

Leaver Industries

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BETAcharge II ELS

POWER

240V ac mains or generator supply
Available in 12Vdc to 144Vdc
15A, 30A, 60A, 90A and 120Amp

PROTECTION

Circuit breakers on input and output
Over-temperature shutdown
Temp controlled fan cooling
Reverse Battery

CONTROL

Microprocessor controlled
Multi-stage recharge programs
FLAT, SOFT, BOOST, PEAK, FLOAT charging
Four (4) program for different battery types

DISPLAY

LED indication of charging status and faults
Earth Leakage
Add-on metering

BATTERIES

Gel cell
Sealed lead-acid
Deep cycle LA
Lead-calcium
Wet ni-cad
Genesis®/Optima®

ALARMS

High/low battery
Faulty battery
No battery
Excessive load
Remote relay

CABINET

Powder coated steel
Wall or bench mount
Compact



The WOODS BETAcharge II ELS is a sophisticated electronic multiple-taper charger for most types of batteries. It employs microprocessor-controlled SCR's to precisely regulate charging voltages and currents during all phases of charging. The BETAcharge II ELS successfully charges deeply discharged batteries and batteries which are loaded during charging.

The BETAcharge II ELS is ideally suited to unattended battery systems which must be kept in a good state of charge for months without maintenance.

The BETAcharge II ELS will not overcharge batteries which are already fully charged.



BETAcharge II ELS

INTELLIGENT MULTI-STAGE MULTI-TYPE BATTERY CHARGING SYSTEM



Features

POWER

- 240V ac mains or generator supply - While the mains input is predetermined for Australian conditions with a mild variance in the supply volts & hertz, remote use is available via generated power with an acceptable level THD% tolerance. We can manufacture the BETAchargeII to suit any supply voltage your system requirements.
- Available in 12Vdc to 144Vdc - With the vast range of different battery terminal voltages are available today. We can manufacture the BETAchargeII to suit any system voltage you require.
- Available in 15A, 30A, 60A, 90A and 120Amp - The larger your battery system and loadings, the larger your charger should be to quickly bring the systems depleted batteries back into service.

PROTECTION

- Circuit breakers on input and output - Over current protection on both the mains input and the battery output is offered for immediate protection. The manual resettable switch circuit type breakers are of industrial grade.
- Temperature controlled fan cooling - The rectifier assembly is protected by an automatic thermo switch. If the temperature rises above its preset level the fan will be enabled until it has cooled the system to below its lower setting; thus disengaging the cooling fan. This extends the fans' operating life.
- Rectifier over-temperature shutdown - The second temperature protection device is also on the rectifier assembly. If, due to severe loading or other fault, the temperature exceeds its level it will shut the battery charger down until the cooling fan brings the temperature back within safe operating levels.
- Transformer over-temperature shutdown - The third temperature protection device is deep within core of the power transformer. Activation of this device indicates serious overheating and will shutdown operation of the battery charger until the cooling fan brings the temperature back within safe operating levels.
- Reverse battery - If a battery is connected in reverse polarity, the battery charger will indicate this fault state and will not charge until the fault is cleared.
- No battery connected - The battery charger will maintain dead voltage-free output until it detects a battery has been connected.
- Other battery faults - The BETAchargeII, will display a "battery fault" if it detects a battery of incorrect Amp Hour rating has been connected; if a battery of incorrect terminal voltage has been connected; if a battery with shorted or faulty cells has been connected; if there is an excessive load connected preventing the battery from being recharged.
- Remote alarm relay - This item can be utilised to notify personnel of any faults the battery charger may be detecting.

CONTROL

- Microprocessor controlled - Precise digital control is achieved using 16bit microprocessor. Deep thinking software constantly monitors all facets of the recharging process using unique algorithms that often outwit other "intelligent" battery chargers.
- Multi-stage recharge program - While triple-stage chargers are currently popular, it just isn't enough to cover all possible recharging situations and events. The BETAcharge employs SIX separate stages for a complete recharging process to ensure no battery escapes charging.

FLAT charge is used to gently replenish severely depleted batteries before a recharge proper

SOFT charge prepares the battery to receive the bulk of the recharge

BOOST charge delivers the maximum amount of bulk charge to a healthy battery

PEAK charge will, if needed, continue to equalize the batteries cells (preventing desulphation)

FLOAT charge will provide a maintenance charge to hold the battery ready for use.

STANDBY will monitor the 100% recharged battery

BATTERIES

- Wide range - due to the intelligence and selectability of the control software, nearly all large batteries can be recharged with a BETAchargeII, eg: Gel cell, Sealed Lead-Acid, Deep Cycle Lead Acid, Lead-calcium, Wet Ni-Cad, Genesis®/Optima®, etc.

DISPLAY

- LED indication - Bright, labelled LED's provide instant clear indication of the charging status and/or faults.
- Metering - Analogue moving-coil meters are fitted as standard. They are large and easy-to-read. Load, Charge, Volts

CABINET

- Strong, durable, attractive - Powder-coated zinc-annealed steel cabinets.
- Mountability - Pre-drilled mounting holes means the BETAcharge may be mounted either on a bench or shelf by the base or on a wall or bulkhead by the back of the cabinet.

