Translation

1 # EU-Type Examination Certificate

2 **Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014**

3 EU-Type Examination Certificate Number: **BVS 15 ATEX E 109** Issue: **01**

4 Equipment: **Transmitter types**

**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**

5 Manufacturer: **holthausen elektronik GmbH**

6 Address: **Wevelinghoven 38, 41334 Nettetal, Germany**

7 This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

8 DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential Report No. BVS PP 15.2223 EU.
This issue of the EU-Type Examination Certificate replaces the previous issue of the EU-Type Examination Certificate BVS 15 ATEX E 109 including supplements 1 to 2.

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

| | |
|---|---|
| **EN IEC 60079-0:2018** | **General requirements** |
| **EN 60079-11:2012** | **Intrinsic Safety "i"** |

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

11 This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

**II 2G Ex ia IIC T4 Gb**

DEKRA Testing and Certification GmbH
Bochum, 2023-04-03

Signed: Dr. Rolf Krökel

Managing Director




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13 **Appendix**

14 **EU-Type Examination Certificate**

**BVS 15 ATEX E 109 issue 01**

15 **Product description**

15.1 **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 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.

15.2 **Description**

**Reason for this issue**

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

**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).

**Listing of all components used referring to older standards:**

None




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## 15.3 Parameters

### 15.3.1 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 |
| Maximum input current | $I_i$ | | 125 | mA |
| Maximum input power | $P_i$ | | 1 | W |

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 |
| Effective concentrated inductance | 30 | µH |
| Cable capacitance | 0.3 | nF/m |
| Cable inductance | 0.8 | µH/m |

### 15.3.2 Ambient temperature range

| | $T_a$ |
|---|---|
| for types without ending „_T“: | -40 °C...50 °C |
| for types with ending „_T“: | -40 °C...65 °C |

## 16 Report Number

BVS PP 15.2223 EU, as of 2023-04-03

## 17 Specific Conditions of Use

None

## 18 Essential Health and Safety Requirements

Met by compliance with the requirements mentioned in item 9.

## 19 Remarks and additional information

Drawings and documents are listed in the confidential report.

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We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, 2023-04-03
BVS-HRH/Mu A 20230168/ 343020400

Managing Director




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