

Load cells

KXX-X with variants,
(KIS-X, KIS-8X, KIS-9X, KIM-1X)
Intrinsic safety version Ex ia Ga and enclosure Ex ia Da



Information for use of load cells
in explosive atmospheres

Load cells for use in explosive atmospheres

KXX-X with variants, (KIS-X, KIS-8X, KIS-9X, KIM-1X)

Certificates

Appendix 1

EC-Type Examination Certificate, No Baseefa02ATEX0073, Issue 5, 3 pages.

Appendix 2

Declaration of Conformity

Overload

The load cells must not be exposed to more than the mechanical "overload, ultimate", specified in the data sheet.

Repair

The equipment is not to be repaired by the user, repairs should only be carried out by the manufacturer or approved repairer. The equipment may only be replaced by an equivalent certified unit.

Certificate Number
Baseefa02ATEX0073
Issue 5



Issued 11 November 2014
Page 1 of 3

1 EC - TYPE EXAMINATION CERTIFICATE

2 Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 EC - Type Examination Certificate Number: **Baseefa02ATEX0073 – Issue 5**

4 Equipment or Protective System: **Load Cell KXX-X with variants**

5 Manufacturer: **Vishay Nobel AB**

6 Address: **Box 423, SE-691 27 Karlskoga, Sweden**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No's. See Schedule

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 EN 60079-11:2012

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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

 **II 1 GD See schedule**
I M1

Baseefa Customer Reference No. **2054**

Project File No. **13/0709**

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R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa02ATEX0073 – Issue 5**

15 **Description of Equipment or Protective System**

The Loadcells Type KXX-X are designed to measure force. Each loadcell comprises a printed circuit board, two dual element strain gauges and two modulus gauges all housed in a stainless steel enclosure. External connections are made via an integral four core cable.

This certificate covers loadcells **KIS-X, KIS-8X, KIS-9X** and **KIM-1X**, where X represents type and load rating.

The apparatus comprises a stainless steel body, in which the strain and modulus gauges and the printed circuit board (coated with silicon rubber compound or varnish) are mounted. Electrical connections are made via a glanded integral cable, the termination of which, on the internal printed circuit board is encapsulated. The loadcells are adequately protected against dust ingress, the enclosures offering a degree of protection of not less than IP6X.

The marking of the equipment depends upon input power and ambient temperature as follows:

Ex ia IIC T6 Ga	Ex ia IIIC T80°C T ₅₀₀ 84°C Da	Ex ia I Ma (-40°C ≤Ta ≤60°C)	1.2W
Ex ia IIC T4 Ga	Ex ia IIIC T60°C T ₅₀₀ 64°C Da	Ex ia I Ma (-40°C ≤Ta ≤40°C)	1.3W
Ex ia IIC T4 Ga	Ex ia IIIC T80°C T ₅₀₀ 84°C Da	Ex ia I Ma (-40°C ≤Ta ≤60°C)	1.2W

Input Parameters

U_i = 25V	C_i = 2.5nF
I_i = 700mA	L_i/R_i = 30μH/Ω
P_i = 1.2W / 1.3W	

Cable length	Capacitance, C_i	Inductance, L_i	L_i / R_i Ratio
< 10m	3.5nF	10μH	30μH/Ω
>10m to 15m	5nF	15μH	30μH/Ω
>15m to 25m	8nF	25μH	30μH/Ω
>25m to 50m	15nF	Use L_i/R_i ratio	30μH/Ω
>50m to 100m	30nF	Use L_i/R_i ratio	30μH/Ω

16 **Report Number**

GB/BAS/ExTR14.0154/00

17 **Specific Conditions of Use**

None.

