

TECHNICAL DATA SHEET

SDC Rectifier / Battery Charger 24 - 220 V / 25 - 1200 A

GUTOR

Rectifier Input

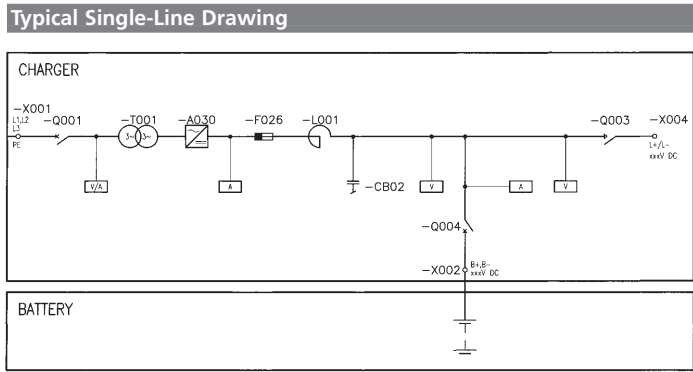
Voltage	3x380/400/415V
Tolerance	
- DC in tolerance	+/-10%
- for function (below -15% the battery might begin to discharge)	+15%/-25%
Frequency	50/60Hz
Tolerance	+8/-8%
Power Factor	
- at nominal mains and float voltage	≈ 0.83
- at -10% mains and float voltage	≈ 0.90
- at +10% mains and float voltage	≈ 0.75

DC – Output

Voltage	24/48/110/125/220VDC
Setting range	
- float voltage at -10/+10% mains voltage	100 - 120%
- float voltage at 0/+10% mains voltage	100 - 130%
- boost voltage at nominal mains voltage	100 - 130%
- initial charge voltage up to maximum150%
Tolerance	+/-1%
Dynamic behaviour	
- 10 - 100% and 100 - 10% load step	maximum +/- 10%Vrms
- regulation time	< 100ms +/-2%
Residual ripple voltage with parallel battery capacity of 3xI2n	=< 2% rms
Optional	
- without battery	=< 2% rms
- without battery	=< 1% rms
- without battery (24 / 48V)	=< 2mV rms psophometric
Current	I2N according to type range
Setting range	
- total output current limitation	50 - 100%
- battery current limitation	0 - 100%
- tolerance	+/-2%
Ripple current	=< 16%
Characteristic	IU according DIN 41773

General Data

Ambient conditions	
- Storage temperature range	from -20 to +70°C
- Operating temperature range	from -10 to +40°C
Altitude above sea level	1000m
Allowable air humidity	<95% noncondensing
Noise level standard n+1 fans	55 - 65dBA
Noise level 100% redundant fans	65 - 70dBA
Degree of protection	IP20 according to IEC 60529
Painting	Pebble grey, RAL 7032 structured
Performance test	IEC 60146
Safety	EN 50091-1, CE Label
EMC	EN 50091-2, CE Label
Efficiency	80-94% depending on type range
Cooling	Natural convection up to 100A/220V, and above forced ventilation with redundant n+1 supervised fans



Output Voltage & Output Current

Output voltage (VDC)	24	48	110	125	220
Output current (A)	-	-	-	-	25
	-	-	50	50	50
	-	100	100	100	100
	-	125	125	125	125
	-	160	160	160	160
	200	200	200	200	200
	250	250	250	250	250
	315	315	315	315	315
	400	400	400	400	400
	500	500	500	500	500
	630	630	630	630	630
	800	800	800	800	800
1000	1000	1000	1000	1000	
1200	1200	1200	1200	1200	

Standard

- Single system
- Rectifier input voltage 3x400V +10/-10%
- Rectifier input frequency 50Hz +/-8%
- Ripple filter =<2% rms with battery 3 x12N
- 6-pulse Rectifier with Isolation Transformer
- Rectifier input switch
- Fixed charging voltage IU characteristic
- System front panel w. mimic and add. LED's for direct alarm display
- LCD display unit with keyboard
- External connection board:
 - Common alarm 2x NO / NC
 - Charger failure NO / NC
 - Remote ON / OFF
 - Emergency stop (internal or external power supply)
 - Input for activating boost charge
 - Input for activating initial charge
 - Input for inhibit boost and initial charge
 - Connection for battery temperature sensor
 - Input for signalling battery fuse / MCCB
 - Connection for remote display
- RS232 Interface
- Battery capacity test (full discharge with actual load)
- DC earth fault alarm
- Bottom cable entry
- Earth terminal

- Ventilation n+1 with two-speed fans with monitor if fans are installed (above 100A)
- Ambient temperature range from -10 to +40°C
- Protection IP20
- Painting pebble grey, RAL 7032 structured

Options

- Parallel redundant configuration with load sharing
- Other input voltages
- Rectifier input frequency 60 Hz +/-8%
- Ripple filter
 - = < 2% rms without battery
 - = < 1% rms without battery
 - = < 2mV rms psophometric
- 12 - pulse Rectifier with Isolation Transformer
- Rectifier input MCCB
- Sensor & cable for battery temperature dependent battery charging, recommended for sealed VRLA batteries and wide temperature range
- Battery temperature alarm (with above sensor and cable)
- Serial diode (for parallel Rectifiers)
- Rectifier output isolator
- Rectifier output circuit breaker
- Battery fuse in Rectifier
- Battery fuse box
- Battery MCCB in Rectifier
- Battery MCCB box
- Additional analogue meters 96x96 cl 1.5

