

## **GECI™ POKER CHARGER USER'S MANUAL**

Selectable Output Battery Charger - 12V/60A, 24V/45A, 36V/30A, 48V/25A

**>>>ATTENTION!<<<**

**READ THE MANUAL CAREFULLY** before connecting charger to mains and battery.

**BE CAREFUL** not to move the selector while the charger is operating!



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# GECI™ GECI™ POKER CHARGER

## INSTALLATION / USE / OPERATION

To use the charger, you have to abide by safety prescriptions contained in laws and regulations and in provisions made by Local Authorities.

**USER OBLIGATIONS:** conforming to the operating instructions, the “user” is any natural or juridical person using directly the battery chargers or anyone using them for account of the above mentioned person. Under special circumstances, e.g. leasing, renting, the “user” is the person who takes following obligations according to the agreements made by owner and user.

The “user” shall install the charger in a proper site. He shall check, whether very sensitive appliances are disturbed by the influence of the battery charger. He shall choose such an installation site, that the operation of the charger does not affect the functioning of electromagnetic devices and magnetic data carriers (e.g. pace makers, monitors, magnetic disks and disquettes, magnetic tapes, magnetic cards, watches etc.), since a high direct current produces interference magnetic fields.

The “user” shall make sure that the use of battery chargers conforms to the rules in force, that any action is avoided which may endanger life and safety of the user or third parties or which may damage things.

The “user” shall make sure that users and operators have read and understood the operating instructions and that they abide by the accident prevention and safety rules and the use and maintenance provisions.

## GECI™ POKER CHARGER INSTALLATION

### >>>WARNING!<<<

**READ THE INSTRUCTIONS CAREFULLY** before connecting charger to mains and battery.

**WARNING:** Skilled and authorised personnel only shall be allowed to open the charger. Before setting the charger at work, the insulation of power cord and charging cable has to be checked.

**WARNING:** Follow the manual of the charger and the battery closely.

**WARNING:** The battery charger must be connected to supply mains by a qualified personal in accordance with applicable local and national codes e.g. CEC, NEC, etc.

**WARNING:** Check battery type and ratings before charging.

**WARNING:** Charge only lead-acid type batteries in a well ventilated area. Other types of batteries may burst causing personal injury and damage.

Batteries produce explosive gases while being charged, therefore there must be neither flames nor sparks near the charger while it is in operation.

The standard charger (IP 20) is to be used in closed and ventilated environments only and not exposed to rain nor splashed with water.

**WARNING:** To reduce the risk of fire, install battery charger on a floor of noncombustible material, such as stone, brick, concrete or metal.

**WARNING:** for continued protection against risk of fire, or electric shock replace only with same type and rating

- The electrical appliances have to be operated by skilled personnel only.
- Disconnect from mains before connecting or disconnecting battery.
- **BE CAREFUL!!** Batteries produce explosive gases while being charged, therefore there must be neither flames nor sparks near the charger while it is in operation. Keep the charger far away from other appliances which may endanger people and objects.
- The charger contains electrical components which may produce voltaic arcs and sparks, therefore if it is used in a closed environment it has to be installed in a proper site. The standard charger (IP 20) is to be used in closed and ventilated environments only and not exposed to rain nor splashed with water. It has to be positioned onto solid and flat floors, far away from dust, water, heating, and moisture. The charger has not to be positioned onto supports and/or shelves of wood or other inflammable materials. Do not stock materials near the charger and do not place any objects and fluid containers on the charger top.
- Ensure that an **adequate earth connection** is made to prevent risks of electrocution. The charger has to be connected to a mains supply of standards corresponding to the power of the charger and has to be protected through an adequate electrical device (fuse or automatic cut-out). The protection needs at least a 10% higher setting than the power input of the device; furthermore the device has to be protected from a too high contact voltage, according to the provisions made by Local Authorities.
- It is recommended to use **bipolar standard connectors** which do not allow a polarity reversal on battery; check the **proper connection of cables in the contacts of the connectors (connectors with oxidized electrical contacts may produce sparks or fires)**.
- Do not use patch cords to prolong the existing electrical connections.
- **It is recommended to use only batteries in good conditions. Therefore check them regularly.**
- Do not tamper with chargers, and in particular with their safety systems.
- Problems in the electrical components have to be removed by skilled personnel only. Defective parts have to be replaced with other components with the same features. Replacements need to be authorized by the manufacturer.

## GECI™ POKER CHARGER SPECIFICATIONS

### MECHANICAL DATA

- Dimensions (LxHxW - Inches): 15.7x33.5x12.6 (without handlebar: 15.7x23.6x12.6).
- Weight: 40 Kg.
- Cabinet with wheels and handlebar for easy handling.
- 24V AC auxiliary circuit with overload cut-out and 1.6A fuse.

