

# Instruction Manual

## Battery Chargers

- TRITASK-300F Series:** IP20 Load-dependent fan-cooled. 3-Step charging technology with automatic float charging ensures optimal and gentle charging for the largest possible number of charging cycles.



### Safety Rules and General Warnings

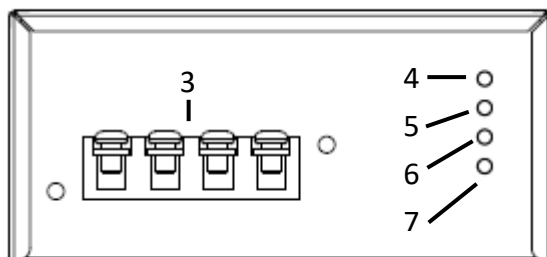
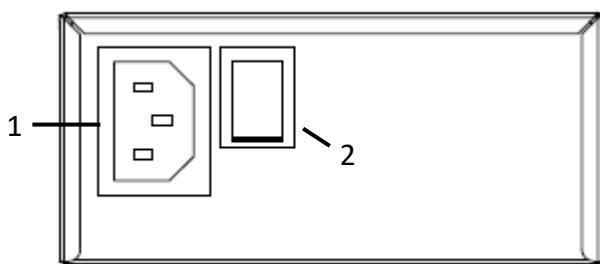
- Persons, who are not able to use the charger in a safe way, because of their physical, sensory or mental incompetence, or because of their lack of experience, should not use without the control or instruction from a skilled or qualified person.
- The charger runs with 100-240 Volts alternating current, which is not suitable for children – Danger of Life. And beware of risk of electric shock at all times.
- Ensure sufficient air ventilation; do not cover the vent outlet while charging in progress.
- Avoid flammable gases, solvents or vapours all the time. Prevent open flame or sparks while charging in progress. Explosion RISK!
- The charger is exclusively designed for charging **Rechargeable Lead-based Batteries** and must not be used for other purposes.
- You should take into consideration of the charging instructions issued by the battery manufacturer before charging. Check also if the charge profile fits your battery and application.
- DO NOT OPEN or DISMANTLE the charger. Repair work must only be processed by authorized technical staff.
- If the mains connection of the charger is damaged, it must be replaced with an original wire which is available at MEC or authorized dealers.
- NEVER place the charger on top of the battery while charging in progress.
- The charger should be protected against direct solar radiation or temperatures over 40°C.
- In case of obvious damage or malfunctioning, disconnect the charger from the mains supply and protect against unintended reconnection.
- The DC cable must not be cut, shortened or extended under any circumstances.
- Keep the charger in dry room (rel. humidity <80%). Clean with dry cloth only. Avoid fluid of any kind to get into the charger.

### Special Features

- IP20 Load-dependent fan cooling; sturdy spray-painted metal housing
- Microprocessor-based 3-Step charging technology with automatic float charging; best for storage maintenance charging
- Optimal and gentle charging for the greatest possibility of charge cycles guaranteed with high frequent combinatorial circuit technology
- Wide range of input with Active PFC (Power Factor Correction)
- LED indicators showing corresponding charge status and errors
- Protection against short circuit, reverse polarity, over temperature or overload with spark suppression

### Product Configuration

1. Mains Socket	2. On / Off Switch	3. Terminal Block
4. Red Mains LED	5. Green Charge LED	6. Yellow Charge LED
7. Red Charge LED		



## Preparation – Before Charging

### General Checking

- Check thoroughly the charger itself including all the cables show no damages
- Take into consideration the charging instruction issued by the battery manufacturer

### Charging Cable – Polarity Checking

WARNING: Check the polarity before mounting onto a plug:

- Red cable = Plus (+)
- Black cable = Minus (-)

### DC Mains Supply Checking

- Make sure the DC cable must not be cut, shortened or extended under any circumstances
- Make sure the mains supply complies with the technical specification requirements of the charger

### Before Connecting the Charger to the Battery

- Make sure the charger is switched off and disconnected from the mains supply
- Then connect the terminals of the charger to the battery (Red cable to the positive (+) terminal of the battery; then Black cable to the negative (-) terminal)
- If the battery is built-in within a vehicle, the Black cable can be connected to the negative (-) terminal of the battery or the body of the vehicle; make sure the connection is done with a safe distance from the fuel line and take into consideration of the battery and vehicle manufacturer
- Finally connect the power cable of the charger to the mains supply, and switch on the charger

## Charging the Battery

Plug in and switch on the charger. The charging process starts automatically and runs through the following stages:

### Phase 1: Constant Current Charging

Red Charge LED (7) blinks or lights up. The battery is being charged to 80% of its capacity at this stage.

### Phase 2: Constant Voltage Charging

Yellow Charge LED (6) blinks or lights up. The battery is being charged to its maximum capacity. When the Green Full LED (5) turns on, the charger can now be disconnected from the battery.

### Phase 3: Float Charging

Green Full LED (5) keeps on lighting indicate the battery has reached its full capacity. If the battery keeps connecting to the charger, float charge mode takes place to keep the readiness of the battery at all time.

