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 INE 12.0021X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2022-01-06) Issue 2 (2018-03-06) Issue 1 (2015-07-21) Issue 0 (2012-07-03)
Date of Issue:	2023-09-14		
Applicant:	**BARTEC F.N. S.R.L.** Via M. Pagano, 3 I - 20090 Trezzano sul Naviglio (MI) **Italy**		
Equipment:	**Junction Boxes type GUA..., S... or EAHF...**		
Optional accessory:			
Type of Protection:	**db or eb and tb**		
Marking:	Ex db or eb T6…T3 IIC Gb Ex tb IIIC T85°C…T200°C Db IP66		

Approved for issue on behalf of the IECEx Certification Body: **Thierry HOUEIX**

Position: **Ex Certification Officer**

Signature: (for printed version)

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

Date: (for printed version) **2023-09-14**

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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

IECEx Certificate of Conformity

Certificate No.: **IECEx INE 12.0021X**

Date of issue: 2023-09-14

Issue No: 4

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 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 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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:

FR/INE/ExTR12.0018/04

Quality Assessment Reports:

IT/CES/QAR09.0003/15 IT/CES/QAR12.0006/10

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

These enclosures made in light alloy or stainless steel or cast iron are covered by the component certificate IECEx INE 12.0023U.
For the version “Ex db” and “Ex tb”, these enclosures are intended to receive terminals and/or other types of electrical equipments.
For the version protected by increased safety “Ex eb”, these enclosures are intended to receive terminals covered by an IECEx component certificate. The list of these components is defined in the Annex of this certificate. Alternative terminals covered by component certificates could be used if they are suitable with the relevant parameters specified in the descriptive documents of the manufacturer.
The enclosures could be also fitted with accessories (operators, valves) covered by the component certificates listed in the Annex.
These enclosures get the degrees of protection IP66 in accordance with IEC 60529 standard.

SPECIFIC CONDITIONS OF USE: YES as shown below:
For use as Ex db enclosures

In accordance with IEC 60079-1, the dimensions of the flameproof joints are different than values specified in the tables of the IEC 60079-1 standard. For any repair to contact the manufacturer.

For use as Ex tb enclosures

For installation in zone 21, when interrupting contacts are present, inside the enclosure the circuit must be protected by breakers or fuses that limit the fault current to maximum 10kA.

For use as Ex db or Ex tb enclosures

The enclosures could be used in different ambient temperatures ranges comprised from -60°C up to +130°C following the components fitted on the enclosures and in accordance with the descriptive documents.

The specific conditions of uses must be completed by those stipulated in the instructions manuals of the manufacturer and of each Ex component fitted on the final product.

Specific conditions of use referring to pilot light type EFL*PC* covered by certificate IECEx INE 13.0073U:

- 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.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue n°4:

- Application of the new standards IEC 60079-0:2017, IEC 60079-7:2017 and IEC 60079-31:2022
- Change of the manufacturer name
- Update of the Ex components list

Issue n°3:

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

Issue n°2:

- Introduction of cast iron material
- Application of the new standards IEC 60079-1 : 2014 and IEC 60079-7 : 2015

Issue n°1:

- Introduction of the type of protection “Ex e” for gas application
- Possibility to install electrical components (not covered by a separated certificate) inside the enclosure, different to terminal block, for the version using the type of protection “Ex d”.
- Application of the new standard IEC 60079-31:2013
- Introduction of new accessories covered by separated component certificates intended to be mounted on the enclosures for all types of protection.

Annex:

IECEx INE 12.0021X-04_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

For enclosures with type of protection “Ex db” and “Ex “tb”:

Maximum supply voltage: 750Vac or Vdc

Maximum current: 40 A

Rated frequency: 0/50/60 Hz

These enclosures can be use in the following range ambient temperatures:

- From -20°C up to +60°C or up to +80°C or up to +130°C.
- From -60°C up to +60°C or up to +80°C or up to +130°C.

The maximum dissipated powers are definied in the following table:

Ambient temperatures	Temperature classes	Maximum dissipated power in accordance with the free internal volume of the enclosures					Tcable
		Volume <140±10% cm3	Volume <290±10% cm3	Volume <560±10% (cm3)	Volume <650±10% (cm3)	Volume <1380±10% (cm3)	
60°C	T6/T85°C	2 W	4 W	6 W	7 W	12 W	N/A
60°C	T5/T100°C	4 W	7 W	11 W	12 W	21 W	95°C
60°C	T4/T135°C	9 W	15 W	22 W	23 W	43 W	130°C
80°C	T4/T135°C	6 W	11 W	16 W	17 W	31 W	
60°C	T3/T200°C	17 W	29 W	43 W	45 W	83 W	190°C
80°C	T3/T200°C	15 W	24 W	37 W	39 W	71 W	
130°C	T3/T200°C	8 W	14 W	21 W	22 W	40 W	

For enclosures with type of protection “Ex eb” and “Ex “tb” (when using terminals only):

Maximum supply voltage: 750 Vac or Vdc

Maximum current: 40 A (or lower in the accordance with the wiring section specified in the descriptive documents).

