

MAINLAND ENERGY CONVERSION LTD

● CHARGER ● POWER SUPPLY ● POWER INVERTER



CATALOGUE

2011



About us



Mainland Energy Conversion Ltd is a Hong Kong registered manufacturer of electronic power devices since 1989, with it's own production plant in Dong Guan, China.

Product design, mold making, metal stamping, powder coating, printing, coil winding, board assembly, final burn-in and testing of finished products are all done under one and the same roof - an effective tool to keep cost, quality and shipping commitments - as promised.

A company wide, modern ERP-system directly links manufacturing with our Hong Kong main office and our Austrian sales office, enabling us to not only cope with large but also with a broad mix of smaller sized production lots.

MEC has shown continuity and stability for the past 20 years, this not only being apparent by steady sales of well manufactured products of it's own design and distinctive appearance, but also by partnering as contract manufacturer with reputable European and American companies.

Range of MEC-products:

- **Lithium Battery Chargers:** up to 1200W
- **Lead Acid Battery Chargers:** industrial type up to 1200W, customizable charge profiles
- **NiMH Battery Chargers:** for single cells and battery packs
- **Switching Power Supplies:** up to 750W, Desktop- and Din-Rail PS
- **Power Inverters:** 150W to 1500 W

Mainland Energy Conversion Ltd stands for product quality and for responsible OEM-manufacturing in China.

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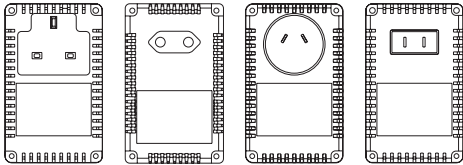
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6V 12V 24V

TriTask-40 Series



Connector types for EU/UK/AU/US



TriTask-40

Main Features

- Fully automatic HF Plug-in charger
- Microprocessor controlled
- LED for charge-status indication
- 3-Step characteristic (IU0U)
- Connector types for EU/UK/AU/US
- Small dimensions & low in weight
- Short circuit- & reverse polarity protection
- Trickle charging
- Wide-range input

Brief description

These high frequency switching battery chargers, housed in a sturdy plastic enclosure, are ideally suited for charging the battery of private motor cars, motor bikes, hobby- and battery powered gardening equipment.

Automatic maintenance charging allows for keeping the batteries connected over prolonged periods of time – best for maintaining the batteries of Mobile Homes, Quads, Boats, Jet Skis or Oldtimers in top condition when idle during winter periods.

The micro processor controlled 3-step charge profile with constant current- and constant voltage phase, will not only ensure the battery to be quickly and safely charged full, but also slow down the damaging sulfation process and thereby substantially prolonging the battery life – thus saving money and contributing to a better environment.

Merkmale

- Vollautomatik HF-Steckerladergerät
- Mikroprozessor gesteuert
- LED zur Ladezustandsanzeige
- 3-Stufen Ladekennlinie (IU0U)
- Steckerversionen für EU/UK/AU/US
- Kleine Abmessungen & geringes Gewicht
- Kurzschluss- und Verpolungsfest
- Erhaltungsladung
- Weitbereichseingang

Kurzbeschreibung

Die HF-Steckerladergeräte mit robustem Kunststoffgehäuse sind ideal für den Ladebetrieb für kleine PKW- und Motorradakkus sowie für Akkus in elektrisch betriebenen Freizeit- und Gartengeräten. Durch die automatische Erhaltungsladung können Akkus auch problemlos am Ladergerät verbleiben - sie eignen sich dadurch besonders für Akkuanwendungen mit langen Standzeiten wie z.B. für die Überwinterung von Wohnmobilen, Quads, Booten, Jet-Skis etc. oder auch unregelmäßig betriebenen Oldtimern.

Durch die Mikroprozessor gesteuerte 3-Stufen Ladekennlinie mit Konstantstrom- und Konstantspannung-Phase werden die Akkus schnelle und sicher vollgeladen. Sie reduziert dabei auch die Gefahr der Bildung von schädlichen Sulfatschichten und verlängert somit die Lebensdauer des Akkus erheblich - das spart Geld und leistet einen wichtigen Beitrag zum Umweltschutz.

Range of Models / Modellübersicht

Version	Input Eingang		Output nominal Ausgang nominal		Dimensions Abmessungen	Weight Gewicht	Article No. Artikel Nr.
	VAC	Hz	VDC	A	[LxWxH] mm	g	
6V 2.7A	100...240	50...60	6	2.7	105 x 65 x 46	ca. 295	111-03272-130
12V 1.5A	100...240	50...60	12	1.5	105 x 65 x 46	ca. 295	111-06152-130
12V 2.7A	100...240	50...60	12	2.7	105 x 65 x 46	ca. 295	111-06272-130
*6/12V 2.7A	100...240	50...60	6/12	2.7	105 x 65 x 46	ca. 295	111-06272-131
24V 1.5A	100...240	50...60	24	1.5	105 x 65 x 46	ca. 295	111-12152-130

* switchable / umschaltbar

12V 24V 36V

TriTask-150 Series



TriTask-150



* switchable

Main Features

- Fully automatic HF-charger
- Microprocessor controlled
- LED for charge-status indication
- 3-Step characteristic (IUOU)
- Compact and sturdy metal housing
- Short circuit- & reverse polarity protection
- Trickle charging

Brief description

These high frequency switching battery chargers, housed in a sturdy metal enclosure, are ideally suited for charging the battery of private motor cars, light trucks as well as battery powered lifting- and working platforms.

Automatic maintenance charging allows for keeping the batteries connected over prolonged periods of time – best for maintaining the batteries of Mobile Homes, Quads, Boats or Oldtimers in top condition when idle during winter periods.

The micro processor controlled 3-step charge profile with constant current- and constant voltage phase, will not only ensure the battery to be quickly and safely charged full, but also slow down the damaging sulfation process and thereby substantially prolonging the battery life – thus saving money and contributing to a better environment.

