

SINGLE AND 3-PHASE POWER SUPPLIES



Switching power supplies, by design, are small and efficient because of their incorporation of a switching transistor to convert electrical power. They regulate output voltage via pulse width modulation (PWM), which allows a variety of topologies to be used. Among the many reasons most system applications are built with switching power supplies over other types of power supplies are their compact size, high efficiency, low cost, and global compatibility. Murrelektronik's suite of Emparro switching power supplies exemplify these qualities.

The Emparro suite includes two categories: Emparro single phase and Emparro 3-Phase. Whatever the variant, when it comes to the Emparro suite, monetary and space costs will be minimized while maximizing the efficiency of power conversion. This maximized efficiency is also the reason these devices generate less heat than other switching power supplies on the market, and as a result, Emparro power supplies and surrounding devices in the installation live longer. Just as 'cost-effective' should be important to any system, 'power-effective' is important to power supplies, and both describe Murrelektronik's Emparro suite.



Related MURRELEKTRONIK Products

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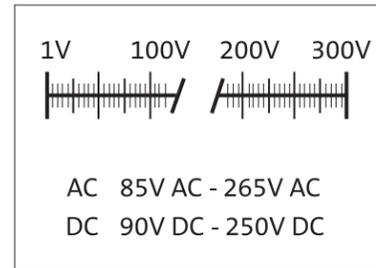
EMPARRO

Our newest generation of single phase, switch mode power supplies. They will win you over with their impressive efficiency rating (up to 95%) that keeps power loss to a minimum and lowers energy consumption.



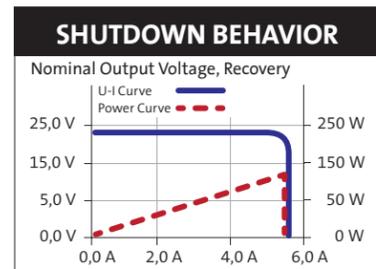
EMPARRO 3-PHASE

The 24V Emparro 3-phase power supplies are important components in power management systems. They are extremely reliable, extraordinarily efficient and they don't require much space in the cabinet.



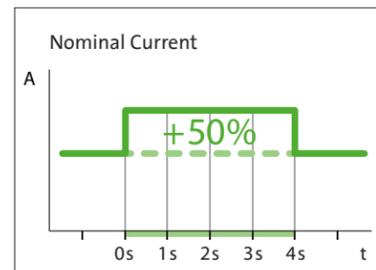
A Global Player

The wide input voltage range of 85 - 265V AC (90 - 250V DC) makes Emparro suitable for worldwide use.



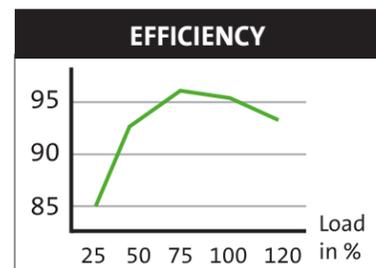
Power Limiter

In the event of an overload, Emparro's output voltage is held to a constant current. It is limited to 100% of the nominal current (or 150% in Power Boost mode). This reliably protects the power supply from damage caused by overloads.



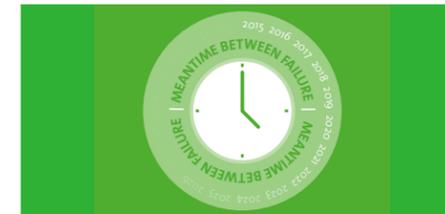
Emparro Makes Startup Easier

Emparro provides up to 50% more power for up to 4 seconds (Power Boost). This allows you to start higher loads and capacities without having to have a second power supply.



Highly Efficient

By keeping power loss to a minimum, operating costs are reduced. By lowering the amount of heat generated, Emparro, and the components installed around it, will have a longer life.



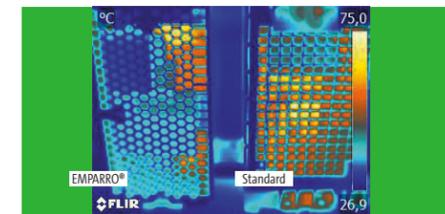
MTBF of up to 1,000,000 Hours

This achievement is possible because of our high-quality components, the modern and slim circuit board design and the processor-controlled electronics.



Integrated Gas Discharge Valve

An integrated gas discharge valve protects the power supply from interfering pulses up to 6kV. Overvoltage coming from the mains, EMC interference (as caused by frequency converters) and/or contact bounces cannot cause any damage.



