



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 13.0088X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2013-12-20)

Status: **Current** Issue No: 1

Date of Issue: 2022-03-17

Applicant: **BARTEC TECHNOR AS**
Vestre Svanholmen 24
SANDNES 4313
Norway

Equipment: **Flameproof enclosure type DE8-BC... or DE8-BC...D**

Optional accessory:

Type of Protection: **db, db [ia or ib], mb and tb**

Marking: Ex db IIB or IIB+H2 T4 or T5 or T6 Gb or Ex db[ia Ga or ib] IIB or IIB+H2 T4 or T5 or T6 Gb
Ex tb or tb mb IIIC T135°C or T100°C or T85°C Db
or
Ex db mb IIB or IIB+H2 T4 or T5 or T6 Gb or Ex db[ia Ga or ib] mb IIB or IIB+H2 T4 or T5 or T6 Gb
Ex tb or tb mb IIIC T135°C or T100°C or T85°C Db

(see details on annex)

Approved for issue on behalf of the IECEx
Certification Body:

Position:

Signature:
(for printed version)

Date:
(for printed version)



Thierry HOUÉIX

Ex Certification Officer

2022-03-17

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

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F-60550 Verneuil-en-Halatte
France



controlling risks |
for sustainable development |



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Manufacturer: **BARTEC TECHNOR AS**
Vestre Svanholmen 24
SANDNES 4313
Norway

Manufacturing locations: **BARTEC TECHNOR AS**
Vestre Svanholmen 24
SANDNES 4313
Norway

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 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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

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

Test Report:

[FR/INE/ExTR13.0089/01](#)

Quality Assessment Report:

[NO/NEM/QAR07.0003/13](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Metallic enclosures of different sizes (from 32 to 148) fitted with control, signal and lighting elements. From the 32 to 108, the enclosure used has the Ex component certificate n°IECEX INE 13.0001U.

The enclosures get the degrees IP66 without Ex component installed.

The enclosures can be fitted with intrinsic safety "IS" and non intrinsic safety "NIS" devices or only intrinsic safety "IS" products.

The connection to external electrical circuit is ensured by certified type of cable glands.

SPECIFIC CONDITIONS OF USE: YES as shown below:

SPECIFIC CONDITION OF USE:

The screws used for the assembly of the cover of the DE8-BC148 must be of quality higher or equal to 700 N/mm². See IECEX INE 13.0001U for the other sizes of enclosures.

The value of flameproof joints (lengths and gaps) are detailed in note of manufacturer.

During the installation, the user will take into consideration that the Ex components, certificate IECEX INE 13.0072U (see table 2), underwent only a shock corresponding to an energy of a low risk.

During the installation, the user will take into consideration that the Ex components, certificate IECEX INE 13.0073U (see table 2), underwent only a shock corresponding to an energy of a low risk.

When the Ex component, certificate IECEX CES 14.0016U (see table 2) is used, the enclosures type DE8-BC... or DE8-BC...D must not be installed in Dust atmospheres.

When the Ex component, certificate IECEX TRC 12.0014U (see table 2) is used, it must be installed with a 1 A fuse (1500 A prospective short circuit current).

When the Ex component, certificate IECEX CSA 16.0032U (see table 2) is used, the maximum load for LED of the pilot light and illuminated buttons is 2 W.

For dust applications, the Ex component SG-EX* models BETR, BEMO, CA, CAG, BPCO, AD, ADA, BEG, BPMV, BEY, ADA3, PL and BL, certificate IECEX CSA 16.0032U (see table 2), shall be cleaned with a damp cloth, only.

The other conditions are stipulated in the instructions.

SPECIFIC CONDITION OF MANUFACTURE:

Windows as defined in drawing DE8BC-146-5_A can't be installed on enclosures when their overpressure test exceed 18 bar.

For dust applications, when the Ex component SG-EX* models BETR, BEMO, CA, CAG, BPCO, AD, ADA, BEG, BPMV, BEY, ADA3, PL and BL, certificate IECEX CSA 16.0032U (see table 2), the following sentence will have to be added to the marking :

"WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS"



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 01:

- Add of Ex components and accessories (see table 2)
- Application of standards :
 - IEC 60079-0 : 2017
 - IEC 60079-1 : 2014
 - IEC 60079-11 : 2011
 - IEC 60079-18 : 2014 + A1 : 2017
 - IEC 60079-31 : 2013

Annex:

[IECEX INE 13.0088X-01_Annex.pdf](#)



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PARAMETERS RELATING TO THE SAFETY

Maximal supply voltage : 36000 Vac

Maximal intensity : 2000 A

Maximal dissipated powers : 250 to 2000 W (table 1)

Version with IS elements:

