The high performance gauge pressure transmitter model EJA440A can be used to measure liquid, gas, or steam pressure. It outputs a 4 to 20 mA DC signal corresponding to the measured gauge pressure.

Model EJA440A also features remote setup and monitoring through communications with the BRAIN™ terminal and CENTUM CS™ or µXL™ or HART® 275 host.

### STANDARD SPECIFICATIONS

Refer to GS 01C22T02-00EN for FOUNDATION Fieldbus communication type and GS 01C22T03-00EN for PROFIBUS PA communication type marked with “◊.”

### 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)

\[ \pm 0.12 \% \text{ of Span} \]

For spans below \( X \),

\[ \pm \left[ 0.03 + 0.09 \frac{X}{\text{Span}} \right] \% \text{ of Span} \]

where \( X \) equals:
8 MPa {1160 psi}

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

\[ \pm \left[ 0.084 \% \text{ Span} + 0.035 \% \text{ URL} \right] \]

Stability
\[ \pm 0.1 \% \text{ of URL per 60 months} \]

Power Supply Effects “◊”
\[ \pm 0.005 \% \text{ per Volt (from 21.6 to 32 V DC, 350 Ω)} \]

### FUNCTIONAL SPECIFICATIONS

**Span & Range Limits**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span Range</td>
<td>MPa</td>
<td>psi (D1)</td>
</tr>
<tr>
<td>C</td>
<td>5 to 32</td>
<td>720 to 4500</td>
</tr>
<tr>
<td>Range</td>
<td>-0.1 to 32</td>
<td>-15 to 4500</td>
</tr>
<tr>
<td>D</td>
<td>5 to 50</td>
<td>720 to 7200</td>
</tr>
<tr>
<td>Range</td>
<td>-0.1 to 50</td>
<td>-15 to 7200</td>
</tr>
</tbody>
</table>

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 “◊”**

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 0.4 kPa {1.6 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.

**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)

**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.

<table>
<thead>
<tr>
<th>Capsule (Silicone Oil)</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Constant (approx. sec)</td>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Capsule</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>48 MPa (6750 psig)</td>
</tr>
<tr>
<td>D</td>
<td>60 MPa (8500 psig)</td>
</tr>
</tbody>
</table>

Working Pressure Limits (Silicone Oil)

<table>
<thead>
<tr>
<th>Capsule</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>32 MPa (4500 psig)</td>
</tr>
<tr>
<td>D</td>
<td>50 MPa (7200 psig)</td>
</tr>
</tbody>
</table>

Minimum Pressure Limit
See graph below

![Graph showing process temperature and working pressure limits.]

Figure 1. Working Pressure and Process Temperature

Supply & Load Requirements
(Safety approvals can affect electrical requirements)
With 24 V DC supply, up to a 5700Ω load can be used. See graph below.

![Graph showing supply voltage and external load resistance.]

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

Supply Voltage “V”
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 “V”
EN61326-1 Class A, Table2 (For use in industrial locations)
EN61326-2-3

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

Safety Requirement Standards
EN61010-1
• Altitude of installation site: Max. 2,000 m above sea level
• Installation category: I
• Pollution degree: 2
• Indoor/Outdoor use

Communication Requirements “V”

BRAIN

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

Load Capacitance
0.22 µF or less (see note)

Load Inductance
3.3 mH or less (see note)

Spacing from power line
15 cm or more.

Input Impedance of communicating device
10 kΩ 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
Hastelloy C-276
Cover flange
SUS316
Process connector
SCS14A (C Capsule)
SUS316 (D Capsule)
Capsule Gasket
Teflon-coated SUS316L
Vent and Drain Plug
SUS316 or ASTM grade 316
Process Connector O-ring
Fluorinated rubber (C Capsule with Process connection code 3 and 4)
Glass reinforced Teflon (C Capsule with Process connection code 1 and 2 and D Capsule)

Non-wetted Parts Materials
Bolting
SCM435, SUS630, or SUH660
Housing
Low copper cast-aluminum alloy with polyurethane paint (Munsell 0.6GY3.1/2.0)
Degrees of Protection
IP67, Type 4X
Cover O-rings
Buna-N, fluoro-rubber (optional)
Name plate and tag
SUS304 or SUS316 (option)
Fill Fluid
Silicone, Fluorinated oil (option)

Weight
C capsule: 6.8 kg (15 lb) without integral indicator, mounting bracket, and process connector.
D capsule: 8.0 kg (17.6 lb) without integral indicator, mounting bracket, and process connector.