Merkmale

- Vollautomatik HF-Ladegeräte
- Mikroprozessor gesteuert
- LED zur Ladezustandsanzeige
- 3-Stufen Ladekennlinie (IUOU)
- Kompaktes und robustes Metallgehäuse
- Kurzschluss- und Verpolungsfest
- Erhaltungsladung

Kurzbeschreibung

Die HF-Steckerladegeräte mit robustem Metallgehäuse sind ideal für den Ladebetrieb von mittelgroßen und großen Akkus für PKWs und Leicht-LKWs sowie elektrisch betriebenen Hebe- und Arbeitsbühnen etc. Durch die automatische Erhaltungsladung können Akkus auch problemlos am Ladegerät verbleiben - sie eignen sich dadurch auch besonders für Akkuanwendungen mit langen Standzeiten wie z.B. für die Überwinterung von Wohnmobilen, Quads, Booten oder auch unregelmäßig betriebenen Oldtimern.

Durch die Mikroprozessor gesteuerte 3-Stufen Ladekennlinie mit Konstantstrom- und Konstantspannungs-Phase werden die Akkus schnelle und sicher vollgeladen. Sie reduziert dabei auch die Gefahr der Bildung von schädlichen Sulfatschichten und verlängert somit die Lebensdauer des Akkus erheblich - das spart Geld und leistet einen wichtigen Beitrag zum Umweltschutz.

Range of Models / Modellübersicht

Version	Input Eingang		Output nominal Ausgang nominal		Dimensions Abmessungen	Weight Gewicht	Article No. Artikel Nr.
	VAC	Hz	VDC	A	[LxWxH] mm	g	
12V 3/6A*	230	50	12	3/6	152 x 110 x 42	ca. 800	121-06602-103
12V 6A	230	50	12	6	152 x 110 x 42	ca. 800	121-06602-100
12V 4/8A*	230	50	12	4/8	175 x 112 x 45	ca. 930	121-06802-101
12V 8A	230	50	12	8	175 x 112 x 45	ca. 930	121-06802-100
12V 10A	230	50	12	10	175 x 112 x 45	ca. 930	121-06103-100
24V 5A	230	50	24	5	175 x 112 x 45	ca. 930	121-12502-100

* switchable / umschaltbar

12V 24V 36V

TriTask-300 Series



Rear view



TriTask-300

Main Features

- Fully automatic HF-charger
- Microprocessor controlled
- LED for charge-status indication
- 3-Step characteristic (IUOU)
- Compact and sturdy metal housing
- Short circuit- & reverse polarity protection
- Trickle charging
- Wide-range input
- Active PFC

Brief description

These high frequency switching battery chargers, housed in a sturdy metal enclosure, are ideally suited for charging the battery of private motor cars, light trucks as well as battery powered lifting- and working platforms.

Automatic maintenance charging allows for keeping the batteries connected over prolonged periods of time – best for maintaining the batteries of Mobile Homes, Quads, Boats or Oldtimers in top condition when idle during winter periods.

The micro processor controlled 3-step charge profile with constant current- and constant voltage phase, will not only ensure the battery to be quickly and safely charged full, but also slow down the damaging sulfation process and thereby substantially prolonging the battery life – thus saving money and contributing to a better environment.

Merkmale

- Vollautomatik HF-Ladegeräte
- Mikroprozessor gesteuert
- LED zur Ladezustandsanzeige
- 3-Stufen Ladekennlinie (IUOU)
- Kompaktes und robustes Metallgehäuse
- Kurzschluss- und Verpolungsfest
- Erhaltungsladung
- Weitbereichseingang
- Aktiv PFC

Kurzbeschreibung

Die HF-Steckerladegeräte mit robustem Metallgehäuse sind ideal für den Ladebetrieb von mittelgroßen und großen Akkus für PKWs und Leicht-LKWs sowie elektrisch betriebenen Hebe- und Arbeitsbühnen etc. Durch die automatische Erhaltungsladung können Akkus auch problemlos am Ladegerät verbleiben - sie eignen sich dadurch auch besonders für Akkuanwendungen mit langen Standzeiten wie z.B. für die Überwinterung von Wohnmobilen, Quads, Booten oder auch unregelmäßig betriebenen Oldtimern.

Durch die Mikroprozessor gesteuerte 3-Stufen Ladekennlinie mit Konstantstrom- und Konstantspannungs-Phase werden die Akkus schnelle und sicher vollgeladen. Sie reduziert dabei auch die Gefahr der Bildung von schädlichen Sulfatschichten und verlängert somit die Lebensdauer des Akkus erheblich - das spart Geld und leistet einen wichtigen Beitrag zum Umweltschutz.

Range of Models / Modellübersicht

Version	Input Eingang		Output nominal Ausgang nominal		Dimensions Abmessungen	Weight Gewicht	Article No. Artikel Nr.
	VAC	Hz	VDC	A	[LxWxH] mm	Kg	
12V 15A	100...240	50...60	12	15	226 x 112 x 52	ca. 1.45	121-06153-170
12V 20A	100...240	50...60	12	20	226 x 112 x 52	ca. 1.45	121-06203-170
24V 8A	100...240	50...60	24	8	226 x 112 x 52	ca. 1.45	121-12802-170
24V 11A	100...240	50...60	24	11	226 x 112 x 52	ca. 1.45	121-12113-170
36V 7A	100...240	50...60	36	7	226 x 112 x 52	ca. 1.45	121-18702-170

12V 24V

TriTask-150s Series



Rear view



TriTask-150s

Main Features

- Fully automatic HF desktop chargers
- Selectable charge programs for Gel-, AGM-, Wet- & Calcium batteries
- 3-Step characteristic (1U0U)
- 3 LEDs for charge status indication
- 4 LED's for battery type indication
- Microprocessor controlled
- Trickle charging
- Short circuit- & reverse polarity protection
- Mains plug for EU/UK/AU
- Compact and robust metal housing

Brief description

The professional and versatile battery chargers of series TriTask-150s permit free selection of either Wet-, AGM-, Gel and Calcium type batteries by means of a slide switch, with the correct charge voltage already pre-set.

Automatic maintenance charging allows for keeping the batteries connected over prolonged periods of time – best for maintaining the batteries of Mobile Homes, Quads, Boats, Jet Skis or Oldtimers in top condition when lying idle during winter periods.

The micro processor controlled 3-step charge profile, with constant current- and constant voltage phase, will not only ensure that the battery be quickly and safely charged full, but also slow down the damaging sulfation process and so substantially prolong the life time of the battery – thus saving money and contributing to a better environment.

