# MultiPlus Inverter/Chargers 2 kVA and 3 kVA

(120 V/60 Hz)

Lithium-lon battery compatible



**MultiPlus** 24/3000/70



MultiPlus Compact 12/2000/80

#### Multifunctional, with intelligent power management

The MultiPlus is a powerful true sine wave inverter, a sophisticated battery charger that features adaptive charge technology, and a high-speed AC transfer switch in a single compact enclosure. Next to these primary functions, the MultiPlus has several advanced features, as outlined below.

#### **Two AC Outputs**

The main output has no-break functionality. The MultiPlus 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 the input of the MultiPlus. Loads that should not discharge the battery, like a water heater for example, can be connected to this output (second output available on models rated at 3kVA and more).

#### Virtually unlimited power thanks to parallel operation

Up to six Multis can operate in parallel to achieve higher power output. Six 24/3000/70 units, for example, provide 15kW / 18kVA output power with 420 Amps of charging capacity.

#### Three phase capability

In addition to parallel connection, three units can be configured for three-phase output. But that's not all: with three strings of six parallel units a 45 kW / 54 kVA three phase inverter and 1260 A charger can be built.

#### Split phase options

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

Alternatively, 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.

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

The MultiPlus is a very powerful battery charger. It will therefore draw a lot of current from the generator or shore side supply (nearly 20 A per 3 kVA MultiPlus at 120 VAC). With the Multi Control Panel a maximum generator or shore current can be set. The MultiPlus will then take account of other AC loads and use whatever is extra for charging, thus preventing the generator or shore supply from being overloaded.

#### PowerAssist - Boosting the capacity of shore or generator power

This feature takes the principle of PowerControl to a further dimension. It allows the MultiPlus to supplement the capacity of the alternative source. Where peak power is so often required only for a limited period, the MultiPlus will make sure that insufficient shore 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.

#### Four stage adaptive charger and dual bank battery charging

The main output provides a powerful charge to the battery system by means of advanced 'adaptive charge' software. The software fine-tunes the three stage automatic process to suit the condition of the battery, and adds a fourth stage for long periods of float charging. The adaptive charge process is described in more detail on the Phoenix Charger datasheet and on our website, under Technical Information. In addition to this, the MultiPlus will charge a second battery using an independent trickle charge output intended for a main engine or generator starter battery.

# System configuring has never been easier

After installation, the MultiPlus is ready to go.

If settings have to be changed, this can be done in a matter of minutes with a DIP switch setting procedure. Even parallel and 3-phase operation can be programmed with DIP switches: no computer needed! Alternatively, VE.Net can be used instead of the DIP switches.

And sophisticated software (VE.Bus Quick Configure and VE.Bus System Configurator) is available to configure several new, advanced, features.

