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KIM6K100 6kW High Power Series AC/DC Power Converter Platform



Water Cooling/ Conductive Cooling

Features

- Wide Input range: 280 ~ 500Vac
- Wide temperature range: -25°C ~ 50 °C
- 94%+ efficiency
- Water cooling
- Active current sharing
- MTBF ≥ 100,000 hours
- EMC in compliant with EN55022

Description

This is a platform designed for the typical application of the Laser industry. Based on the requirements of the customer, we can choose to have different voltage outputs. It has 3-phase input with a wide range of 280—500Vac. The entire design is in compliance with IEC60950-1.

Electrical Characteristics

Input Characteristics	
Rated input voltage	380 Vac
AC Input voltage range	280 ~ 500Vac
Frequency	45 ~ 65Hz (typical 50/60)
PFC	≥ 0.98
Max input current	15 A
Inrush current	ETSI300132-3
Output Characteristics	
Output voltage range adjustable	59 ~ 63Vdc
Rated output voltage	61Vdc
Output power	6100W
Efficiency	≥ 96%
Temperature coefficient	≤ ± 0.02%/°C
Ripple and noise	≤ 500mVp-p



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Starting up output delay	3 ~ 8 S
Turn on/off overshoot amplitude	≤±5%
Dynamic response	Overshoot range ΔV : ≤±5%
	Recovery time Δt: ≤200μS
Regulation accuracy	≤±2%
Current-unbalance	≤±5%

Protection Characteristics

Input under voltage protection point	245 ~ 265 Vac
Input under voltage recovery point	255 ~ 275 Vac
Input over voltage protection	515 ~ 535 Vac
Input over voltage recovery point	505 ~ 525 Vac
Output over voltage protection point	68 ~ 75Vdc (latch)
Output over current protection	Yes. With fuse
Output short circuit protection	Yes. latch after 3 cycle of Hiccup

Environmental Conditions

Operating Temperature	-25 ~ +50°C
Storage Temperature	-40 ~ +80°C
Relative Humidity	5 ~ 95% , No condensation
Altitude	0 ~ 5000 m
Cooling	Water cooling or conductive cooling

