

# 2018

## Magellan Catalogue



magellanpower



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**True 25 Year  
Design Life**

**Built  
for harsh  
environments**

**Advanced  
industrial  
design**

Since establishment in 1991 Magellan Power has designed and manufactured high-reliability DC and AC back-up power systems for many major projects across Australia. These include the Onslow Power Project, Perth Crown Towers, Star Casino Gold Coast, Perth Stadium, the Dampier to Bunbury Gas Pipeline, Chevron Wheatstone, Rio Tinto's Paraburdoo Mine Expansion, TransGrid iDemand, hospitals, airports and many more projects both in Australia and overseas.

Magellan provides its customers with rugged, reliable power solutions especially built and tailored to specific project needs. Magellan Power's advantage is its cutting edge technology and ever evolving Australian-based Research and Development capabilities which ensure it is always at the cusp of industry changes.

The company manufactures high reliability AC and DC power systems, grid supporting Energy Storage equipment plus batteries and specialised service and commissioning.

Magellan Power has a team of over 40 engineers, technicians and professional support staff, plus offices in New South Wales and Victoria.

The company is accredited with the AS/NZS ISO 9001:2008 Quality System across the areas of research and development, manufacture, supply and service of renewable energy equipment, design management, manufacture supply and service of power electronic equipment, and supply of industrial batteries.

Rugged phase-controlled thyristor technology.

Versatile constant voltage and constant current charging modes.

Large LCD Display (71mm x 40mm).

Comprehensive 11 parameter metering.

Battery capacity measurement.

Dual battery metering and testing facility.

Programmable battery current limit.

Precise adjustable temperature compensation.

Isolated RS485, Ethernet & USB-B.

Modbus RTU, Modbus TCP, SNMP, Internal Webpage.

Access facility software.

Full data logging.



With integral battery capacity measurement that can assess the health of the battery and the integrity of its connections, the MCRII series is undoubtedly the most advanced battery management system of its kind.

Incorporating dual battery management capabilities including automatic battery testing, the MCRII prolongs battery life in any application, and can be used with Lead Acid, Lithium and NiCad batteries. Highly reliable, robustly designed, with 25 years design life and advanced communication facilities that enable full remote monitoring of the system, the MCRII is state of the art.

Available in single and three phase, and using ultra rugged phase controlled technologies, this series is ideal for all industrial applications including substation battery systems and DC UPS.



TECHNICAL SPECIFICATIONS						
Nominal Voltage	24V		32V	48V	110V	220V
Nominal Current	5-1000A	5-1000A	5-1000A	5-1000A	5-1000A	5-500A
Input Supply	Single phase 240V $\pm$ 10% 50Hz $\pm$ 5% for output power <5kVA					
Three Phase	415V $\pm$ 10% 50Hz $\pm$ 5% for output power >5kVA					
Output Voltage	9-16V	18-35V	24-46V	40-68V	88-150V	180-270V
Noise and Ripple	<2% specified at full load and without battery connected.					
Static Voltage Regulation	$\pm$ 1% for 0-100% load variation, $\pm$ 10% AC input voltage variation and 5% AC input frequency variation					
Dynamic Voltage	5% for load variation of 10% to 100% or 100% to 10%					
Current Regulation	$\pm$ 1%					
Protection	Input Circuit Breaker, Charger Output Fuse/Circuit Breaker, Charger Current Limit, Dual Battery Current Limit, AC Surge Suppression, Short Circuit Protection, Reverse Battery Polarity Protection					
Alarms	Mains Fail, Charger Fail, DC High, DC Low, Under/Over Voltage Trip, Earth Fault, Low Electrolyte, Battery Disconnected, Battery Fail, Battery Over Temperature, Blown Fuse, Common Alarm Relay, Common Alarm Buzzer *All alarms are user programmable*					
Metering	Charger Voltage, Charger Current, Load Voltage, Load Current, Battery 1 Charge/Discharge Current, Battery 2 Charge/Discharge Current, Battery Temperature, Battery Initial Impedance-Battery Capacity, Battery Capacity Ratio *Meter accuracy 1%*					
Options	Voltage - free contacts for all alarms, Battery test facility, 3 Stage diode voltage limiter, DC distribution board					
Physical	Wall mount or free standing powder coated metal cabinet *Dimensions depend on charger output rating and associated battery requirements*					
Environmental	0-60°C, up to 95% humidity					
Standards	AS 1955, AS 3000, AS 3100 AS 4044, AS 2069					
Serial Comm.	DNP3, TCP/IP, Web-server, RS485 Modbus, SNMP, USB-B					
EMC	AS 2064-1997					
MTBF / MTTR	100,000 Hours / 4 Hours					
Efficiency	80 to 93% depending on nominal voltage and power rating					
Temperature Compensation	Programmable 3 - 6 mV / Cell / °C					
Audible Noise	< 55 dB					
Limp Home Feature	Continuous operation in the event of control failure					
Revert to Factory Settings	Reinstates all original factory settings					
Data Logging	3800 log entries					