# PowerAssist with 2x MultiPlus in parallel

Five parallel units: output power 12,5 kW





"operation (A)         Yes           Tander suite, (A)         50           anallel and 3-phase operation         Yes           Tander suite, (A)         9.5 – 17.2 v         19 – 33 v           Comput voltage range (V DC)         9.5 – 17.2 v         19 – 33 v           Cont. output power at 25°C / 72°F (VA) <sup>(20)</sup> 2000         2000           Cont. output power at 25°C / 72°F (VA) <sup>(20)</sup> 2000         2000           Cont. output power at 25°C / 10°F (W)         1100         2000           Cont. output power at 25°C / 10°F (W)         1100         2000           Cont. output power at 25°C / 10°F (W)         1000         2000           Cont. output power at 25°C / 10°F (W)         1000         2000           Cont. output power at 25°C / 10°F (W)         1000         2000           Cont. output power at 25°C / 10°F (W)         1000         2000           Cont. output power at 25°C / 10°F (W)         1000         2000           Cont. output power at 25°C / 10°F (W)         2000         2000           Cont. output power at 25°C / 10°F (W)         2000         2000           Cont. output power at 25°C / 10°F (W)         200 / 20         2000           Cont. output power at 25°C / 10°F (W)         200 / 20         200 / 20           <			
24/2003/00         24/2000/30         24/2000/30           NeweControl         Ves           SweeControl         Ves           Transfer switch (A)         50           Transfer switch (A)         50           Transfer switch (A)         9,5-177           Output voltage range (VDC)         0.0011 voltage: 120 VAC = 2%           Orici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Onici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Orici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Onici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Onici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Onici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Onici dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Concid dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Concid dupt power at 25% (777 (VA)) <sup>(11)</sup> 2000           Search mode (VD)         104           Programma difficiency (N)         4000           Search mode (VD)         134 / 258           Thinge voltage aborption' (VDC)         134 / 258           Diage concern boxed for (VDC)         134 / 254           Diage concern boxed for (VDC)         134 / 258           Diage concern boxed for (VDC	MultiPlus		
OwerAsist         Yes           Taraffer switch (A)         50           Taraffer switch (A)         50           Taraffer switch (A)         55           Toron topper power at 25°C (77F (M))**         2000           Conct topper power at 25°C (77F (M))**         1000           Conct topper power at 25°C (77F (M))**         1000           Conct topper power at 25°C (77F (M))**         1000           Conct topper power at 25°C (77F (M)         1100           Toron topper power at 25°C (77F (M)         1000           Toron topper power at 25°C (77F (M)         1000           Toron topper power at 25°C (77F (M)         1000           Standammed Toron topper power at 45°C (150F (M)         4000           Conct topper power in A5 mode (W)         3 / 44           Standammed Toron topper power in A5 mode (W)         3 / 44           Conct topper power in A5 mode (W)         3 / 44           Stange toron topper topper at A5°C (400 Toron topper power in A5 mode (W)         3 / 42 / 28 / 28 /	24 Volt	24/2000/50	24/3000/70
iander synch (A) in a synch (A) in the second of the second sec	PowerControl		
lanile and 3-phase operation intervent inter	PowerAssist		
INVERIG           Dutput         95-17V         19-33V           Output woltage 120 VAC ± 2%         Frequency: 60 Hz ± 0.1% '''           Output woltage 120 VAC ± 2%         Frequency: 60 Hz ± 0.1% '''           Cont output power at 257 (77F (W)         1000         3000           Cont output power at 257 (77F (W)         1000         2000           Cont output power at 657 (150F (W)         1100         1700           Vesk power (W)         4000         6000           Assimum efficiency (%)         20 / 20         200           Assimum efficiency (%)         20 / 20         20 / 20           Carolog power in A55 mode (W)         7/18         20 / 20           Carolog power in A55 mode (W)         3/4         8/10           Cliput         Input voltage range: 95-140 VAC         Input frequency: 45 - 65 Hz         Power factor: 1           Anarge voltage hoar (V DC)         132 / 26.4         8/10         120 / 70           Anarge voltage hoar (V DC)         132 / 26.4         120 / 70         132 / 26.4           Anarge voltage hoar (V DC)         4         230         120 / 70           Anarge voltage hoar (V DC)         -9         9         9           Anarge voltage hoar (V DC)         -9         120 / 70         12	Transfer switch (A)		
nput voltage range (VDC)         9.5 - 17.V         19 - 33.V           Dutput         Output voltage 120 VAC ± 2%         Frequency: 60 Hz ± 0,1%.''           Cont output power at 25C / 77F. (VA)**         3000         3000           Cont output power at 35C / 104F. (VA)**         2200         2200           Cont output power at 45C / 104F. (VA)         1450         2200           Cont output power at 45C / 104F. (VA)         4000         6000           Stainum efficiency (%)         92 / 94         39 / 94           Cero load power in A5S mode (W)         7 / 8         15 / 15           Cero load power in A5S mode (W)         3 / 4         8 / 10           Cero load power in A5S mode (W)         3 / 4         8 / 10           Cero load power in Search mode (W)         3 / 4         8 / 10           Cingur entropic absorption' (VDC)         144 / 78.8         76.6           Strange voltage float' (VDC)         132 / 26.4         120 / 70           Linger current share hattery (A)**         8 / 50         4         20 / 70           Strange voltage float' (VDC)         132 / 26.4         Yes (32A)         Yes (32A)           Strange voltage float' (VDC)         132 / 26.4         Yes (32A)         Yes (32A)           Strange voltage float' (VDC)         132 / 26.	Parallel and 3-phase operation		