Merkmale

- Vollautomatik HF-Tischladegeräte
- Auswählbare Ladeprogramme für Gel-, AGM-, Nass-, & Kalziumakkus
- 3-Stufen Ladekennlinie (1U0U)
- 3 LEDs für Ladezustandsanzeige
- 4 LEDs für Anzeige des Akkutyps
- Mikroprozessor gesteuert
- Erhaltungsladung
- Kurzschluss- und Verpolungsfest
- Steckerversionen für EU/UK/AU
- Kompaktes und robustes Metallgehäuse

Kurzbeschreibung

Die professionellen Ladegeräte der TriTask-150s Serie ermöglichen die Wahl der korrekten Ladespannung für Nass-, Fließ-, Gel- und Kalzium-Akkus und sind daher sehr vielseitig einsetzbar. Mittels des Schiebeschalters im Frontpaneel können die vorkonfigurierten Ladespannungen eingestellt werden.

Durch die automatische Erhaltungsladung können Akkus auch problemlos am Ladegerät verbleiben - sie eignen sich dadurch besonders für Akkuanwendungen mit langen Standzeiten wie z.B. für die Überwinterung von Wohnmobilen, Quads, Booten, Jet-Skis etc. oder auch unregelmäßig betriebenen Oldtimern.

Durch die Mikroprozessor gesteuerte 3-Stufen Ladekennlinie mit Konstantstrom- und Konstantspannung-Phase werden die Akkus schnelle und sicher vollgeladen. Sie reduziert dabei auch die Gefahr der Bildung von schädlichen Sulfatschichten und verlängert somit die Lebensdauer des Akkus erheblich - das spart Geld und leistet einen wichtigen Beitrag zum Umweltschutz.

Range of Models / Modellübersicht

Version	Input Eingang		Output nominal Ausgang nominal		Dimensions Abmessungen	Weight Gewicht	Article No. Artikel Nr.
	VAC	Hz	VDC	A	[LxWxH] mm	g	
12V 6A	230	50	12	6	180 x 110 x 36	ca.780	161-06602-100
12V 8A	230	50	12	8	180 x 110 x 36	ca.780	161-06802-100
12V 10A	230	50	12	10	180 x 110 x 36	ca.780	161-06103-100
24V 5A	230	50	24	5	180 x 110 x 36	ca.780	161-12502-100

12V 24V 36V 48V

AdapTask-Series



AdapTask-150



AdapTask-300

Adaptive Charging - the working principle:

This special 3-step charger does, other than those with regular 3-step technology, not remain locked into a rigidly timed absorption phase, this often being one of the main reasons for the premature death of good batteries. The AdapTask charger adapts to the battery's state of charge, precisely knowing at which point in time to change from absorption- to maintenance charge.

Adaptive charging is very well suited for:

- AGING BATTERIES which, if charged with conventional battery chargers, may respond badly to the "Battery Full" criterion – rendering them bloated by overcharging.
- BATTERIES ACROSS A WIDE RANGE OF SIZES, by using one and the same AdapTask charger – with no danger of over- or undercharging.
- BATTERIES IN EXTREME ENVIRONMENTS, such as excessive temperature changes or frequent mains failure: a temperature sensor, close to the battery, addresses temperature issues while the charger's adaptive characteristic provides the solution to problems associated with frequent mains-failure.

AdapTask Battery Chargers - tailored to doing special jobs, like:

Parallel Charging:

- A fresh charge cycle is triggered only at 'Mains-On'
- State 'Battery Full': the charger automatically settles into Power Supply mode
- Regardless of the amount of discharge current, the energy depleted is instantly being replenished in the Power Supply mode, at a pre-set voltage (e.g. 13.8V)

Opportunity Charging - at Frequent Mains Failure:

- When Mains fails: the charger remembers the state of charge it was in, at the point of failure
- When Mains returns: charging is being resumed at precisely the point of the latest mains failure
- Chargers of the regular kind do not remember mains failures but will start a fresh charge cycle instead, every time mains returns.
- Frequent overcharging will, over time, lead to a significant drop of battery performance or render the battery useless altogether.

Range of Models

Version	Input		Output nominal		Dimensions	Weight	*AdapTask Series	Article No.
	VAC	Hz	VDC	A	[LxWxH] mm	g		
12V 6A	100...240	50...60	12	6	180 x 110 x 36	ca. 780	150MF / 150P	161-06602-630
12V 8A	100...240	50...60	12	8	180 x 110 x 36	ca. 780	150MF / 150P	161-06802-630
12V 10A	100...240	50...60	12	10	180 x 110 x 36	ca. 780	150MF / 150P	161-06103-630
24V 5A	100...240	50...60	24	5	180 x 110 x 36	ca. 780	150MF / 150P	161-12502-630
12V 15A	100...240	50...60	12	15	238 x 130 x 58	ca. 1700	300MF / 300P	161-06153-670
12V 20A	100...240	50...60	12	20	238 x 130 x 58	ca. 1700	300MF / 300P	161-06203-670
24V 10A	100...240	50...60	24	10	238 x 130 x 58	ca. 1700	300MF / 300P	161-12103-670
12V 50A	100...240	50...60	12	50	300 x 170 x 75	ca. 2900	750MF / 750P	161-06503-670
24V 25A	100...240	50...60	24	25	300 x 170 x 75	ca. 2900	750MF / 750P	161-12253-670
36V 17A	100...240	50...60	36	17	300 x 170 x 75	ca. 2900	750MF / 750P	161-18173-670

* AdapTask series- MF = Opportunity Charging (Frequent Mains Failure) / P = Parallel Charging

12V 24V 36V 48V

ProTask-Series



ProTask-150



ProTask-300

User Interface

- State-of-charge indication by LEDs
- Distinctive warning of abnormal battery condition
- Signaling of bad contact connection to battery
- Battery temp.sensing / charge voltage compensation

General Features

- Multi-phase / Multi chemistry charge profile
- Scheduled cell balancing / battery maintenance routine
- Charge history recording, faults & deep discharges
- Retrieval of charge history for later fault analysis

Brief Description

The micro processor based, high-frequency switching battery chargers of series ProTask-150/300 are built for use in taxing industrial-, agricultural-, mining-, construction and marine environments.

Model ProTask-150 is housed in a well crafted metal enclosure. Being fully convection cooled and configurable for any type of battery, silent operation and the sealed enclosure make the charger the preferred choice for batteries in wheel chair applications. Attachable mounting brackets facilitate ease of mounting of the charger, on walls and pillars.

