



50-170  
HI-MATIC



50-170  
HYPERMATIC

















OIR DISC

Disclosure

www.victronenergy.com

 **victron energy**  
BLUE POWER



### charger

- mains on
- bulk
- absorption
- float

- battery charger
- powerassist

### inverter

- on
  - off
  - charger only
- inverter on
  - overload
  - low battery
  - temperature

- sine-wave inverter
- transfer switch
- parallel connectable
- three phase connectable

AC transfer capacity: 2x200 A | inverter 200 V

**Quattro**  
24V | 8000VA | 200A



Before charging read the instructions for the user only. Disconnect the supply before testing or working. Do not connect to the battery without ventilation during charging. Charge lead acid or lithium batteries only.



Proprietary DIGITAL software controls Battery of Battery charger

12V-24V  
75A Max  
Fast to Fast  
Charger

CE

| Charge | Amperage | Constant | Fast to Slow |
|--------|----------|----------|--------------|
| 1      | 0.10C    | 2.00V    | 100%         |
| 2      | 0.10C    | 2.00V    | 100%         |
| 3      | 0.10C    | 2.00V    | 100%         |
| 4      | 0.10C    | 2.00V    | 100%         |
| 5      | 0.10C    | 2.00V    | 100%         |
| 6      | 0.10C    | 2.00V    | 100%         |
| 7      | 0.10C    | 2.00V    | 100%         |
| 8      | 0.10C    | 2.00V    | 100%         |
| 9      | 0.10C    | 2.00V    | 100%         |
| 10     | 0.10C    | 2.00V    | 100%         |
| 11     | 0.10C    | 2.00V    | 100%         |
| 12     | 0.10C    | 2.00V    | 100%         |
| 13     | 0.10C    | 2.00V    | 100%         |
| 14     | 0.10C    | 2.00V    | 100%         |
| 15     | 0.10C    | 2.00V    | 100%         |
| 16     | 0.10C    | 2.00V    | 100%         |
| 17     | 0.10C    | 2.00V    | 100%         |
| 18     | 0.10C    | 2.00V    | 100%         |
| 19     | 0.10C    | 2.00V    | 100%         |
| 20     | 0.10C    | 2.00V    | 100%         |
| 21     | 0.10C    | 2.00V    | 100%         |
| 22     | 0.10C    | 2.00V    | 100%         |
| 23     | 0.10C    | 2.00V    | 100%         |
| 24     | 0.10C    | 2.00V    | 100%         |
| 25     | 0.10C    | 2.00V    | 100%         |
| 26     | 0.10C    | 2.00V    | 100%         |
| 27     | 0.10C    | 2.00V    | 100%         |
| 28     | 0.10C    | 2.00V    | 100%         |
| 29     | 0.10C    | 2.00V    | 100%         |
| 30     | 0.10C    | 2.00V    | 100%         |

Specifications:  
 12/24V 75A Max  
 Current limiting  
 Chargeable indicator  
 Auto to gel/lead  
 Suitable for use with  
 AGM batteries  
 Water testing

Background light  
 ON/OFF  
 ON/OFF  
 ON/OFF

Setup: **BETUP** **ENTER** **SELECT**

Starting Power  
 450W  
 12V-24V  
 75A Max

**Sterling**

MAIN SWITCH  
HOTWATER  
LIGHTS/PUMP

**BLAUBERG**  
 EX Maschinenbau GmbH  
 Blauberg Ventilatoren  
 TUV E 1500 15/01

230V ~ 50/60 Hz  
 min 21 m³/h 145 m/h  
 max 33 m³/h 187 m/h

Tamb = 1 - 45°C  
 T - tropical climate

IPX4  
 CE  
 AN 4039425  
 TÜV 18797854

**OEZ**

100A  
 100A  
 100A  
 100A  
 100A



GENERAL POWER

MAINS SUPPLY

INVERTER MAIN SWITCH

OUTLINE PROJECTS



OTR Disclosure Log

Progressive **DIGITAL** software control Battery to Battery charger

12V-24V  
70A input  
Bat to Bat  
Charger



LED status  
flash (fl)  
on solid (S)

