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Технические характеристики на мультихимические зарядные устройства с расширенными возможностями ЕСМС2

EcMC² 250

Adaptable multi chemistry charger

Lightweight military field charger – dependable performance

The EcMC2 250 is a state of the art two-channel, four-position charger. Easy to transport and friendly to operate, it automatically recognizes the type of military battery. Recharges batteries simultaneously, regardless of SOC or chemistry.

Benefits

- Charges different battery types
- Charges different battery chemistries
- Fast battery charge
- Soldier portable
- Worldwide usage
- Quite or silent mode
- Intuitive plug-and-charge operation
- LED indication of charge status

Key features

- Automatic battery recognition
- Charges both channels simultaneously regardless of battery type or chemistry
- Automatic power sharing
- Conditioning charge for battery storage to 20% ± 10% on all channels for battery compliance to ICAO/UN Transport Regulations and IATA.
- On-board HMI
- Rugged construction for a long life of field operations
- Lightweight and compact
- Wide AC input, for worldwide functionality and charging
- Wide DC input, for charging from vehicles, fuel cells, etc . . .
- Input cables (AC, DC) included
- Electronic and mechanical batteries interface included

Typical applications

- Capability to charge more than 50 military Li-ion, Ni-MH and Ni-Cd battery types.
- Ideal for missions involving various battery types:
 - Peace keeping
 - Law enforcement



Electrical characteristics

AC input voltage	85 – 265 V (50-60 Hz, ± 5%)
DC input voltage	11 – 14 V and 19 – 32 V
Output power	250 W
Charging voltage	4 - 34 V
Maximum output current	10 A (per channel)

Physical characteristics

Length	410 mm
Width	240 mm
Height	205 mm
Typical weight	<9.0 kg (AC and DC cables included)
Volume	20.2 litres
Environmental protection	IP 44 (open) IP67 (closed)
Operating temperature range	-20°C to +60°C
Storage temperature range	-40°C to +75°C
Saft model / type reference	

References

Temperature	MIL-STD 810E 503.3
Altitude	MIL-STD 810E 503.3
Vibration	MIL-STD 810E 514.4 Cat 8
Shock	MIL-STD 810E 516.4 I
Drop	MIL-STD 810E 516.4 IV
Salt Fog	MIL-STD 810E 509.3 I
Immersion	MIL-STD 810E 512.3 II-3
NSN	6130 14 564 1779
Saft part number	09101F

EcMC² 250

Technology features

- Microprocessor controlled
- Built-in multiple redundant safety protection
- Software field upgradeable (future proof)
- BIT (Built In self Test)
- DC input automatic cut off to prevent deep discharge of vehicle battery
- SM Bus (smart battery) compatible
- AC and DC input protection by field re-settable circuit breakers
- Please contact Saft for your specific application requirements.

Materials

- Case: high impact polypropylene
- Colour: black
- Control panel: aluminium / ABC
- Cables: 105°C rated PVC

Built-in protection devices ensure safety in case of;

- Exposure to heat
- Exposure to direct sunlight for extended periods
- Short circuit
- Over voltage
- Under voltage
- Transient voltage spikes

Storage

- The storage area should be clean, cool (preferably not exceeding +50°C), dry and ventilated
- For short term storage, keep the above conditions with a temperature range not exceeding -40°C to +75°C.

Performance characteristics for Li-ion batteries

BB 2590	2 charged in approx. 5 hours
BB 2800	2 charged in approx. 5 hours
Sally/Sophie/Mirabelle	2 charged in approx. 3 hours
BA 685 PR4G radio battery	2 charged in approx. 5 hours
BA 684 PR4G radio battery	2 charged in approx. 3 hours
(Capable of charging > 50 different battery types)	

EMI Standards

EMC emission	EN 61000-6 3 & 4 MIL-STD 461D RE102 Ground Army
EMC immunity	EN 61000-6 1 & 2 MIL-STD 461D RS103 Ground Army
RF emission	FCC 47 CFR Ch 1, Pt 15
Mains input	IEC 320/C

Safety/Reliability standards

Information Technology Equipment	EN 60950-1
MTBF (MIL HDBK-217F GB)	40 000 h at 25°C
Operational ceiling	700 hPa

Part number and accessory references

Charger unit	09120A
Interface	GP16497
Cable DC/DC	GP16715
Cable AC/DC	GP16716



Extended capability multi chemistry charger

EcMC² 350

Military workshop charger
Dependable performance

The EcMC² 350 is a state of the art five-channel, ten-position charger. Easy to transport and friendly to operate, it automatically recognizes the type of military battery. Recharges batteries simultaneously, regardless of SOC or chemistry.

