

# EU-TYPE EXAMINATION CERTIFICATE



## Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [3] EU-Type Examination Certificate Number: **DEMKO 18 ATEX 2017X Rev. 2**
- [4] Product: **Quadruple Repeater Power Supply D5212Q**
- [5] Manufacturer: **G.M. International s.r.l**
- [6] Address: **Via G. Mameli, 53/55, 20852 Villasanta (MB) Italy**
- [7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential report no. **DK/ULD/ExTR18.0013/02.**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with  
**EN IEC 60079-0:2018    EN IEC 60079-7: 2015 +A1:2018    EN 60079-11:2012    EN 50303:2000**
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.
- [12] The marking of the product shall include the following:

II 3(1) G    Ex ec [ia Ga] IIC T4 Gc  
 II (1) D    [Ex ia Da] IIIC  
 I (M1)    [Ex ia Ma] I

**Certification Manager**  
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

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

**Re-issued:** 2021-11-12

**Notified Body**    UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)



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## Schedule

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[15] Description of Product

The D5212Q 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 D5212Q 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.

Nomenclature:

D5212Q-xxx, where '-xxx' is optional and denotes software or configuration options

Performance testing

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range

The ambient temperature range is  $-40\text{ °C} \leq T_{amb} \leq +70\text{ °C}$ .

Electrical data

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				

Routine tests

Each piece of equipment shall be subjected to the routine tests for transformers in accordance with clause 11.2 of EN 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.

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Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this EU-Type Examination Certificate.

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Specific conditions of use:

- For installations in which both the  $C_i$  and  $L_i$  of the Intrinsically Safe apparatus exceeds 1% of the  $C_o$  and  $L_o$  parameters of the Associated Apparatus (excluding the cable), then 50% of  $C_o$  and  $L_o$  parameters are applicable and shall not be exceeded (50 % of the  $C_o$  and  $L_o$  become the limits which must include the cable such that  $C_i$  device +  $C_{cable} \leq 50\%$  of  $C_o$  and  $L_i$  device +  $L_{cable} \leq 50\%$  of  $L_o$ ). 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 EN 60079-11 clause 6.3.13 is not provided between separate intrinsically safe circuits. Isolation in accordance with EN 60079-11 clause 6.3.13 is provided between non-intrinsically safe circuits and intrinsically safe circuits.
- When installed in Zone 2, the unit shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with EN 60079-0. The enclosure must have a door or cover accessible only by the use of a tool.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in EN 60664-1.

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## Schedule

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### Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

### Additional information



The trademark  will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.