

Rosemount™ 2405 Monitoring Hub

Product Certifications



1 Product certifications

Rev 0.11

1.1 European directive information

A copy of the EU Declaration of Conformity can be found at the end of the document. The most recent revision of the EU Declaration of Conformity can be found at [Emerson.com/Rosemount](https://www.emerson.com/Rosemount).

1.2 Ordinary location certification

As standard, the monitoring hub 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 Environmental conditions

Table 1-1: Environmental Conditions (Ordinary Location and Low Voltage Directive (LVD))

Type	Description
Location	Indoor or outdoor use
Maximum altitude	6562 ft. (2000 m)
Overvoltage category	II
Ambient temperature	-40 to 140 °F (-40 to 60 °C)
Electrical supply	100-240 Vac 50/60 Hz or 24-48 Vdc
Mains supply voltage fluctuations	Vac and Vdc -15% to +10%
Power consumption	Maximum 12 W
Ingress protection	IP66/67 ⁽¹⁾
Pollution degree	2

(1) Use cable glands, conduits and plugs that fulfil at least IP66/67 to get IP66/67 on the Rosemount 2405.

1.4 Specific conditions of use

The Rosemount 2405 shall only be installed into areas where there is low risk of mechanical danger.

1.5 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.

1.6 FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.7 IC/ISED

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. Cet appareil ne doit pas produire de brouillage.
2. Cet appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

1.8 USA

1.8.1 USA Associated Intrinsically Safe Apparatus

Certificate DEKRA 25CAUS71-159002

Standards	UL60079-0:2019; ANSI/UL 61010-1:2019; ANSI/UL50E:3 rd ed; UL 60079-11:2014 ANSI/UL-61010-1:3 rd ed, Rev June 6, 2023
Markings	Type 4X Associated Apparatus CL I, II, Division 1, Groups A, B, C, D, E, F, G Associated Apparatus CL I, Zone 0 [AEx ia Ga] IIC Associated Apparatus CL II, Zone 20 [AEx ia Da] IIIC $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

Table 1-2: Entity parameters (per channel)

Terminals	U_o V_{oc} [V]	I_o I_{sc} [mA]	P_o P_{out} [mW]	Co or Ca [uF]	Lo or La [mH]	Lo/Ro or La/Ro [μH/Ω]	Group
Sensor Input 1	25.62	87.00	560.00	0.102	2.6	64.0	IIC
Sensor Input 2				0.79	18.0	256.1	IIB and IIIC
				2.71	30.0	512.2	IIA

Specific Conditions of Use (X):

1. Enclosure entries shall be closed with cable glands and/or blanking elements to maintain IP20 minimum protection according to IEC 60529.
2. The connected non-intrinsically safe circuits shall be limited to OVC II according IEC 60664-1.

1.9 Canada

1.9.1 Canada Associated Intrinsically Safe Apparatus

Certificate	DEKRA 25CAUS71-159002
Standards	CSA C22.2 No.94.2-20 C22.2 No. 60079-0:2019 C22.2 No. 60079-11:2011 CAN/CSA-C22.2 No. 61010-1-12; UPD1:2015; UPD2:2016; AMD1:2018; COR1:2019; UPD:2023
Markings	Type 4X

Associated Apparatus CL I, II, Division 1, Groups A, B, C, D, E, F, G
Associated Apparatus CL I, Zone 0 [Ex ia Ga] IIC
Associated Apparatus CL II, Zone 20 [Ex ia Da] IIIC
 $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

Table 1-3: Entity parameters (per channel)

Terminals	U _O V _{OC} [V]	I _O I _{SC} [mA]	P _O P _{OUT} [mW]	Co or Ca [uF]	Lo or La [mH]	Lo/Ro or La/Ro [uH/Ω]	Group
Sensor Input 1	25.62	87.00	560.00	0.102	2.6	64.0	IIC
Sensor Input 2				0.79	18.0	256.1	IIB and IIIC
				2.71	30.0	512.2	IIA

Specific Conditions of Use (X):

1. Enclosure entries shall be closed with cable glands and/or blanking elements to maintain IP20 minimum protection according to IEC 60529.
2. The connected non-intrinsically safe circuits shall be limited to OVC II according IEC 60664-1.

