

Scope : USER MANUAL DE8-BC Ex d Complete Enclosure				BARTEC		
Date: 02.04.2022	Ver.: 6	QA Code: 5	Checked by: E.T.	Approved by: S.Gr.	Page: 1 of 15	Document no. : 13614

Flameproof enclosures

DE8-BC...



The DE8-BC range of Ex d enclosures are rugged and designed for harsh environment like:

- Oil and gas industry
- Chemical industry
- Pharmaceutical
- Industry
- Agribusiness

They are designed for use in potentially explosive atmospheres and certified according to the requirements of the ATEX Directive and IECEx.

Parameters relating to safety

Maximum supply voltage	:	36 kVAC
Maximum current	:	2000 A
Maximum dissipated power	:	250 to 2000 W (table 1)

Versions with IS elements

Maximum voltage of IS circuits	:	28 V
Maximum current	:	10 A

Table 1

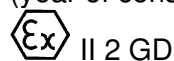
Size	Dissipated power	Temperature class to T°amb			T°cable at T°amb	
		40°C	50°C	60°C	50°C	60°C
32 or 32D	250 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
351 or 351D	250 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
43 or 43D	380 W	T6/T85°C	T5/T100°C	T4/T135°C	81°C	91°C
44 or 44D	380 W	T6/T85°C	T5/T100°C	T4/T135°C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

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
INERIS 09ATEX0061X
(Serial number)
(year of construction)



Scope :

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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

Tamb : -40°C, -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»

2-Version with Intrinsic Safety barrier:

BARTEC TECHNOR AS

N-4313 SANDNES

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

INERIS 09ATEX0061X

(Serial number)

(year of construction)



Ex II 2 (1) GD

or



Ex II 2 (2) GD

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

or

Ex db[ia] IIB+H₂ or db[ia] 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

Tamb : -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 sizes 107 and (108 or 108D) :

1-Version without Intrinsic Safety barrier:

BARTEC TECHNOR AS

N-4313 SANDNES

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

INERIS 09ATEX0061X

(Serial number)

(year of construction)



Ex II 2 GD

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

Tamb : -40°C, -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 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

INERIS 09ATEX0061X

(Serial number)

(year of construction)



II 2 (1) GD

or



II 2 (2) GD

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

or

Ex db[ia] IIB+H₂ or db[ia] 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

Tamb : -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

N-4313 SANDNES

DE8-BC...

INERIS 09ATEX0061X

(Serial number)

(year of construction)



II 2 GD

Ex db IIB or db mb IIB T5 or T4 Gb

Ex tb IIIC or 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

«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:

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(year of construction)



II 2 (1) GD

or



II 2 (2) GD

Ex db[ia] IIB or db[ia] 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

Tamb : -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

The enclosures listed in this manual are certified:

II 2 GD

The certificate numbers are :

INERIS 09ATEX0061X

IECEX INE 13.0088X

They are made in accordance with the following standards:

Zones due to gases, vapors and mists and dusts

EN IEC 60079-0	: 2018	IEC 60079-0	: 2017
EN 60079-1	: 2014	IEC 60079-1	: 2014
EN 60079-11	: 2012	IEC 60079-11	: 2011
EN 60079-18	: 2015+A1:2017	IEC 60079-18	: 2017
EN 60079-31	: 2014	IEC 60079-31	: 2013

Example of the type label that will be mounted on the outside of the enclosure:



Description

Our DE8-BC range of flameproof enclosures is available in many sizes. They are made of welded and machined acid resistant stainless steel 316L or painted carbon steel. Each is expected to receive electrical components inside, making service and maintenance easy. They can also be customized to meet each individual specific need. If necessary, multiple enclosures can be assembled on a frame with or without combined Ex e junction boxes.

The enclosures can be delivered fully equipped according to customer's requirements or empty with component certificate (U-certificate) to be used as basis for further certification of an Equipment or Protective System.


