

UL Type Examination Certificate

ATEX Directive 2014/34/EU

Certificate

UL 25 ATEX 3412X
Rev. 0

Issue date
2025-12-12

This is to acknowledge that

HAUBER-Elektronik GmbH
Fabrikstrasse 6, 72622 Nürtingen, Germany

has had

Enclosed Type, Vibration Sensors

HE050 and HE055 Series

evaluated and meets the requirements of the standards

EN IEC 60079-0:2018

EN 60079-7:2015

EN IEC 60079-7:2015/A1:2018

EN 60079-31:2014

EN IEC 60079-31:2024

Test Report No. **DK/ULD/ExTR25.0018/00**

Certification Manager
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This is to certify that the sample(s) of the product described herein ("Certified Product") has been investigated and found in compliance with the above mentioned harmonized Standard(s) per Article 12 of Directive 2014/34/EU of the European Parliament and of the Council relating to equipment and protective systems for use in potentially explosive atmospheres indicated on this Certificate, in accordance with the UL Type Examination Certificate Scheme Requirements.

The responsibilities of manufacturers, their authorized representatives are provided in Articles 6 and 7 of the Directive 2014/34/EU. This remains the responsibility of the manufacturer and authorized representative and is not covered as part of this certificate.

This certificate and test results obtained apply only to the product sample(s) submitted by the Applicant. UL International Demko A/S (UL) did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established follow-up service for inspection or other surveillance of the product. The Certificate Holder is solely and fully responsible for conformity of all products to all applicable Standards, specifications, requirements or Directives/Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

UL TYPE EXAMINATION CERTIFICATE

TECHNICAL DETAILS/SCHEDULE

Description of product

The HE050 type vibration monitoring unit is an IO-Link sensor for measuring of vibration velocity, vibration acceleration and temperature and is used to measure and monitor absolute bearing vibrations in machines. It has the following features:

- Output 1: IO-Link or digital switching output.
- Output 2: Analogue current output (4...20 mA) or digital switching output.
- Adjustable frequency range 10 Hz.... 1000 Hz.

The HE055 type vibration monitoring unit is an IO-Link sensor for measuring of vibration velocity, vibration acceleration and temperature and is used to measure and monitor absolute bearing vibrations in machines. It has the following features:

- Output 1: IO-Link or digital switching output.
- Output 2: Analogue current output (4...20 mA) or digital switching output.
- Generation of crest factor.
- Adjustable frequency range 1 Hz.... 1000 Hz.

Ingress protection according to EN IEC 60079-0: IP66/IP67 only in connected state.

Nomenclature

Nomenclature for HE050 and HE055 Series:

HE050.	2.	X.	0.	XXX
I	II	III	IV	V

I- HE Sensor Series:

HE050 = Vibration sensor with HE050 PCB inside

HE055 = IO link sensor with crest value development with HE055 PCB inside

II- Certification:

2 = ATEX/IECEX Zone 2/22

3 = ATEX/IECEX Zone 2/22 + SIL1

III- IO link:

One alphanumeric character to specify IO-Link, not safety relevant 0 = no IO link

1 = IO link (alternative function output 1)

IV- Housing material:

0 = 1.4305 (V2A) with fastening M8 x 8 mm; incline 1.25 (Standard)

1 = 1.4404 (V4A) with fastening M8 x 8 mm; incline 1.25 mm

2 = 1.4462 duplex stainless steel with fastening M8 x 8 mm; incline 1.25 mm

V- Software parameter settings (factory default)

Up to three alphanumeric characters to specify software setting, not safety relevant

Ex marking

HE050 series:  II 3 G Ex ec IIC T4 Gc

 II 3 D Ex tc IIIC T105°C Dc

HE055 series:  II 3 G Ex ec IIC T3 Gc


 II 3 D Ex tc IIIC T125°C Dc

Temperature range

The ambient temperature range is -40 °C to +80 °C.

The measuring head temperature TM is -40 °C to +80 °C.

Trademark

The trademark  will be used as the company identifier on the marking label.

Ratings

Electrical data

HE050 series:

Input: 18-30V dc, 700mA max.

Output Out 1 (pin 4): IO-Link or Potential free switching 100mA

Output Out 2 (pin 24): analog output, 4-20mA or Potential free switching 500mA

HE055 series:

Input: 18-30V dc, 320mA max.

Output Out 1 (pin 4): IO-Link or Potential free switching 100mA

Output Out 2 (pin 2): analog output, 4-20mA or Potential free switching 100mA

Routine tests

N/A

Descriptive documents

The scheduled drawings are listed in the report no. provided under item "Test Report No." on page 1 of this UL Type Examination Certificate.

Specific Conditions of Use

- The ambient temperature range (T_{amb}) is between -40°C and $+80^{\circ}\text{C}$. The measuring head temperature range (TM) is between -40°C and $+80^{\circ}\text{C}$.
- Integration of the potential equalization is carried out via installation, see installation instructions for details.
- The device shall be connected in compliance with EN 60079-14 requirements, providing and maintaining degree of protection at least IP54 for EPL Gc and at least IP6x for EPL Dc according to EN IEC 60079-0 requirements – See instructions.
- External panel mounted (M12) connector shall be protected from UV light (for example, daylight or light from luminaires) when installed.

Additional Information

Essential Health and Safety Requirements:

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed on page 1.