The IP26 (current to pressure) transducer converts a 4–20mA electrical current signal to a proportional linear pneumatic output. The unique conversion technology provides a high level of accuracy and repeatability for the operation of actuated valves. A low mass control circuit provides consistent output in high vibration applications. This compact unit is housed in an explosion proof enclosure that is designed for pipe, bracket or direct manifold mounting. This explosion-proof and intrinsically safe field device is available with a built-in volume booster.

**FEATURES**

- 4 to 20 mA, 2-wire Loop powered
- Compact design, small size and low weight
- Approvals Intrinsically Safe and Explosion Proof ATEX, FM and CSA certification
- Gas and Dust certification
- Position insensitive – Unit can be mounted in any plane and is stable in high vibration environments
- Low power consumption minimize loop load

Equipment should be installed, operated, serviced, and maintained only by qualified personnel.
No responsibility is assumed by Schneider Electric for any consequences arising from the use of this material.
## SPECIFICATIONS

### Functional Specifications

<table>
<thead>
<tr>
<th>Input</th>
<th>4-20 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outputs (to be selected in Model Code)</td>
<td>0.2 - 1 bar (3 - 15 psig)</td>
</tr>
<tr>
<td></td>
<td>0.1 - 1.7 bar (1.5 - 25 psig)</td>
</tr>
<tr>
<td></td>
<td>0.4 - 2 bar (6 - 30 psig)</td>
</tr>
<tr>
<td></td>
<td>Outputs with pressure up to 6 bar (90 psi) can be obtained by adding a volume booster with amplifying ratio – Please consult us!</td>
</tr>
</tbody>
</table>

### Air Consumption

| 2.83 l/min (0.1 scfm) |

### Supply Pressure

| 0.2 - 1 bar: 1.5 bar (22 psig) max |
| 0.1 - 1.7 bar: 2.8 bar (42 psig) max |
| 0.4 - 2 bar: 2.8 bar (42 psig) max |

### Flow Capacity

| 4.1 m³/h (2.4 scfm) max. |

### Temperature Limits

| –40 °C to 85 °C (–40 °F to 185 °F) / down to –55 °C (–67 °F) with option -T |

### Relative Humidity

| 75% average - 95% short time non-condensing |

### Impedance

| 260 Ohms @ 21 °C (70 °F) |

### Loop Load

| 5.2 Volts @ 21 °C (70 °F) |

### Performance Specifications

| Linearity (Independent) | < ±0.5% of span |
| Hysteresis | < ±0.3% of span |
| Deadband | < ±0.1% of span |
| Repeatability | < ±0.3% of span; < ±0.15% of span typical |
| Mounting Orientation | < ±0.5% / 90 degree change |
| Air Supply Sensitivity | < 0.3% / 1.5 psig (0.10 bar) change |
| Vibration Effect | < ±1% up to 10 g and 20-80 Hz |
| Temperature Effect | < ±0.75% / 12 °C (/ 10 °F) change |

### Physical Specifications

| Housing | IP 65 (NEMA 4X) |
| Port Sizes | In/Out Pneumatic: 1/4" NPT; gauge part: 1/8" NPT |
| | Electric: M20x1.5 (ATEX) / 1/2 NPT (FM / CSA) |
| Media | Clean, dry, oil-free, instrument air, filtered to 40 micron |
| Electrical Connections | Terminal block |
| Mounting | 2" pipe (optional) |
| Materials | Housing: Chromate-treated Aluminum with epoxy paint. IP65 (NEMA 4X) |
| | Elastomers: Buna-N |
| | Trim: Stainless steel; brass; zinc-plated steel |
| | Label: Stainless steel |
| Weight | 0.64 kg (1.4 lb) |
HAZARDOUS AREA CLASSIFICATION

**ATEX Approvals**

<table>
<thead>
<tr>
<th>Entity Parameters</th>
<th>Temperature Code</th>
<th>Enclosure</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Safety II 1 G Ex ia IIC</td>
<td>Vmax = 40 Vdc Imax = 150 mA Pi = 0.7 W Ci = 0 nF Li = 0 mH</td>
<td>T* -55°C to Ta max*</td>
<td>IP65</td>
</tr>
<tr>
<td>Flameproof II 2 G Ex d II B + H2 II 2 D Ex tD A21 T85°C</td>
<td>— — —</td>
<td>T6 -40°C ≤ Ta ≤ +75°C</td>
<td>IP65</td>
</tr>
<tr>
<td>Limited Energy/Non-Sparking II 3 G Ex nL IIC II 3 G Ex nA nL IIC</td>
<td>— — —</td>
<td>T* -55°C to Ta max* T6 -55°C ≤ Ta ≤ +85°C</td>
<td>IP65</td>
</tr>
</tbody>
</table>

*See energy limiting parameters. Refer to Master Instruction MI EVE0403.

