

Specifications Mass Sine sine wave inverters






AVAILABLE
Q1 2015



	Mass Sine 12/800	Mass Sine 12/1200	Mass Sine 12/2000	Mass Sine Ultra 12/3500
Product code 230 V	24010800	24011200	24012000	26013500
Product code 120 V <i>(see page 28-29 for specifications)</i>			25012000	
GENERAL SPECS				
Nominal battery voltage	12 V	12 V	12 V	12 V
Recommended battery capacity	>100 Ah	>150 Ah	>200 Ah	>600 Ah
Output voltage (± 5%)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)
P30 power at 40 °C, cos phi 1	800 W	1200 W	2000 W	3500 W
Continuous power at 40 °C, cos phi 1	650 W	1000 W	1800 W	3500 W
Peak load	1600 W	2400 W	4000 W	7000 W
Output waveform	true sine	true sine	true sine	true sine
AC connection	internal	internal	internal	internal
Efficiency	92%	92%	92%	93%
Display/read-out	LED display	LED display	LED display	LED display
Parallel configuration	no	no	no	yes, up to 10 units
3-Phase configuration	no	no	no	yes
Dimensions, hwxwd	325 x 220 x 111 mm 12.8 x 8.7 x 4.4 inch	340 x 261 x 130 mm 13.4 x 10.3 x 5.1 inch	420 x 318 x 136 mm 16.5 x 12.5 x 5.4 inch	472 x 318 x 175 mm 18.6 x 12.5 x 6.9 inch
Weight	3.9 kg / 8.6 lb	8 kg / 17.4 lb	14.6 kg / 32.2 lb	15 kg / 33.1 lb
Approvals	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31
TECHNICAL SPECS				
Technology	HF switch mode	HF switch mode	HF switch mode	V6 HF switch mode
Low battery voltage, switches off at	10 V, ± 0.5 V	10 V, ± 0.5 V	10 V, ± 0.5 V	10 V, dynamic window
Low battery voltage, switches on at	11 V, ± 0.5 V	11 V, ± 0.5 V	11 V, ± 0.5 V	11 V, ± 0.5 V
High battery voltage, switches off at	15.5 V, ± 0.5 V	15.5 V, ± 0.5 V	15.5 V, ± 0.5 V	15.5 V, ± 0.5 V
High battery voltage, switches on at	14.5 V, ± 0.5 V	14.5 V, ± 0.5 V	14.5 V, ± 0.5 V	14.5 V, ± 0.5 V
Max. ripple on DC (battery)	5% RMS	5% RMS	5% RMS	5% RMS
Input current (nominal load)	73 A	110 A	183 A	275 A
No load power consumption:				
• 'on' mode (230 V)	470 mA – 5.6 W	450 mA – 5 W	480 mA – 6 W	480 mA – 6 W
• stand-by (scan mode)	65 mA – 0.8 W	43 mA – 0.5 W	50 mA – 0.6 W	50 mA – 0.6 W
Minimal DC fuse (slow blow)**	100 A	150 A	250 A	400 A
Minimal cable size	25 mm ²	50 mm ²	70 mm ²	95 mm ²
Harmonic distortion typical	< 5%	< 5%	< 5%	< 5%
Cos Phi	all power factors allowed	all power factors allowed	all power factors allowed	all power factors allowed
Transfer system	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters
Temperature range (ambient temp.)	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power
Cooling	natural/forced	natural/forced	natural/forced	natural/forced
Sound level	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr
Protection degree	IP23	IP23	IP23	IP23
Protections	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery
MasterBus compatible	yes, using a MasterBus Inverter Interface or AC Power Analyser	yes, using a MasterBus Inverter Interface or AC Power Analyser	yes, using a MasterBus Inverter Interface or AC Power Analyser	yes

OPTIONS				
	C4-RI 70404110	option	option	option
		<i>Remote control on/off for the Mass Sine sine wave inverter.</i>		
	MasterView Easy 77010305	option	option	option
		<i>Touch screen panel for reading charge status, current fold-back and/or Power Sharing setting.</i>		
	Masterlink/MICC 70403105	option	option	option
		<i>Battery consumption meter for 2 batteries, 12/24 V DC with LCD read-out, remote control for Mass Sine inverter and Mass battery charger or Mass Combi.</i>		
	MasterBus Inverter Interface 77030700	option	option	option
		<i>Integrates the Mass Sine inverter in a MasterBus network.</i>		
	AC Power Analyser 77031200	option	option	option
		<i>Integrates the Mass Sine inverter in a MasterBus network and visualizes the AC voltage, current and power.</i>		

