Base Load Power Hub (BLPH)

JB, SOCKET

INSTALLATION, OPERATING, AND MAINTENANCE MANUAL

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1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

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Sign	Date
	28/11/2024

Rev.	Date	Description	Prepared	Reviewed	Approved
03	28/11/2024	Issue for Information (IFI)	A. Sortino	M. Berzoini	M. Berzoini
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TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

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		00	01	02	03				
1	Cover	X	X	X	X				
2	Table of Contents	X	X	X	X				
3	Revision / Change Log / Hold List	X	X	X	X				
4	INSTALLATION, OPERATING, AND MAINTENANCE MANUAL	X	X	X	X				

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Revision / Change Log

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00	Issue for Information (IFI)
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03	Issue for Information (IFI)

HOLDS LIST

No.	Description
1.	
2.	
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JUNCTION BOXES

SB-769520
AQ-252612P
SB-385720
AQ-414012P

PLUGS/SOCKETS

DSN-1
DS-9



AQ/AR/SB/ST/EF.. SERIES

Ex e enclosures

USE & MAINTENANCE INSTRUCTIONS

TECHNOR ITALSMEA

A COMPANY OF MARECHAL ELECTRIC

Listed Documents	Any changes should be authorized by ExCB
EU Type Examination Certificate	**FIDI 21 ATEX 0090X /01**
IECEx Certificate	**IECEx FIDI 21.0015 X /01**
Ex Technical Report	**HR/FIDI/ExTR 21.0016/01** **FIDI 23 CR 019**

INSTRUCTION NOTE: N° TN2111 Annex A				
2	Added note for holes (internal modification)	AIOLFI	ALG	22/11/2023
0	Emission	FUMAGALLI	RONCORONI	08/11/2021
REV.	DESCRIPTION	ISSUED	APPR.	DATE

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INCREASED SAFETY ENCLOSURES

AQ../AR../SB../ST../EF.. SERIES

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



AQ../AR.. SERIES
In GRP and
copper-free aluminium



SB../ST.. SERIES
In AISI316L



EFE/EFXE Series
In AISI316L, copper-free aluminium and GRP

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1. General Information

1.1 Manufacturer

TECHNOR ITALSMEA S.p.A.
Via Italia 33, 20060
Gessate, Milan, Italy
Phone: +39 02 95 00 151
Fax: +39 02 95 00 15 27

1.2 About these Instructions

- **INSTRUCTION NOTE: N° TN2111 Annex A, issued on January 21st, 2023**
- 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 TECHNOR ITALSMEA
- In case of sale of the apparatus, pass these Instructions to subsequent owners

1.3 Conformity with Standards and Regulations

- AQ../AR../SB../ST../EF.. 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

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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 Technor Italsmea is evaluated and approved by a Notified Body**, which carries out Quality System surveillance.
- Technor Italsmea 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 TECHNOR ITALSMEA 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.

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3.2 Type of protection

AQ../AR../SB../ST../EF.. Series – 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.

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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.

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3.3 Intended Use

AQ../AR../SB../ST../EF.. 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

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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 damanged 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.

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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

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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.

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5.4 Apparatus composition

The AQ../AR../SB../ST../EF.. 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 AQ.../AR.../SB... is fixed to the body with screw, between body and cover a gasket guarantee the protection degree IP66 (IP66/67 depending on models).
For SB… it is also possible to add locking device and/or swing handle (IP66) in addition to screws.
The cover of ST... is fixed to the body with locking device and/or swing handle (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 SB… and ST… 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.

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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 AQ-AR.. Series	Aluminium enclosures AQ-AR.. Series	Stainless steel enclosures SB../ST.. Series
2Nm	2Nm	1.5Nm

Enclosures SB… 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 SB-101209 and SB-151510 the cover can be closed only with screw.

Enclosures ST… 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

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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 Smm^2	Protection conductor size Smm^2
S ≤ 16	S
16 < S ≤ 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 conductior size: at least 4mm^2.

PASSING THROUGH GROUNDING TERMINALS:

The enclosures can be supplied (on each wall) c/w passing through termnals installed by Technor Italsmea.

TRANSPARENT PARTS:

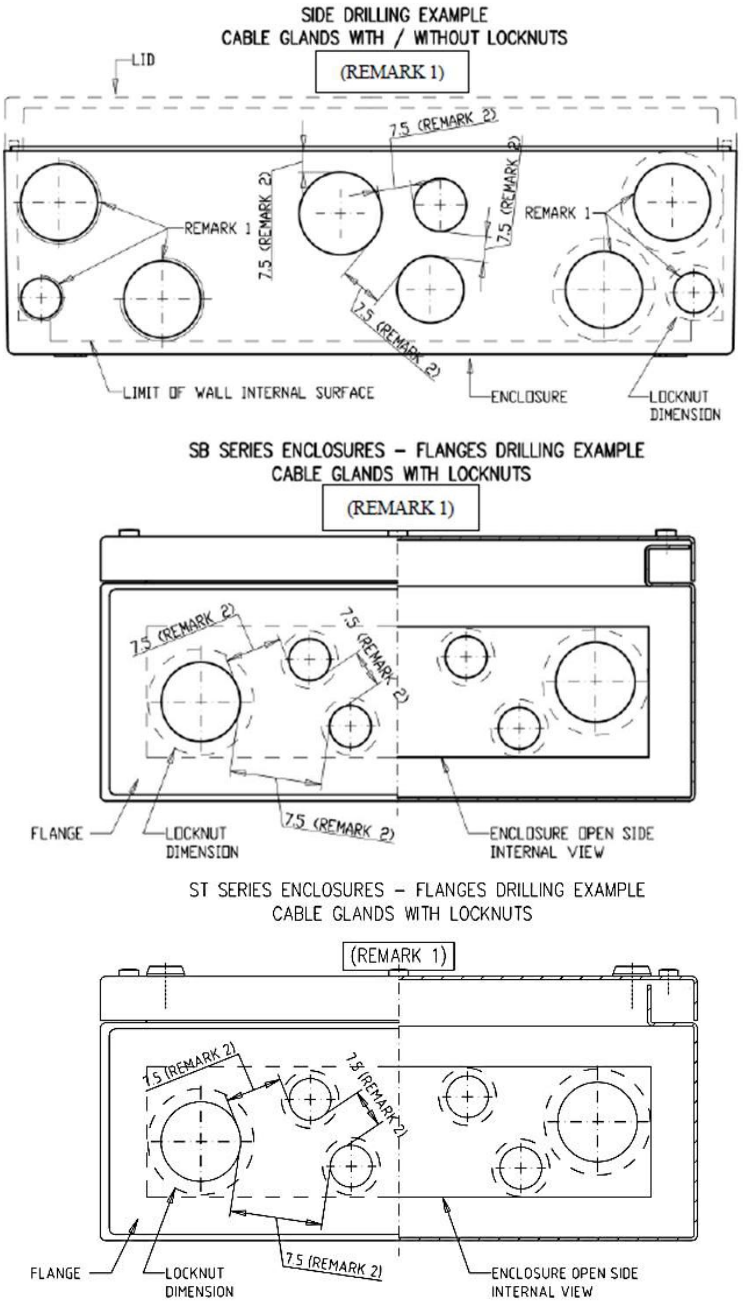
The enclosures can be supplied c/w transparent polycarbonate parts installed by Technor Italsmea.