Relay board, 16 failsafe NO/NC contacts:

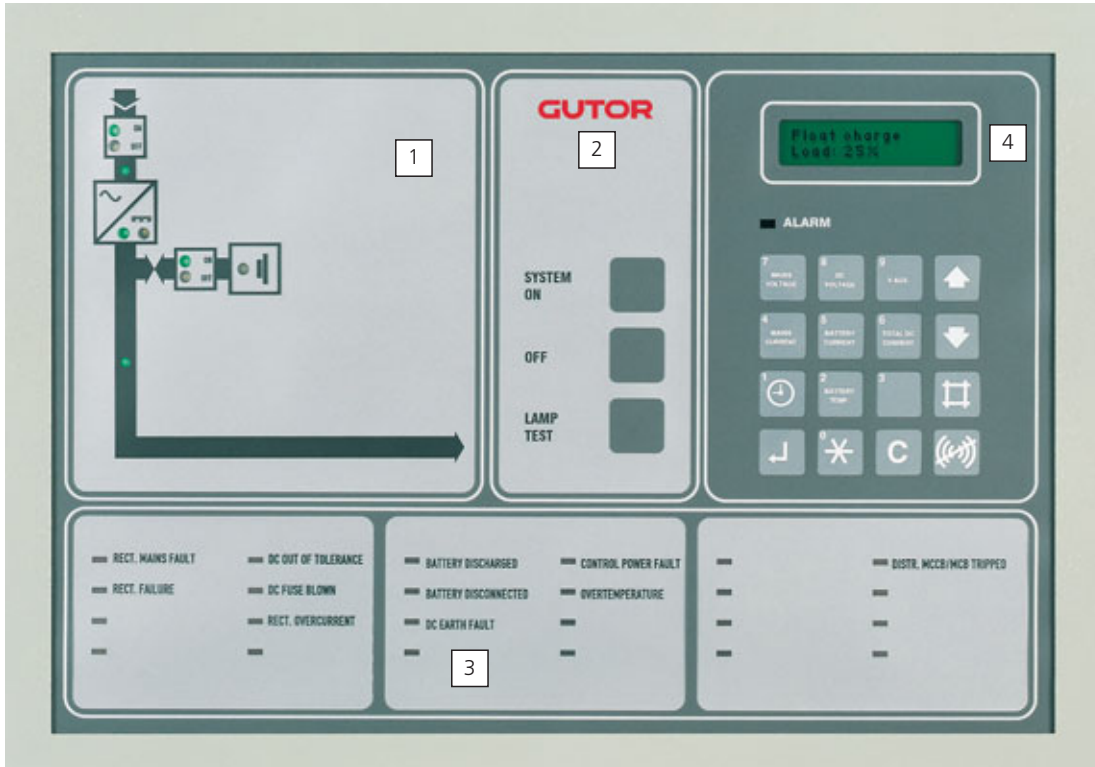
- Charger ON
- Boost charge ON
- Mains failure
- DC out of tolerance
- Battery discharged
- Battery disconnected
- DC fuse blown
- Overtemperature
- DC earth fault
- Internal PSU fault
- DC current overload
- Fan fault

- Advanced Battery Monitor (programmable battery data)
- Battery asymmetry supervision
- RS232 current loop 20mA
- SNMP-Adapter for LAN/WAN Networks with software MODBUS Protocol
- Top cable entry
- Top and bottom cable entry
- Fans 100% redundant
- Space heaters
- Panel lighting
- Ambient temperature maximum +55°C
- Allowable altitude < 4000m above sea level
- Air filters in air inlet
- Protection up to IP52
- Other colours

Additional options are available on request

MAN-MACHINE INTERFACE (FRONT PANEL)

The front panel is used for both AC and DC systems and facilitates a comprehensive and flexible man-machine interface. It is divided into four sections:



1.) The system panel shows the system's current operation status, meaning which system part is supplying the load at the moment and which is in stand-by mode. LED's also indicate possible faults.

2.) Operations for turning on and off the system and a lamp test button for checking if all LED indications function properly.

3.) On the alarm indication panel the respective LED lights up, after an alarm has occurred.

4.) The display unit consist of a LC display, an alarm LED, an acoustic alarm and a key-pad. With this the user can set following operational parameters, obtain a list of measurement data, and get access to the event and alarm log.

Operational parameters

- Language in display
- Autostart
- Charge mode (float / boost / initial)
- Battery capacity test
- Autoboot charge

Indication & Measurements

- Operating mode (float / boost / initial) and DC total current, battery voltage and current
- AC Rectifier mains voltage and current
- Battery temperature (with optional sensor)
- Time left in battery operation with actual load (option with programmed battery data)
- Event log with data / time (change in operating mode and alarm)

GUTOR

GUTOR offices:

Headquarters

GUTOR Electronic Ltd Hardstrasse 72-74 CH-5430 Wettingen Switzerland
Phone: +41 (0)56 437 34 34 Fax: +41 (0)56 437 34 44 e-mail: gutor.info@apcc.com www.gutor.com

Asia-Pacific

GUTOR Electronic Asia Pacific SDN. Bhd. 6th Floor, Wisma Genting Jalan Sultan Ismail 50250 Kuala Lumpur Malaysia
Phone: +603 2161 3440 Fax: +603 2161 3441 e-mail: gutor.asia-pacific@apcc.com www.gutor.com

Representative offices in Brazil, Emirates, Germany, India, Saudi Arabia, USA