DATA SHEET

The ProcessX absolute pressure transmitter accurately measures absolute pressure and transmits a proportional 4 to 20 mA signal. The transmitter utilizes a unique micromachined capacitance silicon sensor with state-of-the-art microprocessor technology to provide exceptional performance and functionality.

FEATURES

1. HIGH ACCURACY
   0.2% accuracy for all calibrated spans is a standard feature.
   0.1% accuracy is available as option.

2. MINIMUM INVENTORY AND DESIGN
   Electronics unit, local indicators and electronics housing are interchangeable among all ProcessX transmitters.

3. MINIMAL ENVIRONMENTAL IMPACT
   The "Advanced Floating Cell" design which protects the pressure sensor against changes in temperature, and overpressure substantially reduces total measurement error in actual field applications.

4. GEORGIN/HART™ BILINGUAL COMMUNICATION PROTOCOL
   ProcessX series transmitter offers bilingual communications to speak both Georgin proprietary protocol and HART®. Any HART® compatible devices can communicate with ProcessX.

5. APPLICATION FLEXIBILITY
   Various options that render the ProcessX suitable for almost any process applications include:
   • Full range of hazardous area approvals.
   • Built-in RFI filter and lightning arrester.
   • 5 digit LCD meter with engineering unit.
   • Stainless steel electronics housing.
   • Wide selection of materials.

6. PROGRAMMABLE OUTPUT LINEARIZATION FUNCTION
   Output signal can be freely programmable.
   (Up to 14 compensated points at approximation).

7. BURNOUT CURRENT FLEXIBILITY (UNDER SCALE : 3.2 TO 4.0 mA / OVER SCALE : 20.0 TO 22.5 mA)
   Burnout signal level is adjustable using Model FXW or Hand Held Communicator (HHC) to comply with NAMUR NE43.

8. CALIBRATION WITHOUT REFERENCE PRESSURE
   Thanks to the best combination of unique construction of mechanical parts (Sensor unit) and high performance electronics circuit (Electronics unit), reliability of dry calibration without reference pressure is at equal level as wet calibration.

FUNCTIONAL SPECIFICATIONS

Type:
FKA: Smart, 4-20 mA DC + Georgin/Hart® digital signal

Service:
Liquid, gas or vapour

Span, range, and overrange limit:

<table>
<thead>
<tr>
<th>Type</th>
<th>Span limit [kPa abs.] [bar abs.]</th>
<th>Range limit [kPa abs.] [bar abs.]</th>
<th>Overrange limit [MPa] [bar]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Max.</td>
<td>0 to +16</td>
</tr>
<tr>
<td>FKA01</td>
<td>1.6 (0.016)</td>
<td>16 (0.16)</td>
<td>0 to +16</td>
</tr>
<tr>
<td>FKA02</td>
<td>1.6 (0.016)</td>
<td>130 (1.3)</td>
<td>0 to +130</td>
</tr>
<tr>
<td>FKA03</td>
<td>5 (0.05)</td>
<td>500 (5)</td>
<td>0 to +500</td>
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<tr>
<td>FKA04</td>
<td>30 (0.3)</td>
<td>3000 (30)</td>
<td>0 to +3000</td>
</tr>
<tr>
<td>FKA05</td>
<td>100 (1)</td>
<td>10000 (100)</td>
<td>0 to +10000</td>
</tr>
</tbody>
</table>

Remark:
To minimize environmental influence, span should be greater than 1/40 of the max. span in most applications.

Output signal:
4 to 20 mA DC with digital signal superimposed on the analogic signal.

Power supply:
Transmitter operates on 10.5 V to 45 V DC at transmitter terminals. 10.5 V to 32 V DC the units with optional arrester.
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- **LOAD LIMITATION**: see figure below

![Diagram showing load resistance vs. power voltage](image)

Note: The load resistance varies with the upper limit of the saturation current (I_max)

\[
R = \frac{E_{[V]} - 10.5}{0.9 \times 10^{-3}}
\]

A 250 Ω load resistor is required to communicate with the FXW Portable Communicator.

