



Modular Switchmode Rectifier System



Unit Shown: LMHF-75-48V with Modules & Shelf



The La Marche model LMHF (La Marche High Frequency) is a 4 RU modular design rectifier for telecommunication applications. It is a highly compact self-contained power system. The current limiting circuitry, voltage regulation, high efficiency and high power factor makes the LMHF an ideal choice where power requirements are critical.

These rectifiers are available with nominal output voltages of 24 VDC or 48 VDC and can deliver 115 amps and 75 amps respectively. The nominal universal input range of 208 VAC to 277 VAC and the frequency range of 45 to 66 Hz provides the flexibility for worldwide power requirements.

The temperature controlled variable fan speed rectifier in a six across 23" rack configuration (five across in 19" configuration) offers high power density and efficiency. These parallel operating rectifiers are ideal for N+1 redundancy.

The system controller features data-logging, advanced alarm notification and full graphic LCD touch-screen. This user-friendly graphical (Menu Driven) display allows simple control and monitoring of LMHF rectifiers. Complete configurations and monitoring is possible through the Ethernet port and web browser. The communication ports provide reliable communication between LMHF power system and management system.

LMHF controller easily allows adjustments such as float voltage, equalize voltage, high voltage alarm, low voltage alarm and high voltage shutdown.

Standard Features

Rectifier

- High Frequency Switchmode Circuitry
- Power Factor Correction Circuitry
- Hot Swappable 4 RU Design
- Output Power
 - 4 KW per 48 Volt Rectifier
 - 3.1KW per 24 Volt Rectifier
- 95% Efficiency
- Parallel Operation
- Over Temperature and Over Voltage Protection
- Operating Temperature
 - 40° to 65°C (-40° to 149°F)
- Indicators
 - AC ON - Green LED
 - DC ON - Green LED
 - Alarm - Red LED
- Backwards Compatible With LMHF 65-48V

Shelf

- 23" Rack Mounting - up to 6 Modules
(19" up to 5 Modules)
- Easy Installation and Maintenance

Controller

- Rack Mount
- LCD Touch-Screen Graphical Display for Local Set-Up, Adjustment and Control
- Digital and Analog User-Configurable Inputs
- Temperature Compensation (With Optional Probe)
- User-defined Major/Minor Alarms
- Web server and SNMP Support Via Ethernet
- Connectivity: Ethernet, RS232, RS485
- 2-Year Warranty

	Model Number	AC Input			DC Output			Overall Dimensions H x W x D (inches)	Mounting	Shipping Weight	
		Nominal	Operating	Frequency	Amps	Volts (Nominal)	Range			lbs	kgs
Rectifier	LMHF-110-24V-D-F1	208-277 VAC	176-312 VAC	45-70 Hz	115	24	21-29 VDC	6.3" x 3.4" x 11.8"	4RU	10	4.6
	LMHF-75-48V-ZE1*	208-277 VAC	187-320 VAC	45-66 Hz	75	48	42-60 VDC	6.3" x 3.4" x 11.8"	4RU	10	4.6
Shelf	LMHF-PC660-24V-23*	208-277 VAC	176-312 VAC	45-70 Hz	660	24	21-29 VDC	6.9" x 20.8" x 15.3"	4RU	21	9.5
	LMHF-PC390-48V-23*	208-277 VAC	187-320 VAC	45-66 Hz	450	48	42-60 VDC	6.9" x 20.8" x 15.3"	4RU	21	9.5



Rectifier Specifications

INPUT VOLTAGE

- **Nominal:** 208 to 277 VAC
- **Operating:** 187 to 320 VAC @ 48V
176-312 @ 24V
- **Extended:** 90 to 187 VAC (derated power)

INPUT CURRENT

- 48 VDC 17.5A @ 240 VAC
21.5A @ 208 VAC
23.5A @ 176 VAC (Max)
- 24 VDC 14.6A @ 240 VAC
16.9A @ 208 VAC
20.2A @ 176 VAC (Max)

INPUT FREQUENCY

- 45 to 66Hz (48 VDC Models)
- 45 to 70Hz (24 VDC Models)

POWER

- 4000W @ 48 VDC
- 3100W @ 24 VDC

OUTPUT CURRENT

- 115A @ 27 VDC (130A max. 24V)
- 74A @ 54 VDC (83 max. 48V)

POWER FACTOR

- > 0.99 (50 to 100% load)

THD

- < 5%

EFFICIENCY

- 24V >90%
- 48V > 95%

LOAD REGULATION

- < ±0.5%

LINE REGULATION

- < ±0.1%

NOISE

- < 38dBmC

RIPPLE

- < 30mV RMS

PROTECTION

- Current Limit, High Voltage, Shutdown, Start Delay, Input/Output Fuses

WEIGHT

- 9lb (4kg)

ENVIRONMENTAL

TEMPERATURE

- **Standard:** -40° to 55°C (-40° to 149°F)
- **Storage:** -40° to 85°C (-40° to 185°F)

HUMIDITY

- 0 to 95% RH non-condensing

ELEVATION

- -500 to 4000m (-1640 to 13120ft)

HEAT DISSIPATION

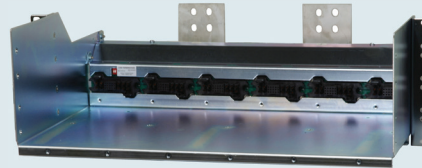
- < 1150 BTU per hour

	Model Number	Input		Overall Dimensions H x W x D (inches)	Mounting		Shipping Weight (approx.)	
		Amps	Voltage		Shelf	Rack	lbs	kgs
Controller	LMHF-SSC-0-1	<200mA	20-60 VDC	6.9 x 2.9 x 10	4RU	-	3.9	1.8

* Backwards compatible with LMHF 65-48V

** 19" configuration available upon request, please contact factory for specifications.

Controllers are factory set @ 48V, to change the settings to 24V refer to the instruction manual.



Shelf Specifications

23" SHELF DIMENSIONS

- 6.9H x 20.8W x 15.3D (inches)
- 177H x 530W x 389D (mm)

WEIGHT

- 21lb (9.5kg)

MOUNTING

- Flush mount up to 6 modules

OPTIONAL REAR COVER

- LMHF-SRC-1

CONNECTIONS

INPUT (per rectifier)

- Box type terminal block 10 to 6AWG (6 to 16mm²)

OUTPUT

- Bus adapters with 3/8 studs

CHASSIS GROUND

- Compression lug (10 to 6AWG)

CAN COMMUNICATION

- RJ12 offset



Controller Specifications

DISPLAY

- LCD touch screen, 160 x 160 pixels

LED INDICATORS

- System OK, Minor and Major

PORTS

- RS232, RS485, Ethernet

MODEM

- Optional (consult factory)

INPUT VOLTAGE

- 20 to 60 VDC

CURRENT

- < 100mA @ 48V
- < 200mA @ 24V

TEMPERATURE

- -40° to 65°C

WEIGHT

- 3.9lb (1.8kg)
- 13.8 Shelf and Rack

ADJUSTMENTS

- Float Voltage, Equalize Voltage, High Voltage Alarm, Low Voltage Alarm, High Voltage Shutdown, Current Limit, Slope, Start Delay Timers

Agency Approvals

Safety: CSA C22.2 No 60950-1-03
UL 60950-1 1st Edition
CE marked
IEC/EN 60950-1
ANSI / IEEE C62.41 Cat B3

Ordering Information

When ordering, please specify:
- La Marche Model Number