



## High Performance Modular DC Power Supply



# MOSAIC

Mosfet technology  
**Availability**

**Power supply**  
Digital Signal Processor

**Performances**  
Efficiency  
Standardization  
Regulation  
Precision  
Water cooled

Web maintenance  
**Flexibility**

Standardization

**ZVS**

Minimum MTTR

**CIME**

Regulation

## Features of Mosaic system:

### Modular and standard:

- Supply voltage: 3 x 400 VAC  $\pm$  10%, 50/60 Hz
- **CIME power module** of 4 independent fully isolated DC converters (air cooled: 4 x 2,5 kW; water cooled: **4 x 5 kW**); EMC filter, 3-phases rectifier, active preregulator, ZVS phase shift H-bridge topology, 50kHz Mosfet technology
- **DC converter: 95V - 80A - 2,5kW air cooled/5kW water cooled** (in : 3 x 400 VAC)
- **Controller** for up to 32 DC outputs controlled by DSP, with 7" touchscreen, local and remote fully digital control, Modbus-Profibus-http web server, remote maintenance



CIME module 4 x 2,5/5kW



Controller

### Flexible:

- By series and/or parallel dedicated setup, possibility to manage one to several independent DC outputs up to 800A-400V-200kW and more
- Standard up to 7 modules and/or controller per cabinet

### Compact:

- Module dimensions: 19" – 3U (**10kW** air cooled/**20kW** water cooled)
- Controller dimensions: 19" – 3U
- Cabinet dimensions: 600 x 800 x 2000 mm for 140kW

### Efficient:

- Power factor above 95% – Efficiency above 92%
- Accuracy and stability: standard : 0,1 % (1000 ppm) – with additional regulation: up to 0,01 % (**10 ppm**)
- Optimized dynamic performances

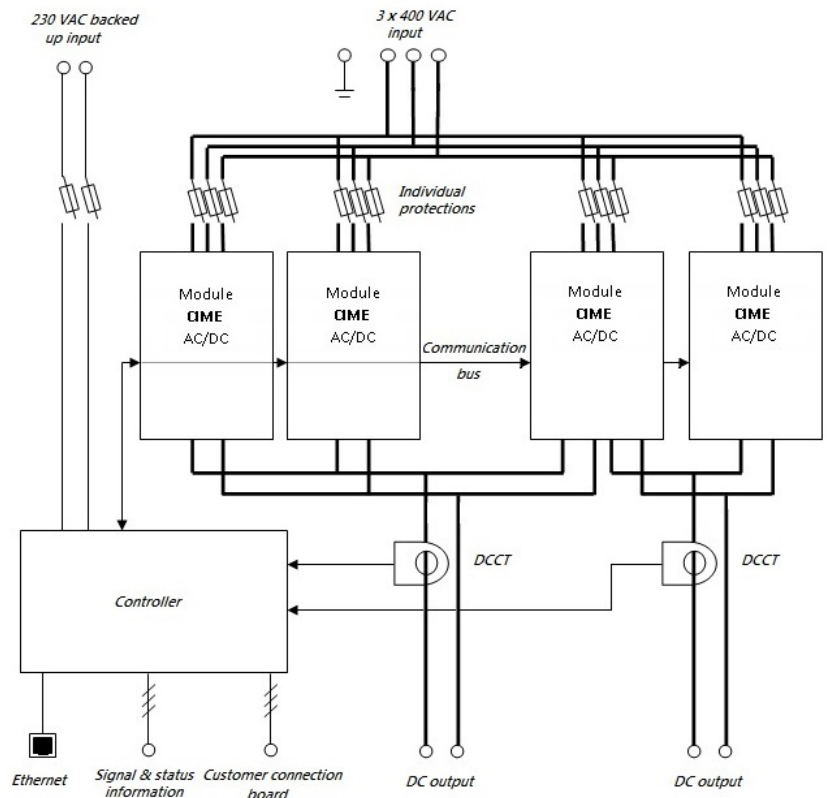
Power Supplies	Cabinet 1	System	Magnets	JEMA	Local	Remote
Output	Magnet Type	Current [A]	PS 1			
PS 1	30° Dipole	0.000	Magnet Type	30° Dipole		
PS 2	30° Dipole	0.000	Current Setpoint [A]	0.000		
PS 3	Quadrupole Type 1	0.000	Current [A]	0.000		
			Regulation status	OK		
			Magnet Interlock status	OK		
			Magnet Interlock override	No		
			# Parallel power slices	5		
			# Series power slices	1		

