



# IECEX Certificate of Conformity

**INTERNATIONAL ELECTROTECHNICAL COMMISSION**  
**IEC Certification Scheme for Explosive Atmospheres**  
for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX BVS 17.0076X** issue No.: **0** Certificate history: \_\_\_\_\_

Status: **Current**

Date of Issue: **2017-10-24** Page 1 of 4

Applicant: **FAFNIR GmbH**  
Schnackenburgallee 149 c  
22525 Hamburg  
Germany

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

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment with Equipment Protection Level (EPL) Ga**

Marking: **Ex ia IIB T4 Ga**  
**Ex ia IIB T4 Ga/Gb**  
**Ex ia IIB T4 Gb**

Approved for issue on behalf of the IECEx  
Certification Body:

Dr Franz Eickhoff

Position:

Deputy Head of Certification Body

Signature:  
(for printed version)

Date:

2017-10-24

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**DEKRA EXAM GmbH**  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

**DEKRA**  
On the safe side.



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Manufacturer: **FAFNIR GmbH**  
Schnackenburgallee 149 c  
22525 Hamburg  
Germany

Additional Manufacturing location(s):

**Security & Electronic  
Technologies GmbH**  
Aumühlweg 3  
2544 Leobersdorf  
Austria

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-26 : 2014-10</b> Edition: 3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:  
[DE/BVS/ExTR17.0078/00](#)

Quality Assessment Report:  
[DE/BVS/QAR17.0014/00](#)

[DE/TUN/QAR06.0013/05](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Type Code: O<sup>2</sup>-PID

### 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.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

**1. Installation completely in areas requiring EPL Gb equipment.**

None

**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.**

2.1 The installation of the Optical Overfill Prevention Sensor 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 / boundary wall is made of plastic material, all insulated metal parts are connected to equipotential bonding.

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

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.





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## EQUIPMENT(continued):

### Ratings

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

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.

3 Ambient temperature range

$-40\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$