



Multifunctional DC-DC converters

In most electrical systems both 12 VDC and 24 VDC equipment is used. **WhisperPower Switched Mode DC -DC converters** takes a particular voltage, for example 24 VDC, and convert it in to another DC voltage, for example 12 VDC. The Switched Mode technology ensures minimal energy loss and high output. Our range is based on three different topologies.



Features and Benefits

- Minimal energy loss thanks to Switched-Mode technology (> 90 % efficiency)
- High quality industrial design for high reliability and longer life cycle
- Silent - no humming, only temperature controlled fans for cooling
- No interference with radios, VHF or other sensitive equipment
- Compact, fast and easy to install
- Excellent price - performance ratio

Converter MCC 24 / 12 - 20 20 Amps with three step charge characteristic

- Aluminum heatsink
- High efficient switched-mode technology
- Can be used in parallel
- Fast-connect
- Bus-connectable
- Marine grade covers
- External screw-based installation (wall/floor mounting)



Essential
building
blocks



MC Series

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- DC-DC converters with common negative
- Step down from 24 VDC to 12 VDC
- Electronic process, high efficiency, low heat output
- Power rating up to 30 A
- Cannot be used in parallel



MCC Series

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- DC-DC charge converter with current limitation
- Designed to convert 24 VDC to 12 VDC and/or to charge 12 VDC batteries
- Multi step charge characteristics, programmable
- Delivered with temperature sensor as standard
- Can be used as dimming device for DC lighting



MG Series

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- DC-DC converters with galvanic isolation
- Step down from 24 VDC or 48 VDC to 12 VDC
- Step up from 12 VDC to 24 VDC is also possible
- Electronic process, high efficiency, low heat output
- Power rating up to 30 A
- Can be run in parallel for high-demand appliance



DC/DC Converters Common Ground MC Series



	12-24 VDC 10 A	24-12 VDC 5 A	24-12 VDC 8 A	24-12 VDC 12 A	24-12 VDC 20 A	24-12 VDC 30 A
Article Number	60110017	60110005	60110010	60110016	60110011	60110012
TECHNICAL SPECIFICATIONS						
Converter type	Voltage step up and stabilization	Voltage step down and stabilization	Voltage step down and stabilization	Voltage step down and stabilization	Voltage step down and stabilization	Voltage step down and stabilization
