

Rectiverter 2U Power Core, 6kVA 1ph

The Rectiverter 2U power core combines both AC and DC feed into one 2U compact unit. Simultaneously it provides AC backup power for 230 VAC or 115 VAC loads, and 48 VDC power for DC loads and battery charging.



The total output power for both AC and DC is limited to a total 8 kW. AC and DC output limits can be set according to the connected load, where the limitation for AC load is set to max 6 kVA and for DC load to max 4,8 kW.

Rectiverter 2U Power Core, 6kVA 1ph

Up to 6 kVA AC & up to 4,8 kW DC with Smartpack R

DOC. NO: CTOR0402.DS3, rev1

MODULAR ARCHITECTURE

RECTIVERTER MODULE

The 3 port converter simultaneously provides power for AC and DC loads. During mains outage the Rectiverter feeds AC loads using energy stored in the battery.

The modular architecture, industry-leading efficiency, compact size, innovative design and comprehensive monitoring and control features provide significant benefits over the current industry standard.



APPLICATIONS

TELECOM-MOBILE/WIRELESS

- LTE/4G/WiMAX
- Distributed antenna system
- Broadband
- Radio base stations/cell sites

POWER UTILITIES

- Low & High voltage switchgear
- Transformer & SUB stations
- Control & protection
- SCADA system

RAILWAY & METRO INFRASTRUCTURE

- Control & protection
- Signaling
- Safety Systems

KEY FEATURES

- COMPACT DESIGN AND SIMPLE INSTALLATION
- SINGLE PHASE 230 OR 115 V_{AC} INPUT/OUTPUT
- 48 V_{DC} INPUT/OUTPUT
- HOUSE UP TO 4 RECTIVERTER MODULES
- 8 KW TOTAL AC + DC OUTPUT
- MAX 6 kVA AC OUTPUT
- MAX 4,8 kW DC OUTPUT
- 1 OR 2 POLE AC DISTRIBUTION OPTION
- 1 POLE DC DISTRIBUTION OPTION
- BUILT IN TRANSFER TECHNOLOGY
- 150 % OVERLOAD CAPABILITY, 15 s
- 600 % QUICK TRIP CURRENT, 20 ms
- HOT PLUGGABLE
- SMARTPACK R CONTROL UNIT

Rectifier 2U Power Core, 6 kVA 1ph



Doc C TOR0402.DS3 – rev1

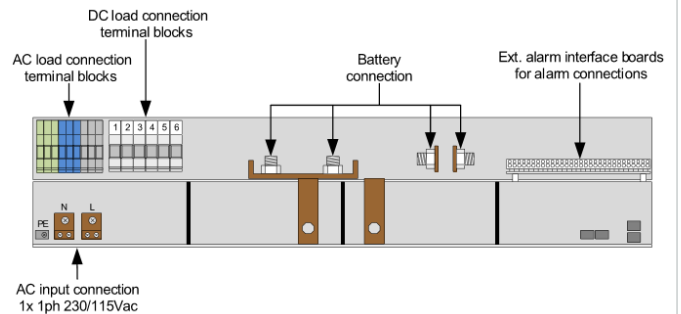
MODEL	8 kW / 4 kW
Product family	CTOR0402.1xxx
INPUT DATA	
Voltage range AC	185-275 / 95-140 V _{AC}
Voltage range DC	45-58 V _{DC}
Maximum current AC	32,8-46 A
Frequency	47-53 / 57-63 Hz
Power factor	> 0,99
OUTPUT DATA	
Adjustable range AC	200-240 / 100-127 V _{AC}
Adjustable range DC	43-58 V _{DC}
Max output power AC	6,0 / 3,0 kVA
Max output power DC	4,8 / 2,4 kW
Power factor	0,8
Frequency	50 Hz, 60 Hz
OTHER SPECIFICATIONS	
1 pole AC distribution	1-3 pc(s), 2-16 A MCBs
1 pole DC distribution	1-3 pc(s), 2-60 A MCBs