Connections
Refer to the model code to specify the process and electrical connection type.
Process Connection of Cover Flange:
DIN 19213 with 7/16 inch × 20 unf female thread (C Capsule).

< Settings When Shipped > “0”

<table>
<thead>
<tr>
<th>Tag Number</th>
<th>As specified in order “1”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Mode</td>
<td>‘Linear’</td>
</tr>
<tr>
<td>Display Mode</td>
<td>‘Linear’</td>
</tr>
<tr>
<td>Operation Mode</td>
<td>‘Normal’ unless otherwise specified in order</td>
</tr>
<tr>
<td>Damping Time Constant</td>
<td>2 sec.</td>
</tr>
<tr>
<td>Calibration Range Lower Range Value</td>
<td>As specified in order</td>
</tr>
<tr>
<td>Calibration Range Higher Range Value</td>
<td>As specified in order</td>
</tr>
<tr>
<td>Calibration Range Units</td>
<td>Selected from mmH2O, mmAq, mmWG, mmHg, Pa, kPa, MPa, mbar, bar, gf/cm², kgf/cm², inH2O, inHg, ftH2O, or psi. (Only one unit can be specified)</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJA440A</td>
<td></td>
<td>Gauge pressure transmitter</td>
</tr>
</tbody>
</table>

**Output Signal**

- **D**
- **E**
- **F**
- **G**

- 4 to 20 mA DC with digital communication (BRAIN protocol)
- 4 to 20 mA DC with digital communication (HART protocol, refer to GS 01C22T01-00EN)
- Digital communication (FOUNDATION Fieldbus protocol, refer to GS 01C22T02-00EN)
- Digital communication (PROFIBUS PA protocol, refer to GS 01C22T03-00EN)

**Measurement span (capsule)**

- **C**
- **D**

- 5 to 32 MPa (50 to 500 kgf/cm²) (720 to 7200 psi) (50 to 500 bar)

- 5 to 50 MPa (50 to 500 kgf/cm²) (720 to 7200 psi) (50 to 500 bar)

- Wetted parts material

- **S**
- **SUS316**
- **SUS316L**
- **SUS316L**

**Process connections**

- 0
- 1
- 2
- 3
- 4
- 5

- without process connector (1/4 NPT 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

**Bolts and nuts material**

- **A**
- **B**
- **C**

- SCM435 32 MPa (320 kgf/cm²) 50 MPa (500 kgf/cm²)
- SUS304 32 MPa (320 kgf/cm²) 50 MPa (500 kgf/cm²)
- SUS316 32 MPa (320 kgf/cm²)

**Installation**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

- Vertical impulse piping type, right side high pressure, process connector upside
- Vertical impulse piping type, right side high pressure, process connector downside
- Vertical impulse piping type, left side high pressure, process connector upside
- Vertical impulse piping type, left side high pressure, process connector downside
- Horizontal impulse piping type, right side high pressure
- Horizontal impulse piping type, left side high pressure

**Electrical connection**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

- G1/2 female, one electrical connection
- 1/2 NPT female, two electrical connections without blind plug
- Pg 13.5 female, two electrical connections without blind plug
- M20 female, two electrical connections without blind plug
- G1/2 female, two electrical connections and a blind plug
- 1/2 NPT female, two electrical connections and a blind plug
- Pg 13.5 female, two electrical connections and a blind plug
- M20 female, two electrical connections and a blind plug
- G1/2 female, two electrical connections and a SUS316 blind plug
- 1/2 NPT female, two electrical connections and a SUS316 blind plug
- M20 female, two electrical connections and a SUS316 blind plug

**Integral indicator**

- **D**
- **E**
- **N**

- Digital indicator
- Digital indicator with the range setting switch

**Mounting bracket**

- **A**
- **B**
- **C**
- **D**
- **K**
- **N**

- SECC Carbon steel 2-inch pipe mounting (flat type)
- SUS304 2-inch pipe mounting (flat type)
- SUS316 2-inch pipe mounting (flat type)
- SUS304 or SCS13A 2-inch pipe mounting (L type)
- SUS316 or SCS14A 2-inch pipe mounting (L type)

**Optional codes**

- **D** Optional specification
## OPTIONAL SPECIFICATIONS (For Explosion Protected type “◊”)