|  |              |        |     |    |       |                               |
|--|--------------|--------|-----|----|-------|-------------------------------|
| Battery preset options.<br>Batt Type LED displayed<br>on start-up. | Desulphation | 15.4 V | 840 | 16 | 30.8V | High Volt in (fl) / out (S)   |
|  | Calcium      | 15.0 V | 720 | 14 | 30.0V | High temp trip (fl)           |
|  | Open         | 14.6 V | 600 | 12 | 29.2V | No Fault (S) / P.Pack (fl)    |
|  | AGM II       | 14.2 V | 480 | 10 | 28.4V | Regen timer off (S) / on (fl) |
|  | GEL II       | 13.8 V | 360 | 8  | 27.6V | Batt. Sense on (S)            |
|  | Sealed       | 13.4 V | 240 | 6  | 26.8V | Volt drop sense (fl)          |
|  | AGM I        | 13.0 V | 120 | 4  | 26.0V | 1/2 power (S) / night (fl)    |
|  | GEL I        | 12.6 V | 30  | 2  | 25.2V | Low Volt in (fl) / out (S)    |
|  | Custom       | 12.2 V | 0   | 0  | 24.4V | High bat temp (fl) SVEM (S)   |
|  |              |        |     |    |       |                               |

- Specifications:  
12V-24V 70A input  
- Current limiting  
- Thermostatic control fan  
- Auto or ignition feed  
- Suitable for use with  
Smart alternators  
Regen. braking

[www.sterling-power.com](http://www.sterling-power.com)  
[www.sterling-power-usa.com](http://www.sterling-power-usa.com)



Background  
light  
on  
unit  
active



Sterling Power  
Alltech  
BB1260  
E13 10R-0513962  
12V - 24V

Designed and Developed in England  
Made in Taiwan

**Sterling**













F.E.D.  
FEDERAL EVIDENCE DEPOSIT

AIR DISCLOSED FOR FOOT







BRON



BRON

BRON

BRON





Please keep the door closed at any time

Non-professional technicians are not allowed to adjust the temperature controller

Refrigeration

Lighting







Please keep the door closed at any time





Non-professional technicians are not allowed  
to adjust the temperature controller



