 to 1450 | 5 to 100 | 5 to 100 |
| U | Range | 0 to 10 | 0 to 1450 | 0 to 100 | 0 to 100 |
| D | Span | 5 to 50 | 720 to 7200 | 50 to 500 | 50 to 500 |
| | Range | 0 to 50 | 0 to 7200 | 0 to 500 | 0 to 500 |
| | | | | | T01E.EPS |

URL is defined as the Upper Range Limit from the table above.

Zero Adjustment Limits

Zero can be fully elevated or suppressed, within the Lower and Upper Range Limits of the capsule.

External Zero Adjustment "0"

External zero is continuously adjustable with 0.01 % incremental resolution of span. Span may be adjusted locally using the digital indicator with range switch.

Mounting Position Effect

Rotation in diaphragm plane has no effect. Tilting up to 90° will cause zero shift up to 0.27 kPa {1.1 inH₂O} which can be corrected by the zero adjustment.

Output "�"

Two wire 4 to 20 mA DC output with digital communications. BRAIN or HART FSK protocol are superimposed on the 4 to 20 mA signal.



Yokogawa Electric Corporation 2-9-32, Nakacho, Musashino-shi, Tokyo, 180-8750 Japan Phone: 81-422-52-5690 Fax.: 81-422-52-2018 GS 01C21F01-00E ©Copyright Apr. 1999 19th Edition Oct. 2008

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 or less -2.5%, 3.6 mA DC or less (Optional code /F1)

Note : Applicable for Output signal code D and E.

Damping Time Constant (1st order)

The sum of the amplifier and capsule damping time constant must be used for the overall time constant. Amp damping time constant is adjustable from 0.2 to 64 seconds.

| Capsule (Silicone Oil) | A, B, C, and D |
|-----------------------------|----------------|
| Time Constant (approx. sec) | 0.2 |

Ambient Temperature Limits (approval codes may affect limits)

-40 to 85 °C (-40 to 185 °F) -30 to 80 °C (-22 to 176 °F) with LCD Display

Process Temperature Limits

(approval codes may affect limits)

-40 to 120 °C (-40 to 248 °F)

Ambient Humidity Limits

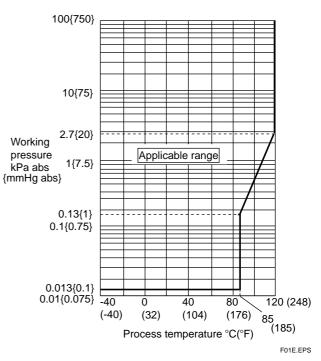
5 to 100 % RH @ 40 °C (104 °F)

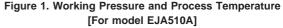
Maximum Overpressure

| | Capsule | | | | |
|---------|-----------------------|--------------------|--|--|--|
| Capsule | EJA510A | EJA530A | | | |
| А | 4 MPa abs{580 psia} | 4 MPa {580 psig} | | | |
| В | 4 MPa abs{580 psia} | 4 MPa {580 psig} | | | |
| С | 20 MPa abs{2900 psia} | 20 MPa {2900 psig} | | | |
| D | 60 MPa abs{8500 psia} | 60 MPa {8500 psig} | | | |

Working Pressure Limits (Silicone Oil) **Maximum Pressure Limit**

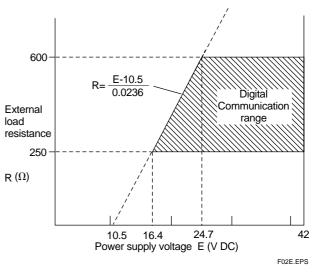
| | Capsule | | | | |
|---------|-----------------------|--------------------|--|--|--|
| Capsule | EJA510A | EJA530A | | | |
| А | 200 kPa abs{29 psia} | 200 kPa {29 psig} | | | |
| В | 2 MPa abs{290 psia} | 2 MPa {290 psig} | | | |
| С | 10 MPa abs{1450 psia} | 10 MPa {1450 psig} | | | |
| D | 50 MPa abs{7200 psia} | 50 MPa {7200 psig} | | | |

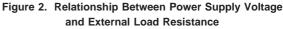




Supply & Load Requirements

(Safety approvals can affect electrical requirements, see graph below) With 24 V DC supply, up to a 570 Ω load can be used.





