



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx ULD 18.0013X

Issue No: 0

Certificate history:

Issue No. 0 (2018-09-18)

Status: **Current**

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Date of Issue: **2018-09-18**

Applicant: **G.M. International s.r.l**
Via G. Mameli, 53/55
20852 Villasanta (MB)
Italy

Equipment: **Quadruple Repeater Power Supply, D5212Q**

Optional accessory:

Type of Protection: **Non Sparking "nA", Intrinsic Safety "ia"**

Marking:

Ex nA [ia Ga] IIC T4 Gc

[Ex ia Da] IIIC

[Ex ia Ma] I

*Approved for issue on behalf of the IECEx
Certification Body:*

Andrew Moffat

Position:

Project Engineer

*Signature:
(for printed version)*

Date:

2018-09-18

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

UL International DEMKO A/S
Borupvang 5A,
DK-2750 Ballerup
Denmark





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Manufacturer: **G.M. International s.r.l**
Via G. Mameli, 53/55
20852 Villasanta (MB)
Italy

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

*This Certificate **does not** indicate compliance with electrical 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/ExTR18.0013/00](#)

Quality Assessment Report:

[NO/DNV/QAR07.0005/08](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The D5212Q-xxx module is a galvanic isolator which provides intrinsically safe connections to four field devices (4-20mA transmitters) located in a hazardous area and repeats the transmitter current in the non-hazardous area. 2 channels are also able to accept 4-20 mA current signals from active (powered) transmitter. The DS5212Q is intended for installation in non-hazardous or Zone 2 hazardous locations. It consists of a single PCB assembly in a plastic enclosure suitable for DIN rail mounting or mounting on a termination board (not part of this evaluation). Electrical connections are by means of plug-in terminal blocks or via the termination board. The supply voltage can be optionally provided to the D5212Q by means of the optional Power Bus connector. An optically coupled, open-drain alarm output is also provided. The alarm trip point is settable by the user over the entire input signal 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.
- Isolation in accordance IEC 60079-11 clause 6.3.13 is not provided between separate intrinsically safe circuits. Isolation in accordance with IEC 60079-11 clause 6.3.13 is provided between non-intrinsically safe circuits and intrinsically safe circuits.
- For hazardous location, the unit shall be installed in a certified Ex enclosure with a minimum ingress protection of at least IP54 in accordance with IEC 60079-15, that must have a door or cover accessible only by the use of a tool.
- The unit shall be installed in an area of not more than Pollution Degree 2 according to IEC 60664-1.

Annex:

[Annex to IECEx ULD 18.0013X Issue 0.pdf](#)



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TYPE DESIGNATION

D5212Q-xxx, where 'xxx' denotes software or configuration options

PARAMETERS RELATING TO THE SAFETY

Power Supply: 21.5 to 30 Vdc, 230 mA, 5.2 W

Intrinsically safe specifications:

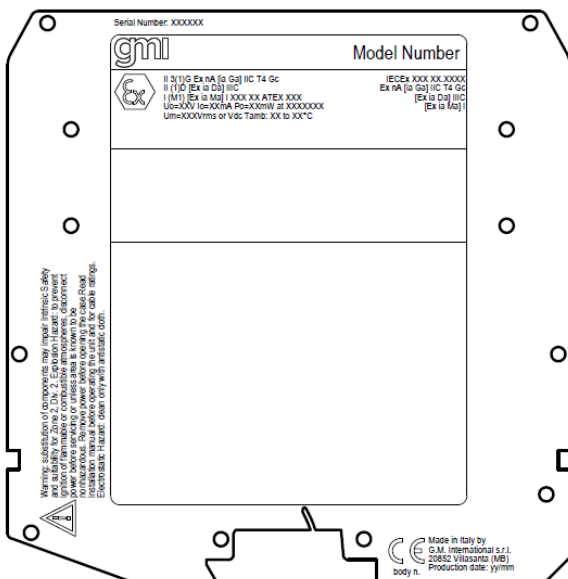
U_m : 250 Vrms

Terminals		Group IIC	Group IIB or Group III	Group IIA	Group I
13 – 14 (Ch 1) 15 – 16 (Ch 2) 17 – 18 (Ch 3) 19 – 20 (Ch 4)	U_o : 24.1 V I_o : 86 mA P_o : 0.516 W	C_o : 121 nF L_o : 4.85 mH L_o/R_o : 68.9 uH/Ohm	C_o : 917 nF L_o : 19.43 mH L_o/R_o : 275.9 uH/Ohm	C_o : 3307 nF L_o : 38.86 mH L_o/R_o : 551.9 uH/Ohm	C_o : 5197 nF L_o : 63.76 mH L_o/R_o : 905.6 uH/Ohm
21 – 22 (Ch 1) 23 – 24 (Ch 2)	U_o : 1.1 V I_o : 56 mA P_o : 0.016 W	C_o : 99 uF L_o : 11.63 mH L_o/R_o : 2339 uH/Ohm	C_o : 999 uF L_o : 46.54 mH L_o/R_o : 9356.1 uH/Ohm	C_o : 999 uF L_o : 93.09 mH L_o/R_o : 18712.2 uH/Ohm	C_o : 999 uF L_o : 152.73 mH L_o/R_o : 30699.7 uH/Ohm
21 – 22 (Ch 1) 23 – 24 (Ch 2)	U_i : 30 V I_i : 128 mA C_i : 2.1 nF L_i : 0 nH				

MARKING

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

Information on the various fields is contained in CRR190.





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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 1500 Vrms shall be applied between T400A pins 1,2 and T400B pins 1 – 6 for a minimum of 60 s without breakdown resulting in more than 5 mArms flowing. Alternatively a test voltage of 1800 Vrms for a minimum of 1 s may be used.