Range of Models

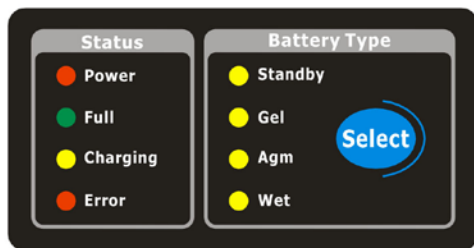
Version	Input		Output nominal		Dimensions	Weight	Article No.	
	VAC	Hz	VDC	A	[LxWxH] mm	g		
ProTask-40	12V 2.7A*	100...240	50...60	12	2.7	105 x 65 x 46	ca. 320	111-06272-430
	24V 1.5A*	100...240	50...60	24	1.5	105 x 65 x 46	ca. 320	111-12152-430
ProTask-150	12V 6A	100...240	50...60	12	5	175 x 110 x 36	ca. 780	161-06602-430
	12V 8A	100...240	50...60	12	8	175 x 110 x 36	ca. 780	161-06802-430
	12V 8A**	100...240	50...60	12	8	175 x 110 x 46	ca. 1100	121-06802-430
	12V 10A	100...240	50...60	12	10	175 x 110 x 36	ca. 780	161-06103-430
	24V 5A	100...240	50...60	24	5	175 x 110 x 36	ca. 780	161-12502-430
	24V 5A**	100...240	50...60	24	5	175 x 110 x 46	ca. 1100	121-12502-430
	24V 5A**	100...240	50...60	24	5	175 x 110 x 46	ca. 1100	121-12502-430
ProTask-300	12V 15A	230	50	12	15	240 x 130x 60	ca. 1600	161-06153-440
	12V 20A	230	50	12	20	240 x 130x 60	ca. 1600	161-06203-440
	24V 10A	230	50	24	10	240 x 130x 60	ca. 1600	161-12103-440
	36V 7A	230	50	36	7	240 x 130x 60	ca. 1600	161-18702-440
	48V 5A	230	50	48	5	240 x 130x 60	ca. 1600	161-24502-440

* Plug-in charger

** Convection cooled

24V 36V 48V

Nomad-750 Series



Monitoring Panel



User Interface

- GEL-, AGM- and Wet-Battery selectable
- Distinctive warning of battery being in state of discharge
- Signaling of contact problems with battery terminals
- Indicating a non-chargeable condition (dead battery)
- Battery temp. sensing / charge voltage compensation
- Remote monitoring panel

General Features

- Multi-phase charge profile, configurable
- Scheduled cell balancing / battery maintenance routine
- Charge history recording, faults & deep discharges
- Retrieval of charge history for later fault analysis
- Minimum 'Start-Up' voltage at batt.terminals >4.0VDC

Brief Description

This microprocessor based, high-frequency switching battery charger is built for use in industrial-, agricultural- and marine applications. It's compact size, light weight and high efficiency is very well suited for on-board charging of fork lift trucks and other mobile e-vehicles.

The rugged sheet metal enclosure, made of painted aluminum alloy or stainless steel, comes with integrated mounting brackets, ensuring ease of mounting on walls or pillars.

The monitoring panel allows for the user to manually select the battery type of his choice, namely GEL, AGM and Wet. The chosen mode will become the default, being indicated by an LED which also will signal the state of charge, or abnormal fault conditions.

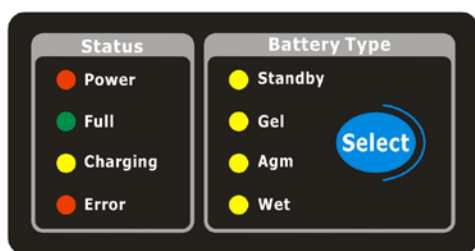
The 5-phase charge profile, being the competent basis of our charging technology, can be flexibly configured to even match very demanding battery specifications – to maintain reliability and predictability of battery performance.

Range of Models

Version	Input		Output nominal		Dimensions	Weight	Article No.
	VAC	Hz	VDC	A	[LxWxH] mm	Kg	
24V 25A	180...240	50	24	25	276 x 117 x 84	ca. 2.9	121-12253-540
36V 18A	180...240	50	36	18	276 x 117 x 84	ca. 2.9	121-18183-540
48V 13A	180...240	50	48	13	276 x 117 x 84	ca. 2.9	121-24133-540

24V 36V 48V

Trident-500 Series Trident-1000 Series



Monitoring Panel



User Interface

- GEL-, AGM- and Wet-Battery selectable
- Distinctive warning of battery being in state of discharge
- Signaling of contact problems with battery terminals
- Indicating a non-chargeable condition (dead battery)
- Battery temp. sensing / charge voltage compensation
- Remote monitoring panel

General Features

- Multi-phase charge profile, configurable
- Scheduled cell balancing / battery maintenance routine
- Charge history recording, faults & deep discharges
- Retrieval of charge history for later fault analysis
- Minimum 'Start-Up' voltage at batt.terminals
- Active PFC

Brief Description

Our microprocessor based, high-frequency switching battery chargers are built for use in taxing industrial-, agricultural-, mining-, construction and marine environments.

Our IP67-chargers are sealed into a rugged sheet metal shell, made of painted aluminum alloy or stainless steel. Convection cooling also ensures total silence of operation, a much appreciated feature in mobile homes. Integrated wall brackets facilitate ease of mounting on walls or pillars.

The monitoring panel allows for the user to manually select the battery type of his choice, namely GEL, AGM and Wet. The chosen mode will become the default, being indicated by an LED which also will signal the state of charge, or abnormal fault conditions.

The 5-phase charge profile, being the competent basis of our charging technology, can be flexibly configured to even match very demanding battery specifications – to maintain reliability and predictability of battery performance.

