

# COMPACT

3-PHASE POWER SUPPLIES OF THE LATEST GENERATION

## EMPARRO® 3~ PREMIUM POWER

Murrelektronik's Emparro family has a new member. The newly developed Emparro 3-phase power supplies for 24V applications are important components in quality power management systems. They are extremely reliable, extraordinarily efficient and they don't require much space in the cabinet.

### EMPARRO® 3~ MEANS...

- **Maximum reliability**
  - MTBF of 1,000,000 hours
  - Integrated gas discharge valve protects from interference pulses
  - Up to 95 % efficiency rating
- **Optimum performance**
  - Permanently overload protected – up to 20 %
  - Power and hyper boost functions for starting high loads
- **Space saving**



### PRACTICAL FEATURES

- Continuous 2-phase operation
- Parallel operation  
(Connect up to five units to each other)
- Alarm contact & LED
- Derating from 60 °C



### PUSH-IN TERMINALS

The vibration resistant push-in terminals make installation tool free so connection maintenance becomes a thing of the past.

Emparro power supplies are UL listed and UR recognized.



## Power Supplies for Maximum RELIABILITY

Reliable power supplies are an essential component to ensure maximum availability of machines and systems. Therefore, reliability was a high priority during development of these new 3-phase units.



## Power Supplies for OPTIMUM PERFORMANCE

Emparro 3-phase power supply units have a special feature: integrated reserve power.



### MTBF OF UP TO 1,000,000 HOURS

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



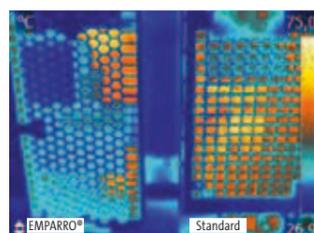
### INTEGRATED GAS DISCHARGE VALVE PROTECTS FROM INTERFERENCE PULSES

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



### PREVENTIVE DIAGNOSTICS – JUST IN TIME...

Emparro 3~ 40A 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. This reduces downtime.



### EFFICIENCY – HIGHLY EFFICIENT

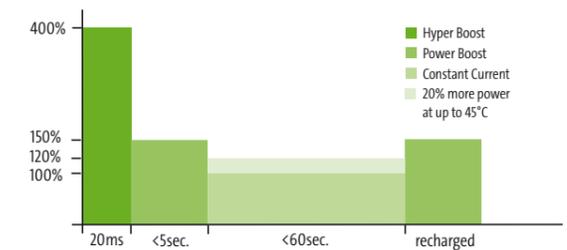
Emparro 3-phase has such a long life span because of its efficiency rating of up to 95%. The resulting power loss is very low which exposes the components to less thermal stress.

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!

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

THIS IS A UNIQUE FEATURE ON THE MARKET.



### HYPER UND POWER 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 20 ms.

## The Slimmest Power Supply Units on the Market

Emparro 3-phase power supplies are very compact. The housing for the 20 A model is only 65 mm wide. As compared to similar power supplies, this saves a lot of space in the cabinet.

SPACE SAVINGS OF UP TO 56%.



## EMPARRO® 3~

Two-/three-phase,  
primary switched

– short circuit and  
overload protected  
(Current limiter)

– Power Boost 150 %

– Parallel connection

**Emparro**  
120 W



**Emparro**  
240 W



**Emparro**  
480 W



**Emparro**  
960 W



Ordering data	Current	Art. No.	Current	Art. No.	Current	Art. No.	Current	Art. No.
24 V DC	5 A	85690	10 A	85691	20 A	85692	40 A	85693
<b>Input</b>								
Input voltage	3x324 V AC...572 V AC/ 450 V DC...745 V DC							
Inrush current after 1 ms	< 14 A							
<b>Output</b>								
Output voltage	adjustable 24...28V DC							
Power Boost	150 % for 5 seconds							
Efficiency	up to 95 %							
Protection	short-circuit and overload protected (output), Current limiter							
<b>General data</b>								
MTBF	> 1.000.000 h		> 950.000 h		> 775.000 h			
Mains failure bridging	> 25 ms at 400 V AC		> 20 ms					
Status display	LED green/red							
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2							
Temperature range	-25...+60 °C/60...70 °C Derating (start up -40 °C/storage temperature -40 ... +85 °C)							
Mounting method	DIN-rail mounting TH35 (EN 60715)							
Other	Relay alarm contact for short-circuit, overload and over-temperature						add. alarm contact prev. diagnostics	
Approvals	UL listed, UL recognized and GL in preparation							
Dimensions (H x W x D)	50 x 143 x 143 mm		65 x 143 x 143 mm		65 x 143 x 167 mm		109 x 138 x 182 mm	
Shock acc. to IEC 60068-2-27	50 g				30 g		30 g*	

\* up to 50g with screw mounting plate

## THE OPTIMUM POWER MANAGEMENT SYSTEM

### REDUNDANCY MODULES

Description	Description	Art. No.
MB Redundancy Balance	2 x 20A, 50 % / 50 % Balancing Function	85496
MB Redundancy Basic	2 x 20A	85495

### BUFFER MODULES

Description	Description	Art. No.
Emparro Cap 20/24 1,0s	Buffer time 1.0sec / 20A	85458
MB Cap 20/24 200ms	Buffer time 0.2sec / 20A	85394
MB Cap Ultra 10/24 38s	Buffer time 38.0sec / 10A	85467
MB Cap Ultra 20/24 16s	Buffer time 16.0sec / 20A	85468

### INTELLIGENT POWER DISTRIBUTION

Description	Description	Art. No.
MICO+ 4.4, 4-channel	1, 2, 3, 4 adjustable incl. NEC Class 2	9000-41084-0100400
MICO+ 4.6, 4-channel	1, 2, 4, 6 adjustable	9000-41084-0100600
MICO+ 4.10, 4-channel	4, 6, 8, 10 adjustable	9000-41084-0401000