



Product Guide

**enatel**  
*energy*



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MERSİS NO : 0752039936800013



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Enatel Energy is a leading network power conversion and electronics specialist. Our solutions offer flexibility, scalability and customization by way of rack mounted, hot pluggable combinations of modular AC-DC rectifiers, DC-AC inverters and DC-DC converters with advanced monitoring and control.



## Small and Powerful microCOMPACT

With a leading combination of power density and reliability, our microCOMPACTs maximize customer space for revenue-generating equipment, with front connect for ease of installation and maintainability.

**2.4kW**  
MAX **48V**  
OUT

ELECTRICAL		PSX16 V2	PSX24 V2	PSX24 V3
AC Input:		Single phase (refer to rectifier spec for full details)		
DC Output: Nominal Voltage:		48V DC	48V DC	48V DC
Max Output Power:		1.6kW	2.4kW	2.4kW
Polarity:		Positive earth	Positive earth	Positive earth
DC Distribution:		6x load circuit breakers (6-30A) 2x battery circuit breakers (max 30A)	4x load circuit breakers (6-30A) 2x battery circuit breakers (max 30A)	6x load GMT fuses (1-15A) 2x battery GMT fuses (2x parallel pairs, 1-30A)
Breaker Fail Detection:		Electronic fail detection		
DC Terminals (Front Connected):	Load: Battery:	6mm² push-in spring cage 50A power-pole plug-in connectors		6mm² push-in spring cage 6mm² push-in spring cage
LVD:		80A magnetically latching battery LVD		

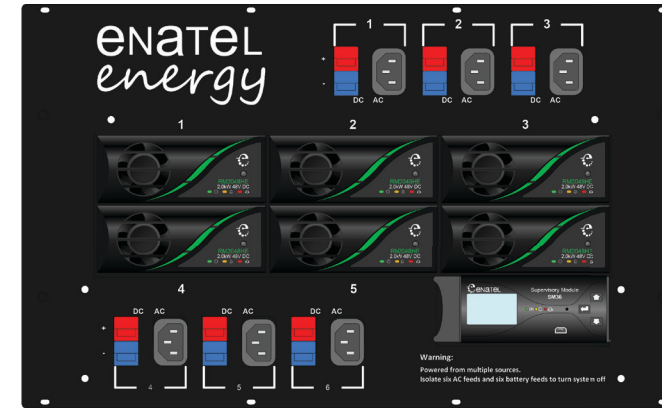


## Mighty. Small. 600-800W 48V

Our most popular modules, the micro rectifiers are proven performers. They have an outstanding record in some of the world's most demanding environments.

**0.8kW**  
MAX **48V**  
OUT

AC INPUT	RM648	RM848
Nominal Input Voltage:	110V AC	230V AC
Input Voltage Range:	90-300V AC (reduced power above 275V AC)	90-300V AC (reduced power below 175V AC)
Power Factor:	>0.99	>0.99
Peak Efficiency:	92.5%	93.0%
DC OUTPUT	RM648	RM848
Nominal Output Voltage:	48V DC	48V DC
Output Voltage Range:	43-60V DC	43-60V DC
Maximum Output Current:	12.5A	16.6A



## Legacy Solutions

How are your legacy power systems working out? Are they over 20 years old and working on borrowed time? We've developed a range of high-efficiency adaptor kits and solutions that allow for "easy hot-swap" rectifier replacements and expansion of obsolete power modules.

Contact us to see if we have a solution that is right for you.

AC INPUT	
Nominal Input Voltage:	230V AC
Input Voltage Range:	85-300V AC
Power Efficiency:	Up to 96.7%
DC OUTPUT OPTIONS*	
Output Voltage:	12V, 24V, 48V, 60V, 110V DC
Output Current:	12.5-60A

\*Dependent on RM product selected.

For our complete product portfolio please go to [www.enatelenery.com](http://www.enatelenery.com).

## What Sets Us Apart



### Technology Solutions

Targeted to your needs

Unique topology, from the industry's pioneering experts, ensures that you will get the highest quality product for the right application.



### Dedicated Support

Every step of the way

You can be sure you'll receive prompt, accurate support and service, with easy access to the decision makers and designers.



### Our Quality Guarantee

Enhanced customer satisfaction

We are committed to creating, manufacturing, and servicing reliable products and services that meet and exceed customer expectation.