- **HAZARDOUS LOCATION**:

<table>
<thead>
<tr>
<th>digit 10</th>
<th>Explosion Proof</th>
<th>Installation areas</th>
<th>ATEX and IECEx parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATEX</td>
<td>X</td>
<td>Zones 1-2</td>
<td>Model without surge arrester</td>
</tr>
<tr>
<td></td>
<td>Ex d IIC T5/T6 Gb</td>
<td></td>
<td>U_i≤45Vdc</td>
</tr>
<tr>
<td></td>
<td>Ex ib IIC T85°C/T100°C Db</td>
<td></td>
<td>P_i≤1.0125W</td>
</tr>
<tr>
<td></td>
<td>Ta= -40&lt;+85°C  - T5/T100°C</td>
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<td></td>
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<tr>
<td></td>
<td>T= -40&lt;+65°C + T6/T85°C</td>
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<tr>
<td></td>
<td>Ex II 2 GD : Group II (Surface) - Category 2GD</td>
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<tr>
<td></td>
<td>The temperature of the cable can be Ta + 5 °C</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>digit 10</th>
<th>Intrinsic safety</th>
<th>Installation areas</th>
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<tr>
<td>ATEX</td>
<td>K</td>
<td>Zones 0-1-2</td>
<td>Model with / without surge arrester</td>
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<tr>
<td></td>
<td>Ex ia IIC T4/T5 Ga</td>
<td></td>
<td>U_i≤94.3mA</td>
</tr>
<tr>
<td></td>
<td>Ex ia IIC T100°C/T135°C Da</td>
<td></td>
<td>P_i≤0.66W</td>
</tr>
<tr>
<td></td>
<td>Ta= -40&lt;+70°C  - T4/T135°C</td>
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<td></td>
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<td></td>
<td>T= -40&lt;+50°C  - T5/T100°C</td>
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<td></td>
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<td></td>
<td>Ex II 1 GD : Group II (Surface) - Category 1GD</td>
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</table>

<table>
<thead>
<tr>
<th>digit 10</th>
<th>&quot;n&quot; Type</th>
<th>Installation areas</th>
<th>ATEX and IECEx parameters</th>
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</thead>
<tbody>
<tr>
<td>ATEX</td>
<td>P</td>
<td>Zones 2</td>
<td>Model without surge arrester</td>
</tr>
<tr>
<td></td>
<td>Ex na IIC T5 Gc</td>
<td></td>
<td>U_i≤45Vdc</td>
</tr>
<tr>
<td></td>
<td>Ex tc IIC T100°C Dc</td>
<td></td>
<td>P_i≤1.0125W</td>
</tr>
<tr>
<td></td>
<td>Ta= -40&lt;+70°C  - T5/T100°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ex II 3 GD : Group II (Surface) - Category 3GD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>digit 10</th>
<th>&quot;n&quot; Type</th>
<th>Installation areas</th>
<th>ATEX and IECEx parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATEX</td>
<td>Q</td>
<td>Zones 22</td>
<td>Model with Surge Protector</td>
</tr>
<tr>
<td></td>
<td>Ex na IIC T5 Gc</td>
<td></td>
<td>U_i≤32Vdc</td>
</tr>
<tr>
<td></td>
<td>Ex tc IIC T100°C Dc</td>
<td></td>
<td>P_i≤1.0125W</td>
</tr>
<tr>
<td></td>
<td>Ta= -40&lt;+70°C  - T5/T100°C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refer to the package insert for safe use.

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**Note:** A 250 Ω load resistor is required to communicate with the FXW Portable Communicator.

