Quattro Inverter/Charger

3kVA - 15kVA Lithium Ion battery compatible

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.

Split phase option

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

Three phase capability

Three units can be configured for three phase output. But that's not all: up to 4 sets of three 15 kVA units can be parallel connected to provide 144 kW / 180 kVA inverter power and 2400 A 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 (16 A per 5 kVA Quattro at 230 VAC). 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

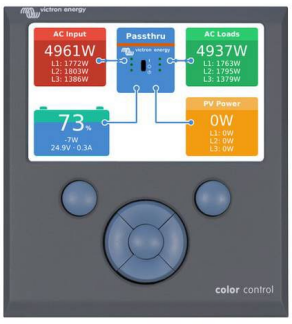
Several options are available: Battery Monitor, Multi Control Panel, Color Control GX or other GX devices, smartphone or tablet (Bluetooth Smart), laptop or computer (USB or RS232).

Remote Monitoring and control

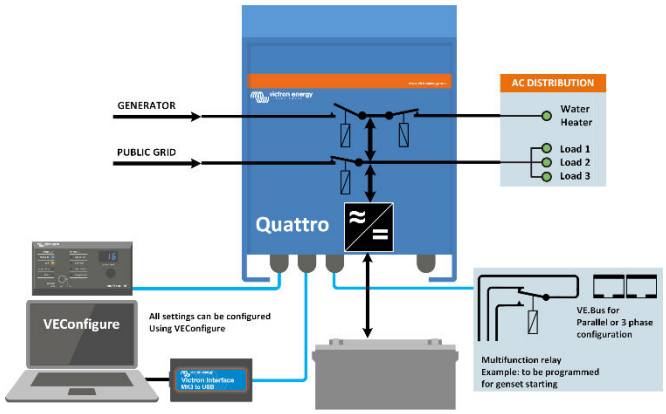
Color Control GX or other GX devices.
Data can be stored and displayed on our VRM (Victron Remote Management) website, free of charge.

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 24/3000/70-50/50	12/5000/220-100/100 24/5000/120-100/100 48/5000/70-100/100	24/8000/200-100/100 48/8000/110-100/100	48/10000/140-100/100	48/15000/200-100/100
Nominal Battery Voltage	12/3000: 12 V battery 24/3000: 24 V battery	12/5000: 12 V battery 24/5000: 24 V battery 48/5000: 48 V Batttery	24/8000: 24 V battery 48/8000: 48 V battery	48 V battery	
PowerControl / PowerAssist	Yes				
Integrated Transfer switch	Yes				
AC inputs (2x)	Input voltage range: 187-250 VAC Input frequency: 50/60 Hz Cos Φ >0.8				
Maximum feed through current (A)	2x 50	2x100	2x100	2x100	2x100
ICw	6 kA 30 mS	10 kA 30 ms			
INVERTER					
Input voltage range (VDC)	9,5 – 17 V 19 – 33 V 38 – 66 V				
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	6400	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
Input current (A DC)	250 / 125	458/238/118	381/188	235	350
Maximum continuous Output current (A~)	11	19	30	37	53/50
Power factor range	±0.8	±0.8	±0.8	±0.8	±0.8
Maximum output fault current	32 A peak 1 sec.	53 A 1 sec.	100 A 1 sec	100 A 1 sec	150 A 1 sec
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
CHARGER					
Charge voltage 'absorption' (VDC)	14,4 / 28,8	14,4 / 28,8 / 57,6	28,8 / 57,6	57,6	57,6
Charge voltage 'float' (VDC)	13,8 / 27,6	13,8 / 27,6 / 55,2	27,6 / 55,2	55,2	55,2
Storage mode (VDC)	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 (12 V and 24 V models only)				
Battery temperature sensor	Yes				
GENERAL					
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.: -20 to +60 °C Humidity (non-condensing): max. 95 %				
Maximum altitude	3500 m				
ENCLOSURE					
Common Characteristics	Material & Colour: aluminium (blue RAL 5012) Protection category: IP20, pollution degree 2, OVC III				
Battery-connection	Four M8 bolts (2 plus and 2 minus connections)				
230 VAC-connection	Screw terminals 13 mm² (6 AWG)	Bolts M6	Bolts M6	Bolts M6	Bolts M6
Weight (kg)	19	34 / 30 / 30	45 / 41	51	72
Dimensions (hxwxd in mm)	362 x 258 x 218	470 x 350 x 280 444 x 328 x 240 444 x 328 x 240	470 x 350 x 280	470 x 350 x 280	572 x 488 x 344
STANDARDS					
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	12 V and 24 V models: ECE R10-4				
Anti-islanding	See our website				

1) Can be adjusted to 60 HZ. 120 V models available on request
2) Protection key:
a) output short circuit
b) overload
c) battery voltage too high
d) battery voltage too low
e) temperature too high
f) 230 VAC on inverter output
g) input voltage ripple too high

3) Non-linear load, crest factor 3:1
4) Up to 25 °C ambient
5) Switches off when no external AC source available
6) Programmable relay that can a.o. be set for general alarm,
DC under voltage or genset start/stop function
AC rating: 230 V / 4 A
DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC

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 NMEA 2000 marine electronics network. See the NMEA2 000 & 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.

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
E-mail: sales@victronenergy.com | **www.victronenergy.com**