

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 09 ATEX 555395 X **issue:** 00

(4) for the product: Enclosure with or without display type HPH Ex ...

(5) of the manufacturer: **FAFNIR GmbH**

(6) Address: Schnackenburgallee 149 c, 22525 Hamburg, Germany

Order number: 8003006585

Date of issue: 2019-10-22

(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. 19 203 246394.

(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:

 **See item 15 of the schedule**

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



Roder

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(13) SCHEDULE

(14) EU-Type Examination Certificate No. TÜV 09 ATEX 555395 X issue 00

(15) Description of product

The enclosure with or without display type HPH Ex d ... is preferably used in conjunction with a certified flameproof encapsulated safety barrier, e. g. SB 1, to connect intrinsically safe sensors (two-wire) to non-intrinsically safe circuits and, if necessary, to visualise the measured value.

The enclosure with display type HPH Ex i D is preferably used in intrinsically safe sensor circuits to visualise a measured value.


In the future, the enclosure may also be manufactured in accordance with the test documents listed in the ATEX test report. The changes affect the addition of a new type and the dust explosion protection. Furthermore, the equipment was assessed according to the latest standards.

The marking is as follows:

Type HPH Ex d ...

	II 2 G	Ex db IIC T6...T4 Gb	resp.
	II 1 D	Ex ta IIIC T100 °C Da	

Type HPH Ex i D

	II 1 G	Ex ia IIC T6...T4 Ga	resp.
	II 1 D	Ex ia IIIC T125 °C Da	

Type designation:

HPH Ex d	Housing in flameproof enclosure and protection by enclosure without display
HPH Ex d D	Housing in flameproof enclosure and protection by enclosure with display
HPH Ex i D	Enclosure with intrinsically safe display

Technical data:

Type HPH Ex d

Signal and supply circuit (terminal -, +)	in type of protection flameproof enclosure Ex db IIC and protection by enclosure Ex ta IIIC
	U = 12 V _{DC} ... 26 V _{DC}
	I = 4 mA ... 20 mA

Type HPH Ex d D

Signal and supply circuit (terminal -, +)	in type of protection flameproof enclosure Ex db IIC and protection by enclosure Ex ta IIIC
	U = 16 V _{DC} ... 29 V _{DC}
	I = 4 mA ... 20 mA

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Type HPH Ex i D

Signal and supply circuit
(terminal -, +)

in type of protection intrinsic safety Ex ia IIC/IIIC

Maximum values:

$$U_i = 30 \text{ V}$$

$$I_i = 200 \text{ mA at } T_a \leq +65 \text{ °C resp. } 100 \text{ mA at } T_a \leq +85 \text{ °C}$$

$$P_i = 1 \text{ W}$$

$$L_i = 250 \text{ } \mu\text{H}$$

$$C_i = 25 \text{ nF}$$

Permissible ambient temperature range:

Type HPH Ex d ...

Used as category 2G equipment

Temperature class	Ambient temperature
T6	-40 °C to +50 °C
T5	-40 °C to +65 °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 range
dust layer $\leq 5 \text{ mm}$	immersed in dust	
$T_a + 15 \text{ °C}$	$T_a + 15 \text{ °C}$	-40 °C to +85 °C

Type HPH Ex i D

Used as category 1G equipment

Temperature class	Ambient temperature range
T6	-40 °C to +40 °C
T5	-40 °C to +55 °C
T4	-40 °C to +60 °C
T3	-40 °C to +60 °C
T2	-40 °C to +60 °C
T1	-40 °C to +60 °C

The process pressure for the media must be between 0.8 bar and 1.1 bar where explosive vapour-air mixtures are present. If no explosive mixtures are present, the equipment may also be operated outside this area according to the manufacturer's specification.

Used as category 2G equipment

Temperature class	Ambient temperature range	
	at $I_i \leq 200 \text{ mA}$	at $I_i \leq 100 \text{ mA}$
T6	-40 °C to +40 °C	-40 °C to +40 °C
T5	-40 °C to +55 °C	-40 °C to +55 °C
T4	-40 °C to +65 °C	-40 °C to +85 °C
T3	-40 °C to +65 °C	-40 °C to +85 °C
T2	-40 °C to +65 °C	-40 °C to +85 °C
T1	-40 °C to +65 °C	-40 °C to +85 °C

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Used as category 1D equipment

Maximum surface temperature		Ambient temperature range
dust layer ≤ 5 mm	Immersed in dust	
$I_i \leq 200$ mA: $T_a + 55$ °C	observe EN 60079-14	$I_i \leq 200$ mA: -40 °C ... +65 °C
$I_i \leq 100$ mA: $T_a + 40$ °C		$I_i \leq 100$ mA: -40 °C ... +85 °C

All further data are valid unchanged.

(16) Drawings and documents are listed in the ATEX Assessment Report No. 19 203 246394

(17) Specific Conditions for Use

1. If the type HPH Ex i D is mounted in a plastic enclosure, the danger of ignition by electrostatic generated by friction on the enclosure must be avoided.
2. If the type HPH Ex i D is mounted in an aluminium enclosure, an ignition hazard caused by impact or friction must be avoided.
3. For the electrical connection at type HPH Ex d ..., cable glands certified in the type of protection flameproof enclosure must be used.
4. Repair of flameproof joints of enclosure HPH Ex d ... is not planned.
5. The equipotential bonding connection of a metallic enclosure must be connected to the equipotential bonding of the potentially explosive area (an equipotential bonding must exist for the entire intrinsically safe area).

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -