

Rosemount™ 0065/0185 Sensor Assembly



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1 About this guide

This guide provides basic guidelines for Rosemount 0065 and 0185 Sensor models. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, Explosion-proof, Flameproof, or intrinsically safe (I.S.) installations.

If the Rosemount 0065 and 0185 ordered was assembled to a temperature transmitter, see the appropriate Quick Start Guide for information on configuration and hazardous locations certifications.

1.1 Safety Messages

⚠ WARNING

Explosions could result in death or serious injury.

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

Conduit/cable entries

Unless marked, the conduit/cable entries in the 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.

Physical access

Unauthorized personnel may potentially cause significant damage to and/or misconfiguration of end users' equipment. This could be intentional or unintentional and needs to be protected against.

Physical security is an important part of any security program and fundamental to protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

⚠ CAUTION

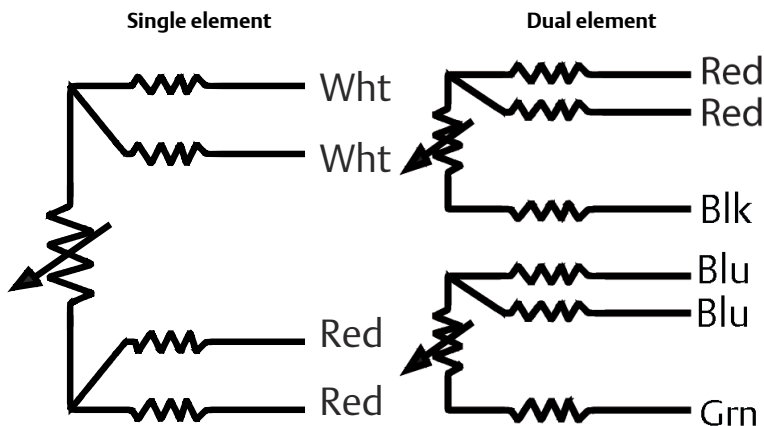


Refer to Product Certification section of this Quick Start Guide documentation.

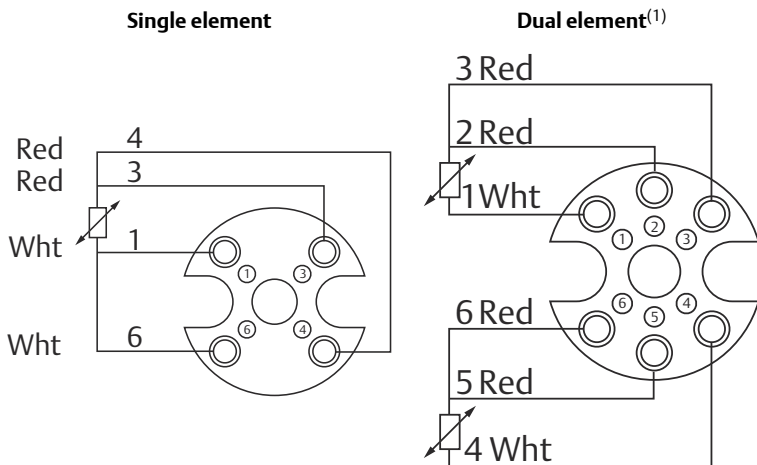
2 Wiring diagrams

Figure 2-1: Rosemount Series 65 RTD Lead Wire Configuration

Series 65 RTD flying leads and spring-loaded adapter (termination codes 0, 1, or 3 only)



Series 65 RTD terminal block (termination code 2 and 4)



(1) The color of the terminal posts in the terminal block may not match the color of the lead wires connected to the capsule.

Note

For 3-wire systems use one white and two red leads. Do not connect the white leads. Insulate or terminate the unused white lead in a manner that prevents shorting to the ground. For 2-wire systems, connect both sets of leads.