**Digital 10:**

- ATEX X
- ATEX K
- ATEX P
- ATEX Q

**Installation areas:**

- Zones 0-1-2
- Zones 1-2
- Zones 20-21-22
- Zones 21-22
- Zones 2
- Zones 22

**ATEX and IECEx parameters:**

- U_i≤45Vdc
- P_i≤1.0125W
- U_i≤94.3mA
- P_i≤0.66W
- U_i≤45Vdc
- P_i≤1.0125W
- U_i≤32Vdc
- P_i≤1.0125W

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**IECEx R** Attestation IECEx CSA 16.0048X

- Ex d IIC T5/T6 Gb
- Ex ib IIC T85°C/T100°C Db
- Ta= -40<+85°C  - T5/T100°C
- T= -40<+65°C + T6/T85°C IP66/67
- Ex II 2 GD : Group II (Surface) - Category 2GD
- The temperature of the cable can be Ta + 5 °C

**IECEx H** Attestation IECEx CSA 16.0049X

- Ex ia IIC T4/T5 Ga
- Ex ia IIC T100°C/T135°C Da
- Ta= -40<+70°C  - T4/T135°C
- T= -40<+50°C  - T5/T100°C IP66/67
- Ex II 1 GD : Group II (Surface) - Category 1GD

**IECEx Q** Attestation IECEx CSA 16.0049X

- Ex ia IIC T4/T5 Ga
- Ex ia IIC T100°C/T135°C Da
- Ta= -40<+70°C  - T4/T135°C
- T= -40<+50°C  - T5/T100°C IP66/67

---

**ATEX P** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67
- Ex II 3 GD : Group II (Surface) - Category 3GD

**IECEx Q** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67

---

**Note:**

- A 250 Ω load resistor is required to communicate with the FXW Portable Communicator.

---

**Digital 10 Intrinsic safety:**

- ATEX K
- ATEX P

---

**ATEX P** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67
- Ex II 3 GD : Group II (Surface) - Category 3GD

**IECEx Q** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67

---

**ATEX P** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67
- Ex II 3 GD : Group II (Surface) - Category 3GD

**IECEx Q** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67

---

**ATEX P** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67
- Ex II 3 GD : Group II (Surface) - Category 3GD

**IECEx Q** Ex nA IIC T5 Gc

- Ex tc IIC T100°C Dc
- Ta= -40<+70°C  - T5/T100°C IP66/67
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- **Zero/Span Adjustment**: Zero and span are adjustable from the HHC(1). Zero and span are also adjustable externally from the adjustment screw.
- **Damping**: (Adjustable from HHC communicator or LCD digital display)
  The time constant is adjustable between 0.06 to 32 seconds.
- **Zero Elevation/Suppression**: Zero can be elevated within the specified range limit of each sensor model.
  -100% to +100% of URL.
- **Normal/Reverse Action**: Selectable from HHC(1).
- **Indication**: Analog indicator or 5-digit LCD meter, as specified.
- **Burnout Direction**: Selectable from HHC(1)
  If self-diagnostic detect transmitter failure, the analog signal will be driven to either “Output Hold”, “Output Overscale” or “Output Underscale” modes.
- **“Output hold”**: Output signal is hold as the value just before failure happens.
- **“Output overscale”**: Adjustable within the range 20.0 mA to 22.5 mA from HHC(1).
- **“Output underscale”**: Adjustable within the range 3.2 mA to 4.0 mA from HHC(1).
  Output limits conforming to NAMUR NE43 by order.

- **Loop-check output**: Transmitter can be configured to provide constant signal 3.2 mA through 22.5 mA by HHC(1).
- **Temperature Limit**: Ambient: -40 to +85°C
  -20 to +80°C (for digital indicator option)
  -40 to +60°C (for arrester option)
  For explosion proof units (flameproof or intrinsic safety), ambient temperature must be within the limits specified by each standard.
  Process: -40 to +85°C (for silicone oil fill sensor)
  Storage: -40 to +90°C
- **Humidity Limit**: 0 to 100% RH (Relative Humidity)
- **Communication**:
  With HHC(1) (model FXW, consult DS EDS8-47), following items can be remotely displayed or configured.
  Note: With HHC(1) (model FXW, consult DS EDS8-47), following items can be remotely displayed or configured.
  Note: HHC’s version soft must be higher than 7.0 (or FXW[1  1]–[CH] for ProcessX for supporting these items: “Saturate current”, “Write protect”, and “History”.