- High efficiency switch-mode technology.
- Versatile constant voltage and constant current charging modes.
- Large LCD graphic display (71mm x 40mm).
- Comprehensive 11 parameter metering.
- Capacity measurement.
- Dual battery metering and testing facility.
- Programmable battery current limit.
- Precise adjustable temperature compensation.
- Isolated USB-B or RS485, Ethernet Modbus RTU, Modbus TCP, SNMP, Internal Web-page.
- Access facility software.
- Data Logging.



SMCR11 series battery chargers combine the advanced functionality of MCR11 with the flexibility of switch mode rectification. Available in single and three phase, the SMCR11 series is ideal for all industrial applications including substation battery systems and DC UPS.

Incorporating dual battery management capabilities including automatic battery testing, the SMCR11 prolongs battery life in any application, and can be used with Lead Acid, Lithium and NiCad batteries. With advanced communication facilities that enable full remote monitoring of the system, the SMCR11 is state of the art.



TECHNICAL SPECIFICATIONS						
Nominal Voltage	24V		32V	48V	110V	220V
Nominal Current	5-200A	5-800A	5-600A	5-800A	5-320A	5-200A
Input Supply	Single phase 240V ± 10% 50Hz ± 5% for output power <5kVA					
Three Phase	415V ± 10% 50Hz ± 5% for output power >5kVA					
Output Voltage	9-16V	18-35V	24-46V	40-68V	88-150V	180-270V
Noise and Ripple	<2% specified at full load and without battery connected.					
Static Voltage Regulation	± 1% for 0-100% load variation, ± 10% AC input voltage variation and 5% AC input frequency variation without battery connected					
Dynamic Voltage	5% for load variation of 10% to 100% or 100% to 10%					
Current Regulation	± 1%					
Protection	Input Circuit Breaker, Charger Output Fuse/Circuit Breaker, Charger Current Limit, Dual Battery Current Limit, AC Surge Suppression, Short Circuit Protection, Reverse Battery Polarity Protection					
Alarms	Mains Fail, Charger Fail, DC High, DC Low, Under/Over Voltage Trip, Earth Fault, Low Electrolyte, Battery Disconnected, Battery Fail (including high impedance), Battery Over Temperature, Blown Fuse, Common Alarm Relay, Common Alarm Buzzer *All alarms are user programmable*					
Metering	Charger Voltage, Charger Current, Load Voltage, Load Current, Battery 1 Charge/Discharge Current, Battery 2 Charge/Discharge Current, Battery Temperature, Battery Initial Impedance, Battery Ongoing Impedance, Battery Capacity, Battery Capacity Ratio *Meter accuracy 1%*					
Options	Voltage - free contacts for all alarms, Battery test facility, 3 Stage diode voltage limiter, DC distribution board					
Physical	Free standing powder coated metal cabinet *Dimensions depend on charger output rating and associated battery requirements*					
Environmental	0-50°C, up to 95% humidity					
Standards	AS 1955, AS 3000, AS 3100 AS 4044, AS 2069					
Serial Comm.	DNP3, TCP/IP, Web-server, RS485 Modbus, SNMP, USB - B.					
EMC	AS 2064-1997					
MTBF / MTTR	100,000 Hours / 4 Hours					
Efficiency	85 to 90% depending on nominal voltage and power rating					
Temperature Compensation	Programmable 3 - 6 mV / Cell / °C					
Audible Noise	< 50 dB					
Limp Home Feature	Continuous operation in the event of control failure					
Revert to Factory Settings	Reinstates all original factory settings					



Rugged IGBT technology.