Figure 2-2: Rosemount Series 185 Thermocouple Lead Wire Configuration

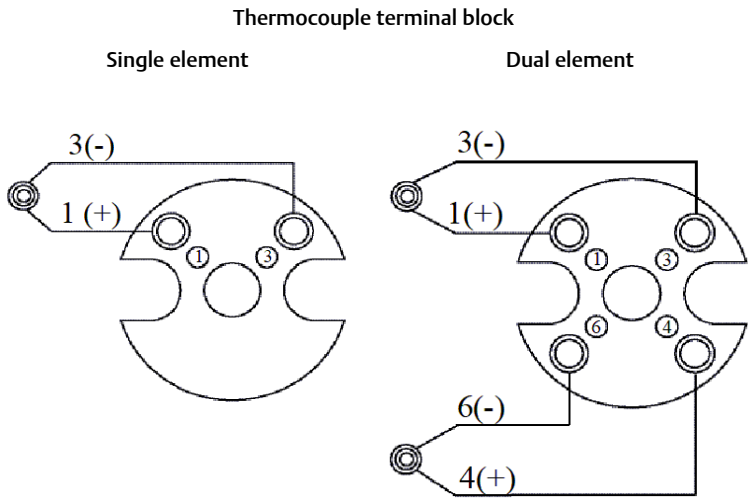


Table 2-1: Rosemount Series 185 Thermocouple Characteristics

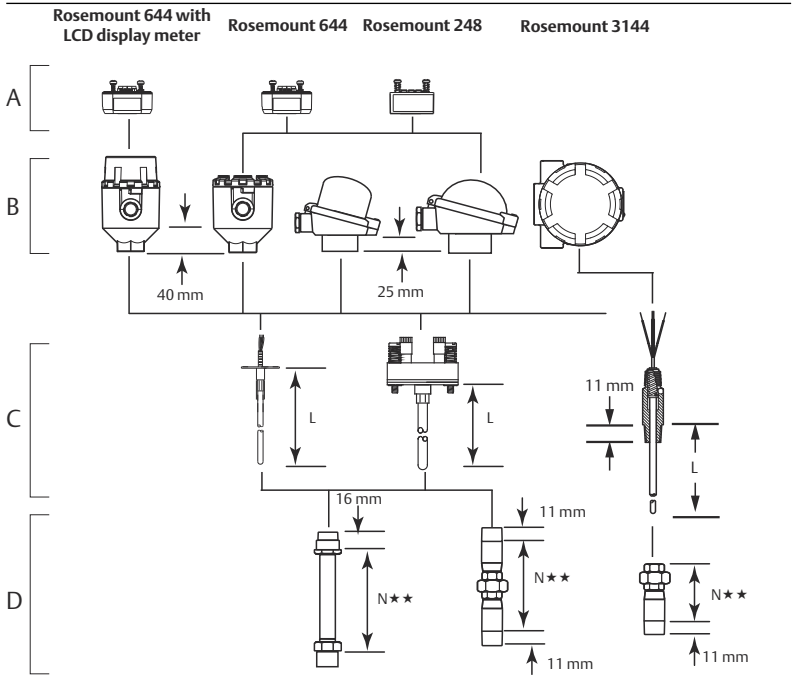
Type	Alloys (wire color)	Sheath material	Temperature range (°C)	Limits of error interchangeability DIN EN 60584-2	Tolerance class
J	Fe (+ black), Cu-Ni (-white)	1.4541 (321 SST)	-40 to 375, 375 to 750	1.5 °C, 0.004 t	1
K	Ni-Cr (+ green), Ni-Al (-white)				1
N	Ni-Cr-Si (+ pink), Ni-Si (-white)				1
E	Ni-Cr (+violet), Cu-Ni (-white)	1.4541(321 SST)	-40 to 375, 375 to 800		1
T	Cu (+brown), Cu-Ni (-white)		-40 to 125, 125 to 350	0.5 °C, 0.004 t	1

Note

To distinguish the two sensors in Rosemount Dual 185 Sensors (flying lead or spring loaded styles), the lead wires of one sensor will be longer than the other sensor.

