Quick Start Guide
00825-0300-4825, Rev BA
June 2022

Rosemount™ 248 Rail Mount Temperature Transmitter

with RK Option and HART® 7 Protocol



ROSEMOUNT™

EMERSON

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1 About this guide

This guide provides basic guidelines to install the Rosemount 248R Rail Mount Temperature Transmitter. It does not provide instructions for detailed configuration, diagnostics, maintenance, service, troubleshooting, or installations. Refer to the Rosemount 248R Temperature Transmitter Reference Manual for more instruction. The manual and this guide are also available electronically at Emerson.com/Rosemount.

1.1 Safety messages

⚠ WARNING

Explosions

Explosions could result in death or serious injury.

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

Review the Hazardous Locations Certifications for any restrictions associated with a safe installation.

Process leaks

Process leaks could result in death or serious injury.

Install and tighten thermowells and sensors before applying pressure.

Do not remove the thermowell while in operation.

Electrical shock

Electrical shock could cause death or serious injury.

Avoid contact with the leads and terminals. High voltage that may be present on leads can cause electrical shock.

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.

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

⚠ WARNING

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.

2 Installation

2.1 Safety messages

Instructions and procedures in this section may require special precautions to ensure the safety of the personnel performing the operations. Information that potentially raises safety issues is indicated by a warning symbol (⚠). Please refer to the following safety messages before performing an operation preceded by this symbol.

⚠ WARNING

Failure to follow these installation guidelines could result in death or serious injury.

Ensure only qualified personnel perform the installation.

Explosions could result in death or serious injury.

Do not remove the housing covers in explosive atmospheres when the circuit is live.

Before connecting a handheld communicator in an explosive atmosphere, ensure the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices.

Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications.

All connection head covers must be fully engaged to meet explosion-proof requirements.

Process leaks could result in death or serious injury.

Do not remove the thermowell while in operation.

Install and tighten thermowells and sensors before applying pressure.

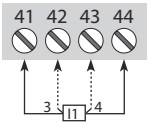
Electrical shock could cause death or serious injury.

Use extreme caution when making contact with the leads and terminals.

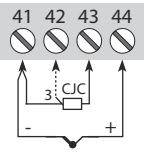
2.2 Connections

Single input

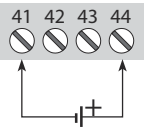
2 w / 3 w / 4 w RTD or lin. R



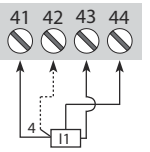
TC (internal CJC or external 2 w / 3 w / 4 w CJC)(1)



mV



3 w / 4 w potentiometer



(1) When using thermocouple input, the transmitter can be configured for either constant, internal or external CJC via a Pt100 or Ni100 sensor. This must be selected during device configuration.

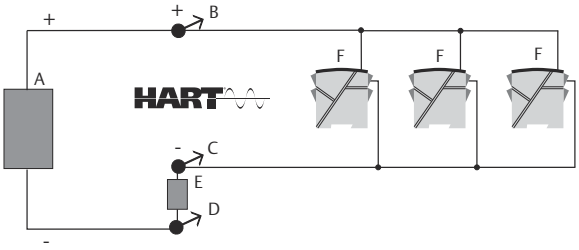
2.3 Multidrop mode

The communication is either by means of a HART® communicator or a HART modem.

The HART communicator or a HART modem can be connected across BC or CD.

The outputs of maximum 63 transmitters can be connected in parallel for a digital HART 2-wire communication.

Before it is connected, each transmitter must be configured with a unique number from 1 to 63. If two transmitters are configured with the same number, both will be excluded. The transmitters must be programmed for multidrop mode (with a fixed output signal of 4 mA). Maximum current in the loop is therefore 252 mA.



A. Power supply
B. Connection
C. Connection
D. Connection
E. 250 Ω < R_{load} < 1100 Ω
F. Transmitter

3 Configuration

3.1 Safety messages

Instructions and procedures in this section may require special precautions to ensure the safety of the personnel performing the operations. Information that potentially raises safety issues is indicated by a warning symbol (⚠). Please refer to the following safety messages before performing an operation preceded by this symbol.

⚠ WARNING

Failure to follow these installation guidelines could result in death or serious injury.

Ensure only qualified personnel perform the installation.

Explosions could result in death or serious injury.

Do not remove the housing covers in explosive atmospheres when the circuit is live.