**Energy Limitation Parameters**

<table>
<thead>
<tr>
<th>* Temperature Class</th>
<th>Ta</th>
<th>li</th>
<th>Ui</th>
<th>Pi</th>
</tr>
</thead>
<tbody>
<tr>
<td>T4</td>
<td>85 °C</td>
<td>60 mA</td>
<td>38.8 V</td>
<td>2.328 W</td>
</tr>
<tr>
<td>T4</td>
<td>85 °C</td>
<td>100 mA</td>
<td>30 V</td>
<td>3.0 W</td>
</tr>
<tr>
<td>T4</td>
<td>80 °C</td>
<td>120 mA</td>
<td>28 V</td>
<td>3.36 W</td>
</tr>
<tr>
<td>T4</td>
<td>70 °C</td>
<td>150 mA</td>
<td>25.5 V</td>
<td>3.825 W</td>
</tr>
<tr>
<td>T5</td>
<td>70 °C</td>
<td>60 mA</td>
<td>38.8 V</td>
<td>2.328 W</td>
</tr>
<tr>
<td>T5</td>
<td>55 °C</td>
<td>100 mA</td>
<td>30 V</td>
<td>3.0 W</td>
</tr>
<tr>
<td>T5</td>
<td>45 °C</td>
<td>120 mA</td>
<td>28 V</td>
<td>3.36 W</td>
</tr>
<tr>
<td>T5</td>
<td>85 °C</td>
<td>23 mA</td>
<td>6.75 V</td>
<td>0.155 W</td>
</tr>
<tr>
<td>T6</td>
<td>60 °C</td>
<td>50 mA</td>
<td>42.5 V</td>
<td>2.125 W</td>
</tr>
<tr>
<td>T6</td>
<td>55 °C</td>
<td>60 mA</td>
<td>38.8 V</td>
<td>2.328 W</td>
</tr>
</tbody>
</table>
FM Approvals (FM) & Canadian Standards Association (CSA) Approvals

Intrinsically Safe:
- Class I, Div. 1, Groups A, B, C & D
- Class II, Div. 1, Groups E, F & G
- Class III, Div. 1, Fibers
- Enclosure Nema 4X (IP65)
- Rated 4-20 mA, 40 VDC Max.
- Temp. Code T4 Ta = + 70°C

Non-Incendive:
- Class I, Div. 2, Groups A, B, C & D
- Class II, Div. 2, Groups E, F & G
- Class III, Div. 2, Fibers
- Enclosure Nema 4X (IP65)
- Temp. Code T6

Entity Parameters:
- Vmax = 40 VDC  Ci = 0 µF
- Imax = 150 mA  Li = 0 mH

Entity Installation Requirements:
- Vmax ≥ Vt OR Voc
- Imax ≥ It OR Isc
- Ca ≥ Ci + Ccable
- La ≥ Li + Lcable
Note: Cable capacitance and inductance must be considered when connecting to pressure transducer.
1. (North America) Control equipment connected to the Associated Apparatus must not use or generate more than 250 Vrms or Vdc.

2. (North America) The IS Barriers or Equipment (Associated Apparatus) must be FM Approved and CSA certified and the configuration of associated Apparatus must be FM Approved and CSA certified under the Entity Concept. The Associated Apparatus may be installed within the Hazardous (Classified) location for which it is certified. The Associated Apparatus and hazardous location loop apparatus manufacturer's control drawings must be followed when installing this equipment. An AEx [ib] Associated Apparatus is suitable only for connection to Class I, Zone 1, Hazardous (Classified) Locations and is not suitable for Class I, Zone 0, or Class I, Division 1 Hazardous (Classified) Locations.

(ATEX) The IS Barriers or other Associated Apparatus shall comply with the ATEX directive 94/9/EC.

3. (US) Installation should be in accordance with ANSI/ISA RP12.06.01 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and Article 500 of the National Electrical Code (ANSI/NFPA 70)

(Canada) Installation should be in accordance with Section 18 of the Canadian Electrical Code.

