# 24V – 12V BATTERY CHARGERS

**This Range of 24V – 12V Lead Acid Battery Chargers is suitable for most applications.**

**The Product Range offers High Specification Switch Mode Battery Chargers, which offer high efficiency and are much smaller in size than conventional chargers, saving both power and space.**

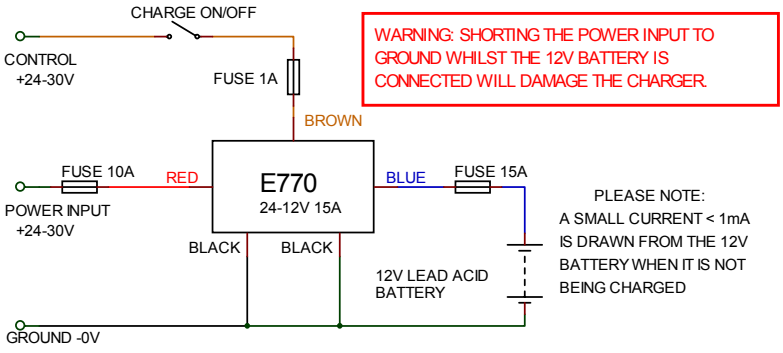
**A Low Power Control Wire has been included to Start and Stop the Chargers, reducing the need for High Current On / Off Switches.**

## SPECIFICATION COMMON TO ALL 24V – 12V BATTERY CHARGERS

| TYPE | SWITCH MODE STEP DOWN BATTERY CHARGER |
|---|---|
| INPUT VOLTAGE | 18 – 30V DC |
| OUTPUT VOLTAGE | 14V DC |
| OVERLOAD PROTECTION | ✓ |
| POLARITY PROTECTED | EXTERNAL FUSE |
| HIGH TEMP PROTECTED | ✓ |
| SHORT CIRCUIT PROTECTION | ✓ |
| EFFICIENCY | > 90% |

## EURO 24V – 12V STEP DOWN BATTERY CHARGERS

| | |
|---|---|
| PART NO | E770 |
| CHARGING CURRENT | 15 AMP |
| DIMENSIONS | 155mm X 70mm X 53mm |
| FIXING CENTRES | 138mm X 40mm<br>4 HOLE FIXING |
| HOLE SIZE | 4mm |
| WEIGHT | 447g |
| CONSTRUCTION | ANODISED<br>COOLING PROFILE |




**This range of Step Down Battery Chargers has been designed on a building block system, which means we can supply Battery Chargers to suit your individual needs:-**

| PART NO | E789 | E790 | E791 |
|---|---|---|---|
| CHARGING CURRENT | 30 AMP | 45 AMP | 60 AMP |
| DIMENSIONS | 270mm X 180mm X 55mm | 380mm X 180mm X 55mm | 380mm X 248mm X 55mm |
| FIXING CENTRES | 250mm X 160mm<br>4 HOLE FIXING | 364mm X 160mm<br>4 HOLE FIXING | 361mm X 229mm<br>4 HOLE FIXING |
| HOLE SIZE | 4mm | 6mm | 6mm |
| CONSTRUCTION | 2 X E770 15A CHARGER MOUNTED ON A SINGLE ALUMINIUM PLATE | 3 X E770 15A CHARGER MOUNTED ON A SINGLE ALUMINIUM PLATE | 4 X E770 15A CHARGER MOUNTED ON A SINGLE ALUMINIUM PLATE |

# 12V – 24V BATTERY CHARGERS

**This Range of 12V – 24V Lead Acid Battery Chargers is suitable for most applications.**

**The Product Range offers High Specification Switch Mode Battery Chargers, which offer high efficiency and are much smaller in size than conventional chargers, saving both power and space.**

