

# 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 highquality components, the modern and slim circuit board design and the processor-controlled electronics.



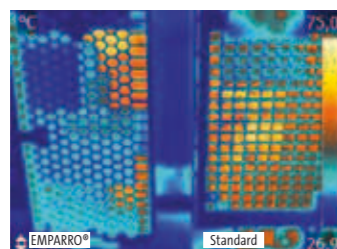
### INTEGRATED GAS DISCHARGE VALVE PROTECTS FROM INTERFERENCE PULSES

An integrated gas discharge valve protects the power supply from interfering pulses up to 6kV. 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

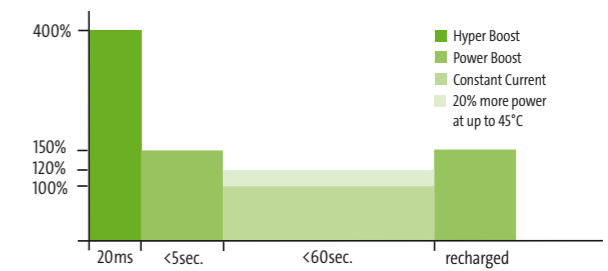
Emparro 3-phase has such a long life span because of its efficiency rating of up to 95%. The resulting power loss is very low which exposes the components to less thermal stress.

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