



# 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](http://www.iecex.com)

Certificate No.: **IECEX ULD 20.0022X** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2021-05-28)

Status: **Current** Issue No: 1

Date of Issue: 2023-05-18

Applicant: **HAUBER-Elektronik GmH**  
Fabrikstr. 6  
72622 Nürtingen  
Germany

Equipment: **Enclosed Type, Vibration Sensor, measuring and monitoring absolute bearing vibrations/temperature in machine**

Optional accessory:

Type of Protection: **Flameproof "db", Increased Safety "ec", Dust Ignition Protection by Enclosure "tb", "tc"**

Marking: Models HE200.02. f/b any number, HE205.02. f/b any number, HE250.02. f/b any number, HE255.02. f/b any number:  
Ex ec IIC T4 Gc  
Ex tc IIIC T135°C Dc  
-40°C to +60°C (for details refer to Annex to CoC)

Models HE200.01. f/b any number, HE205.01. f/b any number, HE250.01. f/b any number, HE255.01. f/b any number:  
Ex db IIC T4 Gb  
Ex tb IIIC T135 °C Db  
-40°C to +60°C (for details refer to Annex to CoC)

The Vibration Sensors HE200, HE205, HE250 and HE255 are for mounting to process lines running adjacent to the enclosure. The temperature of the process line has a temperature range of -40°C to +125°C (see Annex to CoC for model variants for specific temperature ranges) and also specified in the manufacturer's instructions, drawing no. M001-HE200, M001-HE205, M001-HE250, M001-HE255.

Approved for issue on behalf of the IECEx  
Certification Body:

**Andrew Moffat**

Position:

**Senior Project Engineer**

Signature:  
(for printed version)

Date:  
(for printed version)

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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](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**UL International DEMKO A/S**  
Borupvang 5A  
DK-2750 Ballerup  
Denmark





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Fabrikstr. 6  
72622 Nürtingen  
Germany

Manufacturing  
locations: **HAUBER-Elektronik GmnH**  
Fabrikstr. 6  
72622 Nürtingen  
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 60079-1:2014-06](#) 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

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

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 Reports:

[DK/ULD/ExTR20.0022/00](#)

[DK/ULD/ExTR20.0022/01](#)

Quality Assessment Report:

[DK/ULD/QAR21.0004/02](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The HE200 vibration control is used for measuring and monitoring absolute bearing vibrations in machines. It has one analogue output and two potential-free switching contacts.

The HE205 vibration control is used for measuring and monitoring vibration acceleration in machines. It has one analogue output and two potential-free switching contacts with window function.

The HE250 vibration control is used for measuring and monitoring absolute bearing vibrations in machines and provides a bearing status parameter. It has two analogue outputs and two potential-free switching contacts.

The HE255 vibration control is used for measuring and monitoring vibration acceleration in machines and provides a bearing status parameter. It has two analogue outputs and two potential-free switching contacts with window function.

**Please see Annex for additional information.**

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

- The ambient temperature range is between -40°C and +60°C. The measuring head service temperature range is between -40°C and +125°C. Model differences must be observed.
- Repair of flameproof joints is not permitted. A statement, e.g. "Do not repair flameproof joints." Shall be stated in the manual.
- Integration of the potential equalization is carried out via installation, see installation instructions for details.
- The cable glands are tested with a reduced tensile force (25 %) in accordance with clause A.3.1 of IEC 60079-0 and may only be used for fixed installation of Group II apparatus. The user shall ensure adequate clamping of the cable.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

Issue 1: Corrections, updated manual, updated scheduled drawings.

**Annex:**

[Annex to IECEx ULD 20.0022X Issue 1.pdf](#)



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Annex to Certificate No.:

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Issue No.:1

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## TYPE DESIGNATION

HE200, HE205, HE250 or HE255, f/b 01 or 02, f/b any two or three numbers or characters (not safety relevant), f/b any two or three numbers or characters (not safety relevant), f/b 00, 01, 02, 50, 51 or 52, f/b 00, 01 or 02, f/b any number.