The maximum number of the terminals and the permissible rated current depend of the size of the enclosure, the wiring section, the range of ambient temperature and the temperature class. These parameters are described on the descriptive documents.

In accordance with the maximum numbers of terminals and the maximum currents specified in the descriptive documents, these enclosures can be used in the following range ambient temperatures and temperature classes:

- T5/T100°C for ambient temperature from -60°C or -20°C up to +60°C
- T4/T135°C for ambient temperature from -60°C or -20°C up to +80°C (Tcable=+110°C)
- T3/T200°C for ambient temperature from -60°C or -20°C up to +130°C (Tcable=+160°C)

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MARKING

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

Marking for "Ex db" and "Ex tb" version :

BARTEC FN **(****)**
I – 20090 Trezzano sul Naviglio (MI)
GUA… or S… or EAHF…**(*)**
IECEx INE 12.0021X
(Serial number)
Ex db IIC T**(**)** Gb
Ex tb IIIC T**(**)** Db IP66
T. Cable : **(**)**
…°C < Tamb < …°C **(***)**
CABLE ENTRY : (Type and size)
WARNING: DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(*) Type is completed by numbers and/or letters corresponding to manufacturing variations.

(**) Tcable and Temperature classes in accordance with the maximum dissipated power specified in the clause "PARAMETERS RELATING TO THE SAFETY"

(***) Range of temperature ambient from -20°C or -60°C to +60°C or +80°C or +130°C.

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

Marking for "Ex eb" and "Ex tb" version :

BARTEC FN **(****)**
I – 20090 Trezzano sul Naviglio (MI)
GUA… or S… or EAHF…(*)
IECEx INE 12.0021X
(Serial number)
Ex eb IIC T(**) Gb
Ex tb IIIC T(**) Db IP66
T. Cable : (**)
…°C < Tamb < …°C (***)
CABLE ENTRY : (Type and size)
(Rated voltage and rated current and/or rated power)
WARNING: DO NOT OPEN WHEN ENERGIZED

(*) Type is completed by numbers and/or letters corresponding to manufacturing variations.

(**) Tcable and Temperature classes in accordance with the maximum dissipated power specified in the clause "PARAMETERS RELATING TO THE SAFETY"

(***) Range of temperature ambient from -20°C or -60°C to +60°C or +80°C or +130°C.

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

ROUTINE EXAMINATIONS AND TESTS

For "Ex db" version:

None, covered by the component certificate IECEx INE 12.0023U of the enclosures

For "Ex eb" version:

In accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards, the supply voltage shall be applied for one minute.

For "db" versions with operators covered by component certificate IECEx INE 13.0073U:

For Tamb = -20°C

- Operators type PM10X - EFP*, EFI* and EFPL3 are exempted for routine test because they have undergone a static type test upper than 4 times the reference pressure of enclosure (34 bar).
- Operator type EFL*PC* are submitted to routine test at 12.75 bar.

For Tamb = -60°C

- Operators type EFI* and EFPL3 are exempted for routine test because they have undergone a static type test upper than 4 times the reference pressure of enclosure (55.2 bar).
- Operators type EFL*PC* and PM10X - EFP* are submitted to routine test at 20.7 bar.

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Certificate No.: IECEx INE 12.0021X