Maximal voltage of IS circuits : 28 V

Maximal intensity : 10 A

Size	Dissipated power	Temperature class to T°amb			T°cable at T°amb	
		40°C	50°C	60°C	50°C	60°C
32 ou/or 32D	250 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
351 ou/or 351D	250 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
43 ou/or 43D	380 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
44 ou/or 44D	380 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
54 ou/or 54D	410 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
64 ou/or 64D	470 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
75 ou/or 75D	600 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
86 ou/or 86D	600 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
107	1200 W	T5/T100°C	T4/T135°C	T4/T135°C	85°C	95°C
108 ou/or 108D	1400 W	T5/T100°C	T4/T135°C	T4/T135°C	85°C	95°C
148	2000 W	T5/T100°C	T4/T135°C	T4/T135°C	85°C	95°C

MARKING

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

For the sizes (32 or 32D) to (86 or 86D) :

1-Version without Intrinsic Safety barrier:

BARTEC TECHNOR AS

N-4313 SANDNES

DE8-BC... or DE8-BC...D

IECEX INE 13.0088X

(Serial number)

Ex db IIB or db mb IIB T6 or T5 or T4 Gb

or,

Ex db IIB+H2 or db mb IIB+H2 T6 or T5 or T4 Gb

Ex tb IIIC or tb mb IIIC T85°C or T100°C or T135°C Db

T°amb : -40°C (except 75D and 86D), -20°C to +40°C(T6) or +50°C(T5) or +60°C(T4)

T°cable: see table 1

Cable entry: see instructions

« WARNINGS:

DO NOT OPEN WHEN ENERGIZED

AFTER DE-ENERGIZING, DELAY 20 MINUTES BEFORE OPENING (for the T5 T100°C temperature class) or DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

AFTER DE-ENERGIZING, DELAY 30 MINUTES BEFORE OPENING (for the T6 T85°C temperature class) or DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE MAY BE PRESENT»



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2-Version with Intrinsic Safety barrier:

BARTEC TECHNOR AS
N-4313 SANDNES
DE8-BC... or DE8-BC...D
IECEX INE 13.0088X
(Serial number)
Ex db[ia Ga] IIB or db[ia Ga] mb IIB T6 Gb or Ex db[ib] IIB or db[ib] mb IIB T6 Gb
or
Ex db[ia Ga] IIB+H2 or db[ia Ga] mb IIB+H2 T6 Gb or
Ex db[ib] IIB+H2 or db[ib] mb IIB+H2 T6 Gb
Ex tb IIIC or tb mb IIIC T85°C Db
T°amb : -40°C (except 75D and 86D), -20°C to +40°C or +50°C or +60°C *
Cable entry: see instructions

« WARNING : DO NOT OPEN WHEN ENERGIZED »
* according to internal thermal probe

For the sizes 107 and (108 or 108D) :

1-Version without Intrinsic Safety barrier:

BARTEC TECHNOR AS
N-4313 SANDNES
DE8-BC... or DE8-BC...D
IECEX INE 13.0088X
(Serial number)
Ex db IIB or db mb IIB T5 or T4 Gb
or
Ex db IIB+H2 or db mb IIB+H2 T5 or T4 Gb
Ex tb IIIC or tb mb IIIC T100°C or T135°C Db
T°amb : -40°C (except 75D and 86D), -20°C to +40°C (T5) or +50°C (T4) or +60°C (T4)
T°cable: see table 1
Cable entry: see instructions

« WARNINGS:

DO NOT OPEN WHEN ENERGIZED
AFTER DE-ENERGIZING, DELAY 30 MINUTES BEFORE OPENING (for the T5 T100°C temperature class) or DO NOT OPEN WHEN
EXPLOSIVE ATMOSPHERE MAY BE PRESENT»

2-Version with Intrinsic Safety barrier:

BARTEC TECHNOR AS
N-4313 SANDNES
DE8-BC... or DE8-BC...D
IECEX INE 13.0088X
(Serial number)
Ex db[ia Ga] IIB or db[ia Ga] mb IIB T6 Gb or Ex db[ib] IIB or db[ib] mb IIB T6 Gb
or
Ex db[ia Ga] IIB+H2 or db[ia Ga] mb IIB+H2 T6 Gb or Ex db[ib] IIB+H2 or db[ib] mb IIB+H2 T6 Gb
Ex tb IIIC or tb mb IIIC T85°C Db
T°amb : -40°C, -20°C to +40°C or +50°C or +60°C *
Cable entry: see instructions
« WARNING : DO NOT OPEN WHEN ENERGIZED »
* according to internal thermal probe

For the size 148:

1-Version without Intrinsic Safety barrier:

