



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 BVS 16.0010	Page 1 of 5	<u>Certificate history:</u>
Status:	Current	Issue No: 3	Issue 2 (2022-04-26)
Date of Issue:	2023-04-03		Issue 1 (2018-07-26)
Applicant:	holthausen elektronik GmbH Wevelinghoven 38 41334 Nettetal Germany		Issue 0 (2016-03-11)
Equipment:	Transmitters type ESW-small Ex-i 10-**-E, ESW-small Ex-i M 10-**-E, ESW-small Ex-i SIL 10-**-E, ESW-small Ex-i M-SIL 10-**-E, ESW-small Ex-i 10-**-T-E, ESW-small Ex-i M 10-**-T-E, ESW-small Ex-i SIL 10-**-T-E, ESW-small Ex-i M-SIL 10-**-T-E		
Optional accessory:			
Type of Protection:	Intrinsic Safety "i"		
Marking:	Ex ia IIC T4 Gb		

Approved for issue on behalf of the IECEx
Certification Body:

Dr Franz Eickhoff

Position:

**Senior Lead Auditor, Certification Manager and officially
recognised expert**

Signature:
(for printed version)


2023-04-03

Date:
(for printed version)

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Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany





IECEX Certificate of Conformity

Certificate No.: **IECEX BVS 16.0010**

Page 2 of 5

Date of issue: 2023-04-03

Issue No: 3

Manufacturer: **holthausen elektronik GmbH**
Wevelinghoven 38
41334 Nettetal
Germany

Manufacturing locations: **holthausen elektronik GmbH**
Wevelinghoven 38
41334 Nettetal
Germany

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 Report:

DE/BVS/ExTR16.0014/03

Quality Assessment Report:

DE/TUR/QAR12.0002/03



IECEX Certificate of Conformity

Certificate No.: **IECEX BVS 16.0010**

Page 3 of 5

Date of issue: 2023-04-03

Issue No: 3

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Subject and Type

Transmitter types	ESW-small Ex-i 10-**_E,	ESW-small Ex-i 10-**_T_E,
	ESW-small Ex-i M 10-**_E,	ESW-small Ex-i M 10-**_T_E,
	ESW-small Ex-i SIL 10-**_E,	ESW-small Ex-i SIL 10-**_T_E,
	ESW-small Ex-i M-SIL 10-**_E,	ESW-small Ex-i M-SIL 10-**_T_E

The type characteristic "M" (for maritime) marks transmitters with sea water resistant enclosure for use on ships.

The type characteristic "_T" marks transmitters with extended ambient temperature range.

The type ending "_E" marks transmitters with the changed cable parameters.

In the complete type designation, the asterisks are replaced by numerals indicating different variations of the transmitter which differ in measuring range, frequency range and signal evaluation.

These variants are not relevant for explosion protection.

Description of the product

The transmitters type ESW-small Ex-i... are electronic vibration monitors. They are mounted to the monitored machine with a threaded bolt and transform the vibrations into a 4-20 mA-current signal.

The transmitters are passive intrinsically safe apparatus and are suitable for use in areas requiring EPL Gb. All circuits have level of protection IIC ia.

The transmitters have a stainless steel enclosure with removable lid.

The electronic is molded inside the enclosure. An indication-LED is protruding from the encapsulation; it is visible after unscrewing the lid of the enclosure.

The transmitters are supplied via a permanently connected cable (max. 25 m length).

All listed types have the electronic (Schematics, BOM and layout revision G) or (Schematics, BOM and layout revision H).

The transmitters differ only in the enclosure material resp. encapsulant:

Variants with type characteristic „M": anodized stainless steel enclosure

Variants without type characteristic "M": stainless steel enclosure

Variants with type characteristic "_T": encapsulant Wepuran VU 4452/61 HE or Wepuran VU 4452/71 HE

Variants without type characteristic "_T": encapsulant Wepuran VU 4453/61 HE

Variants with type characteristic "SIL" do not differ from variants without this supplement.

Listing of all components used referring to older standards

None

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No.: **IECEX BVS 16.0010**

Page 4 of 5

Date of issue: 2023-04-03

Issue No: 3

Equipment (continued):

Parameters

1 Electrical data

Supply and signal circuit

permanently connected cable, wires white (+) and brown (-) or blue (+) and brown (-) or 1 (+) and 2 (-)

Maximum input voltage	U_i	DC	28.8	V
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Maximum input current	I_i		125	mA
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Maximum input power	P_i		1	W
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The effective capacitance C_i and effective inductance L_i of the apparatus are composed of the (concentrated) capacitance and inductance of the apparatus and the parameters of the connected cable:

Effective concentrated capacitance		10	nF
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Effective concentrated inductance		30	μ H
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Cable capacitance		0.3	nF/m
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Cable inductance		0.8	mH/m
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2 Ambient temperature range

T_a

for types without ending „_T“:		-40 °C...50 °C
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for types with ending „_T“:		-40 °C...65 °C
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IECEX Certificate of Conformity

Certificate No.: **IECEX BVS 16.0010**

Page 5 of 5

Date of issue: 2023-04-03

Issue No: 3

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Due to other cable parameters, the type designation is changed.