See graph below.

2

Supply Voltage "O"

10.5 to 42 V DC for general use and flameproof type
10.5 to 32 V DC for lightning protector (Optional code /A)
10.5 to 30 V DC for intrinsically safe, Type n,

nonincendive, or non-sparking type Minimum voltage limited at 16.4 V DC for digital communications, BRAIN and HART

Load (Output signal code D and E)

0 to 1335 Ω for operation 250 to 600 Ω for digital communication

EMC Conformity Standards "�" CE , C N200

EN61326-1 Class A, Table2 (For use in industrial locations)

EN61326-2-3

European Pressure Equipment Directive 97/23/EC Sound Engineering Practice

With option code /PE3

C € 0038

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

Communication 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

 $0.22 \ \mu\text{F} \text{ or less}$ (see note)

Load Inductance

3.3 mH or less (see note)

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

Note : For general-use and Flameproof type. For Intrinsically safe type, please refer to 'OPTIONAL SPECIFICATIONS.'

□ PHYSICAL SPECIFICATIONS

Wetted Parts Materials:

Diaphragm and Process connector Refer to 'MODEL AND SUFFIX CODE.'

Non-wetted Parts Materials:

Housing

Low copper cast-aluminum alloy with polyurethane paint (Munsell 0.6GY3.1/2.0)

Degrees of Protection

IP67, NEMA4X, JIS C0920 immersion proof

Cover O-rings Buna-N

Data plate and tag SUS304 or SUS316 (option)

Fill Fluid

Silicone, Fluorinated oil (option)

Weight

1.6 kg (3.5 lb) without integral indicator, mounting bracket.

Connections

Refer to the model code to specify the process and the electrical connection type.

< Settings When Shipped > "O"

| Tag Number | As specified in order *1 |
|---|--|
| Output Mode | 'Linear' |
| Display Mode | 'Linear' |
| Operation Mode | 'Normal' unless otherwise specified in order |
| Damping Time Constant | '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 ₂ O, mmAq, mmWG, mmHg, Torr, Pa, hPa, kPa, MPa, mbar, bar, gf/cm ² , kgf/cm ² , inH ₂ O, inHg, ftH ₂ O, psi, or atm.(Only one unit can be specified) |
| | T05E.EPS |

*1: Up to 16 alphanumeric characters for BRAIN and 8 characters for HART including '-' and '? will be entered in the amplifier memory. If specified Tag includes other characters than above, it will not be entered in the amplifier memory.

MODEL AND SUFFIX CODES

Model EJA510A and EJA530A

| Model | Suffix C | odes | Description | | |
|------------------------|--------------------|---------------------|--|--|--|
| EJA510A EJA530A | | | Absolute pressure transmitter Gauge pressure transmitter | | |
| Output Signal | -D · · · · · · | | 4 to 20 mA DC with digital communication (BRAIN protocol) | | |
| | -E · · · · · · · · | | 4 to 20 mA DC with digital communication (HART protocol, refer to GS 01C22T01-00E) | | |
| | -F · · · · · · · · | | Digital communication (FOUNDATION Fieldbus protocol, refer to GS 01C22T02-00E) | | |
| | -G · · · · · · | | Digital communication (PROFIBUS PA protocol, refer to GS 01C22T03-00E) | | |
| Measurement span | A · · · · · | | 10 to 200 kPa {0.1 to 2 kgf/cm ² } {1.45 to 29 psi} {0.1 to 2 bar} | | |
| (capsule) | B · · · · · | | 0.1 to 2 MPa {1 to 20 kgf/cm ² } {14.5 to 290 psi} {1 to 20 bar} | | |
| | C | | 0.5 to 10 MPa {5 to 100 kgf/cm ² } {72.5 to 1450 psi} {5 to 100 bar} | | |
| | D | | 5 to 50 MPa {50 to 500 kgf/cm ² } {720 to 7200 psi} {50 to 500 bar} | | |
| Wetted parts | | | [Process Connection] [Diaphragm] | | |
| material *2 | S# • • • • | | SUS316L Hastelloy C-276 *3 | | |
| | H# • • • • | | Hastelloy C-276 *3 Hastelloy C-276 *3 | | |
| Process connection | 4 · · · · | | 1/2 NPT female | | |
| | 7 · · · · | | 1/2 NPT male | | |
| | 8 | • • • • • • • • • • | G 1/2 DIN 16 288 male | | |
| | 9 | • • • • • • • • • • | M20×1.5 DIN 16 288 male | | |
| | N· | | Always N | | |
| | - | 0 • • • • • • • • • | Always 0 | | |
| Electrical connectio | n | 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 | | |
| | | A | G1/2 female, two electrical connections and a SUS316 blind plug | | |
| | | C | 1/2 NPT female, two electrical connections and a SUS316 blind plug | | |
| | | D | M20 female, two electrical connections and a SUS316 blind plug | | |
| Integral indicator | | D | | | |
| E | | E | Digital indicator with the range setting switch *1 | | |
| | | ☆ N | (None) | | |
| Mounting bracket E · · | | E··· | SECC Carbon steel 2-inch pipe mounting | | |
| - | | F··· | SUS304 2-inch pipe mounting | | |
| | | L | SUS316 2-inch pipe mounting | | |
| | | ☆ N··· | (None) | | |
| Optional codes | | I | / Optional specification | | |
| • | | | | | |