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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.

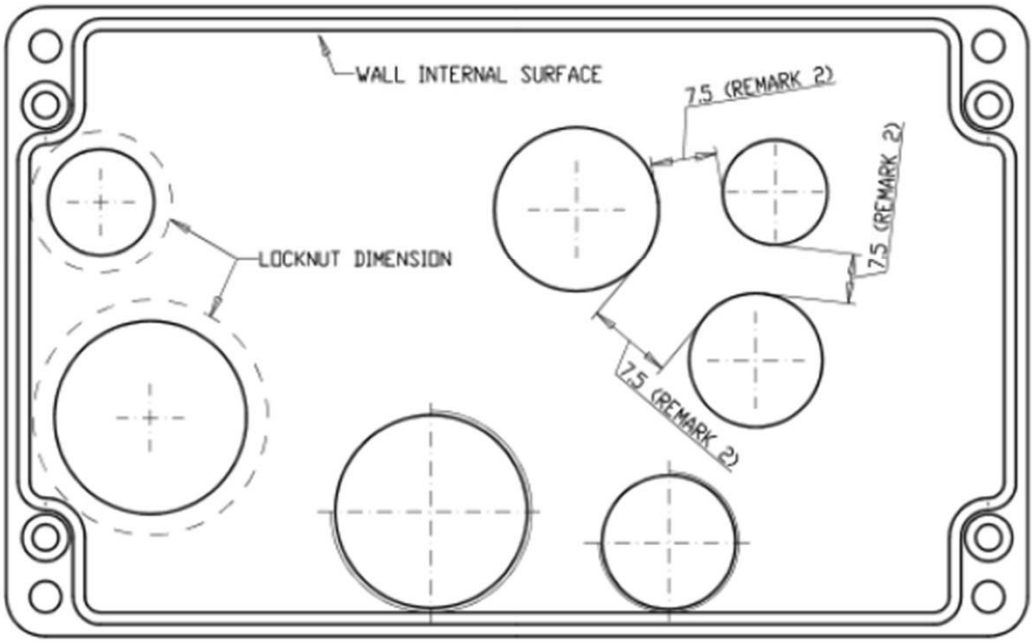
Fig. 1



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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.

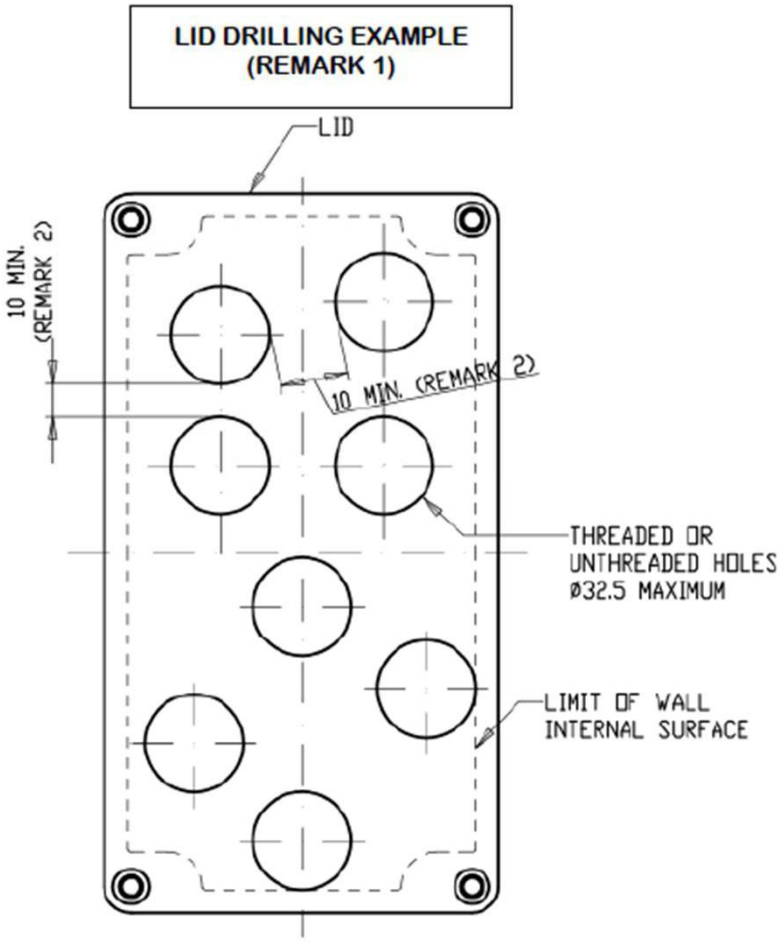
Remark 2

- Minimum distance (mm) between holes.

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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.

In order to maintain the environmental integrity of the enclosure, devices with the same environmental ratings shall be used to close openings in the enclosure.

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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 lleas every 6 months when the accessory is fastened by locknut without star-washer (Fig. 4b).

