

Appendix A

Instructions for installing Pylontech batteries, models US2000B / Extra 2000



IMPORTANT INFORMATIONS FOR SECURITY!



This manual contains important safety instructions that must be followed during installation and start-up of the device. It is advisable to pay particular attention to the installation instructions in order to reduce the risk of electrical shock and to prevent damage to the device.

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Any changes / modifications not approved by the party responsible could void the user's authority to USE the equipment

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Index

1	GENERAL INFORMATIONS	3
2	Use of this appendix.....	3
2.1	Liability	3
2.2	Useful informations and security informations	3
3	INSTALLATION.....	4
3.1	Mounting	4
3.2	Connections	5
3.3	Settings via PC	6

Figures Index

Figure 1 - Pylontech battery fixing.....	5
Figure 2 - Pylontech battery wiring.....	5
Figure 3 - Settings for n. 1 Pylontech US2000B / Extra 2000 battery	6

1 GENERAL INFORMATIONS

2 USE OF THIS APPENDIX



WARNING: this appendix serves as a guideline for safe and effective installation of Pylontech batteries combined with Solar Eclipse but is not exhaustive and should be used in a logical and functional manner, always in conjunction with the battery manual and Solar Eclipse manual.



WARNING: the installation of the Solar Eclipse with Pylontech batteries and the carrying out of operations on it are the exclusive competence of qualified, authorized and trained personnel, in accordance with the applicable local regulations and with due regard to the guidelines and safety measures. Keep your manual in a safe place.

2.1 Liability

P800srl disclaims all liability in the following cases:

- indirect damage related to the use of Solar Eclipse
- possible manual errors and consequences of the same
- damage caused by improper use of Solar Eclipse
- damage caused by poor ground battery isolation
- damage caused by the battery pack and its connections

2.2 Useful informations and security informations



WARNING: all the operations described below must be carried out by qualified personnel only in accordance with national and local safety regulations.



WARNING: in all phases of installation, step-by-step instructions and warnings in the various chapters should be followed in order to avoid danger to the operator and to damage the equipment. Any failure to do so will result in the immediate loss of the warranty.



WARNING: To prevent **damages and / or malfunction of the system**, insert a standard fuse between Solar Eclipse and 32A battery pack as per wiring diagram.



CAUTION: The Solar Eclipse is **WITHOUT INSULATION TRANSFORMER** (transformer-less). This type involves the use of inverters equipped with isolating transformer.



CAUTION: In the case of the use of inverter without isolating transformer it is necessary to keep the poles and connections of the floating battery pack with respect to the ground creating a double insulation against the ground. In particular

ALWAYS FOLLOW THE FOLLOWING WARNINGS:

- Do not connect any battery poles on the ground
- Do not connect the case of the Pylontech batteries to the ground (as opposed to what is stated on the manual)
- Do not fasten or place the Pylontech case on metal structures or metal cabinet shelves that are in turn connected or grounded.
- In case of metal shelf, place a sheet of rubber or other insulating material between the housing of the batteries and the shelf at least 5 mm
- To secure the Pylontech battery case, use insulating fasteners (screws, bolts, clamps, washers, etc ...)
- Do not connect any other type of wiring (RS485, LAN, etc ...) that are not the positive power pole and the negative power pole



CAUTION !!!: Always install the battery pack in a room with air intake and in any case not intended for residential use.

3 INSTALLATION

During the installation and commissioning of Pylontech batteries, the warnings and precautions listed in the previous paragraph apply at all times.

3.1 Mounting



CAUTION: In the case of the use of inverter without isolating transformer, isolate the Pylontech battery case from the metal rack cabinet structures using an insulation material of at least 5 mm thick



CAUTION: For use with inverter without isolating transformer, use screws, nuts, washers and other insulating material to secure the Pylontech battery case.

Attach the Pylontech batteries to a Closed Rack Closet equipped with Interlocking Disconnect, taking care to interpose a minimum insulation thickness of 5 mm between the battery case and the metal structural parts of the cabinet itself.

If the cabinet has metal shelves, place a sheet of insulating material of at least 5 mm in thickness. It is also possible to use insulators to support the shelf bars to create the insulation of the entire shelf.