Specifications are subject to change without notice

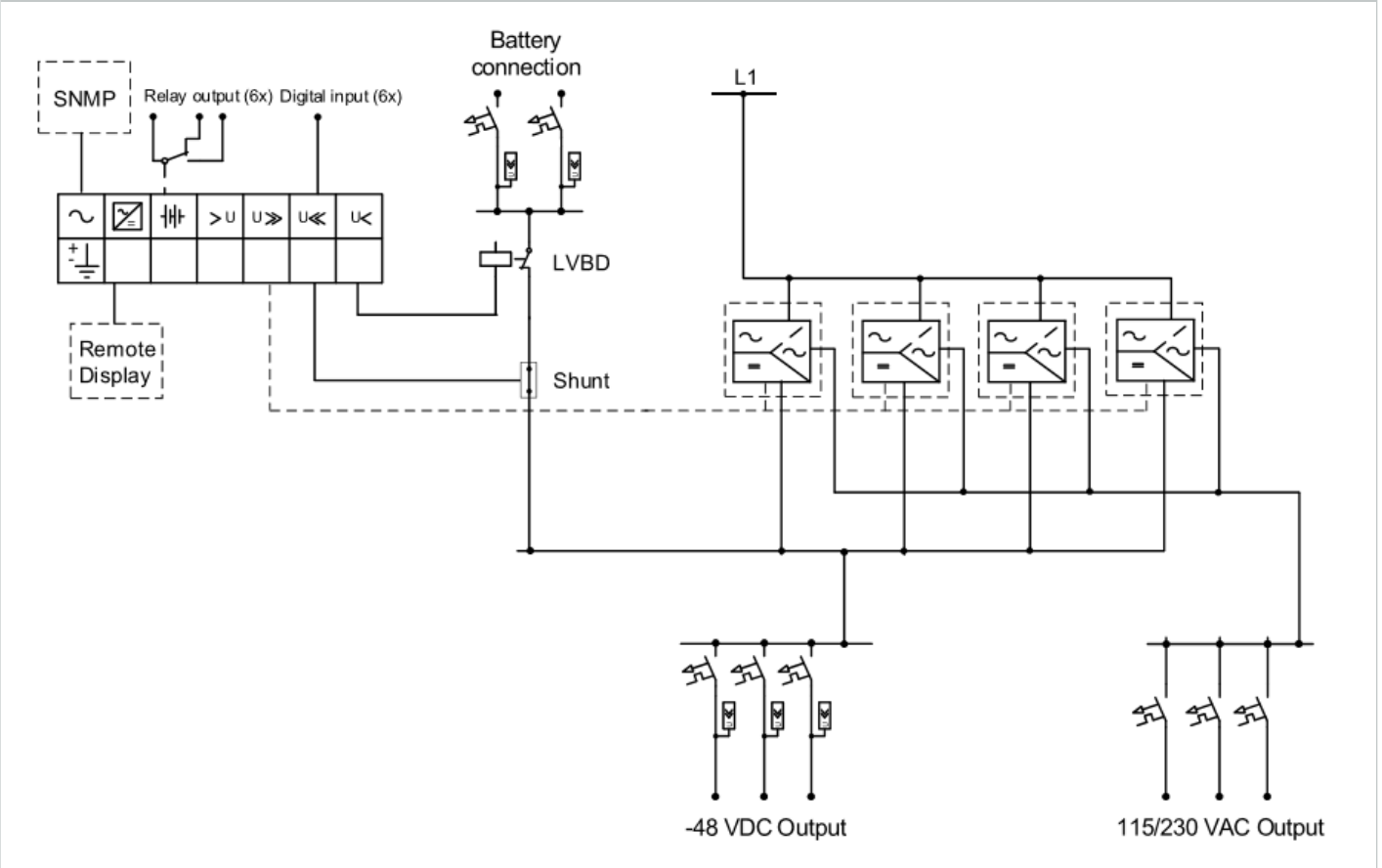
FRONT VIEW – RCV 2U POWER CORE OPTION 1



REAR VIEW – RCV 2U POWER CORE OPTION 1



SINGLE LINE FOR RECTIFIER 2U POWER CORE – OPTION 1



Rectifier 2U Power Core, 6 kVA 1ph



Doc C TOR0402.DS3 – rev1

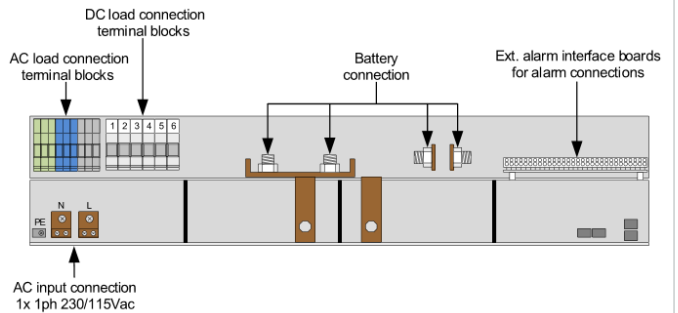
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Voltage range DC	45-58 V _{DC}
Maximum current AC	32,8-46 A
Frequency	47-53 / 57-63 Hz
Power factor	> 0,99
OUTPUT DATA	
Adjustable range AC	200-240 / 100-127 V _{AC}
Adjustable range DC	43-58 V _{DC}
Max output power AC	6,0 / 3,0 kVA
Max output power DC	4,8 / 2,4 kW
Power factor	0,8
Frequency	50 Hz, 60 Hz
OTHER SPECIFICATIONS	
2 pole AC distribution	1 pc, 2-16 A MCBs
1 pole DC distribution	1-3 pc(s), 2-60 A MCBs

