invertek energy

PRODUCT CATALOGUE

www.invertekenergy.com

MADE IN INDIA

Invertek Energy is an upcoming player in the power product industry.It makes sense that the company's top-notch products are what have enabled it to become India's most strong brand. With its ability to create dependable products with the newest technology integrated that are well accepted and valued by household consumers and the industrial sector around the world. Invertek Energy provides a comprehensive range of power backup solutions, Solar Solutions and Battery as well.

We understand the value of having power in today's society and how to transmit it effectively. The home UPS power backup systems from Invertek Energy provide stable, uninterruptible power to keep you comfortable and connected at all times.

The Invertek Energy commercial UPS line comes in a range of power settings to satisfy the needs of all houses for power backup. All of our solutions for home power backup go through a rigorous quality control process and have a strong guarantee and after-sales assistance.

With an expert team of professionals, the company intends to disrupt and reform the solar energy and backup market. We now offer inverters and batteries to nations such as Asia Pacific, South East Asia, Middle East & Africa.

Empowering the world with seamless power ...

850/12V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Grid Charging Up To 15 Amp
- Battery Reverse Protection
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible

- **MODEL : RAPID+ 850**
- **VA RATING : 750VA/12V**
- **BULB LOAD in WATT ±5% : 525 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 10A - 15A**

1050/12V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Grid Charging Up To 15 Amp
- Battery Reverse Protection
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible

- **MODEL : RAPID+ 1050**
- **VA RATING : 950VA/12V**
- **BULB LOAD in WATT ±5% : 650 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 10A - 15A**

1250/12V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- Electronic Breaker – Resettable Fuse Along With Glass Fuse
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible

- **MODEL : RAPID + 1250**
- **VA RATING : 1150VA/12V**
- **BULB LOAD in WATT ±5% : 820 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

1350/12V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- Electronic Breaker – Resettable Fuse Along With Glass Fuse
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible

- **MODEL : RAPID+ 1350**
- **VA RATING : 1250VA/12V**
- **BULB LOAD in WATT ±5% : 875 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

1700/12V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible
- Input / Output Terminal Block (N E L) Used

- **MODEL : RAPID+ 1700**
- **VA RATING : 1600VA/12V**
- **BULB LOAD in WATT ±5% : 1120 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

2000/24V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible

- **MODEL : RAPID +2000**
- **VA RATING : 1800VA/24V**
- **BULB LOAD in WATT ±5% : 1440 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

2500/24V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Input / Output Terminal Block (N E L) Used

- **MODEL : RAPID+ 2500**
- **VA RATING : 2250VA/24V**
- **BULB LOAD in WATT ±5% : 1800 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

3000/24V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Input / Output Terminal Block (N E L) Used

- **MODEL : RAPID+ 3000**
- **VA RATING : 2750VA/24V**
- **BULB LOAD in WATT ±5% : 2200 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

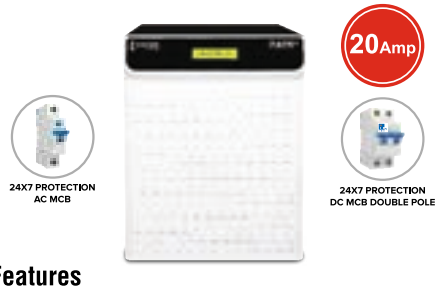
3500/24V

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Automatic Bypass
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible
- Input / Output Terminal Block (N E L) Used

- **MODEL : RAPID+ 3500**
- **VA RATING : 3250VA/24V**
- **BULB LOAD in WATT ±5% : 2600 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

4500/48V

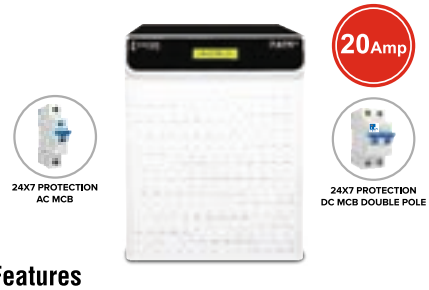


Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible
- Input / Output Terminal Block (N E L) Used
- Battery / Dc Mcb - Isolates Battery From Ups.
- Manual Bypass Maintenance.

- **MODEL : RAPID+ 4500**
- **VA RATING : 4000VA/48V**
- **BULB LOAD in WATT ±5% : 3200 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

6000/48V



Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Rapid Charging Up To 20 Amp
- Battery Reverse Protection
- MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TG/TUB/SMF/GEL/Li)
- Generator Compatible
- Input / Output Terminal Block (N E L) Used
- Battery / Dc Mcb - Isolates Battery From Ups.
- Manual Bypass Maintenance.

- **MODEL : RAPID+ 6000**
- **VA RATING : 5250VA/48V**
- **BULB LOAD in WATT ±5% : 4200 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 15A - 20A**

TECHNICAL SPECIFICATIONS

MODEL	RAPID + 850	RAPID + 1050	RAPID + 1250	RAPID + 1350	RAPID + 1700	RAPID + 2000	RAPID + 2500	RAPID + 3000	RAPID + 3500	RAPID + 4500	RAPID + 6000
VA RATING	750VA	950VA	1150VA	1250VA	1600VA	1800VA	2250VA	2750VA	3250VA	4000VA	5250VA
DC BUS	12v	12V	12V	12V	12V	24V	24V	24V	24V	48V	48V
BULB LOAD in WATT +/- 5%	525 WATT	650 WATT	820 WATT	875 WATT	1120 WATT	1440 WATT	1800 WATT	2200 WATT	2600 WATT	3200 WATT	4200 WATT
NO LOAD CURRENT	< 1.8 A										
OUTPUT VOLTAGE @ NO LOAD	< 240VAC @12.0 VDC					< 240VAC @24.0 VDC				< 240VAC @48.0 VDC	
BATTERY LOW ALARM	10.5 ± 0.2V					21.2 ± 0.2V				42.4 ± 0.2V	
BATTERY LOW SHUTDOWN	10.4 ± 0.2V					20.8 ± 0.2V				41.6 ± 0.2V	
SHORT CIRCUIT PROTECTION	YES										
INVERTER OUTPUT FREQUENCY	50 HZ ± 0.1 Hz										
MODE	UPS MODE										
MAINS INPUT VOLATGE RANGE	170V TO 265 V										
MAINS AC LOW CUT	170VAC ± 10VAC										
MAINS AC LOW CUT RECOVERY	180VAC ± 10VAC										
MAINS AC HIGH CUT	265VAC ± 10VAC										
MAINS AC HIGH CUT RECOVERY	255VAC ± 10VAC										
MAXIMUM CHANGE OVER TIME	< 8 msec										
MODE	WIDE UPS MODE										
MAINS INPUT VOLATGE RANGE	70V TO 290 V										
MAINS AC LOW CUT	70VAC ± 10VAC										
MAINS AC LOW CUT RECOVERY	110VAC ± 10VAC										
MAINS AC HIGH CUT	290VAC ± 10VAC										
MAINS AC HIGH CUT RECOVERY	280VAC ± 10VAC										
MAXIMUM CHANGE OVER TIME	< 18 msec										
MODE	CHARGING MODE										
CHARGING CURRENT @ 220V AC	10A-15A/18A			15A-20A							
BOOST VOLATGE (TUBULAR MODE)	14.4V ± 0.2V										
BOOST VOLATGE (LEAD ACID MODE)	14.0V ± 0.2V										
BOOST MODE (ENABLE TUBULAR MODE)	15.0V ± 0.2V										
BOOST MODE (ENABLE LEAD ACID MODE)	15.0V ± 0.2V										
FLOAT VOLTAGE	13.6V ± 0.2V										
SHORT CIRCUIT	YES										
PROTECTIONS											
BATTERY LOW CUT OFF	1 TIME										
OVERLOAD (AUTO RETRIES)	4 TIME										
SHORT CIRCUIT (AUTO RETRIES)	3 TIME										
OVER TEMPERATURE	3 TIME										
BATTERY OVER CHARGE	YES										
INPUT PROTECTION	YES (MAINS FUSE BLOWN ALONG WITH RESETTABLE FUSE).			YES (MAINS MCB TRIP incase of short circuit in MAINS MODE)							
ENVIRONMENT											
STORAGE TEMPERATURE	0 TO + 40 C										
OPERATING TEMPERATURE	0 TO + 40 C										
HUMIDITY	0-95% NON-CONDENSNG										
ACOUSTIC NOISE (at 1 mts)	< 45dB from 1 METER										
PROTECTION GLASS	IP-20										

900/12V

15Amp

ECB PROTECTION

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Smart Fast Charging Up To 15 Amp
- Battery Reverse Protection
- Electronic Breaker – Resettable Fuse Along With Glass Fuse
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Indian /universal Output Socket Used

- **MODEL : MEGA + 900**
- **VA RATING : 900VA/12V**
- **BULB LOAD in WATT : 630 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 10-15A**

1100/12V

25Amp

ECB PROTECTION

Features

- DSP Pure Sine Wave Technology Using Heavy Duty Mosfet
- Graphical Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Smart Fast Charging Up To 25 Amp
- Battery Reverse Protection
- Electronic Breaker – Resettable Fuse Along With Glass Fuse
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Indian /universal Output Socket Used

- **MODEL : MEGA + 1100**
- **VA RATING : 1100VA/12V**
- **BULB LOAD in WATT : 800 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **CHARGING CURRENT : 5A / 10A / 15A / 25A**

1250/12V

25Amp

24X7 PROTECTION AC MCB

Features

- DSP Pure Sine wave Technology Using Heavy Duty Mosfet
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Smart Fast Charging Upto 25 Amp.
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up to 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Crest Factor 3:1
- Indian /universal Output Socket Used

