LEONARDO PRO X

STORAGE SYSTEM: AC-DC Configurations

DATASHEET

- **Available for AC ON-GRID PV plants or for DC PV Plants configuration**
- **3000VA / 5000VA continuous power**
- **95% Inverter efficiency**
- **48 Vdc Lithium battery voltage**
- **Integrated LCD display**
- **Network ethernet connection**
- **Cloud IOT monitoring & control**
- **Output Voltage 230 V, 50 Hz**
  Three-phase configuration available
- **Leonardo PRO X 3000/48 Li**
  Compliant with CEI 0-21: 2019-04 + V1-2017

LG CHEM RESU | Pylontech US2000C US3000C FORCE L2 | MIDAC RES 5.1

APP my Leonardo

Il **Leonardo PRO X** è la soluzione ideale per nuovi impianti fotovoltaici utilizzando i regolatori di carica WRM, Western CO. o per aggiungere un sistema di accumulo su impianti fotovoltaici già dotati di inverter di stringa AC On-Grid.
Grazie al nuovo hardware di conversione, permette l'utilizzo di batterie agli ioni di litio a 48V, sicure ed affidabili, pur mantenendo elevata efficienza di conversione elettrica.
Il **Leonardo PRO X** è dotato di display integrato e comunicazione ethernet di serie, la connessione ad internet permette il monitoraggio RealTime ed assistenza tecnica da remoto.
In caso di impianti PV ON-GRID, grazie alla connessione AC, il Leonardo PRO X è compatibile con gli schemi di installazione previsti dalla CEI 0-21 senza alterare la quantità di energia prodotta ed incentivata dall'impianto esistente.
In caso di black-out della rete elettrica, il Leonardo PRO X alimenta le utenze collegate all'uscita EPS, con un tempo di ripristino inferiore ai 10ms.

Leonardo PRO X *is the perfect solution for new PV plants in DC configuration using Western CO. MPPT WRM charge controllers, or to add a storage system to existent solar grid tie inverter plants.*
Thanks to the new power conversion hardware, it can be used with the safe and reliable 48 VDC Li-ion batteries, meanwhile keeping high power conversion efficiency.
Leonardo PRO X *has an integrated display and ethernet connection which comes standard. The internet connection is used for monitoring the system, and remote technical assistance.*
Thanks to the AC Grid connection, Leonardo PRO X is suitable with the installation schemes provided by the CEI 0-21, without changing the energy producted and incentivized by the existent PV plant.
In case of grid blackout, Leonardo PRO X supplies the loads connected at the EPS output, with a reactivation time of 10ms.

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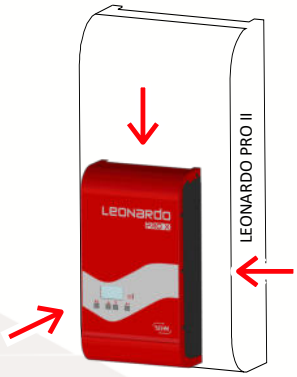
WESTERN CO.®
ELECTRONIC EQUIPMENTS - SOLAR SYSTEMS

LEONARDO PRO X

DATASHEET

Features:

Nuovo hardware:
Efficienza massima del 95% e dimensioni ridotte ad un quarto del modello precedente.
New hardware:
95% maximum efficiency and reduced size to a fourth of the old version.



Molteplici configurazioni:
Gestione carichi con sensore di corrente ed uscita EPS per carichi privilegiati in caso di blackout.
Multiple configurations:
Loads management with current sensor and EPS output to supply protected loads in case of grid outage.

Modularità:
Aumento della potenza di conversione con modulo slave in configurazione parallela.
Modularity:
Increase the conversion power with a slave module in parallel configuration.

Compatibilità con:
Compatible *with:*
- LG CHEM RESU 48V
- PYLONTECH US2000C, US3000C, FORCE L2
- MIDAC RES 5.1

Monitoraggio e controllo con APP, nuovo portale WEB e display remoto, per aggiornamento e modifica parametri di sistema.
Monitoring and control *available using the mobile APP, the new WEB platform and the remote console that allows firmware update and customization of the system settings.*

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Dimensions

3000/48 Li

5000/48 Li

Accessories

P1 Production meter:
Dimensions: 1 DIN Module
Measurements: 32 A, 230 VAC
AC cables section: 2.5-6 mm^2
Pulse output cables section: 1.5 mm^2

Current sensor:
Measurements: AC 100A
Connection cable: 1m, 3.5mm jack
Opening size: 13mm x 13mm

CAN Bus Cable
Battery plug: RJ45 right angle
Inverter plug: RJ10
Length: 2.5 m

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Electrical Features

LEONARDO PRO X

			Leonardo PRO X 3000/48 Li	Leonardo PRO X 5000/48 Li
INVERTER	Nominal power	Pnom	3kVA	5kVA
	Continuous power at 25 ° C	Pcon1	2.4kW	4.0kW
	Continuous power at 40 ° C	Pcon2	2.2kW	3.7kW
	Battery voltage	Vbat	48V	48V
	Battery voltage range	Vdc	40 - 66V	40 - 66V
	AC voltage and frequency	Vnom	230Vac - 50Hz	230Vac - 50Hz
	AC voltage range	Vac	187 - 265Vac	187 - 265Vac
	AC input current	Iac	32A	50A
	Harmonic distortion	Thd	< 3%	< 3%
	Nominal power factor	Pi	1	1
	Min. load Maximum efficiency DC-> AC	Eds	95%	96%
	Max. load Maximum efficiency DC-> AC		80%	80%
	Connectable load power on EPS out	Eps	2.4kW	4.0kW
	EPS transfer time on grid blackout	Tsw	10ms	10ms
	Power consumption in by-pass mode	Pbp	< 2W	< 2W
	Topology	Top	Toroidal isolation transformer	Toroidal isolation transformer
	Cooling	Ven	Forced ventilation	Forced ventilation
	PV production meter	Mis	40A with direct connection	40A with direct connection
	Consumption current sensor	Ta	100A split core current transformer	100A split core current transformer
AC CHARGER	Maximum charge power	Pch	2.1kW	3.5kW
	Maximum charge current	Ich	35A	70A
	Maximum efficiency AC-> DC	Ech	95%	95%
	Charging curve	Alg	BMS self-adaptive	BMS self-adaptive
	Battery communication	Com	CAN BUS	CAN BUS
INTERFACES	PV production meter connection	Meter	2 x 2.5mm2 screw terminals	2 x 2.5mm2 screw terminals
	VE-Bus Master/Slave port	VE-Bus	RJ45	RJ45
	WBUS service port	WBUS	RJ11	RJ11
	Battery communication port	CAN	RJ10 with 1.5m supplied cable	RJ10 with 1.5m supplied cable
	Internet communication port	Ethernet	RJ45	RJ45
	Current sensor port	Current Sense	3.5mm jack with 1m cable	3.5mm jack with 1m cable

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