Specifications are subject to change without notice

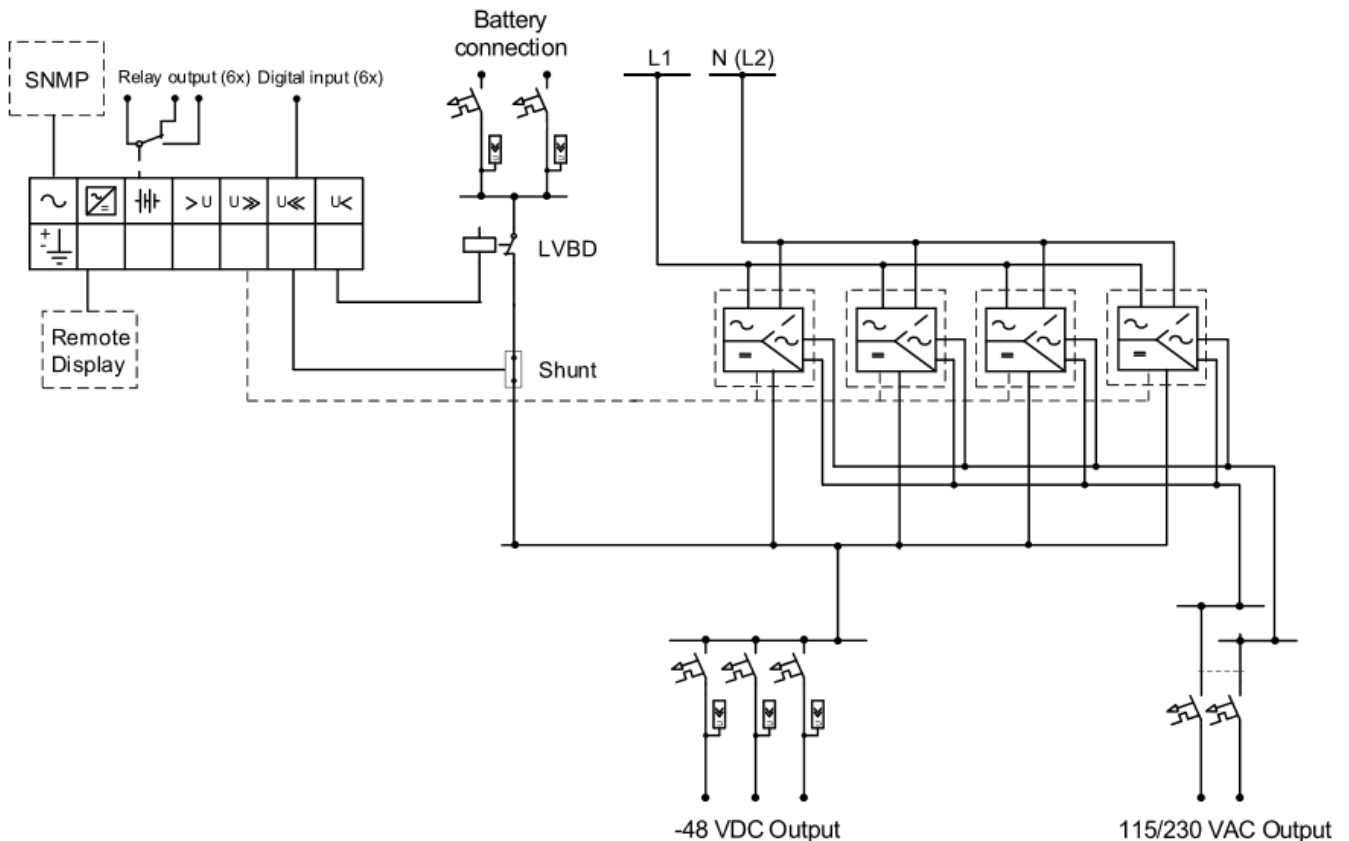
FRONT VIEW – RCV 2U POWER CORE OPTION 2



REAR VIEW – RCV 2U POWER CORE OPTION 2



SINGLE LINE FOR RECTIFIER 2U POWER CORE - OPTION 2



Rectifier 2U Power Core, 6 kVA 1ph



Doc CTOR0402.DS3 – rev1

Models	8 kW, 230 V _{AC}	4 kW, 115 V _{AC}
Product family	CTOR0402.1xxx	CTOR0402.1xxx
AC OUTPUT DATA		
Voltage (default) / (adjustable range) ¹⁾	230 V _{AC} / 200-240 V _{AC}	115 V _{AC} / 100-127 V _{AC}
Frequency (inverter mode – default)	50 Hz (adaptive)	60 Hz (adaptive)
Frequency (inverter mode – settable)	50 Hz, 60 Hz or last synced 50 / 60 Hz (adaptive)	
Power maximum (continuous / overload <15s)	4800 W (6000 VA) / 8000 VA	2400 W (3000 VA) / 4000 VA
Current maximum (continuous / overload <15s)	26 A _{RMS} / 34,8 A _{RMS}	
Current (maximum) quick trip (20ms)	128 A (6 x nominal)	
Hold up (Voltage dips) (before switching to battery)	5 ms	5 ms
THD	< 1,5 % at resistive load	
Protection	Fuse in L, Hot pluggable, Varistor	
DC OUTPUT DATA		
Voltage (default) / (adjustable range)	53,5 V _{DC} / 43-58 V _{DC}	
Power (maximum @ nominal input)	4800 W ²⁾	2400 W ²⁾
Current (maximum @ V _{OUT} ≤ 108 V _{DC})	100 A ²⁾	50 A ²⁾
Current sharing (10 - 100% load)	±5 % of maximum current from 10 to 100 % load	
Protection	Short circuit proof, Over voltage shutdown, Reversed polarity and Fuse	
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 (maximum - depends on module type)	32,8-46 A _{RMS} ³⁾	36,8-45,2 A _{RMS} ³⁾
Frequency (default: sync range)	47-53 & 57-63 Hz	57-63 & 47-53 Hz
