

## OPERATION INSTRUCTIONS

-- TriTask-150s --

### 3-Step Charger with selectable charge voltage for lead acid Batteries



**Art.-No.:**

- 12V / 4A 161-06402-100
- 12V / 6A 161-06602-100
- 12V / 8A 161-06802-100

**Art.-No.:**

- 12V / 10A 161-12103-100
- 24V / 3A 161-12302-100
- 24V / 5A 161-12502-100

Dear Customer!

Thank you very much for your trust in us and our product.  
Please read these operating instructions carefully **before** start of operation.

Mainland Energy Conversion Ltd.

#### 1. Safety Rules and General Warnings

- ATTENTION: 230 Volts AC voltage, device is not suitable for children – danger of life!!
- ATTENTION: The charger is exclusively designed for 12V/24V rechargeable lead /acid batteries and must not be used for other purposes.
- ATTENTION: Please consider the charging instructions from the battery manufacturer before charging!
- Never place the device on top of the battery while charging!
- EXPLOSION RISK! Avoid sparks or open flames while charging!
- Use the device only in dry rooms and protect against dust, heat (>40°C) and humidity (>80% rel.)
- Protect against direct solar radiation.
- No fluids of any kind must get into the device.
- In case of obvious damage or malfunction immediately disconnect the device from mains supply and protect against unintended reconnection
- Clean with a dry cloth only.
- DO NOT OPEN! Repair work must only be accomplished by authorized companies or specialized technical staff.
- Disconnect from mains before connecting or disconnecting the battery.
- Do not recharge non-rechargeable batteries.

## 2. General Information

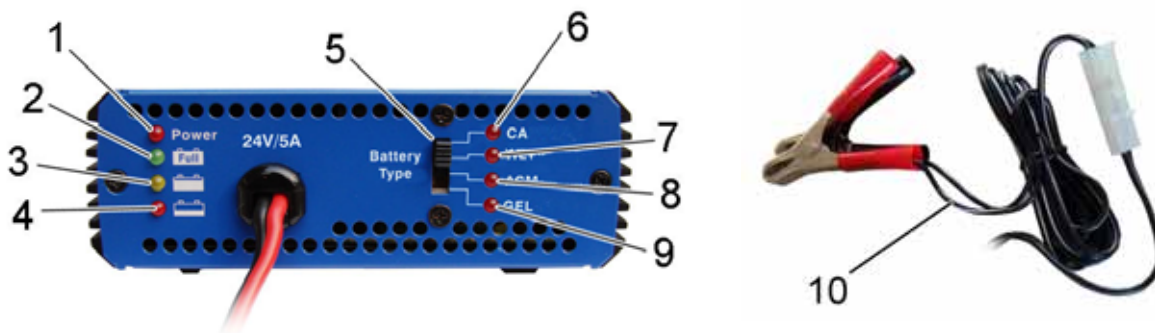
This charger with its compact metal enclosure is ideal for maintaining your Ca-, Wet-, Gel- and AGM-batteries in top condition. The specific charge voltage for these battery types can be set via a selector switch. The charger is designed for the charging of lead/acid-batteries of cars, motor cycles and old timers. After the charging process has finished the charger can remain connected (e.g. in wintertime) and the charger automatically switches to float charging what provides a fully charged battery still after some months.

## 3. Special Features

- 3-step charging technology with automatic float charging;
- 4 different charge voltages selectable via slide switch;
- Convection cooled or with load dependent fan speed;
- Protection against short circuit and reversed polarity;
- High frequent switching technology;
- LEDs to indicate operation and charging status;
- Automatic shutdown when outside temperature is too high;
- Automatic float charging;

## 4. Scope of delivery

- |  |   |
|--|---|
| 1. red Power-LED                             | 6. red charge voltage-LED → 15.6 / 31.2 VDC (Calcium-battery) |
| 2. green charge control-LED                  | 7. red charge voltage-LED → 14.8 / 29.6 VDC (Wet-battery)     |
| 3. yellow charge control-LED                 | 8. red charge voltage-LED → 14.4 / 28.8 VDC (AGM-battery)     |
| 4. red charge control-LED                    | 9. red charge voltage-LED → 14.2 / 28.4 VDC (Gel-battery)     |
| 5. slide switch for charge voltage selection | 10. charging cable with clamp                                 |



## 5. Operation

ATTENTION:

- Before Operation please make sure that neither the power cable nor the charger including the charging cable show any damage and make sure that the mains supply complies with the specification.
- Please consider the charging instructions from the battery manufacturer before charging.

### I. Connect the charger to the battery:

- Make sure that the charger is disconnected from the mains supply.
  - Select the battery type via slide switch of front panel.
  - Connect the clamp of the charging cable with the plug of the battery.
  - Connect the power cable of the charger with the mains supply.
- Important note: please do not slide the switch while the charger working.

### II. Selection of the charge voltage:

According to the type of batteries the charge voltage can be selected via the slide switch in the front panel (5). Please consider the charging instructions from the battery manufacturer!

