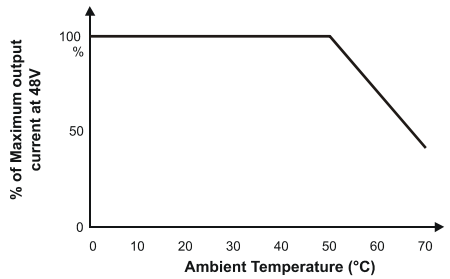
CR48-3G Rectifier Module

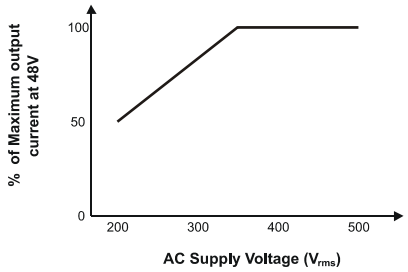
Contents

Powering Business Worldwide

AC Input	**3 Phase + N + PE (Y):**	**3 Phase + PE (Δ):**
Nominal AC Input:	400V	208V
Rated Operating Ranges: (Full Power Output)	323V to 510V	187V to 295V
Extended Operating range:	156V to 520V Reduced Power output below 323V	90V to 300V Reduced Power output below 187V
Maximum Input Current:	11.5A rms per phase (323V AC)	20A rms per phase (187V AC)
Swell Tolerance:	Shutdown above 563V *	Shutdown above 325V*
	**Rectifier returns to normal operation when input is within operating range.*	
Frequency Range:	45 to 66Hz	
Efficiency:	92% peak >91% (50 to 100% load)	
Power Factor:	>0.99 (50 to 100% load)	
Total Harmonic Distortion (THD):	<5% (50 to 100% load, rated AC voltage)	
Input Over-current Protection:	16A HRC Fuses	



Output current derating with Temperature (AC Input voltage > 323VAC Y)



Output current derating with AC input voltage (400V AC Y input, Ambient temperature ≤ 50°C)

DC Output

Nominal Voltage:	48V
Adjustable Voltage Range:	43 to 58V
Rated Output Power:	5800W
Rated Output Current:	120A @ 48V, 100A @ 58V
Preset Accuracy	±0.1V
Regulation:	±0.1V *Constant voltage mode, AVC enabled from supervisory module.*
Default (Fail-safe) voltages	
Loss of System Communication:	Output voltage resets to system preset voltage
Preset voltage:	54.5 ±0.1V (manufacturer preset)
Start-up time:	Soft start
Protection	
Current Limit:	Factory set to 120A
Over Temperature Turndown:	Automatic current turndown. See temperature derating graphs.
Over Voltage Shutdown:	<3ms delay
Short-circuit:	Full short-circuit protection. Output current limited to less than 130% of rated output current. *Rectifier will continue normal operation after short-circuit is removed. Non-urgent (Current Limit) alarm generated.*
Noise under nominal conditions	
Ripple (<100Hz)	<10mV rms (unweighted)
Audio Frequency (300 Hz – 3.4 kHz):	<2mV (psophometric)
Wide band (5kHz – 1MHz):	<10mV rms (unweighted)
Peak to peak (0 – 20 MHz):	<200mV p-p (unweighted)
Discrete frequency (3.4kHz – 150kHz):	<5mV rms (1kHz wide selective frequency)

Environmental Requirements

Ambient Temperature	
Rated Operating Range:	-10°C to +50°C [14°F to 122°F]
Extended Operating Range:	-25°C to +70°C [-13°F to 158°F] *Output derates above 50°C [122°F] and below -10°C [14°F] . Refer to derating graphs.*
Humidity	
Nominal:	50% RH
Range:	< 95% RH (non condensing)
Altitude:	
Rated Operating Range:	< 2000m [6560’]
Extended Operating Range:	< 3000m [9800’] *Output derates above 2000m [6560’].*

Mechanical

Dimensions H, W, D:	3U (130mm, 5.1”), 121mm (4.8”), 321mm (12.6”) overall
Weight:	4.4kg [9.7lb]
Connector:	PCB Edge
Cooling:	Temperature controlled, high reliability fan
Front panel LEDs:	
Power on:	Green
Non-urgent alarm:	Amber
Urgent alarm:	Red

Compliances

Safety:	AS/NZS 60950, UL 60950, IEC 60950
EMC – immunity	
Electrostatic discharge:	EN 61000-4-2
Radiated radio frequency:	EN 61000-4-3
Electrical fast transients:	EN 61000-4-4
Surge:	EN 61000-4-5
Conducted radio frequency:	EN 61000-4-6
Dips, interruptions & variations:	EN 61000-4-11
EMC – emissions	
Conducted emissions (AC):	EN 55022 / CISPR 22 (Class B)
Conducted emissions (DC):	EN 300 386 (Class A)
Radiated emissions:	EN 55022 / CISPR 22 (Class B)
Harmonics:	EN 61000-3-2
Fluctuations and flicker:	EN 61000-3-3

Certifications

Europe	CE-mark, RoHS compliant
USA	UL and FCC
Canada	IC
China	MII
Australia, New Zealand	C-tick