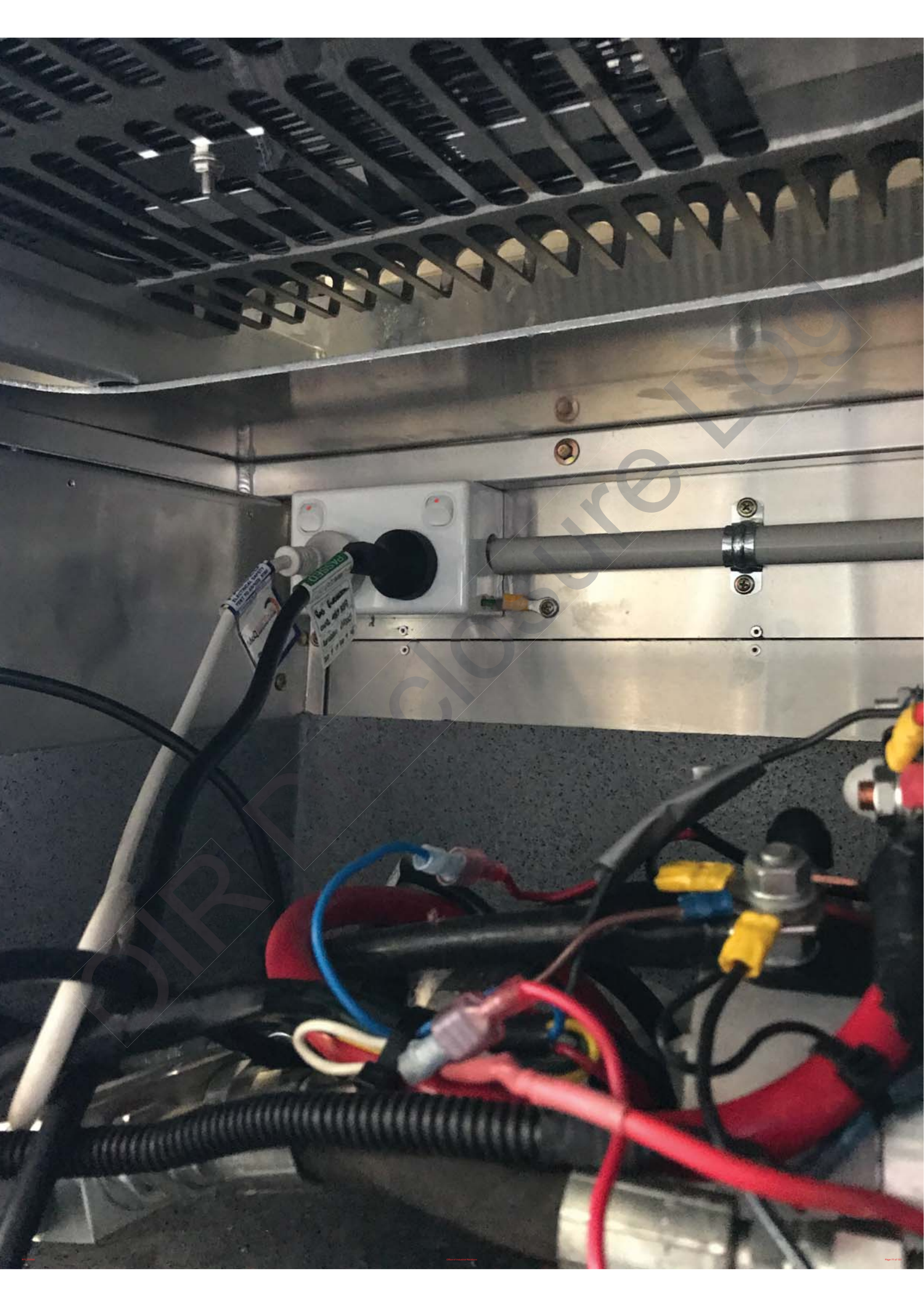
Refrigeration



Lighting











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Monday – Friday Only

- **GUARANTEED\*** next working day (Melb & Sydney Mon-Fri)
- **FREE "Standard" fitting instore**
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**plumberzy**  
GAS

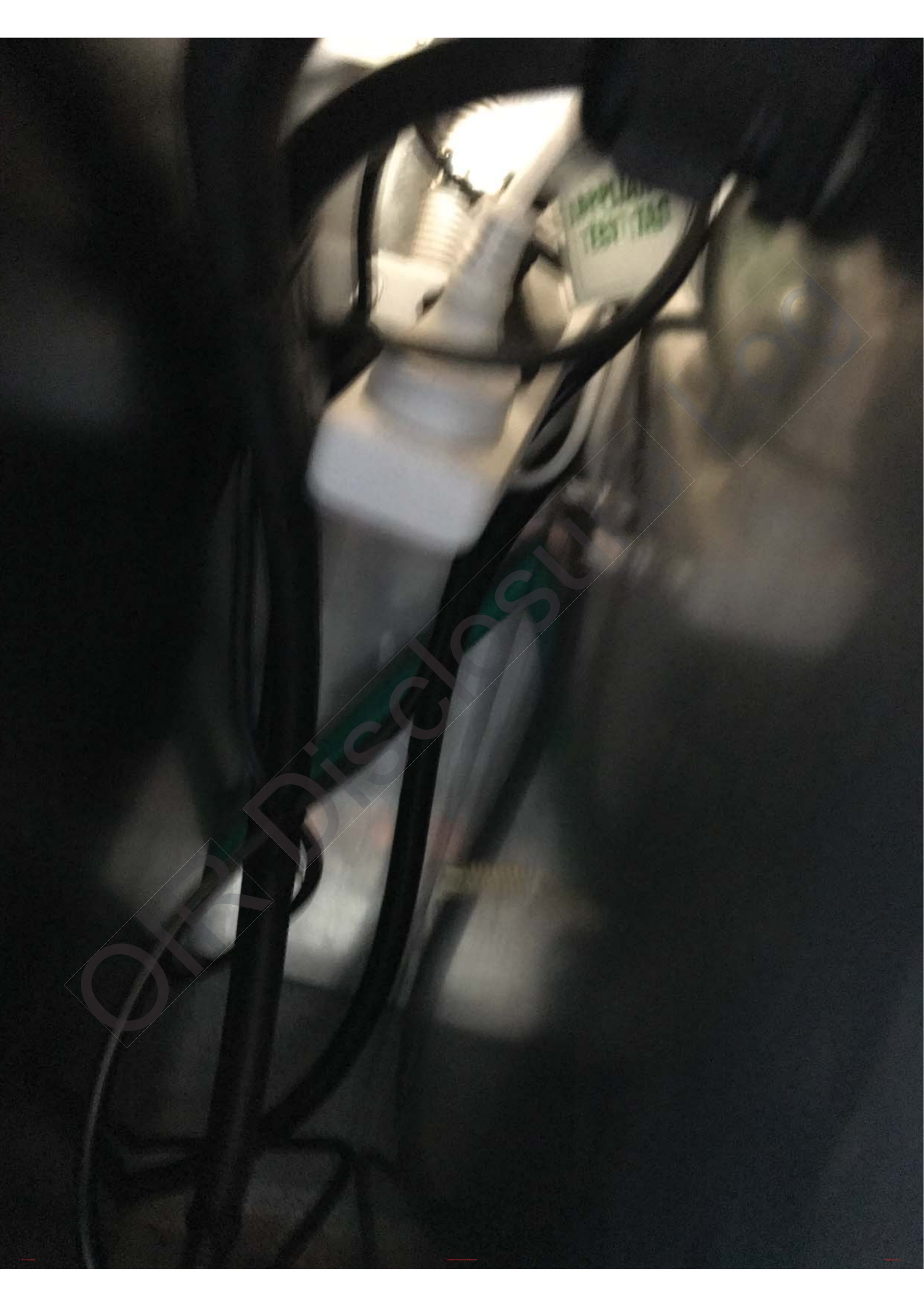
RV48CLM  
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MILKO 2008  
Arco

