



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

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|-----------------------------------|--|-------------|--|
| Certificate No.: | IECEx FTZU 15.0005X | Issue No: 1 | Certificate history: Issue No. 1 (2017-03-31) Issue No. 0 (2015-03-30) |
| Status: | Current | Page 1 of 4 | |
| Date of Issue: | 2017-03-31 | | |
| Applicant: | Elok – Opava spol s r.o. Sádek 17 747 75 Velké Heraltice Czech Republic | | |
| Equipment: Optional accessory: | Earthing block EGT-t | | |
| Type of Protection: | Flameproof enclosure "d", Intrinsic safety "i", dust protection by enclosure "t" | | |
| Marking: | Ex db ib [ib] IIB T4 Gb Ex ib [ib] tb IIIC T130°C Db | | |

Approved for issue on behalf of the IECEx
Certification Body:

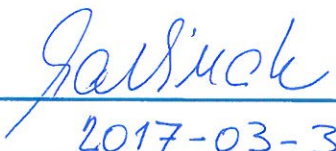

Dipl. Ing. Lukáš Martinák

Position:

Head of the Certification Body

Signature:
(for printed version)

Date:


2017-03-31


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:

Fyzikálně technický zkušební ústav
(Physical -Technical Testing Institute)
Pikartská 7, 71607 Ostrava - Radvanice
Czech Republic





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Manufacturer: Elok – Opava spol s r.o.
Sádek 17
747 75 Velké Heraltice
Czech Republic

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 electrical 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 60079-11 : 2011 Edition:6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" |
| IEC 60079-31 : 2013 Edition:2 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t" |

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:

CZ/FTZU/ExTR15.0005/00 CZ/FTZU/ExTR15.0005/01

Quality Assessment Report:

CZ/FTZU/QAR07.0002/04





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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The EGT-t earthing block is designed for safe pumping of fuels into tank trucks or railway tanks in areas with hazardous or flammable gases and dust ignition. The electronic circuits of the earthing block are installed in a flameproof housing designed as a stainless steel (variant EGT-4S) and an aluminium alloy casting (variant EGT-4; EGT-6). The circuit of the clamp is designed as intrinsically safe. The cover with two or four sights is fixed with six hexagon screw set, placed in protecting shrouds. Certified flameproof cable glands are used for input of supply cable, operating cable and output cable to the clamp. The equipment is equipped by cable with connector for easy connection of earth cable with clamp. For ambient temperature -55°C shall be used a cable type Arctic. Maximum cable length of cable to earthing anchor is 20 m.

The earthing block monitors three connection states of earthing clamps:

- The tank is not connected or the condition that impedance is $< 3000 \Omega$ – red indicator light;
- The clamp are directly connected to the earthing point of the object- red indicator light;
- The tank is connected, the impedance of the system is between 50Ω - 3000Ω – green indicator light or blink;
- The clamps are directly connected to the earthing point of the object after previous connection to the tank-green indicator light.

Marking:

- "ib" - earth cable with clamp,
- "[ib]" - associated apparatus inside of enclosure

Into flameproof enclosure are placed two PCB's. Control PCB include supply terminal, IS relays input terminal, IS terminal for connection of earth clamps. There are also non IS circuits of Power supply and relays control. Displaying PCB include only non IS circuits.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Ambient temperature T_{amb} : -55°C to $+60^{\circ}\text{C}$
2. The basic values for maximum constructional gaps are different from the maximum values shown in Table 3, IEC 60079-1:2014. The values are specified in the approval documents .





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

Issue 1:

1) Using of stainless steel enclosure for version EGT-4S:

- This issue extends the product for variant EGT-4S. The design is the same as variant EGT-4, only used material of enclosure is from stainless steel. Variant EGT-6 is without changes

2) Modification of electronics for version EGT-4 and EGT-4S:

a) Control PCB

- There were modified a circuits around the Clamps terminal. The IS parameters of Clamps were modified due to change of circuit. The output current is raised from 4.5 mA to 44 mA.

- There was changed a footprint of PCB. Insulation distances on PCB were evaluated.

- There was change a type of used fuses.

a) Display PCB

- There were carried out changes on this PCB. The changes haven't influence to IS of equipment. On this PCB aren't parts on which safety depend and PCB is protected by type of protection "db".

- The Bluetooth module SPBT2632C1A is added.

3) Recertification according to newest standards IEC 60079-0:2011, IEC 60079-1:2014, IEC 60079-11:2011 and IEC 60079-31:2013.