COMPLIANCE

- Safety Standards - IEC33-2-29 (AS3350.2.29), IEC61558-1:1997 (AS/NZS61558.1:2000)
- EMC Standards - EN55014 (CISPR14, AS1044), EN55022 (CISPR22, AS3548), EN50082-1
- Emergency Light Systems - AS2293.1:2005
- IP Rating - IP21

BETAcharge II	4830B	4860B	4890B
Nominal Battery Voltage	48.00 Volts	48.00 Volts	48.00 Volts
Maximum Output Voltage	59.60 Volts	59.60 Volts	59.60 Volts
Max Output Current (Ave)	30.00 Amps	60.00 Amps	90.00 Amps
Max Output Current (RMS)	50.00 Amps	100.00 Amps	144.00 Amps
Max Output Ripple (RMS)	2 Vac p-p	3 Vac p-p	4 Vac p-p
Total Battery Capacity	60 Ah ~ 400 Ah	100 Ah ~ 800 Ah	200 Ah ~ 1500 Ah
Max. Load during recharge	12.00 Amps	25.00 Amps	40.00 Amps
Mains Supply Voltage	220 Vac ~ 240 Vac	220 Vac ~ 240 Vac	415 Vac 3phase
Mains Supply Frequency	50Hz ~ 60 Hz	50Hz ~ 60 Hz	50Hz ~ 60 Hz
Maximum Consumption (RMS)	3000 VA	6000 VA	9000 VA
Minimum Genset (max output)	6000 VA	12 kVA	18 kVA
Tolerance to Mains Distortion	16% THD	16% THD	16% THD
Mains Input Protection	1 x 20A Circuit Breaker	1 x 32A Circuit Breaker	3 x 20A Circuit Breaker
Battery Output Protection	1 x 63A Circuit Breaker	3 x 100A Switch	3 x 100A Switch
Temperature Protection:			
Transformer core	150° C	150° C	150° C
Rectifier assembly	100° C	100° C	100° C
Fan Cooling	60° C	60° C	60° C
Temperature Compensation	-3mV / cell / ° Celsius	-3mV / cell / ° Celsius	-3mV / cell / ° Celsius
Operating Temperature range	-10°C ~ 45°C	-10°C ~ 45°C	-10°C ~ 45°C
Connections : Input	15A 3pin 2m cable	20A 3pin 2m cable	Junction Box
Connections : Output	Cables	Cables	Anderson Plug
Connections : cable min. size	15mm ² per 2 meters	20mm ² per 2 meters	25mm ² per 2 meters
Cabinet Dimensions: LxWxD	440 x 270 x 270 mm	400 x 270 x 450 mm	600 x 270 x 450 mm
Mounting Holes: LxW	420 x 120 mm	575 x 120 mm (base only)	575 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	1/8 (3mm)	1/8 (3mm)
Weight	30kg	40kg	60kg
Cab	B	C	D

BETAcharge II	7210B	7220B	7240B
Nominal Battery Voltage	72.00 Volts	72.00 Volts	72.00 Volts
Maximum Output Voltage	89.40 Volts	89.40 Volts	89.40 Volts
Max Output Current (Ave)	10.00 Amps	20.00 Amps	40.00 Amps
Max Output Current (RMS)	16.00 Amps	32.00 Amps	64.00 Amps
Max Output Ripple (RMS)	1 Vac p-p	2 Vac p-p	3 Vac p-p
Total Battery Capacity	25 Ah ~ 200 Ah	50 Ah ~ 300 Ah	100 Ah ~ 600 Ah
Max. Load during recharge	4.00 Amps	8.00 Amps	16.00 Amps
Mains Supply Voltage	220 Vac ~ 240 Vac	220 Vac ~ 240 Vac	220 Vac ~ 240 Vac
Mains Supply Frequency	50Hz ~ 60 Hz	50Hz ~ 60 Hz	50Hz ~ 60 Hz
Maximum Consumption (RMS)	1500 VA	3000 VA	6000 VA
Minimum Genset (max output)	3000 VA	6000 VA	12 kVA
Tolerance to Mains Distortion	16% THD	16% THD	16% THD
Mains Input Protection	1 x 10A Circuit Breaker	1 x 20A Circuit Breaker	1 x 32A Circuit Breaker
Battery Output Protection	1 x 20A Circuit Breaker	1 x 63A Circuit Breaker	1 x 100A Circuit Breaker
Temperature Protection:			
Transformer core	150° C	150° C	150° C
Rectifier assembly	100° C	100° C	100° C
Fan Cooling	60° C	60° C	60° C
Temperature Compensation	-3mV / cell / ° Celsius	-3mV / cell / ° Celsius	-3mV / cell / ° Celsius
Operating Temperature range	-10°C ~ 45°C	-10°C ~ 45°C	-10°C ~ 45°C
Connections : Input	10A 3pin 2m cable	15A 3pin 2m cable	20A 3pin 2m cable
Connections : Output	Cables	Cables	Cables
Connections : cable min. size	10mm ² per 2 meters	15mm ² per 2 meters	20mm ² per 2 meters
Cabinet Dimensions: LxWxD	270 x 270 x 270 mm	440 x 270 x 270 mm	400 x 270 x 450 mm
Mounting Holes: LxW	250 x 120 mm	420 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	5/16 (8mm)	1/8 (3mm)
Weight	25kg	40kg	60kg
Cab	B	B	C