- **MODEL : MEGA + 1250**
- **VA RATING : 1260 VA/12V**
- **BULB LOAD in WATT : 875 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

1500/12V

25Amp

24X7 PROTECTION AC MCB

Features

- DSP Pure Sine wave Technology Using Heavy Duty Mosfet
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Smart Fast Charging Upto 25 Amp.
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7– Isolates Mains Input From Ups
- Battery Reserve Up to 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Crest Factor 3:1
- Indian /universal Output Socket Used

- **MODEL : MEGA + 1500**
- **VA RATING : 1500VA/12V**
- **BULB LOAD in WATT : 1020 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

1600/24V

25Amp

24X7 PROTECTION
AC MCB

Features

- Dsp Pure Sine wave Technology Using Heavy Duty Mosfet
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Up to 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Up to 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- GENERATOR COMPATIBLE
- CREST FACTOR 3:1
- INPUT / OUTPUT TERMINAL BLOCK (N E L) USED

- **MODEL : MEGA + 1600**
- **VA RATING : 1600VA/24V**
- **BULB LOAD in WATT : 1280 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

2000/24V

25Amp

24X7 PROTECTION
AC MCB

Features

- Dsp Pure Sine wave Technology Using Heavy Duty Mosfet
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Up to 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Up to 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- GENERATOR COMPATIBLE
- CREST FACTOR 3:1
- INPUT / OUTPUT TERMINAL BLOCK (N E L) USED

- **MODEL : MEGA + 2000**
- **VA RATING : 2000VA/24V**
- **BULB LOAD in WATT : 1600 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

2500/24V

25Amp

24X7 PROTECTION
AC MCB

Features

- Dsp Pure Sine Wave Technology Using Heavy Duty Mosfet
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Up To 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used

- **MODEL : MEGA + 2500**
- **VA RATING : 2500VA/24V**
- **BULB LOAD in WATT : 2000 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

3500/24V

24X7 PROTECTION
AC MCB

25Amp

24X7 PROTECTION
DC MCB DOUBLE POLE

Features

- Dsp Pure Sine Wave Technology Using Heavy Duty Mosfet
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Up To 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Up To 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - Isolates Battery From Ups.

- **MODEL : MEGA + 3500**
- **VA RATING : 3500VA/24V**
- **BULB LOAD in WATT : 2600 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

3500/48V

25Amp

24X7 PROTECTION
AC MCB

24X7 PROTECTION
DC MCB DOUBLE POLE

Features

- DSP Pure Sine wave Technology Using Heavy Duty Mosfet.
- LCD Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Upto 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Upto 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - Isolates Battery From Ups.
- Manual Bypass – Rotary Type.

- **MODEL : MEGA + 3500**
- **VA RATING : 3500VA/48V**
- **BULB LOAD in WATT : 2800 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

4000/48V

25Amp

24X7 PROTECTION
AC MCB

24X7 PROTECTION
DC MCB DOUBLE POLE

Features

- DSP Pure Sine wave Technology Using Heavy Duty Mosfet.
- LCD Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Upto 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Upto 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - Isolates Battery From Ups.
- Manual Bypass – Rotary Type.

- **MODEL : MEGA + 4000**
- **VA RATING : 4000VA/48V**
- **BULB LOAD in WATT : 3200 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

5000/48V

25Amp

24X7 PROTECTION
AC MCB

24X7 PROTECTION
DC MCB DOUBLE POLE

Features

- DSP Pure Sine wave Technology Using Heavy Duty Mosfet.
- LCD Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Powerful Charging During Low Voltage – 90V
- Super Fast Charging Upto 25 Amp
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Battery Reserve Upto 10.4 V
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - Isolates Battery From Ups.
- Manual Bypass – Rotary Type.

- **MODEL : MEGA + 5000**
- **VA RATING : 5000VA/48V**
- **BULB LOAD in WATT : 4000 WATT**
- **COMPATIBLE BATTERY : TGEL/TUB/SMF/GEL/Li**
- **MAX CHARGING CURRENT : 25 AMPERE**
- **VARIABLE CHARGING CURRENT : 5A / 10A / 15A / 25A**

MODEL	MEGA+										
VA RATING	900	1100	1250	1500	1600	2000	2500	3500	3500	4000	5000
DC BUS	12V	12V	12V	12V	24V	24V	24V	24V	48V	48V	48V
BULB LOAD in WATT	630 WATT	800 WATT	875 WATT	1020	1280 WATT	1600 WATT	2000 WATT	2600 WATT	2800 WATT	3200 WATT	4000 WATT
NO LOAD CURRENT	< 1.8 A				< 1.8 A						
OUTPUT VOLTAGE @ NO LOAD	< 240VAC @12.0 VDC				< 240VAC @24.0 VDC				< 240VAC @48.0 VDC		
BATTERY LOW ALARM	10.5 ± O.2V				21.0 ± 0.2V				42.4 ± 0.2V		
BATTERY LOW SHUTDOWN	10.3 ± O.2V				20.6 ± 0.2V				41.6 ± 0.2V		
SHORT CIRCUIT PROTECTION	YES										
INVERTER OUTPUT FREQUENCY	50 HZ ± 0.1 Hz										
MODE	UPS MODE										
MAINS INPUT VOLATGE RANGE	170V TO 265 V										
MAINS AC LOW CUT	170VAC ± 1OVAC										
MAINS AC LOW CUT RECOVERY	180VAC ± 1OVAC										
MAINS AC HIGH CUT	265VAC ± 1OVAC										
MAINS AC HIGH CUT RECOVERY	255VAC ± 1OVAC										
MAXIMUM CHANGE OVER TIME	< 8 msec										
MODE	WIDE UPS MODE										
MAINS INPUT VOLATGE RANGE	70V TO 290 V										
MAINS AC LOW CUT	70VAC ± 1OVAC										
MAINS AC LOW CUT RECOVERY	110VAC ± 1OVAC										
MAINS AC HIGH CUT	290VAC ± 1OVAC										
MAINS AC HIGH CUT RECOVERY	280VAC ± 1OVAC										
MAXIMUM CHANGE OVER TIME	< 18 msec										
MODE	CHARGING MODE										
CHARGING CURRENT @ 220V AC	15-18A	5/10/15/25 A ± 3A									
BOOST VOLATGE (TUBULAR MODE)	14.4V ± 0.2V				28.8V ± 0.4V				57.6V ± 0.8V		
BOOST VOLATGE (LEAD ACID MODE)	14.0V ± 0.2V				28.0V ± 0.4V				56V ± 0.8V		
BOOST MODE (ENABLE TUBULAR MODE)	14.8V ±- 0.2V				28.8V ± 0.4V				57.8V ± 0.8V		
BOOST MODE (ENABLE LEAD ACID MODE)	13.8V ± 0.2V				27.8V ± 0.4V				56.8.0V ± 0.8V		
FLOAT VOLTAGE	13.6V ± 0.2V				27.2V ± 0.4V				54.4V ±0.8V		
SHORT CIRCUIT	YES										
PROTECTIONS											
BATTERY LOW CUT OFF	1 TIME										
OVERLOAD (AUTO RETRIES)	4 TIME										
SHORT CIRCUIT (AUTO RETRIES)	3 TIME										
OVER TEMPERATURE	3 TIME										
BATTERY OVER CHARGE	YES										
INPUT PROTECTION	YES (MAINS MCB TRIP incase of short circuit in MAINS MODE)										
ENVIRONMENT											
STORAGE TEMPERATURE	0 TO ± 40 C										
OPERATING TEMPERATURE	0 TO ± 40 C										
HUMIDITY	0-95% NON-CONDENSNG										
ACOUSTIC NOISE (at 1 mts)	< 45dB from 1 METER										
PROTECTION GLASS	IP-20										
RECOMMENDATIONS											
INPUT WIRE in Sq mm	1 SQMM				4 SQ MM			6 SQ MM			8 SQMM
OUTPUT WIRE in Sq mm	N.A	N.A			2.5 SQ MM			4 SQ MM			6 SQMM
BATTERY WIRE in Sq mm	8 SQMM	10 SQMM	12 SQMM	25 SQMM	10 SQMM	12 SQMM	16SQMM	25 SQMM	16 SQMM		25 SQMM
OUTPUT SOCKET	6 AMP	16 AMP			N.A						
INPUT/OUTPUT PLUG	6 AMP	16A ISI MARKED			N.A						
INPUT TERMINAL BLOCK (N E L)	N.A				30 AMP (T.B)						
OUTPUT TERMINAL BLOCK (N E L)	N.A				30 AMP (T.B)						
AC MCB (LOAD AT MAINS BYPASS MODE)	N.A	10 AMP			16 AMP	20 AMP	25 AMP	32 AMP	32 AMP		
BATTERY / DC MCB	N.A							63 AMP DC 2 POLE			
BYPASS MODE	ELECTRONIC BYPASS							MANNUAL ROTARY TYPE			
DC FUSE RATING (FOR REVERSE POLAIRTY PROTECTION)	40 A X 3 Nos										40A x 4 Nos

10KVA/96V

20Amp

24X7 PROTECTION
DC MCB DOUBLE POLE

Features

- Dsp Pure Sine wave Technology Using IGBT.
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Cold Start
- Super Fast Settable Charging - 20Amp
- Battery Reverse Protection
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - Isolates Battery From Ups.
- Manual Bypass – Rotary Type.

- **MODEL : STATIC 10KVA**
- **VA RATING : 10KVA/96V**
- **WATT : 8kW WATT**
- **COMPATIBLE BATTERY : LA/VRLA/TUBULAR/GEL/LITHIUM**
- **GRID CHARGING CURRENT : 20 AMPERE**

10KVA/120V

20Amp

24X7 PROTECTION
DC MCB DOUBLE POLE

Features

- Dsp Pure Sine wave Technology Using IGBT.
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Cold Start
- Super Fast Settable Charging - 20Amp
- Battery Reverse Protection
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - Isolates Battery From Ups.
- Manual Bypass – Rotary Type.

