Translation

(1) # EU-Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**

(3) **Certificate Number** **TÜV 20 ATEX 261708 X** **issue:** 00

(4) for the product: Safety Barrier type MD BDS1

(5) of the manufacturer: **Officine Orobiche S. r. l.**

(6) Address: Via Serena, 10 - 24010 Ponteranica (BG) - Italy

Order number: 8003014753

Date of issue: 2020-02-19

(7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 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 ATEX Assessment Report No. 20 203 261708.

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

EN IEC 60079-0:2018 **EN 60079-1:2014** **EN 60079-11:2012** **EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for 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 equipment. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2(1) G Ex db [ia Ga] IIC T6...T4 Gb resp.
II 1(1) D Ex ta [ia Da] IIIC T115 °C Da

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body

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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 20 ATEX 261708 X issue 00**

(15) Description of product

The safety barrier type MD BDS1 is preferably used in conjunction with a certified flameproof enclosure, e. g. MD CPAP Ex d ..., for connecting intrinsically safe sensors (two-wire) to non-intrinsically safe circuits.

Type designation:

MD BDS1 Single-channel safety barrier potted in a bushing

Technical data:

Supply circuit

$U = 24\ V_{DC}$
$U_m = 253\ V$

Output circuit

in type of protection "Intrinsic Safety" Ex ia IIC/IIB/IIIC
Maximum values: $U_o = 28.4\ V$
$I_o = 100\ mA$
$P_i = 705\ mW$
Characteristic line: linear
Maximum permissible outer capacitance and inductance:

	Ex ia IIC		Ex ia IIB/IIIC	
L_o	500 µH	560 µH	5 mH	2 mH
C_o	71 nF	68 nF	330 nF	400 nF

Permissible ambient temperature range:

Used as Category 2G equipment

Temperature class	Ambient temperature
T6	-40 °C to +40 °C
T5	-40 °C to +55 °C
T4	-40 °C to +85 °C
T3	-40 °C to +85 °C
T2	-40 °C to +85 °C
T1	-40 °C to +85 °C

Used as Category 1D equipment

Maximum surface temperature		Ambient temperature
dust layer ≤ 5 mm	Immersed in dust	
+115 °C	+115 °C	-40 °C to +85 °C

(16) Drawings and documents are listed in the ATEX Assessment Report No. 20 203 261708

Schedule to EU-Type Examination Certificate No. TÜV 20 ATEX 261708 X issue 00

(17) Specific Conditions for Use

1. The side of the safety barrier, where the encapsulation can be seen, must be operated protected against UV light.
2. The safety barrier has no terminal compartment. It must be installed in an enclosure that corresponds to a suitable type of protection. In addition, it can only be installed in zone 1 in conjunction with a flameproof enclosure (such as MD CPAP Ex d ...).
3. Repair of flameproof joints is not planned.
4. The equipotential bonding connection must be connected to the equipotential bonding of the potentially explosive area (an equipotential bonding must exist for the entire intrinsically safe area). Therefore, the safety barriers do not meet the dielectric strength requirements. When carrying out an insulation test on the intrinsically safe circuit, the device must therefore be disconnected from equipotential bonding.
5. The maximum permissible pressure is 30 bar.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -