



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 IBE 17.0040X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 1 [Issue 0 \(2018-03-16\)](#)
Date of Issue: 2020-10-12
Applicant: **Johannes Hübner Fabrik elektrischer Maschinen GmbH**
Siemensstraße 7
35394 Gießen
Germany
Equipment: **Encoder type Ex FG 40**
Optional accessory:
Type of Protection: **flameproof enclosure "d" and protection by enclosure "t"**
Marking: Ex db IIC T6 or T5 Gb
Ex tb IIIC T85 °C Db

Approved for issue on behalf of the IECEx
Certification Body:

Alexander Henker

Position:

Deputy Head of department Certification Body

Signature:
(for printed version)

Date:

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:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany





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Manufacturer: **Johannes Hübner Fabrik elektrischer Maschinen GmbH**
Siemensstraße 7
35394 Gießen
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

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:

[DE/IBE/ExTR17.0017/00](#)

[DE/IBE/ExTR17.0017/01](#)

Quality Assessment Report:

[DE/TPS/QAR17.0001/03](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Encoder of the type Ex FG 40 is a cylindrical unit with internal electronics for the angle and rotational speed measurement and the transmission in electrical signals. The enclosure is designed in type of protection flameproof enclosure and protection by enclosure.

The type key Ex FG 40 ** **** ** **** ** describes different variants and configurations of the encoder. In the area of the mechanics there are no differences with influence on the design of the flameproof gaps. The enclosure is produced from aluminium. The cable glands are not part of the examination. In addition, the type key describes the number of pulses, measured signals and interfaces of the encoder.

The permissible maximum ambient temperature of the various designs depends on the intended use of the encoder and is specified in the following table:

EPL Temperature Class ambient temperature range

Gb T6 -40 °C ... +55 °C

Gb T5 -40 °C ... +60 °C

Db T85 °C -40 °C ... +55 °C

Technical data:

Supply voltage electronics: 12 ... 30 V DC

Rated power: maximum 3.62 W

maximum rotation speed: 6000 min⁻¹

ambient temperature range: -40 °C ... +55 °C or +60 °C

degree of protection acc. to IEC 60529: IP6X

Property class screw plug: A2-70

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The surface temperature or temperature class of the equipment depends on the ambient temperature. The corresponding assignment for each design is specified in this certificate and in the operating manual.
- The shaft and shaft sealing ring were not tested for resistance against environmental influences (UV radiation, mechanical influences) because, at a proper installation of the equipment for the intended use, no environmental influences are expected. If the equipment occasionally should not be installed as required, then the shaft and shaft sealing ring have to be protected against environmental influences (light sources, mechanical influences).
- The type of protection depends on a proper selection and installation of the cable glands. All openings have to be provided with suitable and separately certified cable glands or blanking elements. In addition, they have to be selected in accordance with IEC 60079-14.
- The product contains gaps which deviate from the minimum requirements of IEC 60079-1. Therefore, repairing is not allowed.
- Only fastening screws specified by the manufacturer may be used.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- The encoder complies with the requirements of IEC 60079-0, Ed. 7
- A metal name plate is used.
- The encoder may be manufactured according the changed documents.