Rectiverter 1U, 3kVA

Integrated / Standalone 48 V_{DC} System

High Efficiency Industrial Power Solutions

The Rectiverter integration/standalone system can be used in applications where a 230/115 V_{AC} backup is needed in parallel with the 48 V_{DC} backup.

The system can be integrated into a Delta DC system and connected to the same controller as the 48 V_{DC} system. It can also be used as a standalone system connected to any available 48 V_{DC} source.

The total output power for both AC and DC output is limited to max 4 kW. AC and DC output limits can be set according to the attached load, where the limitation for AC load is set to max 3 kVA.

Rectiverter module

Key features

- Single phase 230 or 115 V_{AC} input/output
- 2x Front mounted IEC sockets
- Built in transfer technology
- Can operate in parallel with Flatpack2 rectifiers
- Can be integrated into DC system connected to the same controller

Applications

- Power Utilities
- Marine and Offshore
- Railway / Metro Infrastructure
- Telecom-mobile/Wireless

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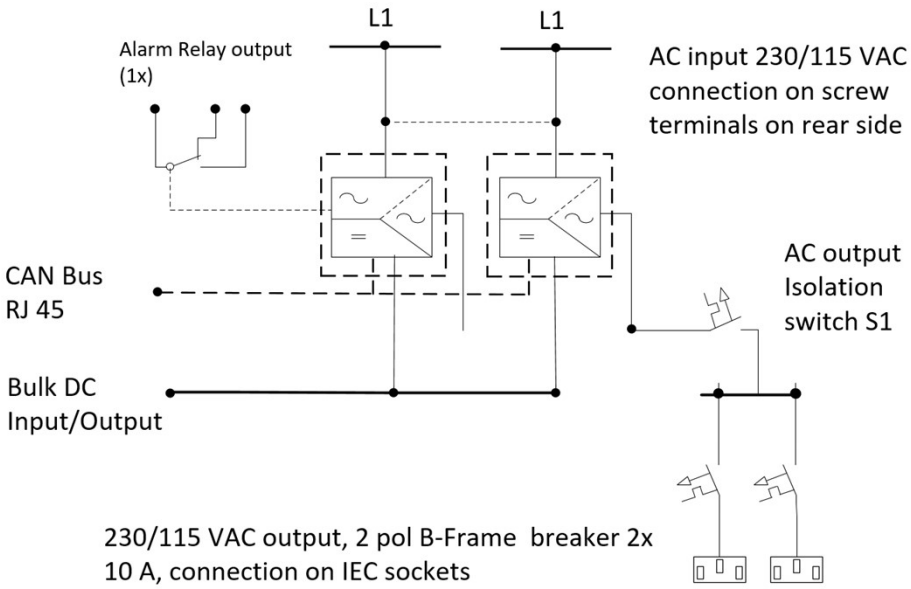
48 V_{DC}

Model	4 kW / 2 kW
Product number	PSPHTx02RC30y.y
Input Data	
Voltage range AC	185 – 275 / 95 – 140 V
Voltage range DC	40 – 58 V
Maximum current AC	14 - 24 A
Frequency	47 - 53 / 57 - 63 Hz
Power factor	>0.99
Output Data	
Adjustable range AC	200 - 240 / 100 – 127 V
Adjustable range DC	43 - 58 V
Max output power AC	3.0 / 1.5 kVA
Max output power DC	2.4 / 1.2 kW
Power factor	0 Ind. To 0 Cap.
Frequency	50 Hz / 60 Hz
Other Specifications	
2- pole AC distribution	2x 10 A
2x IEC sockets (IEC320-C13)	Front mounted

Front View – Rectiverter 1U Integrated

Single Line Diagram: 3 kVA with 2- pole AC distribution



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48 V_{DC}

Model	4 kW, 230 V_{AC}	2 kW, 115 V_{AC}
Product number	PSPHT402RC301.1	PSPHT202RC301.0