Range of Models

	Version	Input		Output nominal		Dimensions	Weight	Article No.
		VAC	Hz	VDC	A	[LxWxH] mm	Kg	
Trident-500	24V 17A	230	50	24	17	340 x 250 x 118	ca. 7.8	171-12173-200
	36V 12A	230	50	36	12	340 x 250 x 118	ca. 7.8	171-18123-200
	48V 9A	230	50	48	9	340 x 250 x 118	ca. 7.8	171-24092-200
Trident-1000	24V 34A	230	50	24	34	340 x 300 x 118	ca. 9.2	171-12343-200
	36V 24A	230	50	36	24	340 x 300 x 118	ca. 9.2	171-18243-200
	48V 18A	230	50	48	18	340 x 300 x 118	ca. 9.2	171-24183-200

Diagnosing - Forming - Discharging - Charging

AP4 - Smart Charger

for NiMH - and NiCd- batteries



Rear View



Main Features

- **Charging/Discharging of 4 AA and AAA batteries**
- **Forming Function for deep discharged cells**
- **Display state of charge with LEDs**
- **-ΔU battery full criteria**

Brief Description

The AP4 is a quick-charger with discharge function for rechargeable batteries especially designed as a cost-efficient alternative solution to our professional AV4m charger.

Each of the 4 charging bays can hold one NiMH- or NiCd-battery of the dimensions AA or AAA. The charging process starts automatically after inserting the batteries. The precise charge control, the - U criteria for detecting a full battery, an integrated safety timer and a temperature monitoring for each charging bay ensure that your batteries are optimal charged and protected.

Technical Specifications

Input	
Input Voltage	100-240 VAC
Frequency	50/60Hz
Power	max. 15W
Output	
Output Voltage	4 x 1.45V
Charge Current AA / AAA	850mA / 400mA
Discharge Current AA / AAA	800mA / 300mA
Thermic Properties	
Temperature Range	0°C to +40°C
Cooling	Convection Cooled

Pressing the „Discharge“ key starts a discharge cycle that discharges the batteries and after that fully charges them. To regularly fully discharge the batteries is a base for their long lifetime. Therefore you should maintain your batteries every 4-6 weeks.

After finishing the charge process the AP4 switches to the maintenance mode that eliminates self discharge and guarantees fully charged batteries for instant use. The AP4 can detect deep discharged batteries and automatically starts a „forming“ for the affected batteries. Defective batteries are also detected and indicated via LED, an automatic shut down of the particular charging bay follows.

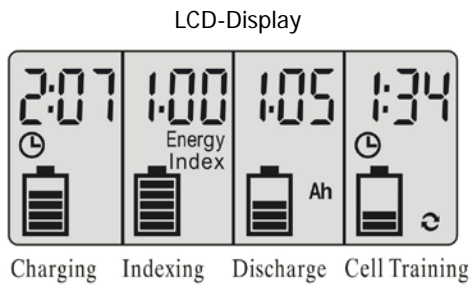
Using a wide range power supply the charger can be operated in almost every international power network and is therefore an ideal travel companion.

Dimensions	
Charger (L x W x H)	145 x 70 x 45 mm
Weight	280 g include power cable
Mains Connection	CEE 7/16 (Typ C)
Charging Connection	4 separate bays (AA & AAA)
Certificates	
CE	
Scope of delivery	
Charge, Power Cable, Operating Instructions	
Article No	
153-04112-730	

Diagnosing - Forming - Discharging - Charging - Cycling

AV4m - Diagnostic Charger

for NiMH - and NiCd- batteries



Main Features

- Multifunctional professional-charger for AA / AAA batteries
- Constant discharge current for AA= 500mA and for AAA= 180mA
- 3 different charging currents (constant current) adjustable with slid switch
- Display of charge time and battery capacity in four different charge bays - for easy cell matching
- Cycling - The battery will be charged/discharged till no further increase of capacity is registered
- Forming - deep discharged cells will be repaired and faulty detection
- Faulty battery detection, safety timer, battery temperature control, -ΔU battery full criteria

Brief Description

The AV4m is a multifunctional diagnosing- and quick charger for rechargeable batteries especially designed for professional users.

Each of the 4 charging bays can hold 1 NiMH- or NiCd-battery of the dimensions AA (Mignon) or AAA (Micro). Via the selective charging bay choice you can separately or simultaneously charge, discharge, condition and analyze each battery. A slide switch for the selection of the charging current allows you to choose between slow, medium and quick charging time.

The precise charge control, - U battery full criteria, an integrated safety timer and a temperature monitoring for each charging bay ensure that your batteries are optimal charged and protected.

The systematic usage of your AV4m can extend the lifetime of your battery, therefore save your money and make an effective contribution to environmental protection. Using a wide range power supply the charger can be operated in almost every international power network and via 12V car adapter also in your car.

Technical Specifications

Input	
Power Supply Input	100-240 VAC
Frequency	50/60Hz
Charger Input	9...14 VDC
Power	max. 18W
Output	
Output Voltage	4 x 1.45V
Charge Current AA / AAA	1200 / 600mA, 900 / 400mA 700 / 250mA
Discharge Current AA / AAA	500mA / 180mA
Thermic Properties	
Temperature Range	0°C to +40°C
Cooling	Convection Cooled

Dimensions	
Charger (L x W x H)	145 x 70 x 45 mm
Power Supply (L x W x H)	80 x 50 x 80 mm
Weight	400 g include PS
Mains Connection	Power Supply 12V car-adapter
Charging Connection	4 separate bays (AA & AAA)
Certificates	
CE	
Scope of delivery	
Charge, Power Supply, Car-adapter, Operating Instructions	
Article No	
153-04122-380	

Diagnosing - Forming - Discharging - Charging

AP8 - Battery Trainer

for NiMH - and NiCd- batteries



Main Features

- Charging/Discharging of 8 AA and AAA batteries
- 2 independent slot for charging/discharging at the same time
- Forming Function for deep discharged cells
- Display state of charge with LEDs
- -ΔU battery full criteria

Brief Description

The AP8 is a battery charger with discharge function for rechargeable batteries and allows simultaneously and alternating charging / discharging of up to 8 batteries in two charging bay groups.

Each of the 8 charging bays can hold one NiMH- or NiCd-battery of the dimensions AA (Mignon) or AAA (Micro). The charging process starts automatically after inserting the batteries. The precise charge control, the - U procedure for detecting a full battery and an integrated safety timer ensure that your batteries are optimal charged and protected.

The discharge function that first discharges the batteries and then fully charges them again, can be separately started for each of the two groups via pressing the "Discharge" button. To regularly fully discharge the batteries is a base for their long lifetime. Therefore you should maintain your batteries every 4-6 weeks.

After finishing the charge process the AP8 switches to the maintenance mode that eliminates self discharge and guarantees fully charged batteries for instant use.

The AP8 can detect deep discharged batteries and automatically starts a „forming“ for the affected batteries. Defective batteries are also detected and indicated via LED, an automatic shut down of the particular charging bay follows.

