



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx ULD 24.0021X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2024-11-08

Applicant: **G.M. International S.R.L.**
Via Mameli 53/55
20852 Villasanta (MB)
Italy

Equipment: **Switch/Proximity Relay-Out Repeater and Switch/Proximity Transistor-Out Repeater, Models D5232Q-xxx and D5233Q-xxx.**

Optional accessory:

Type of Protection: **Increased Safety "ec", Sealed device 'nC", Intrinsic Safety "ia"**

Marking: Ex ec nC [ia Ga] IIC T4 Gc or Ex ec [ia Ga] IIC T4 Gc
[Ex ia Da] IIIC
[Ex ia Ma] I
-40°C to +70°C

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:
(for printed version)

2024-11-08

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

UL Solutions (Demko)
Borupvang 5A
Ballerup DK-2750
Denmark





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Manufacturer: **G.M. International S.R.L.**
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Manufacturing
locations: **G.M. International S.R.L.**
Via Mameli 53/55
20852 Villasanta (MB)
Italy

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DK/ULD/ExTR24.0023/00](#)

Quality Assessment Report:

[NO/DNV/QAR07.0005/12](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Switch/Proximity Detector Repeater D5232Q-xxx is an associated apparatus and increased safety apparatus to be configured for switches or proximity detectors, located in Hazardous Area, and repeat the input state to a relay contact in Safe Area. The selectable fault detection circuit is available for proximity sensors or switches equipped with end-of-line resistors. Input-to-output function can be inverted, and signals can be duplicated.

It is packaged in a plastic enclosure suitable for installation on EN/IEC60715 TH 35 DIN-Rail, with or without Power Bus connector. Electrical connections are accommodated by plug-in removable terminal block.

Model D5232Q-xxx can be mounted with any orientation over the entire ambient temperature range.

The Switch/Proximity Detector Repeater D5233Q-xxx is an associated apparatus and increased safety apparatus to be configured for switches or proximity detectors, located in Hazardous Area, and repeat the input state to an open-collector transistor in Safe Area. The selectable fault detection circuit is available for proximity sensors or switches equipped with end-of-line resistors. Input-to-output function can be inverted, and signals can be duplicated.

It is packaged in a plastic enclosure suitable for installation on EN/IEC60715 TH 35 DIN-Rail, with or without Power Bus connector, or on customized Termination Boards. Electrical connections are accommodated by plug-in removable terminal block.

Model D5233Q-xxx can be mounted with any orientation over the entire ambient temperature range.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- For installations in which both the Ci and Li of the Intrinsically Safe apparatus exceeds 1% of the Co and Lo parameters of the Associated Apparatus (excluding the cable), then 50% of Co and Lo parameters are applicable and shall not be exceeded. The reduced capacitance of the external circuit (including the cable) shall not exceed 1uF for Groups I, IIA and IIB and 600 nF for Group IIC.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.
- For hazardous location, the unit shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0, that must have a door or cover accessible only by the use of a tool.
- Isolation in accordance with Clause 6.3.13 of IEC 60079-11 is not provided between separate intrinsically safe circuits.
- Isolation in accordance with Clause 6.3.13 of IEC 60079-11 is provided between non-intrinsically safe circuits and intrinsically safe circuits.

Annex:

[Annex to IECEx ULD 24.0021X Issue 0.pdf](#)



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TYPE DESIGNATION

Model Nomenclature:

| | | |
|-------|----|------|
| D5232 | Q | -xxx |
| I | II | III |

I- Model Designation:

D5232 – Switch/Proximity Relay-Out Repeater DIN-Rail

D5233 – Switch/Proximity Transistor-Out Repeater DIN-Rail and Termination Board

II- Output type:

Q – 4 channels

III- Configuration – Optional:

-xxx – Any alpha-numeric character denoting pre-delivery testing or configuration requested by end-user. No changes are made to construction of the device.

Marking:

| Model | Ex Marking |
|------------|---|
| D5232Q-xxx | Ex ec nC [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I |
| D5233Q-xxx | Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC [Ex ia Ma] I |



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PARAMETERS RELATING TO THE SAFETY

Electrical ratings:

| Model | Supply voltage Terminals 9-10 | Current consumption | Power consumption | Input Terminals 13-20 | Output Terminals 1-8 |
|------------|---|------------------------|----------------------|---|--|
| D5232Q-xxx | 24V dc (SELV) (18-30 Vdc tolerances) | Max 94 mA | Max 1.7W | 4 channels 7.5V/1K Ω typical (7.5V no load, 7.5mA short circuit) | 4 channels Resistive Load 2A, 250Vac Resistive Load 2A, 250V ac, 500VA; 2A, 250V dc, 80W |
| D5233Q-xxx | 24V dc (SELV) (18-30 Vdc tolerances) | Max 57 mA | Max 1.2W | 4 channels 7.5V/1K Ω typical (7.5V no load, 7.5mA short circuit) | 4 channels Max 100mA, 35Vdc |