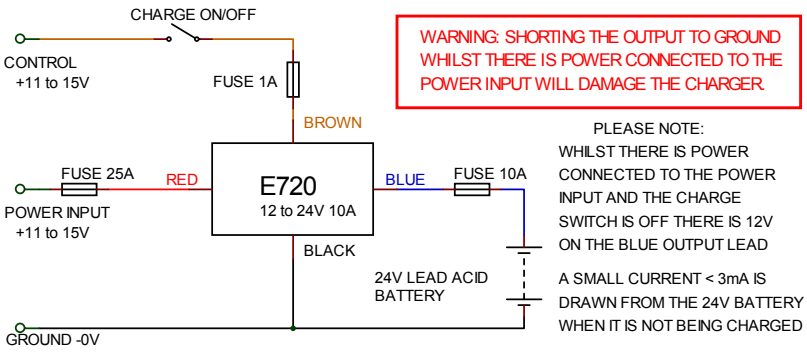
**A Low Power Control Wire has been included to Start and Stop the Chargers, reducing the need for High Current On / Off Switches.**

## SPECIFICATION COMMON TO ALL 12V – 24V BATTERY CHARGERS

| TYPE | SWITCH MODE STEP UP BATTERY CHARGER |
|---|---|
| INPUT VOLTAGE | 11 – 15V DC |
| OUTPUT VOLTAGE | 28V DC |
| OVERLOAD PROTECTION | EXTERNAL FUSE |
| POLARITY PROTECTED | EXTERNAL FUSE |
| HIGH TEMP PROTECTED | ✓ |
| SHORT CIRCUIT PROTECTION | EXTERNAL FUSE |
| EFFICIENCY | > 85% |

## EURO 12V – 24V STEP UP BATTERY CHARGERS

| | |
|---|---|
| PART NO | E720 |
| CHARGING CURRENT | 10 AMP |
| DIMENSIONS | 155mm X 70mm X 53mm |
| FIXING CENTRES | 138mm X 40mm 4 HOLE FIXING |
| HOLE SIZE | 4mm |
| WEIGHT | 447g |
| CONSTRUCTION | ANODISED COOLING PROFILE |




**This range of Step Up Battery Chargers has been designed on a building block system, which means we can supply Battery Chargers to suit your individual needs:-**

| PART NO | E718 | E787 | E788 |
|---|---|---|---|
| CHARGING CURRENT | 20 AMP | 30 AMP | 40 AMP |
| DIMENSIONS | 270mm X 180mm X 55mm | 380mm X 180mm X 55mm | 380mm X 248mm X 80mm |
| FIXING CENTRES | 250mm X 160mm 4 HOLE FIXING | 364mm X 160mm 4 HOLE FIXING | 361mm X 229mm 4 HOLE FIXING |
| HOLE SIZE | 4mm | 6mm | 6mm |
| CONSTRUCTION | 2 X E720 10A CHARGER MOUNTED ON A SINGLE ALUMINIUM PLATE | 3 X E720 10A CHARGER MOUNTED ON A SINGLE ALUMINIUM PLATE | 4 X E720 10A CHARGER MOUNTED ON A SINGLE ALUMINIUM PLATE |

# E848 12V 1AMP BATTERY CHARGER


**This Top-Up Charger was designed for use in motor homes, canal boats etc fitted with either solar or mains charging systems. It transfers charge from the leisure battery to the engine battery.**

**If whilst the leisure battery is being charged it reaches a voltage 0.4V greater than the engine battery, then the Top-Up Charger transfers charge from the leisure battery to the engine battery until the voltage difference is 0.2V, it then terminates the transfer.**

**If the engine battery has a constant drain such as Security Systems, Clocks, Hi-Fi Equipment, etc and its voltage drops 0.4V below the leisure battery, then the Top-Up Charger will transfer charge from the leisure battery to the engine battery.**