Meaning of symbols



This symbol means a hazard and precaution to be taken

Safety instructions

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 The device must be installed, used and maintained in accordance with the following standards:

- IEC/EN 60079-1 (Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d")
- IEC/EN 60079-14 (Explosive atmospheres - Part 14: Electrical installations design, selection and erection)
- IEC/EN 60079-17 (Explosive atmospheres - Part 17: Electrical installations inspection and maintenance)
- IEC/EN 60079-31 (Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t")
- Decrees, orders, laws, directives, circulars, applications, standards, state of art and other documentation relating to its installation site

 **It is forbidden to change anything (components, installation, wiring ...) without the prior written consent of Bartec Technor.**

 **We cannot accept any responsibility for failure to observe these regulations:**

- Make sure of the compatibility between the information on the nameplate, the explosive atmosphere present, the area of use and ambient temperatures on surfaces
- Any damage on the device can cause the flameproof protection to become ineffective
- The installation of the enclosure must be done in the state of the art in the technical domains and only by qualified, competent and empowered personnel
- A defective or abnormal use as well as the non compliance with the instructions of the present document exclude any clause of guarantee and do not engage our responsibility
- The use of the device in case of excessive deposits of dusts superior at 50mm according to EN / IEC 60079-31 is not authorized
- Liability for manufacturer traceability is ensured only at the first known delivery destination (serial number specified on the certification label)
- It is also required to observe the regulations of the country of use
- The doors of the DE8-BC enclosures are relatively heavy, to avoid sagging of the doors, potentially making the door not align with the flange of the enclosure, the doors shall be closed and secured during any moving and shifting of the enclosures. It is also strongly advisable to close and secure the doors when the daily working shift is over
- The flame paths of the doors and of the flanges of the enclosures must be well protected whilst work is performed and ongoing inside the enclosures

 **Transport, storage**

- Check if the product has been damaged during transport. If any damage is observed, do the statutory reserves to the carrier
- Do not put damaged products into service

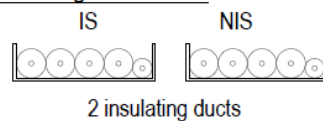
Packaging	Location storage	Duration storage
Open	In a covered location, clean (without contact with external substances) and closed with temperature a constant humidity (-40°C < T < +70°C). Shielded from important temperature variations	2 years and more with regular inspection (cleanliness and mechanical damage)

Putting into service

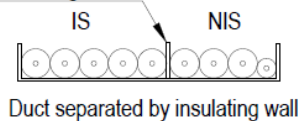
- Verify that the information on the label of the product is in accordance with the permissible conditions for the Ex area of the site of use (Group II: Surface Industries - Category 2: high level of protection for ATEX G = for Gas / D = for Dust, IECEx EPL - G = for Gas / D = for Dusts - IPxx: IP rating (waterproofness for solids and liquids))
- Check if there is a specific position of mounting
- The wiring of the cable conductors must be made with a particular care
- The conductor insulation must reach the terminal. The conductive soul must not be damaged
- Not to exceed the authorized maximal temperature appropriate cables must be selected and take particular care installing them
- Follow the instructions contained in the specifications
- **Installation of intrinsic safety elements :**
 - The installation of the intrinsic safety circuits (IS) inside the enclosure is subordinated to the respect of the requirements of their documents of certification, their certificates and with that after:
 - IS Circuits are cabled with connection wires of which the thickness of insulator is $\geq 0,5$ mm and the section $\geq 0,5$ mm²
 - The connection wires support a dielectric test of 500 V effective
 - The air gap between the active parts under voltage of the connection elements of the intrinsic safety circuit compared to connection elements of a non intrinsic safety circuit is higher or equal to 50 millimeters
 - The air gap and creepage distances in the air between the active parts under voltage of the intrinsic safety circuit compared to an intrinsic safety circuit close are higher or equal to 6 millimeters
 - The air gap and creepage distances in the air between the active parts under voltage of the intrinsic safety circuit compared to the metal parts which can be with the ground are higher or equal to 3 millimeters
 - The active parts of the intrinsic safety circuits support a dielectric test of rigidity under an effective alternating voltage of 500 Volts compared to the metal mass
 - The active parts of an intrinsic safety circuit support a dielectric test of rigidity under an effective alternating voltage of 500 Volts compared to an intrinsic safety circuit close
 - Circuits NIS are cabled with conductive wires whose insulation is such as they can support a dielectric test of $2 U + 1000$ V effective, U being the sum of the tensions of the IS and NIS circuits, with a minimum of 1500 V

- When the enclosure is equipped with intrinsic safety elements, a temperature probe must be fitted inside and be connected to a system that can switch off the supply when the inner temperature raises above the maximum ambient temperature indicated in the certificates of the IS equipment.
The products that can be connected to the IS equipment installed inside the enclosure must be of a certified type and association must be compatible in regards of intrinsic safety.