Duput         Output voltage: 120 VAC ± 29;         Frequency: 60 H ± 2,0 1%; ''           Ont output power at 25°C /77 K (W)         1600         3000           Cont output power at 25°C /77 K (W)         1600         2400           Cont output power at 40°C / 10 K* (W)         1450         2200           Cont output power at 40°C / 10 K* (W)         1100         1700           Cont output power at 65°C / 150°F (W)         92 / 94         93 / 94           Cont output power at 65°C / 150°F (W)         92 / 94         93 / 94           See hower (W)         92 / 94         93 / 94           See hower (W)         92 / 94         93 / 94           See hower (W)         92 / 94         93 / 94           See hower (W)         92 / 94         93 / 94           See hower (W)         32 / 4         93 / 94           See hower (W)         32 / 26         83 / 10           Stange see hower (W)         32 / 26         83 / 10           Stange see hower (V)         132 / 26 / 120 / 70         132 / 26 / 120 / 70           Stange content stant for bar (V DC)         132 / 26 / 120 / 70         132 / 26 / 120 / 70           Stange content stant for bar (V DC)         132 / 26 / 120 / 70         132 / 26 / 120 / 70           Stange content stant for bar (V DC)			
Cont output power at 25°C 77°E (W)         2000         2400           Cont output power at 25°C 77°E (W)         1600         2400           Cont output power at 45°C / 169°E (W)         1100         2000           Cont output power at 45°C / 169°E (W)         4000         6000           Cont output power at 45°C / 169°E (W)         4000         6000           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 45°C / 150°E (W)         92 /94         93 /94           Cont output power at 65°C / 150°E (W)         7.8         8.10           Cont output power at 65°C / 150°E (W)         134 /28         134 /28           Cont output power at 65°C / 150°E (W)         132 /26,4         138 /27,5           Cont output power and cont with power and cont with power at 65°C / 150°E (FRAL         Yes (32)         Yes (32)           Cont output power and cont with power and cont w	Input voltage range (V DC)		
Cont. output power at 25°C / 77°F (W)         1600         2400           Cont. output power at 65°C / 150°F (W)         1100         1700           Cont. output power at 65°C / 150°F (W)         4000         6000           Cont. output power at 65°C / 150°F (W)         4000         6000           Cont. output power at 65°C / 150°F (W)         92 / 54         93 / 54           Cont. output power at 65°C / 150°F (W)         92 / 14         93 / 54           Cont. output power at 65°C / 150°F (W)         91 / 1         20 / 20           Cont. output power at 65°C / 150°F (W)         93 / 54         93 / 54           Cont. output power at 65°C / 150°F (W)         93 / 54         87 / 10           Cont. output power at 65°C / 150°F (W)         37 / 8         87 / 10           Cont. output power at 65°C / 150°F (W)         37 / 8         87 / 10           Cont. output power at 65°C / 150°F (W)         37 / 8         87 / 10           Cont. output power at 65°C / 150°F (W)         37 / 8         87 / 10           Cont. output power at 65°C / 150°F (W)         132 / 256 / 10         120 / 70           Cont. output power at 65°C / 150°F (M)         120 / 70         132 / 256 / 10           Cont. output power at 65°C / 100 Cont. output power at 65°C / 1	Output	1 3	
Cont. output power at 40°C / 104°F (W)         1450         2200           Cont. output power at 40°C / 105°F (W)         1100         1700           Took output power 40°C / 105°F (W)         000         6000           Took output power 40°C / 105°F (W)         000         6000           Took output power 40°C / 105°F (W)         000 / 100         93 / 94           Series Mode (W)         000 / 718         20 / 20           Eero load power in AES mode (W)         3 / 4         8/ 10           Eero load power in AES mode (W)         3 / 4         8/ 10           Charter Construction of the search mode (W)         3 / 4         8/ 10           Charter Construction of the search mode (W)         3 / 4         8/ 10           Charter Construction of the search mode (W)         13 / 27.6         120 / 70           Enarge contage fibral (V DC)         13 / 27.6         120 / 70           Enarge contage fibral (V DC)         13 / 27.6         120 / 70           Enarge contage fibral (V DC)         120 / 70         120 / 70           Enarge contage fibral (V DC)         120 / 70         120 / 70           Enarge contage fibral (V DC)         120 / 70         120 / 70           Enarge contage fibral (V DC)         120 / 70         120 / 70           Enarge contag	Cont. output power at 25°C / 77°F (VA) (3)	2000	3000
Cont. output power at 657 (/ 150°F (M)         1100         1700           Vesk power (M)         40000         60000           darkinum efficiency (%)         92 / 94         93 / 94           Cen load power (M)         9 / 11         20 / 20           Cen load power (M)         7.8         8 / 10           Cen load power in Search mode (M)         3 / 4         8 / 10           Cen load power in Search mode (W)         3 / 4         8 / 10           Cliput         Input voltage range: 95-140 VAC         Input frequency: 45 - 65 Hz         Power factor: 1           Charge voltage 'absorption' (V DC)         134 / 22.8         120 / 70         134 / 22.6           Charge voltage 'absorption' (V DC)         132 / 26.4         120 / 70         120 / 70           Carge unter house battery (A)*         80 / 50         4         120 / 70           Latery temperature sensor         yes         120 / 70         120 / 70           Latery temperature sensor         yes         120 / 70         120 / 70           Construction for parallel and three phase operation, remote monitoring and system integration         6         120 / 70           Construction port         For parallel and three phase operation, remote monitoring and system integration         5           Construction port         <	Cont. output power at 25°C / 77°F (W)	1600	2400