18 **Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 **Drawings and Documents**

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
500938	1 of 1	9	2014-02-19	ATEX Label KIS-X
600529	1 of 1	8	2014-02-19	ATEX Label KIS-8X
600530	1 of 1	8	2014-02-19	ATEX Label KIS-9X
600591	1 of 1	8	2014-02-19	ATEX Label KIM-1X

Current drawings also associated with this certificate:

Number	Sheet	Issue	Date	Description
300275	1 of 1	4	2010-09-09	KIS-8X ATEX
300277	1 of 1	4	2010-09-09	KIS-9X ATEX
300278	1 of 1	4	2010-09-09	KIM-1X ATEX
400689	1 of 1	4	2010-09-09	KIS-X ATEX

20 Certificate History

Certificate No.	Date	Comments
Baseefa02ATEX0073	16 October 2002	The release of the prime certificate. The associated test and assessment is documented in Test Report No. 02(C)0290. Project File No. 02/0290.
Baseefa02ATEX0073/1	4 February 2004 Reissued 18 November 2005	To permit a change of company name/logo, minor drawing changes, new input parameters and new cable length options. Project File No. 03/0931
Baseefa02ATEX0073/2	17 November 2005	To permit minor drawing changes. Project File No. 05/0362
Baseefa02ATEX0073/3	25 September 2006 Reissued 10 May 2007	To permit a change to the ambient temperatures (to -40°C). Project File No. 06/0310
Baseefa02ATEX0073/4	1 June 2011	To permit minor drawing changes, confirm that the equipment covered by this certificate has been reviewed against the requirements of EN 60079-0:2009 and EN 60079-11:2007 in respect of the differences from EN 50014:1997 + Amds 1 & 2 and EN 50020:2002 and to confirm that the equipment covered by this certificate has been additionally reviewed against the requirements of IEC 60079-31:2008 and may also therefore be coded: ⊕ II 1D Ex t IIIC T**°C T ₅₀₀ **°C Da Project File No. 10/0535.
Baseefa02ATEX0073 Issue 5	11 November 2014	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current design meets the requirements of EN 60079-0: 2012 & EN 60079-11: 2012 including the revision of the marking in accordance with these standards. The equipment has been assessed against the requirements for Group I and may also therefore be additionally coded: ⊕ I M1 Ex ia I Ma Test Report No. GB/BAS/ExTR14.0154/00. Project File No. 13/0709.

For drawings applicable to each issue, see original of that issue.

EU Declaration of Conformity

We Vishay Nobel AB
P.O. Box 423, SE-691 27 KARLSKOGA
Skrantahöjdsvägen 40, SE-69146 KARLSKOGA
SWEDEN

declare under our sole responsibility that the products

**Load Cell KXX-X with variants
(KIS-X, KIS-8X, KIS-9X, KIM-1X)**

to which this declaration relates are in conformity with the
following standards or other normative documents.

The essential requirements in the ATEX Directive 2014/34/EU
with later amendments

EN 60079-0: 2012 + A11: 2013¹
EN 60079-11: 2012

Group II Category 1 G, Ex ia IIC T4 Ga
Group II Category 1 D, Ex ia IIIC T*°C T₅₀₀*°C Da
Group I Category M1, Ex ia I Ma

¹) EN 60079-0 A11: 2013 was compared to EN 60079-0: 2012 that were used for the original certification and no changes in the "state of art" apply to this equipment.

*) see certificate for values

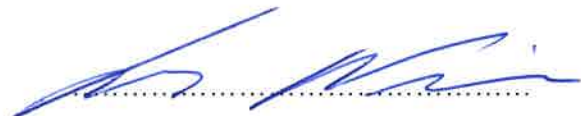
EC – Type examination Certificate: Baseefa02ATEX0073, Issue 5

Notified body for EC type Examination: SGS Baseefa, NB No. 1180, Buxton UK
Notified Body for production: SGS Baseefa, NB No. 1180, Buxton UK

The product is supplied by $U_i = 25\text{ V}$ and is therefore not covered by
the requirements in the Low Voltage Directive 2014/35/EU.

On behalf of the above named company, I declare that, on the date the equipment
accompanied by this declaration is placed on the market, the equipment conforms with all
technical and regulatory requirements of the above listed directives.

KARLSKOGA, 18 of August 2016



Lars Nilsson, Managing Director

IECEX Certificate

The IECEx certificate for the KXX-X with variants, (KIS-X, KIS-8X, KIS-9X, KIM-1X) load cells can be found on the official IECEx web site: <http://iecex.iec.ch>

Certificate number: IECEx BAS 14.0015X Issue No: 0.

Document no: 35217
Publication 600623R7
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