Three-phase high efficiency rectifier

The DPR 6000B is a three-phase rectifier with outstanding efficiency and power density.

These features provide significant energy cost saving opportunities when replacing existing high power installations. The compact size allows for significant space saving in high power applications.

DPR 6000B Rectifier

Doc 370113.DS3 –v1.1

APPLICATIONS

- CENTRAL OFFICE
- CORE NETWORK MSCS
- TELECOM SERVERS/SWITCHES
- DATACENTERS

KEY FEATURES

- HIGH EFFICIENCY
- ADVANCED ENERGY SAVING FUNCTIONALITY
- HIGH POWER DENSITY
- UP TO 24 KW PER SHELF IN 2U HEIGHT
- QUIET OPERATION
- LOW LINE CURRENT DISTORTION – POWER FACTOR CORRECTION

DPR 6000B Rectifier

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MODEL	DPR 6000B ID:A1	DPR 6000B ID:B1
Part number	241246.950.VC	241246.960.VC
INPUT DATA		
Voltage (rated)	380 – 480 $V_{AC\ 3ph\ L\text{-}L}$	208 – 240 $V_{AC\ 3ph\ L\text{-}L}$
Voltage (operating range)	250 – 530 $V_{AC\ 3ph\ L\text{-}L}$*	165 – 290 $V_{AC\ 3ph\ L\text{-}L}$†
Frequency	50/60 Hz	50/60 Hz
Current	10 A_{RMS} @ 380 V_{AC} / 8 A_{RMS} @ 480 V_{AC}	17 A_{RMS} @ 208 V_{AC} / 15 A_{RMS} @ 240 V_{AC}
Power Factor	> 0.99 at 50% load or more @ 480 V_{AC}	> 0.99 at 50% load or more @ 208 V_{AC}
Total Harmonic distortion (THD)	< 5% at 50% load or more @ 480 V_{AC}	< 5% at 50% load or more @ 208 V_{AC}
Protection	Fuse in L_1, L_2 & L_3	Fuse in L_1, L_2 & L_3
OUTPUT DATA		
Voltage (default)	53.5 V_{DC}	53.5 V_{DC}
Voltage (adjustable range)	42 – 58 V_{DC}	42 – 58 V_{DC}
Power (maximum)	6 kW	6 kW
Current (maximum)	125 Amps (@ 48 V_{DC})	125 Amps (@ 48 V_{DC})
Current sharing	Yes	
Static Voltage regulation (0 – 100% load)	±0.5%	
Dynamic Voltage regulation	±4% for 10–90% or 90–10% load variation, regulation time < 2ms	
Hold-up time	> 10ms @ 53.5 V at full load	
Ripple and Noise	< 100 $mV_{p\text{-}p}$ (30 MHz bandwidth) / < 2.0 mV_{RMS} psophometric noise	
Protection	Overvoltage shutdown (level adjustable), Overload and Short circuit proof and High temperature protection	
OTHER SPECIFICATIONS		
Efficiency (peak)	96%	95.7%
Isolation	4.2 kV_{AC} – input to output, 2.8 kV_{AC} - input to earth, 1 kV_{DC} - output to earth	
OK (LED)	Green solid – normal condition; green blinking – efficiency mode or start-up delay Red – rectifier failure, low or high mains; fan failure, overvoltage (OVP) shutdown, over temperature (OTP) shutdown; load sharing error	
COM (LED)	Green solid – proper communication to system controller; green blinking – communication initialization	
LD (LED)	Yellow solid – load of less than 5%; yellow blinking – current limit	
STA (LED)	Red – latched shutdown due to OTP or OVP	
Cooling	Fan cooled	
Acoustic noise	< 46 dBA	
Operating temperature	–40 to +65°C (-40 to +149°F), linear de-rating above 55°C (131°F) to 4000W at 65°C (149°F)	
Storage temperature	–40 to +70°C (-40 to +158°F), humidity 5 – 100% RH non-condensing	
Dimensions [W x H x D] / Weight	129.5 x 83.0 x 380.7 mm (5.1 x 3.26 14.99 in.) / 5.2 kg (11.46 lb)	
DESIGN STANDARDS		
Electrical safety	EN / IEC 60950; UL 60950-1; CAN / CSA – C22.2	
EMI (radiated)	EN 55022, class B	
Environment	RoHS compliant; NEBS Level 3	

*480 VAC WYE only. Startup at 260 VAC, output power derated for input voltage <320 VAC.
†208 VAC WYE or Delta. Startup at 175 VAC, output power derated for input voltage <180 VAC.

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