3 Sensor assembly dimensions

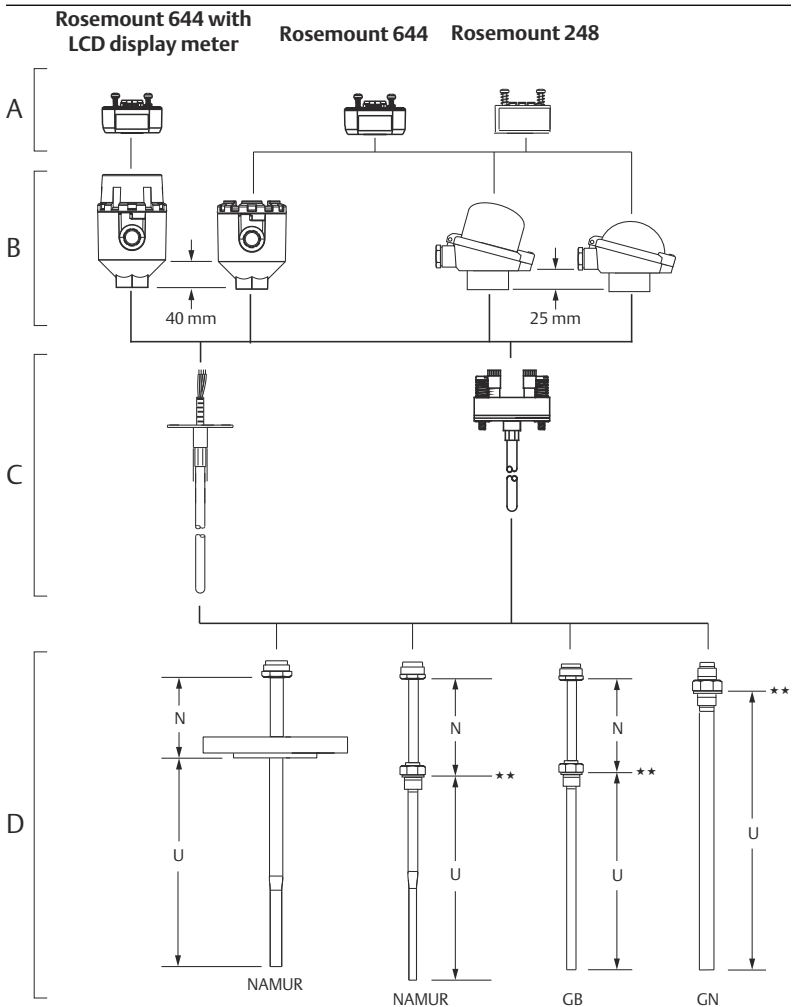
3.1 Sensor assembly without thermowell



- A. Head or field mount transmitters
- B. IP68 or IP65 connection heads
- C. Sensor with flying leads, terminal block, or spring-loaded adapter
- D. Extensions

★★ N dimension measures from thread engagement point

3.2 Tubular thermowell assembly



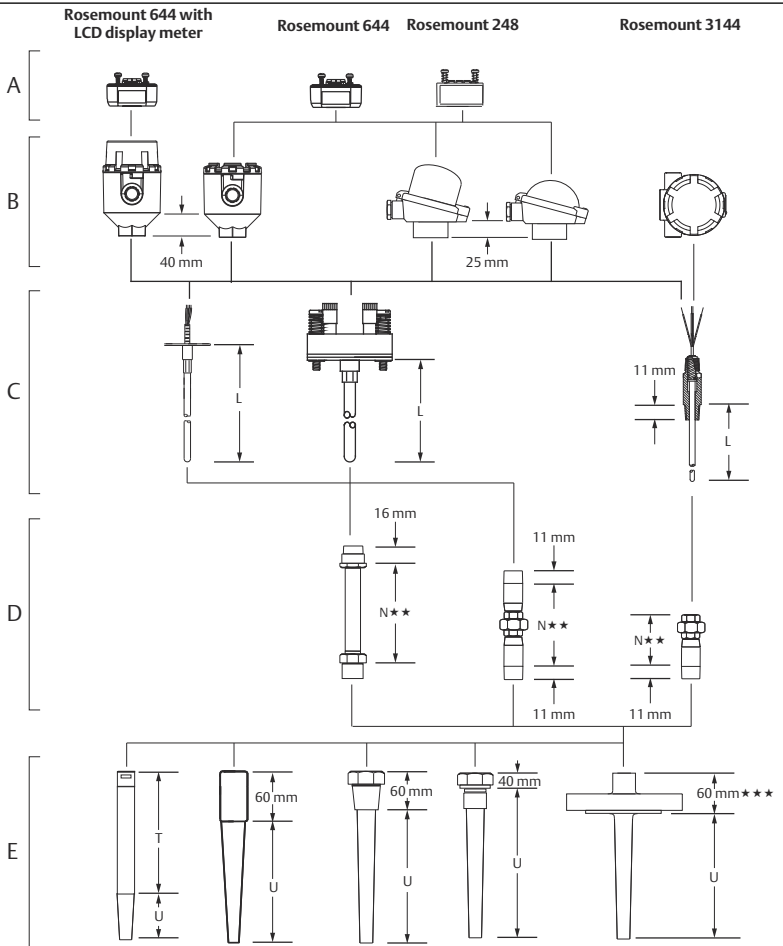
- A. Head or field mount transmitter
- B. IP68 or IP65 connection heads
- C. Sensor with flying leads or terminal block
- D. Threaded and flanged tubular thermowells

★★ For straight threading, N dimension references bottom of hex. For tapered threading, N dimension references thread engagement point (bottom of thread).

3.3 Barstock thermowell sensor assembly

Note

The Rosemount 644 is available with or without an LCD display meter.



- A. Head or field mount transmitter
- B. IP68 or IP65 connection heads
- C. Sensor with flying leads, terminal block, or spring-loaded adapter
- D. Stand-alone extensions
- E. Weld-in, threaded, or flanged barstock thermowells

★★ N dimension measures from thread engagement point.

★★★ This dimension is 80 mm for Class 1500 and Class 2500 flanges

4 Specifications

4.1 Series 65 Platinum RTD

100 Ω RTD at 0 °C, $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$

Temperature range

50 to 450 °C (-58 to 842 °F) or -196 to 300 °C (-321 to 572 °F) depending on type

Self heating

0.15 °C/mW when measured per method defined in IEC 751:1983, Amendments 1 and 2

Thermal response time

Nine seconds maximum required to reach 50 percent sensor response when tested in flowing water according to IEC 751:1983, Amendments 1 and 2

Immersion error

60 mm minimum usable depth of immersion when tested according to IEC 751:1983, Amendments 1 and 2

Insulation resistance

1,000 M Ω minimum insulation resistance when measured at 500 Vdc and at room temperature

Sheath material

316 SST sensor tip (hot end) with 321SST mineral insulated cable construction

Lead wire

PTFE insulated, silver-coated, 0.21mm² (24 AWG) stranded copper wire. See [Figure 2-1](#) for wire configuration.