1.10 Europe

1.10.1 ATEX Associated Intrinsically Safe Apparatus

Certificate	DEKRA 24ATEX0088X
Standards	EN IEC 60079-0:2018 A11:2024 EN 60079-11:2012
Markings	Ⓔ II (1) G [Ex ia Ga] IIC II (1) D [Ex ia Da] IIIC $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

Table 1-4: Entity parameters (per channel)

Terminals	U _O V _{OC} [V]	I _O I _{SC} [mA]	P _O P _{OUT} [mW]	Co or Ca [uF]	Lo or La [mH]	Lo/Ro or La/Ro [μH/Ω]	Group
Sensor Input 1 Sensor Input 2	25.62	87.00	560.00	0.102	2.6	64.0	IIC
				0.79	18.0	256.1	IIB and IIIC
				2.71	30.0	512.2	IIA

Specific Conditions of Use (X):

1. Enclosure entries shall be closed with cable glands and/or blanking elements to maintain IP20 minimum protection according to IEC 60529.
2. The connected non-intrinsically safe circuits shall be limited to OVC II according IEC 60664-1.

1.11 International**1.11.1 IECEx Associated Intrinsically Safe Apparatus****Certificate** IECEx DEK 24.0055X**Standards** IEC 60079-0:2017

IEC 60079-11:2011 Ed6

IEC 60079-11:2023 Ed7

Markings [Ex ia Ga] IIC

[Ex ia Da] IIIC

-40°C ≤ Ta ≤ +60°C

Table 1-5: Entity parameters (per channel)

Terminals	U _O V _{OC} [V]	I _O I _{SC} [mA]	P _O P _{OUT} [mW]	Co or Ca [uF]	Lo or La [mH]	Lo/Ro or La/Ro [μH/Ω]	Group
Sensor Input 1 Sensor Input 2	25.62	87.00	560.00	0.102	2.6	64.0	IIC
				0.79	18.0	256.1	IIB and IIIC
				2.71	30.0	512.2	IIA

Specific Conditions of Use (X):

1. Enclosure entries shall be closed with cable glands and/or blanking elements to maintain IP20 minimum protection according to IEC 60529.
2. The connected non-intrinsically safe circuits shall be limited to OVC II according IEC 60664-1.

1.12 Installation drawings

Figure 1-1: D7000007-319 - System Control Drawing, Rosemount 3490/2405

REVISION
01

DRAWN BY
Reven Lacap

DATE
7509

DESCRIPTION
Initial Release

ENTITY CONCEPT APPROVALS

The Entity concept allows interconnection of intrinsically safe apparatus to associated apparatus not specifically examined in combination as a system. The approved values of max. open circuit voltage (Uo, Voc or Vi) and max. short circuit current (Isc or It) and max. power (Po or Voc x Isc / 4 or Vi x It / 4), for the associated apparatus must be less than or equal to the maximum safe input voltage (Ui), maximum safe input current (Ii), and maximum safe input power (Pi) of the intrinsically safe apparatus. In addition, the approved max. allowable connected capacitance (Ca or Co) of the associated apparatus must be greater than the sum of the interconnecting cable capacitance and the unprotected internal capacitance (Ci) of the intrinsically safe apparatus, and the approved max. Allowable connected inductance (La or Lo) of the associated apparatus must be greater than the sum of the interconnecting cable inductance and the unprotected internal inductance (Li) of the intrinsically safe apparatus.

TABLE 1

	Safe Apparatus for use in:	Ambient Temperature Limits
cDEKRAus	Associated Apparatus for Class I, II Division 1, Groups A, B, C, D, E, F, G Associated Apparatus for Class 1, Zone 0, Group IIC, (AEx/Ex ia Ga)	-40 °C ≤ Ta ≤ +40 °C
ATEX	II 1 GD Ex ia Ga IIC Ex ia Da IIC	-40 °C ≤ Ta ≤ +40 °C
IECEx	Ex ia Ga IIC Ex ia Da IIC	-40 °C ≤ Ta ≤ +40 °C

TABLE 2

Model	Maximum input voltage Um
3490A / 3490C / 2405	250Vrms AC or DC

SPECIFIC CONDITIONS OF USE:

1. Enclosure entries shall be closed with cable glands and/or blanking elements to maintain IP20 minimum protection according IEC 60529.

2. The connected non-intrinsically safe circuits shall be limited to OVC II according IEC 60664-1

APPROVED BY
Reven Lacap

PROJECT CODE
3490/2405

DATE
7509

EMERSON

PRELIMINARY

A B C D E F G H

J K

System Control Drawing, Rosemount
3490/2405

D7000007-319

1 1/3

EX APPROVED PRODUCT

No revisions to this drawing without prior Ex Agency approval.

