

EU-Type Examination Certificate

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

EU-Type Examination Certificate Number: **BVS 18 ATEX E 018 X** Issue: **01**

Equipment: **Surge Arresters types D9410S, D9420S, D9510S, D9520S**

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

Address: **Via G. Mameli 53-55, 20852 Villasanta (MB), Italy**

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

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 19.2010 EU.

This issue of the EU-Type Examination Certificate replaces the previous issue of the EU-Type Examination Certificate BVS 18 ATEX E 018 X including supplement 1.

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

EN IEC 60079-0:2018
EN 60079-11:2012

General requirements
Intrinsic Safety "i"

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.

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.

The marking of the product shall include the following:



II 2(1)G Ex ia [ia Ga] IIC T4/T6 Gb
II (1)D [Ex ia Da] IIIC

Details see 15.3

DEKRA Testing and Certification GmbH
Bochum, 2022-07-12



Managing Director

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15 **Product description**

15.1 **Subject and type**

The Surge Arresters portfolio consists of following devices:

One-piece Surge Arresters

type **D9410S**

type **D9420S**

Multi-piece Surge Arresters

type **D9510S** consisting of

one base element

one plug module

type **SPP410** and

type **SPP510**

type **D9520S** consisting of

one base element

one plug module

type **SPP420** and

type **SPP520**

The base elements and the plug modules of the multi-piece Surge Arresters are coded. A confusion is thus excluded.

15.2 **Description**

Reason for this issue:

The ambient temperature range was enhanced depending on maximum input current I_i . The marking was modified.

Description of Equipment:

The Surge Arresters are used to limit transient overvoltage which could be coupled into protected intrinsically safe circuits. Thereto, a Surge Arrester is connected into the intrinsically safe circuit which has to be protected. The intrinsically safe circuit is not affected by the connection of the Surge Arrester in its properties.

The Surge Arresters have screw disconnectors which can interrupt the signal lines for maintenance purposes.

The Surge Arresters can be installed in the Zone 1 (Category 2 / EPL Gb).

The Surge Arresters can be mounted on a 35 mm width DIN-rail.

The mounting foot establishes an electrical connection to the 35 mm width DIN-rail.

See special conditions for use.

15.3 Parameters

Terminals 1-3 input (unprotected), terminals 4-6 output (protected)

Maximum input / output voltage	U_i / U_o	30 V
Maximum input / output current (see additional thermal parameters)	I_i / I_o	350 mA (T6) 100 mA (T6) 400 mA (T4 / dust) 250 mA (T4)
Maximum internal capacitance	C_i	negligible
Maximum internal inductance	L_i	negligible

The intrinsically safe circuit is not affected by the connection of the surge protection module in its properties.

The mounting foot establishes an electrical connection to the 35 mm width DIN-rail.
See special conditions for use.

The one-piece Surge Arrester type D9420S and the Multi-piece Surge Arrester type D9520S consisting of a base element type SPP420 and a plug module type SPP520 ($I_i / I_o = 400 \text{ mA} / T4$) can be used for connection inside of a fieldbus system according to the FISCO concept.

Thermal parameters:

Ambient temperature range for installation inside of the hazardous area:

- 40 °C ≤ T_a ≤ +50 °C for temperature class T4 and $I_i = 400 \text{ mA}$
- 40 °C ≤ T_a ≤ +70 °C for temperature class T4 and $I_i = 250 \text{ mA}$
- 40 °C ≤ T_a ≤ +35 °C for temperature class T6 and $I_i = 350 \text{ mA}$
- 40 °C ≤ T_a ≤ +70 °C for temperature class T6 and $I_i = 100 \text{ mA}$

Ambient temperature range for installation outside of the hazardous area:

- 40 °C ≤ T_a ≤ +85 °C

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17 Special Conditions for Use

17.1 Ambient temperature range for installation inside of the hazardous area:

- 40 °C ≤ T_a ≤ +50 °C for temperature class T4 and $I_i = 400 \text{ mA}$
- 40 °C ≤ T_a ≤ +70 °C for temperature class T4 and $I_i = 250 \text{ mA}$
- 40 °C ≤ T_a ≤ +35 °C for temperature class T6 and $I_i = 350 \text{ mA}$
- 40 °C ≤ T_a ≤ +70 °C for temperature class T6 and $I_i = 100 \text{ mA}$

Ambient temperature range for installation outside of the hazardous area:

- 40 °C ≤ T_a ≤ +85 °C

17.2 For installation inside of the hazardous area:

The Surge Arresters must be protected from electrostatic charging.

17.3 The mounting foot establishes an electrical connection to the 35 mm width DIN-rail.

The Surge Arresters type D9410S and type D9510S are directly connected over the terminals 3 and 6 to the mounting foot.

The Surge Arresters type D9420S and type D9520S are connected over the terminals 3 and 6 and via an internal surge arrester to the mounting foot.

The terminals 1, 2, 4 and 5 are connected to terminals 3 and 6 via internal surge arresters for all types.

The breakdown voltage of the surge arresters is less than 500 VAC.

The breakdown voltage between the intrinsically safe circuit and the earth connection (mounting foot) is therefore less than 500 VAC depending on the design.

The intrinsically safe circuit is earthed, depending on the type of Surge Arresters and from the installation, in normal operation or by fault. Along to the intrinsically safe circuit potential equalization has to be provided.

- 17.4 The Surge Arresters are intrinsically safe apparatus. The devices were tested in accordance to the standards EN 60079-0 and EN 60079-11. The suitability of the devices as an overvoltage protection device according to EN 60079-25 is not subject of this EU-Type Examination Certificate. Further considerations are required.

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.