Identification data

The model and serial numbers are marked on each sensor.

Ingress protection (IP) ratings

The Rosemount connection head is rated to IP66/IP68 and NEMA[®] 4X. The BUZ and BUZH connection heads are rated to IP65. To maintain IP rating at installation, one of the following options must be used with the connection head:

- Extension and/or adapter and barstock thermowell

- Tubular thermowell
- Sensor and sealing screw (extension option “V”)
- General purpose adapter

Vibration limits

For sensor types option code “1”, “2”, and “5”, the vibration resistance is ±0.02 percent (0.05 °C) maximum ice-point resistance shift after 3 g vibration between 10 and 500 Hz for 150 hours according to IEC 751:1983, Amendments 1 and 2.

For sensor types option code “3”, “4”, and “6” the vibration resistance is 0.1 °C maximum ice-point resistance shift after 1 g vibration between 10 and 500 Hz for 150 hours according to IEC 60751:2008, Amendments 1 and 2.

For sensor types option code “7”, “9”, and “0”, the vibration resistance is ±0.02 percent (0.05 °C) maximum ice-point resistance shift after 10 g vibration between 10 and 500 Hz for 150 hours according to IEC 751:1983, Amendments 1 and 2.

Table 4-1: Series 65 Interchangeability

Standard series 65 IEC-751 class B	Temperature
±0.80 °C (±1.44 °F)	-100 °C (-148 °F)
±0.30 °C (±0.54 °F)	0 °C (32 °F)
±0.80 °C (±1.44 °F)	100 °C (212 °F)
±1.80 °C (±3.24 °F)	300 °C (572 °F)
±2.30 °C (±4.14 °F)	400 °C (752 °F)
Series 65 with IEC-751 class A option	Temperature
±0.35 °C (±0.63 °F)	-100 °C (-148 °F)
±0.15 °C (±0.27 °F)	0 °C (32 °F)
±0.35 °C (±0.63 °F)	100 °C (212 °F)
±0.75 °C (±1.35 °F)	300 °C (572 °F)

4.2 Series 185 Thermocouple

Construction

A thermocouple consists of a junction between two dissimilar metals that produces a change in thermoelectric emf in relationship to a change in temperature. Rosemount Series 185 Thermocouple sensors are manufactured from selected materials to meet IEC 584 Tolerance Class 1. The junction of these wires is welded to form a pure joint, maintaining the integrity of the circuit and ensuring the highest accuracy. Ungrounded

junctions are protected from the environment by the sensor sheath. The ungrounded and isolated junctions provide electrical isolation from the sensor sheath.

Sheath material

Rosemount thermocouples are made of a mineral insulated cable design with a variety of sheath materials available to suit both the temperature and the environment. For temperatures up to 800 °C in air, 1.4541 (321 SST) is standard. For temperatures from 800 to 1100 °C in air, 2.4816 (Alloy 600) is standard. For temperatures above 1100 °C, precious metal or ceramic protective sheaths are available upon request. For strongly oxidising or reducing atmospheres, consult your local Emerson representative.

Lead wires

PTFE insulated, 0.52 mm² (20 AWG) stranded thermocouple wire. Color coded per IEC 584. See [Figure 2-2](#) for wire configuration.

Identification data

The model and serial numbers are marked on each sensor.

Insulation resistance

1,000 MΩ minimum insulation resistance when measured at 500 Vdc and at room temperature.

Ingress protection (IP) ratings

The Rosemount connection head is rated to IP66/IP68 and NEMA 4X. The BUZ and BUZH connection heads are rated to IP65. To maintain IP rating at installation, one of the following options must be used with the connection head:

- Extension and/or adapter and barstock thermowell
- Tubular thermowell
- Sensor and sealing screw (Extension option “V”)
- General purpose adapter

Table 4-2: Characteristics of Series 185 Thermocouples

Type	Alloys (wire color)	Sheath material	Temperature range (°C)	Limits of error (°C) (whichever is greater)	Tolerance class
J	Fe (+ black), CuNi (- white)	1.4541 (321 SST)	-40 to 750	±1.5 or ±0.4%	1
K	NiCr (+ green), NiAl (- white)	2.4816 (Alloy 600)	-40 to 1000	±1.5 or ±0.4%	1

Table 4-2: Characteristics of Series 185 Thermocouples (continued)

