ATEX Installation Instructions
for Micro Motion® D and DL Sensors

For ATEX-approved sensor installations
Note: For hazardous installations in Europe, refer to standard EN 60079-14 if national standards do not apply.

Information affixed to equipment that complies with the Pressure Equipment Directive can be found on the internet at www.micromotion.com/library.
D and DL Sensors
ATEX Installation Instructions

• For installing the following Micro Motion sensors:
  - Models D150 and D300
  - Models DH25, DH38, DH100, DH150, and DH300
  - Models DT65, DT100, and DT150
  - Models DL65, DL100, and DL200

Subject: Equipment type
Sensor type D* **** B

Manufactured and submitted for examination
Micro Motion, Inc.

Address
Boulder, Co. 80301, USA

Basis for examination:
Annex II of Directive 94/9/EC

Standard basis
EN 50014:1997 +A1-A2 General requirements
EN 50020:1994 Intrinsic safety ‘i’
EN 50281-1-1:1998 Dust Evaluation ‘D’

Code for type of protection
EEEx ib IIB/IIC T1–T6
1) **Subject and type**

Sensor type D* *** * ****B

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

\[
\begin{array}{c}
\text{D} * * * * * * * * * * * * B \\
\end{array}
\]

3 numerals for type of sensor

2) **Description**

The flow sensor in combination with a transmitter is used for flow measurement. The flow sensor consists of magnetically excited oscillating tubes. The sensor electrical components are coils, resistors, temperature sensors, terminals and connectors.

The sensor may also be used for measurement of flammable substances, providing that the substances do not form an explosive atmosphere either permanently or frequently. If flammable substances are being measured, the sensor must be included in the recurrent pressure test.

Amendment No. 1 to the ATEX certificate DMT 02 ATEX E 156 X reflects the revised Drive Coil parameters for D*100, DL100, and D*150 for compatibility with other certified ATEX transmitters. Sensors constructed using these revised coil parameters will be identified with a Construction Identification Code (C.I.C.) of A1.
3) Parameters

3.1) Type D* **** * ****B

3.1.1) Drive circuit

Parameters for terminals 1 and 2 (red and brown wires)

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>Inductivity [mH]</th>
<th>Coil resistance @ –20 °C [Ohms]</th>
<th>Series resistance @ –20 °C [Ohms]</th>
</tr>
</thead>
<tbody>
<tr>
<td>D*025</td>
<td>6,9</td>
<td>106,2</td>
<td>946,6</td>
</tr>
<tr>
<td>DH038</td>
<td>6,9</td>
<td>106,2</td>
<td>946,6</td>
</tr>
<tr>
<td>D*065</td>
<td>0,2</td>
<td>3,16</td>
<td>482,6</td>
</tr>
<tr>
<td>DL050X</td>
<td>0,2</td>
<td>3,16</td>
<td>189,3</td>
</tr>
<tr>
<td>DL065</td>
<td>0,2</td>
<td>3,16</td>
<td>482,6</td>
</tr>
<tr>
<td>D*100</td>
<td>32,8</td>
<td>108,7</td>
<td>59,3</td>
</tr>
<tr>
<td>DL100</td>
<td>32,8</td>
<td>108,7</td>
<td>59,3</td>
</tr>
<tr>
<td>D*150</td>
<td>32,8</td>
<td>108,7</td>
<td>59,3</td>
</tr>
<tr>
<td>DL200</td>
<td>3</td>
<td>35,8</td>
<td>9,5</td>
</tr>
<tr>
<td>D*300</td>
<td>3</td>
<td>35,8</td>
<td>9,5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>Inductivity [mH]</th>
<th>Coil resistance @ +32 °C [Ohms]</th>
<th>Series resistance @ +32 °C [Ohms]</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT065</td>
<td>3</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>DT100</td>
<td>3</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>DT150</td>
<td>3</td>
<td>44</td>
<td>0</td>
</tr>
</tbody>
</table>
### 3.1.2) Pick-off circuit (terminals 5,9 and 6,8; green/white and blue/grey wires)

