Rosemount™ 214C Sensor
Safety Messages

**NOTICE**

This guide provides basic guidelines for Rosemount™ 214C Sensor models. If the sensor was ordered assembled to a temperature thermowell or transmitter, see the appropriate product literature for information on configuration and hazardous locations certifications.

**NOTICE**

Complications can arise when the sensors and the transmitters to which they are assembled are certified to compatible, but each has different approvals. Be aware of the following situations:

- If an I.S. approved 214C sensor is ordered with a housing, a transmitter enclosed in that housing may have a different I.S. approval rating. Refer to the transmitter IS certificate if applicable.

- If a sensor and transmitter have different certifications, or if either has more certifications than the other, installation must comply with the most restrictive requirements required by either component. This is especially (but not exclusively) relevant when combination approvals are ordered on either the sensor or transmitter. Review certifications on both the sensor and transmitter for installation requirements and ensure installation of the sensor/transmitter assembly complies with a single certification that is shared by both of these components and that meets the requirements of the application.

**WARNING**

Explosion

Explosions could result in death or serious injury.

- Installation of sensor in an explosive environment must be in accordance with appropriate local, national, and international standards, codes, and practices.

Conduit/cable entries

- Unless marked, the conduit/cable entries in the transmitter housing use a ½–14 NPT thread form. Entries marked “M20” are M20 × 1.5 thread form. On devices with multiple conduit entries, all entries will have the same thread form. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing these entries.

- When installing in a hazardous location, use only appropriately listed or Ex certified plugs, glands, or adapters in cable/conduit entries.

- Only use plugs, adapters, glands, or conduit with a compatible thread form when closing these entries.

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2 Rosemount 214C
# 1 Wiring diagram for RTDs

**Figure 1-1: RTD Lead Wire Configuration per IEC 60751**

<table>
<thead>
<tr>
<th>Single element, 3-wire</th>
<th>Single element, 4-wire</th>
<th>Dual element, 3-wire</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Single element, 3-wire diagram" /></td>
<td><img src="image2" alt="Single element, 4-wire diagram" /></td>
<td><img src="image3" alt="Dual element, 3-wire diagram" /></td>
</tr>
<tr>
<td>Red</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>Red</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>White</td>
<td>White</td>
<td>Yellow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td></td>
<td>White</td>
</tr>
</tbody>
</table>

**Note**
To configure a single element, 4-wire RTD as a 3-wire system, connect only one white lead. Insulate or terminate the unused white lead in a manner that prevents shorting to the ground. To configure a single element, 4-wire RTD as a 2-wire system, connect matching colored wires first and then connect the paired wires to the terminal.
2 Wiring diagram for thermocouples

Figure 2-1: Thermocouple Lead Wire Configuration

<table>
<thead>
<tr>
<th>Single thermocouple, 2-wire</th>
<th>Dual thermocouple, 4-wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>( – )</td>
<td>( – )</td>
</tr>
<tr>
<td>( + )</td>
<td>( + )</td>
</tr>
<tr>
<td>( – )</td>
<td>( – )</td>
</tr>
<tr>
<td>( – )</td>
<td>( + )</td>
</tr>
</tbody>
</table>

IEC 60584 thermocouple colors | ASTM E-230 thermocouple colors |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>POS (+)</td>
</tr>
<tr>
<td>J</td>
<td>Black</td>
</tr>
<tr>
<td>K</td>
<td>Green</td>
</tr>
<tr>
<td>T</td>
<td>Brown</td>
</tr>
</tbody>
</table>

Note
Dual thermocouple sensors are shipped with one pair of the wires shrink wrapped together.
3  Product certifications

Rev 1.21

European Directive information

A copy of the EU Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EU Declaration of Conformity can be found at Emerson.com/Rosemount.