Issue No.: 04

Annex: IECEx INE 12.0021X-04_Annex.pdf

LIST OF THE COMPONENT INTENDED TO BE INSTALLED ON THE ENCLOSURES

Manufacturer	CODE	Certificate	STANDARD VERSION (*)	Ex Marking	Temperature
Tyco Electronics	ZS*	IECEx LCI 08.0031U (Issue 11)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb IIC Gb	To =-55°C up to +105°C.
Cabur	CBC*	IECEx CES 09.0002U (Issue 02)	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-7 (Ed.5.0) (2015)	Ex eb I Mb Ex eb IIC Gb	Ts = -40°C to +110°C
Cabur	TE*	IECEx CES 09.0010U (Issue 01)	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-7 (Ed.5.0) (2015)	Ex eb I Mb Ex eb IIC Gb	Ts = -40°C to +110°C
Cabur	CBD* TC/*	IECEx CES 09.0009U (Issue 01)	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-7 (Ed.5.0) (2015)	Ex eb I Mb Ex eb IIC Gb	Ts = -40°C to +110°C
Phoenix	QTC 1.5	IECEx KIWA 19.0011U (Issue 01)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -45 °C to +90 °C.
Phoenix	ST 1.5	IECEx KEM 06.0043U (Issue 08)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	ST 2.5	IECEx KEM 06.0051U (Issue 08)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	ST 4/6	IECEx KEM 06.0050U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	ST 10/16/35	IECEx KEM 06.0033U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	UK 1.5N/3N/5N/6N	IECEx KEM 06.0034U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	UK 2.5N	IECEx PTB 19.0039U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +105°C.
Phoenix	UK 10N/16N/35 UKH 50/95	IECEx KEM 06.0029U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	UT 2.5/4/6/10/16/35	IECEx KEM 06.0027U (Issue 08)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	SSK-*	IECEx KIWA 17.0009U (Issue 03)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +180°C.
Phoenix	USLKG 1.5N/5/10N 16N/50/95	IECEx KEM 06.0035U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	To = -60 °C to +110°C.
Phoenix	USLKG 2.5N/6N				
Phoenix	USLKG 3				
Phoenix	USLKG 35				
WAGO	TOP JOB S 2002*	IECEx PTB 03.0004U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +75°C/+110°C.
WAGO	TOP JOB S 2004*	IECEx PTB 05.0033U (Issue 03)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +85°C.
WAGO	TOP JOB S 2000*	IECEx PTB 11.0093U (Issue 02)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +110°C.
WAGO	TOP JOB S 2006*	IECEx PTB 05.0014U (Issue 04)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +85°C.
WAGO	TOP JOB S 2016*	IECEx PTB 05.0015U (Issue 05)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +110°C.
WAGO	TOP JOB S 2010*	IECEx PTB 06.0003U (Issue 05)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +110°C.

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Certificate No.: IECEx INE 12.0021X

Annex: IECEx INE 12.0021X-04_Annex.pdf

Manufacturer	CODE	Certificate	STANDARD VERSION (*)	Ex Marking	Temperature
WAGO	TOP JOB S 2001*	IECEx PTB 05.0034U (Issue 03)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb I Mb Ex eb IIC Gb	Ts = -55 °C to +85°C.
Weidmuller	AKZ*	IECEx TUR 18.0024U (Issue 03)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +110°C.
Weidmuller	BK*	IECEx TUR 18.0019U (Issue 02)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +130°C.
Weidmuller	SAK*	IECEx TUR 18.0017U (Issue 00)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -50 °C to +85°C.
Weidmuller	SAKK*	IECEx TUR 18.0018U (Issue 02)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +210°C.
Weidmuller	WDK*	IECEx ULD 15.0003U (Issue 03)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +110°C.
Weidmuller	WDU*	IECEx ULD 14.0005U (Issue 07)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +110°C.
Weidmuller	WFF*	IECEx ULD 15.0004U (Issue 01)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +100°C.
Weidmuller	ZDU*	IECEx ULD 15.0008U (Issue 04)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-7 (Ed.5.1) (2017)	Ex eb IIC Gb	Ts = -60 °C to +110°C.
BARTEC FN	Enclosures type GUA... – S... - EAHF…	IECEx INE 12.0023U (Issue 03)	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-1 (Ed.7.0) (2014) IEC 60079-31 (Ed.2.0) (2013) IEC 60079-7 (Ed.5.0) (2015)	db eb tb	Ts = -60°C to +130°C
BARTEC FN	Operators type EFI, EFP**, EFL*PC*	IECEx INE 13.0073U (Issue 04)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-1 (Ed.7.0) (2014) IEC 60079-31 (Ed.2.0) (2013)	db tb	Ts = -60°C to +200°C (**)
BARTEC FN	Breathing and draining valve type ECD	IECEx EXA 14.0004U (Issue 02)	IEC 60079-0 (Ed.7.0) (2017) IEC 60079-1 (Ed.7.0) (2014) IEC 60079-31 (Ed.2.0) (2013) IEC 60079-7 (Ed.5.1) (2017)	db eb tb	Ts = -60°C ...+80°C

(*) Not impacted by the major technical changes of the standards:
IEC 60079-7 (Ed.5.1) (2017), IEC 60079-0 (Ed.7.0) (2017) and IEC 60079-31 (Ed.2.0) (2013).

(**) Restrictions of uses are specified in the descriptive documents of the manufacturer.