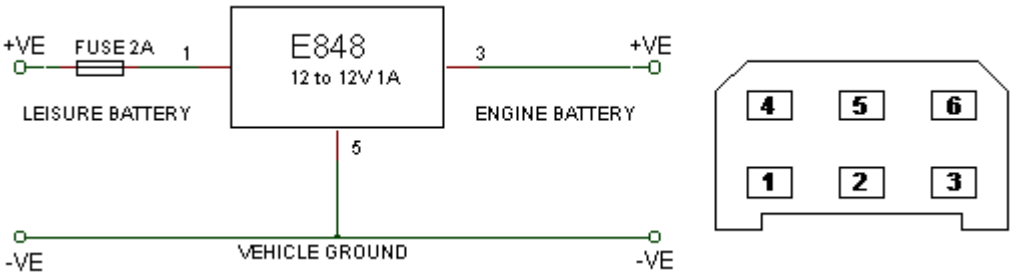
**The Top-Up Charger is able to cope with a discharge of up to 1A and will limit the transfer to protect itself.**

**The LED Charge indicator shows four charge states.**

1. **OFF:** **No charge transfer**
2. **ON "Bright":** **Normal charge transfer**
3. **Flashing:** **Engine battery fully charged**
4. **ON "Dim":** **Charge transfer in progress, engine battery low or leisure battery high**

## SPECIFICATION

| | |
|---|---|
| **Part Number** | **E848** |
| **Description** | **12V 1Amp Battery Charger** |
| **Leisure Battery** | **12V Lead Acid** |
| **Engine Battery** | **12V Lead Acid** |
| **Charge Transfer Rate (I out), Leisure to Engine battery** | **1.1A < I out < 1.6A** |
| **Total Quiescent Current, LED ON** | **6mA Typical** |
| **Leisure Battery Current Drain, LED OFF** | **2.6mA Typical** |
| **Engine Battery Current Drain, LED OFF** | **0.3mA Typical** |
| **Voltage Drop, Leisure to Engine Battery @ 1A** | **0.58V Typical** |
| **Case Style** | **Flat Pack, Fully Encapsulated** |
| **Dimensions** | **97 x 81 x 21 mm** |
| **Fixing** | **2 Point Fixing – 5mm Holes (65mm fixing centres)** |
| **Weight** | **140g** |

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# E899 24V to 24V @ 12A Battery Charger

**This Battery Charger was designed to charge Batteries.**

**A Low Power Control Wire has been included to Start and Stop the Charger, reducing the need for High Current On / Off Switches. This wire also senses the input voltage. The Charger starts when the voltage reaches approximately 24V. There is 1V of hysteresis to prevent spurious switching.**

**The charger output current is limited to 12A**
**The maximum input current has been limited to 15A**
**Protection against reverse polarity connection is achieved using external fuses.**

**For some applications it may be necessary to vary the Control Switching Voltage of the Unit. Example: When charging Leisure Batteries from the Engine Battery and Alternator to prevent the Engine Battery from being discharged beyond the required level when the Alternator is not charging.**

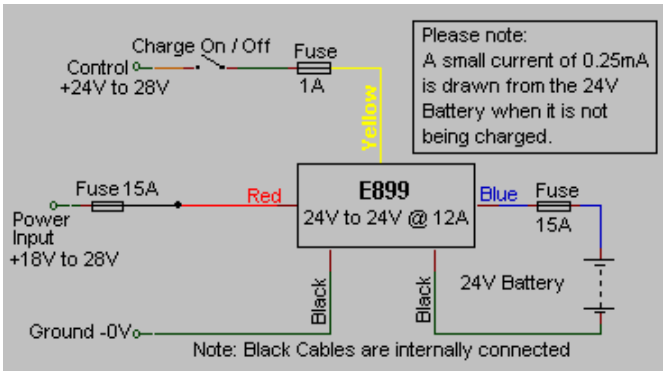
**The E917 Control Voltage Adjuster allows the installer to adjust the voltage at which the Charger switches On / Off. The voltage can be set in the range 24.3 to 27V.**