### Performance Specification

Reference conditions, silicone oil fill, SS 316 isolating diaphragms, 4 to 20 mA analog output.

- **Accuracy Rating**: (included linearity, hysteresis & repeatability).
  (Standard)
  For spans greater than 1/10 of URL:
  \[
  \pm 0.2\% \text{ of span}
  \]
  For spans below 1/10 of URL:
  \[
  \pm \left(0.1 + \frac{0.1 \times \text{URL}}{\text{Span}}\right) \% \text{ of span}
  \]
  (Not available for Max span 16 kPa abs, 130 kPa abs)
  For spans greater than 1/10 of URL:
  \[
  \pm 0.1\% \text{ of span}
  \]
  For spans below 1/10 of URL:
  \[
  \pm \left(0.05 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}}\right) \% \text{ of span}
  \]
- **Stability**: \pm 0.2% of upper range limit (URL) for 10 years.
- **Temperature Effect**: Effects per 28°C change between the limits of -40 et +85°C
  Zero shift: \pm (0.125+0.1 URL) %
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Total effect : ±(0.15+0.1 \( \frac{\text{URL}}{\text{span}} \))%

Double the effects for material code “H” (7th digit in codes symbols).

- **OVERRANGE EFFECT**:
  - Zero shift : ±0.2% of URL for any overrange to maximum limit

- **SUPPLY VOLTAGE EFFECT**:
  - Less than 0.005% of calibrated span per 1 V.

- **UPDATE RATE** : 60 msec

- **INFLUENCE OF RADIO INTERFENCES**:
  - < 0.2% of URL for the frequencies of 20 to 1000 MHz and field strength of 10 V/m when electronic housing covers are on (Classification : 2-abc : 0.2% of span according SAMA PMC 33.1).

- **RESPONSE TIME** :
  - (at 63.3% of the output without electronic damping)
    - Time constant : 0.08 sec (at 23°C)
    - Time out : 0.12 sec
    - Response time = time constant + dead time

- **MOUNTING POSITION EFFECT**:
  - Zero shift, less than 0.1 kPa (1 mbar) for a 10° tilt in any plane. This error can be corrected by adjusting zero. No effect on span.

- **VIBRATIONS EFFECT**:
  - < ±0.25% of span for spans greater than 1/10 of URL.
  - Frequency 10 to 150 Hz, acceleration 39,2 m/sec².

- **MATERIAL FATIGUE**:
  - Please consult Georgin

- **DIELECTRIC STRENGTH**:
  - 500 V AC, 50/60 Hz min., between circuit and earth.

- **INSULATION RESISTANCE**:
  - More than 100 MΩ at 500 V DC.

- **INTERNAL RESISTANCE FOR EXTERNAL FIELD INDICATOR**:
  - 12 Ω (connected to test terminals CK+ et CK-)

- **PRESSURE EQUIPMENT DIRECTIVE (PED) 97/23/EC**
  - According to Article 3.3

- **PHYSICAL SPECIFICATION**

- **ELECTRIC CONNECTIONS**:
  - 1/2-14 NPT, Pg13.5 or M20 x 1.5

- **PROCESS CONNECTION**:
  - Standard : 1/4-18 NPT as specified
  - Option : 1/2-14 NPT for oval flanges

- **PROCESS-WETTED PARTS MATERIAL**:

<table>
<thead>
<tr>
<th>Material code (7th digit in code symbols)</th>
<th>Process cover</th>
<th>Diaphragm</th>
<th>Wetted sensor body</th>
<th>Vent/drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>SS 316L</td>
<td>SS 316L</td>
<td>SS 316L</td>
<td>SS 316L</td>
</tr>
<tr>
<td>H</td>
<td>PVDF or SS 316L</td>
<td>Hastelloy-C</td>
<td>Hastelloy-C</td>
<td>SS 316L</td>
</tr>
<tr>
<td>J</td>
<td>SS 316L</td>
<td>SS 316L + gold coating</td>
<td>SS 316L</td>
<td>SS 316L</td>
</tr>
</tbody>
</table>

**Remark**:
- Sensor gasket : Viton o-ring or PTFE square section gasket. Availability of above material design depends on ranges and static pressure. Refer to “Code symbols”.

