

Rosemount™ 3144P Temperature Transmitter

with HART® Protocol and Rosemount X-well™ Technology



Product documents can be located by selecting the search tool magnifier icon at the top of www.emerson.com and then select the "Serial Number" lookup button in the pop-up menu.

For Additional Product Information:

Please scan the QR code on this document for your local language safety messages.
Escaneie o código QR acima para obter as mensagens de segurança no idioma local.
Bitte scannen Sie den QR-Code oben nach den Sicherheitshinweisen Ihrer Landessprache.

Veuillez scanner le code QR ci-dessus pour obtenir vos messages de sécurité en langue locale.

Lea el código QR anterior para ver sus mensajes de seguridad en el idioma local.

Esegui la scansione del codice QR sopra indicato per i messaggi di sicurezza nella lingua locale.

Отсканируйте QR-код выше, чтобы получить сообщения о безопасности на местном языке.

請掃描上面的 QR 代碼以了解您的本地語言安全消息。

上記の QR コードをスキャンして、地域の言語の安全性に関するメッセージを確認してください。

현재 언어 안전 메시지를 보려면 위의 QR 코드를 스캔하세요

This guide provides basic guidelines for installing the Rosemount 3144P Transmitter. It does not provide instructions for detailed configuration, diagnostics, maintenance, service, troubleshooting, explosion-proof, flameproof, or intrinsically safe (IS) installations. Refer to the [Rosemount 3144P Transmitter Reference Manual](#) for more instructions. The manual and this guide are also available electronically on [Emerson.com](#).

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 Product Certifications section of this document for any restrictions associated with a safe installation.

Conduit/cable entries

The conduit/cable entries in the transmitter housing use a ½–14 NPT thread form.

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

Electrical shock

Electrical shock can result in death or serious injury.

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

Enclosures

Enclosure covers must be fully engaged to meet explosion-proof requirements.

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 in protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

1 Rosemount 3144P Temperature Transmitter product certifications

Rev 2.25

1.1 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/global](https://www.emerson.com/global).

1.2 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).

1.3 North America

1.3.1 E5 USA Explosion-proof, Dust-Ignitionproof, and Nonincendive

Certificate	FM16US0202X
Markings	XP CL I, DIV 1, GP A, B, C, D; T5 (-50 °C ≤ T _a ≤ +85 °C); DIP CL II/III, DIV 1, GP E, F, G; T5 (-50 °C ≤ T _a ≤ +75 °C); T6 (-50 °C ≤ T _a ≤ +60 °C); when installed per Rosemount drawing 03144-0320. NI CL I, DIV 2, GP A, B, C, D; T5 (-60 °C ≤ T _a ≤ +75 °C); T6 (-60 °C ≤ T _a ≤ +60 °C); when installed per Rosemount drawing 03144-0321, 03144-5075.

1.3.2 I5 USA Intrinsic Safety and Nonincendive

Certificate	FM16US0202X [HART®]
Markings	IS CL I/II/III, DIV 1, GP A, B, C, D, E, F, G; T4 (-60 °C ≤ T _a ≤ +60 °C); IS [Entity] CL I, Zone 0, AEx ia IIC T4 (-60 °C ≤ T _a ≤ +60 °C); NI CL I, DIV 2, GP A, B, C, D; T5 (-60 °C ≤ T _a ≤ +85 °C); T6 (-60 °C ≤ T _a ≤ +60 °C); when installed per Rosemount drawing 03144-5076.

1.3.3 I6 Canada Intrinsic Safety and Division 2

Certificate	1242650
Markings	Intrinsically Safe for Class I Groups A, B, C, D; Class II, Groups E, F, G; Class III; IS [Entity] Ex ia IIC T4, Ex ia IIIC T94C T4 (-60 °C ≤ T _a ≤ +60 °C); [HART® only zone markings]: Intrinsically Safe for Class I Zone 0 Group IIC; T4 (-50 °C ≤ T _a ≤ +60 °C); Type 4X; Suitable for Class I, Div. 2, Groups A, B, C, D; [HART only zone markings]: Suitable for Class I Zone 2 Group IIC; T6 (-60 °C ≤ T _a ≤ +60 °C); T5 (-60 °C ≤ T _a ≤ +85 °C); when installed per Rosemount drawing 03144-5076.

1.3.4 K6 Canada Explosion-proof, Intrinsic Safety and Division 2

Certificate	1242650
Markings	Explosion-proof for Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; [HART® only zone markings]: Suitable for Class I, Zone 1, Group IIC; Intrinsically Safe for Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; [HART only zone markings]: Suitable for Class I, Zone 0, Group IIC; T4 (-50 °C ≤ T _a ≤ +60 °C); Type 4X; Suitable for Class I, Div. 2, Groups A, B, C, D; [HART only zone markings]: Suitable for Class I, Zone 2, Group IIC; T6 (-60 °C ≤ T _a ≤ +60 °C); T5 (-60 °C ≤ T _a ≤ +85 °C); when installed per Rosemount drawing 03144-5076.

1.4 Europe

1.4.1 E1 ATEX Flameproof

Certificate	DEKRA 19ATEX0076 X
Markings	 II 2 G Ex db IIC T6...T1 Gb, T6 (-60 °C ≤ T _a ≤ +70 °C), T5...T1 (-60 °C ≤ T _a ≤ +80 °C)

Specific Conditions of 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.

Additional Specific Conditions of Use (X) when "XA" designation is ordered:

Guard DIN style sensors against impacts greater than 4J.

Process temperature range at sensor connection ⁽¹⁾ (°C).	Ambient temperature range (°C)	Temperature class
-60 °C to +70 °C	-60 °C to +70 °C	T6
-60 °C to +80 °C	-60 °C to +80 °C	T5...T1

(1) Sensor connection is where the sensor threads into the transmitter or junction box housing.