INPUT						
Nominal input voltage	12 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
Input range, specifications	9 - 18 VDC	18 - 35 VDC	18 - 35 VDC	18 - 35 VDC	18 - 35 VDC	18 - 35 VDC
Input range, no defects	0 - 18 VDC	0 - 35 VDC	0 - 35 VDC	0 - 35 VDC	0 - 35 VDC	0 - 35 VDC
OUTPUT						
Nominal output voltage	25 VDC	13.8 VDC	13.8 VDC	13.8 VDC	13.8 VDC	13.8 VDC
Voltage adjustable	no	no	no	no	no	no
Output accuracy	3 %	3 %	3 %	3 %	1 %	1 %
Ripple, peak output voltage	3 %	1 %	1 %	1 %	1 %	1 %
Maximum power output	300 W	70 W	110 W	170 W	350 W	490 W
Continuous output power	250 W	70 W	110 W	170 W	280 W	420 W
Maximum output current	12 A	5 A	8 A	12 A	25 A	35 A
Continue output current	10 A	5 A	8 A	12 A	20 A	30 A
Continuous output current at 40°C	up to 10 A	up to 5 A	up to 8 A	up to 12 A	up to 20 A	up to 30 A
GENERAL						
Efficiency	> 93 %	> 92 %	> 92 %	> 92 %	> 92 %	> 92 %
Consumption no load	< 5 mA	< 5 mA	< 5 mA	< 5 mA	< 25 mA	< 25 mA
Ambient operating temperature	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C
Storage temperature	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C
Relative humidity in use	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing
Galvanic isolation	Common negative	Common negative	Common negative	Common negative	Common negative	Common negative
Cooling	Convectonal	Convectonal	Convectonal	Convectonal	Convectonal	Mechanical
PROTECTIONS						
Current / short circuit	Yes / fuse	Yes / fuse	Yes / fuse	Yes / fuse	Restricted by current rating	Restricted by current rating
Overheating, shut down	No	No	No	No	Power restricted by temperature	Power restricted by temperature
MECHANICAL SPECIFICATIONS						
Faston in/off, maximum thread thickness	6 mm ²	6 mm ²	6 mm ²	6 mm ²	6 mm ²	6 mm ²
Dimensions (W x D x H) in mm	88 x 50 x 126	88 x 50 x 70	88 x 50 x 98	88 x 50 x 98	88 x 50 x 126	88 x 50 x 151
Mounting holes (mm)	dia 4 mm, rh 58 x 118	dia 4 mm, rh 58 x 90	dia 4 mm, rh 58 x 90	dia 4 mm, rh 58 x 90	dia 4 mm, rh 58 x 118	dia 4 mm, rh 58 x 143
Weight	360 g	270 g	270 g	290 g	440 g	500 g
International Protection rating	IP20	IP20	IP20	IP20	IP20	IP20
Housing	frame 5	frame 4	frame 4	frame 4	frame 5	frame 6
Housing material	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps
Housing colour	RAL 9011 graphite black	RAL 9011 graphite black	RAL 9011 graphite black	RAL 9011 graphite black	RAL 9011 graphite black	RAL 9011 graphite black

