







GIOVENZANA
INTERNATIONAL B.V.

USE & MAINTENANCE INSTRUCTIONS

EX e ENCLOSURE
JBS/A/G*****EX.. SERIES**
CSS/A/G*****EX.. SERIES**

 Listed Documents		Any changes should be authorized by ExCB
	EU Type Examination Certificate	FIDI 22 ATEX 0047X
	IECEx Certificate	IECEx FIDI 22.0006X
	Ex Technical Report	HR/FIDI/ExTR 22.0013/00 FIDI 22 CR 050

INSTRUCTION NOTE: N° 13000099

0	Emission	A.A.	Y.C.	15/06/22
REV.	DESCRIPTION	ISSUED	APPR.	DATE



GIOVENZANA
INTERNATIONAL B.V.

GIOVENZANA INTERNATIONAL B.V.
WTC Strawinskylaan 1105, 1077 XX Amsterdam,
THE NETHERLANDS

INCREASED SAFETY ENCLOSURES

EX e ENCLOSURE

JBS/A/G*****EX.. SERIES**

CSS/A/G*****EX.. SERIES**

Suitable for installation in Zone: 1, 2, 21, 22



JBA/G*****EX**
In GRP and
copper-free aluminium



JBS*****EX..**
In AISI316L



CSS/A/G*****EX**
In AISI316L, copper-
free aluminium and
GRP





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1. General Information

1.1 Manufacturer

GIOVENZANA
INTERNATIONAL B.V.
WTC Strawinskylaan 1105, 1077 XX Amsterdam, THE NETHERLANDS

1.2 About these Instructions

- **INSTRUCTION NOTE: N° I3000099, issued on JUNE 15th 2022,**
- Read carefully these Instructions before using the device
- Keep these Instructions throughout the entire service life of the enclosure
- Make these Instructions available to operating and maintenance personnel
- Update these Instructions every time an amendment is delivered from **GIOVENZANA INTERNATIONAL B.V.**
- In case of sale of the apparatus, pass these Instructions to subsequent owners

1.3 Conformity with Standards and Regulations

- **JB**S/A/G*****EX** and **CS**S/A/G*****EX** Series are manufactured in accordance with ATEX and IECEx standards

2. Explanation of symbols on the device

Symbol	Meaning
	Product compliant with European Directive 2014/34/EU (ATEX) for installation in hazardous areas
	Product compliant with IEC standards for installation in hazardous areas
	Product compliant with applicable European Directives



3. Safety

3.1 General precautions

- The apparatus must be installed according to **EN/IEC 60079-14** standard (Edit in force) and maintenance operations must be performed according to **EN/IEC 60079-17** standard (Edit in force).
- User must be aware of electric risks, chemical and physical characteristics of gas, vapours, and dusts present in the plant.
- To further guarantee good product quality/safety, the **Quality System of GIOVENZANA INTERNATIONAL B.V is evaluated and approved by a Notified Body**, which carries out Quality System surveillance.
- **GIOVENZANA INTERNATIONAL B.V.** ensures and guarantees correct manufacturing of its products.
- Buyer and/or End User are directly responsible of correct product installation and maintenance, according to local and national laws and product installation specifications.
- Use the apparatus only in accordance with the operating conditions described in these operating Instructions;
- Use the apparatus only for the intended purpose specified in these operating Instructions;
- All modifications and changing are strictly forbidden.

DANGER: EXPLOSION HAZARD DUE TO IMPROPER USE AND/OR ALTERATIONS TO THE APPARATUS CAN CAUSE SEVERE OR FATAL INJURIES

WARNING: ALL MODIFICATIONS / CHANGING, MADE BY BUYER / END USER, WITHOUT GIOVENZANA INTERNATIONAL B.V WRITTEN ACCEPTANCE WILL INVALIDATE CERTIFICATIONS, WARRANTIES AND ANY OTHER CONTRACTUAL AGREEMENT

RESIDUAL RISK: ALTOUGH USED PROPERLY, THE APPARATUS CAN PRESENT RESIDUAL RISKS, WHICH ARE TYPICAL OF ANY APPARATUS CONNECTED TO POWER SUPPLY.



3.2 Type of protection

JBS/A/G*****EX and CS**S/A/G*****EX – Protection: Ex eb tb for enclosures; Ex eb tb ia ib db mb for components**

Compliant with:

- *IEC 60079-0* & *EN IEC 60079-0*
Equipment - General requirement
- *IEC 60079-1* & *EN IEC 60079-1*
Equipment protection by flameproof enclosures 'd'
- *IEC 60079-7* & *EN IEC 60079-7*
Equipment protection by increased safety "e"
- *IEC 60079-11* & *EN IEC 60079-11*
Equipment protection by intrinsic safety 'i'
- *IEC 60079-18* & *EN 60079-18*
Equipment protection by encapsulation "m"
- *IEC 60079-31* & *EN 60079-31*
Equipment dust ignition protection by enclosure "t"

Enclosure & components:

Type of protection Ex eb:

It provides an impact resistant enclosure for electrical equipment and ensures that the contents will not produce a spark, temperature or current creepage that could ignite the external flammable atmosphere in a hazardous area zone, location or workspace.

Type of protection Ex tb:

It avoids combustible dust (IIIC) penetration into the enclosure and ensures surface temperature limitation for use in explosive dust atmospheres.



Components:

Type of protection Ex db:

Electric equipment is installed in enclosure suitable to withstand the pressure raised during the internal explosion and avoids flame transmission to the external potentially explosive atmosphere.