T02E.EPS

The '☆' marks indicate the most typical selection for each specification. Example: EJA530A-DAS4N-02NN/□ The '#'marks indicate the construction materials conform to NACE material recommendations per MR01-75. For the use of SUS316 material, there may be certain limitations for pressure and temperature. Please refer to NACE standards for details.

*1: Not applicable for Output signal code F and G.

▲ Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The *2: 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.

*3: Hastelloy C-276 or ASTM N10276.

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

For FOUNDATION Fieldbus explosion protected type, see GS 01C22T02-00E. For PROFIBUS PA explosion protected type, see GS 01C22T03-00E.

| Item | Description | Code |
|---------------------|---|------|
| | FM Explosionproof Approval *1 *3 Applicable standard: FM3600, FM3615, FM3810, ANSI/NEMA250 Explosionproof 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) Temperature class: T6 Amb. Temp.: -40 to 60°C (-40 to 140°F) | FF1 |
| Factory Mutual (FM) | FM Intrinsically safe Approval *1 *3 Applicable standard: FM3600, FM3610, FM3611, FM3810, ANSI/NEMA250 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 | FS1 |
| | Combined FF1 and FS1 *1 *3 | FU1 |
| CENELEC ATEX | CENELEC ATEX (KEMA) Flameproof Approval *2 *3 Applicable standard: EN50014, EN50018 Certificate: KEMA 02ATEX2148 II 2G EExd IIC T4, T5, T6 Amb. Temp.: T5; -40 to 80°C (-40 to 176°F), T4 and 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) | KF2 |
| | CENELEC ATEX (KEMA) Intrinsically safe Approval *2*3 Applicable standard: EN50014, EN50020, EN50284 Certificate: KEMA 02ATEX1030X II 1G 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 | KS2 |
| | Combined KF2, KS2 and Type n *2 *3 Type n Applicable standard: EN60079-15 Referential standard: IEC60079-0, IEC60079-11 II 3G Ex nL IIC T4, Amb. Temp.: -40 to 60°C (-40 to 140°F) Ui=30 V DC, Ci=22.5 nF, Li=730 μH Dust Applicable standard: EN50281-1-1 II 1D maximum surface temperature T65°C (149°F) {Tamb.: 40°C (104°F)}, T85°C (185°F) {Tamb.: 60°C (140°F)}, T105°C (221°F) {Tamb.: 80°C (176°F)} | KU2 |

T03-1E.EPS

Applicable for Electrical connection code 2, 7 and C (1/2 NPT female).

Applicable for Electrical connection code 2, 4, 7, 9, C and D (1/2 NPT and M20 female). Applicable for Output signal code D and E.