6200  
SPECIAL ORDER  
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OIR D





APPLYING  
TEST TAG

OTR Disclosures



ELECTRICAL SAFETY  
TEST TO ADHER 3780  
APPLIANCE TEST TAG





Log Disclosure







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# Quattro Inverter/Charger

3kVA - 15kVA

Lithium Ion battery compatible

[www.victronenergy.com](http://www.victronenergy.com)



**Quattro**  
48/5000/70-100/100



**Quattro**  
48/15000/200-100/100

### Two AC inputs with integrated transfer switch

The Quattro can be connected to two independent AC sources, for example the public grid and a generator, or two generators. The Quattro will automatically connect to the active source.

### Two AC Outputs

The main output has no-break functionality. The Quattro takes over the supply to the connected loads in the event of a grid failure or when shore/generator power is disconnected. This happens so fast (less than 20 milliseconds) that computers and other electronic equipment will continue to operate without disruption.

The second output is live only when AC is available on one of the inputs of the Quattro. Loads that should not discharge the battery, like a water heater for example, can be connected to this output.

### Virtually unlimited power thanks to parallel operation

Up to 6 Quattro units can operate in parallel. Six units 48/10000/140, for example, will provide 48kW / 60kVA output power and 840 Amps charging capacity.

### Split phase options

Two units can be stacked to provide 120-0-120V, and additional units can be paralleled up to a total of 6 units per phase, to supply up to 30kW / 36kVA of split phase power.

Alternatively, a split phase AC source can be obtained by connecting our autotransformer (see data sheet on [www.victronenergy.com](http://www.victronenergy.com)) to a 'European' inverter programmed to supply 240V / 60Hz.

### Three phase capability

Three units can be configured for three phase output. But that's not all: up to 6 sets of three units can be parallel connected to provide 144kW / 180kVA inverter power and more than 2500A charging capacity.

### PowerControl – Dealing with limited generator, shore side or grid power

The Quattro is a very powerful battery charger. It will therefore draw a lot of current from the generator or shore side supply (16A per 5kVA Quattro at 230VAC). A current limit can be set on each AC input. The Quattro will then take account of other AC loads and use whatever is spare for charging, thus preventing the generator or mains supply from being overloaded.

### PowerAssist – Boosting shore or generator power

This feature takes the principle of PowerControl to a further dimension allowing the Quattro to supplement the capacity of the alternative source. Where peak power is so often required only for a limited period, the Quattro will make sure that insufficient mains or generator power is immediately compensated for by power from the battery. When the load reduces, the spare power is used to recharge the battery.

### Solar energy: AC power available even during a grid failure

The Quattro can be used in off grid as well as grid connected PV and other alternative energy systems. Loss of mains detection software is available.

### System configuring

- In case of a stand-alone application, if settings have to be changed, this can be done in a matter of minutes with a DIP switch setting procedure.
- Parallel and three phase applications can be configured with VE.Bus Quick Configure and VE.Bus System Configurator software.
- Off grid, grid interactive and self-consumption applications, involving grid-tie inverters and/or MPPT Solar Chargers can be configured with Assistants (dedicated software for specific applications).