- **MODEL : STATIC 10KVA**
- **VA RATING : 10KVA/120V**
- **WATT : 8kW WATT**
- **COMPATIBLE BATTERY : LA/VRLA/TUBULAR/GEL/LITHIUM**
- **GRID CHARGING CURRENT : 20 AMPERE**

MODEL	10KVA	
Capacity	96V	120V
Output load	8KW	
Output PF	0.8PF	
INPUT PARAMETERS		
Mains A.C. Low cut	140 ± 5V	
Mains A.C. Low cut Recovery	150 ± 5V	
Mains A.C. High cut	280 ± 5V	
Mains A.C. High cut Recovery	270 ± 5V	
OUTPUT PARAMETERS		
Mains Output Frequency	Same as Input (45Hz-55Hz)	
Inverter Output Frequency	50.0 Hz ± 0.1 Hz	
Output Voltage with Full Load	220V + 10V	
Wave Form	Pure Sine Wave	
Overload	Above 100%	
Short Circuit Protection	>300% Load (Few mSec)	
BATTERY		
DSP Controlled PWM charging with Soft start over full range of Mains		
Charging Current (Settable)	7Amp - 20 Amp	
Recommended Battery Capacity	100Ah - 200Ah	
Number of Batteries	8 12 8	12
TECHNOLOGY		
Digital Signal Processor (DSP) based PWM Generation & Control.		
IGBT Power Devices.		
Fuzzy Logic Controlled SMPS Based CC/CV Charger with soft start.		
Dimension (W x D x H) in mm	350x600x610	
Weight (Kg)	97	98

Note : Due to continuous product improvement specifications are subject to change without any prior notice.

950/12V – 30 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 30 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used

- **MODEL : SUN PRO**
- **VA RATING : 950/12V**
- **BULB LOAD IN WATT : 650 WATT**
- **SOLAR CHARGE CONTROLLER : 30 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 600 W**

1200/12V – 30 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 30 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used

- **MODEL : SUN PRO**
- **VA RATING : 1200/12V**
- **BULB LOAD IN WATT : 820 WATT**
- **SOLAR CHARGE CONTROLLER : 30 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 800 W**

2500/24V – 55 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 55 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - ISOLATES BATTERY FROM UPS.
- Solar MCB Used

- **MODEL : SUN PRO**
- **VA RATING : 2500/24V**
- **BULB LOAD IN WATT : 1800 WATT**
- **SOLAR CHARGE CONTROLLER : 55 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 1800 W**

2800/24V – 75 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 75 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - ISOLATES BATTERY FROM UPS.
- Solar MCB Used

- **MODEL : SUN PRO**
- **VA RATING : 2800/24V**
- **BULB LOAD IN WATT : 2200 WATT**
- **SOLAR CHARGE CONTROLLER : 75 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 2.2 KW**

3500/24V – 75 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 75 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - ISOLATES BATTERY FROM UPS.
- Solar MCB Used
- **MODEL : SUN PRO**
- **VA RATING : 3500/24V**
- **BULB LOAD IN WATT : 2600 WATT**
- **SOLAR CHARGE CONTROLLER : 75 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 2.5 KW**

4000/48V – 75 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 75 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - ISOLATES BATTERY FROM UPS.
- Solar MCB Used
- **MODEL : SUN PRO**
- **VA RATING : 4000/48V**
- **BULB LOAD IN WATT : 3200 WATT**
- **SOLAR CHARGE CONTROLLER : 75 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 3.2 KW**

5000/48V – 75 AMP SCC

CONTROLLED BATTERY CHARGING

Features

- Dsp Pure Sine wave Solar PCU PWM Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 75 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- Automatic Bypass
- Efficiency – 85%
- Powerful Charging During Low Voltage– 90V
- Battery Reverse Protection
- Most Advance 32 Bit Microprocessor – 3011
- Circuit Breaker – MCB Protection 24 X 7 – Isolates Mains Input From Ups
- 6 Stage Charging Technology Helps In Increasing Battery Life.
- Load Start Up 300% Of Rated Capacity
- Compatible With All Types Of Batteries (TGEL/TUB/SMF/GEL/Li/Li)
- Generator Compatible
- Crest Factor 3:1
- Input / Output Terminal Block (N E L) Used
- Battery / DC MCB - ISOLATES BATTERY FROM UPS.
- Solar MCB Used
- **MODEL : SUN PRO**
- **VA RATING : 5000/48V**
- **BULB LOAD IN WATT : 4000 WATT**
- **SOLAR CHARGE CONTROLLER : 75 AMP**
- **TECHNOLOGY : PWM BASED**
- **MAX PV ARRAY : 4 KW**

Model	SUNPRO 950	SUNPRO 1200	SUNPRO 2500	SUNPRO 2800	SUNPRO 3500	SUNPRO 4000	SUNPRO 5000
DC BUS	12V	12V	24V	24V	24V	48V	48V
BULB LOAD in WATT +/- 5%	650W	820W	1800W	2200W	2600W	3200W	4000W
DC CURRENT	56A ± 3%	64A± 3%	56A± 3%	72A± 3%	92A± 3%	68A± 3%	86A± 3%
SCC TYPE	PWM						
MAX PV CONNECTED IN WATT	600W	800W	1800W	2.2KW	2.5KW	3.2KW	4KW
MAX PV CURRENT in AMP	30 A	30 A	55 A	75 A	75A	75A	75A
Manins Input mode							
Mains AC low cut UPS mode	175VAC ± 10VAC						
Mains AC low cut recovery UPS mode	185VAC ± 10VAC						
Mains AC high cut UPS mode	265VAC ± 10VAC						
Mains AC high cut recovery UPS mode	255VAC ± 10VAC						
Mains AC low cut WUPS mode	90VAC ± 10VAC						
Mains AC low cut recovery WUPS mode	110VAC ± 10VAC						
Mains AC high cut WUPS mode	295VAC ± 10VAC						
Mains AC high cut recovery WUPS mode	285VAC ± 10VAC						
Input Frequency Range	40Hz to 60Hz						
Voltage Output in Mains Mode	Same as input						
Frequency Output in Mains Mode	Same as input						
Battery							
Battery Type	LA / Tubular / SMF						
DC input voltage	12V		24V			48V	
Battery Quantity 12V 100Ah to 220Ah	1		2			4	
Float charging voltage	13.7V±0.2V		27.4±0.4V			54.8±0.8V	
Boost charging voltage for Tubular and SMF Battery	14.5V±0.2V		28.0V ± 0.4V			56.0V±0.8V	
Boost charging voltage for LA Battery	14.0V±0.2V		29.0V± 0.4V			58.0V±0.8V	
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)						
Battery High Cut	15.0±0.2V		31.0 +/- 0.4V			62.0 ± 0.8V	
Charging Current 100Ah-135Ah	12A ± 1A						
Charging Current 150Ah-220Ah	15A ± 1A						
Backup Mode							
Output voltage	220VAC +5% -10% (untill battery low alarm)						
Output frequency	50Hz ± 0.2 Hz						
Output waveform	Pure Sine Wave ≤ 5% THD						
No Load current	≤ 4% of rated capacity						
Low Battery Warning	10.7V±0.2V		22V ± 0.4V			44V ±- 0.8V	
Low Battery Cut	10.5V±0.2V		21.6 ± 0.4V			43.2V ± 0.8V	
Change over time UPS mode	< 10msec						
Change over time WUPS mode	< 25msec						
Crest Factor	1 : 5						
Peak Efficiency	86%						
Protections							
Overload in backup mode	≤ 100% Load Continuously run >100% to <120% Load, System will shut down in 2min >120% to <140% Load, System will shut down in 1min >140% to <160% Load, System will shut down in 17sec >160% to <180% Load, System will shut down in 6sec >180% to <200% Load, System will shut down in 3sec >200% Load, System will shut down in 850msec						
Short Circut in Backup Mode	System will shutdown after 3 - retries in case of output short circuit						
Short Circut in Mains Mode	Mains Fuse Blown						
Backfeed	System will shutdown in case of backfeed and there is no retry						
Over tempature	Yes provided, if heatsink tempature goes above 100°C System will shut down						
Reverse Battery	DC fuse will belown						
Phase to Phase protection in mains mode	Yes provided by electronic						
Solar Charge Controller							
Solar Charge Controller type	PWM type						
Efficiency	> 96%						
Mains Charging Shairing	If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid.						
Load Shairing	Load Shairing is provided, solar will deliver the power as per load and battery requirement. Solar Current = Load Current + Batter Charging Current If load is 0% then it will protect the battery for over charging and increase the battery life deliver <18A current for battery charging.						
Option for Solar Mode & Normal Mode	Yes, provided, user can select Solar Mode or Normal Mode. Hense user can select to Save Maximum Power or Smart Power saving mode. Solar Mode: System will run the 100% load on solar whole days (9:AM to 4:PM) and charge the battery from solar. Normal Mode: System will run the 100% load on solar during peak hours (10:AM to 3:PM) and charge the battery from solar.						
100% Solar Priority & Solar Utilization	System is utilizing 100% solar power available						
Revrse PV protection	Yes provided						
Revrse current flow to PV	Yes provided						
Display and Alarms							
LCD Initial Display	Welcome, Contect Website Address, System Capacity, Charging Till 80VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battert Type Selected LA / SMF / Tubular, Battery Capacity Selected 100-135Ah / 150-200Ah,						
LCD Status Display	Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS OFF, Battery Voltage, Load %, Output Voltage, Output Frequency, Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut						
LCD Fault / Protection Status Display	Mains Fuse Below / MCB Trip, Short Circuit, Overload, Battery Low, High Tempature, Backfeed						
Buzzer	Audible beep for Overload, Short Circuit, Backfeed, Low Battery, Over Tempature, Mains Fuse below / MCB Trip						
Safety							
HV Test Input to Earth	Leakage current <5mA when 1.5KV applied for 1 min						
HV Test Output to Earth	Leakage current <5mA when 1.5KV applied for 1 min						
IR Test Input to Earth	>5MΩ between @ 500VDC						
IR Test Output to Earth	>5MΩ between @ 500VDC						
Earth Leakage current in Mains mode	< 2.5mA						
Earth Leakage current in Backup mode	< 2.5mA						
Environment							
Operating Temperature	0°C to 40°C						
Storage Temperature	0°C to 50°C						
Operating Relative Humidity	90% Non-Condensing						

