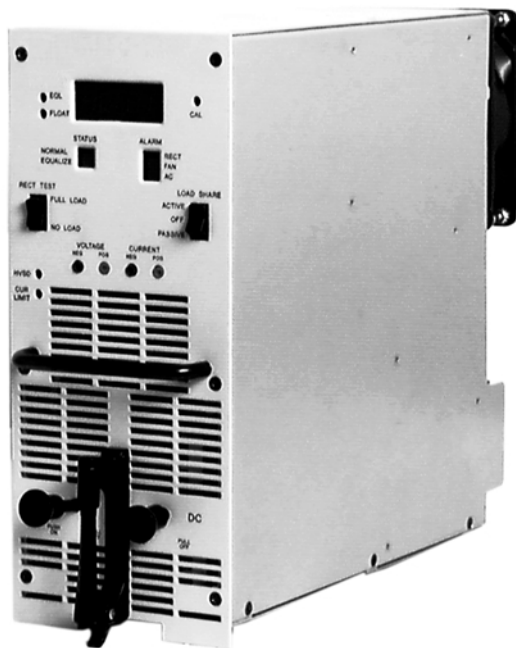


## 50 AMP MODULAR SWITCHED MODE RECTIFIER

### RM4850



#### DESCRIPTION

The RM4850 Modular Switch-Mode Rectifier is one of C&D Technologies' family of rectifiers that may be used in modular power plants. This high power unit will function in parallel with any rectifier with similar current sharing capacities. This versatile and efficient rectifier is ideal for use in advanced telecommunications applications. Its small size allows the user to plan economically for system expansion at minimum cost and makes it ideal for use in fiber optic, microwave and other applications where space is at a premium.

#### FEATURES

- SWITCHED MODE
- >.99 PFC
- >90% EFFICIENCY
- AUTOMATIC LOAD SHARING
- HOT-SWAP CAPABLE
- COMPACT SIZE
- SHELF MOUNTED
- SOFT START TURN-ON
- ESD TO 20,000 VOLTS
- -40°C TO 65°C FULL OPERATION WITHOUT DERATING
- REMOTE EMERGENCY POWER DISCONNECT
- TELECOM BULK POWER RATED
- BELLCORE COMPLIANT
- INFINITE, FULL CURRENT SHORT CIRCUIT CAPABLE
- BUILT-IN AC & DC DISCONNECTS
- FRONT PANEL METER
- BATTERY OR BATTERYLESS OPERATION
- INTELLIGENT HIGH VOLTAGE SHUTDOWN
- GUARANTEED NO SINGLE COMPONENT FAILURE CAN LEAD TO OUTPUT HIGH VOLTAGE
- GUARANTEED SAFE OPERATION TO 300 V<sub>AC</sub>
- ENVIRONMENTALLY HARDENED
- THD <5%

#### AGENCY APPROVALS



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# Input Specifications

Parameter	Conditions	Min	Typ	Max	Units
Operating Range	45 - 65 Hz, single phase, no taps required	176		264	V <sub>AC</sub>
Current	Adjustable	0		50	A
Efficiency				>90	%
Power Factor Correction (PFC)				>.99	

MEASUREMENTS OF RM4850		
<b>Module</b>	Weight	25 lbs.
	Height	7U (12.25")
	Depth	15.25"
	Width	5"
<b>Shelf*</b>	Weight	18 lbs.
	Height	7U (12.25")
	Depth	15.25" maximum
	Width	23" rack mount

\* These measurements are specifically for the 200A Power Shelf for up to 4 quantity RM4850  
Please contact the factory for other shelf and power plant options.

## GENERAL FEATURES

### Hot Swappable Modules

These shelf-mounted modules are easy and safe to install or remove while system is operational without affecting the overall system's performance.

### Parallel Operation and Automatic Load Sharing

Forced or passive load sharing is available between modules of the same operating voltages in parallel applications.

### Current Limit

The Current Limit is adjustable between 0A to 50A. Upon exceeding this limit, the rectifier automatically reduces output voltage.

### Safety

UL/CUL Recognized: UL 1950/CSA 950.  
File Number: E181908

Alarm Outputs		Control Inputs	
Rectifier Fail Alarm	(RFA)	High Voltage Shutdown	(HVSD)
Equalize Occurring	(EQO)	Restart	(RS)
High Voltage Occurring	(HVO)	Equalize	(EQ)
Temporary Restraint Occurring	(TRO)	Temporary Release	(TR)
Thermal Shutdown Occurring	(THSD)		
Open Sense Lead Has Occurred	(OS)	Emergency Shutdown	(EMSD)
Low Current Alarm	(LCA)		
AC Power Has Failed Alarm	(ACF)		
Rectifier Fan Has Failed Alarm	(FF)		
DC Breaker Is Open Alarm	(DCBKR)		
AC Breaker Is Open Alarm	(ACBKR)		
Note: All alarms are "Form A" relay type contacts			

All control inputs are initiated with a ground closure

24V<sub>AC</sub> voltage reference to ground

## Output Specifications

Parameter	Conditions	Min	Typ	Max	Units
Voltage Adjustment Range	float voltage	48		60	V <sub>DC</sub>
	equalize voltage	48		60	V <sub>DC</sub>
Regulation	0-100% load within specified input voltage and frequency range		± 0.5		%
Load Current	within a 10 - 100% rating		±10		%
Hold-Up Time	nominal AC line	>16			mS
Filtering					
Voice band		<32			dB <sub>rnc</sub>
Wide band noise	@ 20 MHz	<250			mV p-p
<b>ENVIRONMENTAL</b>					
Temperature					
Operating		-40		+65	°C
		-40		149	°F
Storage		-50		+85	°C
		-58		185	°F
Humidity	non-condensing	0		95	%
Altitude		0		7000	ft.
		0		2133	m
Heat Dissipation	@ 54V		1025		Btu/hr
Audible Noise	5 ft. from any vertical surface	<55			dB <sub>a</sub>