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	Mass Sine 24/800	Mass Sine 24/1500*	Mass Sine 24/2500*	Mass Sine Ultra 24/4000	Mass Sine 24/5000*
	24020800	24021500	24022500 25022500	26024000	24095100
24 V	24 V	24 V	24 V	24 V	24 V
>50 Ah	>150 Ah	>200 Ah	>350 Ah	>400 Ah	>400 Ah
230 V - 50 Hz (± 0.01 Hz)	230 V - 50 Hz (± 0.01 Hz)	230 V - 50 Hz (± 0.01 Hz)	230 V - 50 Hz (±0.01 Hz)	230 V - 50 Hz (± 0.01 Hz)	230 V - 50 Hz (± 0.01 Hz)
800 W	1500 W	2500 W	4000 W	5000 W	5000 W
650 W	1200 W	2000 W	3500 W	4000 W	4000 W
1600 W	2900 W	5000 W	7000 W	9000 W	9000 W
true sine	true sine	true sine	true sine	true sine	true sine
internal	internal	internal	internal	internal	internal
92%	92%	92%	91%	92%	92%
LED display	LED display	LED display	LED display	LED display	LED display
no	no	no	yes, up to 10 units	no	no
no	no	no	yes	no	no
325 x 220 x 111 mm 12.8 x 8.7 x 4.4 inch	340 x 261 x 130 mm 13.4 x 10.3 x 5.1 inch	420 x 318 x 130 mm 16.5 x 12.5 x 5.1 inch	472 x 318 x 175 mm 18.6 x 12.5 x 6.9 inch	470 x 315 x 254 mm 18.5 x 12.4 x 10 inch	470 x 315 x 254 mm 18.5 x 12.4 x 10 inch
3.9 kg / 8.6 lb	8 kg / 17.4 lb	14.6 kg / 32.2 lb	15 kg / 33.1 lb	25 kg / 55.1 lb	25 kg / 55.1 lb
CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, ABYC	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31
HF switch mode	HF switch mode	HF switch mode	V6 HF switch mode	HF switch mode	HF switch mode
19 V, ± 0.5 V	19 V, ± 0.5 V	19 V, ± 0.5 V	19 V, dynamic window	19 V, ± 0.5 V	19 V, ± 0.5 V
22 V, ± 0.5 V	22 V, ± 0.5 V	22 V, ± 0.5 V	22 V, ± 0.5 V	22 V, ± 0.5 V	22 V, ± 0.5 V
32 V, ± 0.5 V	32 V, ± 0.5 V	33 V, ± 0.5 V	32 V, ± 0.5 V	32 V, ± 0.5 V	32 V, ± 0.5 V
30 V, ± 0.5 V	30 V, ± 0.5 V	31 V, ± 0.5 V	31 V, ± 0.5 V	30 V, ± 0.5 V	30 V, ± 0.5 V
5% RMS	5% RMS	5% RMS	< 10%	5% RMS	5% RMS
36 A	68 A	115 A	152 A	230 A	230 A
240 mA - 5.6 W	200 mA - 5 W	250 mA - 6 W	250 mA - 6 W	250 mA - 6 W	250 mA - 6 W
35 mA - 0.8 W	25 mA - 0.6 W	25 mA - 0.6 W	25 mA - 0.6 W	50 mA - 1.2 W	50 mA - 1.2 W
63 A	100 A	160 A	250 A	1x 250 A of 2x 125 A	1x 250 A of 2x 125 A
16 mm ²	25 mm ²	50 mm ²	70 mm ²	2x 70 mm ²	2x 70 mm ²
< 5%	< 5%	< 5%	< 5%	< 5%	< 5%
all power factors allowed	all power factors allowed	all power factors allowed	all power factors allowed	all power factors allowed	all power factors allowed
The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters	The Masterswitch and Systemswitch can be connected to all sine wave inverters
-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power	-25 °C to 80 °C; > 40 °C derating power power
natural/forced	natural/forced	natural/forced	natural/forced	natural/forced	natural/forced
48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr
IP23	IP23	IP23	IP 23	IP23	IP23
over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery	over temperature, over load, short circuit, high battery, low battery
yes, using a MasterBus Inverter Interface or AC Power Analyser	yes, using a MasterBus Inverter Interface or AC Power Analyser	yes, using a MasterBus Inverter Interface or AC Power Analyser	yes	yes, using a MasterBus Inverter Interface or AC Power Analyser	yes, using a MasterBus Inverter Interface or AC Power Analyser
option	option	option	n.a.	option	option
option	option	option	option	option	option
option	option	option	n.a.	option	option
option	option	option	n.a.	option	option
option	option	option	n.a.	option	option

* Also available in 60 Hz:
 • 1500 W model:
 product code **24121500**
 • 2500 W model:
 product code **24122500**
 • 5000 W model:
 product code **24195100**

** DC fuse depends on the cable size.