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
</table>
| Factory Mutual (FM) | FM Explosionproof Approval<sup>1</sup> <sup>3</sup> <sup>4</sup>  
- 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 |
|  | FM Intrinsically safe Approval<sup>1</sup> <sup>3</sup> <sup>4</sup>  
- 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) | FS1 |
| Canadian Standards Association (CSA) | CSA Explosionproof Approval<sup>1</sup> <sup>3</sup> <sup>4</sup>  
- 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  
- Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G  
- Division 2 SEALS NOT REQUIRED, Temp. Class: T4, T5, T6 Enc 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<sup>1</sup> <sup>3</sup> <sup>4</sup>  
- 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  
- Enclosure 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 | CS1 |
|  | 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 | |
<p>|  | Combined FF1 and FS1&lt;sup&gt;1&lt;/sup&gt; &lt;sup&gt;3&lt;/sup&gt; &lt;sup&gt;4&lt;/sup&gt; | FU1 |
|  | Combined CF1 and CS1&lt;sup&gt;1&lt;/sup&gt; &lt;sup&gt;3&lt;/sup&gt; &lt;sup&gt;4&lt;/sup&gt; | CU1 |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IECEx Scheme</td>
<td>IECEx Intrinsically safe, type n and Flameproof Approval *1, *4, *5</td>
</tr>
<tr>
<td></td>
<td>Intrinsically safe and type n</td>
</tr>
<tr>
<td></td>
<td>Certificate: IECEx KEM 06.0007X</td>
</tr>
<tr>
<td></td>
<td>Ex ia IIC T4, Ex nL, IIC T4 Enclosure: IP67</td>
</tr>
<tr>
<td></td>
<td>Amb. Temp.: –40 to 60°C (–40 to 140°F), Max. Process Temp.: 120°C (248°F)</td>
</tr>
<tr>
<td></td>
<td>Electrical Parameters: [Ex ia] Ui=30 V, li=165 mA, Pi=0.9 W, Ci=22.5 nF, Li=730 μH</td>
</tr>
<tr>
<td></td>
<td>[Ex nL] Uii=30 V, Ci=22.5 nF, Li=730 μH</td>
</tr>
<tr>
<td></td>
<td>Flameproof</td>
</tr>
<tr>
<td></td>
<td>Certificate: IECEx KEM 06.0005</td>
</tr>
<tr>
<td></td>
<td>Ex d IIC T6...T4 Enclosure: IP67</td>
</tr>
<tr>
<td></td>
<td>Max. Process Temp.: T4; 120°C (248°F), T5; 100°C (212°F), T6; 85°C (185°F)</td>
</tr>
<tr>
<td></td>
<td>Amb.Temp.: –40 to 75°C (–40 to 167°F) for T4, –40 to 80°C (–40 to 176°F) for T5,</td>
</tr>
<tr>
<td></td>
<td>–40 to 75°C (–40 to 167°F) for T6</td>
</tr>
</tbody>
</table>

