



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx IBE 13.0041X

Issue No: 1

Certificate history:

Status: **Current**

Issue No. 1 (2018-03-20)

Issue No. 0 (2013-10-21)

Date of Issue: **2018-03-20**

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Applicant: **EUROTEC Antriebszubehör GmbH**
Bildstock 37
88085 Langenargen
Germany

Equipment: **limit switch boxes wave EV...ED*, EA...ED*, EV...K2D* and EA...K2D***

Optional accessory:

Type of Protection: **increased safety "e", dust ignition protection by enclosure "t", protection by flameproof enclosures "d"**

Marking:

Ex db eb IIC T6 Gb or Ex db eb IIB T6 Gb

Ex tb IIIC T80 °C Db

Approved for issue on behalf of the IECEx
Certification Body:

Prof. Dr. Tammo Redeker

Position:

Head of Certification Body

Signature:
(for printed version)

Date:


2018-03-20

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Certification Body
Fuchsmühlenweg 7
09599 Freiberg
Germany





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Manufacturer: EUROTEC Antriebszubehör GmbH
Bildstock 37
88085 Langenargen
Germany

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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:

DE/IBE/ExTR13.0040/00 DE/IBE/ExTR13.0040/01

Quality Assessment Report:

DE/EPS/QAR13.0003/04



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description of Equipment

The limit switch boxes of the types EV... ED*, EA... ED*, EV... K2D* and EA... K2D* consist of Vestamid injection moulding or aluminium casting and contain separately certified Ex-components or normal switches in areas with combustible dust. The connection can be made via separately certified cable entries or alternatively via separately certified connectors. The devices are intended for use in potentially explosive atmospheres requiring Category 2G or 2D equipment.

Type extent

EV...ED...

wave limit switch box. enclosure of Vestamid

EA...ED...

wave limit switch box. enclosure of aluminium

EV...ED...-DB...

wave limit switch box. enclosure of Vestamid with terminal enclosure

EA...ED...-DB...

wave limit switch box. enclosure of aluminium with terminal enclosure

EV...ED...-3D...

wave limit switch box. enclosure of Vestamid with polycarbonate-cap

EV...K2D...

wave limit switch box. enclosure of Vestamid for applications in zone 21

EA...K2D...

wave limit switch box. enclosure of aluminium for applications in zone 21

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The limit switch boxes type EV...ED* and EV...K2D* are tested with reduced impact energy and must be protected for mechanical hazard.
- The special conditions specified in the corresponding operating instructions must be observed for the Ex components used. This applies in particular to cable glands and connectors.



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EQUIPMENT (continued):

Technical Data Ambient temperature range:

EV...ED*, EV...K2D* -20 °C to +40 °C

EA...ED*, EA...K2D* -55 °C/-20 °C to +60 °C

Degree of protection:

IP66, EA...ED*, EA...K2D* additional IP67

Electrical Data

Rated voltage $U_e \leq 90 \text{ V}$ or $90 \text{ V} \leq U_e \leq 250 \text{ V}$

Rated current I_e max. 4 A

Maximum Power dissipation P_{max} 2.5 W

Limit switch boxes are fitted to a valve unit, in order to indicate the position of the valve. The limit switch box has a visual position indicator for the valve position and features an electrical positioning response. The positioning response is given via mechanical end switches or inductive sensors. The limit switch boxes have a housing from conductive Aluminium and vestamid. In these housings, clamps, cable glands and mechanical Ex d switches are installed, which are explosion proof parts with their own type test certificate. In the dust explosion areas with the explosion protection type Ex t, any sensor or limit switch can be built into the housing. Here, the maximum permissible transferred power in the housing must be observed for limiting the surface temperature.



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

- The new standards have been taken into account and the labelling has been adapted accordingly.
- The limit switch boxes EA... -ED may additionally be provided with a further shaft feed-through in the cover, which is constructed structurally the same.
- As an alternative to the cable gland, EV... -ED and EA... -ED limit switch boxes may also be used with suitable and separately certified connecting elements, such as M12 plugs or connectors.
- In addition to cable glands, the limit switch boxes may also be equipped with separately certified thread adapters (e. g. NPT1/2).
- The following connection values must not be exceeded for the electrical feedthroughs for solenoid valve control by means of additional terminals in the box:

$U_N = 24 \text{ V}$, $I_N = 4 \text{ A}$ with a minimum conductor cross-section of 0.75 mm^2