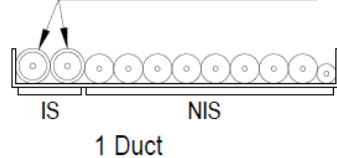
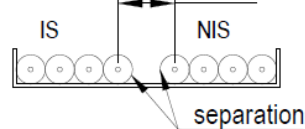
1- Isolating IS and NIS



Insulating wall

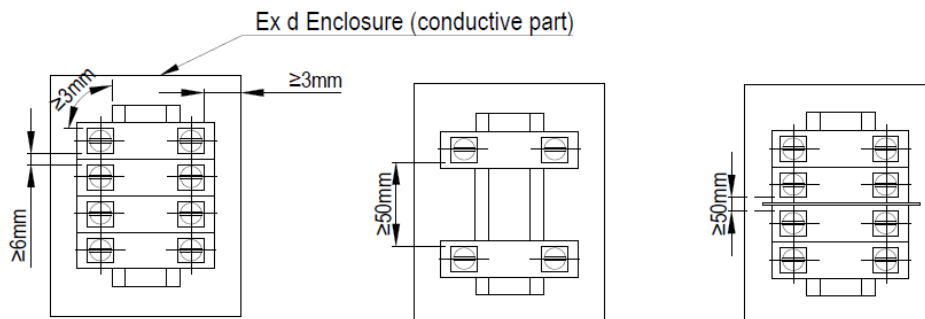


Metallic screen earthed


 $\geq 8\text{mm}$


Duct with separated IS and NIS

2- Clearance and creepage distances between IS and NIS materials



⚠ Before starting

- Make sure the unit has been correctly settled and not damaged
- Make sure the wiring and the tightening of the terminal screws have been performed properly (see descriptive tightening torque)
- The device may include any foreign body and no part is damaged
- The cable gland must be tightened (see description of the gland torque)

⚠ Maintenance

The maintenance and repairs works on devices must be made only by authorized and trained persons for that purpose.

⚠ Before any work the devices must be switched off. In addition:

- Prevent and avoid any formation of layers of dusts: make a periodic cleaning with a wet cloth
- Do not take apart the command and control units (push buttons, pilot light, etc.)

**It is advisable that the following checks must be made at least once a year:**

- The external equipment and surfaces must not be damaged
- The cable entry devices and blanking plugs must be securely fastened
- Prior to closing, check the cleanliness of the flame path (machined part of the cover in contact with the machined part of the box). Grease these 2 parts with a thin layer of grease resistant to oxidation (acid free white Vaseline or Gleitmo 165). Check the gasket for any damage. Replace if damaged. Grease the gasket using acid free Vaseline.
- Screw the cover on the box using the original bolts as listed in the table below. Ensure that the bolts are clean and are greased (grease like Gleitmo 165). Ensure that all the bolts are fitted. Torque all bolts to the correct torque as listed in the table below. After torqueing the bolts, check with a shim of 15/100 mm (4/100mm for IIB + H2) all around the flame path that the shim cannot penetrate the enclosure. Its non-penetration on full perimeter is the insurance of the conformity of the product with the standards