Peak power (W)         4000         6000           damium efficiency (%)         92 / 94         93 / 94           Lero load power in AES mode (W)         9 / 11         20 / 20           Lero load power in Search mode (W)         3 / 4         81 / 10           Lero load power in Search mode (W)         3 / 4         81 / 10           CHARGER         Biput frequency: 45 - 65 Hz         Power factor: 1           Large voltage 'Basorption (V DC)         13,4 / 28,8         Power factor: 1           Large voltage 'Basorption (V DC)         13,3 / 27,6         120 / 70           Large current house battery (A)         80 / 50         120 / 70           Large current house battery (A)         4         120 / 70           Large current house battery (A)         4         120 / 70           Large current house battery (A)         4         120 / 70           Large current house battery (A)         4         120 / 70           Large current house battery (A)         n. a.         Yes (32)           Lorge annable relay "1         Yes (1x)         Yes (32)           Lorge annable relay "2         Yes (32)         Yes (2x)           Loss communication port         For parallel and three phase operation, remet monitoring and system integration           Low common Characteri	Cont. output power at 40°C / 104°F (W)	1450	2200
daamum efficiency (%)     92 / 94     93 / 94       deamum efficiency (%)     9 / 11     20 / 20       fero load power in AES mode (W)     7 / 8     8 / 10       fero load power in Search mode (W)     3 / 4     8 / 10       CHARGER     8 / 10     8 / 10       Charge voltage 'absorption' (V DC)     Input voltage range: 95 - 140 VAC     Input frequency: 45 - 65 Hz     Power factor: 1       harge voltage 'absorption' (V DC)     132 / 27,6     132 / 27,6     120 / 70       harge course thater battery (A) "     80 / 50     4     120 / 70       harge course thater battery (A) "     80 / 50     4     120 / 70       harge course thater battery (A) "     80 / 50     4     120 / 70       harge course thater battery (A) "     80 / 50     4     120 / 70       harge course thater battery (A) "     80 / 50     4     120 / 70       harge course thatery (A) "     80 / 50     4     120 / 70       harge course thatery (A) "     80 / 50     4     120 / 70       harge course thatery (A) "     Na     4     120 / 70       harge course thatery (A) "     n.a.     Yes (32 A)     Yes (32 A)       forger and purpose com, port "     n.a.     Yes (23 A)     Yes (23 A)       forection of for comalign and system integration     Secret memol 6	Cont. output power at 65°C / 150°F (W)		1700
Tero lad power (M)     9 / 11     20 / 20       Tero lad power in AES mode (W)     7 / 8     15 / 15       Tero lad power in SEs mode (W)     3 / 4     8 / 10       C Input     Input voltage rage: 95-140 VAC     Input frequency: 45 - 65 Hz     Power factor: 1       Charge voltage 'nascrption' (V DC)     13.8 / 27.6     13.2 / 26.4       Tharge current house battery (A) <sup>(A)</sup> 80 / 50     120 / 70       Tharge current nucles battery (A) <sup>(A)</sup> 80 / 50     120 / 70       Tharge current nucles battery (A) <sup>(A)</sup> 80 / 50     120 / 70       Tharge current nucles battery (A) <sup>(A)</sup> 80 / 50     120 / 70       Tharge current nucles battery (A) <sup>(A)</sup> 80 / 50     120 / 70       Tharge current nucles battery (A) <sup>(A)</sup> 80 / 50     120 / 70       Tharge current starter battery (A)     4     120 / 70       Tharge current starter battery (A)     4     120 / 70       Vorgaramable relay <sup>(A)</sup> Ne (I)     Yes (32A)       Torgaramable relay <sup>(A)</sup> Yes (1X)     Yes (2A)       Torgaramable relay <sup>(A)</sup> Yes (1X)     Yes (2A)       Common Characteristics     Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)     Humidity (non-condensing): max 95%       Common Characteristics     Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)     Humidity (non-condensing):	Peak power (W)		
Tere laad power in AES mode (W)     7/8     15/15       Itere load power in Search mode (W)     3/4     8/10       CLI put     Input voltage range: 95-140 VAC     Input frequency: 45-65 Hz     Power factor: 1       Atrage voltage 'absorption' (V DC)     13.8/27.6     120/70       Charge voltage 'float' (V DC)     13.8/27.6     120/70       Charge current house battery (A) (%     80/50     120/70       Charge current house battery (A) (%     80/50     4       Attery temperature sensor     yes     120/70       Charge current starter battery (A) (%     80/50     4       Voltage to dev (V DC)     6ENERAL     Yes (32A)       Totatery temperature sensor     yes     3(A)       Totatery temperature sensor     Yes (32A)     Yes (32A)       Totatery temperature sensor     Yes (32A)     Yes (32A) <td>Maximum efficiency (%)</td> <td>92 / 94</td> <td>93 / 94</td>	Maximum efficiency (%)	92 / 94	93 / 94
Pero load power in Search mode (W)       3 / 4       8 / 10         CHARGER       CHARGER         KC Input       Input voltage range: 95-140 VAC       Input frequency: 45 – 65 Hz       Power factor: 1         charge voltage 'absorption' (V DC)       14,4 / 28,8       Power factor: 1         charge voltage 'noat' (V DC)       13,2 / 26,4       Power factor: 1         charge current house battery (A) <sup>(A)</sup> 80 / 50       12,0 / 70         charge current starter battery (A)       4       Power factor: 1         charge current starter battery (A) <sup>(A)</sup> 80 / 50       4       Power factor: 1         charge current starter battery (A) <sup>(A)</sup> A       Yes       Yes         voltage 'noater's tarter battery (A) <sup>(A)</sup> A       Yes       Yes         voltage 'noater's 'noate	Zero load power (W)	9/11	20 / 20