Fig. 4

Fig. 4a

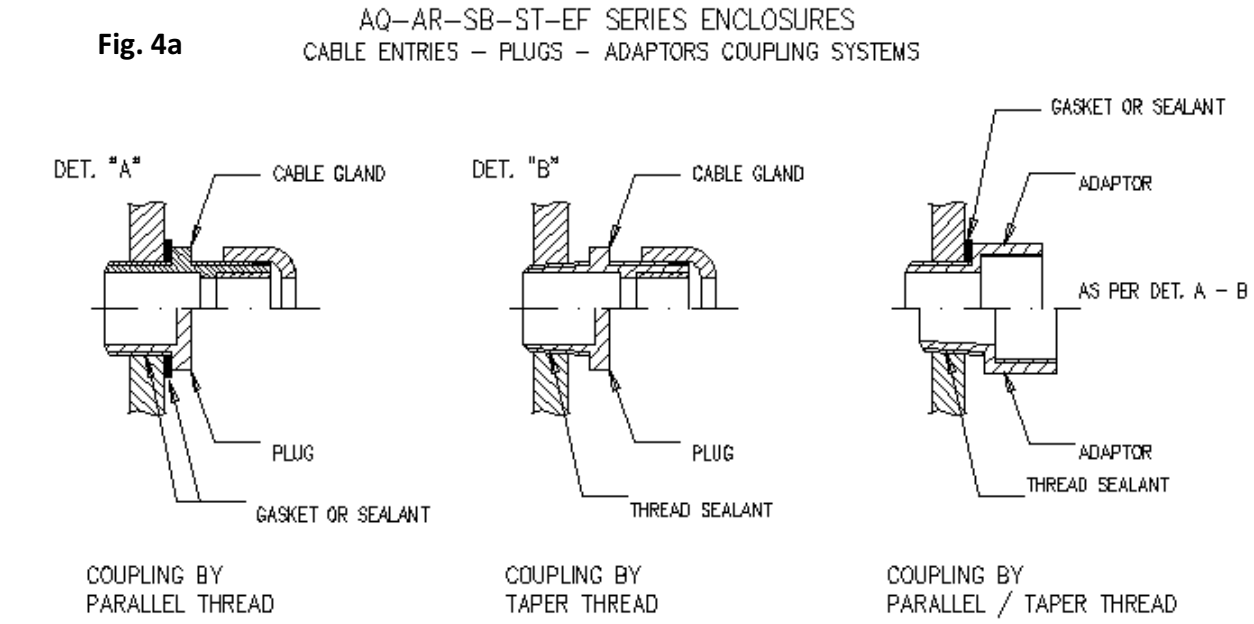
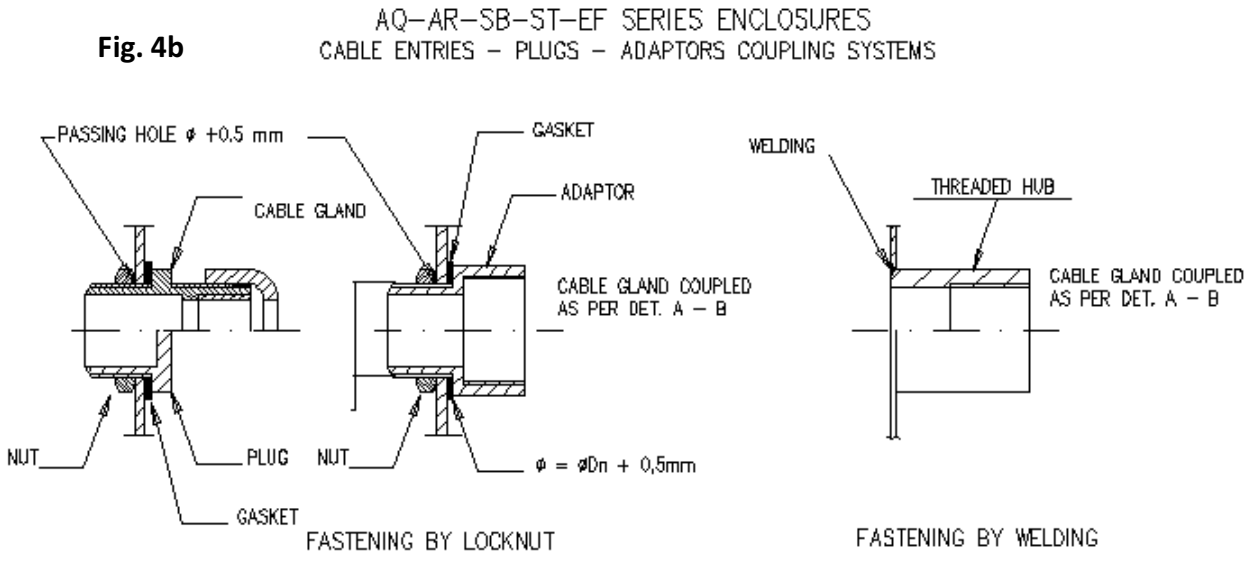


Fig. 4b

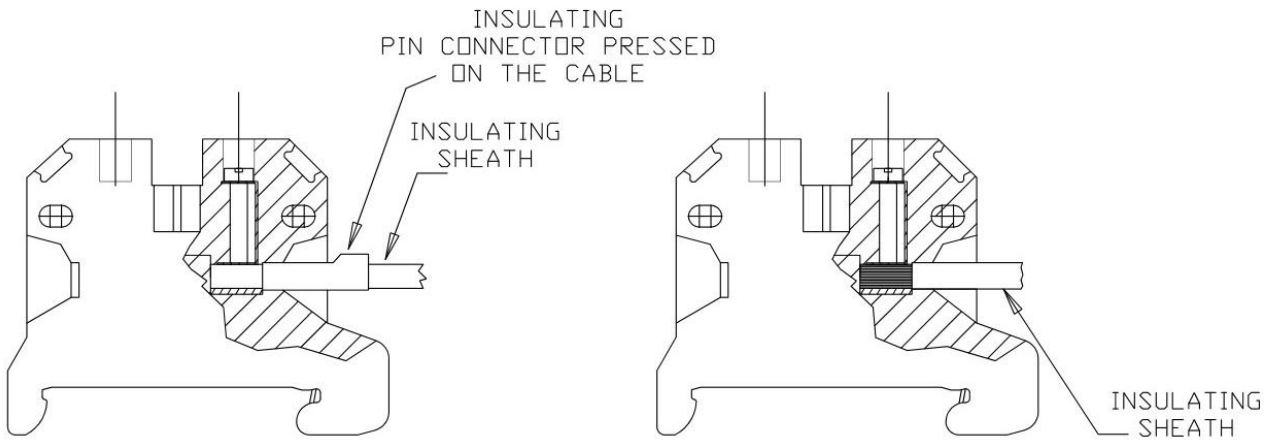


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5.8 Terminals and others components

- 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



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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 Technor Italsmea 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

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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 Technor Italsmea spare parts only.

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

Written agreements with Technor Italsmea 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 print 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.

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10. Special Condition of Use

- AQ.../AR…/SB.../ST…/EF… 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 block 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.

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11. Warranties

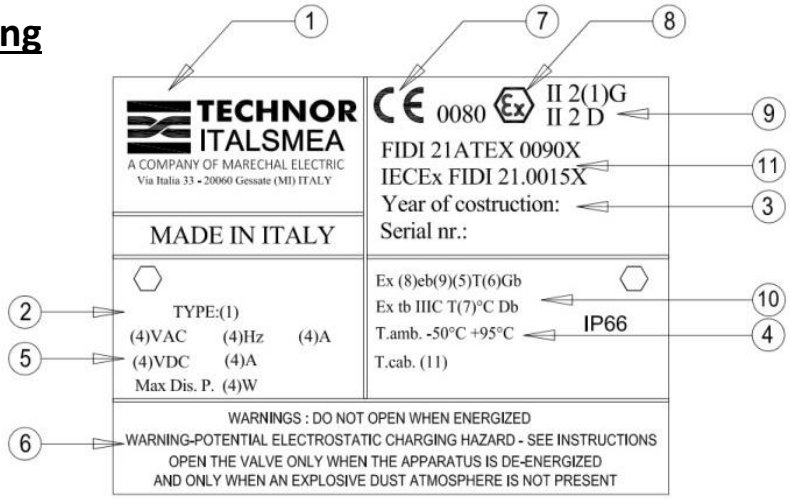
For Warranty Terms & Conditions, please refer to our General Terms & Conditions available at https://marechal.com/technor/en/p-general-terms-and-conditions-of-sales-technor.html

12. 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. TECHNOR ITALSMEA will evaluate the request and the Product will be repaired or replaced, at TECHNOR ITALSMEA sole discretion.

