

[1]

EU-TYPE EXAMINATION CERTIFICATE

[2] Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

[3] EU-Type Examination Certificate Number: **DNV 21 ATEX 50814X** **Issue 1**

[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 Product Assurance AS, notified body number 2460, in accordance with Article 17 and Article 21 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 item 16.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: **EN IEC 60079-0:2018, EN 60079-11: 2012 and EN 50303: 2000**

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

[10] 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.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design and construction 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.

[12] The marking of the product shall include the following:

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



Date of issue:
2023-01-31



Asle Kaastad
For DNV Product Assurance AS
The Certificate has been digitally signed.
See www.dnv.com/digitalsignatures for info

[13]

Schedule

[14]

EU-Type Examination Certificate No:

DNV 21 ATEX 50814X

Issue 1

[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.

Intrinsic Safety Parameters

Maximum input voltage:	U _i =30 V
Maximum input current:	I _i =100 mA
Maximum input power:	P _i =0.7 W
Maximum internal capacitance:	C _i =56.5 nF
Maximum internal inductance:	L _i =4.4 μH

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

Degrees of protection (IP Code)

IP67 according to IEC 60529.

Ambient temperature:

- 45°C ≤ T_a ≤ +70°C

Routine tests

None

[16]

Report No.: 233858/01

[17]

Specific Conditions of Use

1. The load cell shall only be connected to equipment that has adequate safety parameters according to the load cell's safety parameters [15].
2. The models KIMD-FA(D) have outside potted cavities. No rubbing on these non-metallic surfaces are allowed.
3. 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.

Notes for manufacture, installation and operation:

- Manufacturers HQ address:
Vishay Nobel AB Skrantahöjdsvägen 40 691 46 Karlskoga SWEDEN
- Manufacturers Production address:
Vishay Nobel AB Gjuterigatan 12 693 35 Degerfors SWEDEN

[18] Essential Health and Safety Requirements

Met by compliance with the requirements mentioned in item 9.



[19] **Drawings and documents**

Number	Title	Rev.	Date
270204	*ATEX & IECEx document list, KxxD-FA(D) Load cell	5	2022-10-13

[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
0	Original issue. Replace the Presafe 14 ATEX 4470X. Update to latest EN 60079-0:2018.	2021-06-04	233858
1	Update the marking label and use manual for UKCA certificate.	2023-01-31	233858/01

END OF CERTIFICATE