Type	Alloys (wire color)	Sheath material	Temperature range (°C)	Limits of error (°C) (whichever is greater)	Tolerance class
N	NiCrSi (+ pink), NiSi (- white)	2.4816 (Alloy 600)	-40 to 1000	±1.5 or ±0.4%	1

4.3 Material selection

Emerson provides a variety of Rosemount product with various product options and configurations including materials of construction that can be expected to perform well in a wide range of applications. The product information presented is intended as a guide for the purchaser to make an appropriate selection for the application. It is the purchaser’s sole responsibility to make a careful analysis of all process parameters (such as all chemical components, temperature, pressure, flow rate, abrasives, contaminants, etc.), when specifying product, materials, options and components for the particular application. Emerson is not in a position to evaluate or guarantee the compatibility of the process fluid or other process parameters with the product, options, configuration or materials of construction selected.

4.4 Functional specifications

Power

Overvoltage category I

Environmental

Pollution degree 4

5 Product certifications

Rev 1.29

5.1 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.

5.2 Ordinary Location Certification

As standard, the transmitter 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).

5.3 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.

5.4 Hazardous locations certifications

5.4.1 USA

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

Certificate 70044744

Standards FM 3600:2011, FM 3615:2006, UL 50E:2007, UL 61010-1:2010, ANSI/ISA 60529:2004

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} 35VDC, 750mW_{max}

5.4.2 Canada

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

Certificate 70044744

Standards CAN/CSA C22.2 No. 0:2010, CAN/CSA No. 25-1966 (R2000), CAN/CSA C22.2 No. 30-M1986 (R2012), CAN/CSA C22.2 No. 94-M1991 (R2011), CAN/CSA C22.2 No. 61010-1:2012

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} 35VDC, 750mW_{max}

Note

†Spring loaded indicator has reduced ingress and dust ratings. Spring loaded sensors must be installed in a thermowell to maintain dust and ingress ratings.

5.4.3 Europe

E1 ATEX Flameproof

Certificate DEKRA 19ATEX0076 X

Standards EN IEC 60079-0: 2018, EN 60079-1: 2014

Markings  II 2 G Ex db IIC T6...T1 Gb, (-60 °C ≤ T_a ≤ +80 °C)

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Non-Standard Paint options may cause risk from electrostatic discharge. Avoid installations that cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.
3. When provided on their own, the adapter style sensors must be assembled to a suitable Ex db enclosure with a free internal volume no greater than 550 cm³.
4. Guard DIN sensors against impacts greater than 4J.

Process temperature range (°C) ⁽¹⁾	Ambient temperature range (°C) ⁽¹⁾	Temperature class
-60 °C to +80 °C	-60 °C to +80 °C	T6
-60 °C to +95 °C	-60 °C to +80 °C	T5
-60 °C to +130 °C	-60 °C to +80 °C	T4
-60 °C to +195 °C	-60 °C to +80 °C	T3
-60 °C to +290 °C	-60 °C to +80 °C	T2
-60 °C to +440 °C	-60 °C to +80 °C	T1

(1) Minimum process temperature and minimum ambient temperature is limited to -50 °C for models with enclosure designation “7”, “8”, “9”, “K”, “R” or “W”.

I1 ATEX Intrinsic Safety

Certificate Baseefa16ATEX0101X

Standards EN 60079-0:2012+A11:2013, EN 60079-11:2012

Markings  II 1 G Ex ia IIC T5/T6 Ga (see certificate for schedule)

Thermocouples; $P_i = 500 \text{ mW}$	$T6 -60 \text{ }^\circ\text{C} \leq T_a \leq +70 \text{ }^\circ\text{C}$
RTDs; $P_i = 192 \text{ mW}$	$T6 -60 \text{ }^\circ\text{C} \leq T_a \leq +70 \text{ }^\circ\text{C}$
RTDs; $P_i = 290 \text{ mW}$	$T6 -60 \text{ }^\circ\text{C} \leq T_a \leq +60 \text{ }^\circ\text{C}$
	$T5 -60 \text{ }^\circ\text{C} \leq T_a \leq +70 \text{ }^\circ\text{C}$

Special Condition for Safe Use (X):

The equipment must be installed in an enclosure which affords it a degree of ingress protection of at least IP20.

N1 ATEX Type n

Certificate BAS00ATEX3145

Standards EN 60079-0:2012+A11:2013, EN 60079-15:2010

Markings  II 3 G Ex nA IIC T5 Gc ($-40 \text{ }^\circ\text{C} \leq T_a \leq +70 \text{ }^\circ\text{C}$)

ND ATEX Dust

Certificate DEKRA 19ATEX0076 X

Standards EN IEC 60079-0:2018, EN 60079-31:2014

Markings  II 2 D Ex tb IIIC T130 °C Db ($-60 \text{ }^\circ\text{C} \leq T_a \leq +80 \text{ }^\circ\text{C}$)

Special Conditions for Safe Use (X):

1. Non-Standard Paint options may cause risk from electrostatic discharge. Avoid installations that cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.
2. When provided on their own, the adapter style sensors must be assembled to a suitable Ex tb enclosure with a free internal volume no greater than 550 cm^3 .
3. The spring loaded adapter style sensors and DIN style sensors must be installed in a thermowell to maintain Ex tb protection.