Type of protection Ex ia / ib:

The energy of the circuit which could be capable of igniting a potentially explosive atmosphere is limited so that neither sparking nor heating of the electrical components can ignite the surrounding potentially explosive atmosphere.

Type of protection Ex mb:

Encapsulation allows the separation of the alive parts from the explosive atmosphere.



3.3 Intended Use

JB**S/A/G*****EX and CS**S/A/G*****EX Series are suitable for:

- Equipment for explosive GAS and DUST atmospheres, having a "high" Level of Protection, which is not a source of ignition in normal operation or during expected malfunctions.
- Applications such as: Junction Boxes, Local Control Stations and Local Control Panels.
- All terminals, components and equipment installed on the Ex eb/Ex tb enclosure are covered by their own Ex components certificates. The terminals, components and equipment must be used according to data available in related certificates: **temperature range, voltage and current limitations must be respected.** They must be fitted in accordance with IEC 60079-0 and IEC 60079-7 with regard to creepage and clearance distances, and according to related safety instructions.
- Indoor / Outdoor application;
- Hazardous areas: Zone 1, 2, 21, 22.
- Safe areas.

WARNING: USE THE APPARATUS ONLY FOR ITS INTENDED PURPOSE. AN INCORRECT USE MAY AFFECT NEGATIVELY THE EFFICIENCY OF THE APPARATUS

WARNING: USE THE APPARATUS ONLY IN THE HAZARDOUS AREAS STATED IN THESE INSTRUCTIONS.

DANGER: AN IMPROPER USE OF THE APPARATUS MAY LEAD TO SEVER AND/OR FATAL INJURIES



4. Transport, Storage & Handling

4.1 Transport & Storage

- Transport and store the device only in its original packaging:
 - Paper/carton boxes; or
 - Wood boxes; or
 - Wood cages.
- Store the device in a dry place, protected from sunlight, humidity, rain and vibration-free in the following condition:
 - -20°C ... +40°C.

4.2 Handling

For handling, no special measures are required, therefore it is recommended to perform this operation following the common safety standards.

5. Mounting & Installation

5.1 Preparation of the product: unpacking

- Make sure to throw away any packaging component which could result dangerous to people, such as: screws, belts, plastic bags, etc...;
- Make sure that the packaging has not been damaged during transport;
- Put down the right side of the packaging and unpack the apparatus;
- Remove the apparatus from the package in the most appropriate manner according to the weight of the apparatus.



5.2 Before mounting & installation

Before mounting and installing the device, User must verify that:

- Apparatus is suitable for the hazardous area classification;
- Apparatus Group is suitable for gases, vapours and/or dusts present in the installation site;
- Temperature Class and Surface Temperature of the apparatus is suitable for gases, vapours and/or dusts present in the installation site;
- Apparatus is not damaged.

DANGER: EXPLOSION HAZARD DUE TO INCORRECT MOUNTING OF THE DEVICE CAN CAUSE SEVERE OR FATAL INJURIES

5.3 Before commissioning

Before placing the device into service:

- Check project data and installation;
- Check the electrical ratings (voltages, frequency, mechanical and thermal stress within project data);
- Check the clamping of the electric and mechanical connections;
- Check the integrity and the continuity of earth, protection or equipotential conductors;
- Verify that no modifications have occurred to the electrical and/or mechanical structure and functionality of the apparatus (e.g. the alteration of the enclosure by the installation of further equipment inside the apparatus);
- Verify that any electrical protection was not excluded nor deregulated;
- Verify the correct fastening of the enclosure parts;
- Verify the absence of any cause of stress (e.g. exposure to collision damages, presence of corrosive agents, possibility of internal short circuits with power dissipation superior than the admitted one).

WARNING: ALL MODIFICATIONS / CHANGING, MADE BY BUYER / END USER, WHICH IMPACT ON THE ELECTRICAL AND/OR MECHANICAL STRUCTURE AND FUNCTIONALITY OF THE APPARATUS WILL INVALIDATE CERTIFICATIONS, WARRANTIES AND ANY OTHER CONTRACTUAL AGREEMENT



Verify **THREADED ENTRIES and CABLE GLANDS:**

- Threaded entries must be equipped with suitable cable glands, accessories and blanking elements certified according to type of protection Ex eb IIC and / or Ex tb IIIC, suitable to maintain the enclosure protection degree and suitable for ambient temperature stated on the “marking” label;
- Use certified stopping plugs to close unused entries.

Verify the **COVER:**

- Cover must be properly closed. Refer to paragraph 5.5 – Installation.

WARNING: IN CASE UNUSED CABLE ENTRIES AND/OR THE COVER ARE NOT PROPERLY CLOSED, EXPLOSION PROTECTION CAN NO LONGER BE GUARANTEED.

WARNING: IN CASE UNPROPER CABLE GLANDS, ACCESSORIES AND/OR BLANKING ELEMENTS ARE USED, EXPLOSION PROTECTION CAN NO LONGER BE GUARANTEED.



5.4 Apparatus composition

The **JB**S/A/G*****EX** and **CS**S/A/G*****EX** Series are made of Ex eb and Ex tb enclosures in stainless steel, aluminium alloy or glass fiber reinforced polyester resin, of various dimensions.

The cover of **JB**SB/A/G*****EX** and **CS**SB/A/G*****EX** is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models).

For **JB**ST*****EX** and **CS**ST*****EX** it is also possible to add locking device and/or swing handle (IP66) in addition to screws.

The cover of **JB**ST*****EX** and **CS**ST*****EX** "ST". is fixed to the body with locking device and/or swing handle element (IP66), between body and cover a gasket guarantee the protection degree.