WARNING - Substitution of components may impair intrinsic safety.

WARNING - Potential electrostatic charging hazard, wipe with a damp cloth.

WARNING - To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

AVERTISSEMENT - La substitution de composants peut compromettre la sécurité intrinsèque.

AVERTISSEMENT - Risque potentiel de charge électrostatique, essuyer avec un chiffon humide.

AVERTISSEMENT - Ne pas ouvrir en cas de présence d'atmosphère explosive.

8

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REVISION	ECO NO.	DRAWN BY	APP'D	DATE
01	SNE-11913	Reven Latap		7509
DESCRIPTION				
Initial Release.				

Notes

1. Figure 3.1 shows the connection of Intrinsically Safe Apparatus from the Hazardous Location to the Sensor Inputs 1 and 2.
2. Figure 3.2 and 3.3 shows the restriction of connection of Intrinsically Safe or Non-Intrinsically safe Apparatus from the Non-Hazardous Location to the Controller.

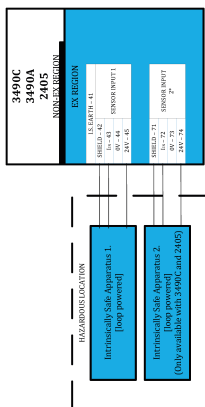


Figure 3.1

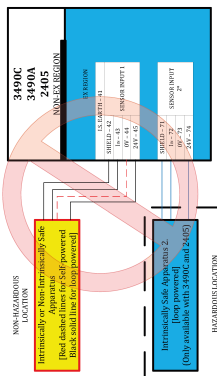


Figure 3.3

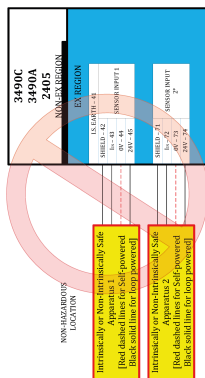


Figure 3.2

[illegible]

EX APPROVED PRODUCT
No revisions to this
drawing without prior Ex
Agency approval.

WARNING—Substitution of components may impair Intrinsic Safety.
WARNING—Potential electrostatic charging hazard, wipe with a damp cloth.
WARNING—To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

1.13 EU Declaration of Conformity

Figure 1-2: EU Declaration of Conformity



Rev. #0.3

Declaration of Conformity 

We,

Rosemount Tank Radar AB
Layoutvägen 1
S-435 33 MÖLNLYCKE
Sweden

declare under our sole responsibility that the product,

Rosemount™ 2405 Monitoring Hub

manufactured by,

Rosemount Tank Radar AB
Layoutvägen 1
S-435 33 MÖLNLYCKE
Sweden

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)

Dajana Prastalo

(name)

Sr. Manager Product Approvals

(function)

5-Jun-25; Mölnlycke

(date of issue & place)

Page 1 of 3



Declaration of Conformity



EMC Directive (2014/30/EU)

Harmonized Standards: EN 61326-1:2013
Other Standards Used: IEC 61326-1:2020

ATEX Directive (2014/34/EU)

DEKRA 24ATEX0088 X associated intrinsically safe
Equipment Group II Category for I.S. Output (1) G [Ex ia Ga] IIC
Equipment Group II Category for I.S. Output (1) D [Ex ia Da] IIIC

Harmonized Standards:
EN IEC 60079-0:2018 + A11:2024
EN 60079-11:2012

Other Standards Used: IEC 60079-11:2023

Low Voltage Directive (2014/35/EU)

Harmonized Standards:
EN 61010-1:2010/A1:2019/AC:2019-04

RoHS Directive (2011/65/EU)

Harmonized Standards:
EN IEC 63000:2018



Declaration of Conformity

ATEX Directive Notified Body

DEKRA Certification B.V. [Notified Body Number: 0344]
Meander 1051
6825 MJ Arnhem
Netherlands

ATEX Notified body for Quality Assurance

DNV Product Assurance AS [Notified Body Number: 2460]
Veritasveien 3
1363 Høvik
Norway



1.14 China RoHS

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

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

This table is proposed in accordance with the provision of SJ/T11364
本表格系依据 SJ/T11364 的规定而制作。
O: Indicate that said hazardous substance in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
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。
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.
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。



Product Certifications
00880-0100-2405, Rev. AA
June 2025

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

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