3.5KVA-3KW/24V

CONTROLLED BATTERY CHARGING

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 70 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

5KVA-5KW/48V

Unique Display

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 100 Amp
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

7.5KVA-7.5KW-96V

Unique Display

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 75 Amp
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

10KVA-10KW/96V

Unique Display

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 80 Amp
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

10KVA-10KW/120V

Unique Display

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 80 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

15KVA-15KW/240V

Unique Display

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 60 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

20KVA-20KW/240V

Unique Display

Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 80 Amp
- Lcd Display (16 X 2)
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available

BACK PANEL

INVERTER RATING (KVA)		3.5KVA	5KVA	5KVA	7.5KVA	10KVA	15KVA	20KVA	25KVA	30KVA
A. SOLAR CHARGE CONTROLLER (SCC)										
1	ChargerType & Topology	Buck Type MPPT								
2	PV Total Nominal Capacity (KVA)	3KW	5KW	5KW	7.5KW	10KW	15KW	20KW	25KW	30KW
3	No. of MPPT Channels	1	1	1	1	1	1	1	1	1
4	Per Channel PV Capacity (w)(Nominal Peak)	3.5KW/3.2KW	5KW/5.5KW	5KW/5.5KW	7.5KW/8.2KW	10KW/11KW	15KW/16.5KW	20KW/22KW	25KW/27.5KW	30KW/33KW
5	Max. open Circuit PV Volts (Voc)	240	240	300	300	400	700	700	700	700
6	MPPT Voltage Range (Volts)	70-240	70-240	96-300	96-300	140-400	240 - 700	240 - 700	240 - 700	240 - 700
7	PV Minimum Voltage (Volts)	24	48	96	96	120	240	240	240	240
8	Max. I/P Amps per channel (Amps)	45	75	35	55	60	45	60	75	80
9	Max. Battery Amps during PV Charging(Amps)	60	100	50	73	78	60	78	80	97
10	Max. SCC O/P (Amps)	60	100	50	75	80	60	80	80	97
11	Battery type Supported	VRLA / LMLA/Li-Ion/Li-Ph (User Settable)								
12	Min. Battery AH (Suggested)	150	150	150	150	150	300	300	300	300
13	Peak charging Efficiency (%)	>93								
B. SOLAR INVERTER										
1	No. of Phases/Connection Type	1-Phased/2 wire								
2	Nominal Battery Voltage (Volts)	24	48	96	96	96/120	240	240	240	240
3	Battery Ripple	5% for VRLA & LMLA/ 1% for Li-Ion & Li- Ph Battery								
4	Nominal Output Voltage/Frequency (Volts/Hz)	230/50								
5	Nominal KVA Capacity (KVA)	3.5KVA	5KVA	5KVA	7.5KVA	10KVA	15KVA	20KVA	25KVA	30KVA
6	Output Amps	10.43	17.39	17.39	26.09	34.78	52.17	69.57	86.96	104.3
7	Voltage Regulation (in standalore Mode)	± 2%								
8	Freq. Regulation (in Standalone mode)	± 0.5 Hz								
9	THD	< 3%								
10	Load Power Factor	0.8 lag to unity								
11	Efficiency (%): Peak/ 100% Load/25% Load	>89/ >88/ >86	>90/ >87/ >86	>90/ >87/ >86	>90/ >87/ >86	>89/ >89/ >86	>89/ >89/ >86	>89/ >89/ >86	>89/ >89/ >86	>91/ >89/ >86
12		100-110% - 60 sec								
13	Over Loads :	110-125% - 30 sec								
14		125-150% - 5 sec								
15	Max Allowed Phase Imbalance (%)	N/A								
16	Auto Bypass Feature	Provided								
C. GRID CHARGER										
1	Grid Voltage Range (Voltage Sync. Range)	160V-280V (Phase to Neutral)								
2	Grid Frequency Range (Freq. Sync. Range)	50 Hz ±5%								
3	Max Grid Import Power (KVA)	3.5KVA	5KVA	5KVA	7.5KVA	10KVA	15KVA	20KVA	25KVA	30KVA
4	Max Battery Amps During Grid Charging (Amps)	40	68	34	51	54	40	54	68	72.5
5	Peak charging Efficiency (%)	>87								
INVERTER (KW)		**3.0**	**4.0**	**4.0**	**6.0**	**8.0**	**12.0**	**16.0**	**20.0**	**24.0**
1	PV Side	Reverse Polarity , Surg Protection								
2	Battery Side	Reverse Polarity, Over/Under Voltage , Current Limit								
3	Grid Side	Over/Under Voltage , Over/Under Frequency ,Anti-Islanding,Surg Protection								
4	Load Side	Overloads, Short circuit								
5	System Protection	Over Temperature.Trip,Breakers at all Inputs,Emergency stop								
D. USER INTERFACE										
1. DISPLAY INTERFACE		LCD NUMERICAL DISPLAY								
2. DISPLAYED PARAMETERS										
1	Battery Parameters	Voltage, Charging Current, Discharging Current,AH-in,AH-out,Cumulative AH-in,Cumulative AH-out,charging state-charging/Discharging.								
2	PV Parameters	Voltage, Current, Power, Cumulative,Today Generation								
3	Grid Parameters	Voltage, Current, Frequency, Import Power, Import Cumulative Energy,Power Factor								
4	Load Parameters	Voltage, Current, Frequency, Power,Cumulative,Power Factor								
5	Data Logging	90 Days PV Generation, Import Energy, Load Energy.								
6	System Level	Faults and warnings								
3. INDICATIONS/PROTECTION										
1	LED Indications:	Power ON, PV Available, PV Charging, Inverter ON, Grid Import Mode, Fault, HYBRID /OFF GRID Mode								
2	User Keypad for Settings Change	Keypad for Settings Input								
3	Breakers at all inputs/Space Heater/Emergency stop Button	Provided								
4	Over shoot due to misbehaviour of BHMS	Provided								
5	Remote monitoring: Optional*	**Data monitoring through GPRS (Optional)**								
Designed and Manufactured the product as for IEC		**Tested as per IEC 61683, IEC 61727, EN 50530 and IEC 60068 (1, 2, 14, 30).**								
MISCELLANEOUS										
1	Degree of Protection	IP31								
2	Cooling Method	Temp. Controlled Force Cooling								
3	Operating Temperature	0-55°C ambient operation								
4	Humidity (Non-condensing)	Max. 95% Non-Condensing								
5	Altiude (above sea level)	1000m above sea level								
6	Housing	Sheet Metal,Floor Standing					Floor Standing,Front/Rear Door			
7	Colour Shade	RAL-7035/RAL-7016								
8	Cable Entry	Rear Bottom					Front Bottom			
9	Cable Termination Type	Bus Bar Type with ring type lugs								
10	Terminal Sizes(PV/Battery/Grid/Load)	TERMINAL SCREW TYPE					35-50MM/35-50MM/25MM/25MM			

TALL TUBULAR BATTERY 100AH - 260AH

100AH@C10

Features

- High pressure spine casting (<100 bar) For superior life
- Satiated Wet Paste gives higher active material Integrity, lowers resistance to deliver consistent power & life
- Serrated Sep - Reduced stratification & float currents Provides better performance
- Superior cyclic life
- Sturdy PPCP (polypropylene copolymer) containers for durability
- Low antimony reduces the need to top up more frequently
- Thicker spine grids for Positive plates —ensure better compaction of lead, can withstand corrosion & provides longer life
- service and active material will not leak causing internal shorts & failure
- Specially designed Ceramic Vent Plugs with high visual Red Float level indicator offers easy visual indication of electrolyte level
- High quality flexible copper battery connectors with accurate current rating design
- Special lead coated, corrosion resistant bolts
- **GROSS WEIGHT : 52Kg±1%**

150AH@C10

Features

- High pressure spine casting (<100 bar) For superior life
- Satiated Wet Paste gives higher active material Integrity, lowers resistance to deliver consistent power & life
- Serrated Sep - Reduced stratification & float currents Provides better performance
- Superior cyclic life
- Sturdy PPCP (polypropylene copolymer) containers for durability
- Low antimony reduces the need to top up more frequently
- Thicker spine grids for Positive plates —ensure better compaction of lead, can withstand corrosion & provides longer life
- service and active material will not leak causing internal shorts & failure
- Specially designed Ceramic Vent Plugs with high visual Red Float level indicator offers easy visual indication of electrolyte level
- High quality flexible copper battery connectors with accurate current rating design
- Special lead coated, corrosion resistant bolts
- **GROSS WEIGHT: 58Kg±1%**

