

Rectifier Power Core 6 kVA 1ph MB

The Rectifier power core combines both AC and DC feed into one common unit. Simultaneously it provides AC backup power for 230 V_{AC} or 115 V_{AC} loads, and 48 V_{DC} power for DC loads and battery charging.

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



Rectifier Power Core 6 kVA 1ph MB

Up to 6 kVA AC & up to 4,8 kW 48 VDC output

Doc CIOR0405.DS3 – rev2

MODULAR ARCHITECTURE

RECTIFIER MODULE

The 3 port converter simultaneously provides power for AC and DC loads. During mains outage the Rectifier 48/1200 HE 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.



Rectifier Module

APPLICATIONS

POWER UTILITIES

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

OFFSHORE AND PROCESS INDUSTRY

- Safety and Automation Systems (SAS)

MARINE

- Communication onboard ships

RAILWAY & METRO INFRASTRUCTURE

- Control & protection
- Signaling

TELECOM-MOBILE/WIRELESS

- LTE/4G/WiMAX
- Distributed antenna system
- Broadband

KEY FEATURES

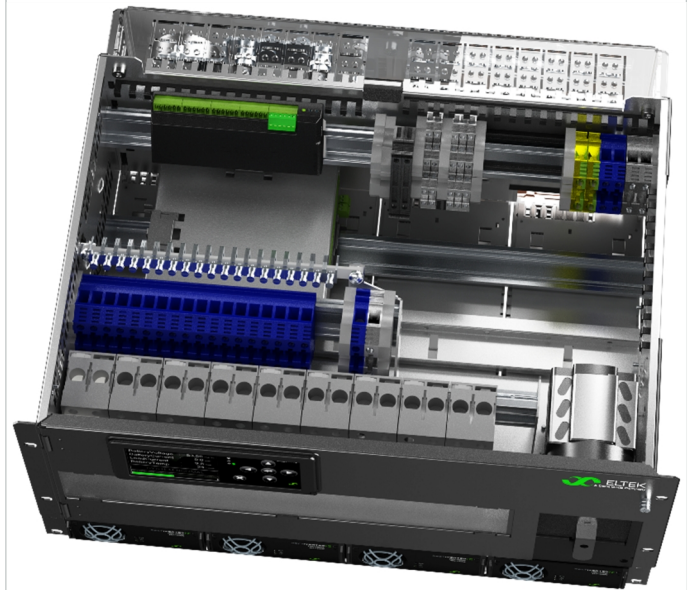
- 230 OR 115 VAC INPUT/OUTPUT
- SINGLE PHASE INPUT/OUTPUT
- 48 VDC INPUT/OUTPUT
- 8 KW TOTAL AC + DC OUTPUT
- MAX 6 KVA AC OUTPUT
- MAX 4,8 KW DC OUTPUT
- 1 POLE AC DISTRIBUTION OPTION
- 2 POLE AC DISTRIBUTION OPTION
- BUILT IN MANUAL BYPASS SWITCH
- BUILT IN TRANSFER TECHNOLOGY
- 150% OVERLOAD CAPABILITY, 15S
- 600% QUICK TRIP CURRENT, 20MS
- HOT PLUGGABLE
- SMARTPACK 2 CONTROLLER
- CAN OPERATE IN PARALELL WITH FLATPACK2 RECTIFIERS
- GLOBAL COMPLIANCE
- PATENTED HE TECHNOLOGY

Rectifier Power Core 6kVA 1ph MB ELTEK

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TOP VIEW WITH OPTIONAL 1 POLE DISTRIBUTION