Before connecting a handheld communicator in an explosive atmosphere, ensure the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices.

Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications.

All connection head covers must be fully engaged to meet explosion-proof requirements.

Process leaks could result in death or serious injury.

Do not remove the thermowell while in operation.

Install and tighten thermowells and sensors before applying pressure.

Electrical shock could cause death or serious injury.

Use extreme caution when making contact with the leads and terminals.

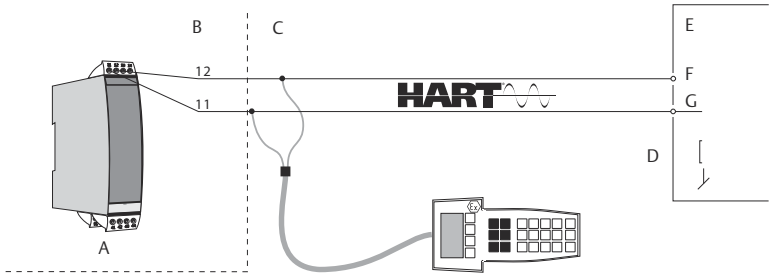
3.2 Configuration methods

The device can be configured in the following ways:

- With a HART® communicator with Emerson's DDL driver
- Via programming framework (e.g. AMS Device Manager, DCS, PACTware™)

HART communicator

To get access to product-specific commands, the HART communicator must be loaded with Emerson's DDL driver. This can be ordered through either the FieldComm Group or Emerson.



A. Rosemount transmitter
B. Ex area
C. Safe area
D. 250 Ω < R_{load} < 1100 Ω
E. Receiving equipment
F. +V supply
G. Input

Programming framework

Support for both EDD and FDT®/DTM™ technology, offering configuration and monitoring via relevant DCS/Asset Management Systems and supported management packages (e.g. PACTware).



A. Rosemount transmitter
B. 250 Ω < R_{load} < 1100 Ω
C. Process computer
D. DCS, etc.

4 Mount the transmitter

4.1 Rail mount transmitter with remote mount sensor

The least complicated assembly uses:

- a remote mounted transmitter
- an integral mount sensor with terminal block
- an integral style connection head
- a standard extension
- a threaded thermowell

Refer to the Metric Sensor Product Data Sheet for complete sensor and mounting accessory information.

4.1.1 Assemble the device

To complete the assembly:

Procedure

1. Attach the transmitter to a suitable rail or panel.
2. Attach the thermowell to the pipe or process container wall. Install and tighten the thermowell before applying pressure.
3. Attach the sensor to the connection head and mount the entire assembly to the thermowell.
4. Attach sufficient lengths of sensor lead wire to the sensor terminal block.
5. Attach and tighten the connection head cover. Enclosure covers must be fully engaged to meet explosion-proof requirements.
6. Run sensor lead wires from the sensor assembly to the transmitter.
7. Attach the sensor and power leads to the transmitter. Avoid contact with leads and terminals.

4.2 Rail mount transmitter with threaded sensor

The least complicated assembly uses:

- a threaded sensor with flying heads
- a threaded sensor connection head
- a union and nipple extension assembly
- a threaded thermowell

Refer to Rosemount Metric Sensor Product Data Sheet for complete sensor and mounting accessory information.

4.2.1 Assemble the device

To complete the assembly:

Procedure

1. Attach the transmitter to a suitable rail or panel.
2. Attach the thermowell to the pipe or process container wall. Install and tighten the thermowell before applying pressure.
3. Attach necessary extension nipples and adapters. Seal the nipple and adapter threads with silicone tape.
4. Twist the sensor into the thermowell. Install drain seals if required for severe environments or to satisfy code requirements.
5. Screw the connection head to the sensor.
6. Attach the sensor lead wires to the connection head terminals.
7. Attach additional sensor lead wires from the connection head to the transmitter.
8. Attach and tighten the connection head cover. Enclosure covers must be fully engaged to meet explosion-proof requirements.
9. Attach the sensor and power leads to the transmitter. Avoid contact with leads and terminals.