### ELECTRICAL DATA

- Mains input: 120V AC  $\pm 5\%$
- Input current below 20A AC, suitable for standard NEMA 5-20 Receiver
- Power cord equipped with NEMA 5-20 plug
- UL listed input fuse, 20A rating
- Output: selectable by means of an electromechanical switch for 12V, 24V, 36V, and 48V lead-acid batteries

OUTPUT SELECTED	MAXIMUM AC CURRENT	BATTERY CAPACITY
12V/60A	8,1 A	12V 300-480Ah
24V/45A	13.4 A	24V 225-360Ah
36V/30A	15 A	36V 150-240Ah
48V/25A	14,3 A	48V 125-200Ah

- Electromechanical timer adjustable from 0 to 24 hours max
- Ammeter: 100A/100mV with a 5 - 100A range for output current reading
- 3 lamps indicating the charge state (POWER ON, IN CHARGE, PAUSE)

## USE / OPERATION

- Make sure that the TM1 Timer is in the OFF position
- Connect the battery cable to the battery
- Connect the charger to a **120V AC single-phase supply**:  
the orange **POWER ON** lamp and the green **PAUSE** lamp will light up.
- Ensure that an adequate earth connection is made.
- Select the voltage of the battery to be recharged by means of the **CM1** switch (12-24-36-48V).
- Start the charger by setting the desired charging time by means of the timer. The **PAUSE** lamp light goes off while the **CHARGING** lamp lights up.
- Make sure that the output current appearing in the ammeter doesn't exceed the rated value by more than 10%. If this occurs, check the following:
  - the selected voltage doesn't match the battery voltage
  - the battery features a short circuited cell
  - the battery is over-discharged (discharged capacity exceeds 80%)

## SETTING THE TIMER

The POKER charger is a timer-controlled battery charger. If the battery is dimensioned for a capacity which is 6-7 times the rated current supplied by the charger at that voltage, the charging process will be completed within 3-4 hours after reaching the gassing point. If the battery discharge depth is 70-80%, and its capacity is 6-7 times the rated current, a complete charging process will last 8-9 hours.

## LAMP INDICATIONS

The charger front panel is equipped with three lamps, powered by the auxiliary internal circuit (24V AC), giving indications on the charge state.

**POWER ON:** Lamp (ORANGE) indicates that MAINS is connected.

**CHARGING:** Lamp (RED) indicates that the Charger is operating and delivering current to the battery. The Ammeter shows the current supplied to the battery. If the output current is zero, a failure might have happened on the output section (contactor, power transformer, output fuse).

**PAUSE:** Lamp (GREEN) indicates that the Charger is not operating and not delivering any current to the battery. In case the output current is no equal to 0, contact technical support.

**PLEASE NOTE:** Under normal conditions either the CHARGING or PAUSE lamp will light up on powering the charger. Should that no be the case, contact technical support.

The table below shows the different lamp's indications:

LAMPS STATUS DESCRIPTION	CHARGING (RED LAMP)	POWER ON (ORANGE LAMP)	PAUSE (GREEN LAMP)
Battery charger disconnected	OFF	OFF	OFF
Battery charger in pause	OFF	ON	ON
Battery charger operating	ON	ON	OFF
Fault: mains connected, input fuse open	OFF	OFF	OFF
Fault: mains connected, auxiliary fuse open	OFF	OFF	OFF
Fault: overload cut-out	OFF	ON	OFF

## SAFETY DEVICE

- A fast-blow fuse on mains input.
- An output fuse as protection against polarity reversals and/or overloads.