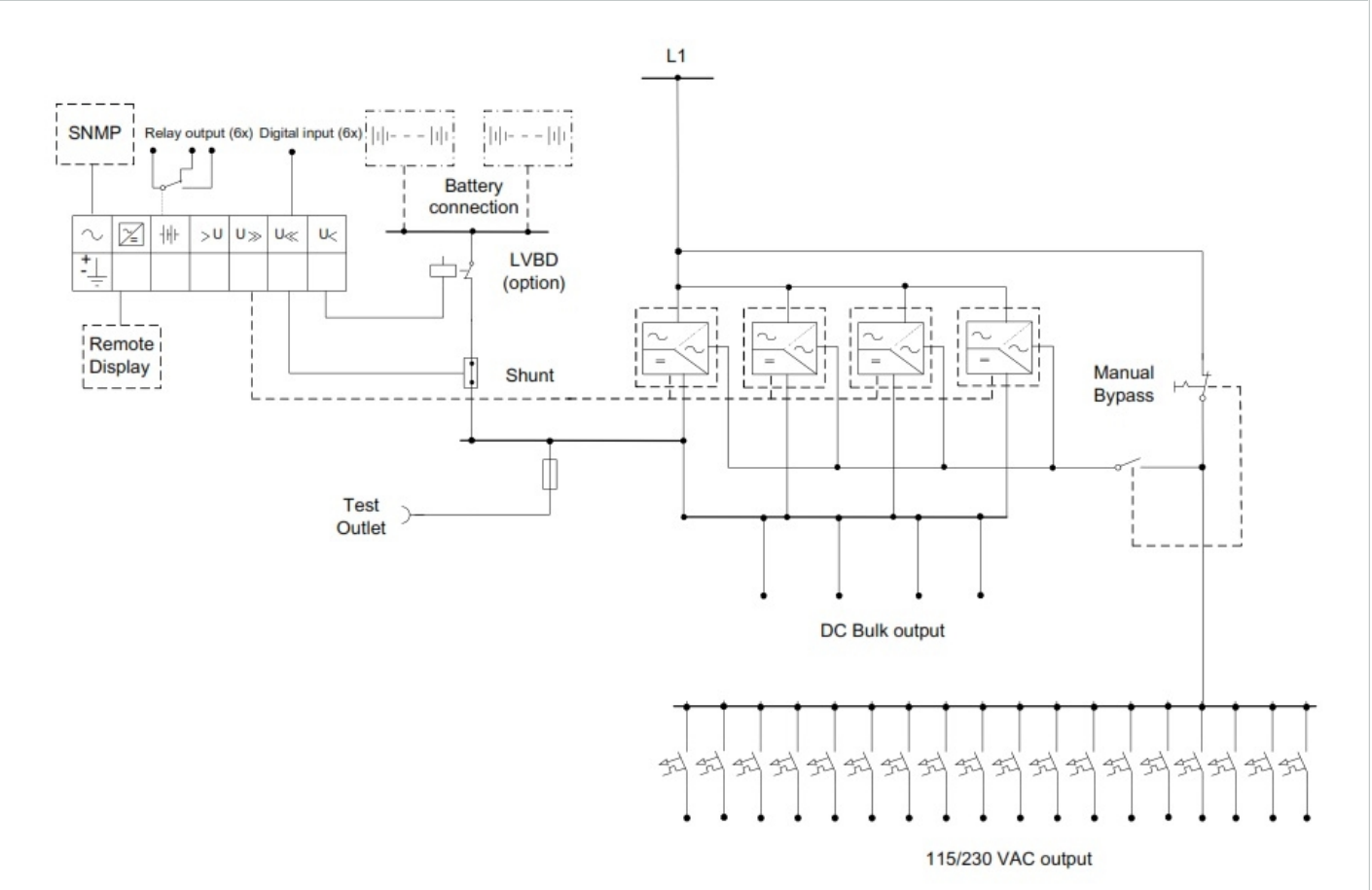


Rectifier 6 kVA single phase power core

MODEL	8 kW / 4 kW
Product family	CIOR0405.1xxx
INPUT DATA	
Voltage range AC	185-275 / 95-140 V
Voltage range DC	40-58 V
Maximum current AC	28-48 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	6,0 / 3,0 kVA
Max output power DC	4,8 / 2,4 kW
Power factor	0,8
Frequency	50Hz, 60 Hz
OTHER SPECIFICATIONS	
Manual bypass switch	63 A
LVBD (option)	350 A
1 pole AC distribution (option)	1-18 pc, 2-10 A, C