AC Output Data		
Voltage (default) I (adjustable range) [1]	230 V_{AC} / 200 – 240 V_{AC}	115 V_{AC} / 100 – 127 V_{AC}
Frequency (default inverter mode)	50 Hz (adaptive)	60 Hz (adaptive)
Frequency (set-able inverter mode)	50 Hz, 60 Hz or last synced 50/60Hz (adaptive)	
Power maximum (continuous / overload (<15s))	2400 W (3000 VA) / 4000 VA	1200 W (1500 VA) / 2000 VA
Current maximum (continuous / overload (<15s))	13 A_{RMS} / 17.4 A_{RMS}	
Current (maximum) Quick trip (20ms)	64 A (6 x nominal)	
Hold up (Voltage dips) (before switching to battery)	5 ms	
THD	<1.5 % at resistive load	
Protection	Module: Fuse in L and N , Hot pluggable	

DC Output Data		
Voltage (default) / (adjustable range)	53.5 V_{DC} / 43 – 58 V_{DC}	
Power (maximum @nominal input)	2400 W [2]	1200 W [2]
Current (maximum @nominal output V_{DC})	50 A [2]	25 A [2]
Hold up time, maximum output power	>10ms; V_{OUT} > 41 V_{DC}	
Output features	Short circuit proof, Over voltage Shutdown, Bulk DC output connection to M6 bolt	

Input Data		
AC Mains Input Voltage (range / LV disconnect)	185 – 275 V_{AC} / 170 V_{AC}	95 – 140 V_{AC} / 85 V_{AC}
AC Current (at nominal output voltage) (depending on module type)	14 - 24 A_{RMS} [4]	
Frequency (default: sync range)	47 - 53 & 57 - 63 Hz	57 - 63 & 47 - 53 Hz
Frequency (set-able: sync range)	47 - 53 Hz, 57 - 63 Hz or both (adaptive)	
Power Factor / THD	> 0.99 at 70% load or more / <3.5%	
DC Voltage nominal I extended range (no overload) [3]	45 - 58 / 40 - 45 V_{DC}	
DC Current (maximum)	64 A / 90 A during overload (15s)	32 A / 45 A during overload (15s)
Input features	Module : Fuse in L and N, Hot pluggable, Varistor AC input individual screw terminals 6 mm^2 for L, N & PE Bulk DC input connection to M6 bolt	

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Other Specifications	
Support for connection to following controller (RJ45)	Smartpack2, Smartpack S & Compack controllers
Efficiency	>96% (mains mode (AC/AC and AC/DC)), >94% (inverter mode (DC/AC))
2 pole AC distribution (connection IEC 320-C13 sockets)	2pc, 10A, Output characteristics (optional 8 A breaker with CS characteristics available)
Protection Class	IP 20
Operating temperature	-40 to +55°C (-40 to +131°F), humidity 5 - 95% RH non-condensing
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing
Dimensions[W x D x H] / Weight	482 x 395 x 44 mm (1U) (19 x 17 x 1.8 inch) / 6 kg (13 lbs)

Design Standards	
Electrical safety	EN IEC62368-1:2020+A11:2020, EN 62040-1 UPS safety
EMC	ETSI EN 300 386 V.1.6.1, FCC CFR 47 Part 15 EN 61000-6-1/-2/-4/-5 EN62040-2 (Cat C1 emissions, cat C2/C3 immunity)
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) Normal operating conditions as per IEC 62040-3:2011 clause 4.2. Other operating conditions as per IEC 62040-3:2011 clause 4.3, must be advised RoHS 3 (2015/863/EU) and WEEE (2008/98/EC) compliant

1) Output voltage ranges configured in factory and have individual keying in top chassis
2) AC load has priority. Maximum available DC output power and current is dependent on instant AC load and AC input voltage; i.e. maximum 1600 W at full AC power and nominal input for 230 V_{AC}
3) Reduced performance - no power boost and increased voltage THD on AC output.
4) If DC port is overloaded pulling the voltage below 43 V the input current may increase above this level.

Specifications are subject to change without notice and errors and omissions excepted

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