Technical features

Table 2

References	External dimensions (mm)			Internal volume dm ³ / liters	Maximum power whatever the content is W Max.	Dimensions of mounting plate (mm)			Fixing (mm)			Bolts in lid Qty x Ø-L	Weight
	A	B	C			H	L	Int c	H1	L1	ØD holes		
DE8BC 32	338	438	261	17	250	300	200	192	234	326	Ø12	12 x M12-35	74
DE8BC 32D	338	438	471	31	250	300	200	192	234	326	Ø12	12 x M12-35	87
DE8BC 351	358	478	261	20	250	350	225	192	274	346	Ø12	14 x M12-35	85
DE8BC 351D	358	478	471	33	250	350	225	192	274	346	Ø12	14 x M12-35	98
DE8BC 43	438	538	321	40	380	400	300	252	334	526	Ø12	14 x M12-35	122
DE8BC 43D	438	538	472	63	380	400	300	403	334	526	Ø12	14 x M12-35	145
DE8BC 44	548	548	323	52	380	400	400	252	334	526	Ø12	16 x M14-40	155
DE8BC 44D	548	548	476	82	380	400	400	405	334	526	Ø12	16 x M14-40	182
DE8BC 54	548	648	323	63	410	500	400	252	414	526	Ø20	18 x M14-40	180
DE8BC 54D	548	648	476	100	410	500	400	405	414	526	Ø20	18 x M14-40	204
DE8BC 64	548	748	323	75	470	600	400	252	514	526	Ø20	20 x M14-40	205
DE8BC 64D	548	748	476	118	470	600	400	405	514	526	Ø20	20 x M14-40	238
DE8BC 75	668	868	332	107	600	700	500	253	614	630	Ø20	24 x M14-50	319
DE8BC 75D	668	868	486	169	600	700	500	405	614	630	Ø20	24 x M14-50	361
DE8BC 86	768	968	378	167	600	800	600	297	714	734	Ø20	26 x M16-50	447
DE8BC 86D	768	968	493	223	600	800	600	407	714	734	Ø20	26 x M16-50	510
DE8BC 107	868	1168	400	236	1200	1000	700	309	908	868	Ø20	30 x M16-50	660
DE8BC 108	868	1168	436	275	1400	1000	700	344	908	868	Ø20	30 x M16-50	675
DE8BC 108D	868	1168	500	325	1400	1000	700	409	908	868	Ø20	38 x M16-50	725
DE8BC 148	944	1594	509	502	2000	1450	800	417	1200	900	Ø20	40 x M16-50	1110

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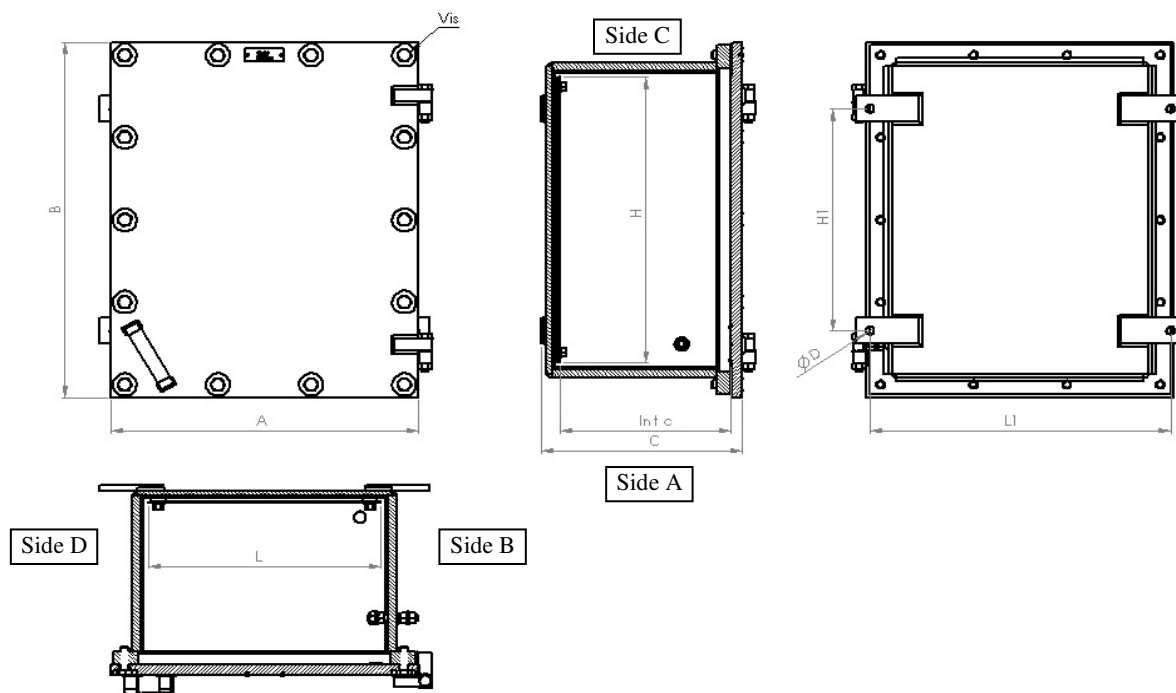
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Recommended tightening torques of the Lid bolts

