



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 ITS 25.0031X	Page 1 of 3	Certificate history:
Status:	Current	Issue No: 0	
Date of Issue:	2025-11-24		
Applicant:	ELFRI S.r.l. Via Friuli, 9 Gonars (UD) 33050 Italy		
Equipment:	Holding electromagnet, models EXD130_xxx_0891, EXD160_xxx_0891 and EXD180_xxx_0891		
Optional accessory:			
Type of Protection:	Encapsulation 'mb'		
Marking:	Ex mb IIC T6 Gb Ex mb IIIC T85°C Db		

Approved for issue on behalf of the IECEx
Certification Body:

Richard J Tunnicliffe

Position:

Certification Officer

Signature:
(for printed version)

Date:
(for printed version)

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:

Intertek Testing & Certification Limited
Units C & D, Imperial Park, Randalls Way
Leatherhead, Surrey KT22 7TS
United Kingdom

intertek



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Manufacturer: **ELFRI S.r.l.**
Via Friuli, 9
Gonars (UD) 33050
Italy

Manufacturing
locations: **ELFRI S.r.l.**
Via Friuli, 9
Gonars (UD) 33050
Italy

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 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

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 Report:

[GB/ITS/ExTR25.0028/00](#)

Quality Assessment Report:

[GB/ITS/QAR25.0003/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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 product has the following ratings:

		EXD130	EXD160	EXD180	
Retention force		540	990	1300	[daN]
Supply Voltage		48			[Vdc]
Ripple max		20			[%]
Absorbed current		0.65	1.22	1.56	[A]
Power consumption		31	59	75	[W]
Duty cycle		40			[%]
Switch ON * / Switch OFF		6 / 9			[s]
Cycles per hour		240			[-]
Degree of protection		IP65			[-]
Weight		4.6	7.5	10.0	[kg]
Dimension	Øext x H x L	130x60x155	160x60x185	180x60x205	[mm]
	Øint	17			[mm]

The type code of product is:

EXD yyy_xxx_0891, where

EXD	Commercial name
yyy	Three digit to indicate the external diameter of equipment: - 130 - 160 - 180
xxx	Three digit to indicate the admitted product variants (variations not relevant to EX certification)
0891	Four digit to indicate elfri technical specification

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall be protected against direct sunlight or ultraviolet lights;
- The user shall provide the required strain relief for both supply cables;
- See user manual to minimize the risk of electrostatic charge and mechanical impact protection;
- 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 IEC 60079-0.

Annex:

[Annex to IECEx C of C - ITS 25.0031X_1.pdf](#)



Annex to IECEx Certificate of Conformity

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Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
USE AND MAINTENANCE MANUAL	UM-EXD	01	22.10.2025
PRODUCT CONFORMITY ASSESSMENT	PCA	01	22.10.2025
Technical Annex no. 1 BILL OF MATERIALS	ANN-TECH.1	02	22.10.2025
Technical Annex no. 2 COILS WINDING CYCLE	ANN-TECH.2	03	22.10.2025
Technical Annex no. 3 DRAWINGS	ANN-TECH.3	01	12.05.2023
Technical Annex no. 4 COMPONENTS:	ANN-TECH.4	01	22.10.2025
RULES FOR PRODUCT CONFORMITY VERIFICATION TESTS	ROT-EXD	0	22.10.2025
ATEX ELECTROMAGNETS RESIN CYCLE	CREA-ATEX	0	26.03.2025

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IECEx Certified Components on which conformance depends:					
Item	Description	Manufacturer	Type	Certificate No. / Standards*	Coding / Ratings
1	Cable gland	Pflitsch GmbH & Co. KG	Blueglobe HT	IECEx PTB 11.0019X / IEC 60079-0:2017, IEC 60079-7:2017, IEC 60079-31:2013	Ex eb IIC Gb Ex tb IIIC Db

* "No applicable Technical Differences"

Required Manufacturer Routine Testing:		
Test	Title/Description of Test	Standard and Clause
1	<p>The manufacturer must conduct a di-electric strength test on each unit at:</p> <ul style="list-style-type: none">- 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 100ms <p>The 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.</p> <p>No breakdown or arcing occurs during testing</p>	IEC 60079-18 clause 9.2
2	<p>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.</p>	IEC 60079-18 clause 9.1

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