*1: *2: *3:

For intrinsically safe approval, use the safety barrier certified by the testing laboratories (BARD-400 is not applicable).

| | | 1 |
|---|---|------|
| Item | Description | Code |
| Canadian Standards Association (CSA) | CSA Explosionproof Approval *1*3 Applicable standard: C22.2 No. 0, No. 0.4, No. 25, No. 30, No. 94, No. 142 Certificate: 1089598 Explosionproof 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) 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 *3 Applicable standard: C22.2 No. 0, No. 0.4, No. 25, No. 30, No. 94, No. 142, No. 157, No. 213 Certificate: 1053843 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 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 Scheme *4 | IECEx Intrinsically safe, type n and Flameproof Approval *2 *3 Intrinsically safe and type n Applicable Standard: IEC 60079-0:2004, IEC 60079-11:1999, IEC 60079-15:2005, IEC 60079-26:2005 Certificate: IECEx KEM 06.0007X Ex ia IIC T4, Ex nL IIC T4 Enclosure: IP67 Amb. Temp.: -40 to 60°C (-40 to 140°F), Max. Process Temp.: 120°C (248°F) Electrical Parameters: [Ex ia] Ui=30 V, Ii=165 mA, Pi=0.9 W, Ci=22.5 nF, Li=730 μ H [Ex nL] Ui=30 V, Ci=22.5 nF, Li=730 μ H Flameproof Applicable Standard: IEC 60079-0:2004, IEC60079-1:2003 Certificate: IECEx KEM 06.0005 Ex d IIC T6T4 Enclosure: IP67 Max.Process Temp.: T4;120°C (248°F), T5;100°C (212°F), T6; 85°C (185°F) Amb.Temp.: -40 to 75°C (-40 to 167°F) for T4, -40 to 80°C (-40 to 176°F) for T5, -40 to 75°C (-40 to 167°F) for T6 | SU2 |

T03-2E.EPS

*1: *2: *3: Applicable for Electrical connection code 2, 7 and C (1/2 NPT female). Applicable for Electrical connection code 2, 4, 7, 9, C and D (1/2 NPT and M20 female).

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). Applicable only for Australia and New Zealand area.

*4: *5: Applicable for Electrical connection code 2, 4, 7, C and D (1/2 NPT and M20 female).

OPTIONAL SPECIFICATIONS

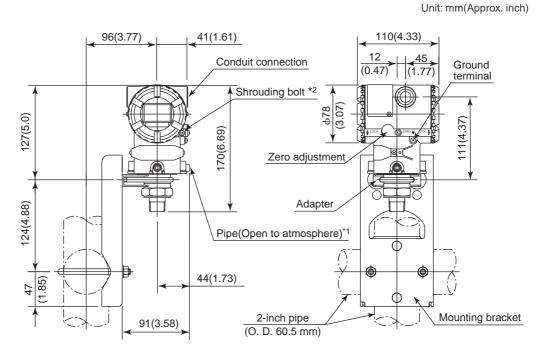
| | Item | Description | | | Code |
|-----------------------------|--|---|---|--|------|
| High accura | cy type *11 | High accuracy | | | |
| | | Amplifier cover only | | | P□ |
| Painting *12 Color change | Amplifier cover and terminal cover, Munsell 7.5 R4/14 | | | PR | |
| | Coating change | Epoxy resin-baked coat | ing * ¹⁵ | | X1 |
| Lightning pro | 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 ($1 \times 40 \mu$ s), Repeating 1000 A ($1 \times 40 \mu$ s) 100 times | | | | A |
| | | Degrease cleansing trea | atment *15 | | K1 |
| Oil-prohibite | ed use | Degrease cleansing treat Operating temperature | atment with fluorinated oil filled ca -20 to 80°C | psule. | K2 |
| | | P calibration (psi unit) | | | D1 |
| Calibration u | units *1 | bar calibration (bar unit) |) | (See Table for Span and Range Limits.) | D3 |
| | - | M calibration (kgf/cm ² u | nit) | | D4 |
| Fast respon | se * ⁹ | Update time: 0.125 sec or less Amplifier damping time constant: 0.1 to 64 sec in 9 increments Response time (with min. damping time constant): max. 0.3 sec | | | |
| Failure alarn | n down-scale *2 | Output status at CPU fa | ilure and hardware error is -5%, | 3.2 mA or less. | C1 |
| NAMUR NE43 compliant *2 *10 | | Output signal limits:Failure alarm down-scale: output status at CPU failure and hardware error is -5%, 3.2 mA or less. | | C2 | |
| NAMOR NE4 | | 3.8 mA to 20.5 mA | Failure alarm up-scale: output status at CPU failure and hardware error is 110%, 21.6 mA or more. | | C3 |
| Data configur | ation at factory *16 | Description into "Descri | ptor" parameter of HART protocol | | СА |
| Stainless ste housing *3 | eel amplifier | Amplifier housing mater stainless steel or ASTM | rial; SCS14A stainless steel (equi l CF-8M) | valent to SUS316 cast | E1 |
| Wired tag pl | ate | Stainless steel tag plate | wired onto transmitter | | N4 |
| European Pr Equipment [| | | | | PE3 |
| Mill Certifica | ite | Process connector | | | M15 |
| | | Test Pressure: 200 kPa (2 kgf/cm ²) *4 | | | T05 |
| Pressure tes | | Test Pressure: 2 MPa (20 kgf/cm ²) *5 Nitrogen (N ₂) Gas or Water | | Nitrogen (N ₂) Gas or Water *8 | T06 |
| Certificate *13 | | Test Pressure: 10 MPa (100 kgf/cm ²) *6 Retention time: 10 minutes | | | T07 |
| | | Test Pressure: 50 MPa | (500 kgf/cm ²) *7 | | T08 |