Ordinary Location Certification

The Rosemount™ 214C has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

North America

The US National Electrical Code® (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

3.1  USA

3.1.1  E5 USA Explosionproof (XP) and Dust-Ignitionproof (DIP)

Certificate  70044744


Markings  XP CL I, DIV 1, GP B, C, D; DIP CL II, DIV 1, GP E, F, G; CL III; T6 (-50 °C ≤ T_a ≤ +80 °C), T5 (-50 °C ≤ T_a ≤ +95 °C); Seal not required; installed per Rosemount drawing 00214-1030; Type 4X† and IP 66/67; V_{max} 35 VDC, 750 mW_{max}

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Cable entries must be used which maintain the ingress protection of the enclosure. Unused cable entries must be filled with suitable blanking plugs.

3.1.2  N5 USA Division 2 (NI)

Certificate  70044744

Markings  NI CL I, DIV 2, GP A, B, C, D; T6 (-50 °C ≤ T_a ≤ +80 °C), T5 (-50 °C ≤ T_a ≤ +95 °C); installed per Rosemount drawing 00214-1030; Type 4X† and IP 66/67; V_{max} 35 VDC, 750 mW_{max}

3.1.3  E6 Canada Explosionproof (XP) and Dust-Ignitionproof (DIP)

Certificate  70044744


Markings  XP CL I, DIV 1, GP B*, C, D; DIP CL II, DIV 1, GP E, F, G; CL III; T6 (-50 °C ≤ T_a ≤ +80 °C), T5 (-50 °C ≤ T_a ≤ +95 °C); Seal not required; installed per Rosemount drawing 00214-1030; Type 4X† and IP 66/67; V_{max} 35 VDC, 750 mW_{max}

Special Conditions for Safe Use (X):
1. Flameproof joints are not intended for repair.
2. Cable entries must be used which maintain the ingress protection of the enclosure. Unused cable entries must be filled with suitable blanking plugs.

3.1.4  N6 Canada Division 2

Certificate  70044744


Markings  CL I, DIV 2, GP A, B, C, D; T6; (-50 °C ≤ T_a ≤ +80 °C), T5 (-50 °C ≤ T_a ≤ +95 °C); installed per Rosemount drawing 00214-1030; Type 4X† and IP 66/67; V_{max} 35 VDC, 750 mW_{max}

†Spring loaded indicator has reduced ingress and dust ratings. Spring loaded sensors must be installed in a thermowell to maintain dust and ingress ratings. Un-painted aluminum enclosures are Type 4 rated. *Assembly is not Canada Explosionproof (E6) rated to Group B if a 0079 connection head is used.

3.2  Europe

3.2.1  E1 ATEX Flameproof

Certificate  DEMKO 16 ATEX 1677X
Standards  EN 60079-0:2012+A11 2013, EN 60079-1:2014

Markings  Ex db IIC T6...T1 Gb T6(-50 °C≤T_a≤+80 °C), T5(-50 °C≤T_a≤+95 °C), T4...T1(-50 °C≤T_a≤+100 °C) V_{max} = 45 Vdc, P_{max} = 750 mW

Installation Instructions:

1. Use field wiring suitable for both the minimum and maximum service temperatures.

2. These devices are provided without cable glands/conduit sealing devices/blanking elements. Proper selection of suitable cable glands/conduit sealing/blanking elements should occur in the field.

3. Unused apertures shall be closed with suitable blanking elements.

4. The enclosures may be provided with up to three ½–14 NPT, ¾–14 NPT, or M20 x 1.5 entries, with location of the entries specified in the installation instructions document.

Special Conditions for Safe Use (X):

1. Refer to certificate for details regarding process and ambient temperature limits.

2. When the Rosemount 214C sensor is provided with an enclosure with a display cover, the maximum ambient shall be 95 °C.

3. The non-metallic label on the device may store an electrostatic charge and become a source of ignition in Group III atmospheres. Care shall be taken to reduce electrostatic build-up. For example, the non-metallic label may be rubbed with a damp cloth.

4. The display covers were impacted at 4 J according to a low risk of mechanical danger. Guard the display covers against impact energies greater than 4 J.

5. Flameproof joints are not intended for repair.

6. The stand-alone Rosemount 214C sensors without an enclosure must be assembled to a suitable Ex certified enclosure of a volume no greater than 0.55 L to maintain the types of protection “db” and “tb”.