Overview of variants:

Coding		HE200.02.xx.xx.xx.00.xxx	HE200.02.xx.xx.xx.01.xxx	HE200.01.xx.xx.xx.00.xxx	HE200.01.xx.xx.xx.02.xxx	HE205.02.xx.xx.xx.00.xxx	HE205.02.xx.xx.xx.01.xxx	HE205.01.xx.xx.xx.00.xxx	HE205.01.xx.xx.xx.02.xxx	HE250.02.xx.xx.xx.00.xxx	HE250.02.xx.xx.xx.01.xxx	HE250.01.xx.xx.xx.00.xxx	HE250.01.xx.xx.xx.02.xxx	HE255.02.xx.xx.xx.00.xxx	HE255.02.xx.xx.xx.01.xxx	HE255.01.xx.xx.xx.00.xxx	HE255.01.xx.xx.xx.02.xxx
Connector	M12 Plug/Socket	x			x				x				x				
	Integrated cable (cable gland)		x	x	x		x	x	x		x	x	x		x	x	x
Measuring head temperature $T_M$ Ambient temperature $T_A$	$-40\text{ °C} \leq T_M \leq 85\text{ °C}$ $-40\text{ °C} \leq T_A \leq 60\text{ °C}$	x		x		x		x		x		x		x		x	
	$-35\text{ °C} \leq T_M \leq 125\text{ °C}$ $-35\text{ °C} \leq T_A \leq 60\text{ °C}$		x				x				x				x		
	$-20\text{ °C} \leq T_M \leq 125\text{ °C}$ $-20\text{ °C} \leq T_A \leq 60\text{ °C}$				x				x				x				x
Ex ec IIC T4 Gc Ex tc IIIC 135°C Dc	IECEX ULD 20.0022X	x	x			x	x			x	x			x	x		
Ex db IIC T4 Gb Ex tb IIIC 135°C Db	IECEX ULD 20.0022X			x	x			x	x			x	x			x	x

## PARAMETERS RELATING TO THE SAFETY

24±10%Vdc, 100mA; Potential free switching contact 2 x 30Vdc/1.0A;  
HE200, HE205 Series: Analog Output 1 x 4..20mA  
HE250, HE255 Series: Analog Output 2 x 4..20mA

## MARKING

Marking has to be readable and indelible; it has to include the following indications:



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## Variant 3 - HE200.02.xx.xx.00.000

<b>HE HAUBER</b> ELEKTRONIK Type: HE2xx,02,xx,xx,xx,00,000 Item-no.: 12345 Serial-no.: 123456 / 2023 Measuring range $v_{rel}$ : 0...xx mm/s Frequency range $v_{rel}$ : xx...xxxx Hz $-40^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$ Ver.: 1,1	MADE IN GERMANY	IECEX	   <b>IP 66/67 Type 4x Enclosure</b>	Manufacturer: Hauber-Elektronik GmbH Fabrikstraße 6 72622 Nürtingen Germany <a href="http://www.hauber-elektronik.de">www.hauber-elektronik.de</a>

## Variant 4 - HE200.02.xx.xx.01.xxx

<b>HE HAUBER</b> ELEKTRONIK Type: HE2xx,02,xx,xx,xx,01,xxx Item-no.: 12345 Serial-no.: 123456 / 2023 Measuring range $v_{rel}$ : 0...xx mm/s Frequency range $v_{rel}$ : xx...xxxx Hz $-35^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$ Ver.: 1,1	MADE IN GERMANY	IECEX	   <b>IP 66/67 Type 4x Enclosure</b>	Manufacturer: Hauber-Elektronik GmbH Fabrikstraße 6 72622 Nürtingen Germany <a href="http://www.hauber-elektronik.de">www.hauber-elektronik.de</a>

## Variant 5 - HE200.01.xx.xx.00.xxx

<b>HE HAUBER</b> ELEKTRONIK Type: HE2xx,01,xx,xx,xx,00,xxx Item-no.: 12345 Serial-no.: 123456 / 2023 Measuring range $v_{rel}$ : 0...xx mm/s Frequency range $v_{rel}$ : xx...xxxx Hz $-40^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$ Ver.: 1,1	MADE IN GERMANY	IECEX	   <b>IP 66/67 Type 4x Enclosure</b>	Manufacturer: Hauber-Elektronik GmbH Fabrikstraße 6 72622 Nürtingen Germany <a href="http://www.hauber-elektronik.de">www.hauber-elektronik.de</a>

## Variant 6 - HE200.01.xx.xx.02.xxx

<b>HE HAUBER</b> ELEKTRONIK Type: HE2xx,01,xx,xx,xx,02,xxx Item-no.: 12345 Serial-no.: 123456 / 2023 Measuring range $v_{rel}$ : 0...xx mm/s Frequency range $v_{rel}$ : xx...xxxx Hz $-20^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$ Ver.: 1,1	MADE IN GERMANY	IECEX	   <b>IP 66/67 Type 4x Enclosure</b>	Manufacturer: Hauber-Elektronik GmbH Fabrikstraße 6 72622 Nürtingen Germany <a href="http://www.hauber-elektronik.de">www.hauber-elektronik.de</a>