NOTE: THE IP DEGREE OF JUNCTION BOXES, LOCAL CONTROL STATIONS AND LOCAL CONTROL PANELS DEPENDS ON THE COMPONENTS ACTUALLY MOUNTED.

The walls of the boxes can be drilled with maximum size and maximum number of holes as specified in the manufacturer documents. The enclosure can be provided with hinges and/or transparent window, according to manufacturer documents. Removable flange can be installed on **JB**S*****EX** and **CS**S*****EX**

Connection of metallic enclosure in blocks are allowed.

The cable glands or plugs, with separate IECEx certificate, are mounted according to related manufacturer's installation instructions.

Each enclosure can be provided with internal earthing plate or lug, earthing screw or bolt. Metal enclosures are provided by external earthing screw or bolt, stainless steel enclosures are available with or without glands plate, metal and polyester enclosures can be provided by passing through earthing terminals.

All enclosures can be provided by:

- Externally installed accessories;
- Drain breath device type ECR3;
- Internal/external earthing plate.

NOTE: THE ENCLOSURE COMPOSITION DEPENDS TO CUSTOMER'S REQUIREMENT, BUT IN ANY CASE IT IS SUBJECT TO CONFORMITY CERTIFICATION.



5.5 Installation

ENCLOSURE LIDS AND FLANGES FASTENING:

To ensure the IP protection degree, the lid / flanges screws / nuts must be screwed tight. Suggested tightening torque as per following table:

Polyester enclosures JB/CS**G****EX Series	Aluminium enclosures JB/CS**A****EX Series	Stainless steel JB/CS**S****EX Series
2Nm	2Nm	1.5Nm

Enclosures **JB/CS**S****EX Series**

can be equipped with locking devices and swing handle. Locking devices do not substitute any fastening screws. The degree of protection are guarantee only from the use of the screws.

For **JB/CS**SB101209EX Series** and **JB/CS**SB151510** the cover can be closed only with screw.

Enclosures **JB/CS**S****EX** is equipped with locking devices and swing handle. The degree of protection is guarantee from the use of locking devices.

GROUNDING TERMINALS FASTENING:

The screws and/or nuts of the grounding cables terminals must be screwed tight. Suggested tightening torque as per following table:

M5	M6	M8	M10	M12
8.5Nm	9Nm	20Nm	25Nm	35Nm



The internal grounding terminal, when installed, is positioned on the internal mounting plate or in a threaded hole.

The internal grounding terminal is suitable to clamp at least one cable lug for conductor size:

Phase conductor size $S\text{mm}^2$	Protection conductor size $S\text{mm}^2$
$S \leq 16$	S
$16 < S \leq 35$	16
$S > 35$	$0,5 S$

The external grounding terminal (in metal enclosures only), when installed, is positioned on one of the enclosure walls.

Dimensions suitable to clamp a cable lug for conductor size: at least 4mm^2 .

PASSING THROUGH GROUNDING TERMINALS:

The enclosures can be supplied (on each wall) c/w passing through terminals installed by GIOVENZANA INTERNATIONAL B.V .

TRANSPARENT PARTS:

The enclosures can be supplied c/w transparent polycarbonate parts installed by GIOVENZANA INTERNATIONAL B.V .

5.6 Walls and Lid drillings

According to the allowable area on the walls of the enclosures, the drilling are made on the enclosures walls as per fig. 1 and 2.

The installed cable glands must be certified according to the types of protection Ex eb IIC and/or Ex tb IIIC.

Fig. 1

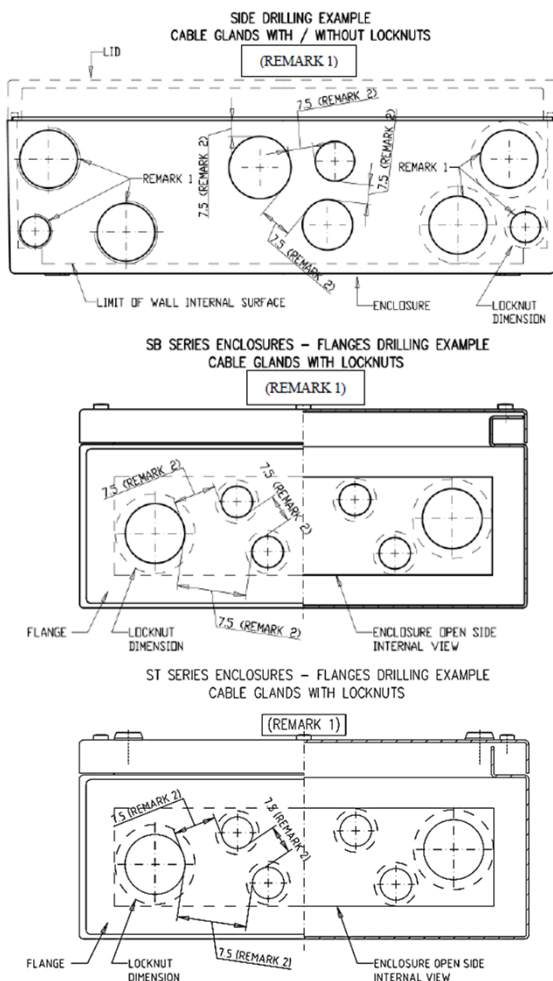
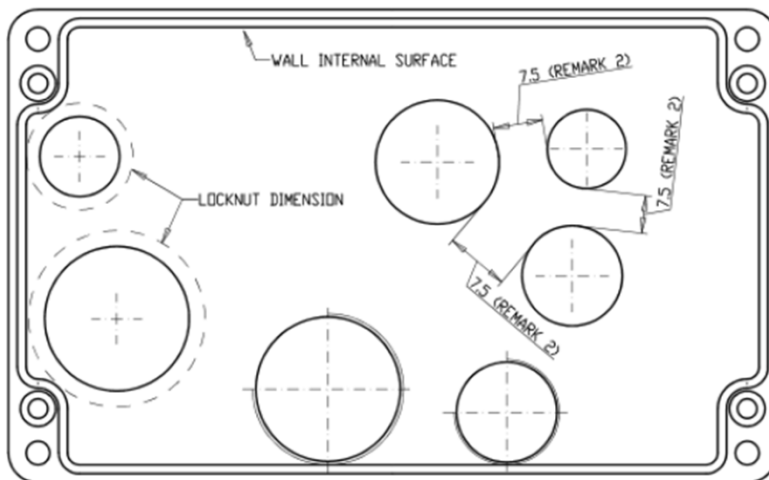