### On-site Monitoring and control

Several options are available: Battery Monitor, Multi Control Panel, Color Control GX or other GX devices, smartphone or tablet (Bluetooth Smart), laptop or computer (USB or RS232).

### Remote Monitoring and control

Color Control GX or other GX devices.

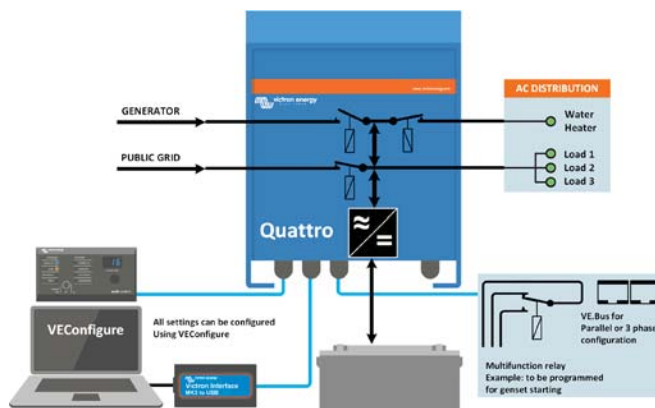
Data can be stored and displayed on our VRM (Victron Remote Management) website, free of charge.

### Remote configuring

When connected to the Ethernet, systems with a Color Control GX or other GX device can be accessed and settings can be changed remotely.