Intrinsically safe specifications:

Um: 250V rms or Vdc

| Model | Terminals | | Group | Co [μ F] | Lo [mH] | Lo/Ro [μ h/ Ω] |
|--------------------------|---|-------------------------------------|-------------|---------------|---------|-----------------------------|
| D5232Q-xxx D5233Q-xxx | 13-14, 15-16, 17-18, 19-20 (Ch1 to Ch4) | Uo: 11.2V Io: 12 mA Po: 34 mW | IIC | 1.83 | 253.4 | 1074 |
| | | | IIB or IIIC | 12.5 | 1000 | 4299 |
| | | | IIA | 53.9 | 1000 | 8599 |
| | | | I | 57.9 | 1000 | 14108 |

Annex to Certificate No.:

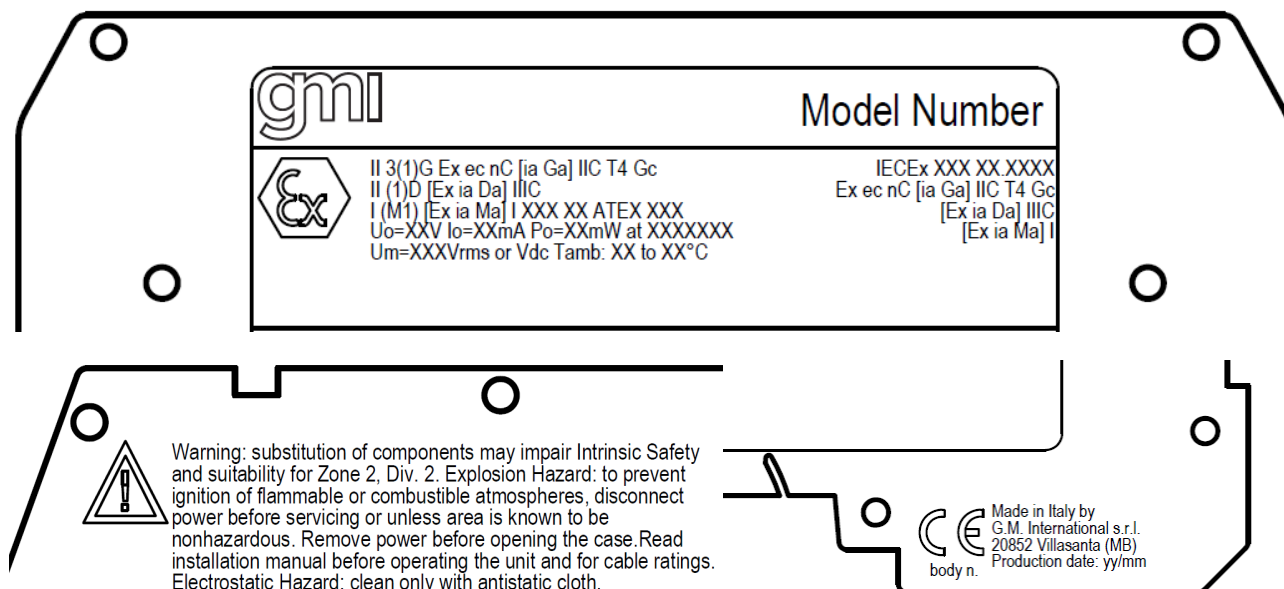
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MARKING

Marking has to be readable and indelible; it has to include the following indications:



Where:

| | |
|------------------------|--|
| Model Number: | D5232Q, D5232Q-xxx D5233Q, D5233Q-xxx |
| IEC Certification | Marking indicated in the certificate, certificate number (IECEx ULD 24.0021X) |
| Electrical Parameters: | Um ≤ value indicated in the certificate Uo, Io, Po ≥ value indicated in the certificate at terminals 13-14, 15-16, 17-18, 19-20 |
| Ambient Temperature: | Tamb: ≥ lower value to ≤ higher value indicated in the certificate |

ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment shall be subjected to the routine tests for transformers in accordance with Clause 11.2 of IEC 60079-11. A test voltage of 1500V rms shall be applied between T201 pins 5,6-7,8 and pins 1,2-3,4 for a minimum of 60s without breakdown resulting in more than 5mA rms flowing. Alternatively, a test voltage of 1800V rms for a minimum of 1s may be used.