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>Inductivity [mH]</th>
<th>Coil resistance @ –20 °C [Ohms]</th>
</tr>
</thead>
<tbody>
<tr>
<td>D*025</td>
<td>6,9</td>
<td>106,2</td>
</tr>
<tr>
<td>DH038</td>
<td>6,9</td>
<td>106,2</td>
</tr>
<tr>
<td>D*065</td>
<td>0,2</td>
<td>3,16</td>
</tr>
<tr>
<td>DL050X</td>
<td>0,2</td>
<td>3,16</td>
</tr>
<tr>
<td>DL065</td>
<td>0,2</td>
<td>3,16</td>
</tr>
<tr>
<td>D*100</td>
<td>6,18</td>
<td>113,8</td>
</tr>
<tr>
<td>DL100</td>
<td>6,18</td>
<td>113,8</td>
</tr>
<tr>
<td>D*150</td>
<td>6,18</td>
<td>113,8</td>
</tr>
<tr>
<td>DL200</td>
<td>6,18</td>
<td>113,8</td>
</tr>
<tr>
<td>D*300</td>
<td>6,18</td>
<td>113,8</td>
</tr>
</tbody>
</table>

### 3.1.3) Temperature circuit (terminals 3, 4 and 7; orange, yellow and violet wires)

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>Inductivity [mH]</th>
<th>Coil resistance @ +32 °C [Ohms]</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT065</td>
<td>1,2</td>
<td>15,7</td>
</tr>
<tr>
<td>DT100</td>
<td>1,2</td>
<td>15,7</td>
</tr>
<tr>
<td>DT150</td>
<td>1,2</td>
<td>15,7</td>
</tr>
</tbody>
</table>
3.1.4) Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

**ATEX ALLOWABLE D100, D150 SENSOR TEMPERATURE RATING WITH INTEGRAL J-BOX BASED ON AMBIENT/FLUID TEMPERATURE**

Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6: T ≤ 80°C, T5: T ≤ 95°C, T4: T ≤ 130°C, T3: T ≤ 195°C, T2 to T1: T ≤ 214°C.

**ATEX ALLOWABLE DT SENSOR TEMPERATURE RATING WITH INTEGRAL J-BOX BASED ON AMBIENT/FLUID TEMPERATURE**

Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6: T ≤ 80°C, T5: T ≤ 95°C, T4: T ≤ 130°C, T3: T ≤ 195°C, T2: T ≤ 295°C, T1: T ≤ 440°C.
Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3 to T1:T 187°C.

Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 237°C.
3.1.5) Ambient temperature range

The use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor. Minimum medium temperature is –20 °C.

The ambient temperature of the sensor may be less than –20 °C provided the temperature of the medium is not less than 0 °C.

4) Marking

\[-20 °C \leq Ta \leq +55 °C\]

<table>
<thead>
<tr>
<th>- type</th>
<th>- type of protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>D<em>025</em> **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIC T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DH038* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIC T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>D<em>065</em> **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIC T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DL050X* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIC T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DL065* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIC T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>D<em>100</em> **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DL100* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>D<em>150</em> **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DL200* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>D<em>300</em> **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DT065* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DT100* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DT150* **** B</td>
<td>CE 0575 Ex II 2 G Ex ib IIB T1–T6 II 2 D IP65 T1 °C</td>
</tr>
</tbody>
</table>

(1) For dust temperature rating, see temperature graphs.
5) **Special conditions for safe use / Installation instructions**

5.1) For the sensor types DT065, DT100 and DT150 the following applies: the minimum process fluid temperature is +32 °C.

5.2) When the application requires that IIB certified sensors are to be used in IIC hazardous area's, these sensors can be modified by adding an infallible series resistor in the drive coil circuitry done by the manufacturer or his representative. In this case, the modified sensor can be marked with IIC and must be marked with an identification code (so-called CEQ number). Furthermore the manufacturer or his representative must issue a Manufacturing Declaration which shows how the calculations have been done, what resistor value is to be added and what the identification code is.

5.3) The above is also applicable when IIB or IIC certified sensors are going to be used at lower fluid temperatures than indicated in the EC Type Examination Certificate.

5.4) A combination of points 5.2 and 5.3 is also allowed.
Model D600 Sensors
ATEX Installation Instructions

Subject: Equipment type
Sensor type DS600* ***S**(Z or F)*****

Micro Motion, Inc.