200AH@C10

Features

- High pressure spine casting (<100 bar) For superior life
- Satiated Wet Paste gives higher active material Integrity, lowers resistance to deliver consistent power & life
- Serrated Sep - Reduced stratification & float currents Provides better performance
- Superior cyclic life
- Sturdy PPCP (polypropylene copolymer) containers for durability
- Low antimony reduces the need to top up more frequently
- Thicker spine grids for Positive plates —ensure better compaction of lead, can withstand corrosion & provides longer life
- service and active material will not leak causing internal shorts & failure
- Specially designed Ceramic Vent Plugs with high visual Red Float level indicator offers easy visual indication of electrolyte level
- High quality flexible copper battery connectors with accurate current rating design
- Special lead coated, corrosion resistant bolts
- **GROSS WEIGHT : 65Kg±1%**

220AH@C10

Features

- High pressure spine casting (<100 bar) For superior life
- Satiated Wet Paste gives higher active material Integrity, lowers resistance to deliver consistent power & life
- Serrated Sep - Reduced stratification & float currents Provides better performance
- Superior cyclic life
- Sturdy PPCP (polypropylene copolymer) containers for durability
- Low antimony reduces the need to top up more frequently
- Thicker spine grids for Positive plates —ensure better compaction of lead, can withstand corrosion & provides longer life
- service and active material will not leak causing internal shorts & failure
- Specially designed Ceramic Vent Plugs with high visual Red Float level indicator offers easy visual indication of electrolyte level
- High quality flexible copper battery connectors with accurate current rating design
- Special lead coated, corrosion resistant bolts
- **GROSS WEIGHT : 68Kg±1%**

240AH@C10

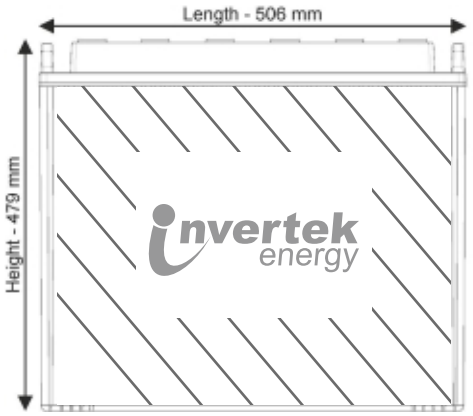
Features

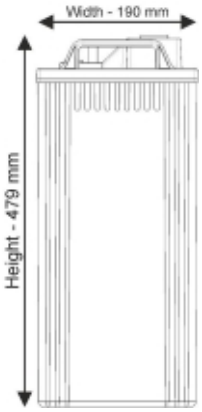
- High pressure spine casting (<100 bar) For superior life
- Satiated Wet Paste gives higher active material Integrity, lowers resistance to deliver consistent power & life
- Serrated Sep - Reduced stratification & float currents Provides better performance
- Superior cyclic life
- Sturdy PPCP (polypropylene copolymer) containers for durability
- Low antimony reduces the need to top up more frequently
- Thicker spine grids for Positive plates —ensure better compaction of lead, can withstand corrosion & provides longer life
- service and active material will not leak causing internal shorts & failure
- Specially designed Ceramic Vent Plugs with high visual Red Float level indicator offers easy visual indication of electrolyte level
- High quality flexible copper battery connectors with accurate current rating design
- Special lead coated, corrosion resistant bolts
- **GROSS WEIGHT : 70Kg±1%**

260AH@C10

Features

- High pressure spine casting (<100 bar) For superior life
- Satiated Wet Paste gives higher active material Integrity, lowers resistance to deliver consistent power & life
- Serrated Sep - Reduced stratification & float currents Provides better performance
- Superior cyclic life
- Sturdy PPCP (polypropylene copolymer) containers for durability
- Low antimony reduces the need to top up more frequently
- Thicker spine grids for Positive plates —ensure better compaction of lead, can withstand corrosion & provides longer life
- service and active material will not leak causing internal shorts & failure
- Specially designed Ceramic Vent Plugs with high visual Red Float level indicator offers easy visual indication of electrolyte level
- High quality flexible copper battery connectors with accurate current rating design
- Special lead coated, corrosion resistant bolts
- **GROSS WEIGHT : 72Kg±1%**





Range available: 100Ah to 260Ah

Features	Benefits
Long Cycles (1100@80% DOD,5000@20% DOD)	Long design life
Topping up frequency: 8 to10 months	Very low maintenance
High temperature performance	Can handle extreme weather conditions
High charge acceptance	Rugged Performance
Self discharge rate - 3 % per month @ STC	Longer life without charging

TECHNICAL DATA

Type of Battery	Nominal Voltage	Capacity @C20 at 27°C	Gross Battery Weight +/- 1% (Kg)	Overall Dimension			Terminal Type
				Length +/- 3mm	Width +/- 3mm	Height upto float top +/- 3mm	
	(V)	(Ah)		(mm)	(mm)	(mm)	
IE 100	12	100	52	506	190	479	L
IE 150	12	150	57	506	190	479	L
IE 200	12	200	65	506	190	479	L
IE 220	12	220	68	506	190	479	L
IE 240	12	240	70	506	190	479	L
IE 260	12	260	72	506	190	479	L

Conditions Apply*

Technical Specifications Are Subject To Change Without Prior Notice.

Electrical Parameters & Charging Profile

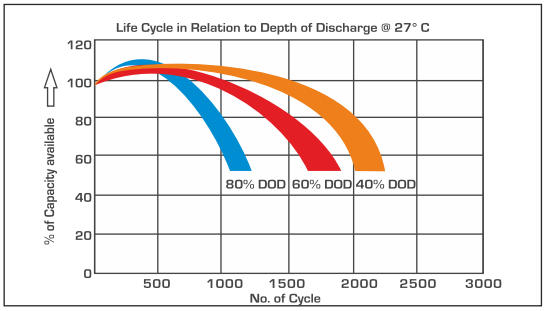
Battery Specified Capacity Test @ 27°C					
MODEL	C20 @ 10.5V	C10 @ 10.5V	C5 @ 10.5V	C3 @ 10.5V	C1 @ 10.5V
IE 100 (12 V 120AH @ C20)	100	90	92	88	60
IE 150 (12 V 150AH @ C20)	150	135	112	97	68
IE 200 (12 V 200AH @ C20)	200	180	150	129	90
IE 220 (12 V 220AH @ C20)	220	200	165	143	100
IE 240 (12 V 240AH @ C20)	240	211	176	151	106
IE 260 (12 V 260AH @ C20)	260	220	186	176	145

Ah & Wh Efficiency			
Ah Efficiency	>90%	Wh Efficiency	>80%

Specific Gravity & Self Discharge w.r.t. Temperature

	Add	Subtract
CHARGING TEMPERATURE COMPENSATION	0.005 volt per cell for every 1°C below 25°C 0.0028 volt per cell for every 1°F below 77°F	0.005 volt per cell for every 1°C above 25°C or 0.0028 volt per cell for every 1°F above 77°F
	Operating Temperature	Self Discharge
OPERATIONAL DATA	-4°F to 131°F (-20°C to +55°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%.	As per discharge Graph

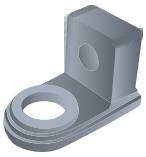
Expected Life



Charging Instructions

Charger Voltage Settings (at 77° F/ 25°C)			
System Voltage	12V	24V	48V
Maximum Charge Current	0.2C10		
Maximum Absorption Phase Time (hours)	4		
Absorption Voltage	14.4	28.8	57.6
Float Voltage	13.6	27.2	54.4
Equalization Voltage	16	32	64
Do not install or charge batteries in a sealer or non- ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.			
Periodic Charge	Provide a periodic freshening charge to maintain a SOC greater than the threshold of 70%		

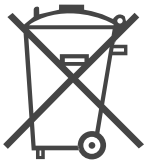
Terminal Configuration
Terminal Type : L
Terminal Height : 26.5 mm
Terminal Width : 25.7 mm
Terminal Length : 42 mm
Bolt Type : M8

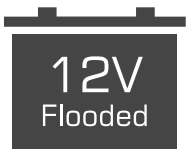


Transport Vent Plug Type
MF Locking

Flot Type
Locking Flot indigator cum watering lid for each cell

Recycle Responsibly





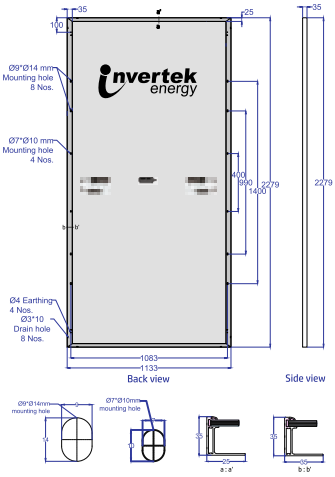
Bifacial - MONO PERC - 144 Cells
525Wp|530Wp|535Wp
540Wp|545Wp
INA-144MHC-xxx (xxx = 525-545 Wp)

Key Features

1. Additional Power yield with 27 YEARS OF PRODUCT LIFETIME with 0.5% annual power degradation.
2. LCOE IS CUT BACK with LESS BOS COST which improves value proposition of the product with competitive ROI.
3. TWO PEAK PERFORMANCE TIME, for optimum utilization of dual facial Generation.
4. Hassle-free installation with ability to INSTALL VERTICALLY IN EAST WEST DIRECTION, with improved soiling resistant.
5. CYLINDRICAL TABBING WIRE is used to reduce the shadow on cell active area.