Specifications are subject to change without notice

SINGLE LINE WITH OPTIONAL 1 POLE DISTRIBUTION

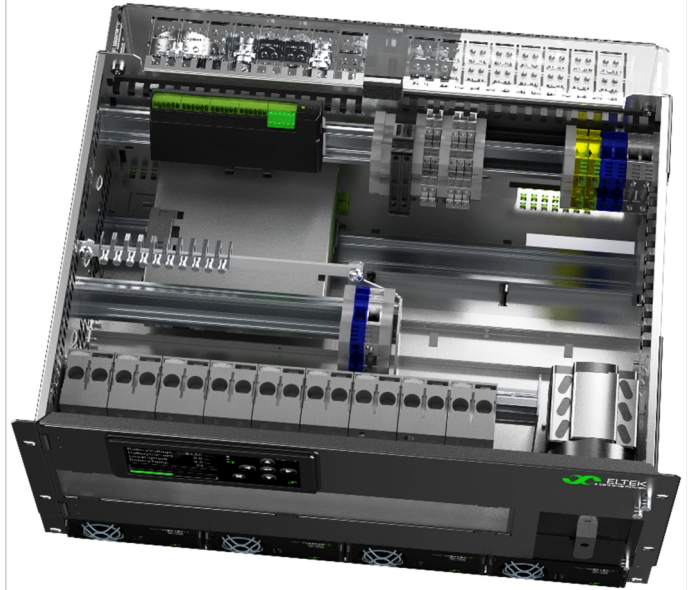


Rectifier Power Core 6kVA 1ph MB ELTEK

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Doc CIOR0405.DS3 – rev2

TOP VIEW WITH OPTIONAL 2 POLE DISTRIBUTION



Rectifier 6 kVA single phase power core

MODEL	8 / 4 kW
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Product family	CIOR0405.1xxx
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INPUT DATA

Voltage range AC	185-275 / 95-140 V
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Voltage range DC	40-58 V
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Maximum current AC	28-48 A
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Frequency	47-53/57-63 Hz
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Power factor	> 0.99
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OUTPUT DATA

Adjustable range AC	200-240 / 100-127 V
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Adjustable range DC	43-58 V
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Max output power AC	6,0 / 3,0 kVA
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Max output power DC	4,8 / 2,4 kW
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Power factor	0,8
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Frequency	50Hz, 60 Hz
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OTHER SPECIFICATIONS

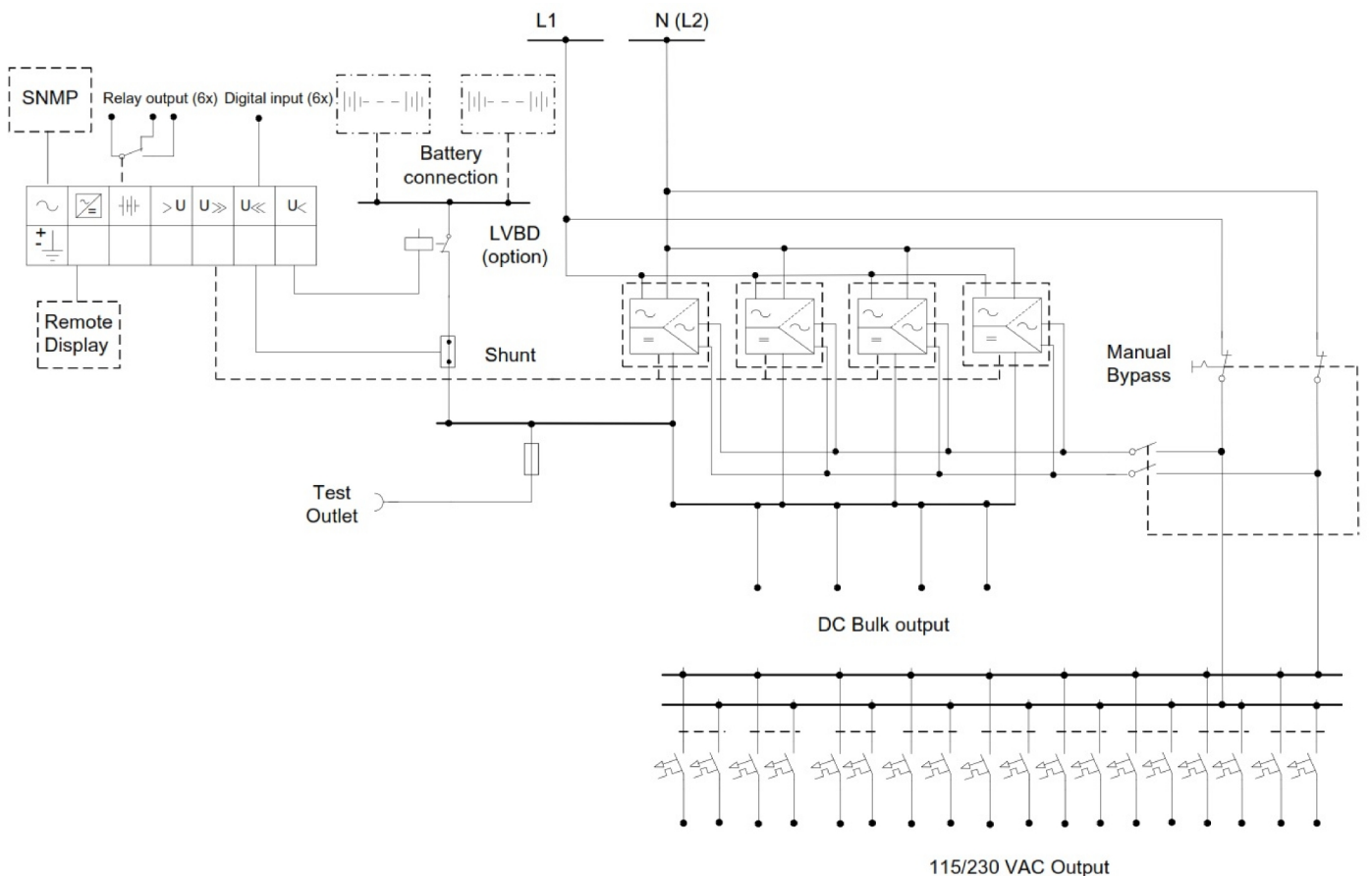
Manual bypass switch	63 A
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LVBD (option)	350 A
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2 pole AC distribution (option)	1-9 pc, 2-10 A, C
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SINGLE LINE WITH OPTIONAL 2 POLE DISTRIBUTION



