



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 FTZU 15.0005X Issue No: 2 Certificate history:
Issue No. 2 (2018-11-19)
Status: Current Issue No. 1 (2017-03-31)
Date of Issue: 2018-11-19 Page 1 of 5 Issue No. 0 (2015-03-30)
Applicant: Elok – Opava spol s r.o.
Sádek 17
747 75 Velké Heraltice
Czech Republic
Equipment: Earthing block EGT-t and EGTP 1.X
Optional accessory:
Type of Protection: Flameproof enclosure "d", Intrinsic safety "i", dust protection by enclosure "t", protection "n"
Marking:
Ex db ib [ib] IIB T4 Gb – EGT-t
Ex ib [ib] tb IIIC T130°C Db – EGT-t
Ex ib [ib Gb] nA nC IIB T4 Gc – EGTP 1.X
Ex ib [ib] tb IIIC T130°C Db – EGTP 1.X

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:


2018-11-19



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 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 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
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](#)

[CZ/FTZU/ExTR15.0005/02](#)

Quality Assessment Report:

[CZ/FTZU/QAR07.0002/06](#)





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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description to the current equipment type EGT-t:

The EGT-t earthing block is designed for safe pumping of fuels into tank trucks or railway tanks in areas with hazardous of flammable gases and dust ignition. The electronic circuits of the earthing block are installed in a flameproof housing designed as an 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 and it is possible to connect only clamps mentioned in the instruction manual. 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:

- 55°C to $+60^{\circ}\text{C}$ for type EGT-t
- 50°C to $+60^{\circ}\text{C}$ for type EGTP 1.X

2. The basic values for maximum constructional gaps of the equipment type EGT-t are different from the maximum values shown in IEC 60079-1:2014, Table 3. The values are specified in the approval documents.

3. The equipment type EGTP 1.X shall be placed outside the zone 1.

4. One clamp can only be connected to the equipment type EGTP 1.X.

5. There is prohibited to combine an intrinsically safe voltage with other voltage on the terminals XC2 and XC4.

6. The cables of the equipment type EGTP 1.X shall be fastened against extraction.





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EQUIPMENT (continued):

Description to new equipment type EGTP 1.X:

The EGTP 1.X earthing block is designed for indication of earth of mobile and stationary tanks. The electronic circuits of the earthing block are installed in a stainless steel box with degrees of protection IP 65. The cover is fixed by screws to the body and equipped by two sight glasses. The box has internal and external earthing clamps.

The power supply and control circuits are in Ex-protection Ex nA and terminal block XC1 is used for connection of power supply cable. For control circuits are determined terminal blocks CX2 and CX4. These terminal blocks are connected with contacts of relays and shall be used for connection of intrinsically safe equipments if the parameters mentioned below are satisfied. The relays RE1 and RE2 are designed in Ex-protection nC. Product is equipped by a Bluetooth module with maximal threshold power 10 mW.

The circuit of the clamp (cable with connector) is designed as intrinsically safe and it is possible to connect only clamps mentioned in the instruction manual. For cable inputs are used Ex-cable glands. Maximum cable length of cable to earthing anchor is 20m.

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:

- Ex „Ib“ – earth cable with clamp,
- Ex „[Ib]“ - associated apparatus inside of enclosure





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

Issue 2:

There was introduced a new type of product EGTP 1.X. Due to this were added new drawings and documents to the technical documents list.

The type EGT-t still without changes. All documents and drawings still without modifications.

The Specific Conditions of Use have been fully updated.

