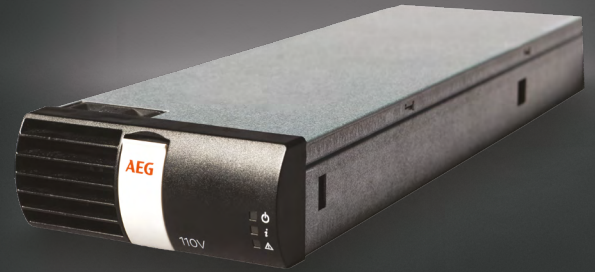


## MIP<sub>E</sub> NEW GENERATION

Switch-mode rectifier module  
For industrial applications



State of the art switch mode technology, MIP<sub>E</sub> rectifier modules are designed to fulfil industrial standards and to bring the benefits of compact hot swappable devices. Fitted inside Protect RCS MIP<sub>E</sub> systems or racks, it allows you to benefit from low electromagnetic pollution and high efficiency, resulting in a cost-effective system with reduced operating costs, short delivery time and ready for possible future power expansion.

### Typical applications

- Power generation
- T & D
- Oil & Gas
- Petrochemical and chemical
- Heavy industry
- Mining industry
- Transportation and signaling

## FEATURES

- Plug and play
- Full digital control through CAN bus
- High power density
- High efficiency:  
93 to 95% typical over large load bandwidth
- Low input current harmonics and high power factor,
- High availability with possibility of N+1 redundancy
- Low MTTR due to modular design
- Low DC voltage ripple for an optimized battery life-time
- Low standby power consumption
- Wide temperature range
- Robust, wide mains input range

## BENEFITS

- Reduces capital and operational expenses (CAPEX & OPEX)
- Engineered for low environmental impact with massive reduction in CO<sub>2</sub> emissions
- High MTBF, low MTTR
- Compact solutions
- International service support



# Specifications

MODULE TYPE	PM 24-50	PM 48-40	PM 110-16	PM 220-8
<b>INPUT</b>				
Nominal input voltage	230 V single phase			
Voltage range	184 V to 275 V with nominal output power – 100 V to 184 V with reduced output power			
Frequency	45 Hz to 66 Hz			
Nominal/maximum input current	9.2 A/12 A			
Inrush current	<40 A peak current @ 230 VAC			
Input earth leakage current	<1.5 mA			
THDI at full power	<5 % typical			
Power factor at full power	0.99 typical			
<b>OUTPUT</b>				
Output voltage	24 V	48 V	110/120V	220 V
Maximum output current	50 A @ 30 V max.	40 A @ 50 V max.	16 A @ 125 V max.	8 A @ 250 V max.
Maximum output constant power	1500 W	2000 W	2000 W	2000 W
Voltage adjustment range*	20 – 33 V	40 – 66 V	91 – 166 V	182 – 308 V
Ripple voltage and noise	<0.2 % Un DC			
Static voltage regulation	±0.5 %			
Dynamic voltage regulation	±5 % – 5 ms response time			
Hold up time	10 mS @ Pn			
Galvanic isolation	Input/output = 4250 VDC / Input to ground = 2125 VDC Output-control/ground – 2270 VDC			
Quiescent mode output OFF/ON	3 W/10 W			
<b>MANAGEMENT</b>				
Control and alarm	Through CAN bus to system controller			
Control panel	Green LED = normal operation   Yellow LED = minor alarms   Red LED = major alarms			
<b>PROTECTION</b>				
Input/Output	HRC fuses in-line and neutral conductors   DC output fuse on positive polarity   DC output current and power electronic limitation to nominal values			
Soft start	Yes			
Over Voltage Protection default value	35 VDC	70 VDC	170 VDC	315 VDC
Over temperature	Automatic power de-rating and excessive temperature shutdown			
<b>MECHANICAL</b>				
Degree of protection	IP20			
Equipment color	Black front panel – steel case			
Dimensions (H x W x D) & weight	41.5 (1 U) x 109 x 325 – 2 kg			
Acoustic noise @ 1 m	≤55 dB(A) – full load			
Connections	Rear connector			
<b>ENVIRONMENTAL</b>				
Efficiency	93 % typical	95 % typical	95 % typical	95 % typical
Type of cooling	Rectifier modules are forced air cooling with electronic speed control IP55 fan			
Operating temperature at	-40 °C to +55 °C full load – de-rating of 2 %   °C between 55 °C and 70 °C			
Storage temperature	-50 °C to +85 °C			
Operating and storage humidity	5 % to 95 % R H non-condensing			
Installation height	0 to 1000 m – de-rating @ 1 % per 100 m above 1000 m up to 3000 m			
MTBF	≥350,000 h per Telcordia SR-332, Method I, Case III			
<b>STANDARDS</b>				
Safety	EN 60950-1 / IEC62477-1			
EMC	EN 50121-3-2 / IEC 62236-3-2 EN 50121-4 / IEC 62236-4 EN 50121-5 / IEC 62236-5 EN 55022 Level A EN60721-3-2 EN60721-3-3 EN 61000-6-1 / 6-2 / 6-3 / 6-4 / 6-5 EN 61000-4-2 / 4-3 / 4-4 / 4-5 / 4-6 / 4-8 / 4-11			
Environment	ROHS – WEEE			
Approvals & certification	CE			
*Power limitation	1000W for Uout>32.4V 1000W for Uout>64.8V 1000W for Uout>297V			

## AEG Power Solutions

Approach your local AEG Power Solutions representative for further support. Contact details can be found on: [www.aegps.com](http://www.aegps.com)