



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 ULD 20.0022X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-05-28

Applicant: **HAUBER-Elektronik GmnH**
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:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:

2021-05-28

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:

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





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Issue No: 0

Manufacturer: **HAUBER-Elektronik GmnH**
Fabrikstr. 6
72622 Nürtingen
Germany

Additional
manufacturing
locations:

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 Report:

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

Quality Assessment Report:

[DK/ULD/QAR21.0004/00](#)



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Date of issue: 2021-05-28

Issue No: 0

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.

Annex:

[Annex to IECEx ULD 20.0022X Issue 0.pdf](#)



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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.00.xxx	HE200.02.xx.xx.xx.01.xxx	HE200.01.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 °C ≤ T _M ≤ 85 °C -40 °C ≤ T _A ≤ 60 °C	x		x		x		x		x		x		x		x	
	-35 °C ≤ T _M ≤ 125 °C -35 °C ≤ T _A ≤ 60 °C		x				x				x				x		
	-20 °C ≤ T _M ≤ 125 °C -20 °C ≤ T _A ≤ 60 °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			
Ex db IIC T4 Gb Ex tb IIIC 135°C Db	IECEx ULD 20.0022X			x	x		x	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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Manufacturer:
 (производитель)
 Hauber-Elektronik GmbH
 Fabrikstraße 6
 72622 Nürtingen
 Germany (Германия)
 www.hauber-elektronik.de

HE HAUBER
 _LLK1RONIK
 Type: HE2xx.02.xx.xx.00.000
 Item-no.: 12345
 Serial-no.: 123456
 Measuring range V_{ER} : 0...xx mm/s
 Frequency range V_{ER} : xx...xxxx Hz

MADE IN GERMANY
 IECEx II 3G Ex ec IIC T4 Gc
 II 3D Ex tc IIIC T135°C Dc
 UL 21 ATEX 2570X
 IECEx ULD 20.0022X
 UL-BR 20.1667 X
 Proc. Cont. Eq. Haz. Loc.
 Class I, Div 2, Groups A, B, C and D, T4
 Class II, Div 2, Groups F and G, T4
 $-40\text{ °C} \leq T_{Amb} \leq +60\text{ °C}$
 IP 66/67 Type 4x Enclosure

EACEx %Ex % % % %
 Ex % % % % T % % °C %
 Nr xx / xx/xxxx
 Segurança

 INMETRO OCP 0028

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 (производитель)
 Hauber-Elektronik GmbH
 Fabrikstraße 6
 72622 Nürtingen
 Germany (Германия)
 www.hauber-elektronik.de

HE HAUBER
 _LLK1RONIK
 Type: HE2xx.02.xx.xx.00.xxx
 Item-no.: 12345
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 II 3D Ex tc IIIC T135°C Dc
 UL 21 ATEX 2570X
 IECEx ULD 20.0022X
 UL-BR 20.1667 X
 Proc. Cont. Eq. Haz. Loc.
 Class I, Div 2, Groups A, B, C and D, T4
 Class II, Div 2, Groups F and G, T4
 $-35\text{ °C} \leq T_{Amb} \leq +60\text{ °C}$
 IP 66/67 Type 4x Enclosure

EACEx %Ex % % % %
 Ex % % % % T % % °C %
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HE HAUBER
 _LLK1RONIK
 Type: HE2xx.01.xx.xx.00.xxx
 Item-no.: 12345
 Serial-no.: 123456
 Measuring range V_{ER} : 0...xx mm/s
 Frequency range V_{ER} : xx...xxxx Hz

MADE IN GERMANY
 IECEx II 2G Ex db IIC T4 Gb
 II 2D Ex tb IIIC T135°C Db
 UL 20 ATEX 2421X
 IECEx ULD 20.0022X
 UL-BR 20.1667 X
 Proc. Cont. Eq. Haz. Loc.
 Class I, Div 2, Groups A, B, C and D, T4
 Class II, Div 2, Groups F and G, T4
 $-40\text{ °C} \leq T_{Amb} \leq +60\text{ °C}$
 IP 66/67 Type 4x Enclosure

EACEx %Ex % % % %
 Ex % % % % T % % °C %
 Nr xx / xx/xxxx
 Segurança

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HE HAUBER
 _LLK1RONIK
 Type: HE2xx.01.xx.xx.02.xxx
 Item-no.: 12345
 Serial-no.: 123456
 Measuring range V_{ER} : 0...xx mm/s
 Frequency range V_{ER} : xx...xxxx Hz

MADE IN GERMANY
 IECEx II 2G Ex db IIC T4 Gb
 II 2D Ex tb IIIC T135°C Db
 UL 20 ATEX 2421X
 IECEx ULD 20.0022X
 UL-BR 20.1667 X
 Proc. Cont. Eq. Haz. Loc.
 Class I, Div 2, Groups A, B, C and D, T4
 Class II, Div 2, Groups F and G, T4
 $-20\text{ °C} \leq T_{Amb} \leq +60\text{ °C}$
 IP 66/67 Type 4x Enclosure

EACEx %Ex % % % %
 Ex % % % % T % % °C %
 Nr xx / xx/xxxx
 Segurança

 INMETRO OCP 0028

LIST OF CERTIFIED COMPONENTS

The following additional previous editions of Standards noted under the “Standards” section of this Certificate were applied to integral Components as itemized below. There are no significant safety related changes between these previous editions and the editions noted under the “Standards” section.

Product	Certificate Number	Standards
HSK-INOX-PVDF-Ex-d 1.633.1200.50 or HSK-INOX-Ex-d 1.632.1200.50	IECEx KEM 07.0013X	IEC 60079-0:2011, IEC 60079-1:2014-06, IEC 60079-31:2013