BETAcharge II	9615B	9630B	9660B
Nominal Battery Voltage	96.00 Volts	96.00 Volts	96.00 Volts
Maximum Output Voltage	120.00 Volts	120.00 Volts	120.00 Volts
Max Output Current (Ave)	15.00 Amps	30.00 Amps	60.00 Amps
Max Output Current (RMS)	25.00 Amps	50.00 Amps	70.00 Amps
Max Output Ripple (RMS)	2 Vac p-p	3 Vac p-p	3 Vac p-p
Total Battery Capacity	30 Ah ~ 200 Ah	60 Ah ~ 400 Ah	100 Ah ~ 800 Ah
Max. Load during recharge	6.00 Amps	12.00 Amps	20.00 Amps
Mains Supply Voltage	220 Vac ~ 240 Vac	220 Vac ~ 240 Vac	220 Vac ~ 240 Vac
Mains Supply Frequency	50Hz ~ 60 Hz	50Hz ~ 60 Hz	50Hz ~ 60 Hz
Maximum Consumption (RMS)	3000 VA	6000 VA	9000 VA
Minimum Genset (max output)	6000 VA	12 kVA	15 kVA
Tolerance to Mains Distortion	16% THD	16% THD	16% THD
Mains Input Protection	1 x 20Amp Circuit Breaker	1 x 32Amp Circuit Breaker	1 x 32Amp Circuit Breaker
Battery Output Protection	1 x 32Amp Circuit Breaker	1 x 63Amp Circuit Breaker	3 x 32Amp Circuit Breaker
Temperature Protection:			
Transformer core	150° C	150° C	150° C
Rectifier Assembly	100° C	100° C	100° C
Fan Cooling	60° C	60° C	60° C
Temperature Compensation	-3mV / cell / ° Celcius	-3mV / cell / ° Celcius	-3mV / cell / ° Celcius
Operating Temperature range	-10°C ~ 45°C	-10°C ~ 45°C	-10°C ~ 45°C
Connections : Input	15A 3pin 2m cable	20A 3pin 2m cable	20A 3pin 2m cable
Connections : Output	Cables	Cables	Cables
Connections : cable min. size	15mm ² per 2 meters	20mm ² per 2 meters	20mm ² per 2 meters
Cabinet Dimensions: LxWxD	440 x 270 x 270 mm	400 x 270 x 450 mm	400 x 270 x 450 mm
Mounting Holes: LxW	420 x 120 mm	375 x 120 mm (base only)	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	1/8 (3mm)	1/8 (3mm)
Weight	40kg	60kg	60kg
Cab	B	C	C

BETAcharge II	ELS11015B	ELS11030B
Nominal Battery Voltage	110.00 Volts	110.00 Volts
Maximum Output Voltage	127.60 Volts	127.60 Volts
Max Output Current (Ave)	15.00 Amps	30.00 Amps
Max Output Current (RMS)	25.00 Amps	50.00 Amps
Max Output Ripple (RMS)	2 Vac p-p	3 Vac p-p
Total Battery Capacity	30 Ah ~ 200 Ah	60 Ah ~ 400 Ah
Max. Load during recharge	5.00 Amps	10.00 Amps
Mains Supply Voltage	220 Vac ~ 240 Vac	220 Vac ~ 240 Vac
Mains Supply Frequency	50Hz ~ 60 Hz	50Hz ~ 60 Hz
Maximum Consumption (RMS)	3000 VA	6000 VA
Minimum Genset (max output)	6000 VA	12000 VA
Tolerance to Mains Distortion	16% THD	16% THD
Mains Input Protection	20 Amps circuit breaker	32 Amps circuit breaker
Battery Output Protection	32 Amps circuit breaker	63 Amps circuit breaker
Temperature Protection:		
Transformer Core	150° C	150° C
Rectifier Assembly	100° C	100° C
Fan Cooling	60° C	60° C
Temperature Compensation	-3mV / cell / ° Celcius	-3mV / cell / ° Celcius
Operating Temperature range	-10°C ~ 45°C	-10°C ~ 45°C
Connections : Input	15A 3pin 2m cable	20A 3pin 2m cable
Connections : Output	Cables	Cables
Connections : cable min. size	15mm ² per 2 meters	20mm ² per 2 meters
Cabinet Dimensions: LxWxD	440 x 270 x 270 mm	400 x 270 x 450 mm
Mounting Holes: LxW	420 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	1/8 (3mm)
Weight	30kg	50kg
Cab	B	C
		