Using a wide range power supply the charger can be operated in almost every international power network and via 12V car adapter also in your car.

The systematic usage of your AV4m can extend the lifetime of your battery, therefore save your money and make an effective contribution to environmental protection. Using a wide range power supply the charger can be operated in almost every international power network and via 12V car adapter also in your car.

Technical Specifications

Input	
Power Supply Input	100-240 VAC
Frequency	50/60Hz
Charger Input	9...14 VDC
Power	max. 18W
Output	
Output Voltage	8 x 1.45V
Charge Current AA / AAA	650mA / 250mA
Discharge Current AA / AAA	600mA / 300mA
Thermic Properties	
Temperature Range	0°C to +40°C
Cooling	Convection Cooled

Dimensions	
Charger (L x W x H)	205 x 70 x 45 mm
Weight	430 g include PS
Mains Connection	Power Supply & 12V car-adapter
Charging Connection	8 separate bays (AA & AAA)
Certificates	
CE	
Scope of delivery	
Charge, Power Supply, Car-adapter, Operating Instructions	
Article No	
153-08651-780	

3...15 Cells, 40...1000W

Nova-series



Nova-150



Nova-300

Brief Description

MEC's **Nova-series** features freely programmable charge parameters, providing the factory with the flexibility and ease to comply with the battery manufacturer's stringent charge specifications, and to confidently deliver the safety required for charging lithium-based batteries.

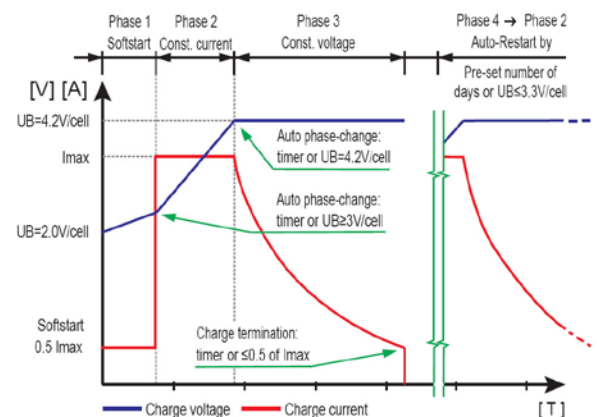
Technical Features

Battery "Wake-up": pushing a tact switch brings the battery back from forced sleep-mode. Regular charging takes over once if the battery voltage has risen above e.g. 2.0V/cell, but can be set to any value, upon request.

Phase 1, soft start: automatically triggered when battery voltage drops below e.g. 3.0V/cell. Default current is 50% of the permitted max. charge current, but can be set to any value, upon request.

Phase 2, constant current: starts if battery voltage breaks though the set level of 3.0V/cell. Criteria for switching over to Phase 3: charge voltage rises to, or exceeds, a pre-set level of e.g. 4.2V/cell (LiFePo4 3.6V/cell) or safety time elapsed has reached a pre-set value.

Phase 3, constant voltage: charger remains at this voltage level until below criteria trigger the release of the output relay, terminating the charge process: Charge current has dropped to e.g. 50% of max. charge current or safety time elapsed has reached a pre-set value.



Auto-restart of the charge cycle commences after a number of days has elapsed or if the battery voltage has dropped to below e.g. 3.3V/cell. Either amount of value can be set, upon request.

Range of Models

Version	Input		Output Range		Dimensions	Output Power max. (W)	Housing
	VAC	Hz	Cells	A	[LxWxH] mm		
Nova-40	100...240	50...60	3...8	3...1.2	105 x 65 x 46	40	Plug-in
Nova-150	100...240	50...60	3...8	10...4	175 x 110 x 36	150	Desktop
Nova-300	180...240	50	3...8	24...10	240 x 130 x 58	300	Desktop
Nova-750	100...240	50...60	6...15	30...12	300 x 170 x 75	750	Wall/Desktop
Nova-1000	100...240	50...60	6...15	40...16	340 x 190 x 75	1000	Wall/Desktop

12V

SMPS-150 Series



Version include cigarette lighter socket



Standard version

Main Features

- **Output:** : DC-voltage adjustable -10%...+20% (model-dependent)
- **DC-termination:** Heavy-duty binding posts, model-dependent: additional cigarette lighter socket
- **Mains:** 230VAC 50Hz, AC cord fixed with connector for EU, UK and AU
- **Overload-, Over-temperature and Short circuit protection**
- **Fan speed load dependent, 12V/6A version convection cooled**

Brief Description

The robust power supply with modern high frequency switching topology will achieve the high operating efficiency necessary for packing so much power into a such compact and low profile enclosure. The attractive, well crafted metal enclosure not only copes very well in rough and harsh environments, its inherent shielding properties are of value when EMC and EMI become an issue, with certain applications.

Easy output termination

Heavy-duty binding posts allow for fast and save wire termination. A through-hole in the main shaft, machined of brass, makes connecting wires fast and easy - a final twist of the knurled plastic head ensures a save, reliable wire termination. Versions with an additional cigarette lighter socket allow for operating camping equipment, such as cooling boxes or refrigerators.

The power supply as a battery charger - parallel charging / battery back-up

The output voltage can be precisely adjusted to the value needed to keep a standby-battery in a well charged, ready state. While a fully discharged battery will not be able to draw charge current in excess of the rated value of the Power Supply, a partially or completely full battery will ask for a current amount as small as a trickle.

Range of Models

Version	Input		Output Range		Dimensions	Weight	Article No.
	VAC	Hz	VDC	A	[LxWxH] mm	g	
12V 6A	230	50	10.8...14.4	6	152 x 110 x 42	ca. 750	22-14602-200
12V 7A*	230	50	13.8	7	152 x 110 x 42	ca. 750	22-14702-301
12V 7A**	230	50	13.8	7	152 x 110 x 42	ca. 750	22-14702-302
12V 8A	230	50	10.8...14.4	8	174 x 112 x 45	ca. 850	22-14802-200
12V 10A	230	50	10.8...14.4	10	174 x 112 x 45	ca. 850	22-14103-200

* Version incl. standard cigarette lighter socket ** Version incl. camping-socket

12V 24V

SMPS-200 Series



Rear View



Main Features

- Output: DC-voltage adjustable
- Mains: 100..240VAC, IEC 3-pin terminal
- Overload-, Over-temperature and Short circuit protection
- DC-termination: Heavy-duty binding posts or 2-way screw terminal
- Fan speed load dependent, 12V/6A version convection cooled

Brief Description

Advanced design practices, combined with modern high frequency switching topology, will achieve the high operating efficiency necessary for packing so much power into a such compact and low profile enclosure.

