



Modular Rectifier SDM SERIES

Modular Rectifier systems

The high-frequency commutated Modular rectifiers are designed to provide direct current stabilized power. This system's advanced modular design makes it a compact system and can provide enough power to meet the requirements of Communication and Power Industrial Systems.

This system consists of one or multiple rectifier modules together with the monitor module. The power of rectifier systems can vary, depending on the quantity of rectifier modules.

Modular Rectifier SDM SERIES

General specifications

- High frequency commutated Modules (IGBT).
- Modules cooled by forced ventilation.
- 19" rack and cabinet mount configurations.
- Possibility of redundant module operation.
- Room temperature probe included in the equipment.
- LVD (Battery Low Voltage Disconnect).
- Output breakers for loads.
- Audible & LED Alarm.
- User-friendly HMI (All parameters, and calibrations can be made through the front panel).
- High-frequency.



Features

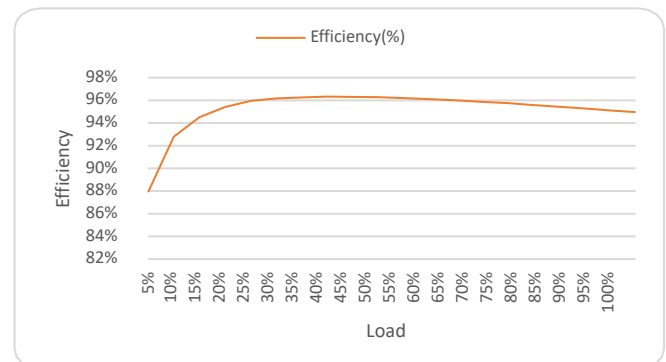
- Remote monitoring: serial port, Ethernet, and dry contacts.
- Temperature Compensated Battery Charging.
- Battery test function.
- Monitoring of all parameters via the front panel display.
- Built-in intelligent battery management.
- Alarm- and event logger, with a date and time-stamped event log memory.
- Large communication facility options.
- Operation with different types of batteries: Lead Acid VRLA.

Add on Options

- Voltage Drop Diode Unit.
- Digital or analog voltage and current meters.
- Internal cabinet lighting.
- Door open sensor.
- Heating resistance to avoid condensation.
- Earth leakage current sensor (positive and negative).
- Removing input neutral at the site.
- Fusible Surge Suppression (AC/DC).
- Redundant Fans.
- Cabinet color can be chosen from RAL codes.
- Cable Entry (Top/side/bottom/rear).
- Ingress Protection: up to IP66.
- RS485, TCP, SNMP and GSM Communication.
- Automatic Battery Test Add on Options 98% 96%.

Applications

- Macro cell BTS.
- Microwave.
- LTE / WiMax.
- FTTX.
- Broadband Access.
- Optical Fibre Transmission System.
- IDC (Internet Data Centres).



Technical Data

Product		24-1500
Capacity	1500W	
AC INPUT		
Voltage Range	85Vac to 305Vac (Nominal @ 185Vac to 275Vac)	
Frequency	45Hz to 66Hz	
Maximum Input Current	Max. 9 Arms @ 185Vac (full load)	
Power Factor	≥0.99 @ rated input and ≥ 50% load	
Input Protection	Varistors for transient protection, Mains Fuse for both input lines, Shutdown @ > 305Vac with hysteresis	
DC OUTPUT		
Output Voltage	27Vdc (adjustable 21Vdc to 29Vdc)	
Output Power (Maximum)	1500W @ nominal input	
Output Current (Maximum)	62.5 A @ 24 Vdc with nominal input	
Peak Efficiency	>96.5%	
Current Sharing	≤±5% of maxcurrent from 20% to 100% load	
Static Voltage Regulation	≤±0.6% from 10% to 100% load	
Dynamic Voltage Regulation	≤±5% for 10%-90% or 90%-10% load variation, regulationtime<50ms	
Hold Up Time	>20ms ; output voltage > 43.5Vdc @ 1500W	
Ripple and Noise	≤150mVp-p, 20MHz bandwidth, ≤2mVrms sophomoric	
Output Protection	Overvoltage shutdown; hotplug-in, inrush current limiting; high temperature protection; short circuit proof	
CONTROL and MONITORING		
Rectifier Alarm and Signaling	High & low mains shutdown, high temperature shutdown, rectifier failure, overvoltage shutdown, fan failure, communication failure	
Visual Indications	Alarms - RED	
	Warning - YELLOW	
	Normal operation - GREEN	
OTHER SPECIFICATIONS		
Isolation	Input to Output: 3.0kVac, Input to Earth: 1.5kVac, Output to Earth: 0.5kVdc	
Cooling	Fan-cooled, front to back airflow	
Fan Speed	Regulated by temperature and output power	
MTBF	>300,000hrs @ 25oC	