### Disconnect the Charger from the Battery:

1. First, disconnect the charger from the mains supply
2. Then, disconnect the charger from the battery (disconnect the Black (-) cable first then the Red (+) cable)

After disconnecting the charger from the mains, please wait at least 5 seconds to reactivate the charger if in need – otherwise damages may be resulted.

## Charging Advice and Battery Care

### Charging Advice:

- If the charger must be disconnected from the battery during the charging process, please FIRST disconnect the charger from the mains supply. The continuation of the charging process is equal to a new charging cycle; all relevant points of the Operating Instructions have to be considered.
- To lengthen the lifetime of the battery, please do not stop the charging process before the battery is fully charged. The charger will automatically switch to float charging when the charging process is completed.

### Battery Care:

- Never expose the battery to high temperatures, as this causes permanent battery capacity loss.
- Never deep-discharge or overcharge the battery, cells can be damaged irreversibly.
- If possible, always disconnect the battery from the load when being stored over long period of time.
- Store battery in a dry and cool place at about 40-60% of its rated capacity.

## Errors and Troubleshooting

General Errors Description	Solutions
No LED lighting or blinking after connecting to the mains	<ul style="list-style-type: none"> <li>• Check if the charger is connected to mains supply properly</li> <li>• Check if there are any problems with the mains supply or mains cable</li> <li>• Check if the charger is switched on</li> </ul>
Red Mains-LED is on, charger is connected to the battery, but the charging process seems not working	<ul style="list-style-type: none"> <li>• Check the connection to battery and if the polarity has been correctly connected</li> <li>• Check if the battery is damaged or has been deeply discharged</li> </ul>

## Advice for Disposal



It is prohibited to dispose the charger with household or residual waste removal (WEEE-Richtlinie 2012/19/EU und EAG-VO). The charger must be disposed at designated disposal points. For the protection of our environment, please check at your communal administrative agency of your nearest disposal point.



The charger conforms to the RoHS-directive EU 2015/863, for the restriction of the use of certain hazardous substances in electrical and electronic equipment.



## Disclaimer of Warranty

The warranty period (see our General Terms and Conditions) starts with the charger being dispatched by the manufacturer. MEC-Energietechnik GmbH accepts liability by 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 dismantling, reconstructions or modifications of the charger, the warranty claim expires and MEC-Energietechnik GmbH assumes no liability for consequential damages to any properties or persons in connection with or arising from the purchase and use of the charger.

We reserves the rights to configure the charger as per actual needs and the manual may not reflect the most updated conditions of the product at all times. Please contact us should you need any technological support.

## Technical Specifications

<b>DC Ausgang   DC Output</b>	
	<b>Lead-based Batteries</b>
Ladespannung max. Charge Voltage max. (+/-1%)	<b>12V</b> <b>24V</b> <b>36V</b> <b>48V</b>
Ladestrom max. Charge Current max. (+/-1%)	<b>20A</b> <b>10A</b> <b>7A</b> <b>5A</b>
Wirkungsgrad max.   Efficiency max.	>89% @ 230V
Ausgangsleistung, nom. Output Power, nom.	350W
Restwelligkeit   Ripple	<1%
Rückstrom   Back Current	<1mA
Ladekabel Charge Cable	1.2m Kabel mit 4-wege schraube klemmleiste 1.2m cable with 4-way screw terminal block
<b>AC Eingang   AC Input</b>	
Eingangsspannung   Input Voltage	100...240VAC / 50...60Hz
Netzkabel & Stecker   Power Cord & Plug	1.2m Länderspezifisch   Country Specific
<b>Gehäuse   Enclosure</b>	
Werkstoff Material	Metallgehäuse, lackiert Metal housing, painted
Abmessungen / Gewicht Dimension / Weight	226 x 112 x 52 mm / ca. 1.45kg
LED-Anzeigen LED-Indicators	Netz-, Laden-, Batt.-Voll Anzeige Mains-, Charging-, Batt.-Full Indicator
Schutzklasse / Protection Class	1
IP Klasse   IP Code	IP20
Einsatztemperaturbereich   Operating Temp.	0°C to +40°C
Kühlung Cooling	Leistungsabhängiger Lüfter Fan Cooling
<b>Besonderheiten   Special Features</b>	
3-Stufen Ladecharakteristik** 3-Step Charge Characteristics**	Abschaltung bei "Batterie-Voll" (Ladestromerkennung) Charge Cut-off at "Battery-Full" (Current Detection)
Ladefreigabe (opt.)*** Charge Enable (opt.)***	Kabel f. Ladefreigabe / Ladesperre Cable f. Charge Enable / Charge Disable
Geräteschutz Device Protection	Kurzschluss-, Verpolung-, Überlastschutz Short Circuit-, Reverse Polarity-, Overload Protection
<b>Zertifizierungen   Certification</b>	
	CE

Spezifikationen der Akkuhersteller sind vorrangig zu beachten! | Specifications of the battery manufacturer take priority!

\*\* Abweichende Ladeprofile auf Anfrage | Different charge profiles available on request.

\*\*\* Optionale Varianten auf Anfrage | Optional features available on request.

**Subject to technical modifications. We assume no liability for misprints.**