The elegant, yet sturdy, metal enclosure's shielding properties are an advantage when EMC/EMI is being an issue, with applications sensitive to radiated disturbances.

Easy output termination

Heavy-duty binding posts allow for fast and save wire termination. A through-hole in the main shaft, machined of brass, makes connecting wires fast and easy - a final twist of the knurled plastic head ensures a save, reliable wire termination.

The power supply as a battery charger - parallel charging / battery back-up

The output voltage can be precisely adjusted to the value needed to keep a standby-battery in a well charged, ready state. While a fully discharged battery will not be able to draw charge current in excess of the rated value of the Power Supply, a partially or completely full battery will ask for a current amount as small as a trickle.

Range of Models

Version	Input		Output Range		Dimensions [LxWxH] mm	Weight g	Article No.
	VAC	Hz	VDC	A			
12V 6A	100...240	50...60	10.8...14.4	6	175 x 110 x 36	ca. 750	26-12602-230
12V 8A	100...240	50...60	10.8...14.4	8	175 x 110 x 36	ca. 750	26-12802-230
12V 10A	100...240	50...60	10.8...14.4	10	175 x 110 x 36	ca. 750	26-12103-230
24V 5A	100...240	50...60	21.6...28.8	5	175 x 110 x 36	ca. 750	26-24503-230
12V 15A	100...240	50...60	10.8...14.4	15	175 x 110 x 36	ca. 800	26-12153-270
24V 7A	100...240	50...60	21.6...28.8	7	175 x 110 x 36	ca. 800	26-24702-270

12V 24V 36V 48V

SMPS-300 Series



Main Features

- **Output:** DC-voltage adjustable -10%...+20%
- **DC-termination:** 4-way screw terminal
- **Fan speed** load dependent
- **Overload protection**
- **Short circuit protection**
- **Over temperature protection**
- **Mains:** 100...240VAC 50...60Hz, Active PFC

Brief Description

The robust power supply with modern high frequency switching topology will achieve the high operating efficiency necessary for packing so much power into a such compact and low profile enclosure. The attractive, well crafted metal enclosure not only copes very well in rough and harsh environments, its inherent shielding properties are of value when EMC and EMI become an issue, with certain applications.

Easy output termination

The 4-way screw terminal block will ensure fast wire termination and that large currents are conducted with little loss. Rugged plastic spacers between the terminal poles and the mounting panel provide the insulation for a secure, dependent operation.

The power supply as a battery charger - parallel charging / battery back-up

The output voltage can be precisely adjusted to the value needed to keep a standby-battery in a well charged, ready state. While a fully discharged battery will not be able to draw charge current in excess of the rated value of the Power Supply, a partially or completely full battery will ask for a current amount as small as a trickle.

Range of Models

Version	Input		Output Range		Dimensions [LxWxH] mm	Weight Kg	Article No.
	VAC	Hz	VDC	A			
12V 15A	100...240	50...60	10.8...14.4	15	226 x 112 x 52	ca. 1.3	22-12153-270
12V 21A	100...240	50...60	10.8...14.4	21	226 x 112 x 52	ca. 1.3	22-12213-270
24V 8A	100...240	50...60	21.6...28.8	8	226 x 112 x 52	ca. 1.3	22-24802-270
24V 11A	100...240	50...60	21.6...28.8	11	226 x 112 x 52	ca. 1.3	22-24113-270
36V 7A	100...240	50...60	32.4...43.2	7	226 x 112 x 52	ca. 1.3	22-36702-270
48V 5.5A	100...240	50...60	43.2...57.6	5.5	226 x 112 x 52	ca. 1.3	22-48552-270

12V 24V 36V

SMPS-750 Series



Rear View



Main Features

- **Output: DC-voltage adjustable**
- **Mains: 100..240VAC, IEC 3-pin terminal**
- **Overload-, Over-temperature and Short circuit protection**
- **DC-termination: 2-way screw terminal or Heavy-duty binding posts**
- **Fan speed load dependent**
- **Active PFC**

Brief Description

Advanced design practices, combined with modern high frequency switching topology, will achieve the high operating efficiency necessary for packing so much power into a such compact and low profile enclosure.

The elegant, yet sturdy, metal enclosure's shielding properties are an advantage when EMC/EMI is being an issue, with applications sensitive to radiated disturbances.

Easy output termination

Heavy-duty 2-way screw terminal allow for fast and save wire termination. A through-hole in the main shaft, machined of brass, makes connecting wires fast and easy - a final twist of the knurled plastic head ensures a save, reliable wire termination.

The power supply as a battery charger - parallel charging / battery back-up

The output voltage can be precisely adjusted to the value needed to keep a standby-battery in a well charged, ready state. While a fully discharged battery will not be able to draw charge current in excess of the rated value of the Power Supply, a partially or completely full battery will ask for a current amount as small as a trickle.

Range of Models

Version	Input		Output Range		Dimensions [LxWxH] mm	Weight Kg	Article No.
	VAC	Hz	VDC	A			
12V 50A	100...240	50...60	10.8...14.4	50	297 x 170 x 75	ca. 2.9	26-12503-270
24V 25A	100...240	50...60	21.6...28.8	25	297 x 170 x 75	ca. 2.9	26-24253-270
36V 17A	100...240	50...60	32.4...43.2	17	297 x 170 x 75	ca. 2.9	26-36173-270

12V 24V

GenPack-150 Series



USB ports - on the back



Main Features

- Effectiveness >90% allows permanent full load
- 2 USB ports for charging of your USB-devices
- Compact and well-shaped metal housing
- Sockets for EU, UK and AU available
- For the safety operation of the mobile office and all other sensitive devices
- Auto-restart function
- Overload- and over-temperature protection
- Battery low-voltage alarm and protection
- Over-voltage protection
- Galvanic ally isolated

Brief Description

The inverters of the GenPack-150 Series are pure sine wave transformer with power electronic at highest level.

The shapely device with the high capacity in the smooth and elegant metal housing could be stowed easily in the glove compartment of the car.

