

EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. EU type examination certificate Nr **ITS-I23ATEX32846X**

4. **Product:** Holding electromagnet, models EXD130, EXD160 and EXD180

5. **Manufacturer:** Elfri S.r.l.

6. **Address:** Via Friuli 9
33050 Gonars (UD)
Italy

7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.

8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 200032846UDI-ATX issued on 12th June 2023

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2018, EN 60079-18:2015, and EN 60079-18:2015/A1:2017 except in respect of those requirements referred to at item 16 of the Schedule.

10. If the sign X is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12. The marking of the product shall include the following:



II2G Ex mb IIC T6 Gb
II2D Ex mb IIIC T85°C Db
Tamb: -20°C ÷ +40°C

June 14, 2023

Certificate issue date

Alessandro Savio

Certification Officer

Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo
Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC
Mutual Recognition Agreements



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Italia S.p.A. Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy

LFT-EMEA-IT-ATEX-OP-23a (8 March 2022)

Page 1 of 3



SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS-I23ATEX32846X

13. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

The product covered by this document is a holding electromagnet.

The operating principle is based on the creation of an electromagnetic field through the application of electricity to the inner enameled round copper wire (air coil). The component that is magnetized is the magnetic core (i.e. the central metal and outer ring surfaces of the holding electromagnet).

When powered, the electromagnet retention force is made active and a suitable object/surface can be attracted. When the supply voltage is cut off, the electromagnet loses its retention force.

The type code of product is:

- EXD yyy_xxx_0891, where

EXD	Commercial name
yyy	Three digit to indicate the external diameter of equipment: <ul style="list-style-type: none">• 130• 160• 180
xxx	Three digit to indicate the admitted product variants (variations irrelevant to ATEX certification)
0891	Four digit to indicate Elfri technical specification

The product is supply at 48Vdc and it is designed for work in accordance with a specific duty cycle: 6s ON and 9s OFF

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

14. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
USE AND MAINTENANCE MANUAL	UM-EXD	00	31.05.2023
ATEX ELECTROMAGNETS RESIN CYCLE	CREA-ATEX	00	24.03.2022
Technical Annex no. 1 BILL OF MATERIALS	ANN-TECH.1	02	12.05.2023
Technical Annex no. 2 COILS WINDING CYCLE	ANN-TECH.2	02	12.05.2023
Technical Annex no. 3 DRAWINGS	ANN-TECH.3	01	12.05.2023
Technical Annex no. 4 COMPONENTS: <ul style="list-style-type: none">- CABLE- CABLE GLAND- COPPER- FUSE- THERMAL PROTECTOR- PLASTIC PA12	ANN-TECH.4	01	12.05.2023



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TITLE	DOCUMENT Nr	LEVEL	DATE
- PLATE - RESIN - SOLDERING TIN - GLASS FIBREBRAIDED COATED WITH SILICONE RUBBER - ROUND HEAD TAPPING RIVETS - UNINSULATED CRIMPING TERMINAL			
RULES FOR PRODUCT CONFORMITY VERIFICATION TESTS	ROT-EXD	0	24/03/2022

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

15. SPECIFIC CONDITIONS OF USE

- The equipment shall be protected against direct sunlight or ultraviolet lights;
- Designed for a specific duty cycle, as indicated in the item description;
- Reduce the impact velocity not more than 1 m/s and reduce the maximum potential impact energy is not more than 500 J;
- The user shall provide the required strain relief for both supply cables;
- See user manual to minimize the risk of electrostatic charge;
- The equipment is furnished with the supply already connected, through a suitable cable gland. The connection of the free end of the cable shall be carried out in safe zone or suitably protected, using one of the types of protection foreseen by the standard EN 60079-0;

16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant Essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. 200032846UDI-ATX Revision 0 dated 12 June 2023

17. ROUTINE (FACTORY) TESTS

- The manufacturer must conduct a di-electric strength test on each unit at:
 - 500V r.m.s. at 48Hz to 62Hz for 1s; or
 - 700Vdc for 1s
 - 600V r.m.s. at 48Hz to 62Hz for 100ms; or
 - 840Vdc for 100msThe test shall be carried out between each circuit and the surface of the compound or the non-metallic enclosure that, if necessary, can be clad with a conductive foil.
No breakdown or arcing occurs during testing
- The manufacturer must conduct a visual inspection on each unit. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion (separation of any adhered parts) or softening.

18. DETAIL OF CERTIFICATE CHANGES

N/A