- **14.2 / 28.4 Volts** → selection for Gel-Lead batteries
- **14.4 / 28.8 Volts** → selection for AGM-Lead batteries
- **14.8 / 29.6 Volts** → selection for Wet-Lead batteries
- **15.6 / 31.2 Volts** → selection for Calcium-Lead batteries

### III. Start charging:

a) Plug in the power cable into the power socket.

The charging process starts automatically and runs through the following three charging phases:

#### 1. charging phase: constant current (CC)

This charging step is indicated by the **red charge-control LED** (4).

During the constant current phase, the battery is being charged to 80% of its capacity.

#### 2. charging phase: constant voltage (CV)

This charging step is indicated by the **yellow charge-control LED** (3).

During the constant voltage phase the battery is being charged to its maximum capacity.

#### 3. charging phase: float charge / battery is fully charged

This charging step is indicated by the **green charge control LED** (2).

As soon as the battery has reached its full capacity, the charger switches into float-charge mode. The charger can now be disconnected from the battery (see pt. IV disconnection the charger) or remain at the battery in float-charge mode. This guarantees a full battery at any time and therefore an instant operational readiness.

### IV. Disconnect the charger from the battery:

a) Disconnect the charger from the mains supply;

b) Disconnect the charger from the battery;

#### Charging advice:

- If the charger will be disconnected from the battery during the charging process, the charge current will be interrupted immediately. In that case please disconnect the charger from the mains supply. For starting a new charging process please comply with the relevant points (see pt.I)
- For increasing the lifetime of a battery please do not stop a charging process before the automatic switching to float charge mode (3<sup>rd</sup> charging step).

## 6. Errors and Troubleshooting

#### Red Power-LED lights, battery is connected but charging process does not start:

- Check if the mains plug is correctly plugged in;
- A defective or deep-discharged battery is connected → Battery must be disposed;

#### Red Power-LED does not light:

- Check if the mains-plug is connected properly;
- Check if mains cable is defective;

## 7. Technical Data

| TriTask-150s Series        |                          |               |               |               |               |               |
|----------------------------|--------------------------|---------------|---------------|---------------|---------------|---------------|
| Version                    | 12V / 4A                 | 12V / 6A      | 12V / 8A      | 12V / 10A     | 24V / 3A      | 24V / 5A      |
| Input (VAC)                | 230V / 50Hz              |               |               |               |               |               |
| Charging characteristic    | IU0U                     |               |               |               |               |               |
| Charging current (A)       | 4                        | 6             | 8             | 10            | 3             | 5             |
| Output power max. (W)      | 63                       | 94            | 125           | 156           | 94            | 156           |
| Temperature range          | 0°C – 40°C               |               |               |               |               |               |
| Cooling                    | No Fan                   | No Fan        | Fan           | Fan           | No Fan        | Fan           |
| Mains cable connection     | Fix mounted              |               |               |               |               |               |
| Charge connection          | Fix mounted DC-cable     |               |               |               |               |               |
| Certifications             | CE                       |               |               |               |               |               |
| Dimensions / Weight        | 180 x 110 x 36mm / ~800g |               |               |               |               |               |
| Rec. battery capacity (Ah) | 12 - 50                  | 18 - 75       | 24 - 100      | 30 - 125      | 9 - 38        | 15 - 65       |
| MEC Art-No.:               | 161-06402-100            | 161-06602-100 | 161-06802-100 | 161-06103-100 | 161-12302-100 | 161-12502-100 |

| Charge voltage for 12V battery |                        |                    |
|--------------------------------|------------------------|--------------------|
| Selector switch:               | Constant voltage (VDC) | Float charge (VDC) |
| CA →                           | 15.6V                  | 13.8V              |
| WET →                          | 14.8V                  | 13.8V              |
| AGM →                          | 14.4V                  | 13.8V              |
| GEL →                          | 14.2V                  | 13.8V              |

| Charge voltage for 24V battery |                        |                    |
|--------------------------------|------------------------|--------------------|
| Selector switch:               | Constant voltage (VDC) | Float charge (VDC) |
| CA →                           | 31.2V                  | 27.6V              |
| WET →                          | 29.6V                  | 27.6V              |
| AGM →                          | 28.8V                  | 27.6V              |
| GEL →                          | 28.4V                  | 27.6V              |

## 8. Advice for Disposal



It is prohibited to dispose the charger into the house- and residual waste removal (WEEE-Richtlinie 2002/96/EG und EAG-VO) , it must be disposed at the according collection points. For the protection of our environment please inform yourself at your communal administrative agency about your nearest disposal point.



The charger equates to the RoHS-directive 2002/95/EG, for the restriction of the use of certain hazardous substances in electrical and electronic equipment.



## 9. Disclaimer of Warranty

- Mainland Energy Conversion Ltd guarantees replacement or repair of chargers that are recognized as defective within 2 years under common environmental conditions. The validation of the warranty time starts with the delivery date from the manufacturer. Mainland Energy Conversion Ltd is limiting the free guaranteeing to working hours and spare parts only.
- For damages caused by non-observance of the operating instructions, inappropriate start up or handling as well as reconstructions and modifications of the device, the warranty claim expires and Mainland Energy Conversion Ltd assumes no liability for consequential damage to property or persons!
- Repair work must only be accomplished by authorized companies or professional staff!