

GUTOR MODULAR DC CHARGER

Compact, flexible, redundant, and scalable industrial grade DC power protection.



Bottom entry

Top and Bottom entry

Gutor Modular charger systems are designed, tested & built to last in harsh environments, with highly flexible configurations.

Designed for Harsh Environments

- Protects against electrical outage with surge protection and galvanic isolation
- The strong input short circuit capability allows it to be installed near to substation equipments
- Industrial enclosure with unique framework increases robustness and protection
- NEMA 1 with ingress protection up to NEMA 2
- Has a 20+ years design lifespan

Enhance System Availability

- N+1 or N+x design increases the internal redundancy of the system
- All Gutor Modular power modules have a “live swap” concept that allows the power modules to be maintained and repaired without interrupting the load

Flexible and Scalable Design

Power modules
1ph+N, 2ph or 3ph input



Input, output and battery breakers
(up to 65kA)

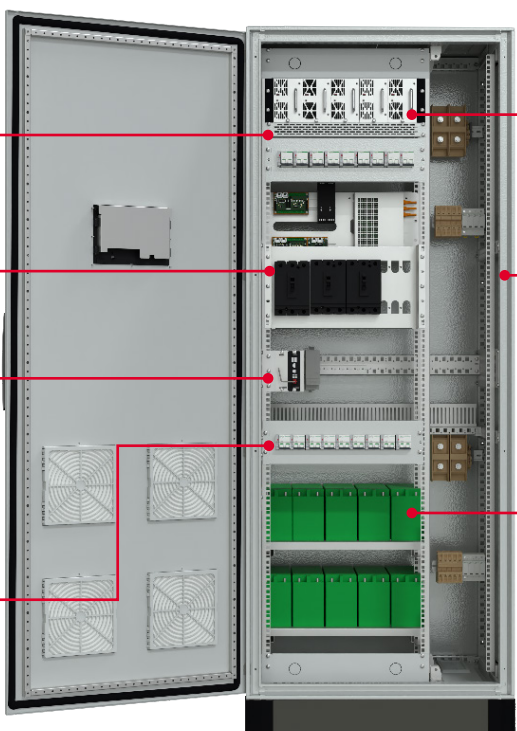


Advanced asset management

- Ready to connect to most communication protocols
- Cybersecure certified



Integrated output feeders



Power factor correction



- Cable entry
- Bottom cable entry with smaller footprint
 - Top and bottom with wider enclosure



- Battery
- Ready for lead acid (VRLA and VLA), NiCd, Li-Ion, and SMC
 - VRLA and SMC batteries can be integrated into one cabinet to achieve footprint optimization

Technical Data

Typical configuration		GUMADC 24		GUMADC 48, 60, 110/125, 220	
Nominal input voltage (V _{AC})		120V (1ph)	240 / 277 V (1ph) 208 V (2ph or 3ph) 480 V (3ph)	120V (1ph)	240 / 277 V (1ph) 208 V (2ph or 3ph) 480 V (3ph)
Output (kW)	1 rack	up to 4.5kW	up to 9kW	up to 7.5kW	up to 15kW
	2 racks	up to 9kW	up to 18kW	up to 15kW	up to 30kW
	3 racks	up to 13.5kW	up to 27kW	up to 22.5kW	up to 45kW
Rectifier input					
Input voltage tolerance (V _{AC})		120/240/277V (1ph), 208V (2ph or 3ph), 480/277V (3ph), ±10% (other voltages upon request)			
Frequency		60Hz ±10% (other frequency upon request)			
Total harmonic distortion (THDi)		≤ 5%			
Power factor		Up to 0.99			
Withstand short circuit (kA)		15kA up to 65kA on option			
DC output					
Voltage tolerance (V _{DC})		GUMADC 24: 19.0 - 33.6V // GUMADC 48: 36.0 - 67.5V // GUMADC 60: 41.0 - 86.5V GUMADC 110/125: 88.0 - 153.9V // GUMADC 220: 170.0 - 297.0V			
Dynamic load regulation		±5% (transient time < 10ms, load (90-10-90) %, di/dt < 200 A/ms)			
Charging characteristic		IPU / IU (constant current - constant voltage)			
Ripple according to EN 300132-2		GUMADC 24/48/60V: <20mV & 1% // GUMADC 110/125/220V: <60mV & 1%			
Overcurrent capability		130% for <4s			
Internal backfeed protection		Included in each module (blocking diode or relay)			
Efficiency		Up to 95%			
General arrangement					
Configuration		N, N+1, N+x. Dual input feeder capable (2N configuration)			
Input neutral earthing type		TN, IT, HRG (High Resistive Ground)			
Display		10" touch display with up to 39 virtual LEDs for warning or alarms			
Communication		Minimum 2 output dry contacts Modbus TCP / Modbus RS485 / SNMP / IEC 61850 as an option - others upon request			
Emergency power off (EPO)		EPO input terminal with an internal 24V _{DC} power supply			
Serviceability		MTBF > 300'000h, and a low MTTR due to the live swap concept: replacing power modules without switching off the system			
Battery protection		Built-in battery breaker possible			
Output earthing system		Floating DC with optional ground fault detection			
Battery		Built-in VRLA or SMC battery, or separate battery such as VLA, NiCd and Li-Ion			
Output feeders		Up to 9 built-in output breakers with signal contact			
General Data					
Cable entry		Bottom or top entry			
Dimensions (width x depth x height)		Top entry - NEMA 1: 31.5 x 23.7 x 82.7 inches (800 x 600 x 2100mm) Bottom entry - NEMA 1: 23.7 x 23.7 x 82.7 inches (600 x 600 x 2100mm) For NEMA 2 (top and bottom entry), the height is 86.2 inches (2191mm)			
Ambient temperature range for operation		14°F to 104°F (-10°C to 40°C) - design for higher ambient conditions upon request			
Noise level		55dBA - 68dBA			
Air flow		From front to top			
Allowable air humidity		Up to 95% non-condensing			
Altitude above sea level		Nominal up to 6,600 ft (2,000 m), with derating up to 10,000 ft (3,000 m) - others upon request			
Paint		RAL 7035, similar to ANSI-61			
Standards		NEMA PE5, UL 1012 and CAN/CSA C22.2 No. 107.2			
Options					
Built-in configuration		Additional dry contacts, analog metering, input voltage adaptation, DC/DC converter, multiple battery string protection, and more on request.			

Contact your local sales representatives for a secure power solution customized for your site requirement.