1.4.2 I1 ATEX Intrinsic Safety

Certificate	BAS01ATEX1431X [HART®]; Baseefa03ATEX0708X [Fieldbus]
Markings	HART:  II 1 G Ex ia IIC T5/T6 Ga; T6 (-60 °C ≤ T _a ≤ +50 °C), T5 (-60 °C ≤ T _a ≤ +75 °C) Fieldbus:  II 1 G Ex ia IIC T4 Ga; T4 (-60 °C ≤ T _a ≤ +60 °C)

Special Conditions for Safe Use (X):

- 1. When fitted with the transient terminal options, the equipment is not capable of passing the 500 V insulation test. This must be taken into account during installation.

- The enclosure may be made from aluminum alloy with a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion when located in Zone 0.

1.4.3 N1 ATEX Type n

Certificate	BAS01ATEX3432X [HART®]; Baseefa03ATEX0709X [Fieldbus™]
Markings	HART:  II 3 G Ex nA IIC T5/T6 Gc; T6 (-40 °C ≤ T _a ≤ +50 °C), T5 (-40 °C ≤ T _a ≤ +75 °C); Fieldbus:  II 3 G Ex nA IIC T5 Gc; T5 (-40 °C ≤ T _a ≤ +75 °C);

Special Condition for Safe Use (X):

When fitted with the transient terminal options, the equipment is not capable of withstanding the 500 V electrical strength test as defined in clause 6.5.1 of EN 60079-15: 2010. This must be taken into account during installation.

1.4.4 ND ATEX Dust

Certificate	DEKRA 19ATEX0076 X
Markings	 II 2 D Ex tb IIIC T130 °C Db, (-60 °C ≤ T _a ≤ +80 °C)

Specific Condition of Use (X):

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.

Additional Specific Conditions of Use (X) when "XA" designation is ordered:

The spring loaded adapter style sensors and DIN style sensors must be installed in a thermowell to maintain Ex tb protection.

Process temperature range at sensor connection ⁽¹⁾ (°C).	Ambient temperature range (°C)	Maximum surface temperature "T"
-60 °C to +80 °C	-60 °C to +80 °C	T130 °C

(1) Sensor connection is where the sensor threads into the transmitter or junction box housing

1.5 International

1.5.1 E7 IECEx Flameproof

Certificate	IECEx DEK 19.0041X
Markings	Ex db IIC T6...T1 Gb, T6 (-60 °C ≤ T _a ≤ +70 °C), T5...T1 (-60 °C ≤ T _a ≤ +80 °C);

Specific Conditions of Use (X):

- Flameproof joints are not intended for repair.
- 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.

Additional Specific Conditions of Use (X) when "XA" designation is ordered:

Guard DIN Style sensors against impacts greater than 4J.

Process temperature range at Sensor Connection ⁽¹⁾ (°C)	Ambient temperature range (°C)	Temperature class
-60 °C to +70 °C	-60 °C to +70 °C	T6
-60 °C to +80 °C	-60 °C to +80 °C	T5...T1

(1) Sensor connection is where the sensor threads into the transmitter or junction box housing.

Additionally Available with Option K7:

IECEx Dust

Certificate IECEx DEK 19.0041X

Markings Ex tb IIIC T130 °C Db, (-60 °C ≤ T_a ≤ +80 °C);

Specific Conditions of Use (X):

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.

Additional Specific Conditions of Use (X) when "XA" designation is ordered:

The spring-loaded adapter style sensors and DIN style sensors must be installed in a thermowell to maintain Ex tb protection.

Process temperature range at Sensor Connection ⁽¹⁾ (°C)	Ambient Temperature Range (°C)	Maximum surface temperature "T"
-60 °C to +80 °C	-60 °C to +80 °C	T130 °C

(1) Sensor connection is where the sensor threads into the transmitter or junction box housing.

1.5.2 I7 IECEx Intrinsic Safety

Certificate IECEx BAS 07.0002X [HART®]; IECEx BAS 07.0004X [Fieldbus]

Markings HART: Ex ia IIC T5/T6 Ga; T6 (-60 °C ≤ T_a ≤ +50 °C), T5 (-60 °C ≤ T_a ≤ +75 °C);
Fieldbus: Ex ia IIC T4 Ga; T4 (-60 °C ≤ T_a ≤ +60 °C)

Special Conditions for Safe Use (X):

- When fitted with the transient terminal options, the apparatus is not capable of withstanding the 500 V electrical strength test as defined in Clause 6.3.13 of IEC 60079-11: 2011. This must be taken into account during installation.
- The enclosure may be made from aluminum alloy with a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion when located in Zone 0.

1.5.3 N7 IECEx Type n

Certificate IECEx BAS 07.0003X [HART®]; IECEx BAS 07.0005X [Fieldbus]

Markings HART: Ex nA IIC T5/T6 Gc; T6 (-40 °C ≤ T_a ≤ +50 °C), T5 (-40 °C ≤ T_a ≤ +75 °C);
Fieldbus: Ex nA IIC T5 Gc; T5 (-40 °C ≤ T_a ≤ +75 °C)

Special Condition for Safe Use (X):

When fitted with the transient terminal options, the apparatus is not capable of withstanding the 500 V electrical strength test as defined in clause 6.5.1 of IEC 60079-15: 2010. This must be taken into account during installation.

1.6 Brazil

1.6.1 E2 Brazil Flameproof and Dust

Certificate UL-BR 21.1296X

Markings Ex db IIC T6...T1 Gb; T6 (-60 °C ≤ T_a ≤ +70 °C); T5...T1 (-60 °C ≤ T_a ≤ +80 °C)
Ex tb IIIC T130 °C Db; (-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 of 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.

Additional Specific Conditions of Use (X) when "XA" designation is ordered:

Additional Specific Conditions of Use (X) when "XA" designation is ordered:

1. Guard DIN Style sensors against impacts greater than 4J.
2. The spring-loaded adapter style sensors and DIN style sensors must be installed in a thermowell to maintain Ex tb protection.