Rectifier Power Core 6kVA 1ph MB ELTEK

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Models / ordering information	8 kW, 230 V	4 kW, 115 V
Product family	CIOR0405.1xxx	CIOR0405.1xxx
AC OUTPUT DATA		
Voltage (default) / (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)	50Hz, 60Hz or last synced 50/60Hz (adaptive)	
Power maximum (continuous / overload (<15s))	4800 W (6000 VA) / 8000 VA	2400 W (3000VA) / 4000 VA
Current maximum (continuous / overload (<15s))	26A _{RMS} / 34,8A _{RMS}	
Current (maximum) Quick trip (20ms)	120A (6 x nominal)	
Hold up (Voltage dips) (before switching to battery)	> 5 ms @ 4800W load	> 5 ms @ 2400W load
THD	< 1.5 % at resistive load	
Output features	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)	4800 W ²⁾	2400 W ²⁾
Current (maximum @V _{OUT} ≤ 48 V _{DC})	100 A ²⁾	50 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 M8 bolt	
INPUT DATA		
AC Mains Input Voltage (single phase)	185 - 275 V _{AC} ,	95 - 140 V _{AC}
AC Current (at nominal output voltage) (depending on module type)	28-48 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 50% load or more / < 3.5%	
DC Voltage nominal / extended range (no overload) ³⁾	45 - 58 V _{DC} / 40 - 45 V _{DC}	
DC Current (maximum)	128 A / 180A during overload (15s)	64 A / 90A during overload (15s)
Input features	Fuse in L and N, Hot pluggable, Varistor, Hot pluggable AC input individual screw terminals 10 mm ² for L, N & PE Bulk DC input connection to M8 bolt Bulk DC battery connection to M8 bolt	
OPTIONS		
Control and monitoring (see Smartpack2 datasheet)	Smartpack2, including industrial basic & I/O monitor type 2	
LVBD	350 A	
1 pole AC distribution (connection directly on MCB)	1-18 pc, 2-10A, C characteristics	
2 pole AC distribution (connection directly on MCB)	1-9pc, 2-10A, C characteristics	
OTHER SPECIFICATION		
Efficiency	>96% (mains mode (AC/AC and AC/DC)), >94% (inverter mode (DC/AC))	
Manual bypass switch	63 A (make before break)	
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[WxDxH] / Weight	482 x 432 x 222mm (5U) (19 x 17 x 8,8") / 16kg (35 lbs)	
DESIGN STANDARDS		
Electrical safety	EN 60950-1, EN 62040-1	
EMC	ETSI EN 300 386 V.1.6.1, FCC CFR 47 Part 15 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) RoHS (2011/65/EU) and WEEE (2002/96/EC) compliant	
<p>1) Output voltage ranges configured in factory and have individual keying in top chassis</p> <p>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 3200W/65 A at full AC power and nominal input for 230V_{AC}.</p> <p>3) 40 - 45 V_{DC}: reduced performance - no power boost and increased voltage THD on AC output.</p> <p>4) If DC voltage is pulled below 43V the input current may increase above this level</p>		

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