General Specification

ENVIRONMENTAL	
Operating Temperature Range	-40° C to +75° C (de-rates above 55° C)
Storage Temperature Range	-40° C to +85° C
Relative Humidity	Operating: 5% to 95% RH non-condensing Storage: 0% to 99% RH non-condensing
Acoustic Noise	≤58dB @ full load, 25° C
PHYSICAL	
Dimensions WxDxH (mm)	109x311x 41(1U)
Net Weight (kg)	≤1.7
DESIGN STANDARDS	
Electrical Safety	EN/IEC62368-1
EMC	ETSI EN 300 386 V2.1.1, EN61000-6-1/-2/-3/-4
AC Harmonics / AC Flicker & Fluctuations	EN61000-3-2 / EN61000-3-3
Others	CE, RoHS compliant

Key Features

- Fully Digital Controlled:
Reduces component count and improves reliability.
- Modular, Scalable and Hot Swappable Flexible installations.
- High Power Density:
Reduces footprint.
- Highly Efficient @ >96%:
Reduces losses and lowers operating costs.
- Front-to-back Airflow:
Unobstructed scalability of shelves.
- Excellent EMC Performance:
Lower interference and excellent susceptibility.
- Wide Input Voltage Range:
Continued operation in demanding grid conditions.
- Wide Temperature Range:
Applications in harsh climatic conditions.
- Compliant with Global Standards:
Delivers quality, performance and reliability in power solutions.

Technical Data

Product		48-3000
Capacity	3000W	
AC INPUT		
Voltage Range	90 Vac to 300Vac (Nominal @ 175Vac to 275Vac)	
Frequency	45Hz to 66Hz	
Maximum Input Current	Max. 24.5 Arms @ 185Vac (full load)	
Power Factor	≥0.99 @ rated input and ≥ 50% load	
Input Protection	Varistors for transient protection, Mains Fuse for both input lines, Shutdown @ > 300Vac with hysteresis	
DC OUTPUT		
Output Voltage	53.5Vdc (adjustable 43Vdc to 58 Vdc)	
Output Power (Maximum)	3000W @ nominal input	
Output Current (Maximum)	62.5 A @ 42-50 Vdc with nominal input	
Peak Efficiency	>95%	
Current Sharing	±5% of maxcurrent from 20% to 100% load	
Static Voltage Regulation	±0.6% from 10% to 100% load	
Dynamic Voltage Regulation	±5% for 10%-90% or 90%-10% load variation, regulationtime<50ms	
Hold Up Time	>20ms ; output voltage > 43.5Vdc @ 1500W	
Ripple and Noise	≤200mVp-p, 20MHz bandwidth, ≤2mVrms sophomoric	
Output Protection	Overvoltage shutdown; hotplug-in, inrush current limiting; high temperature protection; short circuit proof	
CONTROL and MONITORING		
Rectifier Alarm and Signaling	High & low mains shutdown, high temperature shutdown, rectifier failure, overvoltage shutdown, fan failure, communication failure	
Visual Indications	Alarms - RED	
	Warning - YELLOW	
	Normal operation - GREEN	
OTHER SPECIFICATIONS		
Isolation	Input to Output: 3.0kVac, Input to Earth: 1.5kVac, Output to Earth: 0.5kVdc	
Cooling	Fan-cooled, front to back airflow	
Fan Speed	Regulated by temperature and output power	
MTBF	>300,000hrs @ 25oC	