Process temperature range (°C) ⁽¹⁾	Ambient temperature range (°C) ⁽¹⁾	Maximum surface temperature "T"
-60 °C to +100 °C	-60 °C to +80 °C	T130 °C

(1) Minimum process temperature and minimum ambient temperature is limited to -50 °C for models with enclosure designation "7", "8", "9", "K", "R" or "W".

5.4.4 International

E7 IECEx Flameproof

- Certificate** IECEx DEK 19.0041X
- Standards** IEC 60079-0: 2017, IEC 60079-1: 2014
- Markings** Ex db IIC T6...T1 Gb, (-60 °C ≤ T_a ≤ + 80 °C)

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Non-Standard Paint options may cause risk from electrostatic discharge. Avoid installations that cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.
3. When provided on their own, the adapter style sensors must be assembled to a suitable Ex db enclosure with a free internal volume no greater than 550 cm³.
4. Guard DIN sensors against impacts greater than 4J.

Process temperature range (°C) ⁽¹⁾	Ambient temperature range (°C) ⁽¹⁾	Temperature class
-60 °C to +80 °C	-60 °C to +80 °C	T6
-60 °C to +95 °C	-60 °C to +80 °C	T5
-60 °C to +130 °C	-60 °C to +80 °C	T4
-60 °C to +195 °C	-60 °C to +80 °C	T3
-60 °C to +290 °C	-60 °C to +80 °C	T2
-60 °C to +440 °C	-60 °C to +80 °C	T1

(1) Minimum process temperature and minimum ambient temperature is limited to -50 °C for models with enclosure designation "7", "8", "9", "K", "R" or "W".

NK IECEx Dust-Ignitionproof

Certificate	IECEx DEK 19.0041X
Standards	IEC 60079-0:2017 and IEC 60079-31:2013
Markings	Ex tb IIIC T130 °C Db, (-60 °C ≤ T _a ≤ +80 °C);

Special Conditions for Safe Use (X):

1. Non-Standard Paint options may cause risk from electrostatic discharge. Avoid installations that cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.
2. When provided on their own, the adapter style sensors must be assembled to a suitable Ex tb enclosure with a free internal volume no greater than 550 cm³.
3. The spring loaded adapter style sensors and DIN style sensors must be installed in a thermowell to maintain Ex tb protection.

Process temperature range (°C) ⁽¹⁾	Ambient temperature range (°C) ⁽¹⁾	Maximum surface temperature "T"
-60 °C to +100 °C	-60 °C to +80 °C	T130 °C

(1) Minimum process temperature and minimum ambient temperature is limited to -50 °C for models with enclosure designation "7", "8", "9", "K", "R" or "W".

5.4.5 Brazil

E2 INMETRO Flameproof

Certificate	UL-BR 13.0535X
Standards	ABNT NBR IEC 60079-0: 2013; ABNT NBR IEC 60079-1: 2016; ABNT NBR IEC 60079-31:2014
Markings	Ex db IIC T6...T1 Gb, T6...T1(-50 °C ≤ T _a ≤ +40 °C), T5...T1(-50 °C ≤ T _a ≤ +60 °C) Ex tb IIIC T130 °C Db (-40 °C ≤ T _a ≤ +70 °C)

Special Conditions for Safe Use (X):

1. See product description for ambient temperature limits and process temperature limits.
2. The non-metallic label may store an electrostatic charge and become a source of ignition in Group III environments.

3. Guard the LCD display cover against impact energies greater than 4 joules.
4. Consult the manufacturer if dimensional information on the flameproof joints is necessary.
5. A suitable certified Ex d or Ex tb enclosure is required to be connected to temperature probes with Enclosure option “N”.
6. Care shall be taken by the end user to ensure that the external surface temperature on the equipment and the neck of DIN Style Sensor probe does not exceed 130 °C.

5.4.6 Japan

E4 Japan Flameproof (0065 only)

Certificate CML 17JPN1316X

Markings Ex d IIC T6...T1 Gb; T6 (-50 °C ≤ T_a ≤ +40 °C); T5...T1 (-50 °C ≤ T_a ≤ 60 °C)

Special Conditions for Safe Use (X):

1. Flameproof joints are not intended for repair.
2. Models with LCD display cover shall have the display cover protected from impact energies greater than 4 Joules.
3. For Models 65 and 185, the user shall ensure the external surface temperature of the equipment and the neck of the DIN Style probe does not exceed 130 °C.
4. Non-standard paint options may cause risk from electrostatic discharge.
5. The wiring used shall be suitable for temperatures over 80 °C.