5 Product certifications

Rev: 1.1

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 Installing equipment in 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 USA

5.4.1 I5 USA Intrinsically Safe (IS) and Division 2/Zone 2

Certificate 80072530

Standards UL Std No 913 Ed. 8, UL 60079-0 Ed. 5, UL 60079-11 Ed. 6, UL 60079-15 Ed. 4, UL 61010-1 Ed. 3

Markings Class I, Division 1, Groups A, B, C, D
Class I, Zone 0: AEx ia IIC T6...T4
Class I, Zone 1: AEx ib [ia] IIC T6...T4
Class I, Division 2, Groups A, B, C, D
Class I, Zone 2: AEx nA IIC T6...T4
Class I, Zone 2: AEx nA [ic] IIC T6...T4
when installed per Control Drawing 00248-8000

Table 5-1: IS Input Parameters vs Temperature Range

Input parameters (Terminals 11, 12)	Temperature range	Input parameters (Terminals 11, 12)	Temperature range
U_i: 30 VDC	T4: -50 °C ≤ T_a ≤ +85 °C	U_i: 30 VDC	T4: -50 °C ≤ T_a ≤ +85 °C

Table 5-1: IS Input Parameters vs Temperature Range *(continued)*

Input parameters (Terminals 11, 12)	Temperature range	Input parameters (Terminals 11, 12)	Temperature range
I_i: 120 mA	T5: -50 °C ≤ T_a ≤ +70 °C	I_i: 100 mA	T5: -50 °C ≤ T_a ≤ +75 °C
P_i: 900 mW	T6: -50 °C ≤ T_a ≤ +55 °C	P_i: 750 mW	T6: -50 °C ≤ T_a ≤ +60 °C
L_i: 0 uH	N/A	L_i: 0 uH	N/A
C_i: 1.0 nF	N/A	C_i: 1.0 nF	N/A

Table 5-2: IS Output Parameters per Terminal Configuration

Parameters	One sensor using all output terminals (41-54)	Sensor using one set of output terminals (41-44 or 51-54)
U_o	7.2 VDC	7.2 VDC
I_o	12.9 mA	7.3 mA
P_o	23.3 mW	13.2 mW
L_o	200 mH	667 mH
C_o	13.5 uF	13.5 uF

Table 5-3: Division 2/Zone 2 Input Parameters vs Temperature Range

Supply voltage	Temperature range
37 VDC max	T4: -50 °C ≤ T_a ≤ +85 °C T5: -50 °C ≤ T_a ≤ +70 °C T6: -50 °C ≤ T_a ≤ +55 °C
30 VDC max	T4: -50 °C ≤ T_a ≤ +85 °C T5: -50 °C ≤ T_a ≤ +75 °C T6: -50 °C ≤ T_a ≤ +60 °C
NIFW Vmax = 30 VDC, C_i = 1 nF, L_i = 0	T4: -50 °C ≤ T_a ≤ +85 °C T5: -50 °C ≤ T_a ≤ +75 °C T6: -50 °C ≤ T_a ≤ +60 °C

Special Conditions for Safe Use (X):

1. Install per Installation Drawing 00248-8000 as appropriate.
2. Install in accordance with the US National Electrical Code (NEC) for the US and in accordance with the Canadian Electrical Code (CEC) for Canada.

3. The transmitter must be installed in suitable enclosure to meet installation codes stipulated in the Canadian Electrical Code (CEC) or for the US the National Electrical Code (NEC).
4. If the enclosure is made of non-metallic materials or of painted metal, electrostatic charging shall be avoided.
5. For Div 2/Zone 2 applications, the transmitter must be installed in an enclosure providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and is correctly installed. Cable entry devices and blanking elements shall fulfil the same requirements.
6. Use supply wires with a rating of at least 5 K above the ambient temperature.
7. For Div 2/Zone 2 applications, the temperature transmitter requires connecting to Class 2 Power Supply with Transient protection. See installation drawing as appropriate.

5.5 Canada

5.5.1 I6 Canada Intrinsically Safe (IS) and Division 2/Zone 2

Certificate: 80072530

Standards: CSA C22.2 No. 157-92 (R2012), CAN/CSA C22.2 No. 60079-0:11, CAN/CSA C22.2 No. 60079-11:11, CAN/CSA C22.2 No. 60079-15:12, CSA 61010-1-12

Markings: Class I, Division 1, Groups A, B, C, D
Ex ia IIC T6...T4
Ex ib [ia] IIC T6...T4
Class I, Division 2, Groups A, B, C, D
Ex nA IIC T6...T4
Ex nA [ic] IIC T6...T4
when installed per Control Drawing 00248-8000