Electrical Data Performance

Electrical Parameters	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power -Pmax	Wp	525	393.2	530	397.5	535	401.3	540	405.0	545	408.8
Maximum voltage (Vmpp)	V	41.12	38.29	41.39	38.48	41.61	38.68	41.81	38.79	42.02	38.80
Maximum current (Impp)	A	12.77	10.27	12.82	10.33	12.86	10.39	12.92	10.46	12.98	10.46
Open circuit voltage (Voc)	V	48.82	45.94	49.15	46.17	49.48	46.41	49.81	46.54	50.14	46.56
Short circuit current (Isc)	A	13.39	10.78	13.43	10.85	13.47	10.91	13.51	10.98	13.55	11.08
Module Efficiency	%	**20.33**		**20.53**		**20.73**		**20.92**		**21.12**	
Operating Temperature range (°C)		-40 ~+85°C		Power Tolerance						0~+2%	
Maximum system voltage		1500 VDC		Nominal operating cell temperature (NOCT)						45 ± 2 °C	
Maximum series fuse rating		25A		Fire Safety						Class-C (Type 1)	
Temperature coefficients of Isc (α)		0.048%/°C		Application						Class-A	
Temperature coefficients of Pmax (γ)		-0.35%/°C		Safety Class						Class II	
Temperature coefficients of Voc (β)		-0.28%/°C									



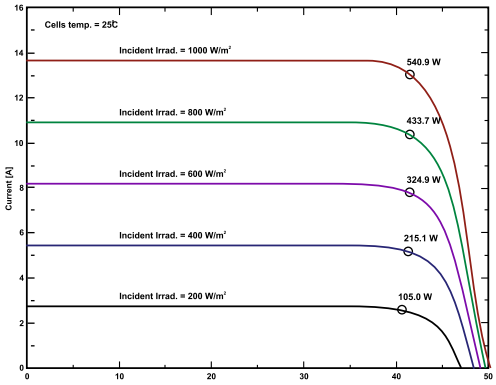
Bifacial Gain	Measurement	Unit	525	530	535	540	545
5%	Maximum Power(Pmax)	Wp	550	555	560	565	570
	Module Efficiency	%	21.29	21.48	21.68	21.87	22.07
10%	Maximum Power(Pmax	Wp	575	580	585	590	595
	Module Efficiency	%	22.26	22.45	22.65	22.84	23.03
15%	Maximum Power(Pmax	Wp	600	605	610	615	620
	Module Efficiency	%	23.23	23.42	23.61	23.81	24.00

***STC: Irradiance 1000 W/m2 module temperature 25° °C, Am=1.5; NOCT: Irradiance 800 W/m2, ambient teperature 20°C, Am=1.5, Wind speed 1m/s. Average power reduction of 4.5% at 200 W/m2 as per IEC 60904-1. Measuring Uncertainty +/- 3%*
***Power gain from rear side depends upon the ground reflectance (Albedo) 8 Bifaciality factor.*

MODULE MECHANICAL DATA

SPECIFICATION	DATA
Cell Type	Type 72 Mono PERC (144 half-cells) P-Type Bifacial solar cells
Dimensions	2279X1133X35mm (LxWxH) ± 1 mm
Weight	28.00 kgs
Front Cover	3.2 mm High Transmission, Low iron, Tempered Glass, AR coated
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)-FC/UFC Back sheet Composite Film (Transparent /White Back sheet)
J-Box	IP68 Split type Junction box with individual bypass diodes
Cable	300mmx2nos solar cable, 4mm2
Connectors	MC4 Compatible Connector IEC/UL Certified
Frame Material	Silver Anodized Aluminium frame with twin wall profile
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s
Standard Packaging	30Pieces/Pallet
Module Pieces per Container	600 pieces (40Feet HQ)

I-V CHARACTERISTICS AT DIFFERENT IRRIDANCE
PV MODULE Insolation Energy – INA-MHC-144 WF - 545



100AH

Features

- Design life of 5 to10 years at 27°C, depending on the model.
- Superior Lead Calcium alloy grid with high density active materials
- Excellent cyclic performance and recovery after over-discharging
- High purity material ensuring low self-discharge
- Valve regulated (sealed) construction for sales operation in any position
- Tank formed plates optimise cell voltage balance and performance
- Completely leak-proof and maintenance-free
- Compact design with high power to power ratio.
- High impact ABS casing

150AH

Features

- Design life of 5 to10 years at 27°C, depending on the model.
- Superior Lead Calcium alloy grid with high density active materials
- Excellent cyclic performance and recovery after over-discharging
- High purity material ensuring low self-discharge
- Valve regulated (sealed) construction for sales operation in any position
- Tank formed plates optimise cell voltage balance and performance
- Completely leak-proof and maintenance-free
- Compact design with high power to power ratio.
- High impact ABS casing

200AH

Features

- Design life of 5 to10 years at 27°C, depending on the model.
- Superior Lead Calcium alloy grid with high density active materials
- Excellent cyclic performance and recovery after over-discharging
- High purity material ensuring low self-discharge
- Valve regulated (sealed) construction for sales operation in any position
- Tank formed plates optimise cell voltage balance and performance
- Completely leak-proof and maintenance-free
- Compact design with high power to power ratio.
- High impact ABS casing

Invertek SMF

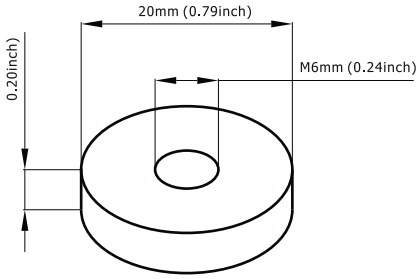
range (deep cycle) is designed specially to have a large amount of stored current discharged between charging sessions, with heavy non-porous battery plate that is made of a different chemical for the plates active paste material and a electrolyte stronger slightly than normal battery electrolyte. It enhances a superior performance of high power output and excellent deep cycle life for energy applications.

Applications

- Electric Powered Vehicle
- Golf Cars and Buggy
- Wheel Chair
- Power Tool
- Electric Powered Toy
- Control System
- Vacuum Cleaner
- Medical Equipment
- UPS
- PVs

General Features

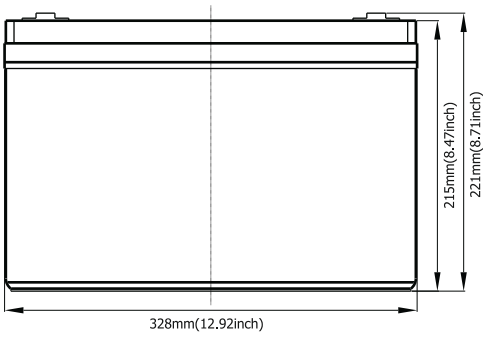
- Better discharge characteristics than normal VRLA batteries.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- Higher safety & reliable construction.
- Extra durability and deep cycle ability for heavy demand applications.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

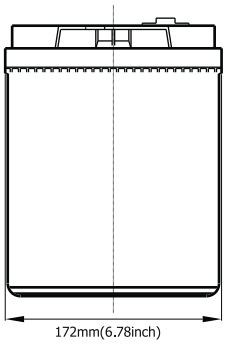


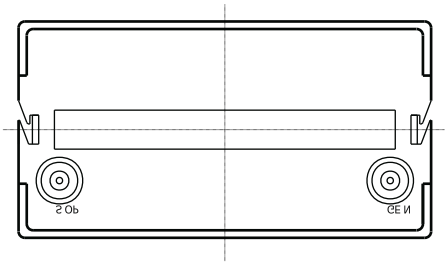
Standard Terminal Dimensions
(Optional terminal please check terminal information page)

Construction

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy Resin
- Safety valve .....EPDR
- Terminal .....Copper
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid







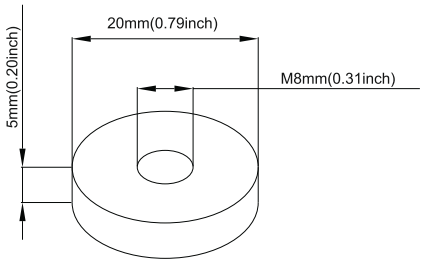
Battery Model	SMF 100AH			
Designed Cycle Life	> 350 cycles @ -0.5CA to 9.6V			
Capacity(25°C)	20HR(5.0A,1.75V)	10HR(10A,1.75V)	5HR(17A,1.75V)	1HR(64A,1.75V)
	102Ah	100Ah	85Ah	64Ah
Dimensions	Length	Width	Height	Total Height
	330mm(13.0inch)	172mm(6.77inch)	215mm(8.46inch)	221mm(8.70inch)
Approx. Weight	29.5Kg (64.9 lbs)			
Internal Resistance	Full charged at 25°C: 0.005 Ohm			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	14.4-15V(-30mV/ °C), max. Current: 25A		13.6-13.8V(-20mV/ °C)	

Invertek SMF

range (deep cycle Lead-Carbon) is use function activated carbon and graphene as carbon materials , with heavy strong grids that is made of a different chemical for the plates active paste material and a electrolyte stronger slightly than normal battery electrolyte. It enhances a superior performance of high power output and more than 2000 cycles life at 80%DOD, it is more suitable for application of PSOC.