BARTEC TECHNOR AS
N-4313 SANDNES
DE8-BC...
IECEX INE 13.0088X
(Serial number)
Ex db IIB or db mb IIB T5 or T4 Gb
Ex tb IIIC ou tb mb IIIC T100°C or T135°C Db
Tamb : -20°C to +40°C (T5) or +50°C (T4) or +60°C (T4)
T°cable : see table 1
Cable entry: see instructions



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« WARNINGS:

DO NOT OPEN WHEN ENERGIZED

AFTER DEENERGIZED, WAIT 30 MINUTES BEFORE OPENING (for the T5 T100°C temperature class) or DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE MAY BE PRESENT»

2-Version with Intrinsic Safety barrier:

BARTEC TECHNOR AS

N-4313 SANDNES

DE8-BC...

IECEX INE 13.0088X

(Serial number)

Ex db[ia Ga] IIB or db[ia Ga] mb IIB T6 Gb or Ex db[ib] IIB or db[ib] mb IIB T6 Gb

Ex tb IIIC or tb mb IIIC T85°C Db

T°amb : -20°C to +40°C or +50°C or +60°C *

Cable entry: see instructions

« WARNING: DO NOT OPEN WHEN ENERGIZED»

* according to internal thermal probe

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.1 of the IEC 60079-1 standard, Each exemplar of the flameproof enclosure size 148 has to have successfully passed; before delivery an overpressure test of a period of 10 seconds minimum under 12 bar.

In accordance with clause 16.1 of the IEC 60079-1 standard, each exemplar of the covers fitted with windows as defined in drawing DE8BC-146-5_A has to have successfully passed, before delivery an overpressure test of a period minimum of 10 seconds under the pressure test defined in the certificate IECEx INE 13.0001U for the sizes 32. to 108. (without exceed 18 bar), and 12 bar for the size 148.

The individual test for the sizes 32. to 108. depends on the Ex component certificate n° IECEx INE 13.0001U.

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TABLE

TABLE 2 : List of the Ex Components and accessories covered by separate certificates

Description	Manufacturer	Type	Ex code	Ingress Protection	Operating temperatures range	Sizes of DE8BC allowed	Certificat/ Certificate	IEC 60079-0	IEC 60079-1	IEC 60079-31
Pilot light	CORTEM	M-0 series	Ex d IIC Gb IP66 Ex tb IIIC Db IP66	IP66	-40°C, -60°C to +100°C	All	IECEx TSA 06.0015U	2011 ⁽¹⁾	2014	2013
Push button	CORTEM	M-0 series	Ex d IIC Gb IP66 Ex tb IIIC Db IP66	IP66	-60°C to +100°C	All	IECEx TSA 06.0015U	2011 ⁽¹⁾	2014	2013
Switch handle	CORTEM	M-0 series	Ex d IIC Gb IP66 Ex tb IIIC Db IP66	IP66	-60°C to +100°C	All	IECEx TSA 06.0015U	2011 ⁽¹⁾	2014	2013
Breather / drain	CORTEM	ECD1*	Ex db IIB Gb or Ex db IIC Gb	None	-50°C to +60°C as Ex d IIC -50°C to +150°C as Ex d IIB	32 (17 dm3) to 75 (107 dm3) and 43D (63 dm3) to 64D (118 dm3)	IECEx CES 14.0016U	2007 ⁽¹⁾	2007 ⁽²⁾	2009 ⁽³⁾
Breather / drain	CCG	BD***D	Ex db IIC Gb or Ex tb IIIC Db IP6X	IP6X	-60°C to +95°C	All	IECEx CML 16.0021X	2018	2014	2013
Breather / drain	BARTEC FEAM	ECD*	Ex d IIC Gb Ex tb IIIC Db	IP6X	-60°C to +80°C	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx EXA 14.0004U	2012 ⁽¹⁾	2007 ⁽²⁾	2009 ⁽³⁾
Pilot light	BARTEC NASP	EFL*PC* / EFPL3	Ex db IIB+H2 Gb or Ex tb IIIC Db IP66	IP66	EFL*PC* -60°C to +95°C EFPL3 -60°C to +100°C	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx INE 13.0072U	2011 ⁽¹⁾	2014	2013
Push button	BARTEC NASP	EFP* / PM10X	Ex db IIB+H2 Gb or Ex tb IIIC Db IP66	IP66	-40°C to +150°C with gasket type EPDM -60°C to +200°C with gasket type LSR or MVQ	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx INE 13.0072U	2011 ⁽¹⁾	2014	2013
Switch handle	BARTEC NASP	EFI*	Ex db IIB+H2 Gb or Ex tb IIIC Db IP66	IP66	-40°C to +150°C with gasket type EPDM -60°C to +200°C with gasket type LSR or MVQ	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx INE 13.0072U	2011 ⁽¹⁾	2014	2013
Pilot light	BARTEC FEAM	EFL*PC* / EFPL3	Ex db IIB+H2 Gb or Ex tb IIIC Db IP66	IP66	EFL*PC* -60°C to +95°C EFPL3 -60°C to +100°C	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx INE 13.0073U	2011 ⁽¹⁾	2014	2013
Push button	BARTEC FEAM	EFP* / PM10X	Ex db IIB+H2 Gb or Ex tb IIIC Db IP66	IP66	-40°C to +150°C with gasket type EPDM -60°C to +200°C with gasket type LSR or MVQ	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx INE 13.0073U	2011 ⁽¹⁾	2014	2013
Switch handle	BARTEC FEAM	EFI*	Ex db IIB+H2 Gb or Ex tb IIIC Db IP66	IP66	-40°C to +150°C with gasket type EPDM -60°C to +200°C with gasket type LSR or MVQ	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	IECEx INE 13.0073U	2011 ⁽¹⁾	2014	2013
Pilot light	ATX	TCD ...	Ex db IIC Gb Ex tb IIIC Db IP66	IP66	-40°C to +105°C	All	IECEx LCI 10.0022U	2018	2014	2013
Push button	ATX	TCD ...	Ex db IIC Gb Ex tb IIIC Db IP66	IP66	-40°C to +105°C	All	IECEx LCI 10.0022U	2018	2014	2013
Switch handle	ATX	TCD ...	Ex db IIC Gb Ex tb IIIC Db IP66	IP66	-40°C to +105°C	All	IECEx LCI 10.0022U	2018	2014	2013
Pilot light	Sermatex	SG-EX*	Ex db IIB+H2 Gb Ex tb IIIC Db	IP66	-50°C to +100°C	32 (17 dm3) to 75 (107 dm3) and 43D (63 dm3) to 64D (118 dm3)	IECEx CSA 16.0032U	2011 ⁽¹⁾	2014	2013