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13. 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.
	(1)G	Only with [ia], in case of associated equipment
(10)	**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 igniton 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
	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)
(11)	Identification of Notified Body that have issued the ATEX and IECEx certificate and its relative number (see declaration of conformity)	

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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	**AQ…/AR... Copper-free aluminium / GRP**
	SB…/ST… AISI316L stainless steel
	EF… AISI316L stainless steel / Copper-free aluminium / GRP
Hardware, screws and locking devices	**AISI316L stainless steel**

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15. Annex B – Design and models

Material & type	Juncion boxes	AQ…/AR… Series	GRP Copper-free aluminium
		SB…/ST… Series	AISI316L stainless steel
	Panel board	EFE-… Series	GRP
		EFXE… 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:** • **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)**		

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KEY CODE: JUNCTION BOXES			
A (1) – (2) (3) (4) (5) – (6)	(1)	Q: R:	Square size Rectangular size
	(2)(3)(4)	Dimensions, in cm	
	(5)	P: AL:	GRP Copper-free aluminium
	(6)	None: HT:	Up to internal temp. of 105°C Up to internal temp. of 130°C
SB – (2) (3) (4)	(2)(3)(4)	Dimensions, in cm	
ST – (2) (3) (4)	(2)(3)(4)	Dimensions, in cm	

KEY CODE: PANEL BOARD			
EFE – (2) (3) (4) – (6)	(2)(3)(4)	Dimensions, in cm	
	(6)	None: HT:	Up to internal temp. of 105°C Up to internal temp. of 130°C
EFXE – (2) (3) (4) (5) – (6)	(2)(3)(4)	Dimensions, in cm	
	(5)	None: AL	AISI316L Stainless steel Copper-free aluminium
	(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 SB-101209 and SB-151510) 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.

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MODELS – HIGH TEMPERATURE			
Polyester		Aluminium	
AQ-080806P-HT	EFE-080806-HT	AQ-080806AL-HT	EFXE-080806AL-HT
AQ-080808P-HT	EFE-080808-HT	AR-081306AL-HT	EFXE-081306AL-HT
AR-081106P-HT	EFE-081106-HT	AR-081806AL-HT	EFXE-081806AL-HT
AR-081108P-HT	EFE-081108-HT	AR-082505AL-HT	EFXE-082505AL-HT
AR-081606P-HT	EFE-081606-HT	AQ-101008AL-HT	EFXE-101008AL-HT
AR-081608P-HT	EFE-081608-HT	AR-101608AL-HT	EFXE-101608AL-HT
AR-081906P-HT	EFE-081906-HT	AR-102008AL-HT	EFXE-102008AL-HT
AR-081908P-HT	EFE-081908-HT	AQ-121208AL-HT	EFXE-121208AL-HT
AR-082306P-HT	EFE-082306-HT	AQ-121209AL-HT	EFXE-121209AL-HT
AR-082308P-HT	EFE-082308-HT	AR-122208AL-HT	EFXE-122208AL-HT
AQ-121209P-HT	EFE-121209-HT	AR-122209AL-HT	EFXE-122209AL-HT
AR-122209P-HT	EFE-122209-HT	AR-123608AL-HT	EFXE-123608AL-HT
AQ-161609P-HT	EFE-161609-HT	AQ-141409AL-HT	EFXE-141409AL-HT
AR-162609P-HT	EFE-162609-HT	AR-142009AL-HT	EFXE-142009AL-HT
AR-163609P-HT	EFE-163609-HT	AQ-161609AL-HT	EFXE-161609AL-HT
AR-165609P-HT	EFE-165609-HT	AR-162609AL-HT	EFXE-162609AL-HT
AQ-202017P-HT	EFE-202017-HT	AR-163609AL-HT	EFXE-163609AL-HT
AR-203017P-HT	EFE-203017-HT	AR-165609AL-HT	EFXE-165609AL-HT
AQ-252612P-HT	EFE-252612-HT	AQ-181810AL-HT	EFXE-181810AL-HT
AQ-252616P-HT	EFE-252616-HT	AR-182810AL-HT	EFXE-182810AL-HT
AR-254012P-HT	EFE-254012-HT	AR-102311AL-HT	EFXE-102311AL-HT
AR-254016P-HT	EFE-254016-HT	AR-202311AL-HT	EFXE-202311AL-HT
AR-256012P-HT	EFE-256012-HT	AR-202318AL-HT	EFXE-202318AL-HT
AR-304020P-HT	EFE-304020-HT	AR-232811AL-HT	EFXE-232811AL-HT

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MODELS – HIGH TEMPERATURE			
Polyester		Aluminium	
AQ-363609P-HT	EFE-363609-HT	AR-233311AL-HT	EFXE-233311AL-HT
AR-406025P-HT	EFE-406025-HT	AR-233318AL-HT	EFXE-233318AL-HT
AQ-414012P-HT	EFE-414012-HT	AR-234011AL-HT	EFXE-234011AL-HT
AQ-414020P-HT	EFE-414020-HT	AR-234023AL-HT	EFXE-234023AL-HT
-	-	AR-236011AL-HT	EFXE-236011AL-HT
-	-	AR-314011AL-HT	EFXE-314011AL-HT
-	-	AR-314014AL-HT	EFXE-314014AL-HT
-	-	AR-314018AL-HT	EFXE-314018AL-HT
-	-	AR-314023AL-HT	EFXE-314023AL-HT
-	-	AR-316011AL-HT	EFXE-316011AL-HT
-	-	AR-316018AL-HT	EFXE-316018AL-HT
-	-	AQ-606020AL-HT	EFXE-606020AL-HT

