

[1] UNITED KINGDOM CONFORMITY ASSESSMENT

UK TYPE EXAMINATION CERTIFICATE

[2] Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

[3] UK Type Examination Certificate Number: **DNV 22 UKEX 76719X** **Issue 0**

[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 Business Assurance UK Ltd, Approved Body number 8501 in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

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**

Except in respect of those requirements listed at section 18 of the schedule to this certificate.

[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 UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of this 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 Business Assurance UK Ltd
The Certificate has been digitally signed.
See www.dnv.com/digitalsignatures for info

[13] **Schedule**

[14] **UK Type Examination Certificate No:** DNV 22 UKEX 76719X Issue 0

[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 (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.



[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	2023-01-31	233858/01

END OF CERTIFICATE