7. The spring loaded sensors and DIN sensors must be installed in a thermowell to maintain IP6X ratings.

8. Contact indicating sensors do not meet requirements for protection type “tb” and therefore are not “tb” rated.
3.2.2 I1 ATEX Intrinsic Safety

Certificate Baseefa16ATEX0101X
Markings II 1 G Ex ia IIC T5/T6 Ga (SEE CERTIFICATE FOR SCHEDULE)

<table>
<thead>
<tr>
<th>Thermocouples; $P_i = 500 \text{ mW}$</th>
<th>$60 \degree C \leq T_a \leq 70 \degree C$</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTDs; $P_i = 192 \text{ mW}$</td>
<td>$60 \degree C \leq T_a \leq 70 \degree C$</td>
</tr>
<tr>
<td>RTDs; $P_i = 290 \text{ mW}$</td>
<td>$60 \degree C \leq T_a \leq 60 \degree C$</td>
</tr>
<tr>
<td></td>
<td>$T_5 60 \degree C \leq T_a \leq 70 \degree C$</td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X):
1. The equipment must be installed in an enclosure which affords it a degree of ingress protection of at least IP20.

3.2.3 N1 ATEX Zone 2

Certificate BAS00ATEX3145
Markings II 3 G Ex nA IIC T5 Gc T5(-40 \degree C \leq T_a \leq 70 \degree C)

3.2.4 ND ATEX Dust Ignitionproof

Certificate DEMKO 16 ATEX 1677X
Markings CE II 2 D Ex tb IIIC T130 \degree C Db(-50 \degree C \leq T_a \leq +100 \degree C)V_{\text{max}} = 45 V_{\text{dc}}, P_{\text{max}} = 750 \text{ mW}

Installation Instructions:
1. Use field wiring suitable for both the minimum and maximum service temperatures.
2. These devices are provided without cable glands/conduit sealing devices/blanking elements. Proper selection of suitable cable glands/conduit sealing/blanking elements should occur in the field.
3. Unused apertures shall be closed with suitable blanking elements.
4. The enclosures may be provided with up to three $\frac{1}{2}$–14 NPT, $\frac{3}{4}$–14 NPT, or M20 x 1.5 entries, with location of the entries specified in the installation instructions document.
**Special Conditions for Safe Use (X):**

1. Refer to certificate for details regarding process and ambient temperature limits.

2. When the 214C sensor is provided with an enclosure with a display cover, the maximum ambient shall be 95 °C.

3. The non-metallic label on the device may store an electrostatic charge and become a source of ignition in Group III atmospheres. Care shall be taken to reduce electrostatic build-up. For example, the non-metallic label may be rubbed with a damp cloth.

4. The display covers were impacted at 4 J according to a low risk of mechanical danger. Guard the display covers against impact energies greater than 4 J.

5. Flameproof joints are not intended for repair.

6. The stand-alone Rosemount 214C sensors without an enclosure must be assembled to a suitable Ex certified enclosure of a volume no greater than 0.55 L to maintain the types of protection “db” and “tb”.

7. The spring loaded sensors and DIN sensors must be installed in a thermowell to maintain IP6X ratings.

8. Contact indicating sensors do not meet requirements for protection type “tb” and therefore are not “tb” rated.

### 3.3 International

#### 3.3.1 E7 IECEx Flameproof

**Certificate**    IECEx UL 16.0048X

**Standards**    IEC 60079-0:2011, IEC 60079-1:2014

**Markings** Ex db IIC T6...T1 Gb T6(-50 °C≤T_2≤+80 °C), T5(-50 °C≤T_2≤+95 °C), T4...T1(-50 °C≤T_a≤+100 °C) V_{max} = 45 Vdc, P_{max} = 750 mW

**Installation Instructions:**

1. Use field wiring suitable for both the minimum and maximum service temperatures.

2. These devices are provided without cable glands/conduit sealing devices/blanking elements. Proper selection of suitable cable glands/conduit sealing/blanking elements should occur in the field.

