



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

Ex COMPONENT CERTIFICATE

Certificate No.:	IECEx INE 13.0073U	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2021-11-29)
Date of Issue:	2023-01-23		Issue 2 (2016-10-25)
			Issue 1 (2014-10-29)
			Issue 0 (2014-01-10)
Applicant:	BARTEC F.N. S.R.L. Via M. Pagano, 3 I - 20090 Trezzano sul Naviglio (MI) Italy		
Ex Component:	Operators series PM10X, EFI*, EFP*, EFL*PC* and EFPL3		

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection:	db and tb
Marking:	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb IIIC 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

2023-01-23

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

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Certificate issued by:

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





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Manufacturer: **BARTEC F.N. S.R.L.**
Via M. Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy

Manufacturing locations: **BARTEC F.N. S.R.L.**
Via M. Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy

FENEX S.r.l.
via Carducci 16
I-34070 Moraro (GO)
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 component 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 60079-1:2014-06](#) 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

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 component listed has successfully met the examination and test requirements as recorded in:

Test Report:

[FR/INE/ExTR13.0073/04](#)

Quality Assessment Reports:

[IT/CES/QAR09.0003/15](#)

[IT/CES/QAR12.0006/09](#)



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Ex Component(s) covered by this certificate is described below:

The operators series PM10X, EFI*, EFL*PC*, EFP* and EFPL3 are used to command push-buttons, switches, two way switches, change over switches, selector switches or pilot lights.

The operators series PM10X, EFI*, EFP* and EFPL3 are carried out in aluminum alloy, stainless steel or carbon steel or brass. The pilot lights EFL * PC * are made in polycarbonate where the thread must be sealed to the enclosure by a silicone as specified in the instruction manual to fulfil the requirements of sealed joints in accordance with the standard IEC 60079-1.

These Ex components get the degrees of protection IP66 in accordance with IEC 60529 standard.

SCHEDULE OF LIMITATIONS:

- Refer to the PARAMETERS RELATING TO THE SAFETY concerning the service and ambient temperature ranges and maximum volumes allowed.
- The overpressure type tests on operators type EFL*PC* have been performed at 33 bar.
- The overpressure type tests on operators type PM10X, and EFP* have been performed at 48.6 bar.
- The overpressure type tests on operators type EFI* have been performed at 60 bar
- The overpressure type test on light pushbutton type EFPL3 have been performed at 80 bar.
- During the installation, the user will take into consideration that pilot light type EFL*PC* underwent only a shock corresponding to an energy of a low risk at 2J.
- The flameproof joints have a different value from those specified in the tables of the IEC 60079-1 standard, for any repair to contact the manufacturer.
- The markings may be omitted if the manufacturer of Ex Component Certificate is also the holder of the Ex Equipment certificate intended to be used.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

For the Issue n°4 :

- Increase of the maximum volume allowed of the enclosures on which the operators could be installed, for Group IIB+H2 with maximum ambient temperature of +60°C
- Remove of the volume restriction for operators type EFL*PC*
- Application of the last editions of the standards listed in the certificates

For the Issue n°3 :

- Change of the name and address of the applicant and manufacturer
- Update of the marking plates

For the Issue n°2 :

- Introduction of new variations of the operators type EF1* with the diameter of the shaft increased to 10 mm or 16 mm
- Application of the standard IEC 60079-1:2014 and IEC 60079-31:2013

For the Issue n°1 :

- Introduction of a new type of operator : Light pushbutton EFPL3
- Extension of the maximum ambient temperature from +60°C to +80°C

Annex:

[IECEX INE 13.0073U-04_Annex.pdf](#)



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PARAMETERS RELATING TO THE SAFETY

- Service and ambient temperature range and maximum volumes allowed

Type	Service temperature	Gas Group	Volume of the enclosure ⁽³⁾	Ambient temperature
PM10X EFI*-RLI, EFI*-RLIM EFI*-RE, EFI*-REL EFI*-RL, EFI*-RLL EFI-RC EFP*F EFP*FSRS, EFP*FSCS EFP*	-30°C to +85°C ⁽¹⁾ -40°C to +150°C ⁽¹⁾ -60°C to +200°C ⁽¹⁾	IIC	$V \leq 79 \text{ dm}^3$	-60°C to +80°C ⁽²⁾
		IIB+H2	$V \leq 175 \text{ dm}^3$	-60°C to +80°C ⁽²⁾
			$175 \text{ dm}^3 < V \leq 325 \text{ dm}^3$	-60°C to +60°C ⁽²⁾
EFPL3	-60°C to +100°C	IIC	$V \leq 79 \text{ dm}^3$	-60°C to +80°C ⁽²⁾
		IIB+H2	$V \leq 175 \text{ dm}^3$	-60°C to +80°C ⁽²⁾
			$175 \text{ dm}^3 < V \leq 325 \text{ dm}^3$	-60°C to +60°C ⁽²⁾
EFL*PC*	-60°C to +95°C	IIC	No restriction	-60°C to +80°C ⁽²⁾

⁽¹⁾: -30°C to + 85°C with gasket type NBR
-40°C to +150°C with gasket type EPDM
-60°C to + 200°C with gasket type LSR or MVQ

⁽²⁾: The operators have been tested in non-transmission following the EN 60079-1 standard for a maximum ambient temperature of +80°C or +60°C depending on the volume.

⁽³⁾: No volume restrictions for Group IIIC and for operators type EFL*PC* in Group IIC.

MARKING

Marking has to be readable and indelible; it has to include the following indications:

- BARTEC FN (**)
- I – 20090 Trezzano sul Naviglio (MI)
- PM10X or EFI * or EFP* or EFL*PC or EFPL3 (*)
- IECEX INE 13.0073U
- (Serial number)
- Ex db IIB+H2 Gb or Ex db IIC Gb
- Ex tb IIIC Db IP66

On the small operators, the marking can be reduced at:

- BARTEC FN (**) I – 20090
- PM10X or EFI * or EFP* or EFL*PC or EFPL3 (*)
- IECEX INE 13.0073U
- Ex db/tb

(*) The type is completed by numbers and/or letters in accordance with the manufacturing variations

(**) Optional Brands "BARTEC FEAM" or "BARTEC NASP" can be added in the marking with the sentence "manufactured by BARTEC FN"

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.2 of the IEC 60079-1 standard, the operators EFL*PC* are exempted of routine test due to the fact that it has undergone a static type test under 33 bar.

In accordance with clause 16.2 of the IEC 60079-1 standard, the operators PM10X and EFP* are exempted of routine test due to the fact that it has undergone a static type test under 48.6 bar.

In accordance with clause 16.2 of the IEC 60079-1 standard, the operators EFI* are exempted of routine test due to the fact that it has undergone a static type test under 60 bar.

In accordance with clause 16.2 of the IEC 60079-1 standard, the light pushbutton type EFPL3 are exempted of routine test due to the fact that it has undergone a static type test under 80 bar.