Fig. 2

BOTTOM DRILLING EXAMPLE
CABLE GLANDS WITH / WITHOUT LOCKNUTS (REMARK 1)



Remark 1

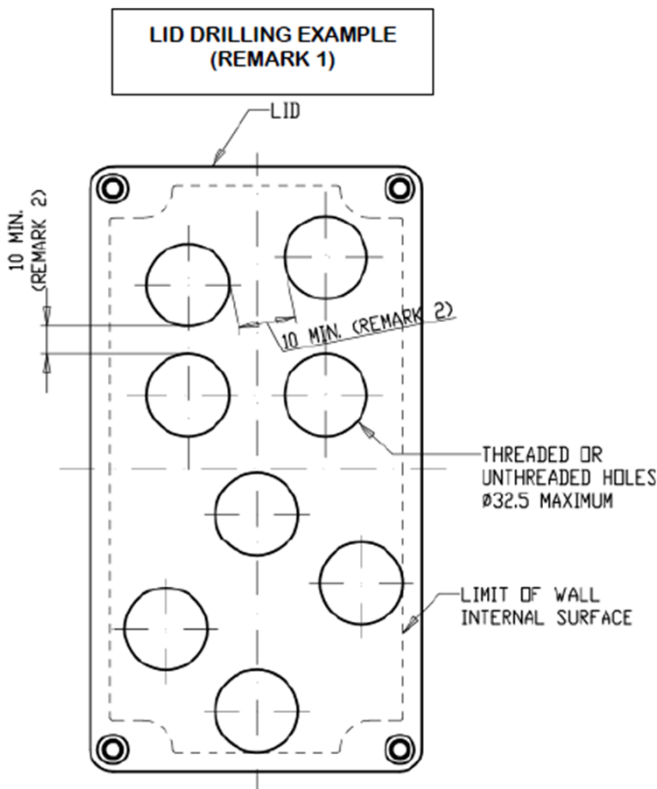
- Drilling examples suitable for the whole range of enclosures.
- Threaded or unthreaded holes. Max. holes dimensions 91mm.
- Parallel or taper threadings are admitted according to the threading of the cable glands to be installed.
- When installed on unthreaded holes, the mechanical fastening of the entry device must be by a locknut.
- The locknut must be also installed when required by the installation instructions of the cable glands.
- The diameter of the unthreaded hole must be maximum 1mm larger than the cable gland threading diameter when not otherwise specified by the assembling instructions of the cable glands.
- To ensure the IP degree of the enclosures, cable glands having at least the same IP degree of the enclosures must be installed. The IP protection degree of the coupling cable gland/enclosure is obtained according to the assembling instructions of the cable glands.
- Taper threadings are not admitted in polyester enclosures.

Remark 2

- Minimum distance (mm) between holes.

When required, drillings for externally operated devices are made on the enclosure lid as per fig. 3

Fig. 3



Remark 1

- Drilling example suitable for the whole range of enclosures.
- Dimension of the threaded or unthread holes must be according to the drilling instructions of the device to be installed.
- The mechanical fastening of the device must be made according its installing instructions.
- To ensure the IP degree of the enclosures, devices having at least the same IP degree of the enclosures must be installed. The IP protection degree of the coupling device/enclosure is obtained according to the assembling instructions of the device.

Remark 2

- Minimum distances (mm) between holes.

5.7 Cable entries and accessories installation

Fig. 4 shows the different cable entries copupled with different accessories.
It is mandatory to perform the maintenance at lleast every 6 months when the accessory is fastened by locknut without star-washer (Fig. 4b).