## Specifications:

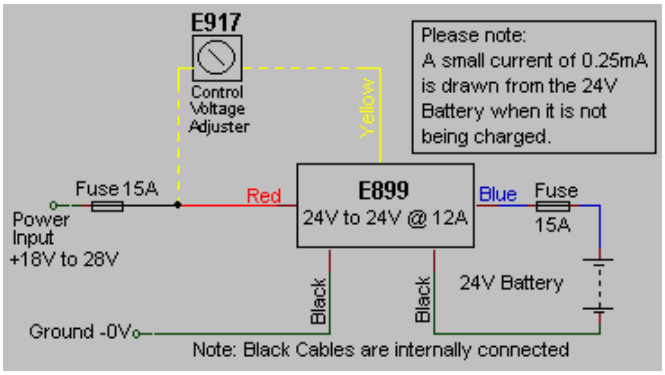
| Parameter | Conditions | Value |
|---|---|---|
| Output Voltage (V-out) | | 28.0V ± 0.1V |
| Maximum Output (Charging) Current | PVin = 26V | 12A |
| Power Input Voltage (PVin) | | 18V to 28V |
| Power Input Current Limit | PVin = 18V to 28V | 15A |
| Control Input Voltage (CVin) | Charger Enabled | 24.2V ± 0.5V |
| | Hysteresis | 1V |
| Control Input Current | | 50µA |
| Battery Current Drain | Charger Disabled | 250µA |
| Overload Protection | | yes |
| Thermal shutdown | | yes |
| Polarity Protection | External Fuses | Input = 15A<br>Output = 15A |
| Connections | Flying leads | Red = Positive Input<br>Black = Negative Input, Output and Control<br>Blue = Positive Output<br>Yellow = Positive Control |
| Physical Dimensions | | 215 x 71 x 55mm |
| Mountings | | 4 x Ø 4.5mm Holes |
| Hole Centres | | 198 x 40mm |

Note: if the input voltage is more than 28.5V the output voltage will rise above 28V and the battery could overcharge.

## Wiring Diagram.




Wiring Diagram without E917 Control Voltage Adjuster




Wiring Diagram with E917 Control Voltage Adjuster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# E914 12V to 12V @ 12A Battery Charger

**This Battery Charger was designed to charge Batteries.**

**A Low Power Control Wire has been included to Start and Stop the Charger, reducing the need for High Current On / Off Switches. This wire also senses the input voltage. The Charger starts when the voltage reaches approximately 12V. There is 0.1V of hysteresis to prevent spurious switching.**

**The charger output current is limited to 12A**
**Protection against reverse polarity connection is achieved using external fuses.**

**For some applications it may be necessary to vary the Control Switching Voltage of the Unit. Example: When charging Leisure Batteries from the Engine Battery and Alternator to prevent the Engine Battery from being discharged beyond the required level when the Alternator is not charging.**

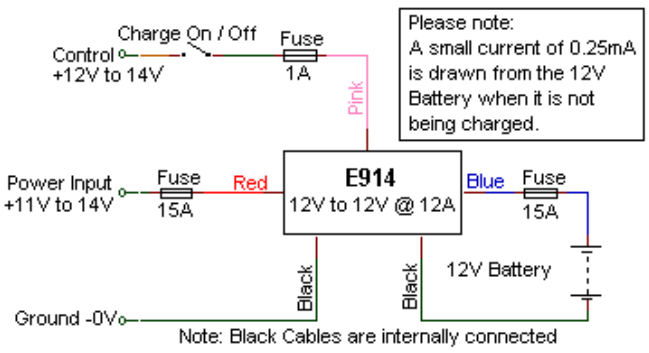
**The E916 Control Voltage Adjuster allows the installer to adjust the voltage at which the Charger switches On / Off. The voltage can be set in the range 12.3V to 13.5V**