**NON-WETTED PARTS MATERIAL**:
- Electronics housing : Low copper die-cast aluminium alloy, finished with polyester coating (standard), or SS 316, as specified.
- **BOLTS AND NUTS**:
  - Standard : Cr-Mo alloy
  - Options : SS 316 (L) or SS 660

- **FILL FLUID**:
  - Silicone oil

- **MOUNTING**:
  - Without mounting bracket : direct mounting on manifold (optional)
  - With optional mounting bracket : for 50 mm (2") pipe or direct wall mounting.

- **MASS (WEIGHT)**:
  - Transmitter approximately 3.5 kg without options.
  - Add : 0.3 kg for indicator (optional)
  - 0.5 kg for mounting bracket
  - 2 kg for stainless steel housing option

- **OPTIONAL FEATURES**

- **INDICATOR**:
  - A plug-in analog indicator (2.5% accuracy) can be housed in the electronics compartment or in the terminal box of the housing.
  - An optional 5 digit LCD meter with engineering unit is also available.

- **LOCAL CONFIGURATION WITH LCD DISPLAY**:
  - An optional 5 digits LCD meter with 3 push buttons can support items without using communication with FXW.

- **ARRESTER**:
  - A built-in arrester protects the electronics from lightning surges.
  - Lightning surge immunity: 4 kV (1.2 × 50 μs)

- **DEGREASING**:
  - Process-wetted parts are cleaned, but the fill fluid is standard silicone oil. Not for use for oxygen or chlorine measurement.

- **NACE SPECIFICATION**:
  - Metallic materials for all pressure boundary parts comply with NACE MR 0175/ISO 15156.
  - SS 660 bolts and nuts comply with NACE MR 0175/ISO 15156.

- **OPTIONAL TAG PLATE**:
  - An extra stainless steel tag for customer tag data is wired to the transmitter.

- **ACCESSORIES**

- **OVAL FLANGES**:
  - Converts process connection to 1/2-14 NPT

- **HAND HELD COMMUNICATOR FXW (HHC)**:
  - (Model FXW, refer to data sheet No. EDS 8-47)
# FKA...5 Absolute pressure transmitter

## CODE SYMBOL

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
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</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Smart 4-20 mA dc; + Georgin/Hart digital signal</td>
<td></td>
<td></td>
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<tr>
<td><strong>Connections</strong></td>
<td><strong>Process</strong></td>
<td><strong>Overrange</strong></td>
<td><strong>Contact</strong></td>
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<td>R</td>
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<td>0-18 NPT</td>
<td>0-18 NPT</td>
<td>0-18 NPT</td>
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<td>0-18 NPT</td>
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</tbody>
</table>

### Storage and transport
- Code "D & V" FM approval only possible with electrical connection 1/2-14 NPT.
- Our stainless steel bolts/nuts in SS 660 are in conformity with the NACE MR 0175/ISO 15156.

### Process cover
- PVDF insert with 1/2-14 NPT side process connection/no vent drain, other upon request - square section PTFE gasket.

### Indicator & Arrester
- Indicator
- Arrester
- Initial setting

- Indicator
- Arrester

### Processing elements & Mounting bracket

### Special options or design
- Special, no code available.

### Notes:
1. Turn down of 100: 1 is possible, but it should be used at a span greater than 1/40 of the maximum span for better performance.
2. When no code can be found in the current code symbols, place * in concerned code digit(s) & add * in 16th digit.
3. Process cover with PVDF insert with 1/2-14 NPT side process connection/no vent drain, other upon request - square section PTFE gasket.
4. Our stainless steel bolts/nuts in SS 660 are in conformity with the NACE MR 0175/ISO 15156.
5. Code "D & V" FM approval only possible with electrical connection 1/2-14 NPT.
**FKA...5**  
Absolute pressure transmitter