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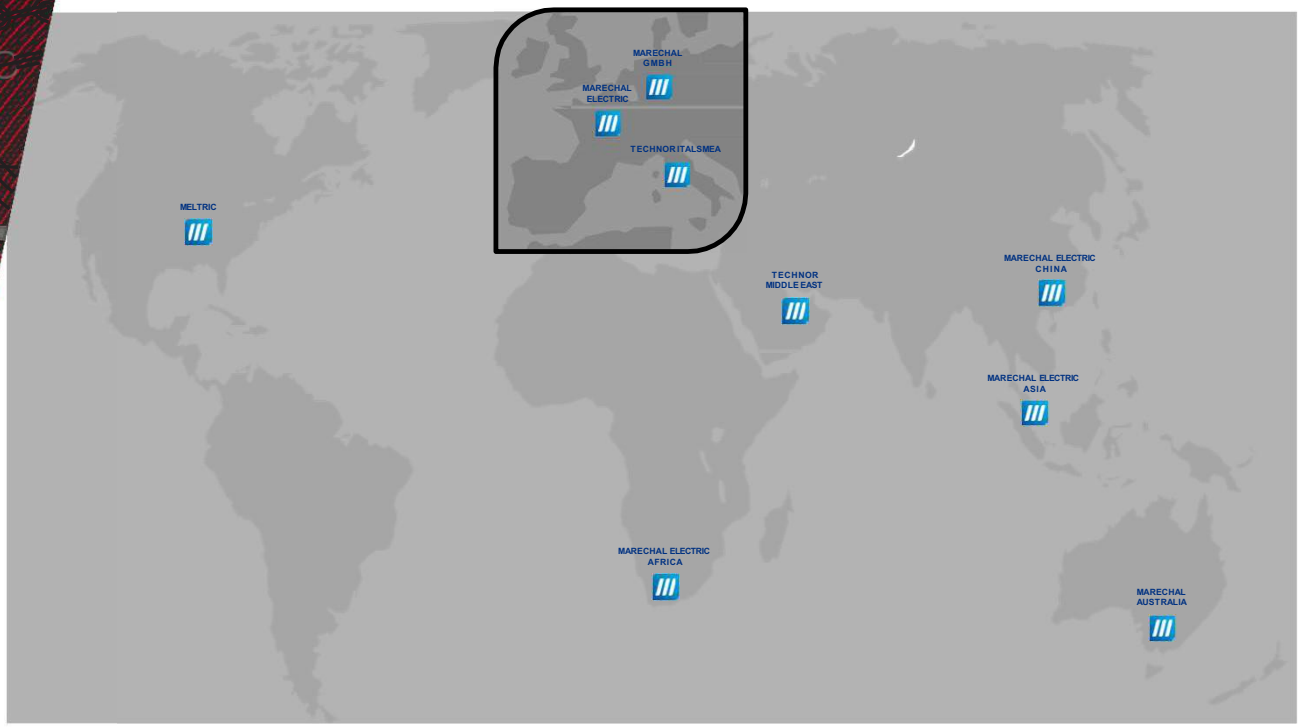
MODELS – STANDARD TEMPERATURE			
Polyester		Aluminium	
AQ-080806P	EFE-080806	AQ-080806AL	EFXE-080806AL
AQ-080808P	EFE-080808	AR-081306AL	EFXE-081306AL
AR-081106P	EFE-081106	AR-081806AL	EFXE-081806AL
AR-081606P	EFE-081606	AR-081808AL	EFXE-081808AL
AR-081906P	EFE-081906	AR-082505AL	EFXE-082505AL
AQ-121209P	EFE-121209	AR-082508AL	EFXE-082508AL
AR-122209P	EFE-122209	AQ-101008AL	EFXE-101008AL
AQ-161609P	EFE-161609	AR-101508AL	EFXE-101508AL
AR-162609P	EFE-162609	AR-101608AL	EFXE-101608AL
AR-163609P	EFE-163609	AR-102008AL	EFXE-102008AL
AQ-252612P	EFE-252612	AQ-121208AL	EFXE-121208AL
AQ-252616P	EFE-252616	AR-122209AL	EFXE-122209AL
AR-254012P	EFE-254012	AQ-141409AL	EFXE-141409AL
AR-254016P	EFE-254016	AR-142009AL	EFXE-142009AL
AR-256012P	EFE-256012	AQ-161609AL	EFXE-161609AL
AQ-414012P	EFE-414012	AR-162410AL	EFXE-162410AL
AQ-414020P	EFE-414020	AR-162609AL	EFXE-162609AL
-	-	AQ-181810AL	EFXE-181810AL
-	-	AR-182810AL	EFXE-182810AL
-	-	AR-202311AL	EFXE-202311AL
-	-	AR-202318AL	EFXE-202318AL
-	-	AR-232811AL	EFXE-232811AL
-	-	AR-233312AL	EFXE-233312AL
-	-	AR-233318AL	EFXE-233318AL

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MODELS – STANDARD TEMPERATURE			
Stainless steel			
SB-101210	EFXE-101210SB	ST-142013	EFXE-142013ST
SB-151510	EFXE-151510SB	ST-202010	EFXE-202010ST
SB-142013	EFXE-142013SB	ST-202016	EFXE-202016ST
SB-202010	EFXE-202010SB	ST-202713	EFXE-202713ST
SB-202016	EFXE-202016SB	ST-272713	EFXE-272713ST
SB-202713	EFXE-202713SB	ST-203016	EFXE-203016ST
SB-272713	EFXE-272713SB	ST-273513	EFXE-273513ST
SB-203016	EFXE-203016SB	ST-282816	EFXE-282816ST
SB-273513	EFXE-273513SB	ST-204016	EFXE-204016ST
SB-282816	EFXE-282816SB	ST-353516	EFXE-353516ST
SB-204016	EFXE-204016SB	ST-282827	EFXE-282827ST
SB-353516	EFXE-353516SB	ST-355016	EFXE-355016ST
SB-282827	EFXE-282827SB	ST-383816	EFXE-383816ST
SB-355016	EFXE-355016SB	ST-384516	EFXE-384516ST
SB-383816	EFXE-383816SB	ST-385716	EFXE-385716ST
SB-384516	EFXE-384516SB	ST-505016	EFXE-505016ST
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SB-577620	EFXE-577620SB	ST-769520	EFXE-769520ST
SB-575730	EFXE--575730SB	ST-1258040	EFXE-1258040ST
SB-769520	EFXE-769520SB	-	-
SB-1258040	EFXE-1258040SB	-	-

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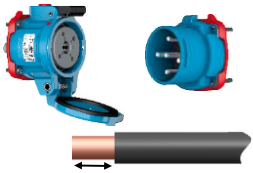
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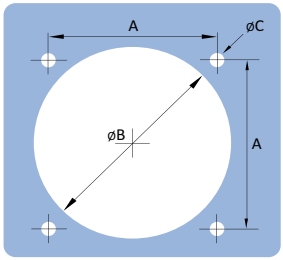
DS1/DS3/DS6/DS9 QUICK START GUIDE

DS



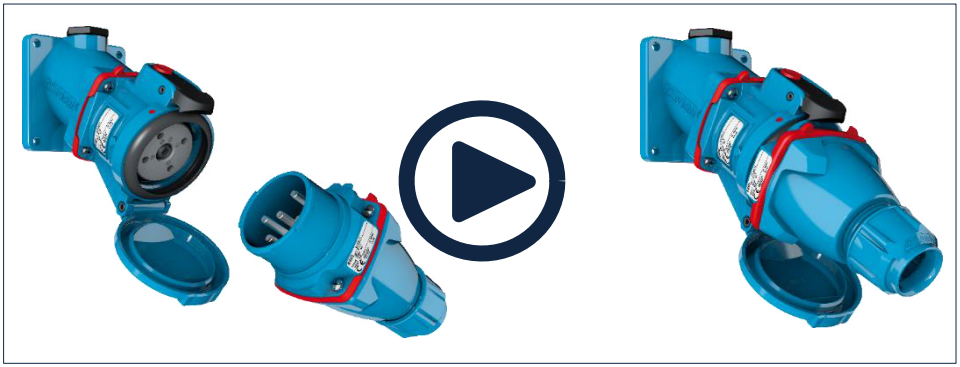



Type		mini-maxi mm²	mini-maxi mm²	mm		Nm (Hm)
DS1		2.5 – 6	2.5 – 10	10	19	1.5
		2.5 – 6	2.5 – 10	10	19	1.5
DS3		6 – 16	10 – 25	12	17	1.8
		1 – 2.5	1.5 – 4	14	13	0.8
DS6		10 – 25	10 – 35	24		4
DS9		25 – 70	25 – 95	30		9