Process temperature range at sensor connection (°C) ⁽¹⁾	Ambient temperature range (°C)	Temperature class
-60 °C to +70 °C	-60 °C to +70 °C	T6
-60 °C to +80 °C	-60 °C to +80 °C	T5...T1
-60 °C to +80 °C	-60 °C to +80 °C	T130 °C

(1) Sensor connection is where the sensor threads into the transmitter or junction box housing.

1.6.2 I2 Brazil Intrinsic Safety [HART®]

Certificate UL-BR 15.0088X

Markings Ex ia IIC T6 Ga (-60 °C < T_a < 50 °C), Ex ia IIC T5 Ga (-60 °C < T_a < 75 °C)

Special Conditions for Safe Use (X):

1. When fitted with the transient terminal options, the equipment is not capable of withstanding the 500 V electrical strength test as defined in ABNT NBR IEC60079-11. This must be taken into account during installation.
2. The enclosure may be made from aluminum alloy with a protective polyurethane paint finish; however, care should be taken to protect it from impact and abrasion when located in areas that require EPL Ga (Zone 0).

Brazil Intrinsic Safety [Fieldbus/FISCO]

Certificate UL-BR 15.0030X

Special Conditions for Safe Use (X):

1. When mounted with the terminal options with transient protection, the equipment is not capable of withstanding the dielectric strength test with 500 V as defined in ABNT NBR IEC 60079-11. This feature should be taken into account during installation.
2. The enclosure may be made from aluminum alloy with a protective polyurethane paint finish; however, care should be taken to protect it from impact and abrasion when located in areas that require EPL Ga (Zone 0).

1.7 China

1.7.1 E3 China Flameproof

Certificate GYJ21.1277X

Markings Ex dB IIC T6...T1 Gb, Ex tb IIIC T130 °C Db

- 产品使用注意事项
 1. 产品外壳设有接地端子，用户在使用时应可靠接地。
 2. 安装现场应不存在对产品外壳有腐蚀作用的有害气体。
 3. 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 dbIIC、Ex ta IIIC Da 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。
 4. 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。
 5. 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。
 6. 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。
 7. 产品的安装、使用和维护应同时遵守产品使用说明书、GB/T 3836.13-2021“爆炸性环境 第13部分：设备的修理、检修、修复和改造”、GB/T 3836.15-2017“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）”、GB/T 3836.16-2017“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）”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。

1.7.2 I3 China Intrinsic Safety

Certificate GYJ21.1278X

Markings HART: Ex ia IIC T5/T6 Ga
Fieldbus: Ex ia IIC T4 Ga

1.7.3 N3 China Type n

Certificate GYJ20.1086X [Fieldbus]; GYJ20.1091X [HART®]

Markings [Fieldbus]: Ex ec IIC T5 Gc
[HART]: Ex ec IIC T5/T6 Gc
[Fieldbus]: Ex nA IIC T5/T6 Gc [HART]

2. Non-standard paint options may cause risk from electrostatic discharge. Avoid installations that could 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. See instructions for relation between process temperature, ambient temperature and temperature class.

Additional Special Condition for Safe Use (X) when "XA" designation is ordered:

Guard DIN Style sensors against impacts greater than 4J.

Process temperature range at sensor connection (°C) ⁽¹⁾	Ambient temperature range (°C)	Temperature class
-60 °C to +70 °C	-60 °C to +70 °C	T6
-60 °C to +80 °C	-60 °C to +80 °C	T5...T1

(1) Sensor connection is where the sensor threads into the transmitter or junction box housing.

1.10 Korea

1.10.1 EP Korea Flameproof

Certificate	22-KA4BO-0079X (flameproof), 22-KA4BO-0075X (dust)
Markings	Ex db IIC Gb T6...T1; T6 (-60 °C ≤ T _{amb} ≤ +70 °C), T5 (-60 °C ≤ T _{amb} ≤ +80 °C) Ex tb IIIC T130 °C Db; (-60 °C ≤ T _{amb} ≤ +80 °C)

Special Condition for Safe Use (X):

See certificate for special conditions.

1.10.2 IP Korea Intrinsic Safety

Certificate	09-KB4BO-0028X
Markings	Ex ia IIC T6/T5 Ga; T6 (-60 °C ≤ T _{amb} ≤ +50 °C), T5 (-60 °C ≤ T _{amb} ≤ +75 °C)

Special Condition for Safe Use (X):

See certificate for special conditions.

1.11 Combinations

K1	Combination of E1, I1, N1, and ND
K2	Combination of E2 and I2
K5	Combination of E5 and I5
KP	Combination of EP and IP

1.12 Tables

1.12.1 Process temperature limits

Table 1-1: 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 1-3 will ensure that the service temperature limitations of the LCD cover are not exceeded. Process temperatures may exceed the limits defined in Table 1-3 if the temperature of the LCD cover is verified to not exceed the service temperatures in Table 1-3 and the process temperatures do not exceed the values specified in Table 1-1.

Table 1-2: Transmitter with LCD Cover

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
9-in. extension	65	75	110	110

Table 1-3: Transmitter with LCD Cover

Service temperature [°C]			
Gas			Dust
T6	T5	T4...T1	T130 °C
65	75	95	95

1.13 Additional certifications

1.13.1 SBS American Bureau of Shipping (ABS) type approval

Certificate	21-2097596-PDA
Intended use	Measurement of temperature for marine and offshore applications

1.13.2 SBV Bureau Veritas (BV) type approval

Certificate	23154
Requirements	Bureau Veritas rules for the classification of steel ships
Application	Class notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS; temperature transmitter type 3144P cannot be installed on diesel engines