Frequency (settable: 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 / extended range ⁴⁾	45-58 V _{DC} / 40-45 V _{DC}	
DC Current (maximum)	128 A / 180 A during overload (15 s)	64 A / 90 A during overload (15 s)
Input features	Fuse in L and N, Hot pluggable, Varistor AC input individual screw terminals 4 mm ² for L, N & PE (4x single phase)	
OPTIONS		
Control unit	Smartpack R	
Alarm connection	Extension Alarm Card (6x Digital Inputs & 6x Relays)	
Battery distribution	Max. 2x 100 A or 1x 150 A	
LVBD	150A (optional)	
AC distribution	Max. 3x 16 A (1 pole) or 1x 16 A (2 pole) MCBs	
DC distribution	Max. 3x 60 A (1 pole) MCBs	
OTHER SPECIFICATION		
Efficiency	> 96 % (mains mode), > 94 % (inverter mode)	> 92 % (mains mode), > 91 % (inverter mode)
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]	483 x 386 x 97 mm (19 x 15,2 x 3,8 inch)	
Weight	9,9 kg (21,8 lbs)	
DESIGN STANDARDS		
Electrical safety	EN 60950-1, EN 62040-1 UPS safety	
EMC	ETSI EN 300 386 V2.1.1, FCC CFR 47 Part 15 EN 62040-2 EN 61000-6-1/-2/-3/-4	
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) 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

3) If DC port is overloaded pulling the voltage below 43 V the input current may increase above this level.

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 3200 W / 66,4 A at full AC power and nominal input for 230 V_{AC}.

4) Reduced performance - no over load support, and for 200-240 V_{AC} output THD will increased and maximum output power derates (to 970 W for 230 V_{AC} @ 40 V_{DC})

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