Table 3

Enclosure type		Minimum tensile strength of lid bolts [N/mm ²]		Bolts quantity and size Qty x Ø-L	Recommended tightening torque Ma for lubricated bolts [Nm]	
		-20°C	-40°C		-20°C	-40°C
DE8BC	32	800	800	12 x M12-35	74	74
DE8BC	32D	800	800	12 x M12-35	74	74
DE8BC	351	800	800	14 x M12-35	74	74
DE8BC	351D	800	800	14 x M12-35	74	74
DE8BC	43	800	800	14 x M12-35	74	74
DE8BC	43D	800	800	14 x M12-35	74	74
DE8BC	44	800	800	16 x M14-40	117	117
DE8BC	44D	800	1000	16 x M14-40	117	117
DE8BC	54	800	800	18 x M14-40	117	117
DE8BC	54D	800	1000	18 x M14-40	117	117
DE8BC	64	800	800	20 x M14-40	117	117
DE8BC	64D	800	1000	20 x M14-40	117	117
DE8BC	75	800	800	24 x M14-50	117	117
DE8BC	75D	1000	X	24 x M14-50	117	X
DE8BC	86	800	800	26 x M16-50	180	180
DE8BC	86D	1000	X	26 x M16-50	180	X
DE8BC	107	800	800	30 x M16-50	180	180
DE8BC	108	800	800	30 x M16-50	180	180
DE8BC	108D	1000	1200	38 x M16-50	180	180
DE8BC	148	800	800	40 x M16-50	180	180

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! Number of cable entries:

- Any type of cable or conduit entry certified Ex d can be used and installed according to EN / IEC 60079-14
- Different types of threads can be used but minimum five threads by bolt must always been engaged

Table 4

Metric	M20 ISO			M25 ISO			M32 – M40 – M42 ISO			M50 ISO			M63 ISO			M75 ISO		
NPT	½ " NPT ¾ " NPT			1 " NPT			1" ¼ NPT 1" ½ NPT			2 " NPT (1)			2 " ½ NPT (1)			3 " NPT (1)		
Product code	Sides A & C	Sides B & D	Max (2)	Sides A & C	Sides B & D	Max (2)	Sides A & C	Sides B & D	Max (2)	Sides A & C	Sides B & D	Max (2)	Sides A & C	Sides B & D	Max (2)	Sides A & C	Sides B & D	Max (2)
DE8BC 32	12	12	32	8	8	20	3	3	12	1	1	4	-	-	-	-	-	-
DE8BC 32D	12	12	32	8	8	20	3	3	12	1	1	4	-	-	-	-	-	-
DE8BC 351	12	12	24	8	8	18	3	3	8	1	1	4	-	-	-	-	-	-
DE8BC 351D	12	12	24	8	8	18	3	3	8	1	1	4	-	-	-	-	-	-
DE8BC 43	18	18	36	14	14	28	4	4	16	2	2	5	1	1	2	-	-	-
DE8BC 43D	18	18	36	14	14	28	4	4	16	2	2	5	1	1	2	-	-	-
DE8BC 44	20	20	40	16	16	30	5	5	20	3	3	6	1	1	3	-	-	-
DE8BC 44D	20	20	40	16	16	30	5	5	20	3	3	6	1	1	3	-	-	-
DE8BC 54	20	20	40	16	16	30	5	5	20	3	3	6	1	1	3	-	-	-
DE8BC 54D	20	20	40	16	16	30	5	5	20	3	3	6	1	1	3	-	-	-
DE8BC 64	28	28	60	18	18	50	7	7	28	4	4	9	1	1	4	-	-	-
DE8BC 64D	28	28	60	18	18	50	7	7	28	4	4	9	1	1	4	-	-	-
DE8BC 75	28	28	72	24	24	72	10	10	40	4	4	11	2	2	7	-	-	-
DE8BC 75D	28	28	72	24	24	72	10	10	40	4	4	11	2	2	7	-	-	-
DE8BC 86	32	32	112	28	28	100	20	20	80	5	5	17	2	2	8	1	1	4
DE8BC 86D	32	32	112	28	28	100	20	20	80	5	5	17	2	2	8	1	1	4
DE8BC 107	36	36	112	32	32	100	20	20	80	5	5	17	3	3	10	1	1	4
DE8BC 108	36	36	112	32	32	100	20	20	80	5	5	17	3	3	10	1	1	4
DE8BC 108D	36	36	112	32	32	100	20	20	80	5	5	17	3	3	10	1	1	4