1.13.3 SDN Det Norske Veritas (DNV) type approval

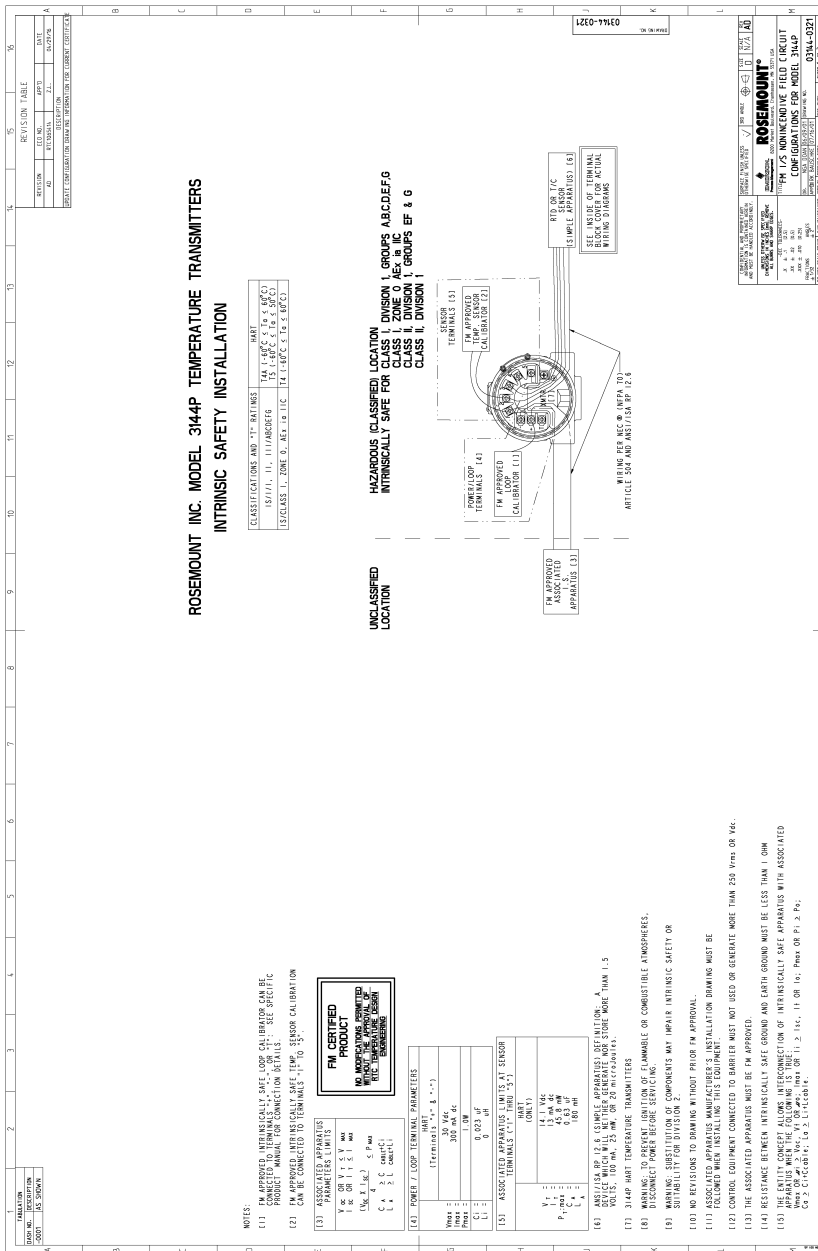
Certificate	TAA00001JK
Intended use	Det Norske Veritas' rules for classification of ships, high speed, and light craft and Det Norske Veritas' offshore standards
Application	

Table 1-4: Location classes

Temperature	D
Humidity	B
Vibration	A
EMC	A
Enclosure	D

1.13.4 SLL Lloyds Register (LR) type approval

Certificate	LR21173788TA
Application	Environmental categories ENV1, ENV2, ENV3, and ENV5



CLASSIFICATIONS AND "T" RATINGS	HART
N11/21 ABCD	T6 (-60°C ≤ T _a ≤ 60°C)
	T5 (-40°C ≤ T _a ≤ 65°C)

DIV. 2 HAZARDOUS (CLASSIFIED) LOCATION
 SUITABLE FOR CLASS 1, DIVISION 2, GROUPS A, B, C, & D



- | | |
|---|---|
| (3) ASSOCIATED NON-INCENDING APPARATUS
PARAMETERS LIMITS | $V_{OC} \text{ OR } V_I \leq V_{MAX}$
$C_A \geq C_{CRIT} + C_I$
$L_A \geq L_{CRIT} + L_I$ |
|---|---|

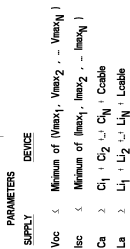
- | | | | |
|---|---|--------------|----------|
| (5) ASSOCIATED NONINDEPENDENT (ANI) FIELD CIRCUIT PARAMETER LIMITS AT SENSOR TERMINALS (-1° THRU -5°) | | | |
| | | HARRY (ONLY) | |
| V_i | = | | 14.1 Vdc |
| C_A | = | | 0.83 af |
| L_A | = | | 180 mH |

[6] ANSI/ISA RP 12.6 (SIMPLE APPARATUS) DEFINITION: A DEVICE WHICH WILL NOT GENERATE NOR STORE MORE THAN 1.5 VOLTS, 100 mA, 25 mW.

[7] 3144P HART TEMPERATURE TRANSMITTERS.

[8] MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 70) FOR WIRING IN DIVISION 2 HAZARDOUS CLASSIFIED AREAS.

ROSEMOUNT INC. INTRINSICALLY SAFE DIV. 1 INSTALLATION (MULTI-DROP CONFIGURATION)

[illegible]

WARNING

Additional warnings

The plastic enclosure may present a potential electrostatic ignition hazard.

RFID tag is suitable for installation in a limited set of Zone classified locations and ambient temperature ranges when compared to the transmitter.

Certificate EPS 15 ATEX 11011X

Markings  II 2G Ex ia IIC T6/T4 Gb
 II 2D Ex ia IIIC T80 °C/T130 °C Db

Certificate IECEx EPS 15.0042X

Markings Ex ia IIC T6/T4 Gb
Ex ia IIIC T80 °C/T130 °C Db

1.15.1 Specific Conditions of Use (X):

1. Maximum ambient temperature range:
 - -55 °C to +80 °C (T6 / T80 °C)
 - -55 °C to +110 °C (T4 / T130 °C)
2. The RFID tags shall never be exposed to high electromagnetic field strengths exceeding RMS values of 1 A/m or 3 V/m, e.g., in high current electrolysis plants.
3. Electrostatic charges shall be avoided. The tags shall never be used next to strong charge generating processes.