Benefits

- Charges different battery types
- Charges different battery chemistries
- Fast battery charge
- Wheeled and transportable
- May be removed from outer wheeled transport case
- Worldwide usage
- Quiet operation
- Intuitive plug-and-charge operation
- LED indication of charge status

Key features

- Automatic battery recognition
- Charges all five channels simultaneously, regardless of battery type or chemistry
- Conditioning charge for battery storage
- On-board HMI
- Rugged construction for a long life of field operations
- Wide AC input, for worldwide functionality
- Wide DC input, for charging from vehicles, fuel cells, etc...
- Input cables (AC, DC) included
- Electronic and mechanical batteries interface included

Typical applications

- Capability to charge more than 50 military Li-ion, Ni-MH and Ni-Cd battery types
- Ideal for missions involving various battery types:
 - Base of operations or workshop
 - Peace keeping
 - Law enforcement
 - Exercise and training



Electrical characteristics

AC input voltage	85 – 265 V (50-60 Hz, +/- 5%)
DC input voltage	11 – 14 V and 19 – 32 V
Output power	350 W
Charger voltage	4 – 34 V
Maximum output current	10 A (per channel)

Physical characteristics

Length	685 mm
Width	460 mm
Depth	340 mm
Weight	< 15 kg (AC, DC cables included)
Volume	107 litres
Environmental Protection	IP44 (open) IP67 (closed)
Operating Temperature Range	-20°C to +60°C
Storage Temperature Range	-40°C to +75°C

References

Temperature	MIL-STD 810E 503.3
Altitude	MIL-STD 810E 500.3 II-3
Vibration	MIL-STD 810E 514.4 Cat 8
Shock	MIL-STD 810E 516.4 I
Drop	MIL-STD 810E 516.4 IV
Salt Fog	MIL-STD 810E 509.3 I
Immersion	MIL-STD 810E 512.3 II-3
NSN	6130 14 564 1772
Part number	09118Y

ECMC² 350

Technology features

- Microprocessor controlled
- Built-in multiple redundant safety protection
- Software field upgradeable (*future proof*)
- BIT (*Built In self Test*)
- DC input automatic cut off to prevent deep discharge of vehicle battery
- SM Bus (*smart battery*) compatible
- AC and DC input protection by field re-settable circuit breakers

Materials

- Case: high impact polypropylene
- Colour: black
- Control panel: aluminium/ABC
- Cables: 105°C rated PVC

Built-in protection devices ensure safety in case of:

- Exposure to heat
- Exposure to direct sunlight for extended periods
- Short circuit
- Over voltage
- Under voltage
- Transient voltage spikes

Transportation and storage:

- For long term storage use a dry place at a temperature preferably not exceeding +50°C
- Short term storage at -40°C to +75°C is possible

Performance characteristics for Li-ion batteries

SAI 2590	5 charged in approx. 5 hours
SAI 2800	5 charged in approx. 5 hours
SALLY	5 charged in approx. 5 hours
PR4G military battery	BA684A - ALI142 - ALI146 BA685A - ALI143
Etc... (capable of charging more than 50 battery types)	

Safety/Reliability standards

Information Technology Equipment	EN 60950-1
MTBF (MIL HDBK-217F GB)	40 000 h at 25°C
Operational ceiling	700 hPa

EMI standards

EMC emission	EN 61000-6 3 & 4 MIL-STD 461D RE102 Ground Army
EMC immunity	EN 61000-6 1 & 2 MIL-STD 461D RS103 Ground Army
RF emission	FCC 47 CFR Ch 1, Pt 15
Mains input connector	IEC 320/C

References

Charger unit	O9119Z	NSN (To Be Advised)
Interface	GP16497	NSN (To Be Advised)
Cable DC/DC	GP16715	NSN (To Be Advised)
Cable AC/DC	GP16716	NSN (To Be Advised)
Case	GP16923	NSN (To Be Advised)

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