Unity Power Factor.

Versatile constant voltage and constant current charging modes.

Battery capacity measurement.

Dual battery metering and testing facility.

Programmable battery current limit.

Ideal for all battery types.

Full AS2293 user programmable alarms.

Single and dual battery testing capability.

Isolated RS232 or RS485, Ethernet.

Modbus RTU, Modbus TCP, SNMP, Internal Webpage.

Access facility software.

Full data logging.



Unique and innovative utilisation of inverter H-bridge to produce DC power has created a highly reliable, industrial battery charger with unity input power factor whilst retaining all advanced functionality of the MCR11 battery chargers.

Available in single and three phase, and using IGBT technologies, this series is ideal for all industrial applications including substation battery systems and DC UPS.





TECHNICAL SPECIFICATIONS	
Nominal Voltage	110V
Nominal Current	15-50A
Input Supply	Single phase 240V $\pm$ 10% 50Hz $\pm$ 5% for output power <5kVA
Three Phase	415V $\pm$ 10% 50Hz $\pm$ 5% for output power >5kVA
Output Voltage	88-150V
Noise and Ripple	<2% specified at full load and without battery connected.
Static Voltage Regulation	$\pm$ 1% for 0-100% load variation, $\pm$ 10% AC input voltage variation and 5% AC input frequency variation
Dynamic Voltage	5% for load variation of 10% to 100% or 100% to 10%
Current Regulation	$\pm$ 1%
Protection	Input Circuit Breaker, Charger Output Fuse/Circuit Breaker, Charger Current Limit, Dual Battery Current Limit, AC Surge Suppression, Short Circuit Protection, Reverse Battery Polarity Protection.
Alarms	Mains Fail, Charger Fail, DC High, DC Low, Under/Over Voltage Trip, Earth Fault, Low Electrolyte, Battery Disconnected, Battery Fail, Battery Over Temperature, Blown Fuse, Common Alarm Relay, Common Alarm Buzzer *All alarms are user programmable*
Metering	Charger Voltage, Charger Current, Load Voltage, Load Current, Battery 1 Charge/Discharge Current, Battery 2 Charge/Discharge Current, Battery Temperature, Battery Initial Impedance Battery Capacity, Battery Capacity Ratio *Meter accuracy 1%*
Options	Voltage - free contacts for all alarms, Battery test facility, 3 Stage diode voltage limiter, DC distribution board
Physical	Free standing powder coated metal cabinet *Dimensions depend on charger output rating and associated battery requirements*
Environmental	0-60°C, up to 95% humidity
Standards	AS 1955, AS 3000, AS 3100 AS 4044, AS 2069
Serial Comm.	DNP3, TCP/IP, Web-server, RS485 Modbus, SNMP, USB-B.
EMC	AS 2064-1997
Efficiency	80 to 93% depending on nominal voltage and power rating
Temperature Compensation	Programmable 3 - 6 mV / Cell / °C
Audible Noise	< 55 dB
Limp Home Feature	Continuous operation in the event of control failure
Revert to Factory Settings	Reinstates all original factory settings
Data Logging	3800 log entries



- Constant voltage/ current limit.
- Low output ripple.
- ±1% output regulation.
- High reliability in harsh environments.
- LCD charger voltage.
- LCD charger current.
- High volts/ low volts alarm.
- Volt-free alarm contacts.



Designed for harsh environmental conditions, the Magellan Power Series IIB battery charger combines rugged SCR power circuitry with intelligent control electronics to produce an efficient, cost effective, highly reliable, safe and almost indestructible charger for vented and sealed Lead Acid batteries.

With low output ripple, LCD Displays and voltage alarms, the Series IIB battery charger is ideal for engine starting and many other applications.

