eurofins | Product Testing

DICHIARAZIONE DI CONFORMITÀ / *DECLARATION OF CONFORMITY*

alle prescrizioni della Norma Italiana CEI 0-21:2016-07

Certificato N°/ *Certificate n°*: EPT.16.CEI021.0225.1

Tipologia di prova / *Type of test*: Prove di tipo / *Type testing*

TIPOLOGIA DI APPARATO CUI SI RIFERISCE LA DICHIARAZIONE

Equipment classification

DISPOSITIVO DI INTERFACCIA (DDI)	Sistema di Protezione di Interfaccia (SPI)	DISPOSITIVO DI CONVERSIONE STATICA	DISPOSITIVO DI GENERAZIONE ROTANTE
	X	X	

COSTRUTTORE: *Manufacturer:* **VRP S.r.l. -** Via Terza Strada, n. 14 - 35129 Padova - Italy

MODELLI* / *Models:*	VR 5 K xx,x ON	VR 4 K xx,x ON	VR 3,5 K xx,x ON	VR 3 K xx,x ON	VR 2,5 K xx,x ON

VERSIONE FIRMWARE**: Manager: V2.07.XX - Inverter: V2.02.XX - Charger: V2.03.XX - Controller: V1.00.XX.XX

TIPO / *Type*: Sistema di accumulo con convertitore statico connesso alla rete - Monofase 230V_{AC}

Grid connected Energy Storage System (EES) with PV power converter – Single phase 230 V_{AC}

Potenza apparente nominale @cosfi = 0.95 [kVA] / *Rated apparent power @cosfi = 0.95 [kVA]*	4850	3900	3900	3200	2650
Potenza attiva nominale [kW] / *Rated active power [kW]*	4600	3680	3680	3000	2500

Note / *Remarks*:

* V. Allegato #1 / *See Annex# 1*

** I numeri indicati con "X" corrispondono a blocchi funzionali del firmware non in contrasto con i requisiti della norma di riferimento / *the numbers replaced by "X" relate to functional blocks within the firmware which are not in contrast with the requirements of the reference standard*

RIFERIMENTI DEI LABORATORI CHE HANNO ESEGUITO LE PROVE / *Testing Laboratories*

- Esaminati i Rapporti di Prova / *After reviewing the Test Reports*:
  - n° EPT.15.NRG.0306/53879 del 30/07/2015, emesso dal Laboratorio Eurofins Product Testing Italy S.r.l. (n° EA 0085)
  - n° 3162473.50 del 24/04/2015, emesso dal Laboratorio DEKRA Testing and Certification (Shanghai) Ltd. – China (ILAC No. CNAS L5776)
  - n° EPT.15.EMC.0304/53879 del 30/07/2015, emesso dal laboratorio Eurofins Product Testing Italy S.r.l. (n° EA 0085)
  - n° EPT.15.SIEL.0305/53879 del 30/07/2015, emesso dal laboratorio Eurofins Product Testing Italy S.r.l. (n° EA 0085)
- Esaminata la documentazione tecnica di costruzione (fascicolo tecnico) fornita dal Costruttore / *After reviewing the techical construction file submitted by the applicant.*

Si dichiara che il prodotto è conforme alle prescrizioni della norma
We undersigned declare that the product complies with the requirements of the standards CEI 0-21: 2016-07 and CEI 0-21: 2014-09 + V1: 2014-12

Place and date of issue:
Torino, 2016 - 09 - 15

Giovanni Bellenda
Technical responsible EMC-LVD-Energy
Head of EMC-LVD-Energy Area

The Certificate is valid until:
2019 - 09 - 14

Paolo Trisoglio
Amministratore Delegato
Managing Director

This declaration is valid for three years and doesn't exonerate the manufacturer from other obligations of law regarding the responsibility from product. Every change in the design or realization of the product can make not valid this declaration. Any modification of the reference standard makes this declaration invalid. The present Declaration is composed by 1 page and it is reproducible only in whole.

ALLEGATO #1 - ANNEX #1 CERTIFICATE N. EPT.16.CEI021.0225

DICHIARAZIONE DI CONFORMITÀ - *DECLARATION OF CONFORMITY*

alle prescrizioni della Norma Italiana CEI 0-21: 2016-07

General remarks (see NOTE * - page 1)

Tested model:

- **VR 5K 19,2 ON**

rated active power: 4600W, inverter model: INV-RA5K, battery charger model: BMU-RA5K (I_{MAX} = 100A) – 48V/400Ah Lead acid battery.