**SU2**

*1: Applicable for Electrical connection code 2, 7 and C (1/2 NPT female).
*2: (Not used)
*3: 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).
*4: Lower limit of ambient temperature is –15°C (5°F) when /HE is specified.
*5: Applicable for Electrical connection code 2, 4, 7, C and D (1/2 NPT and M20 female).
## OPTIONAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Painting</strong>&lt;sup&gt;*&lt;/sup&gt;</td>
<td><strong>Color change</strong>&lt;sup&gt;10&lt;/sup&gt;  Amplifier cover only</td>
<td>P□</td>
</tr>
<tr>
<td><strong>Code</strong></td>
<td><strong>Amplifier cover and terminal cover, Munsell 7.5 R4/14</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coating change</strong></td>
<td><strong>Epoxy resin-baked coating</strong></td>
<td>PR</td>
</tr>
<tr>
<td><strong>316 SST exterior parts</strong></td>
<td><strong>Amplifier cover and terminal cover, Munsell 7.5 R4/14</strong></td>
<td>X1</td>
</tr>
<tr>
<td><strong>Fluoro-rubber O-ring</strong></td>
<td><strong>All O-rings of amplifier housing. Lower limit of ambient temperature: −15°C (5°F)</strong></td>
<td>HC</td>
</tr>
<tr>
<td><strong>Lightning protector</strong></td>
<td><strong>Transmitter power supply voltage: 10.5 to 32 V DC (10.5 to 30 V DC for intrinsically safe type, 9 to 32 V DC for Fieldbus communication type.) Allowable current: Max. 6000 A (1×40 µs ), Repeating 1000 A (1×40 µs) 100 times</strong></td>
<td>A</td>
</tr>
<tr>
<td><strong>Oil-prohibited use</strong></td>
<td><strong>Degrease cleansing treatment</strong></td>
<td>K1</td>
</tr>
<tr>
<td><strong>Calibration units</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td><strong>P calibration (psi unit)</strong></td>
<td>D1</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td><strong>bar calibration (bar unit)</strong></td>
<td>D3</td>
</tr>
<tr>
<td><strong>Sealing treatment to SUS630 nuts</strong></td>
<td><strong>Sealant (liquid silicone rubber) is coated on JIS SUS630 cover flange mounting nuts against stress corrosion cracking.</strong></td>
<td>Y</td>
</tr>
<tr>
<td><strong>316 SST exterior parts</strong></td>
<td><strong>Exterior parts on the amplifier housing (name plates, tag plate, zero-adjustment screw, stopper screw) will become 316 SST</strong></td>
<td>HC</td>
</tr>
<tr>
<td><strong>Fluoro-rubber O-ring</strong></td>
<td><strong>All O-rings of amplifier housing. Lower limit of ambient temperature: −15°C (5°F)</strong></td>
<td>HE</td>
</tr>
<tr>
<td><strong>Lightning protector</strong></td>
<td><strong>Transmitter power supply voltage: 10.5 to 32 V DC (10.5 to 30 V DC for intrinsically safe type, 9 to 32 V DC for Fieldbus communication type.) Allowable current: Max. 6000 A (1×40 µs ), Repeating 1000 A (1×40 µs) 100 times</strong></td>
<td>A</td>
</tr>
<tr>
<td><strong>Oil-prohibited use</strong></td>
<td><strong>Degrease cleansing treatment</strong></td>
<td>K1</td>
</tr>
<tr>
<td><strong>Calibration units</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td><strong>P calibration (psi unit)</strong></td>
<td>D1</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td><strong>bar calibration (bar unit)</strong></td>
<td>D3</td>
</tr>
<tr>
<td><strong>Sealing treatment to SUS630 nuts</strong></td>
<td><strong>Sealant (liquid silicone rubber) is coated on JIS SUS630 cover flange mounting nuts against stress corrosion cracking.</strong></td>
<td>Y</td>
</tr>
<tr>
<td><strong>Fast response</strong>&lt;sup&gt;*&lt;/sup&gt;</td>
<td><strong>Update time: 0.125 sec</strong></td>
<td>F1</td>
</tr>
<tr>
<td><strong>Failure alarm down-scale</strong>&lt;sup&gt;3&lt;/sup&gt;</td>
<td><strong>Output status at CPU failure and hardware error is –5%, 3.2 mA or less.</strong></td>
<td>C1</td>
</tr>
<tr>
<td><strong>NAMUR NE43 compliant</strong>&lt;sup&gt;3, 8&lt;/sup&gt;</td>
<td><strong>Output signal limits: 3.8 mA to 20.5 mA</strong></td>
<td>C2</td>
</tr>
<tr>
<td><strong>Data configuration at factory</strong>&lt;sup&gt;12&lt;/sup&gt;</td>
<td><strong>Description into “Descriptor” parameter of HART protocol</strong></td>
<td>CA</td>
</tr>
<tr>
<td><strong>Stainless steel amplifier housing</strong></td>
<td><strong>Amplifier housing material: SCS14A stainless steel (equivalent to SUS316 cast stainless steel or ASTM CF-8M)</strong></td>
<td>E1</td>
</tr>
<tr>
<td><strong>Gold-plate</strong></td>
<td><strong>Surface of isolating diaphragms are gold plated, effective for hydrogen permeation. (The diaphragm for atmospheric side is not gold-plated)</strong></td>
<td>A1</td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td><strong>Custom software configuration</strong></td>
<td>R1</td>
</tr>
<tr>
<td><strong>Body option</strong>&lt;sup&gt;6&lt;/sup&gt;</td>
<td><strong>Right side high pressure, without drain and vent plugs</strong></td>
<td>N1</td>
</tr>
<tr>
<td><strong>Wired tag plate</strong></td>
<td><strong>Stainless steel tag plate wired onto transmitter</strong></td>
<td>N4</td>
</tr>
<tr>
<td><strong>Mill Certificate</strong></td>
<td><strong>Cover flange</strong></td>
<td>M01</td>
</tr>
<tr>
<td><strong>Pressure test/Leak test Certificate</strong></td>
<td><strong>Test Pressure: 32 MPa(320 kgf/cm²)&lt;sup&gt;*&lt;/sup&gt;  Nitrogen (N2) Gas or Water&lt;sup&gt;-19&lt;/sup&gt; Retention time: 10 minutes</strong></td>
<td>T09</td>
</tr>
<tr>
<td><strong>Wired tag plate</strong></td>
<td><strong>Stainless steel tag plate wired onto transmitter</strong></td>
<td>N4</td>
</tr>
<tr>
<td><strong>Mill Certificate</strong></td>
<td><strong>Cover flange</strong></td>
<td>M01</td>
</tr>
<tr>
<td><strong>Pressure test/Leak test Certificate</strong></td>
<td><strong>Test Pressure: 50 MPa(500 kgf/cm²)&lt;sup&gt;*&lt;/sup&gt;  Nitrogen (N2) Gas or Water&lt;sup&gt;-19&lt;/sup&gt; Retention time: 10 minutes</strong></td>
<td>T08</td>
</tr>
</tbody>
</table>