General Specification

ENVIRONMENTAL	
Operating Temperature Range	-40° C to +75° C (de-rates above 55° C)
Storage Temperature Range	-40° C to +85° C
Relative Humidity	Operating: 5% to 95% RH non-condensing Storage: 0% to 99% RH non-condensing
Acoustic Noise	≤58dB @ full load, 25° C
PHYSICAL	
Dimensions WxDxH (mm)	108x325x 41 (1U)
Net Weight (kg)	≤1.7
DESIGN STANDARDS	
Electrical Safety	EN/IEC62368-1
EMC	ETSI EN 300 386 V2.1.1, EN61000-6-1/-2/-3/-4
AC Harmonics / AC Flicker & Fluctuations	EN61000-3-2 / EN61000-3-3
Others	CE, RoHS compliant

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- Wide Input Voltage Range:
Continued operation in demanding grid conditions.
- Wide Temperature Range:
Applications in harsh climatic conditions.
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Delivers quality, performance and reliability in power solutions.

Technical Data

Product		110-2900
Capacity	2900W	
AC INPUT		
Voltage Range	90Vac to 264Vac	
Frequency	45Hz to 66Hz	
Maximum Input Current	Max. 4.4 Arms @ 185Vac (full load)	
Power Factor	≥0.98 @ rated input and ≥ 50% load	
Input Protection	Varistors for transient protection, Mains Fuse for both input lines, Shutdown @ > 305Vac with hysteresis	
DC OUTPUT		
Output Voltage	117Vdc (adjustable 99Vdc to 143Vdc)	
Output Power (Maximum)	2900W @ nominal input	
Output Current (Maximum)	22A	
Peak Efficiency	>95%	
Current Sharing	±5% of maxcurrent from 20% to 100% load	
Static Voltage Regulation	±0.6% from 10% to 100% load	
Dynamic Voltage Regulation	±5% for 10%-90% or 90%-10% load variation, regulationtime<50ms	
Hold Up Time	>20ms	
Ripple and Noise	≤200mVp-p, 20MHz bandwidth, ≤2mVrms sophomoric	
Output Protection	Overvoltage shutdown; hotplug-in, inrush current limiting; high temperature protection; short circuit proof	
CONTROL and MONITORING		
Rectifier Alarm and Signaling	High & low mains shutdown, high temperature shutdown, rectifier failure, overvoltage shutdown, fan failure, communication failure	
Visual Indications	Alarms - RED	
	Warning - YELLOW	
	Normal operation - GREEN	
OTHER SPECIFICATIONS		
Isolation	Input to Output: 3.0kVac, Input to Earth: 1.5kVac, Output to Earth: 0.5kVdc	
Cooling	Fan-cooled, front to back airflow	
Fan Speed	Regulated by temperature and output power	
MTBF	>100,000hrs @ 25oC	

General Specification

ENVIRONMENTAL	
Operating Temperature Range	-40° C to +75° C (de-rates above 55° C)
Storage Temperature Range	-40° C to +85° C
Relative Humidity	Operating: 5% to 95% RH non-condensing Storage: 0% to 99% RH non-condensing
Acoustic Noise	≤58dB @ full load, 25° C
PHYSICAL	
Dimensions WxDxH (mm)	111 x 270 x 88 (2U)
Net Weight (kg)	≤3.8
DESIGN STANDARDS	
Electrical Safety	EN/IEC62368-1
EMC	ETSI EN 300 386 V2.1.1, EN61000-6-1/-2/-3/-4
AC Harmonics / AC Flicker & Fluctuations	EN61000-3-2 / EN61000-3-3
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