2 Declarations of Conformity (DoC)

2.1 Transmitter DoC



EU DECLARATION OF CONFORMITY



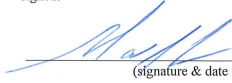
This declaration of conformity is issued under the sole responsibility of

Rosemount Inc.
6021 Innovation Blvd
Shakopee, MN 55379
USA

that the following products,

Rosemount™ 3144P Temperature Transmitter

comply with the provisions of the European Union Directives, including the latest amendments, valid at the time this declaration was signed.

 July 18, 2025 Mark Lee | Vice President, Quality | Boulder, CO, USA
(signature & date of issue) (name) (function) (place of issue)

Authorized Representative in Europe:
Emerson S.R.L., company No. J12/88/2006
Emerson 4 street, Parcul Industrial
Tetarom II, Cluj-Napoca 400638, Romania

Regulatory Compliance Shared Services Department
Email: europaeproductcompliance@emerson.com Phone: +40 374 132 035

ATEX Notified Bodies for EU Type Examination Certificates:

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

EMC Directive (2014/30/EU)

Harmonized Standard:
EN 61326-1: 2013
EN 61326-2-3: 2013

RoHS Directive (2011/65/EU)

Harmonized Standards:
EN IEC 63000:2018

Rosemount 3144P Temperature Transmitter (HART Output)

ATEX Directive (2014/34/EU)

BAS01ATEX1431X – Intrinsic Safety Certificate

Equipment Group II, Category I G
Ex ia IIC T5 Ga
Ex ia IIC T6 Ga
Harmonized Standards:
EN IEC 60079-0:2018
EN 60079-11:2012

BAS01ATEX3432X – Type n or Increased Safety Certificate

Equipment Group II, Category 3G
Ex nA IIC T5 Gc or Ex ec IIC T5 Gc
Ex nA IIC T6 Gc or Ex ec IIC T6 Gc
Harmonized Standards:
EN IEC 60079-0:2018
EN IEC 60079-7:2015+A1:2018
EN 60079-15:2010

Rosemount 3144P Temperature Transmitter (Fieldbus Output)**Baseefa03ATEX0708X – Intrinsic Safety Certificate**

Equipment Group II, Category 1 G

Ex ia IIC T4 Ga

Harmonized Standards:

EN IEC 60079-0:2018

EN 60079-11:2012

Baseefa03ATEX0709X – Type n or Increased Safety Certificate

Equipment Group II, Category 3G

Ex nA IIC T5 Gc or Ex ec IIC T5 Gc

Harmonized Standards:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

Rosemount 3144P Temperature Transmitter (all Output Protocols)**DEKRA 19ATEX0076X – Dust Certificate**

Equipment Group II, Category 2 D

Ex tb IIIC T130°C Db

Harmonized Standards:

EN IEC 60079-0:2018

EN 60079-1:2014

EN 60079-31:2014

DEKRA 19ATEX0076X – Flameproof

Equipment Group II, Category 2 G

Ex db IIC T6...T1 Gb

Harmonized Standards:

EN IEC 60079-0:2018

EN 60079-1:2014

EN 60079-31:2014



EU Declaration of Conformity

Company: smart-TEC GmbH & Co. KG
Address: Kolpingring 3
82041 Oberhaching

Product category: Passive LF (125 kHz) RFID Tag
Passive HF (13,56 MHz) RFID Tag

Model name: smart-DOME Freestyle Ex, smart-DOME Classic Ex

The product is in compliance with the requirements of the following European harmonisation legislations:

Harmonisation legislation:	Title:
2014/53/EU:2014-04-16	Radio equipment Directive (RED)
2011/65/EU:2011-06-08	Restriction of the use of hazardous substances Directive (RoHS)
2014/34/EU 2014-02-16	Equipment and protective systems intended for use in potentially explosive 2014/34/EU atmospheres (ATEX)

The compliance with the requirements of the European harmonisation legislations was proved by the application of the following harmonised standards and technical specifications:

Essential requirements:	Reference:
Health and safety (article 3.1(a) RED)	EN 62368-1:2014+AC:2015 EN 50364:2010
Electromagnetic compatibility (article 3.1(b) RED)	EN 301 489-1 V2.2.3 EN 301 489-3 V2.1.1 EN 300 330 V2.1.1
Radio equipment (article 3.2 RED)	N/A
Equipment within certain categories or classes (article 3.3 RED)	
Hazardous substances (RoHS)	EN IEC 63000:2018
ATEX	EN IEC 60079-0:2018 EN IEC 60079-11:2012

Additional information:
The object of the declaration described above is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

According to the EU Type Examination EPS 15 ATEX 1 1011 X issued by Bureau Veritas Consumer Products Services (Notified Body 2004).