---

<sup>*1</sup>: 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.

<sup>*2</sup>: Applicable for Vertical impulse piping type (Installation codes 2, 3, 6, or 7).

<sup>*3</sup>: 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.

<sup>*4</sup>: Applicable for Electrical connection code 2, 3, 4, A, C and D. Not applicable for Option code P□ and X1.

<sup>*5</sup>: Applicable for Output signal code D and E. Write protection switch is attached for Output code E.

<sup>*6</sup>: Applicable for 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.

<sup>*7</sup>: Not applicable for Capsule code D.

<sup>*8</sup>: Not applicable for Option code C1.

<sup>*9</sup>: 316 or 316L SST. The specification is included in option code /E1.

<sup>*10</sup>: 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.
*11: Not applicable for color change option.
*12: Applicable for Output signal code E.
*13: (Not used)
*14: Applicable for Process connection code 0 and 5.
*15: Applicable for Process connection code 1, 2, 3, and 4.
*16: The unit on the certificate is always MPa regardless of selection of option code D1, D3, or D4.
*17: Applicable for Capsule code C.
*18: Applicable for Capsule code D.
*19: Pure nitrogen gas or pure water is used for oil-prohibited use (Optional code K1 and K2).
**DIMENSIONS**

- **Model EJA440A**

The data in the drawing is common to C capsule and D capsule, except where the difference is noted.

**Vertical Impulse Piping Type**

Process connector upside (INSTALLATION CODE ’6’) (For CODE ’2’ or ’3,’ refer to the notes below.)

**Process connector downside (INSTALLATION CODE ’7’)**

**Horizontal Impulse Piping Type (INSTALLATION CODE ’9’) (For CODE ’8’, refer to the notes below)**

---

*1: When Installation code 2, 3, or 8 is selected, high and low pressure side on above figure are reversed. (i.e. High pressure side is on the right side.)

*2: When Optional code K1, K2, K5, or K6 is selected, add 15 mm (0.59 inch) to the value in the figure.

*3: Applicable only for ATEX and IECEx Flameproof type.
## Terminal Configuration

- Communication Terminals (BT200 etc.)
- Connection hook

---

### Terminal Wiring

<table>
<thead>
<tr>
<th>SUPPLY</th>
<th>Power supply and output terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHECK</td>
<td>External indicator (ammeter) terminal*1</td>
</tr>
<tr>
<td>Ground terminal</td>
<td></td>
</tr>
</tbody>
</table>

*1: When using an external indicator or a check meter, the internal resistance must be 10Ω or less.

Not available for Fieldbus communication (Output signal code F and G).