TECHNICAL SPECIFICATIONS		
Nominal Output	24V	36V
Output Current	15A	5A
Float Voltage	27V	40.5V
Metering	LCD Voltmeter, LCD Ammeter	
Alarm	Low Volts/ High Volts	
Indication	Low Volts/ High Volts	
Remote Alarm	Volt Free Changeover Contacts	
Protection	Overload	
Input Voltage	240VAC AC ± 10% 50Hz	
EMC Standards	AS 2064-1997	
Working Temp.	-10°C to 60°C	
IP Rating	IP20	
Dimensions	227mm (H) x 353mm (W) x 183mm (D)	



- Low cost.
- High reliability.
- Low output ripple.
- LCD display.
- Common alarm relay.
- Lightweight.



The SMR series utilises switch-mode technology to offer low cost, compact, lightweight DC power systems for switchgear protection, PLC control, generator starting batteries and other DC power supply applications.

The SMR is highly reliable and is suitable for rugged applications.

## TECHNICAL SPECIFICATIONS

Model	24SMR10	48SMR5
Nominal Output	24V	48V
Output Current	10A	5A
Float Voltage	27V	54V
Metering	LCD Charger Voltmeter & Ammeter	
Alarm	Low Voltage & High Voltage Alarm	
High Volt Alarm	28.5V	57V
Low Volt Alarm	25.5V	51V
Indication	Red LED's	
Remote Alarm	Common Alarm Relay	
Protection	Input/ Output Load Circuit Breakers	
Input Voltage	88V to 264V AC, 47 to 63 Hz	
Ripple and Noise	200mV Pk/Pk	240mVPk/Pk
Line Regulation	±0.2%	
Load Regulation	±0.5%	
EMC Standards	AS 2064 - 1997	
Working Temp	-10 °C to 50 °C	
IP Rating	IP33	
Max Internal Battery	7Ah/17Ah	7Ah
Dimensions	500mm(H) x 400 mm (W) x 270mm (D)	



- Smart interface.
- Fully programmable.
- Protection from input & output over/under voltage.
- High efficiency.
- Battery temperature compensation.
- For use with Gel, AGM or Wet batteries.
- Unity power factor.
- High reliability.
- Compact size/ light weight.



Designed for Industrial and Marine applications, the SMC charger combines high reliability, high efficiency and unity power factor with small size, light weight and ease of installation.

TECHNICAL SPECIFICATIONS	
Input Voltage	85 - 290VAC (Nominal 180 -290 VAC)
Input Current	10 Amps
Input Frequency Range	45 Hz - 65 Hz
Power Factor	>0.99 at P nom ≥ 75%
OUTPUT	
Nominal Output	24V
Voltage Adjustable	21V - 28V
Voltage Stabilisation	±0.5%
Current Stabilisation	±1%
Nominal Output Current	50A
Efficiency	≥94%
Charge Characteristics	IU Characteristic according to DIN41772/DIN41773
Default Charging Voltage	24V
Voltage Ripple	≤200mV
Short Circuit Protection	15% -30% of Inom when in short circuit
ALARMS	
Mains Fail	No Adjustment



TECHNICAL SPECIFICATIONS	
DC Low	(software adjustable up to 21VDC)
DC High	(software adjustable up to 28 VDC)
Over Load	(software adjustable)
Comms Fail	No Adjustment
Fan Fail	No Adjustment
High Battery Temperature	(software adjustable)
RELAY ALARMS	
Relay 1	Common Alarm
Relay 2	Mains Fail
MECHANICAL	
Ambient Temperature	Operation: -20° to + 55° C Storage: -40° to +70° C
Humidity	≤90 %RH
Cooling	Fan Cooled
Dimensions	159mmD, 256mmW, 335mmH (no glands)
Audible Noise	< 50 db



- High efficiency switch-mode technology.
- Unity power factor.
- Low cost, maintenance free.
- Analog voltmeter and ammeter.
- Adjustable output voltage.
- Compact and light weight.
- Can be used on lead acid and NiCad batteries.



Australian designed and manufactured, the Emergency Charger is an invaluable tool for keeping substation batteries in a charged state and keeping down time to zero. In case of a substation charger failure, simply connect the Emergency DC Power Supply to the batteries and your charger can be repaired without time pressure.