Other models covered by this certificate:

- VR 2,5 K xx,x ON, rated active power: 2,5 kW, inverter model INV-RA3K, battery charger model: BMU-RA3K
- VR 3 K xx,x ON, rated active power: 3 kW, inverter model INV-RA3K, battery charger model: BMU-RA3K
- VR 3,5 K xx,x ON, rated active power: 3,7 kW, inverter model INV-RA4K, battery charger model: BMU-RA3K
- VR 4 K xx,x ON, rated active power: 3,7 kW, inverter model INV-RA4K, battery charger model: BMU-RA5K
- VR 5 K xx,x ON, rated active power: 4,6 kW, inverter model INV-RA5K, battery charger model: BMU-RA5K

All the evaluated models have the same construction and firmware. The differences relate only to :
- Storage capacity: symbols "xx,x" in the identification codes can be 7,5 or 9, or 11, or 13, or 15,6, or 19,2 depending on the storable energy (7,5KWh, 9KWh, 11KW, 13KWh, 15,6KWh, 19,2KWh)
- Rated power of inverters and battery chargers

Technical Documentation:

The reviewed Technical Construction File includes:	Block diagram / Sketch of the intended connection to the grid	☒
	Critical Components list	☒
	External/internal photos – Mechanical drawings	☒
	Circuit description	☒
	Schematic diagram	☒
	User manual	☒

Compliance with Requirements of CEI 0-21:2016 -07 – Documentary evidences

To demonstrate conformity with art. B.1 – CE marking requirements – SAFETY

Applied standards	*Version*	*Report or Certificate n°*	*Issued by*	*Issue date*
EN 62109-2:2011	2011	EPT.15.SIEL.0305/53879	EUROFINS Product Testing Italy S.r.l.	2015-07-30
EN 62109-1:2010	2010			

To demonstrate conformity with art. B.1 – CE marking requirements – EMC

Applied standards	*Version*	*Report or Certificate*	*Issued by*	*Issue date*
EN 61000-6-3 EMC - Emission standard for residential environments	2007 + A1:2011	EPT.15.EMC.0304/53879	EUROFINS Product Testing Italy S.r.l.	2015-07-30
EN 61000-6-2 EMC - Immunity standard for industrial environments	2005			

To demonstrate conformity with art. B.1 - cl. a), b), c), g) – POWER QUALITY requirements

Applied standards	*Version*	*Report or Certificate*	*Issued by*	*Issue date*
EN 61000-3-2* EN 61000-3-3*	2006 +A1:2009+A2:2009 2008	n° 3162473.50	DEKRA Testing and Certification (Shanghai) Ltd. - China	2015-04-24

Remarks: *Test also performed at extreme temperature conditions on inverter model INV-RA5K (Pn = 4600 W)

To demonstrate conformity with artt. 8.4, 8.5, 8.6 ; B.1.1 to B.1.6 – Technical and FUNCTIONAL REQUIREMENTS, grid services

Applied standards	*Version*	*Report or Certificate*	*Issued by*	*Issue date*
CEI 0-21	2014-09 + V1:2014-12	EPT.15.NRG.0306/53879	EUROFINS Product Testing Italy S.r.l.	2015-07-30
		n° 3162473.50	DEKRA Testing and Certification (Shanghai) Ltd. - China	2015-04-24

Remarks: Adjustable delays on the P(f) and Q(V) functions of the power converters have been checked to be implemented in the controller (firmware)

To demonstrate conformity with art. 8.6.2; A.4 – REQUIREMENTS for the Interface Protection System (SPI)

Applied standards	*Version*	*Report or Certificate*	*Issued by*	*Issue date*
CEI 0-21	2014-09 + V1:2014-12	EPT.15.NRG.0306/53879	EUROFINS Product Testing Italy S.r.l.	2015-07-30

This declaration is valid for three years and doesn't exonerate the manufacturer from other obligations of law regarding the responsibility from product.
Every change in the design or realization of the product can make not valid this declaration and requires communication to the Certification Body. The reviewed technical documentation regards the requirements as defined in the Italian standard CEI 0-21:2016-07 only. Any modification of the reference standard makes this declaration invalid.
This Certificate is composed by 2 pages and it is reproducible only in whole.