Fig. 4

Fig. 4a

AQ-AR-SB-ST-EF SERIES ENCLOSURES
CABLE ENTRIES - PLUGS - ADAPTORS COUPLING SYSTEMS

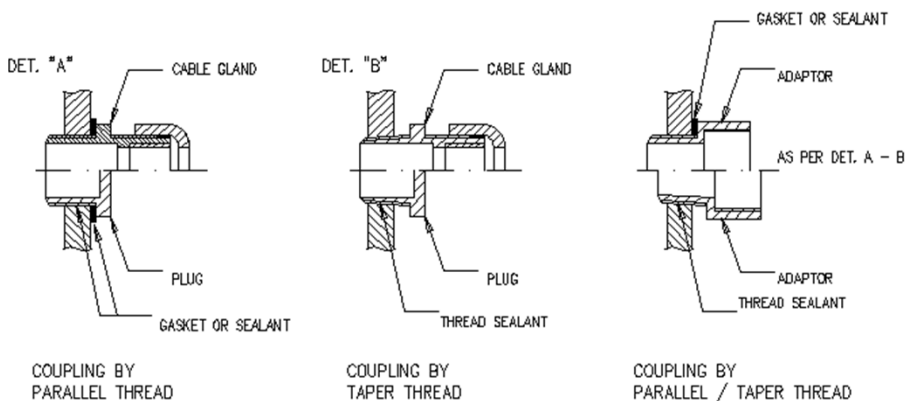
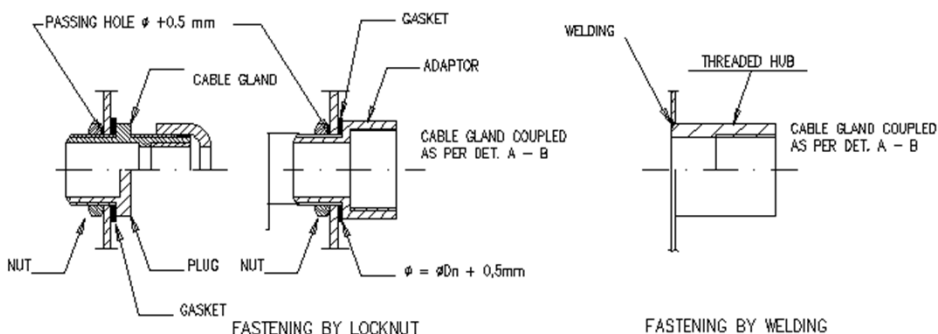


Fig. 4b

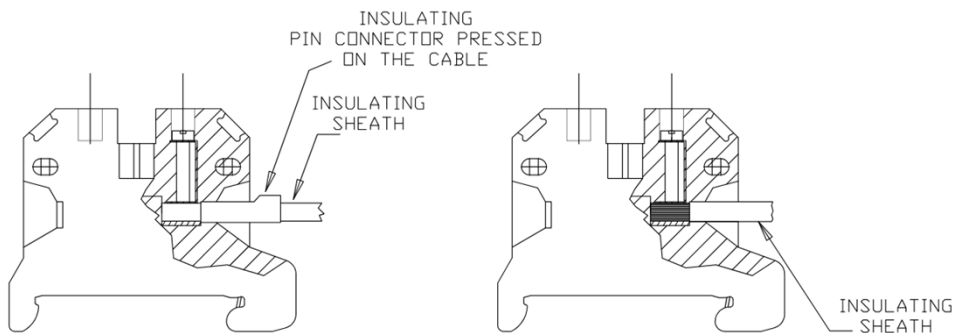
AQ-AR-SB-ST-EF SERIES ENCLOSURES
CABLE ENTRIES - PLUGS - ADAPTORS COUPLING SYSTEMS



5.8 Terminals and others components

- The conductor must be inserted into the mouth of the terminal.
- The insulation must touch the outside of the conducting part of the terminal (Fig 5).
- Insert only one conductor per terminal socket. (unless otherwise described on the relevant certificate)
- Terminals that are jumpered with the appropriate accessories must be adjacent to each other and separated from neighbouring terminals by means of terminal plates.

Fig. 5





6. Maintenance

6.1 General information

- The maintenance is a set of operations performed in order to maintain the safety and functional features of the apparatus during its operating life;
- The maintenance operations must be performed according to **EN/IEC 60079-17** standard (Edit in force);
- The apparatus must be submitted to a detailed maintenance program studied and managed by qualified and authorized technicians and related to the type of apparatus, its operating service and environmental conditions;
- Do not exceed the limit of two years between inspections;
- Check the WARNINGS on the marking tag before opening the enclosure;
- All the maintenance operations must be performed with the electrical apparatus isolated from all energy sources;
- The apparatus must be installed and maintained in order to prevent dangers from casual contacts with under voltage elements and the risks of fire and burst derived from possible abnormal working conditions;
- If the apparatus is subjected to vibrations, verify frequently the fastening of screws, pipe and/or cable entries and each part of the enclosure;
- Replace damaged parts by original GIOVENZANA INTERNATIONAL B.V spare parts only;
- The inspections and maintenance on the apparatus must be carried out only from expert staff, whose training has included all the necessary instructions on the installation modalities, on the laws and standards relevant and on the general principles of the classification of the hazardous areas.

7. Cleaning

- Use only non-metallic brushes and non-corrosive cleaning fluids;
- Before re-assembling the apparatus, verify that flanged, gasket and screws have not been damaged;

When the apparatus is installed in environments with combustible dust:

- Proceed with a regular cleaning of the apparatus to avoid dust accumulation on the surfaces



When the Warning: "POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS" is present on the tag:

- Proceed with a regular cleaning using damp cloth or antistatic products only;
- During cleaning process, touch the apparatus with an insulated object.

DANGER: EXPLOSION HAZARD DUE TO DAMAGED GASKET DURING CLEANING TREATMENTS CAN CAUSE SEVERE OR FATAL INJURIES

8. Repairing

Repair of the re-certified equipment must be performed according to the standard EN/IEC 60079-19 by trained personnel.

Fastening screws of cover must be replaced by GIOVENZANA INTERNATIONAL B.V spare parts only.

All repairing impacting the type of protection (except for replacement with original GIOVENZANA INTERNATIONAL B.V spare parts) **are admitted only under written authorization of GIOVENZANA INTERNATIONAL B.V.**

Written agreements with GIOVENZANA INTERNATIONAL B.V must be taken concerning procedures for mandatory verifications and tests to be performed after repairing.