## TECHNICAL SPECIFICATIONS

Nominal Characteristics	24V	32V	48V	110V
Input Supply	Single phase 240V± 10% 50Hz ± 5%			
Output Voltage	22-35V Set at 27.2V	32-43V Set at 36.2V	44-58V Set at 54.5V	90-150V Set at 122.5V
Noise and Ripple	< 0.5% specified at full load and without battery connected			
Static Voltage Regulation	± 1% for 0-100% load variation, ± 10% AC input voltage variation and 5% AC			
Dynamic Voltage	5% for load variation of 10% to 100% or 100% to 10%			
Current Regulation	± 1%			
Protection	Input Circuit Breaker, Short Circuit, Output Circuit Breaker			
Power Factor	0.99 to 0.995 measured at full load and 220V input			
Metering	Charger Voltage, Charger Current. *Meter accuracy ± 5%*			
Environmental	0-50°, up to 95% humidity			
Psophometric Noise	2mV : 300Hz - 3400Hz			
Wide Band Noise	50mV: 3.4Khz-150KHz			
	20mV:0.15Mhz-30Mhz			
EMC	AS 2064-1997			
Efficiency	90% at Full Load			
Audible Noise	< 50 dB			
Cooling	Forced Air			
Dimensions	377mm (H) x 298mm (W) x 460mm (D)			
Weight	20kg			

Compact and portable design.

Complete solution for avoiding DC power loss.

Uses light-weight, high efficiency lithium batteries with removeable modules.

Easy to deploy/ portable.

Provides dual DC output power, 110V/20A and (24V/25A or 48V/25A).

Allows technicians to restore site DC power without stress.



Magellan's new emergency DC UPS is a complete solution for avoiding any loss of DC power in substations.

The unit is light, compact and portable. It combines an advanced, integrated, reliable battery charging system and light weight, high efficiency Lithium batteries, along with an integrated intelligent battery monitoring system (BMS).

The charger operates from 240VAC, providing dual uninterruptible 110VDC, 24VDC or 48VDC power.

The unit is to be kept connected to mains at all times when it is not being used to make sure that the batteries are charged and are available at full capacity when needed, this portable DC UPS then allows technicians to restore the site DC power without stress.



## TECHNICAL SPECIFICATIONS

Float Voltage	115.2V		
Nominal Power	2400W		
Input Supply	Single Phase 240V± 10% 50Hz ±5% Via 3 Pin Plug		
Output Voltages - Via Anderson Plugs	24V	48V	110V
Noise and Ripple	< 0.5% specified at full load and without battery connected		
Static Voltage Regulation	± 1% for 0-100% load variation, ± 10% AC input voltage variation and 5% AC input frequency variation.		
Dynamic Voltage	5% for load variation of 10% to 100% or 100% to 10%		
Current Regulation	± 1%		
Protection	Input Circuit Breaker, Short Circuit, Output Circuit Breaker, Input Shunt Trip		
Power Factor	0.99 to 0.995 measured at full load and 220V input		
Metering	Charger Voltage, Charger Current, Battery Voltage, Battery Current, Cell Voltage, Battery Temperature *meter accuracy ±5%		
Environmental	0-45°C, up to 95% humidity		
Communications	USB, RS485 & Ethernet		
Psophometric Noise	2mV: 300Hz-3400Hz		
Wide Band Noise	50mV: 3.4Khz-150KHz		
	20mV:0.15Mhz-30Mhz		
EMC	AS 2064-1997		
Efficiency	90% at Full Load		
Audible Noise	<60dB		
Cooling	Forced Air		
Dimensions	605mm D x 600mm W x 1170mm H		
Weight	Approx 80kgs without batteries Approx 145kgs with batteries		

## BATTERY SPECIFICATIONS: LiFePO4

Number of Cells	32 x 60Ah
Type	LiFePO4, Lithium Iron Phosphate
Number of Modules	3
BMS	Magellan Passive
Weight of each module	25kg







Enclosure Technical Specifications	
Height (mm)	2000
Width (mm)	815
Depth (mm)	650
Weight (kg)	145
Colour - External	RAL7035
Colour - Internal	RAL7035
Colour - Internal Accessories	Dulux Pearl White
Ingress Protection	IP42 to AS:1939