---

### Selection Guide

<table>
<thead>
<tr>
<th>Application</th>
<th>Type</th>
<th>Model</th>
<th>Capsule</th>
<th>Measurement Span (kPa)</th>
<th>Maximum Working Pressure (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential Pressure</td>
<td>Traditional-Mounting*1</td>
<td>EJA110A L</td>
<td>0.5 to 10</td>
<td>2 to 40</td>
<td>16*4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>1 to 100</td>
<td>4 to 400</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>5 to 500</td>
<td>20 to 2000</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td>0.14 to 14 MPa</td>
<td>20 to 2000 psi</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EJA115 L</td>
<td>1 to 10</td>
<td>4 to 40</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>2 to 100</td>
<td>8 to 800</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>20 to 210</td>
<td>80 to 830</td>
<td>14</td>
</tr>
<tr>
<td>Flow</td>
<td>Integral Orifice</td>
<td>EJA118N M</td>
<td>2.5 to 10</td>
<td>10 to 400</td>
<td>Based on Flange Rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>25 to 500</td>
<td>100 to 2000</td>
<td></td>
</tr>
<tr>
<td>Differential Pressure &amp; Liquid Level</td>
<td>Extended Flush Combination</td>
<td>EJA118W M</td>
<td>2.5 to 100</td>
<td>10 to 400</td>
<td>Based on Flange Rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>25 to 500</td>
<td>100 to 2000</td>
<td></td>
</tr>
<tr>
<td>Draft Range</td>
<td>Traditional-Mounting*1</td>
<td>EJA120A E</td>
<td>0.1 to 1</td>
<td>0.4 to 4</td>
<td>50 kPa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EJA130A M</td>
<td>1 to 100</td>
<td>4 to 400</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>5 to 500</td>
<td>20 to 2000</td>
<td>32</td>
</tr>
<tr>
<td>Liquid Level, Closed or Open Tank</td>
<td>Flush Extended</td>
<td>EJA210A M</td>
<td>1 to 100</td>
<td>4 to 400</td>
<td>Based on Flange Rating</td>
</tr>
<tr>
<td>Absolute Pressure</td>
<td>Traditional-Mounting*1</td>
<td>EJA310A L</td>
<td>0.67 to 10*2</td>
<td>0.38 to 38 inHg</td>
<td>10 kPa*2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>1.3 to 130*2</td>
<td>4.3 to 430 psi</td>
<td>130 kPa*2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>0.03 to 3 MPa*2</td>
<td>10 in HgO</td>
<td>300 kPa*2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EJA310A A</td>
<td>0.03 to 3 MPa</td>
<td>4.3 to 430 psi</td>
<td>18.65*2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>0.14 to 14 MPa</td>
<td>3.5</td>
<td>430*2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20 to 2000</td>
<td>430*2</td>
</tr>
<tr>
<td>Gauge Pressure</td>
<td>Traditional-Mounting*1</td>
<td>EJA430A A</td>
<td>0.06 to 3 MPa</td>
<td>6.6 to 1000 psi</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>0.46 to 7 MPa</td>
<td>8.6 to 430 psi</td>
<td>14</td>
</tr>
<tr>
<td>Gauge Pressure with Remote Seal</td>
<td>Extended</td>
<td>EJA438W A</td>
<td>0.06 to 3 MPa</td>
<td>6.6 to 2000 psi</td>
<td>Based on Flange Rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>0.46 to 14 MPa</td>
<td>8.6 to 430 psi</td>
<td></td>
</tr>
<tr>
<td>High Gauge</td>
<td>Traditional-Mounting*1</td>
<td>EJA440A C</td>
<td>5 to 32 MPa</td>
<td>720 to 4500 psi</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>5 to 50 MPa</td>
<td>720 to 7200 psi</td>
<td>50</td>
</tr>
<tr>
<td>Absolute &amp; Gauge Pressure*3</td>
<td>Direct-Mounting</td>
<td>EJA510A A</td>
<td>10 to 200</td>
<td>1.45 to 29 psi</td>
<td>50 kPa*2</td>
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<tr>
<td></td>
<td></td>
<td>B</td>
<td>0.1 to 2 MPa</td>
<td>14.5 to 290 psi</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>0.5 to 10 MPa</td>
<td>72.5 to 1450 psi</td>
<td>290</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>5 to 50 MPa</td>
<td>720 to 7200 psi</td>
<td>1450</td>
</tr>
</tbody>
</table>

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

*2: Measurement values in absolute.

*3: Measurement values in absolute for EJA510A.

*4: When combined with Wetted parts material code H, M, T, A, D, and B, the value is 3.5 MPa (500 psi).
<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)

<Related Instruments> “◊”
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.
3. HART; Trademark of the HART Communication Foundation.
4. FOUNDATION; Trademark of Fieldbus Foundation.
5. PROFIBUS; Registered trademark of Profibus Nutzerorganisation e.v., Karlsruhe, Germany.

<table>
<thead>
<tr>
<th>Material Cross Reference Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUS316L</td>
</tr>
<tr>
<td>SUS316</td>
</tr>
<tr>
<td>SUS304</td>
</tr>
<tr>
<td>S25C</td>
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<tr>
<td>SCM435</td>
</tr>
<tr>
<td>SUS630</td>
</tr>
<tr>
<td>SCS14A</td>
</tr>
</tbody>
</table>

6. Other company names and product names used in this material are registered trademarks or trademarks of their respective owners.

<Specification Conformance>
The model EJA440A maintains a specification conformance to at least 3σ.

CE marking is not applied to the product from the end of February 2016.