



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 13.0006X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 1 Issue 0 (2013-01-15)
Date of Issue: 2023-08-21
Applicant: **holthausen elektronik GmbH**
Wevelinghoven 38
41334 Nettetal
Germany
Equipment: **Vibration monitor type ESW®-small-Ex....**
Optional accessory:
Type of Protection: **Flameproof Enclosures "d", Protection by Enclosure "t"**
Marking: Ex db IIC T4 up to T6 Gb
Ex tb IIIC T80°C up to T115°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Jörg Koch

Position:

Head of Certification Body

Signature:
(for printed version)

21.08.2023

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:

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





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Issue No: 1

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 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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/ExTR13.0006/01](#)

Quality Assessment Report:

[DE/TUR/QAR12.0002/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Subject and Type

Vibration monitor type ESW[®]-small-Ex....

The dots in the type reference will be replaced by numbers representing the material, the enclosure size and the position of the cable entry.

Description

The vibration monitor type ESW[®]-small-Ex... is manufactured to meet the requirements of the type of protection Flameproof Enclosure 'd' and Protection by Enclosure 't'. It is intended to protect machines against non-permissible vibration and for the use in atmospheres where combustible gases or dusts are present.

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The dimensions of the flameproof joints are in parts other than the relevant minimum or maximum values of IEC 60079-1:2014. For information on the dimensions of the flameproof joints contact the manufacturer.
2. The enclosure has to be integrated into the potential equalization of the machine to be monitored; this can be done either via the fastenings or via the connecting terminal.
3. The free cable end of the vibration monitor has to be connected either in an enclosure in one the types of protection stated in section 1 of IEC 60079-0:2017 or outside the explosive atmosphere.
4. In applications in Zone 21 it must be ensured when installing the connection cable that electrostatic charging cannot lead to ignitable discharges.
5. In applications in Zone 21: The vibration monitor must be used only in areas where strong or repeated charging processes are not expected to occur.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Update of the used revision of the standards including the Ex-marking
- Change of the permitted minimum ambient temperature from -20 °C to -60 °C

Annex:

[BVS_13_0006X_holthausen_Annex_issue1.pdf](#)



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Parameters

1 Electrical parameters

Rated voltage	DC	24	V
Maximum voltage	DC	30	V
Rated power	up to	2.5	W
Current of analogue output	up to	20	mA
Voltage of potential-free switch contact	up to	30	V
Current of potential-free switch contact	up to	1	A

2 Temperature class allocation

Lower ambient temperature -60 °C up to -20 °C
The used lower ambient temperature will be included in the marking of the equipment and is related with a choice of an applicable cable gland and cable.

Upper ambient temperature See table 3 "Upper ambient temperature" below

3 Table "Upper ambient temperature"

Enclosure size type	Maximum Power in W	Upper ambient temperature	Temperature-class for EPL Gb	Temperature-marking for EPL Db	Necessary temperature for the cable	Necessary temperature for the cable gland
1	0.5 W	+70 °C	T6	T 80 °C	80 °C	80 °C
1	0.5 W	+80 °C	T5	T 90 °C	90 °C	90 °C
1	1.0 W	+65 °C	T6	T 80 °C	85 °C	85 °C
1	1.0 W	+70 °C	T5	T 85 °C	90 °C	90 °C
1	1.0 W	+85 °C	T4	T 100 °C	105 °C	100 °C
1	1.5 W	+60 °C	T6	T 80 °C	85 °C	85 °C
1	1.5 W	+65 °C	T5	T 85 °C	90 °C	90 °C
1	1.5 W	+85 °C	T4	T 105 °C	110 °C	105 °C
1	2.0 W	+55 °C	T6	T 80 °C	90 °C	90 °C
1	2.0 W	+70 °C	T5	T 95 °C	105 °C	95 °C
1	2.0 W	+85 °C	T4	T 110 °C	120 °C	110 °C
1	2.5 W	+50 °C	T6	T 80 °C	90 °C	90 °C
1	2.5 W	+65 °C	T5	T 95 °C	105 °C	95 °C
1	2.5 W	+85 °C	T4	T 115 °C	125 °C	115 °C
2	0.5 W	+70 °C	T6	T 80 °C	80 °C	80 °C
2	0.5 W	+80 °C	T5	T 90 °C	90 °C	90 °C
2	1.0 W	+65 °C	T6	T 80 °C	80 °C	80 °C
2	1.0 W	+75 °C	T5	T 90 °C	90 °C	90 °C
2	1.0 W	+85 °C	T4	T 100 °C	100 °C	100 °C
2	1.5 W	+60 °C	T6	T 80 °C	80 °C	80 °C
2	1.5 W	+70 °C	T5	T 90 °C	90 °C	90 °C
2	1.5 W	+85 °C	T4	T 105 °C	105 °C	105 °C
2	2.0 W	+55 °C	T6	T 80 °C	80 °C	80 °C
2	2.0 W	+65 °C	T5	T 90 °C	90 °C	90 °C
2	2.0 W	+85 °C	T4	T 110 °C	110 °C	105 °C
2	2.5 W	+55 °C	T6	T 80 °C	85 °C	85 °C
2	2.5 W	+60 °C	T5	T 85 °C	90 °C	105 °C
2	2.5 W	+85 °C	T4	T 110 °C	115 °C	110 °C
3	0.5 W	+70 °C	T6	T 80 °C	80 °C	80 °C
3	0.5 W	+80 °C	T5	T 90 °C	90 °C	90 °C
3	1.0 W	+65 °C	T6	T 80 °C	80 °C	80 °C
3	1.0 W	+75 °C	T5	T 90 °C	90 °C	90 °C
3	1.0 W	+85 °C	T4	T 100 °C	100 °C	100 °C
3	1.5 W	+60 °C	T6	T 80 °C	80 °C	80 °C
3	1.5 W	+70 °C	T5	T 90 °C	90 °C	90 °C
3	1.5 W	+85 °C	T4	T 105 °C	105 °C	105 °C
3	2.0 W	+55 °C	T6	T 80 °C	80 °C	80 °C
3	2.0 W	+65 °C	T5	T 90 °C	90 °C	90 °C
3	2.0 W	+85 °C	T4	T 110 °C	110 °C	105 °C



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3	2.5 W	+55 °C	T6	T 80 °C	85 °C	85 °C
3	2.5 W	+60 °C	T5	T 85 °C	90 °C	105 °C
3	2.5 W	+85 °C	T4	T 110 °C	115 °C	110 °C
4	0.5 W	+70 °C	T6	T 80 °C	80 °C	80 °C
4	0.5 W	+80 °C	T5	T 90 °C	90 °C	90 °C
4	1.0 W	+65 °C	T6	T 80 °C	80 °C	80 °C
4	1.0 W	+75 °C	T5	T 90 °C	90 °C	90 °C
4	1.0 W	+85 °C	T4	T 100 °C	100 °C	100 °C
4	1.5 W	+60 °C	T6	T 80 °C	85 °C	85 °C
4	1.5 W	+70 °C	T5	T 90 °C	90 °C	90 °C
4	1.5 W	+85 °C	T4	T 105 °C	105 °C	100 °C
4	2.0 W	+60 °C	T6	T 80 °C	85 °C	85 °C
4	2.0 W	+65 °C	T5	T 90 °C	90 °C	90 °C
4	2.0 W	+85 °C	T4	T 105 °C	110 °C	105 °C
4	2.5 W	+55 °C	T6	T 80 °C	85 °C	85 °C
4	2.5 W	+60 °C	T5	T 85 °C	90 °C	90 °C
4	2.5 W	+85 °C	T4	T 110 °C	115 °C	110 °C