3. Unused apertures shall be closed with suitable blanking elements.
4. The enclosures may be provided with up to three $\frac{1}{2}$–14 NPT, $\frac{3}{4}$–14 NPT, or M20 × 1.5 entries, with location of the entries specified in the installation instructions document.

**Special Conditions for Safe Use (X):**

1. Refer to certificate for details regarding process and ambient temperature limits.

2. When the Rosemount 214C sensor is provided with an enclosure with a display cover, the maximum ambient shall be 95 °C.

3. The non-metallic label on the device may store an electrostatic charge and become a source of ignition in Group III atmospheres. Care shall be taken to reduce electrostatic build-up. For example, the non-metallic label may be rubbed with a damp cloth.

4. The display covers were impacted at 4 J according to a low risk of mechanical danger. Guard the display covers against impact energies greater than 4J.

5. Flameproof joints are not intended for repair.

6. The stand-alone Rosemount 214C sensors without an enclosure must be assembled to a suitable Ex certified enclosure of a volume no greater than 0.55 L to maintain the types of protection “db” and “tb”.

7. The spring loaded sensors and DIN sensors must be installed in a thermowell to maintain IP6X ratings.

8. Contact indicating sensors do not meet requirements for protection type “tb” and therefore are not “tb” rated.

### 3.3.2 I7 IECEx Intrinsic Safety

**Certificate**  
IECEx BAS 16.0077X

**Standards**  

**Markings**  
Ex ia IIC T5/T6 Ga (SEE CERTIFICATE FOR SCHEDULE)

<table>
<thead>
<tr>
<th>Thermocouples; $P_i = 500$ mW</th>
<th>$T_6 \leq T_a \leq +70$ °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTDs; $P_i = 192$ mW</td>
<td>$T_6 \leq T_a \leq +70$ °C</td>
</tr>
<tr>
<td>RTDs; $P_i = 290$ mW</td>
<td>$T_6 \leq T_a \leq +60$ °C</td>
</tr>
<tr>
<td></td>
<td>$T_5 \leq T_a \leq +70$ °C</td>
</tr>
</tbody>
</table>

**Special Conditions for Safe Use (X):**

1. The equipment must be installed in an enclosure which affords it a degree of ingress protection of at least IP20.
3.3.3 N7 IECEx Zone 2

**Certificate**  IECEx BAS 07.0055

**Standards**  IEC 60079-0:2011, IEC 60079-15:2010

**Markings**  Ex nA IIC T5 Gc; T5(−40 °C ≤T<sub>a</sub> ≤+70 °C)

3.3.4 NK IECEx Dust Ignitionproof

**Certificate**  IECEx UL 16.0048X

**Standards**  IEC 60079-0:2011, IEC 60079-31:2013

**Markings**  Ex tb IIIC T 130 °C Db (-50 °C ≤T<sub>a</sub> ≤+100 °C) V<sub>max</sub> = 45 Vdc, P<sub>max</sub> = 750 mW

**Installation Instructions:**

1. Use field wiring suitable for both the minimum and maximum service temperatures.

2. These devices are provided without cable glands/conduit sealing devices/blanking elements. Proper selection of suitable cable glands/conduit sealing/blanking elements should occur in the field.

3. Unused apertures shall be closed with suitable blanking elements.

4. The enclosures may be provided with up to three ½–14 NPT, ¾–14 NPT, or M20 × 1.5 entries, with location of the entries specified in the installation instructions document.

**Special Conditions for Safe Use (X):**

1. Refer to certificate for details regarding process and ambient temperature limits.

2. When the Rosemount 214C sensor is provided with an enclosure with a display cover, the maximum ambient shall be 95 °C.

3. The non-metallic label on the device may store an electrostatic charge and become a source of ignition in Group III atmospheres. Care shall be taken to reduce electrostatic build-up. For example, the non-metallic label may be rubbed with a damp cloth.

4. The display covers were impacted at 4 J according to a low risk of mechanical danger. Guard the display covers against impact energies greater than 4J.

5. Flameproof joints are not intended for repair.

6. The stand-alone Rosemount 214C sensors without an enclosure must be assembled to a suitable Ex certified enclosure of a volume no
greater than 0.55 L to maintain the types of protection “db” and “tb”.