Highly Efficient

The efficiency rating is the same whether it is operating at full power or at any point along the load range including low capacity operation.



Preventative Diagnostics

The 40A Emparro 3-phase continuously monitors parameters like temperature, load or number of starts. The unit generates a message when it's time to be replaced. Replacement can be scheduled for the next service interval reducing downtime.

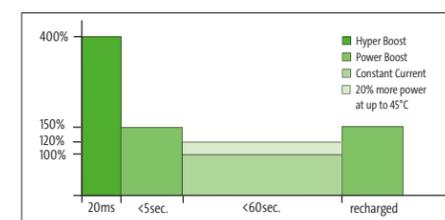
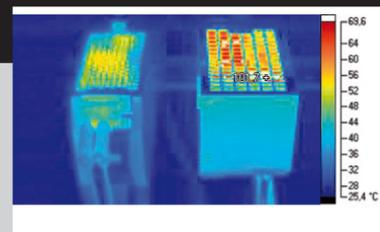
5 A	EMPARRO® 3~ 24 VDC/5 A	6 A
10 A	EMPARRO® 3~ 24 VDC/10 A	12 A
20 A	EMPARRO® 3~ 24 VDC/20 A	24 A
40 A	EMPARRO® 3~ 24 VDC/40 A	48 A

20% More Power up to 45°C

Emparro 3-phase power supplies can be operated at up to 20% overload in ambient temperatures of up to 45°C. The 5A models can continuously supply 6A, 10A models 12A and 20A models 24A, and 40A models 48A.

COMPETITIVE COMPARISON

The photo shows that Emparro (left) emits less heat than a conventional switch mode power supply (right) based on the same input current. Because Emparro remains cooler, the components installed near it are exposed to a lower amount of heat and, as a result, their lifespan can be longer.



Power and Hyper Boost

Emparro 3-phase features 2 different boost functions: Power Boost and Hyper Boost. The Power Boost supplies 50% more power for up to 5 seconds while the Hyper Boost provides up to 400% more power for up to 20ms.

Single Phase Primary Switch Mode	Emparro 120W 	Emparro 240W 	Emparro 480W 
Ordering Data	Art. No. - Current	Art. No. - Current	Art. No. - Current
12V DC	85434 - 10A		
24V DC	85440 - 5A	85441 - 10A	85442 - 20A
48V DC	85437 - 2.5A	85438 - 5A	85439 - 10A
Input			
Input Voltage	85 - 265V AC / 90 - 250V DC		
Inrush Current After 1ms	< 13A		
Output			
Output Voltage	Adjustable 12 - 15V DC, 24 - 28V DC, 48 - 56V DC		
Power Boost	50% (≥ 4sec.)		
Efficiency	Up to 95%		
Protection	Short Circuit and Overload Protected (Output), Power Limiter		
General Data			
MTBF	> 500,000 h		
Mains Failure Bridging	> 20ms at 230V AC		
Status Display	LED Green/Red		
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2		
Temperature Range	-25 - +60°C Without Derating (Storage Temp. -40 - +85°C)		
Dimensions (H x W x D)	125 x 50 x 137mm	125 x 65 x 137mm	125 x 85 x 137mm
Other	Relay Alarm Contact for Short Circuit, Overload and Over-temperature		

Emparro 3-Phase • Power Limiter • Power Boost • Parallel Connection	Emparro 5A/120W 	Emparro 10A/240W 	Emparro 20A/480W 	Emparro 40A/960W 
Art. Number	85690	85691	85692	85693
Input				
Input Voltage	3 x 324V AC - 572V AC/450V DC - 745V DC			
Inrush Current after 1ms	< 14A			
Output				
Output Voltage	Adjustable 24 - 28V DC			
Power Boost	50% for up to 5 seconds			
Efficiency	Up to 95%			
Protection	Short circuit and overload protected (output), Current Limiter			
General Data				
MTBF	> 1,000,000 h		> 950,000 h	> 775,000 h
Mains Failure Bridging	> 25ms at 400V AC		> 20ms	
Status Display	LED Green/Red			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2			
Temperature Range	-25 to 60°C / 60 to 70°C Derating (Storage Temperature -40 to 85°C)			
Dimensions (H x W x D)	123 x 50 x 138mm	123 x 65 x 138mm	123 x 65 x 167mm	138 x 109 x 182mm
Other	Relay alarm contact for short circuit, overload and over-temperature			Additional alarm contact, preventative diagnostics