

GUTOR MODULAR DC CHARGER

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

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
- IP20 as a standard, up to IP42 upon request
- 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



Bottom entry

Top and Bottom entry

Flexible and Scalable Design

Power modules
1ph+N or 2ph input



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

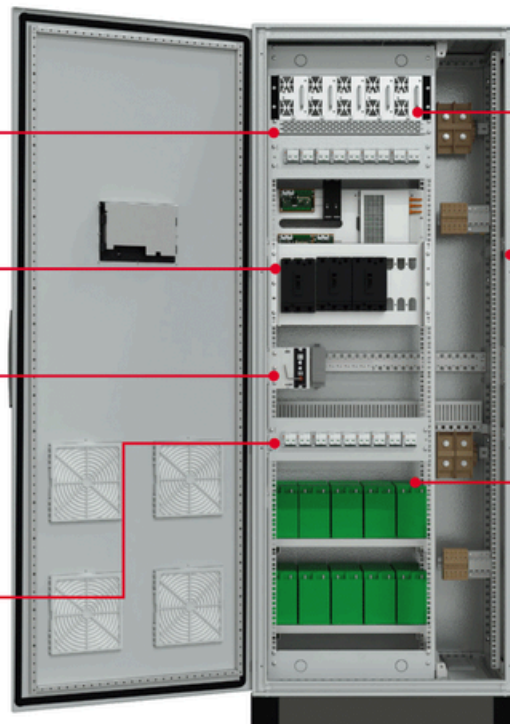


Advanced asset
management



- 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})		220 / 230 / 240 V (1ph) 380 / 400 / 415 V (3ph)	220 / 230 / 240 V (1ph) 380 / 400 / 415 V (3ph)
Output (kW)	1 rack	up to 9kW	up to 15kW
	2 racks	up to 18kW	up to 30kW
	3 racks	up to 27kW	up to 45kW
Rectifier input			
Input voltage range (V _{AC})		220/230/240V (1ph) and 380/400/415V (3ph), ±10% (other voltages upon request)	
Frequency		50 / 60Hz ±10% (other frequency upon request)	
Total harmonic distortion (THDi)		≤ 5%	
Power factor		Up to 0.99	
Withstand short circuit (kA)		Up to 65 kA upon request	
DC output			
Voltage range (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 24/48/60: <20mV & 1% // GUMADC 110/125/220: <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+0, N+1, N+x. Dual input feeder capable (2N configuration)	
Input neutral earthing type		TN or IT or 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 on 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 entry or top entry	
Dimensions (width x depth x height)		IP20 - IP40: IP42:	Bottom entry 600 x 600 x 2100 mm 600 x 600 x 2200 mm Top entry 800 x 600 x 2100 mm 800 x 600 x 2200 mm
Ambient temperature range for operation		-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 2'000m, with derating up to 3'000m (others upon request)	
Paint		RAL 7035	
Standards		IEC 62040-1, IEC 62040-2, IEC 62040-5-3, IEC 61000, IEC 62443, CE mark	
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.