

# mSPRe

## COMPACT THYRISTOR CONTROLLED INDUSTRIAL RECTIFIER & BATTERY CHARGER

Input:  
220/230/240 V AC 1 phase

Output:  
24 V DC; 10 A  
24 V DC; 25 A  
48 V DC; 15 A  
60 V DC; 15 A  
110 V DC; 15 A



AEG Power Solutions rectifiers assure permanent availability of all your global industrial applications including Oil, Gas & Petrochem, Power Generation, Transportation and other Infrastructures.

The mSPRe has been developed and designed to provide high reliability power supply and battery charging capability in very compact design.

The product is using thyristor-controlled technology and it suitable for charging nickel-cadmium or lead acid batteries while supplying DC loads. The small compact system includes all necessary function of modern rectifier to protect the load, optimize the life time of batteries and communicate with environment

### Features & Benefits

- » Standard system configurations - cost effective, short lead time solutions
- » Compact design with built-in protection
- » Proven microprocessor-controlled thyristor technology
- » High MTBF and low MTTR
- » Digital processing and setting of all parameters
- » Monitoring of all parameters on the front panel display
- » Built-in Intelligent battery management system including temperature-compensated charge
- » Ease of installation, start-up, maintenance with front access

### Standard system

The mSPRe product has been pre-configured with a number of the most commonly requested features built-in as standard.

- » Single system
- » Internal mains rectifier input switch Q1
- » 6-pulse rectifier bridge with input isolation transformer
- » Digital control card
- » Output filter L1-C1 ripple voltage < 5 % RMS without battery
- » Rectifier F1 fuse & rectifier shunt R3
- » Tropicalized control electronics boards
- » Common fault remote alarm
- » Cabinet colour RAL 7035 with protection IP21
- » Power and control cable marking
- » Battery temperature sensor
- » Battery tray for NiCd SBLe7.5/15/30, SBM/SLM 15/30, UP1M24/30 batteries - ONLY 24mSPRe10
- » Support for lead acid batteries
- » Additional battery cabinets, mBAT1 & mBAT2 for bigger battery size
- » Bottom or top cable entry (depending on model)
- » Input/battery/output terminals
- » Standard labeling

## mSPRe

TECHNICAL DATA

SPECIFICATION	24mSPRe10	24mSPRe25	48mSPRe15	60mSPRe15	110mSPRe15
INPUT					
Nominal input voltage	230V AC $\pm 20\%$ 1 phase				
Frequency	50 Hz or 60 Hz, $\pm 6\%$				
Current consumption	2.5	6.1	6.9	8.6	14.9
Inrush current	1.5 nominal peak current				
Power factor	0.67				
OUTPUT					
Output voltage	24V	24V	48V	60V	110V
Maximum output current	10A	25A	15A	15A	15A
Static voltage regulation	$\pm 0.5\%$ at float voltage, 0-100% DC load variations, input nominal voltage $\pm 10\%$ , frequency $\pm 6\%$ , temp. range $0^{\circ}\text{C}$ to $+40^{\circ}\text{C}$				
Dynamic voltage regulation	10-100%, 100%-10% load step - deviation 5%				
System earth	Floating				
Charging characteristic	Constant current/constant voltage (I/V as per IEC 478 1) during float charge				
MANAGEMENT					
Common alarm connection	1 Form C relay contact - Rating 60VAC @ 2A, 24VDC @ 2A & 60VDC @ 0.1A				
Control panel	Multi-functional LCD with 2 LEDs indicate the system status				
PROTECTION					
Input/Battery/Load	Built-in mains input switch				
Protection	The rectifier has built-in protection functions against short circuit, over and under AC input voltage, over and under DC output voltage.				
MECHANICAL					
Equipment colour	RAL 7035, Powder coated, textured paint				
Degree of protection	IP21 according to IEC 60529				
Dimensions & weight	932x432x425mm (HxWxD), approx. 60kg without batteries				
Acoustic noise @ 1m	<55dBA				
Battery compartment	Yes, include battery tray	Prepared for external battery connection			
Connections	Top or bottom	Top	Top	Top	Top
ENVIRONMENTAL					
Type of cooling	Natural cooling				
Operating temperature	$0^{\circ}\text{C}$ to $+40^{\circ}\text{C}$ with a de-rating of 1.25%/ $^{\circ}\text{C}$ between $40^{\circ}\text{C}$ and $55^{\circ}\text{C}$				
Storage temperature	$-25^{\circ}\text{C}$ to $+70^{\circ}\text{C}$				
Operating humidity	10% to 95% R H Non-Condensing				
Installation height	0 to 1000m - De-rating @ 1% per 100m above 1000m up to 3000m				
STANDARDS					
Safety	IEC / EN 62040-1-2				
EMC	IEC/ EN 61000-6-2, 4, IEC / EN 62040-1-2				
Performance	IEC / EN 62040-1-2, IEC 601146-1-1				
Approvals & Certification	CE-label				
ADDITIONAL OPTIONS					
Option 10	Communication interface RS232 & RS485				
Option 11	Max 3 load mcb's 10A-B; with aux contacts, no terminals				
Option 12	Relay card (8 contacts) wired to terminals with predefined alarms				
Option 13	Blocking diode				
Option 14	Matching battery cabinet mBAT1 or mBAT2				

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Autorizovaný distribútor pre Slovensko:  
 Rhea elektro s.r.o., Elektrárenská 1/12440, 831 04 Bratislava  
 Telefón: +421 2 49101914, -18  
 E-mail: info@rhea-elektro.sk  
 www.rhea-elektro.sk

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