Manufactured and submitted for examination

Address
Boulder, Co. 80301, USA

Basis for examination:
Annex II of Directive 94/9/EC
Standard basis
EN 50019:2000 Increased safety ´e´
EN 50020:2002 Intrinsic safety ´i´

Code for type of protection
EEx de [ib] IIB T4–T6
EEx de [ib] IIB T3–T6
1) **Subject and type**

Sensor type DS600* *****(F or Z)*****

Instead of the *** letters and numerals will be inserted which characterize the following modifications:

- **Marking without influence to the type of protection**
  - DS 600** S** **Z**

- **Approval**
  - **F** = Flameproof Terminal Compartment
  - **Z** = Increased Safety Terminal Compartment

- **Letter for conduit connections**

- **Letter for electronics interface**
  - **K** = Integral booster amp with local core processor
  - **L** = Integral booster amp with local core processor for direct host
  - **M** = Integral booster amp with 9-wire junction box
  - **N** = Remote booster amp with local core processor
  - **O** = Remote booster amp with local core processor for direct host
  - **P** = Remote booster amp with 9-wire junction box

- **Case option**
  - **S** = Standard pressure containment

- **Marking without influence to the type of protection**
2) Description

The flow sensor DS600 in conjunction with a Micro Motion Transmitter is used for flow measurement. The flow sensor, which consists of magnetically exited oscillating tubes, contains as electrical components coils, temperature sensor, terminals, connectors and a Booster Amplifier.

The Booster Amplifier used with the Mass Flow Sensor Model D600 is certified as a component under KEMA 01 ATEX 2184 U. The Booster Amplifier may be used either integrally or remotely mounted in relation to the sensor body, depending upon the maximum fluid temperature. The Booster Amplifier is able to accept Micro Motion’s 9-Wire J-Box or Core Processor (Model 700) (certified as EEx ib IIB/IIC T5 under DMT 01 ATEX E 081 U) inputs.

The terminal compartment of the Booster Amplifier may be Certified as either a flame proof (EEx d) enclosure or an increased safety (EEx e) enclosure.

The Booster Amplifier additionally incorporates an intrinsically safe Junction Housing for termination and connection of the separately certified intrinsically safe transmitter and sensor wiring.

The drive coils are classified as EEx e. The pick-off coils and temperature sensor are standard designed and classified as EEx i.

By mounting the Core Processor (Model 700) directly to the Booster Amplifier the use of the unit will be modified according to the following table:

<table>
<thead>
<tr>
<th>Sensor</th>
<th>DS600* <em><strong><em>S(N, O or P)</em>(F or Z)</strong></em>**</th>
<th>DS600* <em><strong><em>S(K, L or M)</em>(F or Z)</strong></em>**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EEx 0575 II 2 G EEx de [ib] IIB T3–T6</td>
<td>EEx 0575 II 2 G EEx de [ib] IIB T4–T6</td>
</tr>
<tr>
<td></td>
<td>II 2 D IP65 T1 °C</td>
<td>II 2 D IP65 T1 °C</td>
</tr>
</tbody>
</table>

(1) For dust temperature ratings, see temperature graphs.

3) Parameters

3.1) Electrical parameters: see Booster Amplifier Section.

3.2) Type DS600* ****S(K, L or M)*(F or Z)*****

   (Integral booster amplifier provided with 9-wire junction box or 4-wire core processor)

3.2.1) Ambient temperature range

   DS600* ****S(K, L or M)*(F or Z)***** Ta
   
   –20 °C up to +60 °C
3.2.2) Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

**Note 1.** Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6: T 80°C, T5: T 95°C, T4: T 128°C.

3.3) Type DS600* **S(N, O or P)**(F or Z)*****
(Remote booster amplifier provided with 9-wire junction box or 4-wire core processor)
3.3.1) Temperature class

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graph:

ATEX ALLOWABLE D600 (EExe DRIVE COILS) SENSOR TEMPERATURE RATING WITH REMOTE BOOSTER WITH J-BOX OR CORE PROCESSOR BASED ON AMBIENT/FLUID TEMPERATURE

Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6: T 80°C, T5: T 95°C, T4: T 130°C, T3: T 155°C.

3.3.2) Ambient temperature range

Type DS600* ***S(N, O or P)*(F or Z)****** Ta –20 °C up to +60 °C

4) Marking

–20 °C ≤ Ta ≤ +60 °C

<table>
<thead>
<tr>
<th>- type</th>
<th>- type of protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS600 * *** S (K, L or M) * (F or Z) * * * * *</td>
<td>II 2 G EEEx de [ib] IIB T4–T6</td>
</tr>
<tr>
<td></td>
<td>II 2 D IP65 T1 °C</td>
</tr>
<tr>
<td>DS600 * *** S (N, O or P) * (F or Z) * * * * *</td>
<td>II 2 G EEEx de [ib] IIB T3–T6</td>
</tr>
<tr>
<td></td>
<td>II 2 D IP65 T1 °C</td>
</tr>
</tbody>
</table>

(1) For dust temperature ratings, see temperature graphs.
5) **Special conditions for safe use / Installation instructions**

5.1) For certified conduit installations a customer supplied Conduit Seal Fitting is required within 18” of the enclosure.