Table 5-4: IS Input Parameters vs Temperature Range

Input parameters (Terminals 11, 12)	Temperature range	Input parameters (Terminals 11, 12)	Temperature range
U_i: 30 VDC	T4: -50 °C ≤ T_a ≤ +85 °C	U_i: 30 VDC	T4: -50 °C ≤ T_a ≤ +85 °C
I_i: 120 mA	T5: -50 °C ≤ T_a ≤ +70 °C	I_i: 100 mA	T5: -50 °C ≤ T_a ≤ +75 °C
P_i: 900 mW	T6: -50 °C ≤ T_a ≤ +55 °C	P_i: 750 mW	T6: -50 °C ≤ T_a ≤ +60 °C

Table 5-4: IS Input Parameters vs Temperature Range *(continued)*

Input parameters (Terminals 11, 12)	Temperature range	Input parameters (Terminals 11, 12)	Temperature range
L_i: 0 uH	N/A	L_i: 0 uH	N/A
C_i: 1.0 nF	N/A	C_i: 1.0 nF	N/A

Table 5-5: IS Output Parameters per Terminal Configuration

Parameters	One sensor using all output terminals (41-54)	Sensor using one set of output terminals (41-44 or 51-54)
U_o	7.2 VDC	7.2 VDC
I_o	12.9 mA	7.3 mA
P_o	23.3 mW	13.2 mW
L_o	200 mH	667 mH
C_o	13.5 uF	13.5 uF

Table 5-6: Division 2/Zone 2 Input Parameters vs Temperature Range

Supply voltage	Temperature range
37 VDC max	T4: -50 °C ≤ T_a ≤ +85 °C T5: -50 °C ≤ T_a ≤ +70 °C T6: -50 °C ≤ T_a ≤ +55 °C
30 VDC max	T4: -50 °C ≤ T_a ≤ +85 °C T5: -50 °C ≤ T_a ≤ +75 °C T6: -50 °C ≤ T_a ≤ +60 °C
NIFW Vmax = 30 VDC, C_i = 1 nF, L_i = 0	T4: -50 °C ≤ T_a ≤ +85 °C T5: -50 °C ≤ T_a ≤ +75 °C T6: -50 °C ≤ T_a ≤ +60 °C

Special Conditions for Safe Use (X):

1. Install per Installation Drawing 00248-8000 as appropriate.
2. Install in accordance with the US National Electrical Code (NEC) for the US and in accordance with the Canadian Electrical Code (CEC) for Canada.
3. The transmitter must be installed in suitable enclosure to meet installation codes stipulated in the Canadian Electrical Code (CEC) or for the US the National Electrical Code (NEC).

4. If the enclosure is made of non-metallic materials or of painted metal, electrostatic charging shall be avoided.
5. For Div 2/Zone 2 applications, the transmitter must be installed in an enclosure providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and is correctly installed. Cable entry devices and blanking elements shall fulfil the same requirements.
6. Use supply wires with a rating of at least 5 K above the ambient temperature.
7. For Div 2/Zone 2 applications, the temperature transmitter requires connecting to Class 2 Power Supply with Transient protection. See installation drawing as appropriate.

5.6 Europe

5.6.1 I1 ATEX Intrinsic Safety

Certificate: DEKRA 21ATEX0003X

Standards: EN60079-0:2012+A11:2013, EN60079-11:2012

Markings: Ⓔx II 1 G Ex ia IIC T6...T4 Ga
II 2(1) G Ex ib [ia Ga] IIC T6...T4 Gb
II 1 D Ex ia IIIC Da
I 1 M Ex ia I Ma
when installed per Control Drawing 00248-8001

Input parameters (Power terminals)	Output parameters (Sensor terminals)
U_i: 30 VDC	U_o: 7.2 VDC
I_i: 120 mA	I_o: 7.3 mA
P_i: See table below	P_o: 13.2 mW
L_i: 0 uH	L_o: 667 mH
C_i: 1.0 nF	C_o: 13.5 uF

Pi per Channel	Temperature class	Maximum ambient temperature
900 mW	T6	+50 °C
	T5	+65 °C
	T4	+85 °C
750 mW	T6	+55 °C

Pi per Channel	Temperature class	Maximum ambient temperature
	T5	+70 °C
	T4	+85 °C
610 mW	T6	+60 °C
	T5	+75 °C
	T4	+85 °C

Special Conditions for Safe Use (X):

1. For all potentially explosive atmospheres, if the enclosure is made of non-metallic materials, or if it is made of metal having a paint layer thicker than 0.2 mm (group IIC), or 2 mm (group IIB, IIA, I), or any thickness (group III), electrostatic charges shall be avoided.
2. For EPL Ga, if the enclosure is made of aluminum, it must be installed such that ignition sources due to impact and friction sparks are excluded.
3. For EPL Da, the surface temperature "T" of the enclosure, for a dust layer with a maximum thickness of 5 mm, is the ambient temperature +20 K.

