

Translation

# EU-Type Examination Certificate

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

EU-Type Examination Certificate Number: **BVS 17 ATEX E 064 X**

Product: **Optical Overfill Prevention Sensor and Product-Identification-Device  
type O<sup>2</sup>-PID**

Manufacturer: **FAFNIR GmbH**

Address: **Schnackenburgallee 149 c, 22525 Hamburg, Germany**

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

DEKRA EXAM 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 17.2164 EU.

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

**EN 60079-0:2012 + A11:2013**    **General requirements**  
**EN 60079-11:2012**            **Intrinsic Safety "i"**  
**EN 60079-26:2015**           **Equipment with equipment protection level (EPL) Ga**

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 1G Ex ia IIB T4 Ga**  
**II 1/2G Ex ia IIB T4 Ga/Gb**  
**II 2G Ex ia IIB T4 Gb**

DEKRA EXAM GmbH  
Bochum, 2017-10-20

Signed: Dr Franz Eickhoff

Certifier

Signed: Dr Michael Wittler

Approver

13 **Appendix**

14 **EU-Type Examination Certificate  
BVS 17 ATEX E 064 X**

15 **Product description**

15.1 **Subject and type**

Optical Overfill Prevention Sensor and Product-Identification-Device type O<sup>2</sup>-PID

15.2 **Description**

The Optical Overfill Prevention Sensor and Product-Identification-Device type O<sup>2</sup>-PID is used as level detector in fuel stations.

The device comprises of a tubular stainless steel enclosure of specified diameter and various length, adapted to individual requirements.

The stainless steel enclosure is fitted with optical prism at one end and a cable gland for the permanently connected cable (length 2 m) carrying the intrinsically safe supply- and signal-circuit at the other end.

Electronic components are arranged on a printed circuit board located inside the tubular enclosure.

Due to application, the Optical Overfill Prevention Sensor and Product-Identification-Device is mounted in the boundary wall separating EPL Ga area from less hazardous area, or, by means of suitable mounting assembly, completely in EPL Ga or EPL Gb area.

With reference to application, the marking 'Ex ia IIB T4 Ga', or 'Ex ia IIB T4 Ga/Gb', or 'Ex ia IIB T4 Gb' applies.

Listing of all components used referring to older standards: not applicable.

15.3 **Parameters**

15.3.1 Supply- and signal-circuit, level of protection Ex ia IIB

Voltage	$U_i$	DC	15	V
Current	$I_i$		300	mA
Power	$P_i$		1100	mW
Effective internal capacitance	$C_i$	$\leq$	12	nF
Effective internal inductance	$L_i$	$\leq$	5	$\mu$ H

15.3.2 Optical radiation

Wavelength		850 nm +/- 15	nm
Radiated continuous power		$\leq$ 20	mW

The optical radiation of the device has been assessed on the basis of IEC 60079-28: 2015. An ignition risk for Group IIB does not exist.

15.3.3 Ambient temperature range  $-40\text{ °C} \leq T_a \leq +60\text{ °C}$

16 **Report Number**

BVS PP 17.2164 EU, as of 2017-10-20

17 **Special Conditions for Use**

17.1 Installation completely in areas requiring EPL Gb equipment  
None

17.2 Installation in areas providing EPL Ga requirements on both sides of the mounting assembly or in the boundary wall separating EPL Ga area from less hazardous area

17.2.1 The installation of the Optical Overfill Prevention Sensor and Product-Identification-Device in the mounting assembly or in the boundary wall separating areas with EPL Ga requirements from less hazardous areas shall be executed in such a way, that:

- all metallic parts are conductively connected to the metallic mounting assembly / the boundary wall, or
- if the mounting assembly / the boundary wall is made of plastic material, all insulated metal parts are connected to equipotential bonding.

17.2.2 The installation in the boundary wall shall provide degree of protection  $\geq$  IP67 between EPL Ga area and less hazardous area.

17.2.3 In case of EPL Ga area on both sides of the mounting assembly, exposition to electrostatic charge effects of the permanently connected cable shall be excluded and the cable gland in the wall separating EPL Ga area from less hazardous area shall provide degree of protection  $\geq$  IP67 between EPL Ga area and less hazardous area.

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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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 EXAM GmbH  
Bochum, dated 2017-10-20  
BVS-Scha/Nu A 20170383



Certifier



Approver