T04E.EPS

- *1: 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.
- *2: Applicable for Output signal code D and E. The hardware error indicates faulty amplifier or capsule.
- When combining with Option code F1, output status for down-scale is -2.5%, 3.6 mA DC or less. *3: Applicable for Electrical connection code 2, 3, 4, A, C and D. Not applicable for Option code PD and X1.
- *4: Applicable for Capsule code A.
- *5:
- Applicable for Capsule code B. Applicable for Capsule code C.
- *6: *7:
- Applicable for Capsule code D.
- *8: Pure nitrogen gas or pure water is used for oil-prohibited use (Option code K1 and K2)
- *9: Applicable for Output signal code D and E. Write protection switch is attached for Output code E.
- *10: *11: Not applicable for Option code C1. Applicable for EJA530A. Refer to GS 01C21F01-02E.
- *12: Standard polyurethan painting can be used in acid atmosphere, whereas the epoxy resin-baked coating (Option code X1) can be used in alkaline atmosphere. Anti-corrosion coating, the combination of polyurethan and epoxy resin-baked coating, is available by special order as sea water, alkaline, and acid resistant.
- *13: The unit on the certificate is always kPa or MPa regardless of selection of option code D1, D3, or D4.
- *14: If compliance with category III is needed, specify this option code.
- *15: Not applicable for color change option.
- *16: Applicable for Output signal code E.

Model EJA510A and EJA530A

With Process Connection code 7

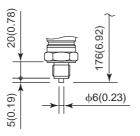


*1: Applied to Model EJA530A with Measurement span code A, B, and C. *2: Applicable only for ATEX and IECEx Flameproof type.

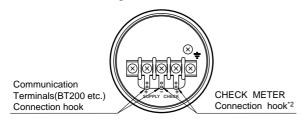
◆ For Process Connection code 4



For Process Connection code 8 and 9



• Terminal Configuration



Terminal Wiring

| SUPPLY | + - | Power supply and output terminal | | | |
|--------|--------|--|--|--|--|
| CHECK | + - | External indicator(ammeter) terminal*2 | | | |
| ÷ | | Ground terminal | | | |
| ** | | | | | |

*2: 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 and G).