Key Features	
Material	2mm ZINCANNEAL steel
Finish	100 micron powder coating
Plinth	150mm (H) Powder Coated
Gland	Bottom Entry 3mm aluminium gland plate
Door	180° open left hinge
Hinge	Black powder coated zinc hinges
Locking Mechanism	Key lockable chrome handle
Ventilation	Natural
Other	Integrated document holder

Available Options
Lifting eyebolts
Pad lockable handles
Chrome hinges
Brass gland plate
Bronze insect screen
IP53 - Requires fan-forced ventilation
Plinth kick plates
Custom color depending on availability



Enclosure Technical Specifications	
Height (mm)	1656
Width (mm)	800
Depth (mm)	650
Weight (kg)	123
Colour - External	RAL7035
Colour - Internal	RAL7035
Colour - Internal Accessories	Dulux Pearl White
Ingress Protection	IP42 to AS:1939

Key Features	
Material	2mm ZINCANNEAL steel
Finish	100 micron powder coating
Plinth	150mm (H) Powder Coated
Gland	Bottom Entry 3mm aluminium gland plate
Door	180° open left hinge
Hinge	Black powder coated zinc hinges
Locking Mechanism	Key lockable chrome handles
Ventilation	Natural
Other	Integrated document holder

Available Options
Lifting eyebolts
Pad lockable handles
Chrome hinges
Brass gland plate
Bronze insect screen
IP53 - Requires fan-forced ventilation
Plinth kick plates
Custom color depending on availability



### Enclosure Technical Specifications

Height (mm)	2010
Width (mm)	800
Depth (mm)	800
Weight (kg)	159
Colour - External	RAL7035
Colour - Internal	RAL7035
Colour - Internal Accessories	Dulux Pearl White
Ingress Protection	IP42 to AS:1939

### Key Features

Material	2mm ZINCANNEAL steel
Finish	100 micron powder coating
Plinth	150mm (H) Powder Coated
Gland	Bottom Entry 3mm aluminium gland plate
Door	180° open left hinge
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Locking Mechanism	Key lockable chrome handles
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Other	Integrated document holder

### Available Options

Lifting eyebolts
Padlockable handles
Chrome hinges
Brass gland plate
Bronze insect screen
IP53 - requires fan-forced ventilation
Custom color depending on availability

Qualified in-house and certified electrical engineers specialising in Magellan Power products.

Full service report provided.

Comprehensive visual and mechanical inspection.

Functional test.

Full battery health check including battery capacity test.

Quality assurance: AS/NZS ISO9001:2008.

Workers compensation insurance.

Public liability insurance.

Marine insurance.



The Magellan Power Service Department was formed to offer customers peace of mind when it comes to reliability and dependability of back-up power.

Magellan Power's service technicians are the industry's leading experts in the provision of support through preventative maintenance and onsite repair services, which can eliminate the downtime of power equipment.

Magellan engineers are fully trained in all aspects of AC/DC repair and refurbishment and bring the collective knowledge and experience of the entire Magellan Power design and manufacturing team.



## Benefits of Magellan Service

Magellan Power designs and manufactures industrial power equipment, and therefore has in-depth knowledge of UPS and charger maintenance.

Magellan equipment offers steadfast reliability when maintained properly, with a product design life of 25 years.

Magellan keeps its main market in Australia to ensure the best service outcome for customers. It differs from other providers as it manufactures locally in Australia, which means customers can access technicians and engineers who assisted in designing and testing the product.

We Provide:

1. In House Qualified and Certified Electrical Engineers and Technicians, specialising in Magellan Power products (from our manufacturing testing department).
2. Full Service Report: Following a service, a full report is submitted to the customer, with details of repairs undertaken, recommendations of any action, and a quote for additional items if needed.

Service Procedure:

1. Comprehensive visual and mechanical inspection.
2. Functional test.
3. Full battery health check including battery capacity test if needed.

At the completion of each service, a full service report will be submitted. The report will also mention any corrective action to be undertaken, and will provide a formal quotation for the rectification if required.

Quality Assurance:

AS/NZS ISO 9001:2008

Research & Development, design, manufacture, supply and service of power electronic and renewable energy equipment and supply of industrial batteries.





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Magellan Power reserves the right to change or modify product design, construction, specifications or materials without prior notice.