

# EU-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: **Presafe 14 ATEX 4470X** **Issue 2**
- [4] Product: **Load cell with integrated amplifier(s)**
- [5] Manufacturer: **Vishay Nobel AB**
- [6] Address: **Box 423  
69127 Karlskoga  
SWEDEN**
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, 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 confidential reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2012/A11:2013, EN 60079-11: 2012 and EN 50303: 2000**
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of 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 product. These are not covered by this certificate.
- [12] The marking of the product shall include the following:

	<b>I M1</b>	<b>Ex ia I Ma</b>	<b>- 45°C ≤ Ta ≤ +70°C</b>
	<b>II 1 G</b>	<b>Ex ia IIC T5 Ga</b>	<b>- 45°C ≤ Ta ≤ +70°C</b>
	<b>II 1 D</b>	<b>Ex ia IIIC T84°C Da</b>	<b>- 45°C ≤ Ta ≤ +70°C</b>



Date of issue:  
2019-12-11



Bjørn Spongsveen  
For DNV GL Presafe AS  
The Certificate has been digitally signed.  
See [www.dnvgl.com/digitalsignatures](http://www.dnvgl.com/digitalsignatures) for info

This certificate may only be reproduced in its entirety and without any change, schedule included.

DNV GL Presafe AS, Veritasveien 3, 1363 Høvik, Norway, Tel +47 67 57 88 00, [www.dnvgl.com](http://www.dnvgl.com)

[13] **Schedule**

[14] **EU-Type Examination Certificate No:** Presafe 14 ATEX 4470X Issue 2

[15] **Description of Product**

KxxD-FA(D) is a series of load cells of different size. This certificate covers three different enclosures made of stainless steel or zinc coated toughened steel: KIMD, KOSD and KEND. Three different end terminations are included: cable connector, permanent connected cable and blind plug.

They incorporate resistive strain gauges, measuring the shear force (KIMD, KOSD) and tension (KEND). They are equipped with one or two integrated amplifiers, each with 2-wire, 4-20mA current loop output. All housed in an IP67 approved enclosure.

These load cells are approved for use in an explosive gas and dust area, provided that suitable intrinsic safety barriers are used.

**Type designation**

The following type identification is included:

- KIMD-FA(D)
- KOSD-FA(D)
- KEND-FA(D)

The FA-versions have one electrical circuit and the FAD-version two separate electrical circuits. For the FAD-version the safety parameters are applicable to each circuit. Connection is made by two-wires, separated from each other in a common external connector or fixed cable for each amplifier.

**Electrical Data**

**Safety parameters for intrinsically safe connection:**

Maximum input voltage,  $U_i=30V$

Maximum input current,  $I_i=100mA$

Maximum input power,  $P_i=0.7W$

Maximum internal capacitance,  $C_i=56.5nF$

Maximum internal inductance,  $L_i=4.4\mu H$

- Total cable capacitance must not exceed 9.5nF for use in Group IIC.
- Total cable capacitance must not exceed 0.5μF for use in Group IIB and Group III.
- Total cable capacitance must not exceed 3μF for use in Group I.

**Degrees of protection (IP Code)**

IP67 according to IEC 60529.

**Ambient temperature:**

$-45^{\circ}C \leq T_a \leq +70^{\circ}C$

**Additional manufacturing locations**

<b>Manufacturers HQ address:</b>	<b>Manufacturers Production address:</b>
Vishay Nobel AB Skrantahöjdsvägen 40 691 46 Karlskoga SWEDEN	Vishay Nobel AB Gjuterigatan 12 693 35 Degerfors SWEDEN

[16] **Report No.:** D0003962

[17] **Specific Conditions of Use**

- The load cell shall only be connected to equipment that has adequate safety parameters according to the load cell's safety parameters [15].
- The models KIMD-FA(D) have outside potted cavities. No rubbing on these non-metallic surfaces are allowed.
- The free end of the connected external cable must be installed such that the terminations are afforded according to Cl. 6.1 and 6.2 of the standard EN 60079-11.

[18] **Essential Health and Safety Requirements**

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] **Drawings and documents**

Number	Title	Rev.	Date
270204	ATEX & IECEx document list, KxxD-FA(D) Load cell	3	2019-10-16

[20] **Certificate History**

Issue	Description	Issue date	Report no.
0	Original issue	2014-05-07	D0001188
1	Minor changes of the design and reduction of the ambient temperature from -40°C to -45°C.	2015-01-14	D0001188 Rev 1
2	Minor changes of the size and holes in PCB, new shape of mounting washer.	2019-12-11	D0003962

END OF CERTIFICATE