	A mm	øB mm	øC mm
DS1	48	57	5
DS3	55	69	5
DS6	66	81	6
DS9	81	100	6





IS 06-1 [DS1/DS3/DS6/DS9] Rev A.5 - 2024-06

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INSTRUCTION SHEET

CONTENTS

- ▶FOREWORD
- ▶GENERAL
- ▶INFORMATION
- ▶WIRING
- ▶INSTALLATION
- ▶OPERATION
- ▶MAINTENANCE
- ▶ SELF-EJECTING DEVICES
- ▶OPTIONAL INDUSTRIAL-DOMESTIC ADAPTER
- ▶RESPONSIBILITY
- ▶DOCUMENTS

▶FOREWORD

This instruction sheet has been prepared in English and translated into different languages. In case of divergence, the English version shall prevail. Download it for future use. Read this instruction sheet completely before proceeding with the installation. Plugs, fixed or portable socket-outlets and appliance inlets are herein referred to as "devices".
In some countries, the term "ground" is used instead of "earth". In some cases, for practical reasons, some of the stickers are delivered separately. Affix them near the device in a suitable and visible manner.

ENGLISH

►GENERAL

DECONTACTOR™ , are devices for industrial purposes with an integral switching device according to IEC/EN 60309- 1 and 60309- 4. They combine in a single accessory the performances of a plug and socket-outlet for industrial purposes with those of an air-break switch. In AC, they can make and break mixed resistive and inductive loads, highly inductive loads, or harsh overloads in complete safety. At their nominal ratings, DECONTACTOR™ have the performances of a switch of utilization category AC-22A and/or AC-23A, according to IEC/EN 60947-3 standard. These devices can be electrically interlocked with a switching device when one or two auxiliary contacts, if any, are used as pilot contacts. According to IEC/EN 60529 standard, live parts are protected against a 1 mm metallic wire IP4X/IPXXD by a safety shutter controlled by a complementary device having compatible ratings and contact configurations.

►INFORMATION

• MARECHAL ELECTRIC SAS declines any responsibility in the event of non-observance of applicable standards and instructions contained in this document.

• These devices must be installed and maintained by a qualified electrician.

• MARECHAL® devices must be used with MARECHAL® complementary devices only. Any repair or service must be performed with genuine MARECHAL® parts only.

• Only devices with similar casing material should be mated with each other: poly with poly and metal with metal. Metal-cased devices may use rear accessories (handle, box, adaptor) of insulating material.

• For optimum operation, ensure that the flexible cable does not hinder the return of the device to its rest position.

• Apply the recommended tightening torques. Do not overtighten the self-tapping screws.

• Poly box closing screws must be tightened at a torque of 1.2 Nm.

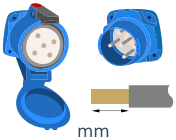
• Beyond certain values of voltage and current, devices may be used as "Connectors without breaking capacity". They are then fitted with a red sticker: WARNING - Do not connect/disconnect under load. Compliance with this warning is the responsibility of the installer and end-user. It can be performed using of a locking device (see Optional socket-outlet locking), by the installation itself, or by an appropriate procedure.

►WIRING

☼The contact terminals are spring-assisted to prevent loosening due to strand settlement, vibration, or thermal cycling.

• Remove an adequate length of cable outer sheath, according to the accessory used. The cable sheathing must extend through the cord grip into the accessory as required to achieve the intended sealing and cord gripping performance.

• Strip conductors' insulation to the lengths indicated.
(Other conductor sizes can be used with the help of specific amplifier lugs).
A crimped lug may prevent the dispersion of strands of flexible conductors.

		mini-maxi mm²	mini-maxi mm²	 mm		Nm (Hm)	 mm
DS1		2.5 – 6	2.5 – 10	10	19	1.5	4
		2.5 – 6	2.5 – 10	10	19	1.5	
DS3		6 – 16	10 – 25	12	17	1.8	5
		1 – 2.5	1.5 – 4	14	13	0.8	3
DS6		10 – 25	10 – 35	24		4	4
		2.2 (14 AWG)	-	-		-	-
DS9		25 – 70	25 – 95	30		9	4
		2.2 (14 AWG)	-	-		-	-





• Do not back terminal screws completely out;
• Fully insert the conductor and tighten the terminal screws to the torque indicated.

ENGLISH

COLOUR-CODED RINGS

(except EMC range)

Insert a colour-coded ring between the device and its rear accessory (handle, angle adapter, etc.).

The two protrusions of the rings must be positioned on the latch side for the socket-outlet/connector and on the catch side for the plug/inlet.

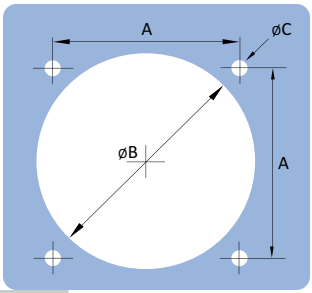
This ring acts as a seal.

VOLTAGE STICKERS

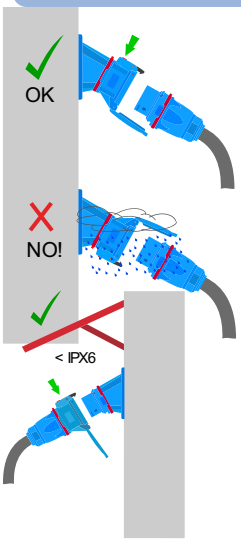
If necessary, affix the voltage stickers supplied in a bag to the locations provided for this purpose on the plug/inlet and on the socket-outlet cover.

▶INSTALLATION

• When devices are surface-mounted, the following drillings must be observed.



	A mm	øB mm	øC mm
DS1	48	57	5
DS3	55	69	5
DS6	66	81	5.5
DS9	81	100	6



• The socket-outlets have a retaining latch with a button. Install the devices so that the button is at the top.

• when the appliance inlet of an accessory having a degree of protection lower than IPX6 is oriented downwards, the portable socket-outlet (connector) is not protected against running water. This appliance inlet must be sheltered.

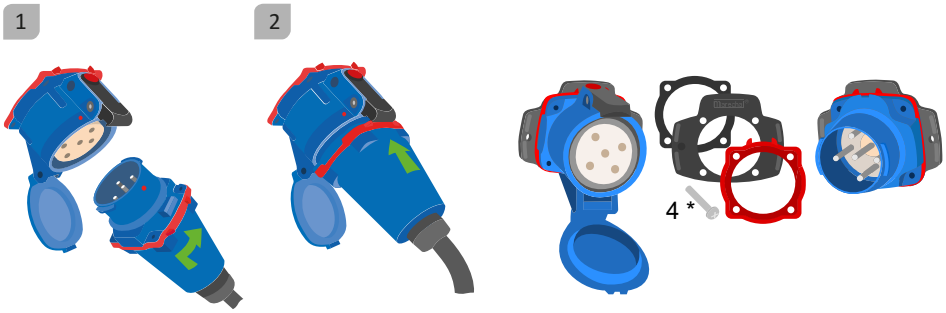
►OPERATION

• Only devices with compatible contact configurations and electrical ratings will mate.