**Color Control GX, showing a PV application**



| Quattro   | 12/3000/120-50/50<br>24/3000/70-50/50   | 12/5000/220-100/100<br>24/5000/120-100/100<br>48/5000/70-100/100 | 24/8000/200-100/100<br>48/8000/110-100/100 | 48/10000/140-100/100 | 48/15000/200-100/100 |
|---|---|--|--|----------------------|----------------------|
| PowerControl / PowerAssist                          | Yes   |  |  |                      |                      |
| Integrated Transfer switch                          | Yes   |  |  |                      |                      |
| AC inputs (2x)                                      | Input voltage range: 187-265 VAC Input frequency: 45 – 65 Hz Power factor: 1                            |  |  |                      |                      |
| Maximum feed through current (A)                    | 2x 50   | 2x100  | 2x100                                      | 2x100                | 2x100                |
| <b>INVERTER</b>                                     |   |  |  |                      |                      |
| Input voltage range (V DC)                          | 9,5 – 17V 19 – 33V 38 – 66V   |  |  |                      |                      |
| Output (1)  | Output voltage: 230 VAC ± 2% Frequency: 50 Hz ± 0,1%  |  |  |                      |                      |
| Cont. output power at 25°C (VA) (3)                 | 3000  | 5000   | 8000                                       | 10000                | 15000                |
| Cont. output power at 25°C (W)                      | 2400  | 4000   | 6500                                       | 8000                 | 12000                |
| Cont. output power at 40°C (W)                      | 2200  | 3700   | 5500                                       | 6500                 | 10000                |
| Cont. output power at 65°C (W)                      | 1700  | 3000   | 3600                                       | 4500                 | 7000                 |
| Peak power (W)                                      | 6000  | 10000  | 16000                                      | 20000                | 25000                |
| Maximum efficiency (%)                              | 93 / 94   | 94 / 94 / 95   | 94 / 96                                    | 96                   | 96                   |
| Zero load power (W)                                 | 20 / 20   | 30 / 30 / 35   | 60 / 60                                    | 60                   | 110                  |
| Zero load power in AES mode (W)                     | 15 / 15   | 20 / 25 / 30   | 40 / 40                                    | 40                   | 75                   |
| Zero load power in Search mode (W)                  | 8 / 10  | 10 / 10 / 15   | 15 / 15                                    | 15                   | 20                   |
| <b>CHARGER</b>                                      |   |  |  |                      |                      |
| Charge voltage 'absorption' (V DC)                  | 14,4 / 28,8   | 14,4 / 28,8 / 57,6   | 28,8 / 57,6                                | 57,6                 | 57,6                 |
| Charge voltage 'float' (V DC)                       | 13,8 / 27,6   | 13,8 / 27,6 / 55,2   | 27,6 / 55,2                                | 55,2                 | 55,2                 |
| Storage mode (V DC)                                 | 13,2 / 26,4   | 13,2 / 26,4 / 52,8   | 26,4 / 52,8                                | 52,8                 | 52,8                 |
| Charge current house battery (A) (4)                | 120 / 70  | 220 / 120 / 70   | 200 / 110                                  | 140                  | 200                  |
| Charge current starter battery (A)                  | 4 (12V and 24V models only)   |  |  |                      |                      |
| Battery temperature sensor                          | Yes   |  |  |                      |                      |
| <b>GENERAL</b>                                      |   |  |  |                      |                      |
| Auxiliary output (A) (5)                            | 25  | 50   | 50   | 50                   | 50                   |
| Programmable relay (6)                              | 3x  | 3x   | 3x   | 3x                   | 3x                   |
| Protection (2)                                      | a-g   |  |  |                      |                      |
| VE.Bus communication port                           | For parallel and three phase operation, remote monitoring and system integration                        |  |  |                      |                      |
| General purpose com. port                           | 2x  | 2x   | 2x   | 2x                   | 2x                   |
| Remote on-off                                       | Yes   |  |  |                      |                      |
| Common Characteristics                              | Operating temp.: -40 to +65°C Humidity (non-condensing): max. 95%                                       |  |  |                      |                      |
| <b>ENCLOSURE</b>                                    |   |  |  |                      |                      |
| Common Characteristics                              | Material & Colour: aluminium (blue RAL 5012) Protection category: IP 21                                 |  |  |                      |                      |
| Battery-connection                                  | Four M8 bolts (2 plus and 2 minus connections)  |  |  |                      |                      |
| 230 V AC-connection                                 | Screw terminals 13 mm <sup>2</sup><br>(6 AWG)   | Bolts M6   | Bolts M6                                   | Bolts M6             | Bolts M6             |
| Weight (kg)   | 19  | 34 / 30 / 30   | 45 / 41                                    | 51                   | 72                   |
| Dimensions (hwxwd in mm)                            | 362 x 258 x 218   | 470 x 350 x 280<br>444 x 328 x 240<br>444 x 328 x 240            | 470 x 350 x 280                            | 470 x 350 x 280      | 572 x 488 x 344      |
| <b>STANDARDS</b>                                    |   |  |  |                      |                      |
| Safety  | EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1   |  |  |                      |                      |
| Emission, Immunity                                  | EN 55014-1, EN 55014-2, EN-IEC 61000-3-2, EN-IEC 61000-3-3, IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3 |  |  |                      |                      |
| Road vehicles                                       | 12V and 24V models: ECE R10-4   |  |  |                      |                      |
| Anti-islanding                                      | See our website   |  |  |                      |                      |
| 1) Can be adjusted to 60 Hz; 120 V 60 Hz on request | 3) Non-linear load, crest factor 3:1  |  |  |                      |                      |
| 2) Protection key:                                  | 4) At 25°C ambient  |  |  |                      |                      |
| a) output short circuit                             | 5) Switches off when no external AC source available  |  |  |                      |                      |
| b) overload   | 6) Programmable relay that can a.o. be set for general alarm,   |  |  |                      |                      |
| c) battery voltage too high                         | DC under voltage or genset start/stop function  |  |  |                      |                      |
| d) battery voltage too low                          | AC rating: 230 V / 4 A  |  |  |                      |                      |
| e) temperature too high                             | DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC   |  |  |                      |                      |
| f) 230 VAC on inverter output                       |   |  |  |                      |                      |
| g) input voltage ripple too high                    |   |  |  |                      |                      |



### Digital Multi Control Panel

A convenient and low cost solution for remote monitoring, with a rotary knob to set PowerControl and PowerAssist levels.



### VE.Bus Smart Dongle

Measures battery voltage and temperature and allows monitoring and control of Multis and Quattros with a smartphone or other Bluetooth enabled device.



### Computer controlled operation and monitoring

Several interfaces are available:



### Color Control GX and other GX devices

Monitoring and control. Locally, and also remotely on the [VRM Portal](#).



### MK3-USB (VE.Bus to USB interface)

Connects to a USB port ([see 'A guide to VEConfigure'](#))



### VE.Bus to NMEA 2000 interface

Connects the device to a NMEA2000 marine electronics network. See the [NMEA2000 & MFD integration guide](#)



### BMV-712 Smart Battery Monitor

Use a smartphone or other Bluetooth enabled device to:

- customize settings,
- monitor all important data on single screen,
- view historical data, and to
- update the software when new features become available.