(ATEX) Installation shall be in accordance with the applicable local installation rules Energy Limitation Parameters specified.

4. (North America) All units suitable for Type 4X installations.

5. (North America) Units are suitable for Class I, Division 2, Groups A, B, C, and D hazardous (classified) locations. Transducers to be installed in accordance with the (US) National Electrical Code (ANSI/NFPA 70) Division 2 hazardous (classified) location wiring techniques

(Canada) Canadian Electrical Code.

6. The Intrinsic Safety Entity concept allows the interconnection of two Intrinsically safe devices with entity parameters not specifically examined in combination as a system when:

   - Entity Parameters for: IP26
     - $U_i (V_{max}) = 40 \text{ V}$
     - $I_i (I_{max}) = 150 \text{ mA}$
     - $C_i = 0$
     - $L_i = 0$
     - $P_i = 0.7 \text{ Watt}$
     - $U_i$ or $V_{max}$ > $U_o$ or $V_{oc}$
     - $I_i$ or $I_{max}$ > $I_o$ or $I_{sc}$ or $I_{t}$
     - $C_i + C_{cable}$
     - $La$ or $Lo$ > $Li$ ÷ $L_{cable}$
     - $Pi > P_o$.

7. No revision to this drawing is permitted without prior FM Approval and CSA Certification.
MODEL CODES IP26

**Electro/pneumatic Signal Converter**

**Input Signal**
4 - 20 mA

**Output Signal** (without Output gauge)
- 0.2 - 1 bar (3-15 psi)
- 0.1 - 1.7 bar (1.5-25 psi)
- 0.4 - 2 bar (6-30 psi)

**Body Material**
- Aluminum
- Stainless Steel (not released)

**Electrical Certification**
- ATEX Intrinsically Safe and Explosion Proof
- FM & CSA, IS and XP

**Option**
- Low temperature down to –55°C (–67 °F)

### MODEL CODES ACCESSORIES FOR IP26

<table>
<thead>
<tr>
<th>Accessory Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 inch pipe mounting kit (steel zinc plate and clear chromate)</td>
<td>EBZG-IP1</td>
</tr>
<tr>
<td>Gauge for Output pressure (scale 0 - 2.5 bar) (stainless steel housing)</td>
<td>EBZG-IP2</td>
</tr>
<tr>
<td>Pipe for gauge mounting (stainless steel)</td>
<td>VG-92</td>
</tr>
<tr>
<td>Filter regulator FRS02 (Aluminum Housing)</td>
<td>FRS02</td>
</tr>
<tr>
<td>Pipe VG-91 (stainless steel)</td>
<td>VG-91</td>
</tr>
<tr>
<td>Cable Entry 1/2” NPT via adaptor (Brass Nickel coated)</td>
<td>AD-A5</td>
</tr>
<tr>
<td>Cable Entry 1/2” NPT via adaptor (Stainless steel)</td>
<td>AD-A6</td>
</tr>
</tbody>
</table>

**EC Declaration of Conformity**

We, FOXBORO ECKARDT GmbH
Stammheimer Str. 10
D-70806 Kornwestheim, Germany

declare that the IP26 Transducer family to which this declaration applies, comply with these standards:
- EN 50082-1:1998
- EN 55011:1999
- EN 61010-1:1993 including AMD2:1995
- EN 60079-0:2006
- EN 60079-11:2007
- EN 60079-26:2007
- EN 60079-1:2007
- EN 61241-0:2007
- EN 60079-15:2005

Following the provisions of EMC directive 89/336/EEC
- EN 60079-0:2006
- EN 60079-11:2007
- EN 60079-26:2007
- EN 60079-1:2007
- EN 61241-0:2007
- EN 60079-15:2005

Following the provisions of EMC directive 94/9/EC
DIMENSIONS

I/P Converter for use with pneumatic positioner SRP981 / SRI983

IP26 Series Stand Alone I/P converter

Optional 50 mm / 2" Bracket, EBZG-IP1
EXAMPLES FOR MOUNTING

IP26

I/P conv.

Air OUT

EBZG-IP2

IN

4-20 mA

EBZG-IP1

IN

Air supply

FRS02

VG-91

IP26

I/P conv.

Air OUT

EBZG-IP2

IN

4-20 mA

EBZG-IP1

IN

Air supply

FRS02

VG-92

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