## PROTECTION, ALARM AND CONTROL SYSTEMS

### Rectifier Failure Alarm (RFA)

Problems occurring because of an unacceptable relationship between the output power and load conditions will cause a Rectifier Failure Alarm (RFA). Conditions which may lead to an RFA include:

**Low Current** - Output current has decreased to below 5% of its rated value.

**Unit Shutdown** - Any shutdown occurrence due to overvoltage, external shutdown command, unacceptable ambient temperature conditions or out of bounds AC input voltage.

**Fan Malfunction** - The fan has stopped operating or is not providing the airflow needed to cool the unit.

**Over Temperature** - The ambient temperature has exceeded 65°C.

### High Voltage Shutdown (HVSD)

The unit's high voltage limit is adjustable up to 60V<sub>DC</sub>. Shutdown occurs while voltage is high and the rectifier is delivering greater than 10% rated current. When internal shutdown occurs, the unit may be restarted by a local switch or by a remote signal.

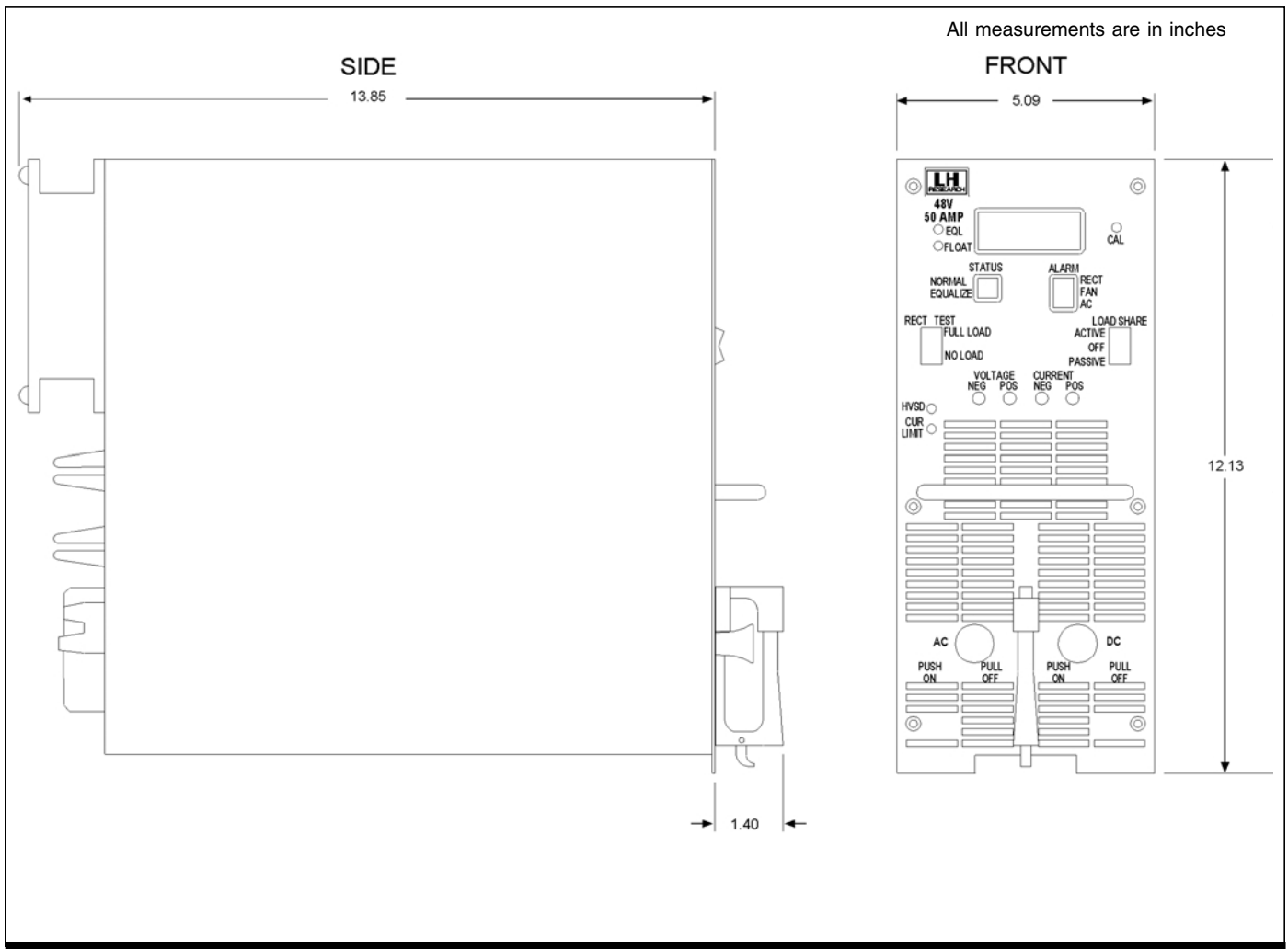
### Surge Protection

The unit will withstand lightning and input surges of 6000V/3000A.

### Under Voltage Protection

When input voltage is below 176 V<sub>AC</sub>, the rectifier's operation is automatically inhibited.

# Mechanical



Standard Options are shown, consult factory for other available options.

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