5.6.2 N1 ATEX Zone 2

Certificate: DEKRA 21ATEX0004X

Standards: EN60079-0:2012+A11:2013, EN60079-7:2015+A1:2018, EN60079-11:2012, EN60079-15:2010

Markings: Ⓔx II 3 G Ex nA IIC T6...T4 Gc
II 3 G Ex ec IIC T6...T4 Gc
II 3 G Ex ic IIC T6...T4 Gc
II 3 D Ex ic IIIC Dc
when installed per Control Drawing 00248-8001

Supply/input to transmitter			Temperature class	Maximum ambient temperature
Ex nA & Ex ec	**Ex ic** **L_i = 0 µH** **C_i = 1.0 nF**	**Ex ic** **U_i = 48 VDC** **L_i = 0 µH** **C_i = 1.0 nF**		**Single and dual input**
V_{max} = 37 VDC	U_i = 37 VDC	P_i = 851 mW per channel	T4	+85 °C
			T5	+70 °C
			T6	+55 °C
V_{max} = 30 VDC	U_i = 30 VDC	P_i = 700 mW per channel	T4	+85 °C
			T5	+75 °C
			T6	+60 °C

Table 5-7: Maximum Output of Transmitter

Ex nA & Ex ec	Ex ic
Vmax = 7.2 VDC	U_o = 7.2 VDC I_o = 7.3 mA P_o = 13.2 mW L_o = 667 mH C_o = 13.5 µF

Special Conditions for Safe Use (X):

1. For all potentially explosive atmospheres, if the enclosure is made of non-metallic materials, or if it is made of metal having a paint layer thicker than 0.2mm (group IIC), or 2mm (group IIB, IIA, I), or any thickness (group III), electrostatic charges shall be avoided.
2. The transmitter shall be installed in an enclosure providing a degree of protection of not less than IP54 in accordance with EN 60079-0, which is suitable for the application and correctly installed, e.g. in an enclosure that is in type of protection Ex n or Ex e.
3. Additional, for Ex nA or Ex ec, the area inside the enclosure shall be pollution degree 2 or better, as defined in EN 60664-1.
4. For EPL Dc, the surface temperature “T” of the enclosure, for a dust layer with a maximum thickness of 5mm, is the ambient temperature +20K.

5.7 International

5.7.1 I7 IECEx Intrinsic Safety

Certificate IECEx DEK 21.0002X

Standards IEC 60079-0:2011, IEC 60079-11:2011

Markings Ex ia IIC T6...T4 Ga
Ex ib [ia Ga] IIC T6...T4 Gb
Ex ia IIIC Da
Ex ia I Ma
when installed per Control Drawing 00248-8002

Input parameters (Power terminals)	Output parameters (Sensor terminals)
U_i: 30 VDC	U_o: 7.2 VDC
I_i: 120 mA	I_o: 7.3 mA
P_i: See table below	P_o: 13.2 mW
L_i: 0 uH	L_o: 667 mH
C_i: 1.0 nF	C_o: 13.5 uF

Pi per channel	Temperature class	Maximum ambient temperature
900 mW	T6	+50 °C
	T5	+65 °C
	T4	+85 °C
750 mW	T6	+55 °C
	T5	+70 °C
	T4	+85 °C
610 mW	T6	+60 °C
	T5	+75 °C
	T4	+85 °C

Special Conditions for Safe Use (X):

1. For all potentially explosive atmospheres, if the enclosure is made of non-metallic materials, or if it is made of metal having a paint layer

thicker than 0.2 mm (group IIC), or 2 mm (group IIB, IIA, I), or any thickness (group III), electrostatic charges shall be avoided.

2. For EPL Ga, if the enclosure is made of aluminum, it must be installed such that ignition sources due to impact and friction sparks are excluded.
3. For EPL Da, the surface temperature "T" of the enclosure, for a dust layer with a maximum thickness of 5 mm, is the ambient temperature +20 K.