The following example shows how to fix the battery in a rack type cabinet:

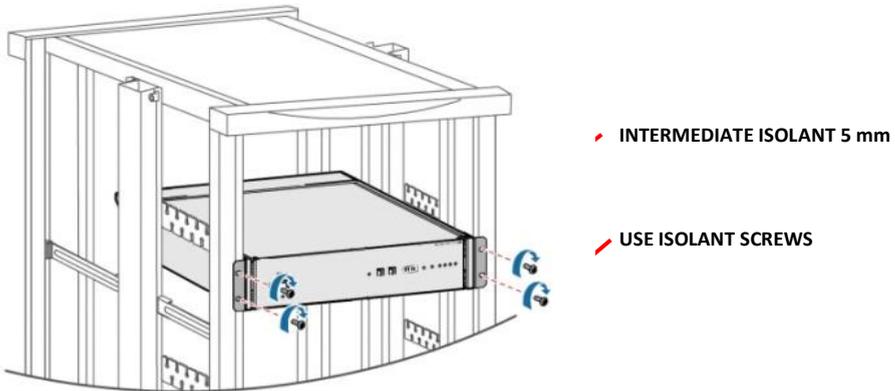


Figure 1 - Pylontech battery fixing

3.2 Connections

CAUTION: In case of using of inverter without isolating transformer, do not connect the grounding clamp of the Pylontech battery case for any reason!

CAUTION: In case of using inverter without isolating transformer, do not connect for any reason, LAN cable, RS485 cable or other communication wiring!

The only connections to connect from Solar Eclipse to Pylontech batteries are the positive and negative power pole, interposing an interlock switch in the wardrobe lock and a 20 A fuse.

NOTE: Due to the absence of any insulation transformer inside the Solar Eclipse, the battery poles are in direct connection to the photovoltaic field and the grid inverter. For this reason, it is necessary to create a double insulation between the batteries and the earth according to CEI EN62109-1: 2010.

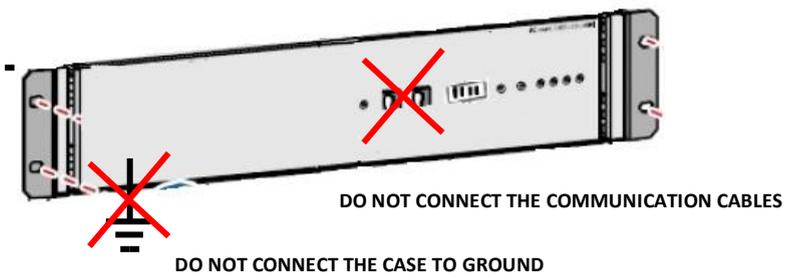


Figure 2 - Pylontech battery wiring

3.3 Settings via PC



CAUTION: To configure Solar Eclipse with Pylontech batteries, you must use the Software Configurator and the USB-RS485 serial cable, setting the parameters as follows.

After making all connections, proceed as follows:

- Make sure that the inverter is disconnected from AC
- Turn on the battery using the button
- Close the battery isolator
- Verify that the Solar Eclipse shows the power of the front red LEDs
- Verify that the first led to the left is blinking (block state)
- Connect with the USB-RS485 serial cable
- Set the parameters as shown in Figure 3
- Press the export button of the Software Configurator
- Restart Solar Eclipse (see manual restart procedure)

NOTE: Up to 4 Pylontech batteries can be installed on each Solar Eclipse. If the batteries are 4 set capacity 200 Ah.

Solar Eclipse Configurator Monofase

Andamento Parametri Configurazione LAN Avanzate Servizi di Rete Cei 021

Configurazione Base

Tipo Batteria: Pylontech Lito

Capacità A/h: 50 25 < [Ah] < 550

Numero Pannelli per Stringa di Solar Eclipse: 12 4 < N°Pann. < 16

Tipo Inverter: Tipo A

Massima Potenza Mppt: 3000 500 < [W] < 6000

Massima Corrente di Erogazione Solar Eclipse

Limite Fissato a C/10

Valore Massima Corrente Libero: 30 2 < [A] < 30

Figure 3 - Settings for n. 1 Pylontech US2000B / Extra 2000 battery