



# 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](http://www.iecex.com)

Certificate No.: **IECEX INE 24.0034X** Page 1 of 3 [Certificate history:](#)  
Status: **Current** Issue No: 0  
Date of Issue: 2024-10-16  
Applicant: **BIFFI ITALIA s.r.l**  
Strada Biffi, 165  
I – 29017 Fiorenzuola d'Arda  
**Italy**  
Equipment: **Electro-Magnetic Clutch Device and Manually Operated Electrical Switch for Actuator Type EFS**  
Optional accessory:  
Type of Protection: **db, h, tb**  
Marking: **Ex db h IIB T4 Gb**  
**Ex h tb IIIC T135°C Db IP66**

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)



Thierry HOUÉIX

Ex Certification Officer

2024-10-16

Signé électroniquement  
Digitally signed by  
Thierry HOUÉIX  
Ex Certification Officer  
Délégué Certification

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

**INERIS**  
Institut National de l'Environnement Industriel et des Risques  
BP n2 / Parc Technologique ALATA  
F-60550 Verneuil-en-Halatte  
**France**



controlling risks  
for sustainable development



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Manufacturer: **BIFFI ITALIA s.r.l**  
Strada Biffi, 165  
I – 29017 Fiorenzuola d'Arda  
**Italy**

Manufacturing  
locations: **BIFFI ITALIA s.r.l**  
Strada Biffi, 165  
I – 29017 Fiorenzuola d'Arda  
**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 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

[ISO 80079-36:2016](#) Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic methods and requirements  
Edition:1.0

[ISO 80079-37:2016](#) Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"  
Edition:1.0

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:

[FR/INE/ExTR24.0038/00](#)

Quality Assessment Report:

[FR/INE/QAR08.0005/16](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

EFS actuator consists of an assembly of five main parts:

- a Spring Return Mechanism,
- a Multiturn Certified Electric Actuator,
- an Epicyclical Gear Reduction,
- an Electro-Magnetic Clutch Device
- an hydraulic control group including a Manually Operated Electrical Switch

The parts subjected to this certificate are the Electro-Magnetic Clutch Device, available in two sizes (with free volume of 2500 cm<sup>3</sup> or 3200 cm<sup>3</sup>), the Manually Operated Electrical Switch, the Spring Return Mechanism, and the Epicyclical Gear Reduction.

Electro-Magnetic Clutch Device and Manually Operated Electrical Switch are protected by "Ex db" enclosures for gas Group IIB and "Ex tb" enclosures for dust Group IIIC.

The two enclosures (clutch and switch enclosures) present the protection degrees IP66 according to the standard IEC/EN 60529.

The Spring Return Mechanism and the Epicyclical Gear Reduction have "Ex h" types of protection for gas Group IIB and for dust Group IIIC.

Other parts and/or components of the EFS assembly must bear a suitable certification for installation in the specified hazardous areas.

The Electrical Actuator is subjected to a separate ATEX and IECEx certification; it must be in accordance with the suitable hazardous area (Zone 1 and 21), gas group IIB, temperature class T4, dust group IIIC, maximum surface temperature T135°C and ambient temperature at least -20°C to +60°C or +85°C.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- The gap and diametrical clearances are lower than the values specified in the tables of EN/IEC 60079-1 standard. The width of the flameproof joints is greater of the values specified in the EN/IEC 60079-1 standard. For any repair, to contact the manufacturer.
- For the assembly of the various parts of explosion-proof enclosures, the screws must be in stainless steel class A4 grade 70 with yield strength higher or equal to 450 N/mm<sup>2</sup>.

The other conditions of use are stipulated in the instructions.

## Annex:

[IECEX INE 24.0034X-00\\_Annex.pdf](#)