F04E.EPS

F03E.EPS

■ SELECTION GUIDE

| Application | Туре | Model | Capsule | Measurement Span | | Maximum Working Pressure | |
|--|------------------------------------|-------------------------------|------------------|---|---|---|--|
| Application | туре | Model | | kPa | inH ₂ O | MPa | psi |
| Differential Pressure | Traditional-Mounting ^{*1} | EJA110A | L M H V | 0.5 to 10 1 to 100 5 to 500 0.14 to 14MPa | 2 to 40 4 to 400 20 to 2000 20 to 2000 psi | 16 ^{*4} 16 16 16 | 2250 ^{*4} 2250 2250 2250 |
| Flow | Integral Orifice | EJA115 | L M H | 1 to 10 2 to 100 20 to 210 | 4 to 40 8 to 400 80 to 830 | 3.5 14 14 | 500 2000 2000 |
| Differential Pressure & Liquid Level with Remote Seals | Extended Flush Combination | EJA118N EJA118W EJA118Y | M H | 2.5 to 100 25 to 500 | 10 to 400 100 to 2000 | Based on Fla | ange Rating |
| Draft Range | Traditional-Mounting*1 | EJA120A | E | 0.1 to 1 | 0.4 to 4 | 50 kPa | 7.25 |
| Differential Pressure & Liquid Level | Traditional-Mounting*1 | EJA130A | M H | 1 to 100 5 to 500 | 4 to 400 20 to 2000 | 32 32 | 4500 4500 |
| Liquid Level, Closed or Open Tank | Flush Extended | EJA210A EJA220A | M H | 1 to 100 5 to 500 | 4 to 400 20 to 2000 | Based on Flange Rating | |
| Absolute (vacuum) Pressure | Traditional-Mounting*1 | EJA310A | L M A | 0.67 to 10 ^{*2} 1.3 to 130 ^{*2} 0.03 to 3 MPa ^{*2} | 2.67 to 40 ^{*2} 0.38 to 38 inHg ^{*2} 4.3 to 430 psi ^{*2} | 10 kPa ^{*2} 130 kPa ^{*2} 3000 kPa ^{*2} | 40 in H ₂ O ^{*2} 18.65 ^{*2} 430 ^{*2} |
| Gauge Pressure | Traditional-Mounting*1 | EJA430A | A B | 0.03 to 3 MPa 0.14 to 14 MPa | 4.3 to 430 psi 20 to 2000 psi | 3 430 14 2000 | |
| Gauge Pressure with Remote Seal | Extended | EJA438N | A B | 0.06 to 3 MPa 0.46 to 7 MPa | 8.6 to 430 psi 66 to 1000 psi | Based on Flange Rating | |
| Gauge Pressure with Remote Seal | Flush | EJA438W | A B | 0.06 to 3 MPa 0.46 to 14 MPa | 8.6 to 430 psi 66 to 2000 psi | Based on Flange Rating | |
| High Gauge | Traditional-Mounting*1 | EJA440A | C D | 5 to 32 MPa 5 to 50 MPa | 720 to 4500 psi 720 to 7200 psi | 32 50 | 4500 7200 |
| Absolute & Gauge Pressure ^{*3} | Direct-Mounting | EJA510A EJA530A | A B C D | 10 to 200 0.1 to 2 MPa 0.5 to 10 MPa 5 to 50 MPa | 1.45 to 29 psi 14.5 to 290 psi 72.5 to 1450 psi 720 to 7200 psi | 200 kPa 2 10 50 | 29 290 1450 7200 |

*1: *2: *3: *4: Traditional-mounting is 1/4 - 18 NPTF process connections (1/2 - 14 NPTF with process adapters) on 2-1/8" centers. Measurement values in absolute.

Measurement values in absolute for EJA510A. When combined with Wetted parts material code H, M, T, A, D, and B, the value is 3.5 MPa (500 psi).

< Ordering Information > " \Diamond "

Specify the following when ordering

1. Model, suffix codes, and optional codes

- 2. Calibration range and units:
- 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.
 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)

< Related Instruments > " \Diamond "

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

< Reference >

- 1. Teflon; Trademark of E.I. DuPont de Nemours & Co.
- 2. Hastelloy; Trademark of Haynes International Inc.
- HART; Trademark of the HART Communication Foundation.
- 4. FOUNDATION ; Trademark of Fieldbus Foundation.
- 5. PROFIBUS; Registered trademark of Profibus Nutzerorganisation e.v., Karlsruhe, Germany.

| M | laterial | Cross | Reference | Table |
|---|----------|-------|-----------|-------|
| | | | | |

| | SUS316L | AISI 316L | |
|--|---------|------------|--|
| | SUS316 | AISI 316 | |
| | SUS304 | AISI 304 | |
| | S25C | AISI 1025 | |
| | SCM435 | AISI 4137 | |
| | SUS630 | ASTM630 | |
| | SCS14A | ASTM CF-8M | |
| | | T07E.EPS | |

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< Specification Conformance >

The model EJA510A and EJA530A maintain a specification conformance to at least 3 $\sigma.$

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