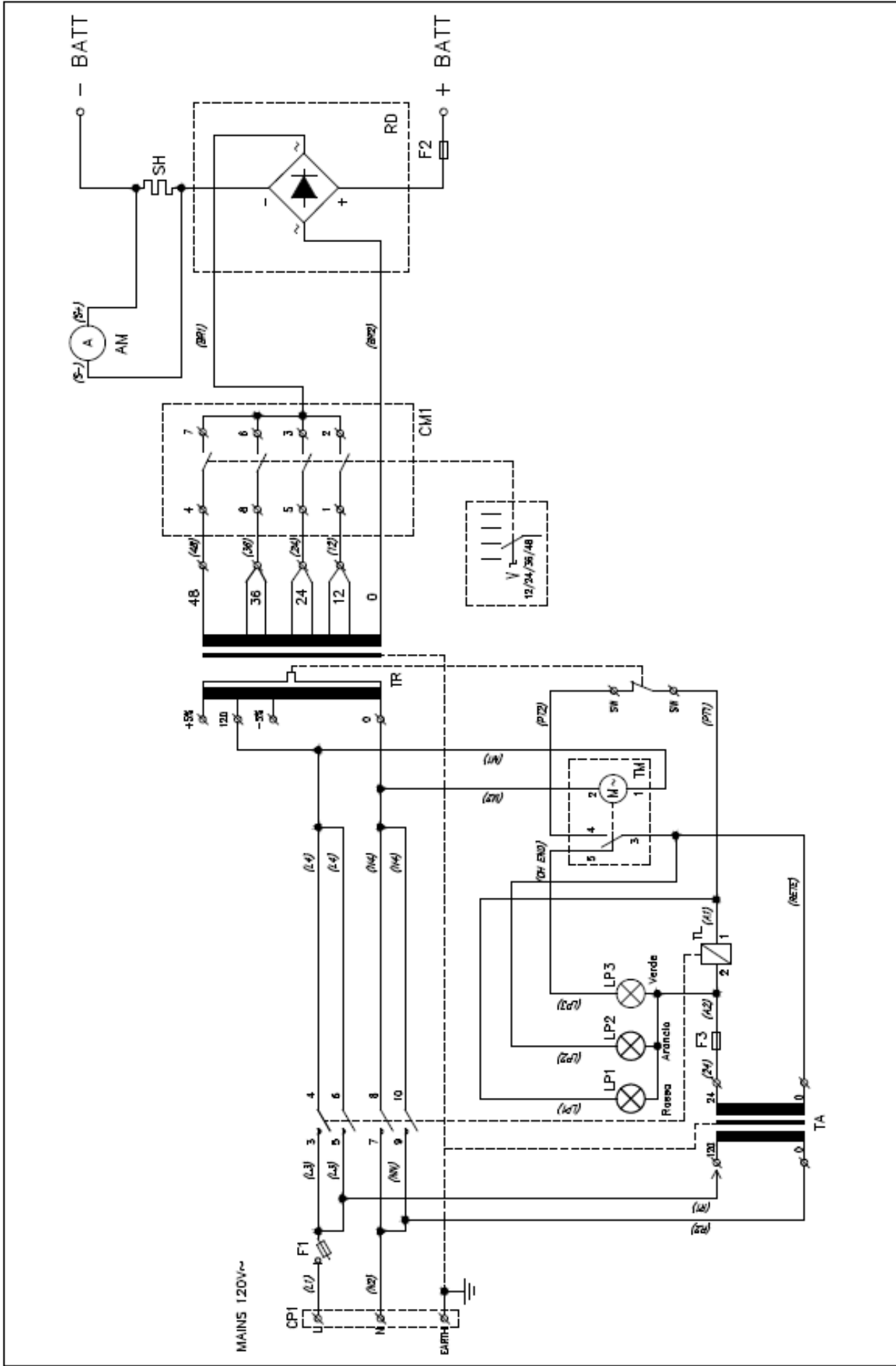
## GUARANTEE


- The charger is guaranteed for 12 months from the date of installation.
- The guarantee covers all proven defects in components, assembly, and construction.
- Any incorrect installation or use of the machine NULLIFIES the guarantee.
- Any unauthorized tampering NULLIFIES the guarantee.
- In case of difficulties please contact the LOCAL DEALER.

## COMPONENT LIST "POKER" (see wiring diagram no. WA169/1)

BF1	UL Listed mains fuse 10x38mm 20A (Ferraz ATM20)
F2	UL Listed Output fuse on battery side, CNN 80A
F3	UL Listed Auxiliary Fuse, glass 5x20 1.6A
TR	Single-phase transformer 12V/60A - 24V/45A - 36V/30A - 48V/25A
CM1	4-position switch (63A) for transformer output selection
TA	Auxiliary Transformer 0-120Vin/0-24 Vout
RD	Diode rectifier bridge with amperometric shunt
AM	Linear ammeter (100A/100mV)
LP1	POWER ON lamp 24V AC (orange)
LP2	CHARGING lamp 24V AC (red)
LP3	PAUSE lamp 24V AC (green)
TM	24-h Timer, 120V AC

# WIRING DIAGRAM



REVISIONE		P. B. M. s.r.l. via Barallo - Z.L. 41056 VIGNOLA (MO) Tel. +39 059 770.53.11 Fax. +39 059 770.53.00		DATA 11/04/2018	TITOLO Schema elettrico concibatterie	DIS. WA169/1
		DIS FB CONTR <i>Assoluti</i> SCALA		Poker multitemperatura Monofase (120V AC±5%) Versione UL	FOGLIO 1	NOME WA169