OIML Member State Sweden	**OIML Certificate No.** R60/2017-A-SE1-21.01

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

Name: RISE Research Institutes of Sweden AB
Address: Box 857, SE-50115 Borås, Sweden
Person responsible: Martin Tillander

Applicant

Name: Vishay Nobel AB
Postal address: Box 423, SE-691 27 Karlskoga, Sweden
Visiting address: Skrantahöjdsvägen 40, SE-691 46 Karlskoga, Sweden

Manufacturer

Name: Vishay Nobel AB
Postal address: Box 423, SE-691 27 Karlskoga, Sweden
Visiting address: Skrantahöjdsvägen 40, SE-691 46 Karlskoga, Sweden

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

KIS-11

Designation of the module *(if applicable)*

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 60 Edition (year):2017

For accuracy class (if applicable): III, IIII

OIML Certificate No.
R60/2017-A-SE1-21.01R60/2017-A-SE1-21.01

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. 153312-1 dated 2021-06-16 that includes 4 pages.

The technical documentation relating to the identified type is contained in documentation file:

No. 0402-MTm035 dated 2002-04-29 that includes 18 pages

OIML Certificate History

Revision No.	Date	Description of the modification
First issue	2021-07-01	

Identification, signature and stamp
The OIML Issuing Authority
RISE Research Institutes of Sweden AB

Signed by: Martin Tillander
Reason: I am the author of this document
Date & Time: 2021-07-01 08:12:44 +02:00

Martin Tillander

Date: 2021-07-01

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

Identification of the certified type (continued)
Metrological characteristics of the type:

Reference to R60/2017, point 3.

Load cell characterization	analog-passive load cell	
Accuracy class		C
Maximum number of intervals	n_{max}	3 000
Maximum capacity	E_{max}	50, 100, 125, 200 kN
Load cell supply voltage	U_{exc}	10 V
Safe overload	E_{lim}/E_{max}	100 %
Min capacity	E_{min}	0 %
Ratio to minimum LC verification interval, Y	E_{max} / V_{min}	10 500
Ratio to minimum dead load output return, Z	$=E_{max}/(2*DR)$	13 000
Rated output, C		1.02 mV /V ±0.1 %
Load cell impedance		350 ±0.5 Ω
Output Impedance		350 ±3 Ω
Fraction of mpe	P_{Ic}	0.7
Temperature range		-10° C to +40° C

KIS-11 is a shear beam load cell supported at one end and the load applies at the other end.
KIS-11 has strain gauges that measure the strain that arise from the shear forces caused by the load.

Construction of the load cell

KIS-11 has a sleeve, which make it possible to apply the load directly over the strain gauges. That eliminates disturbing effects from bending forces. The strain gauges are placed in an I-beam section and are oriented for optimal measurement of the shear force. The load cell is provided with a shielded cable. The shield is not connected to the load cell body.

Characteristics of load cell cable

The cable has four wire plus shield. The ground is open at the load cell end. The cross section of wire is 4 x 0.5 mm^2, cable length 10-30 m. Electrical connectors: four wire with shield, specification as follows:

RED/GREEN +Excitation
BLACK -Excitation
GREEN/WHITE +Signal
WHITE/RED -Signal

Markings

The markings of the load cell contain the cell type, manufacturers name, serial number, and E_{MAX}.