Meets the following Standards

EN61000-6-3 (EN55022), EN61000-6-2 (EN61000-2/3/4, EN61000-4-3), LVD 2006/95/EC (EN60335-1), Automotive EMC 2004/104/EC, RoHS 2011/65/EU Note: The above specifications are subject to change without prior notice.

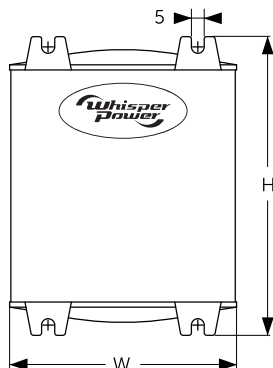
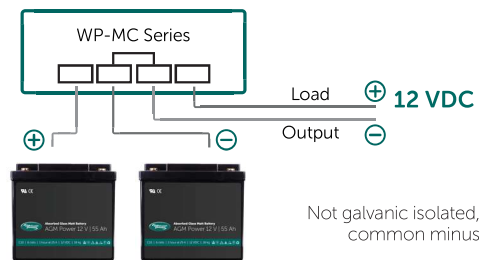


Diagram MC Series



DC-DC B2B Chargers Common ground MCC Series



12-12 VDC | 16 A



24-12 VDC | 5 A



24-12 VDC | 20 A



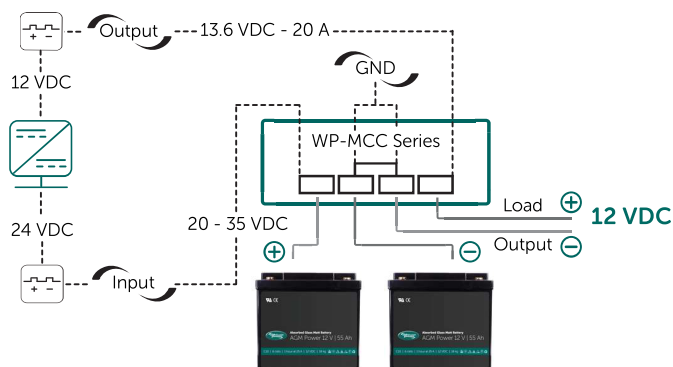
Article Number	60110014	60201023	60110015
TECHNICAL SPECIFICATIONS			
Converter type	Voltage stabilised 3-step charge	Voltage step down and stabilization	Voltage step down and stabilization 3-step 12 VDC battery charger, light dimmer function
INPUT			
Nominal input voltage	12 VDC	24 VDC	24 VDC
Input range, specifications	9 - 18 VDC	24 - 32 VDC	24 - 32 VDC
Input range, no defects	0 - 18 VDC	0 - 35 VDC	0 - 35 VDC
OUTPUT			
Nominal output voltage	12 VDC	13.8 VDC	13.6 VDC
Voltage adjustable	13.8 Float VDC 14.4 Boost VDC	12 - 15 VDC	12 - 15 VDC
Output accuracy	1%	2%	2%
Ripple, peak output voltage	1%	1%	1%
Maximum power output	200 W	70 W	300 W
Continuous output power	200 W	70 W	270 W
Maximum output current	16 A	5 A	20 A
Continue output current	16 A	5 A	20 A
Continuous output current at 40°C	up to 16 A	up to 5 A	up to 20 A
GENERAL			
Efficiency	> 90 %	> 92 %	> 90 %
Consumption no load	17 mA	< 5 mA	< 30 mA
Ambient operating temperature	20°C	-10 up to 40°C	-10 up to 40°C
Storage temperature	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C
Relative humidity in use	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing
Galvanic isolation	Common negative	Common negative	Common negative
Cooling	Convexional	Convexional	Mechanical
PROTECTIONS			
Current / short circuit	Yes / fuse	Restricted by current rating	Restricted by current rating
Overheating, shut down	Yes	Power restricted by temperature	Power restricted by temperature
MECHANICAL SPECIFICATIONS			
Faston in /off, maximum thread thickness	6 mm ²	6 mm ²	6 mm ²
Dimensions (W x D x H) in mm	88 x 58 x 175	88 x 50 x 98	123 x 66 x 191
Mounting holes (mm)	dia 4 x 6.3 mm Faston	dia 4 mm, rh 58 x 90	dia 4 mm, rh 91 x 177
Weight	613 g	270 g	955 g
International Protection rating	IP20	IP20	IP20
Housing	Yes	frame 4	frame 8
Housing material	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps
Housing colour	RAL 9011 graphite black	RAL 9011 graphite black	RAL 9006 blank Aluminum

Meets the following Standards

EN61000-6-3 (EN55022), EN61000-6-2 (EN61000-2/3/4, EN61000-4-3), LVD 2006/95/EC (EN60335-1), Automotive EMC 2004/104/EC, RoHS 2011/65/EU
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Diagram MCC Series