Oberhaching, 16 November 2021

Klaus Dargatzis, General Manager

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Klaus Dargatzis, graduate in business administration (FH) | Vt: smart-TEC Verwaltungsgesellschaft mbH, headquarter
Oberhaching; AG Mchn. B 162297 | smart-TEC GmbH & Co. KG; AG Mchn. A 74704 VtR-ID-No.: D5263077185



含有 China RoHS 管控物质超过最大浓度限值的部件型号列表 3144P
List of 3144P Parts with China RoHS Concentration above MCVs

产品中有害物质的名称及含有的信息表 Names and information table of hazardous substances in product						
部件名称 Part Name				电子组件 Electronics Assembly	壳体组件 Housing Assembly	传感器组件 Sensor Assembly
有害物质 Hazardous Substances	铅	Lead	(Pb)	X	O	X
	汞	Mercury	(Hg)	O	O	O
	镉	Cadmium	(Cd)	O	O	O
	六价铬	Hexavalent chromium	(Cr(VI))	O	O	O
	多溴联苯	Polybrominated biphenyls	(PBBs)	O	O	O
	多溴联苯醚	Polybrominated diphenyl ethers	(PBDEs)	O	O	O
	邻苯二甲酸二正丁酯	Dibutyl phthalate	(DBP)	O	O	O
	邻苯二甲酸二异丁酯	Diisobutyl phthalate	(DIBP)	O	O	O
	邻苯二甲酸丁苯酯	Butyl benzyl phthalate	(BBP)	O	O	O
	邻苯二甲酸二(2-乙基)己酯	Bis(2-ethylhexyl) phthalate	(DEHP)	O	O	O

注 1: O: 表示该有害物质在该部件所有均质材料中的含量均不超出电器电子产品有害物质限制使用国家标准要求。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出电器电子产品有害物质限制使用国家标准要求。

Note1: O: Indicate that said hazardous substance contained in all of the homogeneous materials for this part does not exceed the limit requirement of the national standard for the restriction of the use of hazardous substances in electrical and electronic products.
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 the national standard for the restriction of the use of hazardous substances in electrical and electronic products.

注 2: 以上未列出的部件，表明其有害物质含量均不超过电器电子产品有害物质限制使用国家标准要求。

Note2: For components not listed above, indicates that their hazardous substance content does not exceed the limit requirements of the national standard for the restriction of the use of hazardous substances in electrical and electronic products.

注 3: 组装备件说明

Note3: Spare Parts Descriptions for Assemblies

部件名称 Part Name	组装备件说明 Spare Parts Descriptions for Assemblies
电子组件 Electronics Assembly	电子线路板组件 Electronic Board Assemblies 端子块组件 Terminal Block Assemblies 液晶显示屏或本地操作界面 LCD or LOI Display
壳体组件 Housing Assembly	电子外壳 Electrical Housing

4 System readiness

4.1 Confirm HART® revision capability

If using HART-based control or asset management systems, confirm the HART capability of those systems prior to transmitter installation. Not all systems are capable of communicating with HART Revision 7 Protocol. Configure the transmitter for either HART Revision 5 or 7.

5 Verify configuration

When ordered with C1 custom software configuration option code, Emerson pre-configures Rosemount X-well™ Technology's software for specific pipe characteristics at the factory. If ordered without C1 option code or when installing on a pipe that is different from specified, you must reconfigure the device, or it will not perform as specified.

The Rosemount 3144P Temperature Transmitter communicates using a Field Communicator (communication requires a loop resistance between 250 and 1100 ohms) or AMS Device Manager.

NOTICE

Do not operate when power is below 12 Vdc at the transmitter terminal.

Refer to the [Rosemount 3144P Temperature Transmitter Reference Manual](#) and [AMS Trex™ Device Communicator User Manual](#).

5.1 Update the Field Communicator software

To fully communicate with the Rosemount 3144P Temperature Transmitter, the latest Field Communicator Field Device Revision Dev v5 or v7, device descriptor (DD) v1 or greater is required. Transmitters equipped with Rosemount X-well™ Technology require DD revision 3144P Dev. 7 Rev. 1 or greater to view this functionality.

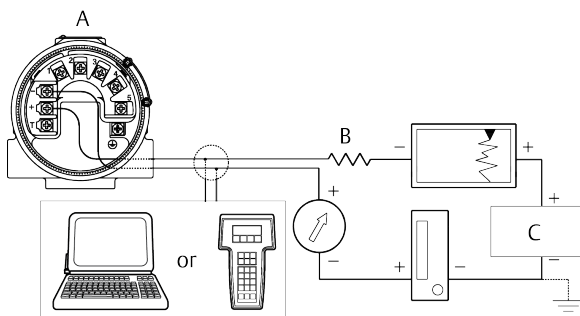
The DDs for new communicators are available at Emerson.com/global. Emerson Service Centers provide downloads for existing communicators.

The DDs are as follows:

- Device in HART® 5 mode: Device v5 DDv1
- Device in HART 7 mode: Device v7 DDv1

To determine if a device upgrade is needed:

Figure 5-1: Connecting a Field Communicator to a Bench Loop



A. Power/signal terminals

B. $250\ \Omega \leq R_L \leq 1100\ \Omega$

C. Power supply

1. Connect the sensor.
Refer to the wiring diagram located on the inside of the transmitter housing cover.
2. Connect the bench power supply to the power terminals (+ or -).
3. Connect a Field Communicator to either:
 - The loop across a loop resistor
 - The power/signal terminals on the transmitter

ResultThe following message appears if the communicator has a previous version of the Device Descriptors (DDs):

NOTICE

Upgrade the communicator software to access new XMTR functions. Continue with old description.

NOTICE

If the latest version is not available, the communicator will communicate properly, but when the transmitter is configured some new capabilities may not be visible.

To prevent this from happening, upgrade to the latest DD or answer **NO** to the question and default to the generic transmitter functionality.

Note

If this message does not appear, then the latest DD is installed.

5.2 Switch HART® revision mode

If the HART Protocol configuration tool is not capable of communicating with HART Revision 7, the transmitter loads a generic menu with limited capability. The following procedure switches the HART Revision mode from the generic menu.

Select **Manual Setup** → **Device Information** → **Identification** → **Message**.

- To change to HART Revision 5, enter **HART5** in the **Message** field.
- To change to HART Revision 7, enter **HART7** in the **Message** field.