5.4.7 EAC – Belarus, Kazakhstan, Russia

EM Technical Regulation Customs Union (EAC) Flameproof

Markings 1Ex db IIC T6...T1 Gb X

Special Condition for Safe Use (X):

See certificate for special conditions.

IM Technical Regulation Customs Union (EAC) Intrinsic Safety

Markings 0Ex ia IIC T5, T6 Ga X

Special Condition for Safe Use (X):

See certificate for special conditions.

KM Technical Regulation Customs Union (EAC) Flameproof, Intrinsic Safety

Markings Ex tb IIIC T 130 °C Db X plus EM and IM markings above

Special Condition for Safe Use (X):

See certificate for special conditions.

5.4.8 Korea

EP Korea Explosionproof/Flameproof

Certificate 13-KB4BO-0560X

Markings Ex d IIC T6...T1; T6 ($-50\text{ °C} \leq T_{\text{amb}} \leq +40\text{ °C}$), T5...T1 ($-50\text{ °C} \leq T_{\text{amb}} \leq +60\text{ °C}$)

Special Condition for Safe Use (X):

See certificate.

5.4.9 Combinations

- KD** Combination of E1, E5, and E6
- K1** Combination of E1, I1, N1, and ND
- K3** Combination of E3 and I3
- K7** Combination of E7 and NK

5.4.10 Process temperature limits

Table 5-1: Sensor Only

Extension length	Process temperature (°C)						
	Gas						Dust
	T6	T5	T4	T3	T2	T1	T130 °C
Any extension length	85	100	135	200	300	450	130

Table 5-2: Transmitter

Extension length	Process temperature (°C)						
	Gas						Dust
	T6	T5	T4	T3	T2	T1	T130 °C
No extension	55	70	100	170	280	440	100
3-in. extension	55	70	110	190	300	450	110
6-in extension	60	70	120	200	300	450	110
9-in extension	65	75	130	200	300	450	120

Adhering to the process temperature limitations of [Table 5-3](#) will ensure that the service temperature limitations of the LCD display cover are not exceeded. Process temperatures may exceed the limits defined in [Table 5-3](#) if the temperature of the LCD display cover is verified to not exceed the service temperatures in [Table 5-4](#) and the process temperatures do not exceed the values specified in [Table 5-2](#).

Table 5-3: Transmitter with LCD Display Cover - Process Temperature (°C)

Extension length	Process temperature (°C)			
	Gas			Dust
	T6	T5	T4...T1	T130 °C
No extension	55	70	95	95
3-in. extension	55	70	100	100
6-in. extension	60	70	100	100

Table 5-3: Transmitter with LCD Display Cover - Process Temperature (°C) (continued)

Extension length	Process temperature (°C)			
	Gas			Dust
	T6	T5	T4...T1	T130 °C
9-in. extension	65	75	110	110

Table 5-4: Transmitter with LCD Display Cover - Service Temperature (°C)

Extension length	Service temperature (°C)			
	Gas			Dust
	T6	T5	T4...T1	T130 °C
	65	75	95	95

5.4.11 China

I3 NEPSI 本质安全

证书 GYJ20.1360X (CCC 认证)

所用标准 GB3836.1 – 2010, GB3836.4 – 2010, GB3836.20-2010

标志 Ex ia IIC T5/T6 Ga

特殊使用条件(X):

产品需安装于具有不低于 IP20 外壳防护等级的外壳内方可使用

使用注意事项：

1. 产品温度组别与使用环境温度范围的关系：

类型	最大输入功率 Po (mW)	温度组别	环境温度
Thermocouples	500	T6	$-60\text{ °C} \leq T_a \leq +70\text{ °C}$
RTDs	192	T6	$-60\text{ °C} \leq T_a \leq +70\text{ °C}$
RTDs	290	T6	$-60\text{ °C} \leq T_a \leq +60\text{ °C}$
		T5	$-60\text{ °C} \leq T_a \leq +70\text{ °C}$

2. 参数:

Thermocouples:

最高输入电压 U_i (V)	最大输出电流 I_i (mA)	最大输出功率 P_i (mW)	最大外部等效参数	
			C_i (pF)	L_i (nH)
60	100	500	75	600

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)
0.1	50	25

RTDs:

最高输入电压 U_i (V)	最大输出电流 I_i (mA)	最大输出功率 P_i (mW)	最大外部等效参数	
			C_i (pF)	L_i (nH)
60	100	192/290	75	600

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本安防爆系统方可使用于爆炸性气体环境。其系统接线必须同时遵守本产品 and 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”、GB/T3836.15-2017“爆炸性环境 第 15 部分：电气装置的设计、选型和安装”、GB/T3836.16-2017“爆炸性环境 第 16 部分：电气装置的检查与维护”、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。