---

### Table 1

<table>
<thead>
<tr>
<th>Code X=4</th>
<th>Electrical connection</th>
<th>Oval flange screw</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>R</td>
<td>M20x1.5</td>
<td>16</td>
</tr>
<tr>
<td>T</td>
<td>1/2-14NPT</td>
<td>16</td>
</tr>
<tr>
<td>V</td>
<td>Pg13.5</td>
<td>10.5</td>
</tr>
<tr>
<td>W</td>
<td>M20x1.5</td>
<td>16</td>
</tr>
<tr>
<td>X</td>
<td>Pg13.5</td>
<td>10.5</td>
</tr>
</tbody>
</table>

---

**Weight:**  
3.5 kg (without option)  
**Add:**  
- 0.8 kg for indicator option  
- 2 kg for stainless steel housing option  
- 0.5 kg for mounting bracket

---

### SPAN LIMIT

<table>
<thead>
<tr>
<th>FKA...01</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0 KPa (mbar)</td>
<td>20 KPa (1 bar)</td>
<td></td>
</tr>
</tbody>
</table>

---

**GEORGIN France:**  
Tel: +33 (0)1 46 12 60 00 - Fax: +33 (0)1 47 35 93 98 - regulateurs@georgin.com

**GEORGIN Belgium:**  
Tel: 02 735 54 75 - Fax: 02 735 16 79 - info@georgin.be
All models of ProcessX series transmitters are in accordance with:
- EN 61326-1 : 2006 (Electrical equipment for measurement, control and laboratory use - EMC requirement).
criteria for transducers with integrated or remote signal conditioning).

**Emission limits : EN 61326-1 : 2006**

<table>
<thead>
<tr>
<th>Frequency range (MHz)</th>
<th>Limits</th>
<th>Basics standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 to 230</td>
<td>40 dB (µV/m) quasi peak, measured at 10 m distance</td>
<td>EN 55011 / CISPR 11 Group 1 Class A</td>
</tr>
<tr>
<td>230 to 1000</td>
<td>47 dB (µV/m) quasi peak, measured at 10 m distance</td>
<td></td>
</tr>
</tbody>
</table>

**Immunity requirements : EN 61326-1 : 2006 (Table 2)**

<table>
<thead>
<tr>
<th>Phenomenon</th>
<th>Test value</th>
<th>Basic standard</th>
<th>Performance criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic discharge (EDS)</td>
<td>4 kV (Contact)</td>
<td>EN 61000-4-2</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>8 kV (Air)</td>
<td>IEC 61000-4-2</td>
<td></td>
</tr>
<tr>
<td>Electromagnetic field</td>
<td>10 V/m (80 to 1000 MHz)</td>
<td>EN 61000-4-3</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>3 V/m (1.4 to 2.0 GHz)</td>
<td>IEC 61000-4-3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 V/m (2.0 to 2.7 GHz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated power frequency magnetic field</td>
<td>30 A/m</td>
<td>EN 61000-4-8</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IEC 61000-4-8</td>
<td></td>
</tr>
<tr>
<td>Burst</td>
<td>2 kV (5/50 NS, 5 kHz)</td>
<td>EN 61000-4-4</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IEC 61000-4-4</td>
<td></td>
</tr>
<tr>
<td>Surge</td>
<td>1 kV line to line</td>
<td>EN 61000-4-5</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>2 kV line to line</td>
<td>IEC 61000-4-5</td>
<td></td>
</tr>
<tr>
<td>Conducted RF</td>
<td>3 V (150 kHz to 80 MHz)</td>
<td>EN 61000-4-6</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IEC61000-4-6</td>
<td></td>
</tr>
</tbody>
</table>

**Performance criteria :**
- A : During testing, normal performance within the specification limits.
- B : During testing, temporary degradation or less of function or performance which is self-recovering.