

Translation

EU-Type Examination Certificate Supplement 1

Change to Directive 2014/34/EU

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 14 ATEX E 067 X**

Product: **Electronic unit with integrated barrier type VC-Plus or VFS-BARRIERE-2**

Manufacturer: **TST electronics GmbH**

Address: **Berliner Straße 42, 58135 Hagen, Germany**

This supplementary certificate extends EC-Type Examination Certificate No. BVS 14 ATEX E 067 X to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations 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 14.2135 EU.

The Essential Health and Safety Requirements are assured in consideration of:

EN IEC 60079-0:2018

General requirements

EN 60079-11:2012

Intrinsic Safety "i"

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

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 this certificate.

The marking of the product shall include the following:

 **II (1)G [Ex ia Ga] IIB**

DEKRA Testing and Certification GmbH
Bochum, 2021-02-15

Signed: Jörg-Timm Kilisch

Managing Director

13 **Appendix**

14 **EU-Type Examination Certificate**

**BVS 14 ATEX E 067 X
Supplement 1**

15 **Product description**

15.1 **Subject and type**

Electronic unit with integrated barrier type VC-Plus or VFS-Barriere-2

15.2 **Description**

With this supplement the certificate is changed to Directive 2014/34/EU.
(Annotation: In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.)

Reason for the supplement

Change to Directive 2014/34/EU
The equipment have been assessed in accordance with current standard versions.
Additional to the device type VC-Plus a new device type VFS-Barriere-2 has been introduced.

Description of Product

The electronics unit, which is installed outside any areas where explosive atmospheres are present, is used to supply power to the sensors (type VC-Plus or VFS-Barriere-2) and to process the sensor signals (only type VC-Plus).
The limit switch need for that is a component of this electronics unit which is securely fastened into a rail enclosure for this purpose. The connection of up to two sensors is done via the terminal strips X2 and X3.

15.3 Parameters

15.3.1 Non-intrinsically safe input circuit (terminal X1)

| | | | | |
|-----------------|-------|----|-----|---|
| Nominal voltage | | DC | 24 | V |
| Max. voltage | U_m | AC | 250 | V |

15.3.2 Intrinsically safe output circuits (terminal strips X2 and X3)

15.3.2.1 Supply circuit (V_{out+} and V_{out-} , terminals 2 and 3 or brown & white wire)

| | | | | |
|---------|-------|----|------|----|
| Voltage | U_o | DC | 6.16 | V |
| Current | I_o | | 156 | mA |
| Power | P_o | | 240 | mW |

15.3.2.2 Signal circuit (Sig and GND, terminals 4 and 1 or yellow & green wires)

| | | | | |
|---------|-------|----|------|----|
| Voltage | U_o | DC | 3.78 | V |
| Current | I_o | | 191 | mA |
| Power | P_o | | 180 | mW |

15.3.2.3 Supply and signal circuits interconnected

| | | | | |
|---------|-------|----|------|----|
| Voltage | U_o | DC | 5.36 | V |
| Current | I_o | | 347 | mA |
| Power | P_o | | 464 | mW |

15.3.2.4 The least favourable values of U_o and I_o result in the following parameters:

| | | | | |
|---------------------------|-------|--|-----|---------|
| Max. external capacitance | C_o | | 100 | μ F |
| Max. external inductance | L_o | | 400 | μ H |

15.3.3 Ambient temperature range

| | |
|-------|------------------|
| T_a | -20 °C to +60 °C |
|-------|------------------|

16 Report Number

BVS PP 14.2135 EU, as of 2021-02-15

17 Special Conditions for Use

- 17.1 The circuits of the electronic unit are earthed by the assembly (fastened to the hat rail). At the point of installation a connecting element must be provided for an earth wire. This connecting element must allow for a proper connection of a cable with a cross section of minimum 4 mm².
- 17.2 Along the external intrinsically safe circuits equipotential bonding must be provided.

18 Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

19 Drawings and Documents

Drawings and documents are listed in the confidential report.

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Drawings and documents are listed in the confidential report.

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, 2021-02-15
BVS-Ben/MGR A20200344



Managing Director