Function	HART 5 Fast Keys	HART 7 Fast Keys
2-wire offset sensor 1	2, 2, 1, 5	2, 2, 1, 6
2-wire offset sensor 2	2, 2, 2, 5	2, 2, 2, 6
Alarm values	2, 2, 5, 6	2, 2, 5, 6
Analog calibration	3, 4, 5	3, 4, 5
Analog output	2, 2, 5	2, 2, 5
Average temperature setup	2, 2, 3, 3	2, 2, 3, 3
Burst mode	N/A	2, 2, 8, 4
Comm status	N/A	1, 2
Configure additional messages	N/A	2, 2, 8, 7
Configure Hot Backup™	2, 2, 4, 1, 3	2, 2, 4, 1, 3
Date	2, 2, 7, 1, 2	2, 2, 7, 1, 3
Descriptor	2, 2, 7, 1, 3	2, 2, 7, 1, 4
Device information	2, 2, 7, 1	2, 2, 7, 1
Differential temperature setup	2, 2, 3, 1	2, 2, 3, 1
Filter 50/60 Hz	2, 2, 7, 5, 1	2, 2, 7, 5, 1

Function	HART 5 Fast Keys	HART 7 Fast Keys
Find device	N/A	3, 4, 6, 2
First good temperature setup	2, 2, 3, 2	2, 2, 3, 2
Hardware revision	1, 8, 2, 3	1, 11, 2, 3
HART lock	N/A	2, 2, 9, 2
Intermittent sensor detect	2, 2, 7, 5, 2	2, 2, 7, 5, 2
Lock status	N/A	1, 11, 3, 7
Long tag	N/A	2, 2, 7, 2
Loop test	3, 5, 1	3, 5, 1
LRV (lower range value)	2, 2, 5, 5, 3	2, 2, 5, 5, 3
Message	2, 2, 7, 1, 4	2, 2, 7, 1, 5
Min/max tracking	2, 1, 7, 2	2, 1, 7, 2
Open sensor holdoff	2, 2, 7, 4	2, 2, 7, 4
Percent range	2, 2, 5, 4	2, 2, 5, 4
Rosemount X-well configuration	N/A	2, 2, 1, 11
Sensor 1 configuration	2, 2, 1	2, 2, 1
Sensor 1 serial number	2, 2, 1, 7	2, 2, 1, 8
Sensor 1 setup	2, 2, 1	2, 2, 2
Sensor 1 status	N/A	2, 2, 1, 2
Sensor 1 type	2, 2, 1, 2	2, 2, 1, 3
Sensor 1 unit	2, 2, 1, 4	2, 2, 1, 5
Sensor 2 configuration	2, 2, 2	2, 2, 2
Sensor 2 serial number	2, 2, 2, 7	2, 2, 2, 8
Sensor 2 setup	2, 2, 2	2, 2, 2
Sensor 2 status	N/A	2, 2, 2, 2
Sensor 2 type	2, 2, 2, 2	2, 2, 2, 3
Sensor 2 unit	2, 2, 2, 4	2, 2, 2, 5
Sensor drift alert	2, 2, 4, 2	2, 2, 4, 2
Simulate device variables	N/A	3, 5, 2
Software revision	1, 8, 2, 4	1, 11, 2, 4
Tag	2, 2, 7, 1, 1	2, 2, 7, 1, 1
Terminal temperature units	2, 2, 7, 3	2, 2, 7, 3
Thermocouple diagnostic	2, 1, 7, 1	2, 1, 7, 2
URV (upper range value)	2, 2, 7, 3	2, 2, 7, 3

Function	HART 5 Fast Keys	HART 7 Fast Keys
Variable mapping	2, 2, 8, 5	2, 2, 8, 5

6 Set the switches

The Rosemount 3144P Temperature Transmitter comes with hardware switches to configure alarms and lock the device.

 WARNING

Enclosure covers must be fully engaged to meet explosion-proof requirements.

6.1 Set the switches with an LCD display

1. Set the loop to **Manual** (if applicable) and disconnect the power.
2. Remove the electronics housing cover.
3. Unscrew the LCD display screws.
4. Gently slide the meter straight off.
5. Set the alarm and security switches to the desired position.
6. Cautiously slide the LCD display to its original position.
7. To secure the LCD display, replace and tighten the LCD display screws.
8. Reattach housing cover.
9. Apply power and set the loop to **Automatic** control.

6.2 Set the switches without an LCD display

1. Set the loop to **Manual** (if applicable) and disconnect the power.
2. Remove the electronics housing cover.
3. Set the alarm and security switches to the desired position.
4. Reattach housing cover.
5. Apply power and set the loop to **Automatic** control.

7 Mount the transmitter

Mount the transmitter at a high point in the conduit run to prevent moisture from draining into the transmitter housing.

7.1 Typical North American installation

1. Mount the thermowell to the process container wall.
2. Install and tighten thermowells.
3. Perform a leak check.

4. Attach any necessary unions, couplings, and extension fittings. Seal the fitting threads with an approved thread sealant, such as silicone or PTFE tape (if required).
5. Depending on installation requirements, screw the sensor into the thermowell or directly into the process.
6. Verify all sealing requirements.
7. Attach the transmitter to the thermowell/sensor assembly. Seal all threads with an approved thread sealant, such as silicone or PTFE tape (if required).
8. Install field wiring conduit into the open transmitter conduit entry (for remote-mounting) and feed wires into the transmitter housing.
9. Pull the field wiring leads into the terminal side of the housing.
10. Attach the sensor leads to the transmitter sensor terminals. The wiring diagram is located inside the housing cover.
11. Attach and tighten both transmitter covers.

7.2 Typical European installation

1. Mount the thermowell to the process container wall.
2. Install and tighten thermowells.
3. Perform a leak check.
4. Attach a connection head to the thermowell.
5. Insert sensor into the thermowell.
6. Mount the transmitter to a 2-in. (50 mm) pipe or a panel using one of the optional mounting brackets.
7. Attach cable glands to the shielded cable

Note

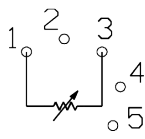
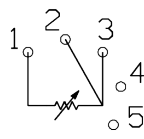
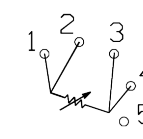
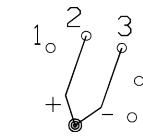
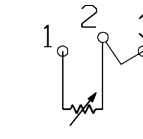
The shielded cable runs from the connection head to the transmitter conduit entry.