## Specifications:

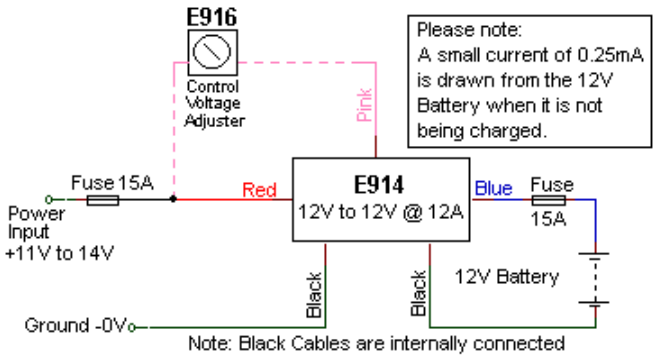
| Parameter | Conditions | Value |
|---|---|---|
| Output Voltage (V-out) | | 14.0V ± 0.1V |
| Typical Output (Charging) Current | PVin = 13V | 12A |
| Power Input Voltage (PVin) | | 11V to 14V |
| Control Input Voltage (CVin) | Charger Enabled | 12.1V |
| | Hysteresis | |
| Control Input Current | | 50µA |
| Battery Current Drain | Charger Disabled | 250µA |
| Overload Protection | | yes |
| Thermal shutdown | | yes |
| Polarity Protection | External Fuses | Input = 15A<br>Output = 15A |
| Connections | Flying leads | Red = Positive Input<br>Black = Negative Input, Output and Control<br>Blue = Positive Output<br>Pink = Positive Control |
| Physical Dimensions | | 215 x 71 x 55mm |
| Mountings | | 4 x Ø 4.5mm Holes |
| Hole Centres | | 198 x 40mm |

Note: if the input voltage is more than 15V the output voltage will rise above 14V and the battery could overcharge.

## Wiring Diagrams




Wiring Diagram without E916 Control Voltage Adjuster




Wiring Diagram with E916 Control Voltage Adjuster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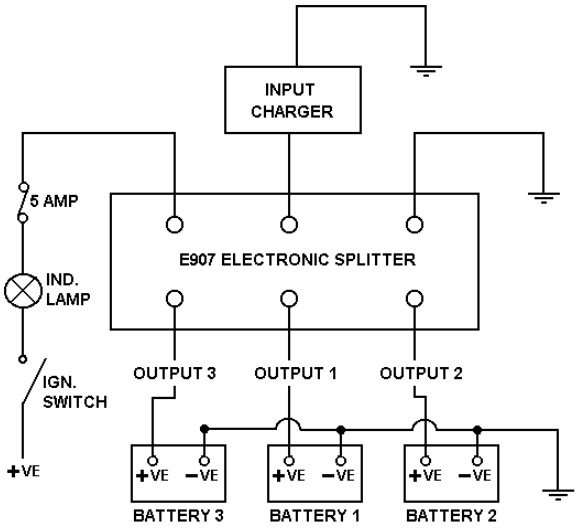
# E907 150A ALL ELECTRONIC CHARGE SPLITTER

**THIS UNIT ALLOWS ONE CHARGING SOURCE (SUCH AS ALTERNATORS INCLUDING BATTERY SENSED VERSIONS, NORMAL BATTERY CHARGERS WITH OR WITHOUT AN INCORPORATED MULTI-OUTPUT FACILITY, ON-BOARD AUXILIARY GENERATORS, SOLAR CELL CHARGERS, TOWED GENERATORS ETC) TO CHARGE 3 INDEPENDENT BANKS OF BATTERIES FULLY WITH MINIMAL VOLTAGE DROP OR THE NEED FOR SPECIAL VOLTAGE REGULATORS AND BLOCKING DIODES.**


- ✓ NO VOLTAGE DROPS NO POWER LOSS
- ✓ NO POWER LOSS
- ✓ DUAL SENSING
- ✓ RANGE: 6V – 32V DC
- ✓ INDEPENDENT BATTERY BANK CHARGING
- ✓ ISOLATES BATTERY BANKS
- ✓ USES EXISTING VOLTAGE REGULATOR

## Specification

| | |
|---|---|
| PART NO | E907 |
| INPUT | 1 |
| OUTPUTS | 3 |
| INPUT VOLTAGE | 6V – 32V DC |
| INPUT CURRENT (MAX) | 150A |
| RATED OUTPUT CURRENT (PER CHANNEL) | 150A |
| SENSE CURRENT | 2.4mA – 6mA |
| CASE | DIE CAST ALUMINIUM |
| DIMENSIONS | 231mm X 166mm X 82mm |
| FIXING | 4 POINT FIXING (6mm HOLES) |
| FIXING CENTRES | 210mm X 60mm |
| WEIGHT | 900g |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