Modular Rectifier SDM SERIES

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 specefications

- 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

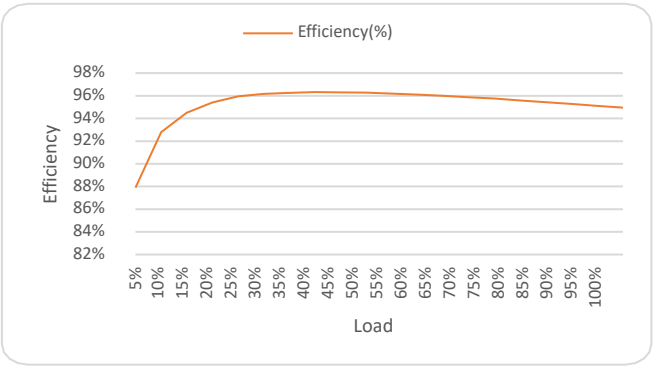
- Remote monitoring:serial port, Ethernet, and dry contacts.
- Temperature Compensated Battery Charging.
- Battery test function.
- Monitoring of all parameters via the front panel display.
- Built-in intelligent battery management.
- Alarm- and event logger, with a date and time-stamped event log memory.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

Applications

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

Add on Options

- Voltage Drop Diode Unit.
- Digital or analogvoltage 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%.



Modular Rectifier SDM SERIES

Technical Data

Product	48-3000
Capacity	3000W
AC INPUT	
Voltage Range	90Vac to 300Vac (Nominal @ 175Vac to 275Vac)
Frequency	45Hz to 66Hz
Maximum Input Current	Max. 18 Arms @ 175Vac (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 58Vdc)
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 max current 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, regulation time <50ms
Hold Up Time	>20ms; output voltage >43.5Vdc @ 1500W
Ripple and Noise	≤200mVp-p, 20MHz bandwidth, ≤2mVrms sophomoric
Output Protection	Overvoltage shutdown; hot plug-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	> 300,000 hrs @ 25° C

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

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.

Modular Rectifier SDM SERIES

Technical Data

Product	48--6000
Capacity	6000W
AC INPUT	
Voltage Range	250Vac to 475Vac (Nominal @ 323Vac to 456Vac)
Frequency	45Hz to 66Hz
Maximum Input Current	Max. 12A per Phase
Power Factor	≥0.99 @ rated input and ≥50% load
Input Protection	Varistors for transient protection, Mains Fuse for both input lines , Shutdown @ > 475Vac with hysteresis
DC OUTPUT	
Output Voltage	53.5Vdc (adjustable 43Vdc to 58Vdc)
Output Power (Maximum)	6000W @ nominal input
Output Current (Maximum)	125 A @ 42-50 Vdc with nominal input
Peak Efficiency	>96.5%
Current Sharing	≤±5% of max current 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, regulation time <50ms
Hold Up Time	>20ms; output voltage >43.5Vdc @ 3000W
Ripple and Noise	≤200mVp-p, 20MHz bandwidth, ≤2mVrms sophomoric
Output Protection	Overvoltage shutdown; hot plug-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	> 300,000 hrs @ 25° C

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)	210x345x 86 (2U)
Net Weight (kg)	≤6.2
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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