8. Run the shielded cable from the opposite conduit entry on the transmitter back to the control room.
9. Insert shielded cable leads through the cable entries into the connection head/transmitter.
10. Connect the shielded cable leads to:
 - The connection head terminals (located inside the connection head)
 - The sensor wiring terminals (located inside the transmitter housing)

8 Wire and apply power

8.1 Wire the transmitter

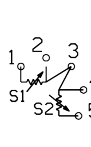
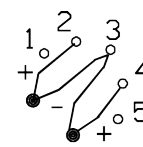
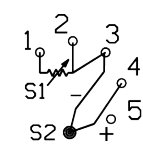
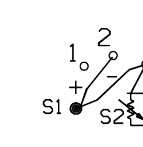
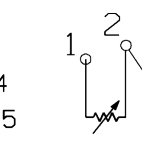
Table 8-1: Single Sensor

2-wire RTD and ohms	3-wire RTD and ohms ⁽¹⁾	4-wire RTD and ohms	Thermocouples and mV	RTD with compensation loop ⁽²⁾
				

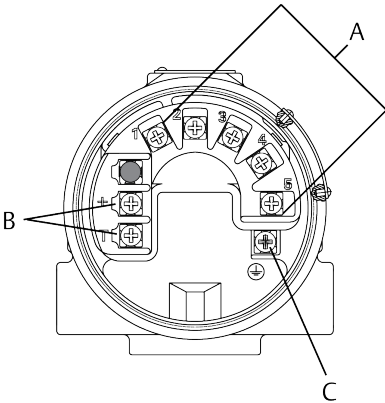
- (1) Emerson provides four-wire sensors for all single-element RTDs. To use the RTDs in three-wire configurations, leave the unneeded leads disconnected and insulated with electrical tape.
- (2) Transmitter must be configured for a three-wire RTD in order to recognize an RTD with a compensation loop.

Emerson provides four-wire sensors for all single-element RTDs. To use these RTDs in three-wire configurations, leave the unneeded leads disconnected and insulated with electrical tape. This table refers to wiring dual sensors for ΔT and Hot Backup™.

Table 8-2: Dual Sensor

With 2 RTDs	With 2 thermocouples	With RTDs/ thermocouples	With RTDs/ thermocouples	With 2 RTDs with compensation loop
				

8.2 Power the transmitter



- A. Sensor terminals (1 to 5)
- B. Power terminals
- C. Ground

1. Remove the terminal block cover.
2. Tighten the terminal screws.
3. Reattach and tighten the cover.

WARNING

Enclosure

Enclosure covers must be fully engaged to meet explosion-proof requirements.

4. Apply power.

8.3 Ground the transmitter

8.3.1 X-well standard range TR1 sensor input

Each process installation has different requirements for grounding. Use the grounding options recommended by the facility for the specific sensor type or begin with grounding option 1 (the most common).

Ground the transmitter: option 1

Emerson recommends this option for ungrounded transmitter housing.

1. Connect signal wiring shield to the sensor wiring shield.
2. Ensure that the two shields are:
 - a. Tied together
 - b. Electrically isolated from the transmitter housing
3. Ground shield at the power supply end only.
4. Ensure that the sensor wiring shield is electrically isolated from the surrounding grounded fixtures.

Ground the transmitter: option 2

Emerson recommends this method for grounded transmitter housing.

1. Connect sensor wiring shield to the transmitter housing.

NOTICE

Perform this step only if the housing is grounded.

2. Ensure that the sensor is electrically isolated from surrounding fixtures that may be grounded.
3. Ground signal wiring shield at the power supply end.

Ground the transmitter: option 3

1. If possible, ground sensor wiring shield at the sensor.
2. Ensure the sensor wiring and signal wiring shields are electrically isolated from the transmitter housing and other grounded fixtures.
3. Ground signal wiring shield at the power supply end.

8.3.2 Ground thermocouple inputs

1. Ground sensor wiring shield at the sensor.
2. Ensure the sensor wiring and signal wiring shields are electrically isolated from the transmitter housing and other grounded fixtures.
3. Ground signal wiring shield at the power supply end.

9 Perform a loop test

The loop test verifies transmitter output, loop integrity, and operation of any recorders or similar devices installed in the loop.

The following procedures are for the device dashboard - device revisions 5 and 7, DD v1.

9.1 Initiate a loop test

1. To ensure the power to the transmitter goes through the meter at some point in the loop, connect an external ampere meter in series with the transmitter loop.
2. From the *Home* screen, select **3 Service Tools** → **5 Simulate** → **1 Perform Loop Test**. The communicator displays the loop test menu.
3. Select a discrete milliampere level for the transmitter to output.
 - a. At *Choose Analog Output*, select **1 4 mA** or **2 20 mA**. If you want to enter a different value, select **4 Other** to manually input a value between 4 and 20 milliamperes.
 - b. Select **Enter** to show the fixed output.
 - c. Select **OK**.
4. In the test loop, check that the transmitter's actual mA output and the HART® mA reading are the same value.

NOTICE

If the readings do not match, either the transmitter requires an output trim or the current meter is malfunctioning.

After completing the test, the display returns to the loop test screen where another output value can be selected.

5. To end the loop test, select **5 End** and **Enter**.

9.2 Initiate simulation alarm

1. From the **Home** screen, select **3 Service Tools** → **5 Simulate** → **1 Perform Loop Test** → **3 Simulate Alarm**.
The transmitter outputs the alarm current level based on the configured alarm parameter and switch settings.
2. Select **5 End** to return the transmitter to normal conditions.

10 Safety Instrumented Systems (SIS)

For safety certified installations, refer to the [Rosemount 3144P Temperature Reference Manual](#). The manual is available electronically on [Emerson.com](#). An Emerson representative may also be contacted for the manual.



Quick Start Guide

00825-0100-4021, Rev. SH

April 2026

For more information: [Emerson.com/global](https://emerson.com/global)

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