AC Input       Input voltage range: 95-140 VAC       Input requency: 45 - 65 Hz       Power factor: 1         harge voltage 'absorption' (V DC)       13.8/27.6       13.8/27.6         harge voltage 'float' (V DC)       13.8/27.6       120 / 70         harge current house battery (A) ''       80 / 50       120 / 70         harge current house battery (A)       80 / 50       4         tattery temperature sensor       yes         Ukiliary output <sup>50</sup> n. a.       Yes (32A)         'rotection ''       6ENERAL       Yes (32A)         'rotection ''       8 - 9       Yes (32A)         'rotection ''       n. a.       Yes (32A)         'rotection ''       0       a - 9         'KEBus communication port       For parallel and three phase operation, remote monitoring and system integration       a - 9         'KEBus communication port       N.a.       Yes (2X)       Yes (2X)         common Characteristics       Operating temp: range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Material & Colour aluminium (blue RAL 5012)       Protection category: IP 21         interty connection       MB boits       MB boits (2 plus and 2 minus connections)         20 V AC-connection       Screw-terminal 6 AWG (1	Zero load power in AES mode (W)		
NC Input         Input voltage range: 95-140 VAC         Input frequency: 45 - 65 Hz         Power factor: 1           harge voltage 'aborption' (V DC)         14.4 / 28.8         14.4 / 28.8           harge voltage 'aborption' (V DC)         13.8 / 27.6         13.8 / 27.6           harge voltage 'aborption' (V DC)         13.8 / 27.6         12.0 / 70           harge current starter battery (A) (*         80 / 50         4         12.0 / 70           harge current starter battery (A)         4         4         12.0 / 70           harge current starter battery (A)         4         12.0 / 70         12.0 / 70           harge current starter battery (A)         4         12.0 / 70         12.0 / 70           harge current starter battery (A)         4         12.0 / 70         12.0 / 70           harge current starter battery (A)         4         12.0 / 70         12.0 / 70           harge voltage 'abort (A)         Yes (3.2A)         Yes (3.2A)         Yes (3.2A)           forgarmable relay '''         Yes (3.2A)         Yes (3.2A)         Yes (3.2A)           forgarmable relay '''         Yes (3.2A)         Yes (3.2A)         Yes (3.2A)           forgarmable relay '''         Yes (3.2A)         Yes (3.2A)         Yes (3.2A)           formaton ont         For parallel and thr	Zero load power in Search mode (W)	- / ·	8 / 10
harge voltage labsorption' (V DC)     14.4 / 28.8       harge voltage float' (V DC)     13.8 / 27.6       harge voltage float' (V DC)     13.8 / 27.6       charge current house battery (A)***     80 / 50       harge current starter battery (A)     4       tattery temperature sensor     yes       GENERAL       Ves (32A)       Ves (32A)       Yes (32A) <t< td=""><td>AC Input</td><td></td><td>fraguency 45 65 Hz Douverfactor 1</td></t<>	AC Input		fraguency 45 65 Hz Douverfactor 1
harge voltage float' (V C) itorage mode (V DC) 13,8 / 27,6 itorage mode (V DC) 13,2 / 26,4 Large current house battery (A) <sup>(4)</sup> 80 / 50 1 120 / 70 harge current battery tatter battery (A) tattery temperature sensor CENERAL Vusiliary output <sup>40</sup> n. a. Yes (32,A) rotoection <sup>60</sup> Yes (13,A) rotoection <sup>60</sup> Yes (3,A) rotoection <sup>60</sup> A - g EBus communication port Pro parallel and three phase operation, remote monitoring and system integration Seneral purpose com. port <sup>60</sup> n. a. Yes (2,A) rotoection <sup>60</sup> A - g EBus communication port O - n. a. Yes (2,A) termote on-off Yes (2,A) remote On-Off Yes (2,A)	•	1 3 3 1	. ,
itorage mode (VDC)       13,2/26,4         harge current house battery (A) (4       80 / 50       120 / 70         harge current house battery (A)       4       300 / 50       4         battery temperature sensor       yes       yes         visualiary output <sup>40</sup> n. a.       Yes (32A)         horge namely (B)       Nest (S)       Yes (32A)         horge namely (B)       N.a.       Yes (32A)         hordertion (7)       Yes (13)       Yes (32A)         foretrion (7)       Per (S)       Yes (32A)         /* (EBus communication port       For parallel and three phase operation, remote monitoring and system integration       e-g         /* (EBus common Characteristics       Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         common Characteristics       Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         common Characteristics       Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         common Characteristics       Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         common Characteristics       Operating temp, range: -40 + 65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-cond		· ·	<i></i>
charge current house battery (A) <sup>16</sup> 80 / 50       120 / 70         charge current starter battery (A)       4       4         charge current starter battery (A)       GENERAL       Yes         Musiliary output <sup>80</sup> n. a.       Yes (32A)         Yes         To pravide relay <sup>160</sup> Yes (32A)         Yes (2X)         Yes (2X) <t< td=""><td></td><td></td><td>•</td></t<>			•
Charge current starter battlery (Å)       4         Jattery temperature sensor       yes         Auxillary output <sup>60</sup> n. a.         Auxillary output <sup>60</sup> n. a.         Auxillary output <sup>60</sup> N.a.         Programmable relay <sup>60</sup> Yes (32A)         Protection <sup>60</sup> a - g         EBus communication port       For parallel and three phase operation, remote monitoring and system integration         Eener al purpose com. port <sup>60</sup> Area         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Stattery-connection       Masteils a Colour:			•
Autery temperature sensor       Jess         CENERAL       CENERAL         Variable relay (III)       n. a.         Programmable relay (III)       Yes (32A)         Sensor munication port       Programmable relay (III)         EBus communication port       Yes (22A)         Sensor munication port       Yes (22A)         Femote on-off       Yes (22A)         Common Characteristics       Operating temp, range: -40 - +65°C / 40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp, range: -40 - +65°C / 40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp, range: -40 - +65°C / 40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp, range: -40 - +65°C / 40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp, range: -40 - +65°C / 40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%	5		