(1) With welded ring

(2) Maximum number of cable entries on all side walls of the enclosure

! Number and type of windows, dependant on the enclosure size:

- 1 to 3 cylindrical glass windows, visible opening of Ø60 mm or
- 1 to 5 cylindrical glass windows, visible opening of Ø46 mm or
- 1 cylindrical glass window, visible opening of Ø150 mm or
- 1 to 5 rectangular glass windows, visible opening of:
 - 100x50 mm
 - 100x100 mm
 - 200x45 mm
 - 235x75 mm

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! Number of lid mounted components, i.e. push buttons, switches, lamps etc:

- These are components that may be mounted on the lid, also in combination with windows: Push buttons, knobs, lights, switches, locks or a mix of these, all mounted with metal bushings, screwed (5 threads minimum) and sealed with Loctite 273. These bushings with different diameters (M12 to M32) provide a guide axes through ≥ 25 mm with a gap ≤ 0.15 mm. It is also possible to use external units Certified Type ATEX and/or IECEx
- It is possible to couple several Ex d enclosures with the appropriate bushings. It is possible to couple an Ex d enclosure with one or several Ex e enclosures with the appropriate bushings
- Whatever the kind of material included (size, brand ...) with warm ups of the different components have to be compatible with the marking temperature selected after opening the enclosure
- Any type of cable or conduit entry certified Ex d can be used and installed according to EN / IEC 60079-14
- Different types of threads can be used but minimum five threads by bolt must always been engaged

Table 5

Dimensions	Dimensions of mounting plate (mm)			Internal volume dm ³ / liters	Maximum power whatever the content is W Max.	Temperature classification T4 (135°C)		Temperature classification T5 (100°C)		Temperature classification T6 (85°C) T° amb	Maximum number of control unit and / or signaling	
	References	H	L			h	T° amb	T° cable	T° amb			T° cable
DE8BC	32	300	200	192	17	250	60°C	91°C	50°C	81°C	40°C	25
DE8BC	351	350	225	192	20	250	60°C	91°C	50°C	81°C	40°C	30
DE8BC	43	400	300	252	40	380	60°C	91°C	50°C	81°C	40°C	42
DE8BC	43D	400	300	403	63	380	60°C	91°C	50°C	81°C	40°C	42
DE8BC	44	400	400	252	52	380	60°C	91°C	50°C	81°C	40°C	54
DE8BC	44D	400	400	405	82	380	60°C	91°C	50°C	81°C	40°C	54
DE8BC	54	500	400	252	63	410	60°C	91°C	50°C	81°C	40°C	72
DE8BC	54D	500	400	405	100	410	60°C	91°C	50°C	81°C	40°C	72
DE8BC	64	600	400	252	75	470	60°C	91°C	50°C	81°C	40°C	90
DE8BC	64D	600	400	405	118	470	60°C	91°C	50°C	81°C	40°C	90
DE8BC	75	700	500	253	107	600	60°C	91°C	50°C	81°C	40°C	100
DE8BC	75D	700	500	405	169	600	60°C	91°C	50°C	81°C	40°C	100
DE8BC	86	800	600	297	167	600	60°C	91°C	50°C	81°C	40°C	100
DE8BC	86D	800	600	407	223	600	60°C	91°C	50°C	81°C	40°C	100