5.7.2 N7 IECEx Zone 2

Certificate: IECEx DEK 21.0002X

Standards: IEC 60079-0:2011, IEC 60079-7:2017, IEC 60079-11:2011, IEC 60079-15:2010

Markings: Ex nA IIC T6...T4 Gc
Ex ec IIC T6...T4 Gc
Ex ic IIC T6...T4 Gc
Ex ic IIIC Dc
when installed per Control Drawing 00248-8002

Supply/input to transmitter			**Temperature class**	**Maximum ambient temperature**
Ex nA & Ex ec	**Ex ic L_i = 0 µH C_i = 1.0 nF**	**Ex ic U_i = 48 VDC L_i = 0 µH C_i = 1.0 nF**		**Single and dual input**
Vmax = 37 VDC	U_i = 37 VDC	P_i = 851 mW per channel	T4	+85 °C
			T5	+70 °C
			T6	+55 °C
Vmax = 30 VDC	U_i = 30 VDC	P_i = 700 mW per channel	T4	+85 °C
			T5	+75 °C
			T6	+60 °C

Table 5-8: Maximum Output of Transmitter

Ex nA & Ex ec	Ex ic
Vmax = 7.2 VDC	U_o = 7.2 VDC I_o = 7.3 mA P_o = 13.2 mW L_o = 667 mH C_o = 13.5 µF

Special Conditions for Safe Use (X):

1. For all potentially explosive atmospheres, if the enclosure is made of non-metallic materials, or if it is made of metal having a paint layer thicker than 0.2mm (group IIC), or 2mm (group IIB, IIA, I), or any thickness (group III), electrostatic charges shall be avoided.
2. The transmitter shall be installed in an enclosure providing a degree of protection of not less than IP54 in accordance with EN 60079-0, which is suitable for the application and correctly installed, e.g. in an enclosure that is in type of protection Ex n or Ex e.
3. Additional, for Ex nA or Ex ec, the area inside the enclosure shall be pollution degree 2 or better, as defined in EN 60664-1.
4. For EPL Dc, the surface temperature “T” of the enclosure, for a dust layer with a maximum thickness of 5mm, is the ambient temperature +20K.

5.8 China

5.8.1 I3 China (NEPSI) Intrinsic Safety

Certificate GYJ21.1036X

Standards GB3836.1-2010, GB3836.4-2010, GB3836.20-2010, GB12476.1-2013, GB12476.4-2010

Markings Ex ia IIC T4/T5/T6 Ga
Ex ib [ia Ga] IIC T4/T5/T6 Gb
Ex iaD 20 T80 °C/T95 °C/T130 °C
Ex ibD [iaD 20]21 T80 °C/T95 °C/T130 °C

Special Condition for Safe Use (X):

See certificate for special conditions.