7. The spring loaded sensors and DIN sensors must be installed in a thermowell to maintain IP6X ratings.

8. Contact indicating sensors do not meet requirements for protection type “tb” and therefore are not “tb” rated.

3.4 Brazil

3.4.1 E2 Brazil Flameproof & Dust Ignitionproof

Certificate: UL-BR 17.0199X


Markings: Ex db IIC T6...T1 Gb T6(-50 °C≤T_a≤+80 °C), T5(-50 °C≤T_a≤+95 °C), T4...T1(-50 °C≤T_a≤+100 °C);
Ex tb IIIIC T130°C Db (-50 °C ≤T_a≤ +100 °C)

Special Conditions for Safe Use (X):

1. Refer to certificate for details regarding process and ambient temperature limits.

2. When the Rosemount 214C sensor is provided with an enclosure with a display cover, the maximum ambient shall be 95 °C.

3. The non-metallic label on the device may store an electrostatic charge and become a source of ignition in Group III atmospheres. Care shall be taken to reduce electrostatic build-up. For example, the non-metallic label may be rubbed with a damp cloth.

4. The display covers were impacted at 4 J according to a low risk of mechanical danger. Guard the display covers against impact energies greater than 4J.

5. Flameproof joints are not intended for repair.

6. The stand-alone Rosemount 214C sensors without an enclosure must be assembled to a suitable Ex certified enclosure of a volume no greater than 0.55 L to maintain the types of protection “db” and “tb”.

7. The spring loaded sensors and DIN sensors must be installed in a thermowell to maintain IP6X ratings.

8. Contact indicating sensors do not meet requirements for protection type “tb” and therefore are not “tb” rated.
3.4.2  I2 Brazil Intrinsic Safety

Certificate  UL-BR 18.0257X

Standards  ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-11:2013

Markings  Ex ia IIC T6...T5 Ga Thermocouples: $P_i = 500 \text{ mW}$, T6(-60°C ≤ $T_a$ ≤ +70°C) RTDs: $P_i = 192 \text{ mW}$, T6(-60°C ≤ $T_a$ ≤ +70°C) $P_i = 290 \text{ mW}$, T6(-60°C ≤ $T_a$ ≤ +60°C), T5(-60°C ≤ $T_a$ ≤ +70°C)

Special Conditions for Safe Use (X):
1. The equipment must be installed in an enclosure which affords it a degree of ingress protection of at least IP20.

3.5  China

3.5.1  E3 China Flameproof

Certificate  GYJ17.1010X

Standards  GB 3836.1-2010, GB 3836.2-2010, GB 12476.1-2013, GB 12476.5-2013

Markings  Ex d IIC T6~T1 Gb, Ex td A21 IP6X T130°C

*Dust Ignitionproof approvals/markings are only available through the K3 option code

产品安全使用特殊条件
证书编号后缀“X”表明产品具有安全使用特殊条件:

1. 涉及隔爆接合面的维修须联系产品制造商.

2. 非金属铭牌可能带来静电放电危险，产品用于爆炸性粉尘危险场所时需要采取措施以防止静电积聚.

产品使用注意事项

1. 产品温度组别和使用环境温度的关系为:

<table>
<thead>
<tr>
<th>温度组别</th>
<th>AR1、SR1、AD1、SD1、AT1</th>
<th>AR2、SR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>-50°C ≤ $T_a$ ≤ +80°C</td>
<td>-50°C ≤ $T_a$ ≤ +80°C</td>
</tr>
<tr>
<td>T5</td>
<td>-50°C ≤ $T_a$ ≤ +95°C</td>
<td>-50°C ≤ $T_a$ ≤ +95°C</td>
</tr>
<tr>
<td>T4~T1</td>
<td>-50°C ≤ $T_a$ ≤ +100°C</td>
<td>-50°C ≤ $T_a$ ≤ +95°C</td>
</tr>
<tr>
<td>T130°C</td>
<td>-50°C ≤ $T_a$ ≤ +100°C</td>
<td>-50°C ≤ $T_a$ ≤ +95°C</td>
</tr>
</tbody>
</table>
2. 产品温度组别和过程温度的关系为：