9. Disposal



The symbol, applied to the product or to the package, indicates that **the product should not be considered normal domestic waste, but must be taken to the appropriate collection point for the recycling of electric and electronic devices.**

Ensuring that you dispose of the product in the appropriate way contributes to avoiding potential negative consequences that might arise from unsuitable disposal of the product. For further information about recycling of this product, contact your local municipal offices, the local municipal waste disposal service or the point-of-sale where you purchased this product.



10. Special Condition of Use

- **JB**S/A/G*****EX** and **CS**S/A/G*****EX** Series enclosures are suitable for service temperature: from -50°C to 105°C;
- Installation of cable entries or plugs and drillings in walls/lid shall be in accordance with Manufacturer's instructions. The suitability of all entries should be considered in the end use application;
- Enclosures equipped with polycarbonate transparent parts, painted enclosures having paint layer thickness more than 0,2 mm and not antistatic polyester enclosures (other than the black colored ones: clean only by damp cloth or antistatic products);
- For the use of the enclosures in environments with explosive atmosphere for the combustible dust presence, the following precautions must be taken: to avoid the accumulation of dust on the surfaces, the user must proceed with a regular cleaning of the enclosures;
- The accessories used for cable entries shall be certified according to EN/IEC 60079-0(*), EN/IEC 60079-7(*), EN/IEC 60079-31(*) standards, with Gb and Db minimum EPLs, and installed according EN/IEC 60079-14(*). They shall guarantee the protection degree on enclosure. If cylindrical threads are used, the coupling between the cable gland and the terminal box shall be provided with lock to prevent loosening.

(*): According to EN Standards for the component certified according to 2014/34 Directive. According to IEC Standards for the component certified according to IECEx Scheme.

11. Management of non-conformities

In case of receiving a Product considered as non-compliant, please contact aftersaleservice@italsmea.com and communicate the following information: Company name, PO number, delivery date, non-compliant Product and the reason(s) why the Product has been considered as non-compliant. GIOVENZANA INTERNATIONAL B.V. will evaluate the request and the Product will be repaired or replaced, at GIOVENZANA INTERNATIONAL B.V. sole discretion.



12. Marking



Legenda:		
(1)	Brand, name and address of the manufacturer	
(2)	Equipment type designation given by manufacturer	
(3)	Year of construction and serial number	
(4)	Ambient temperature range	
(5)	Nominal electrical characteristic	
(6)	Warning used for all types of Enclosure	
(7)	Graphic symbol of conformity CE marking	
(8)	Distinctive community mark specific of explosion protection	
(9)	ATEX Marking	
	II:	Group of apparatus - equipment suitable to be installed in surface places
	2G:	Category - equipment suitable to be installed in places in which, during the normal activities, explosive atmosphere caused by gases, vapours, mists (G) are likely to occur (zone 1); suitable to be installed in zone 1 and in zone 2.
	2D:	Category - equipment suitable to be installed in places in which, during the normal activities, explosive atmosphere caused by mixture of air and combustible dust are likely to occur (zone 21); suitable to be installed in zone 21 and in zone 22.
(10)	(1)G	Only with [ia], in case of associated equipment
	IECEx marking – type of protection	
	Ex:	Protection against explosion.
	ia	Type of protection "ia" - Intrinsic Safety protection
	eb	Type of protection "eb" – Equipment protection by increased safety (for EPL Gb)
	db	Type of protection "db" – Equipment protection for flameproof of enclosure (for EPL Gb)
	mb	Type of protection "mb" – Equipment protection by encapsulation
	IIC or IIB	Equipment suitable to be installed in surface places for all types of combustible gas
	Gb:	Equipment for explosive gas atmospheres, having a "enhanced" level of protection, which is not source of ignition in normal operation and which may have some additional protection to ensure that it remains inactive as an ignition source in the case of regular expected occurrences.
	tb:	Protection by enclosures, (for EPL Db).
	IIIC	Group III for use in places with an explosive dust atmosphere other than mines susceptible to firedamp; conductive dust
	T135°C Or T85°C	Maximum surface temperature
(11)	Db:	Equipment for explosive dust atmospheres, having an "high" level of protection, which is not a source of ignition in normal operation or during expected malfunctions
	IP66	Dust-tight (6); protected against powerful water jets (6)
	Identification of Notified Body that have issued the ATEX and IECEx certificate and its relative number (see declaration of conformity)	



14. Annex A – Technical data

14.1 Explosion protection

Global (IECEx)	Ex ia IIC/IIB T6/T5/T4 Ga ² or Ex eb IIC/IIB T6/T5/T4 Gb ¹ or Ex e IIC/IIB T6/T5/T4 Gb ¹ or Ex db eb ia/ib mb [³] IIC/IIB T6/T5/T4 Gb ¹ and/or Ex tb IIIC T85°C/T100°C/T135°C Db
Europe (ATEX)	II 1 G Ex ia IIC/IIB T6/T5/T4 Ga ² or II 2 G Ex eb IIC/IIB T6/T5/T4 Gb ¹ or II 2(1) G Ex db eb ia/ib mb [³] IIC/IIB T6/T5/T4 Gb ¹ or II 2G (1D) Ex db e ia/ib mb [Ex iaD] IIC/IIB T6/T5/T4 Gb ¹ and/or II 2 D Ex tb IIIC T85°C/T100°C/T135°C Db

NOTES:

1) Others type of protection additional to Ex e/eb depending to the components actually mounted.

2) In case of enclosures containing Ex e/Ex eb terminals and/or Ex ia Ga already certified components (with compatible marking) only.

