



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX DNV 21.0017X** Page 1 of 5 [Certificate history:](#)
Issue 0 (2021-06-04)

Status: **Current** Issue No: 1

Date of Issue: 2023-03-10

Applicant: **Vishay Nobel AB**
Box 423
69127 Karlskoga
Sweden

Equipment: **Load cell with replaceable amplifier(s)**

Optional accessory:

Type of Protection: **Intrinsic safety "Ex ia"**

Marking: Ex ia I Ma
Ex ia IIC T4 Ga
Ex ia III C T79°C Da
-45°C < Ta < +70°C

Approved for issue on behalf of the IECEx
Certification Body:

Asle Kaastad

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

DNV Product Assurance AS
Veritasveien 1
1363 Høvik
Norway





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Manufacturer: **Vishay Nobel AB**
Box 423
69127 Karlskoga
Sweden

Manufacturing
locations: **Vishay Nobel AB**
Box 423
69127 Karlskoga
Sweden

Vishay Nobel AB
Gjuterigatan 12
693 35 Degerfors
Sweden

Vishay Nobel AB
Skrantahöjdsvägen 40
691 46 Karlskoga
Sweden

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 equipment 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

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with 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 Reports:

[NO/DNV/ExTR21.0017/00](#)

[NO/DNV/ExTR21.0017/01](#)

Quality Assessment Reports:

[GB/BAS/QAR14.0003/00](#)
[GB/BAS/QAR14.0003/03](#)

[GB/BAS/QAR14.0003/01](#)
[GB/BAS/QAR14.0003/04](#)

[GB/BAS/QAR14.0003/02](#)
[GB/BAS/QAR14.0003/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

KxxD-RA(D) is a series of load cells, this certificate covers the KIMD and KOSD types. They incorporate resistive strain gauges, measuring the shear force, and types of replaceable signal conditioning amplifiers with 2-wire 4-20mA current loop output with HART communication and NAMUR high error signalling. 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.

Two different metallic cylinders are included: KOSD is made of metal and KIMD which also is made of metal but in addition have compound as a part of the external enclosure and therefore includes a Warning – Potential electrostatic hazard.

The load cell consists of replaceable amplifier, housed in the metallic cylinder ends, filled with casting compound. Three different end terminations are included: connector (LCAMP110), cable (LCAMP120) and blind (LCAMP130). In addition the load cell can be equipped with either single or double Bridge.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The load cell shall only be connected to equipment that has adequate safety parameters according to the load cell's safety parameters.
- The models KIMD-RA and KIMD-RAD 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 a degree of protection of at least IP20.
- Use of secondary current loop output on primary side when using LCAMP110 or LCAMP120 as secondary amplifier on KxxD-RAD is not allowed.



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Equipment (continued):

Type designation

The KxxD load cell can be used with replaceable signal amplifiers as follows :

- KxxD-RA: Primary LCAMP110 with 4-pin M12 connector.
- KxxD-RA: Primary LCAMP120 with fixed shielded 4 wire cable.
- KxxD-RAD: Primary LCAMP110 or 120 and optional Secondary LCAMP110, 120 or blind 130.

The RA-versions have one electrical circuit and the RAD-version two separate electrical circuits. For the RADversion the safety parameters are applicable to each circuit. Connection to indicator and power supply is made by two-wires in a common external connector or fixed cable for each amplifier.

Intrinsic Safety Parameters

Maximum input voltage:	$U_i=30\text{ V}$
Maximum input current:	$I_i=100\text{ mA}$
Maximum input power:	$P_i=0.7\text{ W}$
Maximum internal capacitance:	$C_i=57\text{ nF}$
Maximum internal inductance:	$L_i=4.4\text{ }\mu\text{H}$

- Total cable capacitance must not exceed 9.0nF for use in Group IIC.
- Total cable capacitance must not exceed 503nF for use in Group IIB and Group III.
- Total cable capacitance must not exceed 3 μ F for use in Group I.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

New alternative component D9.

Update the marking label and use the manual for UKCA certificate.