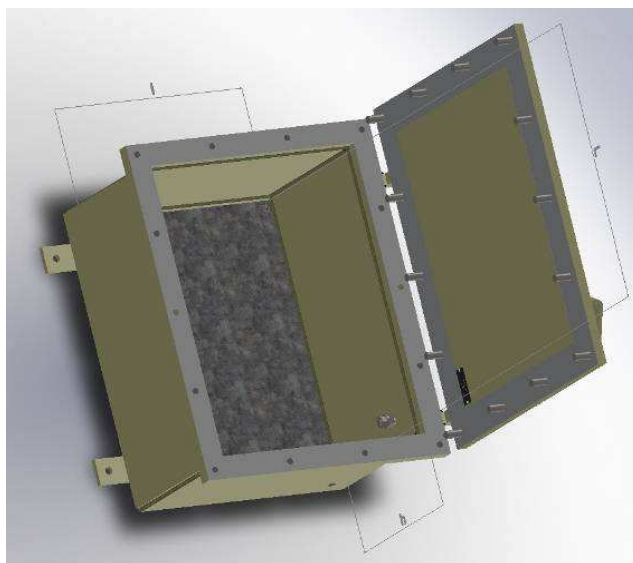
Dimensions	Dimensions of mounting plate (mm)			Internal volume dm ³ / liters	Maximum power whatever the content is W Max.	Temperature classification T4 (135°C)		Temperature classification T5 (100°C)		Temperature classification T6 (85°C) T° amb	Maximum number of control unit and / or signaling	
	References	H	L			h	T° amb	T° cable	T° amb			T° cable
DE8BC	107	1000	700	309	236	1200	60°C	95°C	50°C	85°C	40°C	100
DE8BC	108	1000	700	344	275	1400	60°C	95°C	50°C	85°C	40°C	100
DE8BC	108D	1000	700	409	325	1400	60°C	95°C	50°C	85°C	40°C	100
DE8BC	148	1450	800	417	502	2000	60°C	95°C	50°C	85°C	40°C	100

Scope :

USER MANUAL

DE8-BC Ex d Complete Enclosure

BARTEC

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02.04.2022Ver.:
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List of the Ex Components and accessories covered by separate certificates

Table 6

Description	Manufacturer	Type	Ex code	Ingress Protection	Operating temperature range	Sizes of DE8BC allowed	ATEX EC/EU Type Examination Certificate	IECEx Certificate of Conformity
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	CESI 01 ATEX 025U	TSA 06.0015U
Push button	CORTEM	M-0 series	Ex d IIC Gb IP66 Ex tb IIIC Db IP66	IP66	-60°C to +100°C	All	CESI 01 ATEX 025U	TSA 06.0015U
Switch handle	CORTEM	M-0 series	Ex d IIC Gb IP66 Ex tb IIIC Db IP66	IP66	-60°C to +100°C	All	CESI 01 ATEX 025U	TSA 06.0015U
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)	CESI 01 ATEX 081U	CES 14.0016U
Breather / drain	CCG	BD***D	Ex db IIC Gb or Ex tb III C Db IP6X	IP6X	-60°C to +95°C	All	CML 16ATEX1029X	CML 16.0021X
Breather / drain	BARTEC FEAM	ECD*	Ex d IIC Gb Ex tb III C Db	IP6X	-60°C to +80°C	32 (17 dm3) to 86 (167 dm3) and 43D (63 dm3) to 75D (169 dm3)	EXA 14 ATEX 0059U	EXA 14.0004U
Pilot light	BARTEC NASP	EFL*PC* / EFPL3	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb III C 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)	INERIS 13 ATEX 9016U	INE 13.0072U
Push button	BARTEC NASP	EFP* / PM10X	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb III C 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)	INERIS 13 ATEX 9016U	INE 13.0072U
Switch handle	BARTEC NASP	EFL*	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb III C 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)	INERIS 13 ATEX 9016U	INE 13.0072U
Pilot light	BARTEC FEAM	EFL*PC* / EFPL3	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb III C 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)	INERIS 13 ATEX 9017U	INE 13.0073U
Push button	BARTEC FEAM	EFP* / PM10X	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb III C 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)	INERIS 13 ATEX 9017U	INE 13.0073U
Switch handle	BARTEC FEAM	EFL*	Ex db IIB+H2 Gb or Ex db IIC Gb Ex tb III C 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)	INERIS 13 ATEX 9017U	INE 13.0073U
Pilot light	ATX	TCD ...	Ex db IIC Gb Ex tb IIIC Db IP66	IP66	-40°C to +105°C	All	LCIE 02 ATEX 0036 U	LCI 10.0022U
Push button	ATX	TCD ...	Ex db IIC Gb Ex tb IIIC Db IP66	IP66	-40°C to +105°C	All	LCIE 02 ATEX 0036 U	LCI 10.0022U
Switch handle	ATX	TCD ...	Ex db IIC Gb Ex tb IIIC Db IP66	IP66	-40°C to +105°C	All	LCIE 02 ATEX 0036 U	LCI 10.0022U