3) Associated equipment protection depending on the components actually mounted (see lists): e.g. [ia/ib Ga/ia IIIC Da] and/or [ia IIIC Da] or [ia/ib/ia Ga/ia IIIC Da] and/or [ia/ib/ia Ga] [ia IIIC Da]

14.2 Mechanical data

Degree of protection:	IP66 / IP67
Ambient temp. range	-50°C to 95°C Other possible ranges are with: - min temperature: -50°C to -20 °C - max temperature of: 40 °C to 95 °C
Body	CS/JB**A/G*****EX Series Copper-free aluminium / GRP CS/JB** S*****EX AISI316L stainless steel
Hardware, screws and locking devices	AISI316L stainless steel



15. Annex B – Design and models

Material & type	Junction boxes	JB**G/A*****EX Series	GRP Copper-free aluminium
		JB**S*****EX Series	AISI316L stainless steel
	Panel board	CS**G/A*****EX Series	GRP Copper-free aluminium
		CS**S*****EX Series	AISI316L stainless steel Copper-free aluminium
Electrical data	Depending on mounted components		
Ambient temperature	-50°C to +95°C Other possible ranges are with: <ul style="list-style-type: none"> • min temperature: -50°C to -20 °C • max temperature of: 40 °C to 95 °C 		
Temperature Class	T6 (T85°C), T5 (T100°C), T4 (135°C)		



KEY CODE: JUNCTION BOXES

JB (1) (2) (3) (4) (5) (6) EX	(1)	Progressive number	
	(2)	G: A: SB/ST:	GRP Copper-free aluminium Stainless Steel
	(3)(4)(5)	Dimensions, in cm	
	(6)	None: HT:	Up to internal temp. of 105°C Up to internal temp. of 130°C

KEY CODE: CONTROL STATION

CS (1) (2) (3) (4) (5) (6) EX	(1)	Progressive number	
	(2)	G: A: SB/ST:	GRP Copper-free aluminium Stainless Steel
	(3)(4)(5)	Dimensions, in cm	
	(6)	None: HT:	Up to internal temp. of 105°C Up to internal temp. of 130°C

NOTE 1: For commercial reasons, model name listed in the above table can be modified as follows: first (2) and second (3) digits can be reversed.

NOTE 2: For stainless steel enclosures (except types JB/CS**SB101209EX and JB/CS**SB151510EX) the dimensions (2) and (3) can be decreased or increased up to 20%, the dimensions (3) can be increased up to 800 mm. Model name changes consequently.



MODELS – HIGH TEMPERATURE			
Polyester		Aluminium	
G080806HTEX	JB/CSxxG080806HTEX	A080806HTEX	JB/CSxxA080806HTEX
G080808HTEX	JB/CSxxG080808HTEX	A081306HTEX	JB/CSxxA081306HTEX
G081106HTEX	JB/CSxxG081106HTEX	A081806HTEX	JB/CSxxA081806HTEX
G081108HTEX	JB/CSxxG081108HTEX	A082505HTEX	JB/CSxxA082505HTEX
G081606HTEX	JB/CSxxG081606HTEX	A101008HTEX	JB/CSxxA101008HTEX
G081608HTEX	JB/CSxxG081608HTEX	A101608HTEX	JB/CSxxA101608HTEX
G081906HTEX	JB/CSxxG081906HTEX	A102008HTEX	JB/CSxxA102008HTEX
G081908HTEX	JB/CSxxG081908HTEX	A121208HTEX	JB/CSxxA121208HTEX
G082306HTEX	JB/CSxxG082306HTEX	A121209HTEX	JB/CSxxA121209HTEX
G082308HTEX	JB/CSxxG082308HTEX	A122208HTEX	JB/CSxxA122208HTEX
G121209HTEX	JB/CSxxG121209HTEX	A122209HTEX	JB/CSxxA122209HTEX
G122209HTEX	JB/CSxxG122209HTEX	A123608HTEX	JB/CSxxA123608HTEX
G161609HTEX	JB/CSxxG161609HTEX	A141409HTEX	JB/CSxxA141409HTEX
G162609HTEX	JB/CSxxG162609HTEX	A142009HTEX	JB/CSxxA142009HTEX
G163609HTEX	JB/CSxxG163609HTEX	A161609HTEX	JB/CSxxA161609HTEX
G165609HTEX	JB/CSxxG165609HTEX	A162609HTEX	JB/CSxxA162609HTEX
G202017HTEX	JB/CSxxG202017HTEX	A163609HTEX	JB/CSxxA163609HTEX
G203017HTEX	JB/CSxxG203017HTEX	A165609HTEX	JB/CSxxA165609HTEX
G252612HTEX	JB/CSxxG252612HTEX	A181810HTEX	JB/CSxxA181810HTEX
G252616HTEX	JB/CSxxG252616HTEX	A182810HTEX	JB/CSxxA182810HTEX
G254012HTEX	JB/CSxxG254012HTEX	A102311HTEX	JB/CSxxA102311HTEX
G254016HTEX	JB/CSxxG254016HTEX	A202311HTEX	JB/CSxxA202311HTEX
G256012HTEX	JB/CSxxG256012HTEX	A202318HTEX	JB/CSxxA202318HTEX
G304020HTEX	JB/CSxxG304020HTEX	A232811HTEX	JB/CSxxA232811HTEX