5.8.2 N3 China (NEPSI) Zone 2

Certificate GYJ21.1036X

Standards GB3836.1-2010, GB3836.4-2010, GB3836.8-2014, GB3836.20-2010

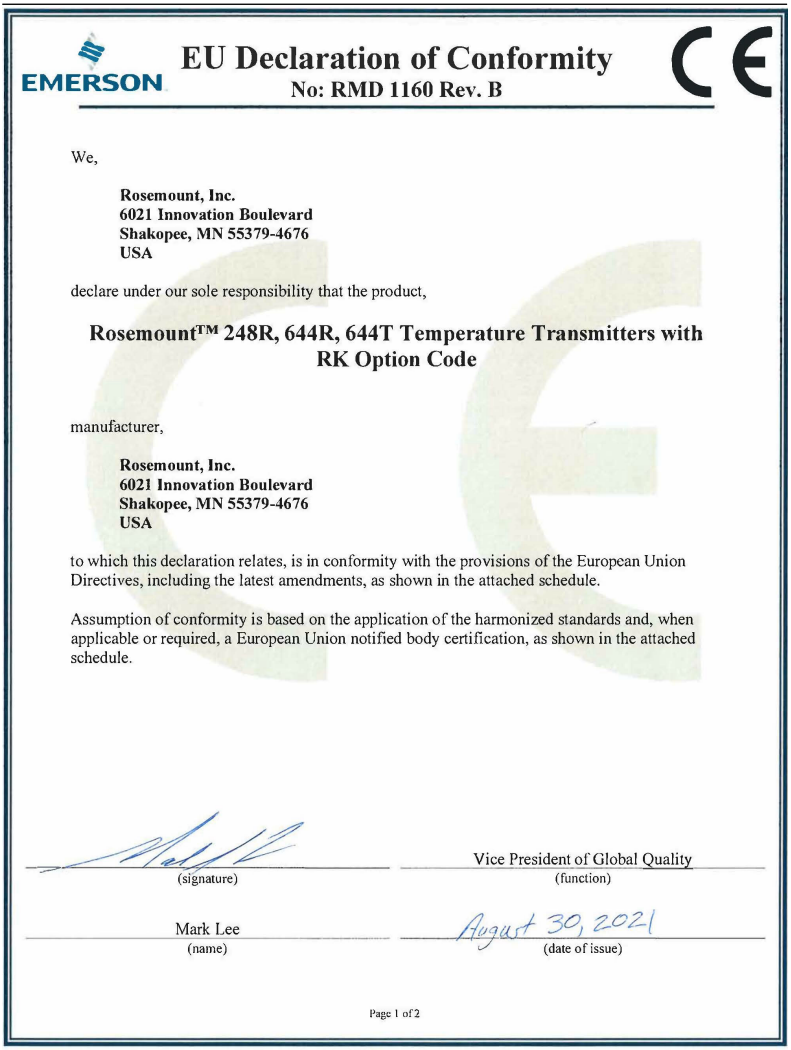
Markings Ex nA [ic Gc] IIC T6...T4 Gc

Ex ic IIC T6...T4 Gc

Special Condition for Safe Use (X):

See certificate for special conditions.

5.9 Declaration of conformity



EMERSON

EU Declaration of Conformity
No: RMD 1160 Rev. B

CE

We,

Rosemount, Inc.
6021 Innovation Boulevard
Shakopee, MN 55379-4676
USA

declare under our sole responsibility that the product,

Rosemount™ 248R, 644R, 644T Temperature Transmitters with RK Option Code

manufacturer,

Rosemount, Inc.
6021 Innovation Boulevard
Shakopee, MN 55379-4676
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)

Vice President of Global Quality
(function)

Mark Lee
(name)

August 30, 2021
(date of issue)

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EMERSON

EU Declaration of Conformity

No: RMD 1160 Rev. B

CE

ATEX Directive (2014/34/EU)

DEKRA 21ATEX0003X – Intrinsic Safety Certificate

Equipment Group II Category 1 G (Ex ia IIC T6…T4 Ga)
Equipment Group II Category 2(1) G (Ex ib [ia Ga] IIC T6…T4 Gb)
Equipment Group II Category 1 D (Ex ia IIIC Da)
Equipment Group I Category M1 (Ex ia I Ma)

DEKRA 21ATEX0004X – Zone 2 Certificate

Equipment Group II Category 3 G (Ex nA IIC T6…T4 Gc)
Equipment Group II Category 3 G (Ex ec IIC T6…T4 Gc)
Equipment Group II Category 3 G (Ex ic IIC T6…T4 Gc)
Equipment Group II Category 3 D (Ex ic IIIC Dc)

Harmonized Standards:

EN 60079-0:2012+A11: 2013 (a review against EN IEC 60079-0:2018, which is harmonized, shows no significant changes relevant to this equipment so EN 60079-0:2012_A11:2013 continues to represent "State of the Art"), EN 60079-7:2015+A1:2018, EN 60079-11:2012, EN 60079-15:2010

EMC Directive (2014/30/EU)

Harmonized Standard: EN 61326-1:2013

RoHS Directive (2011/65/EU)

Harmonized Standard: EN 50581:2012

ATEX Notified Bodies

DEKRA Certification B.V. [Notified Body Number: 0344]
Meander 1051, 6825 MJ Arnhem
P.O. Box 5185
6802 ED Arnhem The Netherlands

ATEX Notified Body for Quality Assurance

SGS FIMKO OY [Notified Body Number: 0598]
Takomotie 8
FI-00380 HELSINKI
Finland

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6 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* ***248R***
List of 248R 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)**
电子组件 Electronics Assembly	X	O	O	O	O	O

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**
电子组件 Electronics Assembly	端子螺钉 Terminal Screws



Quick Start Guide
00825-0300-4825, Rev. BA
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