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TABLE 2: List of the Ex Components and accessories covered by separate certificates

Description	Manufacturer	Type	Ex code	Ingress Protection	Operating temperatures range	Sizes of DE8BC allowed	Certificat/ Certificate	IEC 60079-0	IEC 60079-1	IEC 60079-31	
Push button	Sermatex	SG-EX*	Ex db IIB+H2 Gb Ex tb IIIC Db	IP66	-50°C to +100°C	32 (17 dm3) to 75 (107 dm3) and 43D (63 dm3) to 64D (118 dm3)	IECEX CSA 16.0032U	2011 ⁽¹⁾	2014	2013	
Switch handle	Sermatex	SG-EX*	Ex db IIB+H2 Gb Ex tb III C Db	IP66	-50°C to +100°C	32 (17 dm3) to 75 (107 dm3) and 43D (63 dm3) to 64D (118 dm3)	IECEX CSA 16.0032U	2011 ⁽¹⁾	2014	2013	
Push button	JCE	KS*/SP/PB*	Ex d IIC Gb Ex tb IIIC Db	IP6X	-40°C to +60°C	All	IECEX TRC 12.0013U	2007 ⁽¹⁾	2007 ⁽²⁾	2008 ⁽³⁾	
Switch handle	JCE	SS*	Ex d IIC Gb Ex tb IIIC Db	IP6X	-40°C to +60°C	All	IECEX TRC 12.0013U	2007 ⁽¹⁾	2007 ⁽²⁾	2008 ⁽³⁾	
Empty enclosure	BARTEC	DE8-BC32. to DE8-BC108.	Ex db IIB+H2 Gb Ex tb IIIC Db	IP66	-40°C, -20°C to +60°C	/	IECEX INE 13.0001U	2018	2014	2013	
Description	Manufacturer	Type	Ex code	Ingress Protection	Operating temperature range	Sizes of DE8BC allowed	Certificate	IEC 60079-0	IEC 60079-1	IEC 60079-18	IEC 60079-31
Pilot light	JCE	PL*	Ex db mb IIC Gb Ex mb tb IIIC Db	IP6X	-40°C to +104°C	All	IECEX TRC 12.0014U	2011 ⁽¹⁾	2007 ⁽²⁾	2014 ⁽⁴⁾	2008 ⁽³⁾

- (1) No impacted by major technical changes of standards IEC 60079-0 : 2011 and/or IEC 60079-0 : 2017.
 (2) No impacted by major technical changes of the standard IEC 60079-1 : 2014
 (3) No impacted by major technical changes of the standard IEC 60079-31 : 2013
 (4) No impacted by major technical changes of the standard IEC 60079-18 : 2015 + AMD1 : 2017