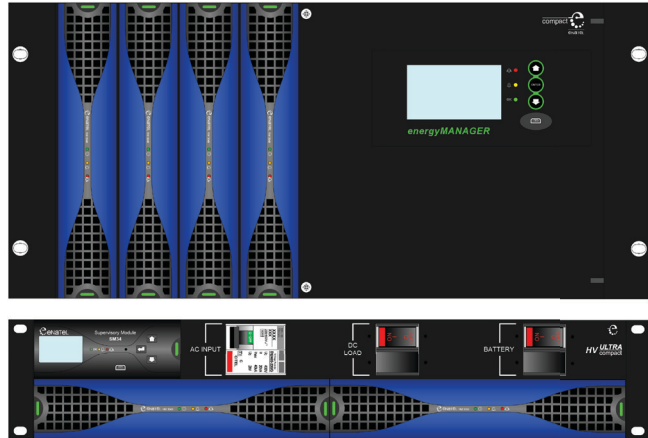
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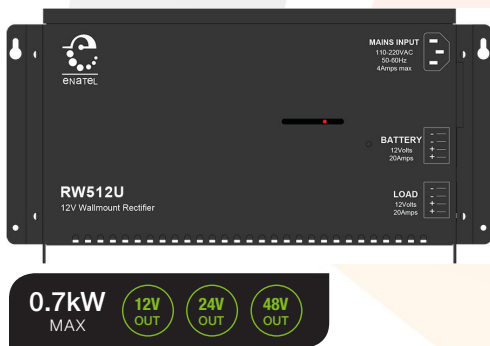
## Distinctly Reliable COMPACT

Compact solutions are suitable for industrial applications – marine, rail, water treatment, oil, mining, emergency networks and much more.

**12kW  
MAX** **110V  
OUT**

### ELECTRICAL

AC Input:	Three phase or single phase (refer to rectifier spec for full details)
DC Output: Nominal Voltage:	110V DC
Max Output Power:	12.0kW
Polarity:	Floating Earth
DC Distribution:	3x 63A 2 pole load MCB (breaks +ve & -ve) 1x 125A 2 pole battery MCB (breaks +ve & -ve)
Breaker Fail Detection:	Auxiliary breaker detect
DC Terminals:	Load: Direct to breaker: 16mm <sup>2</sup> tunnel terminals Battery: Direct to breaker: 35mm <sup>2</sup> tunnel terminals



## Convection-Cooled RW SERIES

Easy to install and compact, these robust standalone wall-mounted rectifiers are convection cooled. Able to be paralleled, features include temperature compensation, low voltage disconnect and alarm card with relay outputs.

**0.7kW  
MAX** **12V  
OUT** **24V  
OUT** **48V  
OUT**

AC INPUT	RW512U	RW624U	RW748U
Nominal Input Voltage:	110/220V AC, 50/60Hz		
Input Voltage Range:	110-275 AC (reduced power below 100V AC)		
Power Factor:	>0.99	>0.99	>0.99
Efficiency:	85%	87%	88%
Maximum Input Current:	8.5A	8.5A	8.5A
DC OUTPUT	RW512U	RW624U	RW748U
Nominal Output Voltage:	12V DC	24V DC	48V DC
Output Voltage Range:	11.5-15V DC	22-30V DC	45-60V DC
Maximum Output Current:	35.0A	22.0A	12.0A



## Multi-Purpose Power ultraCOMPACT

UltraCOMPACT solutions are available in a range of configurations, with distribution options providing the flexibility to tailor solutions to your requirements.

**8.0kW  
MAX** **12V  
OUT** **24V  
OUT** **48V  
OUT** **60V  
OUT** **GREEN  
ENERGY**

### ELECTRICAL

	PSC04	PSC06	PSC08
AC Input:	Single phase (refer to rectifier spec for full details)		
DC Output: Nominal Voltage:	48V DC	48V DC	48V DC
Max Output Power:	4.0kW	6.0kW	8.0kW
Polarity:	Positive Earth	Positive Earth	Positive Earth
DC Distribution:	Customized designs available as required		
Breaker Fail Detection:	Electronic fail detection		
LVD:	80A magnetically latching battery LVD	125A magnetically latching battery LVD	150A magnetically latching battery LVD

Other voltages are available on request.



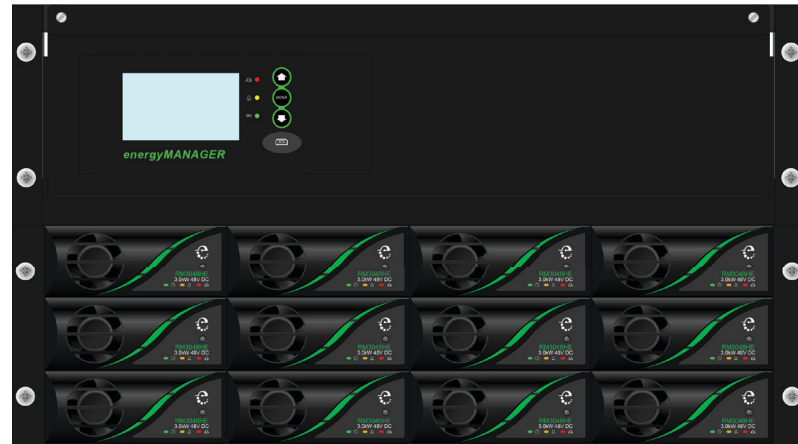
## Unrivalled Power Density HE Rectifiers

With a power density of 41W/in<sup>3</sup>, our high efficiency rectifiers lead the industry pack. They are perfectly dependable power building block for large systems and designed for backwards compatibility.