Applications

- Solar Power Generation
- Energy Storage System
- Wheel Chair
- Wind Energy Storage System
- Home Energy Storage System
- Smart power & micro-grid System
- Generation and Hybrid Energy
- Medical Equipment
- Distributed Energy Storage System



General Features

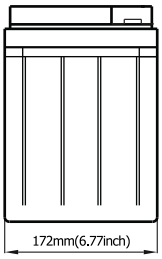
- Better discharge characteristics than normal VRLA batteries.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- Higher safety & reliable construction.
- Extra durability and deep cycle ability for heavy demand applications.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

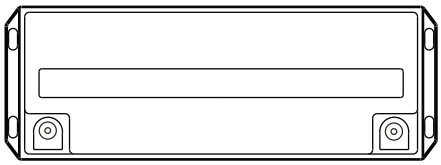
Standard Terminal Dimensions

(Optional terminal please check terminal information page)

Construction

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy Resin
- Safety valve .....EPDR
- Terminal .....Lead
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid





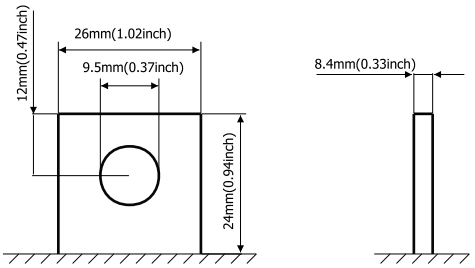
Battery Model	SMF 150AH			
Designed Cycle Life	> 2000 cycles 80% DOD @ -0.5CA to 9.6V			
Capacity(25°C)	20HR(7.5A,1.75V)	10HR(13.5A,1.75V)	5HR(23.0A,1.75V)	1HR(77A,1.75V)
	150Ah	135Ah	115Ah	77Ah
Dimensions	Length	Width	Height	Total Height
	485mm(19.1inch)	172mm(6.77inch)	240mm(9.45inch)	240mm(9.45inch)
Approx. Weight	45Kg (99.2 lbs)			
Internal Resistance	Full charged at 25°C: 0.004 Ohm			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	14.4-15V(-30mV/ °C), max. Current: 37.5A		13.6-13.8V(-20mV/ °C)	

Invertek SMF

range (deep cycle) is designed specially to have a large amount of stored current discharged between charging sessions, with heavy non-porous battery plate that is made of a different chemical for the plates active paste material and a electrolyte stronger slightly than normal battery electrolyte. It enhances a superior performance of high power output and excellent deep cycle life for energy applications.

Applications

- Electric Powered Vehicle
- Golf Cars and Buggy
- Wheel Chair
- Power Tool
- Electric Powered Toy
- Control System
- Vacuum Cleaner
- Medical Equipment
- UPS
- PVs



Standard Terminal Dimensions

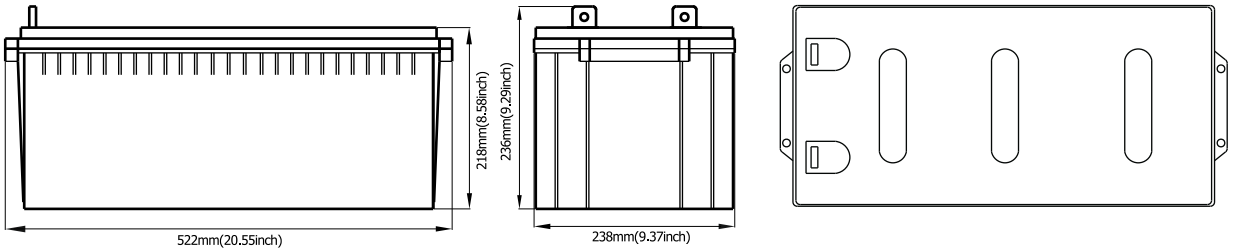
(Optional terminal please check terminal information page)

General Features

- Better discharge characteristics than normal VRLA batteries.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- Higher safety & reliable construction.
- Extra durability and deep cycle ability for heavy demand applications.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

Construction

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy Resin
- Safety valve .....EPDR
- Terminal .....Lead
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid



Battery Model	SMF 200AH			
Designed Cycle Life	> 350 cycles @ -0.5CA to 9.6V			
Capacity(25°C)	20HR(10.1A,1.75V)	10HR(20A,1.75V)	5HR(37A,1.75V)	1HR(120A,1.75V)
	202Ah	200Ah	185Ah	120Ah
Dimensions	Length	Width	Height	Total Height
	522mm(20.55inch)	238mm(9.37inch)	218mm(8.58inch)	236mm(9.29inch)
Approx. Weight	61Kg (134.2 lbs)			
Internal Resistance	Full charged at 25°C :0.0038 Ohm			
Self Discharge	Self discharge < 3% per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	14.4-14.8V(-30mV/ °C), max. Current: 50A		13.6-13.8(-20mV/ °C)	

GEL
SEALED MAINTENANCE FREE BATTERY
100AH - 200AH

100AH

Features

GE series batteries are designed with AGM separator and GEL deep cycle technology to give Extra-durable cyclic performance at extreme temperatures. GE series Batteries are designed for 15 years life time floating design life at 25'C. Meet with IEC, BS,JIS and Eurobat standard.

- Safety Sealing
- Non-spillable construction
- Sealed and Maintenance-free
- Safety and Quality Certification
- Longer Life and low self-discharge design
- High Reliability and Stability

150AH

Features

GE series batteries are designed with AGM separator and GEL deep cycle technology to give Extra-durable cyclic performance at extreme temperatures. GE series Batteries are designed for 15 years life time floating design life at 25'C. Meet with IEC, BS,JIS and Eurobat standard.

- Safety Sealing
- Non-spillable construction
- Sealed and Maintenance-free
- Safety and Quality Certification
- Longer Life and low self-discharge design
- High Reliability and Stability

200AH

Features

GE series batteries are designed with AGM separator and GEL deep cycle technology to give Extra-durable cyclic performance at extreme temperatures. GE series Batteries are designed for 15 years life time floating design life at 25'C. Meet with IEC, BS,JIS and Eurobat standard.

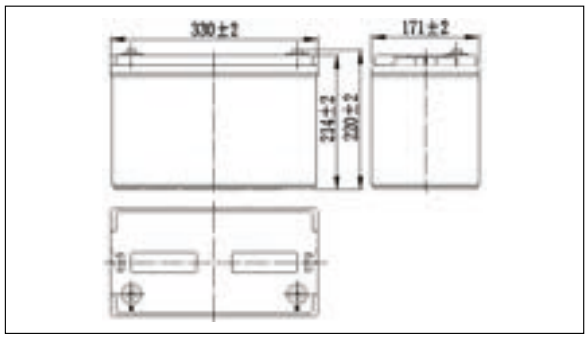
- Safety Sealing
- Non-spillable construction
- Sealed and Maintenance-free
- Safety and Quality Certification
- Longer Life and low self-discharge design
- High Reliability and Stability

GEL BATTERY 100AH
TECHNICAL SPECIFICATIONS

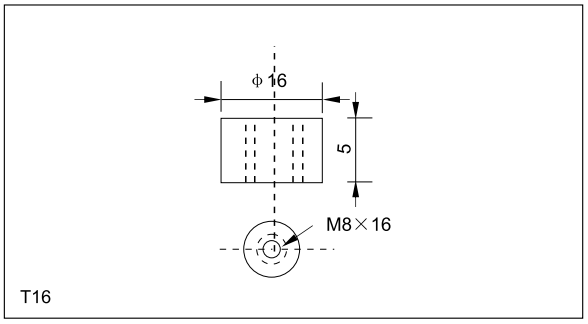
Specifications

Nominal Voltage		12V
Rated capacity (10 hour rate)		100Ah
Dimensions	Length	330±2mm(12.99inch)
	Width	171±2mm(6.73inch)
	Height	214±2mm(8.43inch)
	Total Height	220±2mm(8.66inch)
Approx. Weight		28kg(64.6lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity (25℃)	10HR(10.8V)	100Ah
	3HR(10.8V)	72Ah
	1HR(10.5V)	53Ah
Terminal type		T16
Internal resistance (Fully charged,25℃)		Approx.5.5m Ω
Capacity affected by temperature (10HR)	40℃	102%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-discharge (25℃)	3 months	Remaining Capacity:91%
	6 months	Remaining Capacity:82%
	12 months	Remaining Capacity:65%
Nominal operating temperature		25℃±3℃(77℉±5℉)
Operating temperature range	Discharge	-15℃~50℃(5℉~122℉)
	Charge	-10℃~50℃(14℉~122℉)
	Storage	-20℃~50℃(-4℉~122℉)
Float charging voltage(25 ℃)		13.50 to 13.80V Temperature compensation: -18mV/℃
Cyclic charging voltage(25 ℃)		14.40 to 14.70V Temperature compensation: -30mV/℃
Maximum charging current		20A
Maximum discharge current		800A(5 sec.)
Designed floating life(20 ℃)		12years

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Gel	Rubber	Copper

Constant Current Discharge Characteristics Unit:A(25℃,77℉)

F.V/Time	10m in	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	187	154	93.1	57.6	35.4	25.2	19.8	16.8	11.9	9.87	5.23
9.90V	182	150	91.3	56.8	35.2	25.1	19.7	16.7	11.8	9.86	5.22
10.2V	174	144	88.5	55.3	34.9	24.9	19.5	16.6	11.7	9.86	5.21
10.5V	167	140	86.3	53.6	34.4	24.7	19.4	16.5	11.6	9.77	5.18
10.8V	157	132	83.2	51.9	33.5	24.2	18.8	16.0	11.3	9.70	5.14

Constant Power Discharge Characteristics Unit:W(25℃,77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2022	1687	1045	657	410	297	233	199	141	118	62.8
9.90V	1962	1647	1024	647	408	295	231	198	140	118	62.7
10.2V	1881	1586	993	631	404	293	230	196	139	117	62.5
10.5V	1800	1532	969	611	398	291	228	195	138	117	62.1
10.8V	1699	1451	933	591	388	285	221	189	134	116	61.7

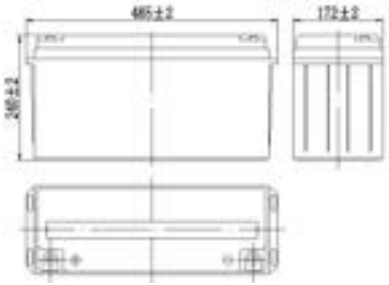
Note: The above characteristics data can be obtained within three charge or discharge cycles.