<table>
<thead>
<tr>
<th>外壳类型</th>
<th>扩展长度</th>
<th>过程温度（℃）</th>
<th>气体</th>
<th>粉尘</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T6</td>
<td>T5</td>
<td>T4</td>
</tr>
<tr>
<td>AR2, SR2</td>
<td>无扩展</td>
<td>55</td>
<td>70</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>3”</td>
<td>55</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>6”</td>
<td>60</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>9”</td>
<td>65</td>
<td>75</td>
<td>110</td>
</tr>
<tr>
<td>AR1, SR1, AD1, SD1, AT1</td>
<td>任何长度</td>
<td>85</td>
<td>100</td>
<td>135</td>
</tr>
</tbody>
</table>

3. 产品外壳设有接地端子，用户在使用时应可靠接地。
4. 安装现场应不存在对产品外壳有腐蚀作用的有害气体。
5. 现场安装时，电缆引入口须选用国家指定的防爆检验机构按检验认可、具有 Ex d II C Gb，Ex tD A21 IP6X 防爆等级的电缆引入装置或堵封件，冗余电缆引入口须用堵封件有效密封。
6. 用于爆炸性气体环境中，现场安装、使用和维护必须严格遵守“断电后开盖！”的警告语。用于爆炸性粉尘环境中，现场安装、使用和维护必须严格遵守“爆炸性粉尘场所严禁开盖！”的警告语。
7. 用于爆炸性粉尘环境中，产品外壳表面需保持清洁，以防粉尘堆积，但严禁用压缩空气吹扫。
8. 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。

3.5.2 I3 China Intrinsic Safety

**Certificate**  GYJ18.1024X

**Standards**  GB 3836.1-2010, GB 3836.4-2010, GB 3836.20-2010

**Markings**  Ex ia IIC T5/T6 Ga
产品安全使用特殊条件

证书编号后缀“X”表明产品具有安全使用特殊条件：产品必须安装于具有IP20外壳防护等级的外壳内方可使用。

产品使用注意事项

1. 产品使用环境温度和温度组别的关系为：

<table>
<thead>
<tr>
<th>传感器类型</th>
<th>最大输入功率 $P_i$ (mW)</th>
<th>温度组别</th>
<th>使用环境温度</th>
</tr>
</thead>
<tbody>
<tr>
<td>热电偶</td>
<td>500</td>
<td>T6</td>
<td>-60°C ~ +70°C</td>
</tr>
<tr>
<td>RTD</td>
<td>192</td>
<td>T6</td>
<td>-60°C ~ +70°C</td>
</tr>
<tr>
<td>RTD</td>
<td>290</td>
<td>T6</td>
<td>-60°C ~ +60°C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T5</td>
<td>-60°C ~ +70°C</td>
</tr>
</tbody>
</table>

2. 本安电气参数:
   热电偶：
   最高输入电压 $U_i$ (V) | 最大输入电流 $I_i$ (mA) | 最大输入功率 $P_i$ (mW) | 最大内部等效参数  |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>100</td>
<td>500</td>
<td>75</td>
</tr>
</tbody>
</table>

   最高输出电压 $U_o$ (V) | 最大输出电流 $I_o$ (mA) | 最大输出功率 $P_o$ (mW) |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>0.1</td>
<td>50</td>
<td>25</td>
</tr>
</tbody>
</table>

   RTD:  
   最高输入电压 $U_i$ (V) | 最大输入电流 $I_i$ (mA) | 最大输入功率 $P_i$ (mW) | 最大内部等效参数  |
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>100</td>
<td>192/290</td>
<td>75</td>
</tr>
</tbody>
</table>

3. 该产品必须与已通过防爆认证的关联设备配套共同组成安全防爆系统才可用于爆炸性气体环境。其系统接线必须同时遵守本产品和所配关联设备的使用说明书要求，接线端子不得接错。