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Pilot light	Sermatex	SG-EX*	Ex db IIC Gb or 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)	UL 21 ATEX 2390U	ULBR 21.0004U
Push button	Sermatex	SG-EX*	Ex db IIC Gb or 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)	UL 21 ATEX 2390U	ULBR 21.0004U
Switch handle	Sermatex	SG-EX*	Ex db IIC Gb or 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)	UL 21 ATEX 2390U	ULBR 21.0004U
Pilot light	JCE	PL*	Ex db mb IIC Gb Ex mb tb IIIC Db	IP6X	-40°C to +70°C	All	TRAC 12 ATEX 0033U	TRC 12.0014U
Push button	JCE	KS*/SP/PB*	Ex d IIC Gb Ex tb IIIC Db	IP6X	-40°C to +60°C	All	TRAC 12 ATEX 0032U	TRC 12.0013U
Switch handle	JCE	SS*	Ex d IIC Gb Ex tb III C Db	IP6X	-40°C to +60°C	All	TRAC 12 ATEX 0032U	TRC 12.0013U
Empty enclosure	BARTEC	DE8-BC32. to DE8-BC108.	Ex db IIB+H2 Gb Ex tb III C Db	IP66	-40°C, -20°C to +60°C	/	INERIS 09ATEX9017U	IECEX INE 13.0001U

Specific Conditions of use (X):

The screws used for the assembly of the cover of the DE8-BC148 must be of quality higher or equal to 700 N/mm2.

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 INERIS 13ATEX9016U (see table 6), 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 INERIS 13ATEX9017U (see table 6), underwent only a shock corresponding to an energy of a low risk.

When the Ex component, certificate CESI 01ATEX081U (see table 6) is used, the enclosures type DE8-BC... must not be installed in Dust atmospheres.

When the Ex component, certificate TRAC 12ATEX0033U (see table 6) is used, it must be installed with a 1 A fuse (1500 A prospective short circuit current).

When the Ex component, certificate UL 21ATEX2390U (see table 6) 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 UL 21ATEX2390U (see table 6), shall be cleaned with a damp cloth, only. The following sentence will have to be added to the marking :

“WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS”

Scope :

**USER MANUAL
DE8-BC Ex d Complete Enclosure**

BARTEC

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02.04.2022

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E.T.

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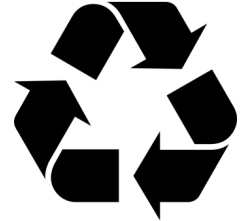
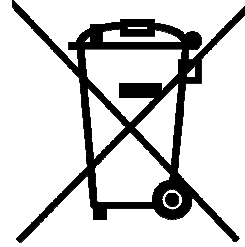
 The content of the DE8-BC enclosures may be placed in any arrangement provided that an area of at least:

- - 20 % of each cross-sectional area remains free for gas group IIB
- - 40 % of each cross-sectional area remains free for gas group IIB + H₂

 **Dismantling, taking out of service :**

When removing the enclosure and taking it out of service, the same precautions apply as those observed when mounting the enclosure.

The enclosure with its content must be handled according to the WEEE (Waste Electrical and Electronic Equipment) Directive, 2012/19/EU.



SS316L