E3 NEPSI 隔爆和粉尘

证书 GYJ20.1361X (CCC 认证)

所用标准 GB3836.1 – 2010, GB3836.4 – 2010, GB3836.20-2010

标志 Ex d IIC T6~T1 Gb , Ex tD A21 IP66 T130 °C

特殊使用条件(X):

1. 涉及隔爆接合面的维修须联系产品制造商。
2. 铭牌材质为非金属，使用时须防止产生静电火花，只能用湿布清理。

产品使用注意事项

1. 产品温度组别和防爆标志及使用环境温度之间的关系为：




防爆标志	温度组别	使用环境温度
Ex d IIC T6~T1 Gb	T6~T1	-50°C~+40°C
	T5~T1	-50°C~+60°C
Ex tD A21 IP66 T130 °C	T130 °C	-40°C~+70°C


2. 产品温度组别和过程温度之间的关系为：

温度组别	T6	T5	T4	T3	T2	T1	T130 °C
过程温度 (°C)	85	100	135	200	300	450	130

- 产品外壳设有接地端子，用户在使用时应可靠接地。
- 安装现场应不存在对产品外壳有腐蚀作用的有害气体。
- 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。
- 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。
- 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”、GB/T3836.15-2017“爆炸性环境 第 15 部分：电气装置的设计、选型和安装”、GB/T3836.16-2017“爆炸性环境 第 16 部分：电气装置的检查与维护”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”和 GB15577-2018“粉尘防爆安全规程”的有关规定。


6 Declaration of Conformity

	EU Declaration of Conformity No: RMD 1109 Rev. E	
<p>We,</p> <p>Rosemount, Inc. 8200 Market Boulevard Chanhassen, MN 55317-9685 USA</p> <p>declare under our sole responsibility that the product,</p> <p>Rosemount™ 65, 185, and 214C Temperature Sensors</p> <p>manufactured by,</p> <p>Rosemount, Inc. 8200 Market Boulevard Chanhassen, MN 55317-9685 USA</p> <p>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.</p> <p>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.</p>		
 _____ (signature)		Vice President of Global Quality _____ (function)
Mark Lee _____ (name)		February 23, 2021 _____ (date of issue)
Page 1 of 2		



EU Declaration of Conformity

No: RMD 1109 Rev. E



A TEX Directive (2014/34/EU)

DEKRA 19ATEX0076 X - Flameproof Certificate
 Equipment Group II Category 2 G (Ex db IIC T6...T1 Gb)
 Harmonized Standards:
 EN IEC 60079-0:2018, EN 60079-1:2014

DEKRA 19ATEX0076 X - Dust Certificate
 Equipment Group II Category 2 D (Ex tb IIIC T130°C Db)
 Harmonized Standards:
 EN IEC 60079-0:2018, EN 60079-31:2014

BAS00ATEX3145 - Type n Certificate
 Equipment Group II Category 3 G (Ex nA IIC T5 Gc)
 Harmonized Standards:
 EN60079-0:2012+A11:2013, EN60079-15:2010

Baseefa16ATEX0101X – Intrinsic Safety Certificate
 Equipment Group II Category 1 G (Ex ia IIC T5/T6)
 Harmonized Standards:
 EN 60079-0:2012+A11:2013, EN 60079-11:2012

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

A TEX Notified Bodies for EC Type Examination Certificate

DEKRA [Notified Body Number: 0344]
 Meander 1051, 6825 MT Arnhem
 P.O. Box 5185, 6802 ED Arnhem
 The Netherlands
 Postbank 6794687

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

A TEX Notified Body for Quality Assurance

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

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7 China RoHS

含有China RoHS管控物质超过最大浓度限值的部件型号列表 0065 and 0185 Temperature Sensor
List of 0065 and 0185 Temperature Sensor Parts with China RoHS Concentration above MCVs

部件名称 Part Name	有害物质 / Hazardous Substances					
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr +6)	多溴联苯 Polybrominated biphenyls (PBB)	多溴联苯醚 Polybrominated diphenyl ethers (PBDE)
壳体组件 Housing Assembly	○	○	○	○	○	○
传感器组件 Sensor Assembly	○	○	○	○	○	○

本表格系依据SJ/T11364的规定而制作。

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

O: 意为该部件的所有均质材料中该有害物质的含量均低于GB/T 26572所规定的限量要求。

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: 意为在该部件所使用的所有均质材料里，至少有一类均质材料中该有害物质的含量高于GB/T 26572所规定的限量要求。

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.

部件名称 Part Name	组装备件说明 Spare Parts Descriptions for Assemblies
壳体组件 Housing Assembly	电子外壳 Electrical Housing



Quick Start Guide
00825-0200-2654, Rev. HB
March 2021

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