4. 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。
5. 产品的安装、使用和维护应同时遵守产品使用说明书、GB3836.13-2013“爆炸性环境 第 13 部分：设备的修理、检修、修复和改造”、GB3836.15-2000“爆炸性气体环境用电气设备 第 15 部分：危险场所电气安装（煤矿除外）”、GB3836.16-2006“爆炸性气体环境用电气设备 第 16 部分：电气装置的检查和维护（煤矿除外）”、GB3836.18-2010“爆炸性环境 第 18 部分：本质安全系统”和 GB50257-2014“电气装置安装工程爆炸和火灾危险环境电力装置施工及验收规范”的有关规定。

3.5.3  N3 China Zone 2

Certificate  GYJ18.1025
Standards  GB 3836.1-2010, GB 3836.8-2014
Markings  Ex nA IIC T5 Gc, T5(-40°C≤Ta≤+70°C)

产品使用注意事项

1. 产品使用环境温度为：-40°C ~ +70°C

2. 输入参数：

<table>
<thead>
<tr>
<th>类型</th>
<th>输入参数 Ui</th>
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</thead>
<tbody>
<tr>
<td>变送器</td>
<td>42.4 V</td>
</tr>
<tr>
<td>热电阻端子</td>
<td>5 V</td>
</tr>
<tr>
<td>热电偶端子</td>
<td>0 V</td>
</tr>
</tbody>
</table>

3. 产品外壳内可以安装如下温度变送器模块：

<table>
<thead>
<tr>
<th>型号</th>
<th>防爆合格证编号</th>
</tr>
</thead>
<tbody>
<tr>
<td>644 系列</td>
<td>GYJ15.1502</td>
</tr>
<tr>
<td>248 系列</td>
<td>GYJ15.1089</td>
</tr>
</tbody>
</table>

4. 现场安装时，电缆引入口须选用经国家指定的防爆检验机构检验认可、具有 Ex eII C Gb 或 Ex nR IIC Gc 防爆等级的电缆引入装置或堵封件，冗余电缆引入口须用堵封件有效密封。电缆引入装置或封堵件的安装使用必须遵守其使用说明书的要求并保证外壳防护等级达到 IP54（符合 GB4208-2008 标准要求）以上。

5. 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。

6. 产品的安装、使用和维护应同时遵守产品使用说明书、GB3836.13-2013“爆炸性环境 第 13 部分：设备的修理、检修、修复和改造”、GB3836.15-2000“爆炸性气体环境用电气设备 第 15 部
3.6 Korea

3.6.1 EP Korea Flameproof

**Certificate** 17-KA4BO-0305X

**Markings** Ex d IIC T6...T1, T6(-50 °C≤T_a≤+80 °C), T5(-50 °C≤T_a≤+95°C), T4...T1(-50 °C≤T_a≤+100 °C)

**Special Conditions for Safe Use (X):**

1. Refer to certificate for Special Conditions for Safe Use.

3.6.2 IP Korea Intrinsic Safety

**Certificate** 17-KA4BO-0304X

**Markings** Ex ia IIC T6/T5

**Special Conditions for Safe Use (X):**

1. Refer to certificate for details regarding process and ambient temperature limits as well as Special Conditions for Safe Use.

3.6.3 KP Korea Flameproof Dust Ignitionproof and Intrinsic Safety

**Certificate** 17-KA4BO-0306X in addition to the EP and IP certificate numbers

**Markings** Ex tb IIIC T130 °C, T130 °C(-50 °C≤T_a≤+100 °C) in addition to the markings for EP and IP

**Special Conditions for Safe Use (X):**

1. Refer to certificate for details regarding process and ambient temperature limits as well as Special Conditions for Safe Use.