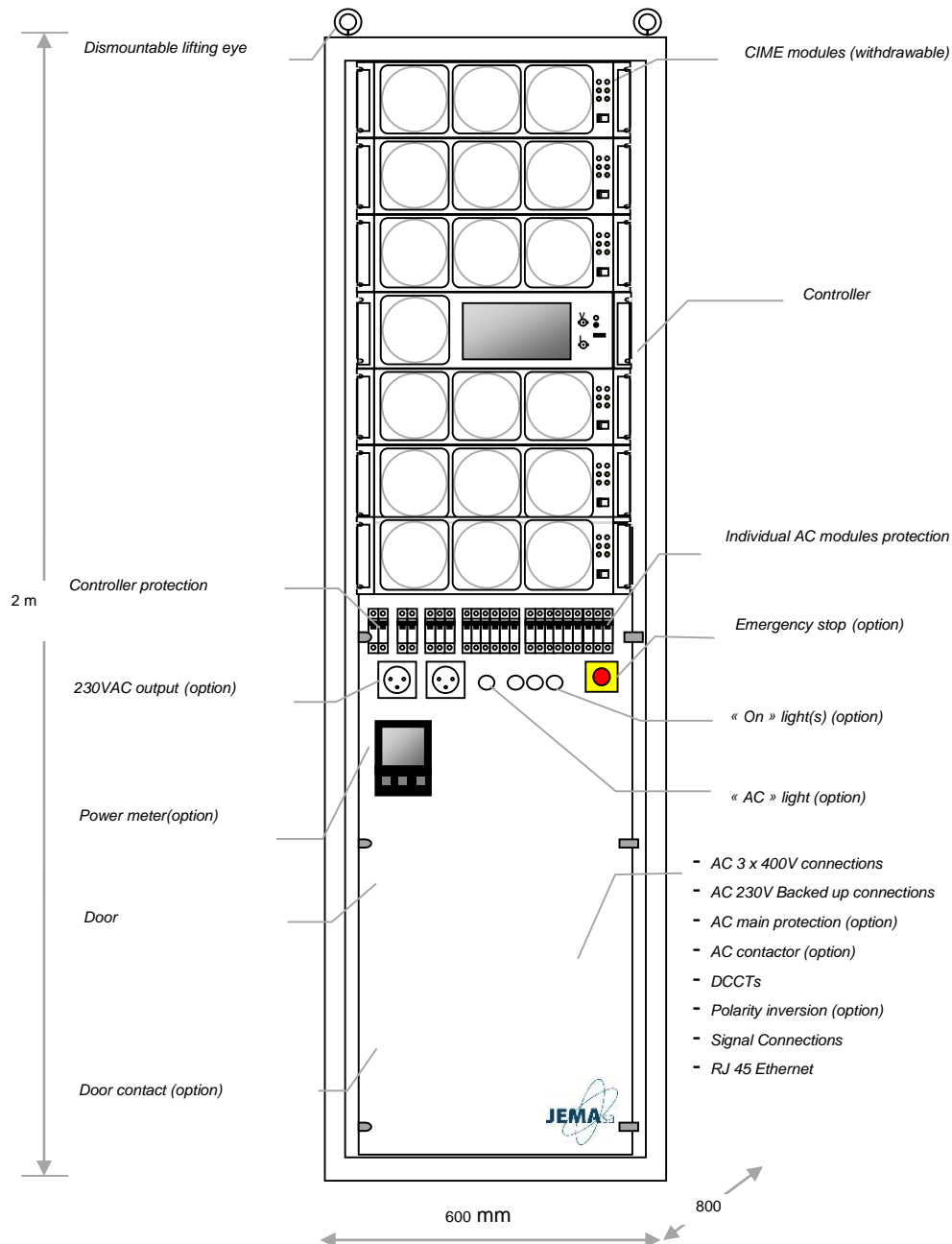
### Available:

- Withdrawable modules without specific tooling (electric and cooling water plugging system)
- **MTTR: < 15 minutes**

### Other technical data:

- **EMC conformity** according to EN 61000-6-4 for emissions and EN 61000-6-2 for immunity
- Protection class: IP 20
- Temperature: 10° - 40°C
- Optional features: Main circuit breaker, line contactor, polarity inversion, power meter,...





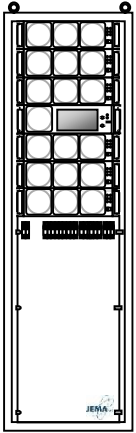
## Applications:

- Beam line power supply
- Magnets and solenoids power supply
- Particle accelerator power supply
- Multiple DC power supply

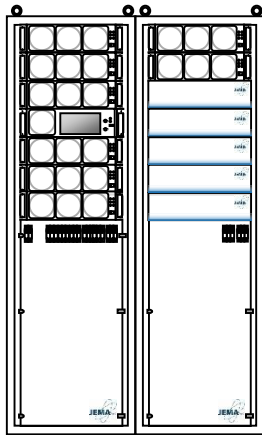
## They trust us:



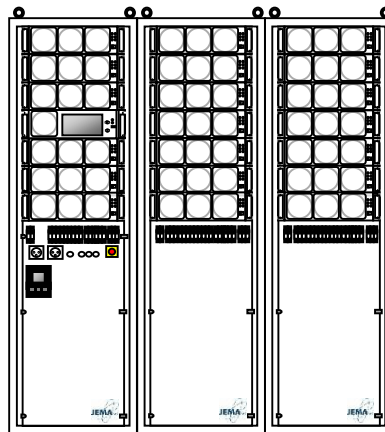
Make your own configuration:



2 x 70V/115A – 10<sup>-4</sup>  
10 x 45V/135A – 10<sup>-5</sup>



2 x 120V/115A – 10<sup>-4</sup>  
4 x 45V/245A – 10<sup>-3</sup>  
2 x 45V/165A – 10<sup>-3</sup>



1 x 66V/800A – 10<sup>-4</sup>  
1 x 90V/570A – 10<sup>-4</sup>  
1 x 98V/685A – 10<sup>-4</sup>  
1 x 45V/790A – 10<sup>-4</sup>  
1 x 90V/580A – 10<sup>-4</sup>  
2 x 20V/320A – 10<sup>-4</sup>



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