GENERAL       Auxiliary output <sup>(5)</sup> n. a.     Yes (32A)       Protection <sup>(2)</sup> Yes (1x)     Yes (3x)       Protection <sup>(2)</sup> a - g       KE.Bus communication port     For parallel and three phase operation, remote monitoring and system integration       Seneral purpose com, port <sup>(7)</sup> n. a.       Yes     Yes       Common Characteristics     Operating temp, range: -40 - +65°C / -40 to 150°F (fan assisted cooling)     Humidity (non-condensing): max 95%       EncloSURE     ENCLOSURE       Common Characteristics     Operating temp, range: -40 - +65°C / -40 to 150°F (fan assisted cooling)     Humidity (non-condensing): max 95%       EncloSURE     ENCLOSURE     ENCLOSURE       Common Characteristics     Material & Colou: aluminium (blue RAL 5012)     Protection category: IP 21       Battery-connection     M8 bolts     M8 bolts (2 plus and 2 minus connections)       20 V AC-connection     Screw-terminal 6 AWG (13 mm <sup>2</sup> )     Screw-terminal 6 AWG (13 mm <sup>2</sup> )       Weight     13 kg 25 lbs.     19kg 40 lbs.       Dimensions (hxwad in mm and inches)     520x255x12 m 20.5x10.0x5.0 inch     362x258x218 mm 14.3x10.2x8.6 inch       Stanubarder     Signification 23/2-3.7, EN-IEC 60335-1, EN-IEC 60335-2-2.9     UL 1741, UL 458, EN-IEC 61030-3-2/3-3/, EN-IEC 61030-3-2/3-3/, EN-IEC 61030-3-2/3-3/, EN-IEC 61030-3-2/3-3/, EN-IEC 61030-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC			-
Nuxiliary output <sup>(5)</sup> n.a.       Yes (32A)         Programmable relay <sup>(6)</sup> Yes (1x)       Yes (3x)         Protection <sup>(7)</sup> a - g         CBus communication port       For parallel and three phase operation, remote monitoring and system integration         Seneral purpose com. port <sup>(7)</sup> n.a.         Vere commonication port       Yes (2x)         Remote on-off       Yes         Common Characteristics       Operating temp, range: 40 - 455°C / -40 to 150°F (fra assisted cooling)       Humidity (non-condensing); max 95%         Common Characteristics       Operating temp, range: 40 - 455°C / -40 to 150°F (fra assisted cooling)       Humidity (non-condensing); max 95%         Common Characteristics       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Sattery-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       19kg 40 lbs.         Sifety       UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29         Sifety       UL 458, EN-IEC 60100-3-2/3-3/, EN-IEC 60100-6-1/6-2/6-3       EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         Sifety       UL 458, EN-IEC 60100-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3       EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         Sifety       UL 458, EN-IEC 61000-	battery temperature sensor		25
Programmable relay <sup>(%)</sup> Yes (1x)     Yes (3x)       Protection <sup>(%)</sup> a - g       Vest communication port     For parallel and three phase operation, remote monitoring and system integration       Seneral purpose com, port <sup>(%)</sup> n. a.       Seneral purpose com, port <sup>(%)</sup> Yes (2x)       Remote on-off     Yes       Common Characteristics     Operating temp, range: 40 - +65° C / 40 to 150° f (fan assisted cooling)       Common Characteristics     Operating temp, range: 40 - 465° C / 40 to 150° f (fan assisted cooling)       Common Characteristics     Operating temp, range: 40 - 465° C / 40 to 150° f (fan assisted cooling)       Sommon Characteristics     Operating temp, range: 40 - 465° C / 40 to 150° f (fan assisted cooling)       Sommon Characteristics     Material & Colour: aluminium (blue RAL 5012)     Protection category: IP 21       Sommon Characteristics     Material & Colour: aluminium (blue RAL 5012)     Protection category: IP 21       Soutery-connection     Screw-terminal 6 AWG (13 mm <sup>2</sup> )     Screw-terminal 6 AWG (13 mm <sup>2</sup> )       20 V AC-connection     Screw-terminal 6 AWG (13 mm <sup>2</sup> )     Screw-terminal 6 AWG (13 mm <sup>2</sup> )       Veight     13 kg 25 lbs.     19 kg 40 lbs.       Sterwy ot passion and Immunity     EN-EC 60335-1, EN-IEC 61000-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC 61000-3-2/3-3/, EN-IEC	Auxiliancoutput <sup>(5)</sup>		Voc (32Å)
Protection <sup>(2)</sup> a - g         /E,Bus communication port       For parallel and three phase operation, remote monitoring and system integration         Seneral purpose com, port <sup>(7)</sup> n. a.       Yes         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         Stattery-connection       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Stattery-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Stattery-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Stattery-cola (hxwxd in mm and inches)       S20x258x125 m	2 1		
/E.Bus communication port       For parallel and three phase operation, remote monitoring and system integration         Seneral purpose com. port (?)       n. a.       Yes (2x)         Remote on-off       Yes       Yes         Common Characteristics       Operating temp. range: 40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         ENCLOSURE       ENCLOSURE         Common Characteristics       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Battery-connection       M8 bolts       M8 bolts (2 plus and 2 minus connections)         20 V AC-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       19kg 40 lbs.         Jimensions (hxwxd in mm and inches)       520x255x125 mm 20.5x10.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         Stafety       UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-2-29         Emission and Immunity       EN-IEC 61000-3-2/3-3, KI-IEC 61000-6-1/6-2/6-3       EN-IEC 61000-3-2/3-3, EN-IEC 61000-6-1/6-2/6-3         1) Can be adjusted to 50 HZ;       3) Non-linear load, crest factor 3:1       2) Protection key:       4) Up to 57 F ambient         a) output short circuit       5) Switches off when no external AC source available       5) Switches off when no external AC source available			