• The socket-outlet is shielded by a protective lid held in the closed position by a latch. Depress this latch to release the lid.

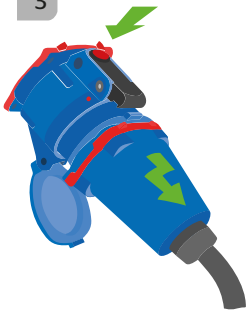
• To connect, align the red marks on the housings. Insert the device and turn clockwise until the stop. The device is in the rest position, circuit open.

• Push the device fully home until latched. If any, use the finger draw plates or the draw-and-lock levers. The finger draw plates must be assembled on the devices as follows.



▶OPERATION

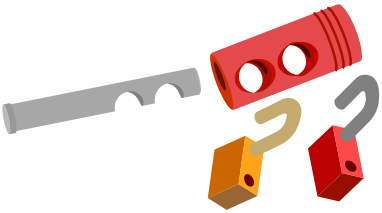
3



• To disconnect, disengage the draw-and-lock levers and depress the latch. The device returns to its rest position.
• Turn the device in the opposite direction to remove it. Shut the lid.

SOCKET-OUTLET LOCKING (OPTION)

• Padlocking: cover closed, insert the shaft into the hole provided on the socket-outlet and then place one or more padlock(s) (not supplied) or another locking device.



PLUG LOCKOUT (OPTION)

To prevent the plug from being inserted into a socket-outlet, place a padlock (not supplied) or other lockout device through the hole provided in the plug casing.

ENGLISH

►MAINTENANCE

• Ensure that the fixing screws, caps and cable glands are tight.

• Verify that the weight of the cable is supported by the strain relief mechanism and not by the terminal connections.

• To inspect the contacts, depress the spring-loaded ejection ring on two opposite points. The safety shutter can then be rotated clockwise to inspect contact tips. Any deposit can be rubbed off with a clean cloth, compressed air, or a fine emery cloth. Do not file or grind the contacts. If necessary, replace damaged contacts. Do not forget to re-lock the safety shutter after inspection.

• To replace contacts on Poly-cased DS and DSN, a special key (P/N° 31-A500-1) is available to remove the retaining clip of the casing and gain access to the contacts.

• Periodically inspect IP gaskets for wear and tear. Replace as necessary.

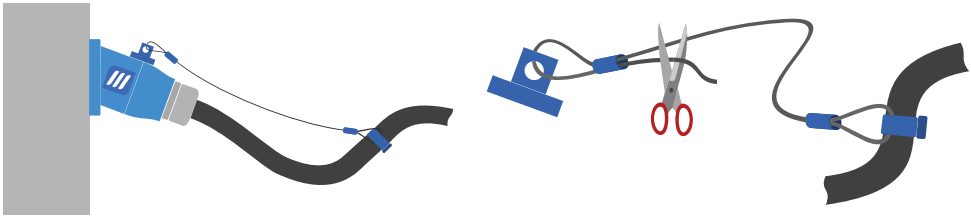
• Regularly check the continuity of the earth circuit by electric tests.

ENGLISH

► SELF-EJECTING DEVICES

The automatic ejection function uses modified devices, the active parts of which are protected against the contact test finger (IP2X/IPXXB, according to standard IEC/EN 60529). These devices must not be locked.

A device releases the retaining latch when accidental traction is exerted on the flexible power cable. This device is activated by means of a tension cord connected either to the flexible cable.

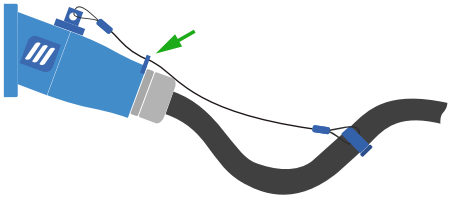


The tension cord has a loop at one end and a cable tie, for clamping the power cable or at a fixed point. A crimping lug allows looping the other end, once passed through to the releasing device and cut to the desired length.

ENGLISH

► SELF-EJECTING DEVICES

EYELET : Some handles are equipped with an eyelet. This eyelet allows an optimal pulling angle of the tension cord on the latch release mechanism.



• Make sure the tension cord is shorter than the flexible cable.

• Make sure that the ejection system operates correctly, considering the pulling angle of the cable with respect to the axis of the device.

• Make sure the ejected devices:

- are not likely to harm anyone in the vicinity;
- are not likely to be damaged or damage any surrounding equipment.

• Occasionally check the state of the tension cord and the free motion of the ejection mechanism.

►OPTIONAL INDUSTRIAL-DOMESTIC ADAPTER

In option, some devices can receive an industrial-domestic adapter.

If the adapter is equiped with a fuse-holder, a 6,3x32 mm cylindric fuse is provided.

Chexk regularly the fuse state, change it when necessary.

Disconnect the adapter before each fuse verification/replacement.



• Opening of the fuse-holder: push the head of the fuse-holder (see figure) with a flat 4 mm screwdriver and turn conter-clockwise.

• Closing of the fuse-holder: push the head of the fuse-holder with the screwdriver and turn clockwise.

ENGLISH

►RESPONSIBILITY

• In the case MARECHAL® devices would be associated with devices or spare parts other than from MARECHAL®, MARECHAL ELECTRIC S.A.S.'s responsibility cannot be engaged, and the CE marking is invalidated. MARECHAL ELECTRIC S.A.S.'s responsibility is strictly limited to the obligations expressly agreed in its general sales conditions. Any penalty or indemnity provided herein will be considered as lump damages, redeeming from any other sanctions.

►DOCUMENTS

For the latest edition of our documents, visit
https://marechal.com/marechal/en/documentation.html

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ISTRUZIONI D'USO E MANUTENZIONE
CUSTODIE SERIE MXBS…

Certificati: LCIE 17 ATEX 3005X e IECEx LCIE 17.0003X

PREFAZIONE

Questo foglio di istruzioni è stato redatto in inglese e tradotto in diverse lingue. In caso di discrepanze, prevarrà la versione originale inglese.

CARATTERISTICHE GENERALI

Le custodie B2X sono destinate ad essere utilizzate in atmosfere potenzialmente esplosive.
Gli apparecchi sono conformi alle norme di sicurezza internazionali (IECEx) ed europee e in particolare alla direttiva 2014/34/UE.
Gli apparecchi possono essere installati nelle zone 1 e 2 (gas) e nelle zone 21 e 22 (polveri).
Queste custodie possono contenere apparecchiature a sicurezza intrinseca e tale combinazione deve essere conforme ai requisiti della norma IEC/EN 60079-25.
Il grado di protezione e di tenuta è IP66/IP67 secondo la norma IEC/EN 60529.