The galvanic insulation between the low battery voltage at the input (12/24V) and the high sine wave transformer voltage at the output (230VAC) affords an intrinsic safety of the operator.

The pure sine wave at the output shows best start-up at energy saving lamps, inductive loads (motor, pumps, ...), television and power supplies.

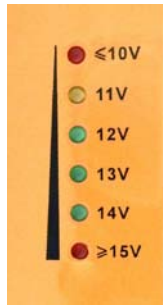
The auto-restart function tries to start the inverter new, if there are faulty conditions, like battery voltage too low or too high, overtemperature or overload. After the particular error has been cancelled, the inverter automatically continues normal operation.

Range of Models

Version	Input	Output nominal		Dimensions	Weight	Article No.
	VDC	VAC	Hz	[LxWxH] mm	g	
150W-12V	10.5...15.0	230	50	200 x 115 x 36	ca. 750	313-151-100
150W-24V	21.0...30.0	230	50	200 x 115 x 36	ca. 750	313-151-200

12V 24V

GenSet-300 Series GenSet-600 Series GenSet-1200 Series



Input voltage indication



Main Features

- Effectiveness >85% allows permanent full load
- Monitoring display of the input voltage
- Effortless start-up of 'difficult loads'
- Sockets for EU, UK and AU available
- Compact and robust metal housing
- Low battery alarm and shut down
- Over voltage shut down
- Overload shut down
- Thermal shutdown
- Reverse polarity and short circuit protection

Brief Description

The inverters of the GenSet-Series, with modified sine wave at the output, are competitive, robust and reliable in operation - the ideal generator to power the electric appliances in your car, caravan, marine craft, alpine hut or other remote places.

A feature of the GenSet-Series is the very good start-up at inductive and capacitive loads, like television, energy saving lamps, power supplies, pumps and motors. The Soft-Start function protects the inverter and appliances against extreme and sudden inrush currents, produced by inductive or capacitive loads.

The battery voltage gauge indicates the state-of-charge of the battery, by a string of coloured LEDs. Over- and under voltage is audibly and visually signalled.

Range of Models

Version	Input	Output nominal		Dimensions	Weight	Article No.
	VDC	VAC	Hz	[LxWxH] mm	Kg	
300W-12V	11.0...15.0	230	50	270 x 130x 58	1.3	323-301-100
300W-24V	22.0...30.0	230	50	270 x 130x 58	1.3	323-301-200
600W-12V	11.0...15.0	230	50	315 x 130 x 58	1.7	323-601-100
600W-24V	22.0...30.0	230	50	315 x 130 x 58	1.7	323-601-200
1200W-12V	11.0...15.0	230	50	370 x 150 x 58	2.3	323-122-100
1200W-24V	22.0...30.0	230	50	370 x 150 x 58	2.3	323-122-200

Halogen Flood light

WM56

Main Features

- 600m beam
- 4h continuous operation per charge
- Controlled recharge - 1000 recharge cycles
- High impact resistant, rugged and waterproof case
- Electronic switch
- Battery protection
- Fast recharge in 8 hours
- Battery charging LED indicator
- Low battery warning LED indicator
- Supplied with mains and vehicle 12V/24V chargers
- CE approved



Highly mobile

the WM56 can be charged from both AC mains and a vehicle charger, making it highly independent and mobile.

Optimal operational reliability

This lamp has an impact resistant and waterproof housing allowing it to operate in harsh environment.

Electronic switch

The electronic switch guarantees a life long service and effortless operation.

Soft start

The soft start uses a special technique to start the light bulb, extending the life of the light bulb.

Controlled recharge

The built-in controlled battery charger is designed to charge this specific battery type, which results in up to 1000 recharging cycles.

Electronic battery guard

To preserve the battery, this lamp is equipped with an automated power cut-out, preventing the battery from a deep discharge. It has a low battery warning indicator, to show when the battery is running out.

Range of Models

Model	WM56
Light output	100 lumens
Running time	4 hrs
Charge time	8 hrs
Battery	6V 4Ah dry lead acid
Bulb	5.5V 1A
Size	L195 x W123 x 136 mm
Weight	1.1Kg

Batteries

NiMH Rechargeable Low-Self-Discharge Batteries

- Low-Self-Discharge technology
- Pre-charged and ready to use
- No Memory-Effect
- Up to 1000 cycles

Pre-charged and ready to use, with 85% residual capacity still being available after 6 months of storage. Pro-energy batteries have low internal resistance, guaranteeing stable voltage at a high-rate current discharge, therefore easily meeting the thirst of today's high-power-draining devices, like digital cameras, photo flashes and others.



NiMH Rechargeable Batteries

- Fast rechargeable
- No Memory-Effect
- Up to 1000 cycles

MEC marathon industrial grade rechargeable batteries are ranking amongst the highest standards in the market. Their excellent discharge characteristic is based on a stable operating voltage under continuous and high current discharge.



Lithium Batteries - non - rechargeable

- True 1.5V and 9V Lithium Power
- 10 years storage time
- Operating temperature from -20°C to +60°C

MEC x-force batteries offer more capacity than standard alkaline batteries, while weighing 1/3 less and performing well in extreme temperature environments.



Range of Models

Version	Article No.	Size	Capacity (mAh)	Voltage (V)	Cells / Blister
Pro-energy NiMH - LSD rechargeable	42C-02-52	AA / Mignon	2000	1.2	4
	42C-03-52	AAA / Micro	800	1.2	4
	42C-04-50	C / Baby	4000	1.2	1
	42C-05-50	D / Mono	8000	1.2	1
	42C-06-50	9V-Block	200	8.4	1
Marathon NiMH rechargeable	42C-07-52	AA / Mignon	2600	1.2	4
	42C-08-52	AA / Mignon	2400	1.2	4
	42C-09-52	AA / Mignon	2200	1.2	4
	42C-11-52	AA / Mignon	1800	1.2	4
	42C-12-52	AAA / Micro	1000	1.2	4
	42C-14-51	C / Baby	4500	1.2	2
	42C-16-50	D / Mono	9000	1.2	1
42C-18-50	9V-Block	250	8.4	1	
X-force LiFeS2 non-rechargeable	41A-01-52	AAA / Micro	1100	1.5	4
	41A-02-52	AA / Mignon	2900	1.5	4
	41A-04-50	9V-Block	600	9.0	1



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