5.2) Risk of Ignition of Hazardous Atmospheres — Disconnect equipment from supply circuit and wait 30 minutes before opening. Keep assembly tightly closed when in operation.

5.3) Explosion Hazard — Substitution of components may impair Intrinsic Safety.

5.4) For installation only with Micro Motion Booster Amplifier and Transmitters.
Booster Amplifier
ATEX Installation Drawings and Instructions

- For installing a booster amplifier to the following sensors:
  - Booster amplifier with 4-wire core processor to D600 sensor
  - Booster amplifier with 9-wire junction box to D600 sensor

Subject: Equipment type
Booster amplifier

Manufactured and submitted for examination
Micro Motion, Inc.

Address
Boulder, Co. 80301, USA

Basis for examination:
Annex II of Directive 94/9/EC
EN 50014:1997 General requirements
EN 50018:2000 Flameproof enclosure ‘d’
EN 50019:2000 Increased safety ‘e’
EN 50020:1994 Intrinsic safety ‘i’
EN 50281-1-1:1998 Dust ‘D’

Code for type of protection
EEEx d [ib] IIB T5
or
EEEx de [ib] IIB T5
When Core Processor (Model 700) is Integrally Mounted to Booster Amplifier
EEEx d [ib] IIB T6
or
EEEx de [ib] IIB T6
When 9-Wire J-Box is Mounted on Booster Amp
1) **Subject and type**

Booster amplifier

2) **Description**

The Booster Amplifier is used with the Micro Motion Mass Flow Sensor model DS600S and a Micro Motion transmitter to form a Mass Flow Meter system. The Booster Amplifier may be integrally or remotely mounted in relation to the sensor body, depending on the maximum process temperature. The Booster Amplifier is able to accept Micro Motion's 9-Wire J-Box or Core Processor (Model 700) inputs.

The terminal compartment of the Booster Amplifier may be Certified as either a flame proof (EEx d) enclosure or an increased safety (EEx e) enclosure.

The Booster Amplifier additionally incorporates an intrinsically safe Junction Housing for termination and connection of intrinsically safe transmitter and sensor wiring.

The temperature class is T5 when the Core Processor (Model 700) is used; otherwise the temperature class is T6.

3) **Parameters**

3.1) Non intrinsically safe input circuit (mains circuit)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Ui AC</td>
<td>85–265 V</td>
</tr>
<tr>
<td>Max. voltage Um AC</td>
<td>265 V</td>
</tr>
<tr>
<td>Max. current Ii</td>
<td>500 mA</td>
</tr>
<tr>
<td>Max. power Pi</td>
<td>50 W</td>
</tr>
</tbody>
</table>

3.2) Non intrinsically safe output circuits (drive coil)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. voltage Uo DC</td>
<td>32 V</td>
</tr>
<tr>
<td>Max. current Io</td>
<td>2 A</td>
</tr>
</tbody>
</table>

3.3) For intrinsic safety EEx [ib] IIB only connect to certified intrinsically safe circuits, with the following maximum values:

3.3.1) Input circuit, Model 700 core processor (terminals 1–4):

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Ui DC</td>
<td>17,3 V</td>
</tr>
<tr>
<td>Current Ii mA</td>
<td>484 mA</td>
</tr>
<tr>
<td>Power Pi W</td>
<td>2,1 W</td>
</tr>
<tr>
<td>Effective internal resistance Ci nF</td>
<td>2,2 nF</td>
</tr>
<tr>
<td>Effective internal inductance Li μH</td>
<td>30 μH</td>
</tr>
</tbody>
</table>
3.3.2) Input circuit, 9-wire junction box

3.3.2.1) Drive coil circuit (brown and red insulated wires)

| Voltage (Ui) | DC | 11,4 V |
| Current (Ii) | 2,45 A |
| Power (Pi)   | 2,54 W |
| Effective internal capacitance (Ci) | Negligible |
| Effective internal inductance (Li) | Negligible |

3.3.2.2) Pick-off coils (green and white, blue and grey, insulated wires)

| Voltage (Ui) | DC | 30 V |
| Current (Ii) | 215 mA |
| Power (Pi)   | 1,6 W |
| Effective internal capacitance (Ci) | Negligible |
| Effective internal inductance (Li) | Negligible |

when connected to D600

| Voltage (Ui) | DC | 30 V |
| Current (Ii) | 253 mA |
| Power (Pi)   | 1,9 W |
| Effective internal capacitance (Ci) | Negligible |
| Effective internal inductance (Li) | Negligible |

