



Safety Interlock

LAPS-4000

Solution for



Laser



Semicon



Analytical



Industry



Motor Drive



Telecom/
Broadcasting

ACDC and DCDC power supply with safety interlock

The LAPS-4000 is a 4 kW scalable power supply solution for DC and pulsed applications and can be used in serial and/or parallel operation. The low ripple and excellent transient response, together with the unique features like the safety interlock (PLe) and DC input capability, makes the LAPS-4000 one of the most innovative power supply solutions in the market. The integrated safety interlock functionality guarantees safety, reduces cost on system level and improves system uptime. The LAPS-4000 is available with baseplate and can be placed on a liquid cooling plate, and supports universal mains for global use.

Key features

- 🔌 Safety interlock class PLe
 - Double safety interlock
 - ISO-13849-1 PLe certified
- 🔌 Very low ripple
- 🔌 Excellent transient response
- 🔌 DC input capability
- 🔌 High power density
 - Programmable current and voltage output
- 🔌 Fully digital interface
 - Galvanic isolated
 - Control and monitoring
- 🔌 Modular and scalable
- 🔌 Parallel and/or serial operation
- 🔌 Universal mains, world-wide 3-phase without neutral, no derating
- 🔌 Water cooled baseplate

Benefits

- 🔌 Guarantees safety
 - Improves system uptime
 - Reduces total cost of ownership
- 🔌 Suitable for noise sensitive applications
- 🔌 Ideal for pulsed applications
- 🔌 For battery and UPS applications
- 🔌 Reduces footprint and increases scalability
- 🔌 Adjustable to user's specifications
- 🔌 Less sensitive for disturbances (robust)
 - Enables series operation
 - Remote diagnostics and programming
- 🔌 Easily adaptable to changing requirements
- 🔌 Scalable in current and voltage
- 🔌 Global use. No additional mains transformer required
- 🔌 Suitable for dusty environments



LAPS-4000

Main Technical Details

Model		LAPS-4000-55	LAPS-4000-90
Output	Voltage	9 - 55 V	15 - 90 V
	Current	0 - 80 A	0 - 53 A
	Power	4000 W	4000 W
	Ripple and noise	< 35 mVpp	< 70 mVpp
	Transient response	Load step of 50%, < 0.3 V	Load step of 50%, < 0.5 V
Input	Voltage AC	180 V - 528 Vac, 3 Phase + PE, 50/60 Hz, No derating at low line	
	Voltage DC	200 - 500 Vdc input capability	
	Efficiency (typ)	93.3%	93.3%
	Inrush current	< 5 Arms at 400 Vac	
	Start-up time	< 1.5 sec	
Protections	Over voltage, over temperature	Yes	
Functions	Output voltage and current programming	9 - 55 V	
	Current sharing	Yes, up to 6 units	
	Remote ON/OFF	Yes	
	Safety interlock	2 interlock signals, 2 feedbacks	
	Remote control and monitoring	RS485 or analog / digital	
	Interface	Galvanic isolated	
Environmental	Cooling type	Base plate: 0 - 50 °C, Ambient: 0 - 70 °C	
Safety & EMC	Safety	IEC/UL/CSA 61010	
	Interlock	ISO 13849-1 PLe, MTTFd > 5000 years, DCavg > 99%	
	EMC	IEC 61000-6-2, IEC 61000-6-4	
	Semi	F 47	
Others	Power density	18.7 W/inch ³	
	Dimensions	103 mm x 402.4 mm x 84.5 mm (4.06 x 15.84 x 3.33 inch)	
	MTBF	> 250.000 hours	
	Parallel / series operation	Max. 3 units in series up to 16 units in parallel	Max. 2 units in series up to 16 units in parallel

For a complete overview of all the technical details, we refer to the specifications and user manual of the LAPS-4000.