Seneral purpose com. port (?)       n.a.       Yes         temote on-off       Yes         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): may 95%         ENCLOSURE         Common Characteristics       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Battery-connection       Material & AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         120 V AC-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       19kg 40 lbs.         Dimensions (hxwxd in mm and inches)       520x255x125 mm 20.5x110.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         STANDARDS         Out 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 61000-6-1/6-2/6-3         EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         Out 1741, UL 458, EN-IEC 61000-6-1/6-2/6-3         EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         Out of 51° F ambient         a) Non-linear load, crest factor 3:1         Output short circuit       5) Switches off when no external AC source available       b) overload			
Remote on-off       Yes         Common Characteristics       Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)       Humidity (non-condensing): max 95%         ENCLOSURE         Common Characteristics       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Sattery-connection       M8 bolts       M8 bolts (2 plus and 2 minus connections)         120 V AC-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       19kg 40 lbs.         Dimensions (hxwxd in mm and inches)       520x255x125 mm 20.5x10.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         StranpARDS         ENLIEC 61000-3-2/3-3/, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29         UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 61000-6-1/6-2/6-3         EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         On-linear load, crest factor 3:1         1) Protection key:       4) Up to 75°F 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         c) battery voltage too high       alarm,         <	•		, , , , , , , , , , , , , , , , , , ,
Common Characteristics         Operating temp. range: -40 - +65°C / -40 to 150°F (fan assisted cooling)         Humidity (non-condensing): max 95%           ENCLOSURE           Common Characteristics         Material & Colour: aluminium (blue RAL 5012)         Protection category: IP 21           Stattery-connection         M8 bolts         M8 bolts (2 plus and 2 minus connections)           20 V AC-connection         Screw-terminal 6 AWG (13 mm²)         Screw-terminal 6 AWG (13 mm²)           Veight         13 kg 25 lbs.         19kg 40 lbs.           Dimensions (hxwxd in mm and inches)         520x255x125 mm 20.5x10.0x5.0 inch         362x258x218 mm 14.3x10.2x8.6 inch           StraNDARDS           Safety         UL 458, EN-IEC 60335-1, EN-IEC 60335-2-2.9         UL 1741, UL 458, EN-IEC 60305-3-2.9           I'mission and Immunity         EN-IEC 61000-3-2/3-3, KI-IEC 61000-6-1/6-2/6-3         EN-IEC 61000-3-2/3-3, EN-IEC 60335-2-2.9           I'D rotection key:         3) Non-linear load, crest factor 3:1         Protection key:         4) Up to 5°F 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           c) battery voltage too high         alarm,         D/L under voltage or genest start/stop function         D/L under voltage or geneset start/stop function			
ENCLOSURE         Common Characteristics       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Battery-connection       M8 bolts       M8 bolts (2 plus and 2 minus connections)         20 V AC-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       19kg 40 lbs.         Dimensions (hxwxd in mm and inches)       520x255x125 mm 20.5x10.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         Stafety       UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-2-29         Sinsion and Immunity       EN-IEC 61000-3-2/3-3, EN-IEC 61000-6-1/6-2/6-3       EN-IEC 61000-3-2/3-3, EN-IEC 61000-6-1/6-2/6-3         () Can be adjusted to 50 HZ;       3) Non-linear load, crest factor 3:1       2) Protection key:       4) Up to 57 F ambient         a) output short circuit       5) Switches off when no external AC source available       5) Switches off when no external AC source available         b) overload       6) Programmable relay that can a.o. be set for general       c) battery voltage too low       DC under voltage or genset start/stop function			
Common Characteristics       Material & Colour: aluminium (blue RAL 5012)       Protection category: IP 21         Battery-connection       M8 bolts       M8 bolts (2 plus and 2 minus connections)         20 V AC-connection       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       19kg 40 lbs.         Dimensions (hxwxd in mm and inches)       520x255x125 mm 20.5x10.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Dimensions (hxwxd in mm and inches)       520x255x125 mm 20.5x10.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Veight       13 kg 25 lbs.       Strew-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Dimensions (hxwxd in mm and inches)       520x255x255 mm 20.5x10.0x5.0 inch       362x258x218 mm 14.3x10.2x8.6 inch         Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)         Screw-terminal 6 AWG (13 mm²)       UL 458, EN-IEC 60335-1, EN-IEC 60335-2.29       UL 1741, UL 458, EN-IEC 61000-6-1/6-2/6-3         I) Can be adjusted to 5	common endracteristics		sisted cooling, Trainiary (non condensing), max 95%
Battery-connection     M8 bolts     M8 bolts (2 plus and 2 minus connections)       (20 V AC-connection     Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Strew-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Strew-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Strew-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Strew-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Strew-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 V AC-connection     Strew-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       (20 C model in the street of the street o	Common Characteristics		5012) Protection category: IP 21