3.3.2.3) Temperature pass through wiring (violet, orange and yellow insulated wires)

| Voltage (Ui) | DC | 30 V |
| Current (Ii) | 253 mA |
| Power (Pi)   | 1,9 W |
| Effective internal capacitance (Ci) | Negligible |
| Effective internal inductance (Li) | Negligible |

3.4) Ambient temperature range

Booster amplifier

Ta

−40 °C up to +60 °C

Maximum surface temperature for Dust

Td

+80 °C

4) Marking

0575 EEx II 2 G D

T80 °C

Maximum surface temperature for Dust

−40 °C ≤ Ta ≤ +60 °C

<table>
<thead>
<tr>
<th>- type</th>
<th>- type of protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Booster amplifier with integrally mounted core processor (Model 700)</td>
<td>EEx d [ib] IIB T5 or EEx de [ib] IIB T5</td>
</tr>
<tr>
<td>Booster amplifier with 9-wire j-box</td>
<td>EEx d [ib] IIB T6 or EEx de [ib] IIB T6</td>
</tr>
</tbody>
</table>
5) **Special conditions for safe use / Installation instructions**

5.1) For certified conduit installations a customer supplied Conduit Seal Fitting is required within 18” of the enclosure.

5.2) **Risk of Ignition of Hazardous Atmospheres** — Disconnect equipment from supply circuit and wait 30 minutes before opening. Keep assembly tightly closed when in operation.

5.3) **Explosion Hazard** — Substitution of components may impair Intrinsic Safety.

5.4) For installation only with Micro Motion Mass Flow Sensor type D*600.
Booster amplifier with core processor to D600 sensor

Allowable process fluid temperature range with remotely mounted booster amplifier is $-194 \degree C < T_{\text{fluid}} < +87 \degree C$ for standard D600 sensor (EEx e Drive Coils).

Allowable ambient temperature $-40 \degree C < T_{\text{ambient}} < +60 \degree C$

Do not open while energized. Wait 30 minutes after power is off before opening.

Enclosures and interconnections are approved under ISSeP 04 ATEX 127 X

Remote booster amplifier

To comply with the low voltage directive, install a power source switch near the Booster Amplifier.

Connection diagram

From remote booster amp terminal | To sensor explosion-proof j-box terminal
--- | ---
1 | 1
2 | 2

To achieve potential equalization the ground terminal must be connected to the appropriate ground terminal within the hazardous area using a potential equalizing line.
Booster amplifier with junction box to D600 sensor

Allowable process fluid temperature range with remotely mounted booster amplifier is
\[ -194 \, ^\circ C < T_{\text{fluid}} < +87 \, ^\circ C \]
for standard D600 sensor (EEx e Drive Coils).

**Equipment ground**

This unit is provided with an external terminal for supplementary bonding connections. This terminal is for use where local codes or authorities permit or require such connections.

- **1/2"–14 NPT or M20 x 1,5 adapter supplied as ordered.** Customer can wire through any port. Leave plugs in unused ports.
- **For conduit installations:** Conduit, seals, and wiring supplied by customer. Use single jacketed, twisted-pair, 18–14 gauge wire with insulation suitable for process and temperature. Conduit seal required within 18" of enclosure. To be sealed after wiring. (customer supplied)
- **For cable installations:** Use double jacketed, twisted-pair, minimum 18 gauge wire, with insulation suitable for process and temperature.
- **Maximum distance between remote booster amplifier and sensor is 18 m.** Must be mechanically protected. See EN 60079-14 (cable only)

- **Intrinsically Safe EEx ib j-box**

**Enclosures and interconnections are approved under ISSeP 04 ATEX 127 X**

**Remote booster amplifier**

- **Allowable ambient temperature**
  \[ -40 \, ^\circ C < T_{\text{amp}} < +60 \, ^\circ C \]

- **Cable O.D. must be suitably sized to gland.**

**Connection diagram**

From remote booster amp terminal | To sensor explosion-proof j-box terminal
---|---
1 | 1
2 | 2

**To achieve potential equalization the ground terminal must be connected to the appropriate ground terminal within the hazardous area using a potential equalizing line.**
Cable glands and adapters

ATEX Installation Instructions

1) ATEX certification requirement

All sensor and transmitter cable glands and adapters are required to be ATEX certified. Refer to the specific manufacturer’s website for installation instructions.