

## Translation

# 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 088 X** Issue: **01**

Equipment: **Sensors type X-One and PA2**

Manufacturer: **NIR-Online GmbH**

Address: **Emil-Gumbel-Strasse 1, 69126 Heidelberg, Germany**

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 19.2021 EU. This issue of the EU-Type Examination Certificate replaces the previous issue of the EU-Type Examination Certificate BVS 18 ATEX E 088 X.

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

**EN IEC 60079-0:2018 General requirements**  
**IEC 60079-26:2021 Equipment with Separation Elements or combined Levels of Protection**  
**EN 60079-31:2014 Protection by Enclosure "t"**

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 1/2D Ex tb IIIC T85°C / T100°C \*) Da/Db**

\*) See clause 15.3 for details

DEKRA Testing and Certification GmbH  
Bochum, 2023-07-28

Signed: Oliver Brumm

Managing Director



## 13 Appendix

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## 15 Product description

### 15.1 Subject and type

Sensors type X-One and PA2

A	NIR
C	CAMERA
D	VIS
E	Gold-Reflector (X-One)
F	Silver-Reflector (X-Two/X-Four (diffuse Lamps), X-Three)
G	Lamp position rev. 1.3.2
H	Lamp position rev. 1.3.6 (X-Two/X-Four/X-View (diffuse Lamps))
I	Camera setting flange (0 mm)
L	Camera setting (20 mm (X-Cell+X-Cool))
N	System temperature 0 - 80 °C
O	Humidity sensor 0-100 % RH
S	X-Quvette (Fibre lens (ca. 0 - 2 cm))
U	Camera setting special flange ZB-0103
V	External button
X2	X-Beam 002 (approx.15 cm measuring distance)

### 15.2 Description

The process analyzers type "X-One" and "PA2" are used for the analysis of substances and samples in production and in the laboratory. The sensors are designed for these applications. The sensors can be used for the following activities:

- Quality control
- Process optimisation
- Reference measurement

The process analyzers are optically connected to the process line via a flange. The separation between device and process is ensured by two sapphire windows.

The two sensor types "X-One" and "PA2" differ in the passive cooling of the X-One and the active water cooling of the PA2 with additional temperature sensor. The temperature sensor and the control of the cooling circuit are not part of the test.

Depending on the product temperature in the process line, a water-cooled flange can optionally be used.



## Reason for this issue

- Correction of Product temperature
- Updating the ignition protection concept
- Change of address

## 15.3 Parameters

PA2: Ex tb IIIC T100°C Da/Db  
X-One: Ex tb IIIC T85°C Da/Db  
Nominal voltage 12.7 VDC  
Nominal current 3.5 A  
Ambient temperature  $-10\text{ °C} \leq T_{\text{amb}} \leq +40\text{ °C}$

### Product temperature:

Temperature at flange with water cooling  $-10\text{ °C}$  up to  $+130\text{ °C}$   
Temperature at flange without water cooling  $-10\text{ °C}$  up to  $+70\text{ °C}$

The functionality of the water cooling must be considered separately and is not part of this type examination.

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## 17 Specific Conditions of Use

- Do not separate when energized.
- Clean unit when dust layer exceeds 5 mm thickness.

In the case of a water-cooled flange, the cooling circuit parameters must be observed in accordance with the manufacturer's operating instructions.

## 18 Essential Health and Safety Requirements

Met by compliance with the requirements mentioned in item 9. The standard IEC 60079-31:2022 is equivalent to the harmonized standard EN 60079-31:2014 in terms of safety.

## 19 Remarks and additional information

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, 2023-07-28  
BVS-Ret/MGR A 20230117 / 343004800

  
Managing Director