AVVERTENZE

• L'installazione e la manutenzione degli apparecchi "Ex" devono essere effettuate da personale abilitato, nel rispetto delle norme applicabili e delle presenti istruzioni.
• Tutti gli accessori complementari utilizzati (pressacavi, adattatori, tappi,…) devono essere certificati, avere un grado di protezione IP e modo di protezione compatibili con tali custodie e conservare le caratteristiche d'assieme. Devono essere installati secondo le istruzioni previste dal produttore.
• Il pre-cablaggio operato dalla nostra fabbrica tra le apparecchiature e le morsettiere non deve in nessun caso essere modificato.
• Il cablaggio deve essere realizzato in conformità alle prescrizioni riportate sul disegno allegato alle scatole.
• Rispettare le coppie di serraggio indicate nel disegno allegato e alla Tabella T1.
• Queste custodie devono essere impiegate in conformità alla loro destinazione d'uso. Rispettare la loro corrente nominale, tensione d'utilizzo, indice di protezione prevista e la loro classificazione Ex (vedasi dichiarazione UE).
• Gli apparecchi TECHNOR ITALSMEA SPA devono essere collegati esclusivamente ad apparecchi complementari TECHNOR ITALSMEA SPA. I dispositivi devono essere sostituiti esclusivamente con parti originali TECHNOR ITALSMEA SPA.
• L'uso di componenti accessori TECHNOR ITALSMEA SPA sulle custodie serie B2X… garantisce il completo rispetto di quanto richiesto dalle norme e direttive Ex.
• Qualsiasi riparazione o manutenzione effettuata su qualunque prodotto TEHNOR ITALSMEA SPA dovrà essere effettuata usando esclusivamente componenti originali TECHNOR ITALSMEA SPA.

MANUTENZIONE

• Le operazioni di manutenzione devono essere eseguite da personale qualificato o autorizzato.
• La norma IEC/EN 60079-17: Atmosfere esplosive - Parte 17: "Verifica e manutenzione degli impianti elettrici" prevede dei requisiti molto rigidi per la manutenzione degli impianti elettrici, da rispettare obbligatoriamente.
• Ispezionare periodicamente le guarnizioni (stato di usura ed elasticità). Sostituirle se necessario.
• Di tanto in tanto assicurarsi che le viti siano ben serrate.
• Per la pulizia, utilizzare uno straccio leggermente imbevuto d'acqua insaponata. Non utilizzare solventi.
• Presa(e) di corrente (a seconda del caso): rifarsi alle istruzioni corrispondenti.

DICHIARAZIONE DI CONFORMITÀ

Queste cassette sono state progettate, fabbricate e controllate nel rispetto delle normative in vigore internazionali ed europee in particolare alla Direttiva Europea ATEX 2014/34/UE. Hanno apposta la marcatura CE.
Nota: la marcatura CE non si applica alle parti di ricambio e ai componenti venduti separatamente.

RESPONSABILITÀ

Qualora gli apparecchi TECHNOR ITALSMEA SPA siano associati ad apparecchi o parti di ricambio diversi da quelli di TECHNOR ITALSMEA SPA, la marcatura CE non è valida e non è configurabile alcuna responsabilità di TECHNOR ITALSMEA SPA.
La responsabilità di TECHNOR ITALSMEA SPA è strettamente limitata agli obblighi espressamente convenuti nelle relative condizioni generali di vendita. Qualsiasi penale o indennizzo previsto in virtù del presente avrà natura di risarcimento danni forfettario ed escluderà qualsiasi altra sanzione.

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USE AND MAINTENANCE INSTRUCTIONS
ENCLOSURES MXBS…SERIE

Certificates: LCIE 17 ATEX 3005X and IECEx LCIE 17.0003X

FOREWORD

This instruction sheet has been prepared in English and translated into different languages. In case of divergence, the English version shall prevail.

GENERAL

MXBS boxes are intended for use in potentially explosive atmospheres.
They comply with the relevant international (IECEx) and European safety standards and particularly with the ATEX Directive 2014/34/EU.
They can be installed in zones 1 and 2 (for gas) and in zones 21 and 22 (for dust).
These boxes may be used for certified intrinsically safe equipment. Such combination must comply with the requirements of IEC/EN 60079-25 standard.
Their IP66/IP67 rating is given according to IEC/EN 60529 standard.

WARNING & INSTALLATION

• Installation and maintenance of "Ex" devices must be performed by an authorized electrician, according to applicable standards and to the present instruction sheet.
• Any additional components used (e.g. cable entry, adaptor, blanking cap, etc.) must be certified with (a) protection mode(s) and IP rating that are compatible with and maintain the rating of the device they are used with. They must be installed according to the manufacturer's instructions.
• No alteration must be made to the factory-made pre-wiring between the terminal blocks and the devices.
• Wiring must be in accordance with the requirements defined in the drawing delivered with the box.
• Observe the tightening torque indicated on the attached drawing and in **table 1.**
• These boxes must be used according to their designed destination. Respect their assigned ratings in terms of current, voltage, IP and their Ex classification (see EU declaration).
• Where there is a risk of deformation of the surface on which the device is installed, care must be taken to prevent the transmission of this deformation to the device or its surface box.
• The use of TECHNOR ITALSMEA SPA complementary devices on enclosures MXBS… series guarantee total respect of the requirements of Ex standard and directives.
• Any repair or service on any TECHNOR ITALSMEA SPA product must be achieved with genuine TECHNOR ITALSMEA SPA parts only.

MAINTENANCE

• Maintenance operations should only be carried out by a qualified or authorized electrician.
• IEC/EN 60079-17 standard: Explosive atmospheres – Part 17: "Electrical installations inspection and maintenance", foresees very strict requirements regarding the maintenance of electric installations which must be imperatively respected.
• Inspect periodically IP gaskets for wear and resilience. Replace as required.
• From time to time the fastening screws should be checked for tightness.
• Use a wet cloth and soap to clean the device. Do not use any solvent.
• Socket-outlet(s): please refer to the corresponding instruction sheet.

DECLARATION OF CONFORMITY

These boxes have been designed, manufactured and controlled in a strict respect of the requirements and rules of international and European standards and particularly the ATEX Directive 2014/34/EU. They bear the CE marking.
Note: The CE marking does not apply to spare parts and components supplied separately.

RESPONSIBILITY

In the case TECHNOR ITALSMEA SPA devices are associated with devices or spare parts other than from TECHNOR ITALSMEA SPA , the CE marking is invalidated and TECHNOR ITALSMEA SPA's responsibility cannot be engaged.
TECHNOR ITALSMEA SPA's responsibility is strictly limited to the obligations expressly agreed in its general sales conditions. Any penalty or indemnity provided herein will be considered as lump damages, redeeming from any other sanctions.

Tabella T1 / Table T1 :

T1	Nm/Нм
M5	8.5
M6	9
M8	20
M10	25
M12	35
	Nm/Нм
Poly	2
Alu	2
Stainless/rostfrei/ inox/inossidable	1.5