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EV.Charge

POWER

120Vav or 240V ac mains or generator supply
Available in 72Vdc, 96Vdc, 120Vdc and 144Vdc
7A,10A,15A,20A,30A or 40Adc Output

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
Add-on metering (optional)

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 EV.Charge 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 EV.Charge successfully charges deeply discharged batteries and batteries which are loaded during charging.

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

The EV.Charge will not overcharge batteries which are already fully charged. The EV.Charge "sleeps" when necessary, minimizing loss of electrolyte over prolonged periods, and delivers a replenishing charge only as required by battery self-discharge.



EV.Charge



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 EV.Charge to suit any supply voltage your system requirements.

• Available in 72V, 96V, 120V and 144Volts - With the vast range of different battery terminal voltages are available today.

We can manufacture the EV.Charge to suit any system voltage you require.

• Available in 7A_{dc} to 40A_{dc} - 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 EV.Charge, 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.

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 EV.Charge 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 BETAchargell, eg: , 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 - Accurate analogue moving-coil meters are not fitted as standard. But, they are large and easy-to-read.

CABINET

• Strong, durable, attractive - Powder-coated zinc-annealed steel cabinets.




• Mountability - Pre-drilled mounting holes means the EV.Charge 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

• IP Rating - IP21

EV.Charge	7210E	7220E	7240E
Nominal Battery Voltage	72.00 Volts	72.00 Volts	72.00 Volts
Maximum Output Voltage	107.40 Volts	107.40 Volts	14.90 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	40 Ah ~ 150 Ah	60 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	1.2 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 20 Amps Circuit Breaker	1 x 63A Circuit Breaker	3 x 32A 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	6mm ² per 2 meters	10mm ² per 2 meters	15mm ² per 2 meters
Cabinet Dimensions: LxWxD	230 x 270 x 300 mm	400 x 270 x 300 mm	400 x 270 x 450 mm
Mounting Holes: LxW	380 x 120 mm	380 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	5/16 (8mm)	1/8 (3mm)
Weight	15kg	27kg	50kg
Cab	A	B	C
			

EV.charge	9615E	9630E
Nominal Battery Voltage	96.00 Volts	96.00 Volts
Maximum Output Voltage	120.00 Volts	120.00 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	6.00 Amps	12.00 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	12 kVA
Tolerance to Mains Distortion	16% THD	16% THD
Mains Input Protection	1 x 20A Circuit Breaker	1 x 32A Circuit Breaker
Battery Output Protection	1 x 32A Circuit Breaker	1 x 63A 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 / ° Celsius	-3mV / cell / ° Celsius
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	10mm ² per 2 meters	15mm ² per 2 meters
Cabinet Dimensions: LxWxD	400 x 270 x 300 mm	400 x 270 x 450 mm
Mounting Holes: LxW	380 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	1/8 (3mm)
Weight	27kg	50kg
Cab	B	C
		

EV.charge	11010E	12020E	12040E
Nominal Battery Voltage	110.00 Volts	110.00 Volts	110.00 Volts
Maximum Output Voltage	139.00 Volts	139.00 Volts	139.00 Volts
Max Output Current (Ave)	10.00 Amps	20.00 Amps	40.00 Amps
Max Output Current (RMS)	12.00 Amps	25.00 Amps	45.00 Amps
Max Output Ripple (RMS)	1 Vac p-p	2 Vac p-p	4 Vac p-p
Total Battery Capacity	20 Ah ~ 100 Ah	40 Ah ~ 200 Ah	80 Ah ~ 400 Ah
Max. Load during recharge	3.00 Amps	6.00 Amps	12.00 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	1.2 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 32A Circuit Breaker	1 x 63A 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	10A 3pin 2m cable	15A 3pin 2m cable	20A 3pin 2m cable
Connections : Output	Cables	Cables	Cables
Connections : cable min. size	6mm ² per 2 meters	10mm ² per 2 meters	15mm ² per 2 meters
Cabinet Dimensions: LxWxD	230 x 270 x 300 mm	400 x 270 x 300 mm	400 x 270 x 450 mm
Mounting Holes: LxW	380 x 120 mm	380 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	5/16 (8mm)	1/8 (3mm)
Weight	15kg	27kg	50kg
Cab	A	B	C
			

EV.charge	12010E	12020E	12040E
Nominal Battery Voltage	120.00 Volts	120.00 Volts	120.00 Volts
Maximum Output Voltage	149.00 Volts	149.00 Volts	149.00 Volts
Max Output Current (Ave)	10.00 Amps	20.00 Amps	40.00 Amps
Max Output Current (RMS)	12.00 Amps	25.00 Amps	45.00 Amps
Max Output Ripple (RMS)	1 Vac p-p	2 Vac p-p	4 Vac p-p
Total Battery Capacity	20 Ah ~ 100 Ah	40 Ah ~ 300 Ah	80 Ah ~ 600 Ah
Max. Load during recharge	3.00 Amps	6.00 Amps	12.00 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	1.2 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 32A Circuit Breaker	1 x 63A 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	10A 3pin 2m cable	15A 3pin 2m cable	20A 3pin 2m cable
Connections : Output	Cables	Cables	Cables
Connections : cable min. size	6mm ² per 2 meters	10mm ² per 2 meters	15mm ² per 2 meters
Cabinet Dimensions: LxWxD	230 x 270 x 300 mm	400 x 270 x 300 mm	400 x 270 x 450 mm
Mounting Holes: LxW	380 x 120 mm	380 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	5/16 (8mm)	1/8 (3mm)
Weight	15kg	27kg	50kg
Cab	A	B	C
			

EV.charge	14407E	14415E	14430E
Nominal Battery Voltage	144.00 Volts	144.00 Volts	144.00 Volts
Maximum Output Voltage	178.80 Volts	178.80 Volts	178.80 Volts
Max Output Current (Ave)	7.00 Amps	15.00 Amps	30.00 Amps
Max Output Current (RMS)	10.00 Amps	20.00 Amps	40.00 Amps
Max Output Ripple (RMS)	1 Vac p-p	2 Vac p-p	4 Vac p-p
Total Battery Capacity	10 Ah ~ 80 Ah	20 Ah ~ 160 Ah	40 Ah ~ 300 Ah
Max. Load during recharge	2.00 Amps	5.00 Amps	10.00 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	1.2 kVA
Tolerance to Mains Distortion	16% THD	16% THD	16% THD
Mains Input Protection	10A Circuit Breaker	20A Circuit Breaker	32A Circuit Breaker
Battery Output Protection	20A Circuit Breaker	32A Circuit Breaker	63A 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	10A 3pin 2m cable	15A 3pin 2m cable	20A 3pin 2m cable
Connections : Output	Cables	Cables	Cables
Connections : cable min. size	6mm ² per 2 meters	10mm ² per 2 meters	15mm ² per 2 meters
Cabinet Dimensions: LxWxD	230 x 270 x 300 mm	400 x 270 x 300 mm	400 x 270 x 450 mm
Mounting Holes: LxW	380 x 120 mm	380 x 120 mm	375 x 120 mm (base only)
Mounting Holes: size	5/16 (8mm)	5/16 (8mm)	1/8 (3mm)
Weight	15kg	27kg	50kg
Cab	A	B	C
	