20 V AC-connection     Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Weight     13 kg 25 lbs.     19kg 40 lbs.       Dimensions (hxwxd in mm and inches)     520x255x125 mm 20.5x10.0x5.0 inch     362x258x218 mm 14.3x10.2x8.6 inch       Screw-terminal 6 AWG (13 mm²)     362x258x218 mm 14.3x10.2x8.6 inch       Screw-terminal 6 AWG (13 mm²)     362x258x218 mm 14.3x10.2x8.6 inch       Screw-terminal 6 AWG (13 mm²)     362x258x218 mm 14.3x10.2x8.6 inch       Screw-terminal 6 AWG (13 mm²)     362x258x218 mm 14.3x10.2x8.6 inch       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     362x258x218 mm 14.3x10.2x8.6 inch       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal 6 AWG (13 mm²)     Screw-terminal 6 AWG (13 mm²)       Screw-terminal			
Weight     13 kg     25 lbs.     19kg     40 lbs.       Dimensions (hxwxd in mm and inches)     520x255x125 mm     20.5x10.0x5.0 inch     362x258x218 mm     14.3x10.2x8.6 inch       Stafety     UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29     UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       Sinsion and Immunity     EN-IEC 61000-3-2/3-3, EN-IEC 61000-6-1/6-2/6-3     EN-IEC 61000-3-2/3-3, EN-IEC 61000-6-1/6-2/6-3       I) Can be adjusted to 50 HZ;     3) Non-linear load, crest factor 3:1     2) Protection key;     4) Up to 57'F ambient       a) output short circuit     5) Switches off when no external AC source available     5) Switches off when no external AC source available       b) overload     6) Programmable relay that can a.o. be set for general       c) battery voltage too low     DC under voltage or genset start/stop function			
Dimensions (hxwxd in mm and inches)     520x255x125 mm     20.5x10.0x5.0 inch     362x258x218 mm     14.3x10.2x8.6 inch       STANDARDS       Stafety     UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29     UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       Stafety       UL 528, EN-IEC 6000-3-2/3-3/, EN-IEC 60035-2-29       UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 6000-6-1/6-2/6-3       EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3       (D can be adjusted to 50 HZ;       3) Non-linear load, crest factor 3:1       Protection key:       4) Up to 75°F 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       c) battery voltage too high       d) battery voltage too low       DC under voltage or genset start/stop function			
STANDARDS         Safety       UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29       UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29         Emission and Immunity       EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3       EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         I) Can be adjusted to 50 HZ;       3) Non-linear load, crest factor 3:1       EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3         I) Protection key:       4) Up to 75°F 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       c) battery voltage too high       alarm,         d) battery voltage too low       DC under voltage or genset start/stop function       DC			
Immunity     EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3     EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3       1) Can be adjusted to 50 HZ;     3) Non-linear load, crest factor 3:1     ************************************			
Immunity     EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3     EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3       1) Can be adjusted to 50 HZ;     3) Non-linear load, crest factor 3:1     ************************************	Safety	UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29	UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29
I) Can be adjusted to 50 HZ;       3) Non-linear load, crest factor 3:1         2) Protection key:       4) Up to 75°F 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         c) battery voltage too high       alarm,         d) battery voltage too low       DC under voltage or genset start/stop function			
2) Protection key:       4) Up to 75°F 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         c) battery voltage too high       alarm,         d) battery voltage too low       DC under voltage or genset start/stop function		•	
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       c) battery voltage too high     alarm,       d) battery voltage too low     DC under voltage or genset start/stop function	2) Protection key:		
c) battery voltage too high alarm, d) battery voltage too low DC under voltage or genset start/stop function	a) output short circuit		
d) battery voltage too low DC under voltage or genset start/stop function		5) Switches off when no external AC source available	
e) temperature too high AC rating: 120 V/4 A	b) overload c) battery voltage too high	<ul> <li>Frogrammable relay that can a.o. be set for general alarm,</li> </ul>	
	b) overload c) battery voltage too high d) battery voltage too low	6) Programmable relay that can a.o. be set for general alarm, DC under voltage or genset start/stop function	
f) 120 VAC on inverter output DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC	b) overload c) battery voltage too high d) battery voltage too low e) temperature too high	6) Programmable relay that can a.o. be set for general alarm, DC under voltage or genset start/stop function AC rating: 120 V/4 A	
g) input voltage ripple too high 7) A.o. to communicate with a Lithium Ion battery BMS	b) overload c) battery voltage too high d) battery voltage too low e) temperature too high f) 120 VAC on inverter output	6) Programmable relay that can a.o. be set for general alarm, DC under voltage or genset start/stop function AC rating: 120 V/4 A DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC	



**Digital Multi Control** 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.



Several interfaces are available:

Color Control GX and other GX devices Provides monitor and control. Locally, and also remotely on the VRM Portal.

Computer controlled operation and monitoring



### 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.