3.7 EAC - Belarus, Kazakhstan, Russia

3.7.1 EM Technical Regulation Customs Union TR CU 012/2011 (EAC) Flameproof

**Markings** 1Ex d IIC T6...T1 Gb X, T6(-50 °C≤T_a≤+80 °C), T5(-50 °C≤T_a≤+95°C), T4...T1(-50 °C≤T_a≤+100 °C)
Special Conditions for Safe Use (X):

1. Refer to certificate for Special Conditions for Safe Use.

3.7.2 IM Technical Regulation Customs Union TR CU 012/2011 (EAC) Intrinsic Safety

Markings 0Ex ia IIC T5,T6 Ga X

Special Conditions for Safe Use (X):

1. Refer to certificate for details regarding process and ambient temperature limits as well as Special Conditions for Safe Use.

3.7.3 KM Technical Regulation Customs Union TR CU 012/2011 (EAC) Flameproof, Dust-Ignitionproof, and Intrinsic Safety

Markings Ex tb IIIC T130 °C Db X in addition to the markings above for EM and IM.

Special Conditions for Safe Use (X):

1. Refer to certificate for details regarding process and ambient temperature limits as well as Special Conditions for Safe Use.

3.8 Combinations

K1 Combination of E1, I1, N1, and ND
K3 Combination of E3, I3, and N3
K7 Combination of E7, I7, N7, and NK
KA Combination of E1 and E6
KB Combination of E5 and E6
KC Combination of E1 and E5
KD Combination of E1, E5, and E6
KE Combination of E1, E5, E6, and E7
KM Combination of EM and IM
KN Combination of N1, N5, N6, and N7s
KP Combination of EP and IP
4 Installation drawings

Figure 4-1: Rosemount 214C Hazardous Location (00214-1030)
Declaration of Conformity

EU Declaration of Conformity
No: RMD 1109 Rev. D

We,

Rosemount, Inc.
8200 Market Boulevard
Chanhassen, MN 55317-9685
USA

declare under our sole responsibility that the product,

Rosemount™ 214C Temperature Sensor

manufactured by,

Rosemount, Inc.
8200 Market Boulevard
Chanhassen, MN 55317-9685
USA

to which this declaration relates, is in conformity with the provisions of the European Union Directives, including the latest amendments, as shown in the attached schedule.

Assumption of conformity is based on the application of the harmonized standards and, when applicable or required, a European Union notified body certification, as shown in the attached schedule.

__________________________
(Signature)

Chris LePond
(name)

Vice President of Global Quality
(Firm)

__________________________
(date of issue)

Page 1 of 3
EU Declaration of Conformity
No: RMD 1109 Rev. D

ATEX Directive (2014/34/EU)

DEMKO 16ATEX1677X - Flameproof Certificate
Equipment Group II Category 2 G (Ex db IIC T6 ... T1 Gb)
Harmonized Standards:

DEMKO 16ATEX1677X - Dust Certificate
Equipment Group II Category 2 D (Ex tb IIIC T130°C Db)
Harmonized Standards:

BAS00ATEX3145 - Type Certificate
Equipment Group II Category 2 G (Ex nA IIC T5 Gc)
Harmonized Standards:

Baseflo16ATEX0101X - Intrinsic Safety Certificate
Equipment Group II Category 1 G (Ex ia IIC T5/T6)
Harmonized Standards:

RoHS Directive (2011/65/EU)
Harmonized Standard: EN 50581:2012

ATEX Notified Bodies

UL International Demko A/S [Notified Body Number: 0539]
Berupsgaard 5A
2750 Ballerup
Denmark

SGS FIMCO OY [Notified Body Number: 0598]
P.O. Box 30 (Sarkintie 3)
00211 HELSINKI
Finland

ATEX Notified Body for Quality Assurance

SGS FIMCO OY [Notified Body Number: 0598]
P.O. Box 30 (Sarkintie 3)
00211 HELSINKI
Finland
# China RoHS

<table>
<thead>
<tr>
<th>Part Name</th>
<th>Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lead (Pb)</td>
</tr>
<tr>
<td>Electronics Assembly</td>
<td>O</td>
</tr>
<tr>
<td>Housing Assembly</td>
<td>O</td>
</tr>
<tr>
<td>Sensor Assembly</td>
<td>O</td>
</tr>
</tbody>
</table>

This table is proposed in accordance with the provision of SJ/T11364.

O: Indicate that said hazardous substance in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: Indicate that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.