

Translation

1 **EU-Type Examination Certificate**

2 **Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014**

3 EU-Type Examination Certificate Number: **BVS 14 ATEX E 023 X** Issue: **01**

4 Equipment: **Power Supply Module type PSD5201 / PSD5201-xxx**

5 Manufacturer: **G.M. International S.R.L.**

6 Address: **Via Mameli 53/55, 20852 Villasanta (MB), Italy**

7 This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

8 DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the 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 the confidential Report No. BVS PP 14.2044 EU. This issue of the EU-Type Examination Certificate replaces the previous issue of the EU-Type Examination Certificate BVS 14 ATEX E 023 X including supplement 1.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018 General requirements**  
**EN IEC 60079-7:2015 + A1:2018 Increased Safety "e"**  
**EN 60079-11:2012 Intrinsic Safety "i"**

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

11 This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

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

DEKRA Testing and Certification GmbH  
 Bochum, 2022-08-19

Signed: Dr Rolf Krökel

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 Managing Director

13 **Appendix**

14 **EU-Type Examination Certificate**

**BVS 14 ATEX E 023 X issue 01**

15 **Product description**

15.1 **Subject and type**

Power Supply Module type PSD5201 or type PSD5201-xxx  
(Option 'xxx' = non Ex -relevant details of construction or function)

15.2 **Description**

The Power Supply Module is designed as associated apparatus and designated for installation in the safe area or alternatively in areas requiring EPL Gc equipment.  
Electronic components of the Power Supply Module are arranged on printed-circuit-boards (PCB) packaged in plastic enclosures suitable for installation on T35 DIN Rails.  
The intrinsically safe output circuit provides safe galvanic separation from the non-intrinsically safe power supply circuit on the PCB up to a sum of peak values of rated voltages of 375 V.

**Reason for this issue**

- Change of the type of protection "nA" to "ec"
- Update of standard
  - o EN 60079-0

15.3 **Parameters**

15.3.1 Non-intrinsically safe power supply circuit

| Power Supply Module type | Voltage |        | Power      |
|--------------------------|---------|--------|------------|
|                          | $U_n$   | $U_m$  | $P_n$      |
|                          | DC [V]  | AC [V] | [W]        |
| PSD5201, PSD5201-xxx     | 24      | 250    | $\leq 5.1$ |

15.3.2 Intrinsically safe output circuit, level of protection Ex ia IIB / IIA / I / IIIC

| Parameters                                    |      | Power Supply Module type<br>PSD5201, PSD5201-xxx |
|---|------|--|
| Channel / terminals                           | 1    | 13/15 -14/16                                     |
| Voltage $U_o$ (open loop)                     |      | DC 21.5 V  |
| Current $I_o$ (short circuit)                 |      | 604 mA   |
| Load current at $U_n = DC 14.5 V$             |      | 150 mA   |
| Power $P_o$                                   |      | 3243 mW  |
| Effective internal capacitance $C_i$          |      | 0 nF   |
| Effective internal inductance $L_i$           |      | 0 nH   |
| Max. external capacitance $C_o$               | IIB  | 1.2 $\mu F$                                      |
|   | IIIC |  |
|   | IIA  | 4.5 $\mu F$                                      |
|   | I    | 6.5 $\mu F$                                      |
| Max. external inductance $L_o$                | IIB  | 0.39 mH  |
|   | IIIC |  |
|   | IIA  | 0.78 mH  |
|   | I    | 1.28 mH  |
| Max. inductance- / resistance ratio $L_o/R_o$ | IIB  | 43.8 $\mu H/\Omega$                              |
|   | IIIC |  |
|   | IIA  | 87.7 $\mu H/\Omega$                              |
|   | I    | 143.9 $\mu H/\Omega$                             |
| Characteristic                                |      | linear   |

|  |  |
|--|--|
| Parameters   | Power Supply Module type<br>PSD5201, PSD5201-xxx |
| Ambient temperature range  | $-40\text{ °C} \leq T_a \leq +70\text{ °C}$      |
| Remark:<br>U <sub>n</sub> = DC 14.5 V: regulated nominal IS output voltage |  |

## 16 Report Number

BVS PP 14.2044 EU, as of 2022-08-19

## 17 Specific Conditions of Use

### 17.1 Group I application

The Power Supply Module shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification. For Group I application interconnection of the Power Supply Module with other electrical apparatus to an intrinsically safe electrical system shall be assessed in a System Certificate, if required in local installation rules.

### 17.2 Group II application (gas):

- The Power Supply Module: must be installed outside the potentially explosive atmosphere, or
- in the case of alternative installation, must be used in areas with EPL Gc requirements:
  - o used in an area with a pollution degree of at least 2 according to EN 60664-1 and
  - o be installed in an enclosure with a degree of protection of at least IP54 in accordance with EN 60079-0.

### 17.3 Group II application (dust):

The Power Supply Module shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification.

### 17.4 General

The installation of the Power Supply Module shall be carried out in such a way that the clearances of un-insulated conductors of intrinsically safe circuits to grounded metal parts of the enclosure are at least 3 mm, and un-insulated conductors of non-intrinsically safe circuits of other apparatus are situated at least 50 mm from terminals for external intrinsically safe circuits, or are separated from them by an insulating barrier according to clause 6.2.1 of EN 60079-11:2012.

18 **Essential Health and Safety Requirements**

Met by compliance with the requirements mentioned in item 9.

19 **Remarks and additional information**

Drawings and documents are listed in the confidential report.

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We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH  
Bochum, 2022-08-19  
BVS-Ret/Mu A 20220362 / 342710600



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Managing Director