GEL BATTERY 150AH
TECHNICAL SPECIFICATIONS

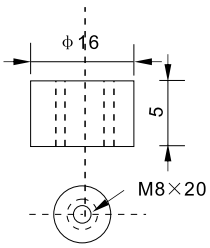
Specifications

Nominal Voltage		12V
Rated capacity (10 hour rate)		150Ah
Dimensions	Length	485±2mm(19.09inch)
	Width	172±2mm(6.77inch)
	Height	240±2mm(9.45inch)
	Total Height	240±2mm(9.45inch)
Approx. Weight		42.5kg(92.1lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



T16

Characteristics

Capacity (25℃)	10HR(10.8V)	150Ah
	3HR(10.8V)	140Ah
	1HR(10.5V)	85Ah
Terminal type		T16
Internal resistance (Fully charged,25℃)		Approx.4.3m Ω
Capacity affected by temperature (10HR)	40℃	102%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-discharge (25℃)	3 months	Remaining Capacity:91%
	6 months	Remaining Capacity:82%
	12 months	Remaining Capacity:65%
Nominal operating temperature		25℃ ±3℃(77℉ ±5℉)
Operating temperature range	Discharge	-15℃~50℃(5℉~122℉)
	Charge	-10℃~50℃(14℉~122℉)
	Storage	-20℃~50℃(-4℉~122℉)
Float charging voltage(25℃)		13.50 to 13.80V Temperature compensation: -18mV/℃
Cyclic charging voltage(25℃)		14.40 to 14.70V Temperature compensation: -30mV/℃
Maximum charging current		30A
Maximum discharge current		1200A(5 sec.)
Designed floating life(20℃)		12 years

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Gel	Rubber	Copper

Constant Current Discharge Characteristics Unit:A(25℃,77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	277	227	138	85.2	51.9	36.9	29.0	24.6	17.4	14.5	7.66
9.90V	269	222	135	83.9	51.6	36.7	28.8	24.5	17.3	14.4	7.65
10.2V	258	214	131	81.8	51.1	36.5	28.6	24.3	17.2	14.4	7.62
10.5V	246	206	128	79.2	50.4	36.2	28.4	24.1	17.0	14.3	7.58
10.8V	233	195	123	76.7	49.1	35.5	27.5	23.4	16.5	14.2	7.53

Constant Power Discharge Characteristics Unit:A(25℃,77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2991	2495	1545	971	601	434	341	291	206	173	91.9
9.90V	2901	2435	1515	957	597	432	339	289	205	172	91.8
10.2V	2781	2345	1468	932	592	429	336	287	204	172	91.5
10.5V	2662	2265	1433	903	583	426	334	285	202	171	90.9
10.8V	2512	2145	1380	874	568	417	324	277	196	170	90.3

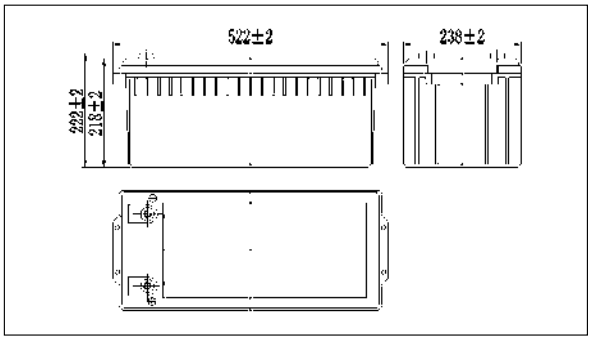
Note: The above characteristics data can be obtained within three charge or discharge cycles.

GEL BATTERY 200AH
TECHNICAL SPECIFICATIONS

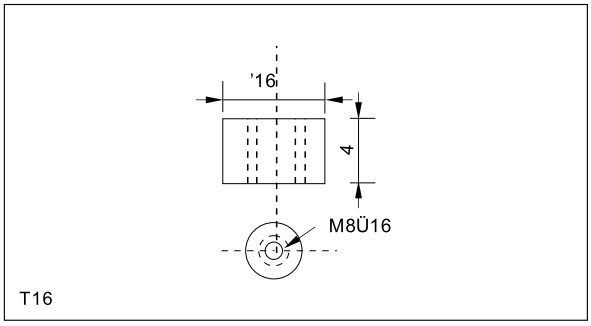
Specifications

Nominal Voltage		12V
Rated capacity (10 hour rate)		200Ah
Dimensions	Length	522Ñ 2mm(20.55inch)
	Width	238Ñ2mm(9.37inch)
	Height	218Ñ2mm(8.58inch)
	Total Height	222Ñ2mm(8.74inch)
Approx. Weight		55 kg (131.2lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity (25ď)	10HR(10.8V)	200Ah
	3HR(10.8V)	150Ah
	1HR(10.5V)	108Ah
Terminal type		T16
Internal resistance (Fully charged,25ď)		Approx.3.3m F
Capacity affected by temperature (10HR)	40ď	102%
	25ď	100%
	0ď	85%
	-15ď	65%
Self-discharge (25ď)	3 months	Remaining Capacity:91%
	6 months	Remaining Capacity:82%
	12 month	Remaining Capacity:65%
Nominal operating temperature		25ď Ñ 3 (77Ñ5)Æ
Operating temperature range	Discharge	-15ď ~50ď (5Æ ~122Æ)
	Charge	-10ď ~50ď (14Æ ~122Æ)
	Storage	-20ď ~50ď (-4Æ ~122Æ)
Float charging voltage(25ď)		13.50 to 13.80V Temperature compensation: -18mV/ď
Cyclic charging voltage(25ď)		14.40 to 14.70V Temperature compensation: -30mV/ď
Maximum charging current		40A
Maximum discharge current		1400A(5 sec.)
Designed floating life(20ď)		12years

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Gel	Rubber	Copper

Constant Current Discharge Characteristics Unit:A(25ď,77Æ)

F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	314	190	118	73.1	52.0	40.8	34.7	30.6	24.5	20.4	10.8
9.90V	306	186	116	72.6	51.7	40.6	34.5	30.4	24.3	20.3	10.8
10.2V	295	181	113	72.0	51.4	40.3	34.2	30.2	24.2	20.3	10.7
10.5V	285	176	109	70.9	51.0	40.0	34.0	30.0	24.0	20.1	10.7
10.8V	270	170	106	69.1	50.0	38.8	33.0	29.1	23.3	20.0	10.6

Constant Power Discharge Characteristics Unit:W(25ď,77Æ)

F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	3443	2133	1341	846	612	480	410	362	291	243	129
9.90V	3361	2090	1321	841	608	477	408	360	289	243	129
10.2V	3237	2026	1287	834	604	474	405	357	287	242	129
10.5V	3127	1977	1247	821	600	470	402	355	285	240	128
10.8V	2961	1905	1207	800	588	456	390	344	277	239	127

Note: The above characteristics data can be obtained within three charge or discharge cycles.

CVCC BATTERY CHARGER

FEATURES :

1. Wide input supply range.
2. Built in EMI filter, low ripple noise.
3. Protection: Short circuit / Over load / Over voltage.
4. 100% Full Load Burn in test.
5. High efficiency, long life and high reliability.
6. Miniature size.

SPECIFICATION:

MODEL NO:		IE-16710BC	IE-16720BC
	BATTERY CHARGING VOLATGE	167VDC	
	CHARGING CURRENT	10AMP	
	RIPPLE & NOISE (max)	<1% Of Rated Voltage	
	CHARGER TYPE	CV-CC	
	LINE REGULATION	<+/-1%	
	LOAD REGULATION	<+/-1%	
INPUT	VOLTAGE RANGE	230VAC	
	FREQUNCY RANGE	50Hz	
	EFFICIENCY	>85%	
PROTECTION	OVERLOAD	Above 105% Rated Output Power	
		Protection Type: Recovers automatically after Fault condition is removed	
	OVERVOLTAGE	103% Rated Output Voltage	
		Protection Type: Recovers automatically after fault condition removed.	
INDICATION	LED	CV / CC	
ENVIRONMENT	WORKING TEMP.	(-5DegC To 55DegC.)	
	WORKING HUMIDITY	20 To 90% RH Non-Condensing.	
	STORAGE TEMP./HUMIDITY	(-10 To 85DegC 10 To 95%RH)	
	VIBRATION	(-10 To 500 Hz,2G,20min/Sweep,Period-1Hr,Each along X,Y,Z axes.	
SAFETY & EMC	SAFETY STANDARD	Designed To Meet UL60950-1	
	WITH STAND VOLTAGE	I/P-O/P:1.5KVDC,I/P-Earth:1.5KVDC	
	ISOLATION RESISTANCE	I/P-O/P,I/P-Earth:100MOhms/500VDC.	
	EMI & EMC	Designed To Meet EN55022, EN61000-4-2.	
OTHERS	ENCLOSURE PROTECTION	IP-20	
	COOLING	FORCED COOLING	
NOTE	1. All parameters NOT specially mentioned are measured at typical input, rated load and 25Deg C ambient temperature. 2. Ripple& noise are measured at 20MHz of bandwidth by using a 12"twisted pair-wired terminated with a0.1uF & 47uF parallel capacitor. 3. Tolerance includes set up tolerance ,line regulation and load regulation. 4. The power supply is considered a component which will be installed into final equipment. The final equipment must be recon formed that it still meets EMC directives. 5. Specifications are subject to change without prior notice due to constant improvement in design& technology.		

GLOBAL PRESENCE

Manufactured By:

INVERTEK ENERGY SOLUTIONS PVT. LTD.

Factory Address:

GF, Plot No. 445 Kh. No. 9/20,10/16, Laxmi Vihar, Najafgarh,
Near DTC Bus Depot Dichaon Kalan, UER2 Expressway,
West Delhi-110043 (INDIA)

www.invertekenergy.com, info@invertekenergy.com

Dubai Office:

A-109 Baniyas Tower Baniyas Square Deira- Dubai - 671536
Contact No. +971 58 857 5171