MODELS – HIGH TEMPERATURE

Polyester		Aluminium	
G363609HTEX	JB/CSxxG363609HTEX	A233311HTEX	JB/CSxxA233311HTEX
G406025HTEX	JB/CSxxG406025HTEX	A233318HTEX	JB/CSxxA233318HTEX
G414012HTEX	JB/CSxxG414012HTEX	A234011HTEX	JB/CSxxA234011HTEX
G414020HTEX	JB/CSxxG414020HTEX	A234023HTEX	JB/CSxxA234023HTEX
-	-	A236011HTEX	JB/CSxxA236011HTEX
-	-	A314011HTEX	JB/CSxxA314011HTEX
-	-	A314014HTEX	JB/CSxxA314014HTEX
-	-	A314018HTEX	JB/CSxxA314018HTEX
-	-	A314023HTEX	JB/CSxxA314023HTEX
-	-	A316011HTEX	JB/CSxxA316011HTEX
-	-	A316018HTEX	JB/CSxxA316018HTEX
-	-	A606020HTEX	JB/CSxxA606020HTEX



MODELS – STANDARD TEMPERATURE			
Polyester		Aluminium	
G080806EX	JB/CSxxG080806EX	A080806EX	JB/CSxxA080806EX
G080808EX	JB/CSxxG080808EX	A081306EX	JB/CSxxA081306EX
G081106EX	JB/CSxxG081106EX	A081806EX	JB/CSxxA081806EX
G081606EX	JB/CSxxG081606EX	A081808EX	JB/CSxxA081808EX
G081906EX	JB/CSxxG081906EX	A082505EX	JB/CSxxA082505EX
G121209EX	JB/CSxxG121209EX	A082508EX	JB/CSxxA082508EX
G122209EX	JB/CSxxG122209EX	A101008EX	JB/CSxxA101008EX
G161609EX	JB/CSxxG161609EX	A101508EX	JB/CSxxA101508EX
G162609EX	JB/CSxxG162609EX	A101608EX	JB/CSxxA101608EX
G163609EX	JB/CSxxG163609EX	A102008EX	JB/CSxxA102008EX
G252612EX	JB/CSxxG252612EX	A121208EX	JB/CSxxA121208EX
G252616EX	JB/CSxxG252616EX	A122209EX	JB/CSxxA122209EX
G254012EX	JB/CSxxG254012EX	A141409EX	JB/CSxxA141409EX
G254016EX	JB/CSxxG254016EX	A142009EX	JB/CSxxA142009EX
G256012EX	JB/CSxxG256012EX	A161609EX	JB/CSxxA161609EX
G414012EX	JB/CSxxG414012EX	A162410EX	JB/CSxxA162410EX
G414016EX	JB/CSxxG414016EX	A162609EX	JB/CSxxA162609EX
-	-	A181810EX	JB/CSxxA181810EX
-	-	A182810EX	JB/CSxxA182810EX
-	-	A202311EX	JB/CSxxA202311EX
-	-	A202318EX	JB/CSxxA202318EX
-	-	A232811EX	JB/CSxxA232811EX
-	-	A233312EX	JB/CSxxA233312EX
-	-	A233318EX	JB/CSxxA233318EX



MODELS – STANDARD TEMPERATURE

Stainless steel

SB101210EX	JB/CSxxSB101210EX	ST101210EX	JB/CSxxST101210EX
SB151510EX	JB/CSxxSB151510EX	ST151510EX	JB/CSxxST151510EX
SB142013EX	JB/CSxxSB142013EX	ST142013EX	JB/CSxxST142013EX
SB202010EX	JB/CSxxSB202010EX	ST202010EX	JB/CSxxST202010EX
SB202016EX	JB/CSxxSB202016EX	ST202016EX	JB/CSxxST202016EX
SB202713EX	JB/CSxxSB202713EX	ST202713EX	JB/CSxxST202713EX
SB272713EX	JB/CSxxSB272713EX	ST272713EX	JB/CSxxST272713EX
SB203016EX	JB/CSxxSB203016EX	ST203016EX	JB/CSxxST203016EX
SB273513EX	JB/CSxxSB273513EX	ST273513EX	JB/CSxxST273513EX
SB282816EX	JB/CSxxSB282816EX	ST282816EX	JB/CSxxST282816EX
SB204016EX	JB/CSxxSB204016EX	ST204016EX	JB/CSxxST204016EX
SB353516EX	JB/CSxxSB353516EX	ST353516EX	JB/CSxxST353516EX
SB282827EX	JB/CSxxSB282827EX	ST282827EX	JB/CSxxST282827EX
SB355016EX	JB/CSxxSB355016EX	ST355016EX	JB/CSxxST355016EX
SB383816EX	JB/CSxxSB383816EX	ST383816EX	JB/CSxxST383816EX
SB384516EX	JB/CSxxSB384516EX	ST384516EX	JB/CSxxST384516EX
SB385716EX	JB/CSxxSB385716EX	ST385716EX	JB/CSxxST385716EX
SB505016EX	JB/CSxxSB505016EX	ST505016EX	JB/CSxxST505016EX
SB383827EX	JB/CSxxSB383827EX	ST383827EX	JB/CSxxST383827EX
SB575716EX	JB/CSxxSB575716EX	ST575716EX	JB/CSxxST575716EX
SB577620EX	JB/CSxxSB577620EX	ST577620EX	JB/CSxxST577620EX
SB575730EX	JB/CSxxSB575730EX	ST575730EX	JB/CSxxST575730EX
SB769520EX	JB/CSxxSB769520EX	ST769520EX	JB/CSxxST769520EX
SB1258040EX	JB/CSxxSB1258040EX	ST1258040EX	JB/CSxxST1258040EX