AC INPUT	RM2048HE	RM3048HE
Nominal Input Voltage:	230V AC	230V AC
Input Voltage Range:	85-300V AC (175-275V AC not derating output power)	85-300V AC (190-275V AC not derating output power)
Power Factor:	>0.99	>0.99
Peak Efficiency:	96.7% (>96% efficiency @ >45% load)	96.3%
DC OUTPUT	RM2048HE	RM3048HE
Nominal Output Voltage:	48V DC	48V DC
Output Voltage Range:	43-60V DC	43-60V DC
Maximum Output Current:	41.7A	60.0A







## Flexible by Name and by Nature flexiCOMPACT

This solution delivers at every level: front access that's easy, configurable, powerful and simple; completely scalable to accommodate all those future changing needs to make technology migration painless.



The flexiCOMPACT series are front-connected, advanced power systems with a friction-hinged, panel-mounted monitor for ease of installation/commissioning. The flexiCOMPACT is populated with high-efficiency on-line replaceable rectifiers in combination with intelligent energy management software to provide a highly reliable DC power solution delivering significantly reduced operational costs.

FlexiCOMPACTs are a truly scalable power system with a building block philosophy to support both delivery and final point definition benefits. The modular construction includes a 3U distribution chassis and expandable 1U power shelves. It is fully busbar based for increased reliability, performance and quality. The flexiCOMPACT system forms the basis for SYNERGi, a solution which can be tailored for hybrid applications or made solar-ready allowing renewable inputs to be intuitively optimized.



## SYNERGi – Smart Integrated Hybrid Energy

SYNERGi is the industry's most advanced hybrid solution. SYNERGi will maximize benefits and deliver increased uptime as it dynamically optimizes and self-heals. It intuitively and intelligently blends multiple energy inputs and optimization is made simple. The field results and related patents prove it.

Specifically designed for easy integration of renewables to support solar and wind inputs – now and in the future.



### SYNERGi Dimensioning

In order to augment the economics of hybrid solutions, the goal is to maximize the battery time and minimize the charging time. SYNERGi is compatible with various battery storage mediums. Enatel Energy has developed an advanced dimensioning tool which is based on real world and actual data sets to simulate anticipated benefits such as generator life, maintenance, fuel savings and payback.



## Perfect for Off Grid Sites GreenSHELF Solar Systems

The greenSHELF provides significant operational cost-savings, with an impressive ROI, by utilizing solar energy to minimize grid dependence and the reliance on fossil fuels. It is the perfect solution for rural BTS sites. Your solar harvesting will start earlier and last longer than comparable devices on the market. A wind based version is also available.

ELECTRICAL	greenSHELF V1	greenSHELF V2
DC Input:	85-400V (refer to solar charger SM2048HE specification for full details)	
Termination:	2x 6mm <sup>2</sup> tunnel terminals	
DC Output: Nominal Voltage: Max Output Power:	48V DC 2.0kW	48V DC 8.0kW
DC Distribution:	1x load circuit breaker (6-63A) 1x battery circuit breaker (max 63A)	N/A
Breaker Fail Detection:	Electronic fail detection	N/A
DC Terminals:	Load: 2x 6mm <sup>2</sup> rear connect tunnel terminals Battery: 2x 6mm <sup>2</sup> rear connect tunnel terminals	N/A

CONVERTERS	NOMINAL INPUT VOLTAGE	NOMINAL OUTPUT VOLTAGE	MAX OUTPUT CURRENT	PEAK EFFICIENCY
SM1848HE	100V DC	48V DC	37.5A	97.5%
SM2048HE	220V DC	48V DC	41.7A	97.5%
WM2048HE	230V DC	48V DC	41.7A	97.5%



## Converters

Our range of DC-DC converters can be configured in combinations to provide multiple voltage outputs, filtering and isolation. The software allows adjustment of various performance parameters. This is ideal for network power applications. Modules can operate standalone or with the Energy Manager to provide complete system level monitoring and control.

CM SERIES	NOMINAL INPUT VOLTAGE	NOMINAL OUTPUT VOLTAGE	MAX OUTPUT CURRENT	PEAK EFFICIENCY
CM612-24	24V DC	12V DC	40.0A	91%
CM612-48	48V DC	12V DC	40.0A	93%
CM1048-24	24V DC	48V DC	21.6A	93%
CM1024-48	48V DC	24V DC	43.0A	94%
CM1748-48	48V DC	48V DC	33.0A	93%
CM2048	360V DC	48V DC	41.7A	97%