DC/DC converters Galvanic Isolated

MG Series



	12-12 VDC 8 A -i	12-12 VDC 30 A -i	24-12 VDC 3 A -i	24-12 VDC 16 A -i
Article Number	60110019	60110026	60110030	60110020
TECHNICAL SPECIFICATIONS				
Converter type	Voltage stabilization	Voltage stabilization	Voltage step down and stabilization	Voltage step down and stabilization
INPUT				
Nominal input voltage	12 VDC	12 VDC	24 VDC	24 VDC
Input range, specifications	9 - 18 VDC	9 - 18 VDC	20 - 35 VDC	20 - 35 VDC
Input range, no defects	0 - 18 VDC	0 - 18 VDC	0 - 35 VDC	0 - 35 VDC
OUTPUT				
Nominal output voltage	12.5 VDC	12.5 VDC	12.5 VDC	12.5 VDC
Voltage adjustable	Yes	Yes	Yes	Yes
Output accuracy	3 %	3 %	3 %	3 %
Ripple, peak output voltage	1 %	1 %	1 %	1 %
Maximum power output	110 W	490 W	38 W	200 W
Continuous output power	110 W	420 W	36 W	200 W
Maximum output current	8 A	30 A	3 A	16 A
Continue output current	8 A	30 A	3 A	16 A
Continuous output current at 40°C	up to 8 A	up to 30 A	up to 3 A	up to 16 A
GENERAL				
Efficiency	> 87 %	> 87 %	> 87 %	> 87 %
Consumption no load	<2.5 mA	< 25 mA	< 25 mA	< 25 mA
Ambient operating temperature	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C
Storage temperature	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C
Relative humidity in use	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing
Galvanic isolation	Yes, 500 VAC	Yes, 500 VAC	Yes, 500 VAC	Yes, 500 VAC
Cooling	Mechanical	Mechanical	Mechanical	Mechanical
PROTECTIONS				
Current / short circuit	Restricted by current rating	Restricted by current rating	Restricted by current rating	Restricted by current rating
Overheating, shut down	Power restricted by temperature	Power restricted by temperature	Power restricted by temperature	Power restricted by temperature
MECHANICAL SPECIFICATIONS				
Faston in / off, maximum thread thickness	6 mm ²	6 mm ²	6 mm ²	6 mm ²
Dimensions (W x D x H) in mm	88 x 50 x 151	133 x 83 x 186	88 x 50 x 85	88 x 50 x 176
Mounting holes (mm)	dia 4 mm, rh 58 x 143	dia 4 mm, rh 91 x 177	dia 4 mm, rh 58 x 168	dia 4 mm, rh 58 x 168
Weight	630 g	1400 g	250 g	630 g
International Protection rating	IP20	IP20	IP20	IP20
Housing	frame 6	frame 8	frame 7	frame 7
Housing material	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps
Housing colour	RAL 9011 graphite black	RAL 9006 blank Aluminum	RAL 9011 graphite black	RAL 9011 graphite black
Meets the following standards	EN1000-6-3 (EN55022), EN1000-6-2 (EN1000-2/3/4, EN1000-4-3), LVD 2006/95/EC (EN60335-1), Automotive EMC 2004/104/EC, RoHS 2011/65/EU Note: The above specifications are subject to change without prior notice			





24-12 VDC 30 A -i	24-24 VDC 15 A -i	48-12 VDC 8 A -i	48-12 VDC 30 A -i
60110021	60110025	60110024	60110023
Voltage step down and stabilization	Voltage stabilization	Voltage step down and stabilization	Voltage step down and stabilization
24 VDC	24 VDC	48 VDC	48 VDC
20 - 35 VDC	20 - 35 VDC	30 - 60 VDC	30 - 60 VDC
0 - 35 VDC	0 - 35 VDC	0 - 70 VDC	0 - 70 VDC
12.5 VDC	12.5 VDC	12.5 VDC	12.5 VDC
Yes	Yes	Yes	Yes
3 %	3 %	3 %	3 %
1 %	1 %	1 %	1 %
400 W	400 W	200 W	400 W
360 W	360 W	100 W	360 W
32 A	16 A	16 A	32 A
30 A	15 A	8 A	30 A
up to 30 A	up to 15 A	up to 8 A	up to 30 A
> 87 %	> 87 %	> 87 %	> 87 %
< 25 mA	< 25 mA	< 25 mA	< 25 mA
-10 up to 40°C	-10 up to 40°C	-10 up to 40°C	-10 up to 40°C
-25 up to 85°C	-25 up to 85°C	-25 up to 85°C	-25 up to 85°C
up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing	up to 95 %, non-condensing
Yes, 500 VAC	Yes, 500 VAC	Yes, 500 VAC	Yes, 500 VAC
Mechanical	Mechanical	Mechanical	Mechanical
Restricted by current rating	Restricted by current rating	Restricted by current rating	Restricted by current rating
Power restricted by temperature	Power restricted by temperature	Power restricted by temperature	Power restricted by temperature
6 mm ²	6 mm ²	6 mm ²	6 mm ²
133 x 83 x 186	133 x 83 x 186	88 x 50 x 151	133 x 83 x 186
dia 4 mm, rh 91 x 177	dia 4 mm, rh 91 x 177	dia 4 mm, rh 58 x 143	dia 4 mm, rh 91 x 177
1400 g	1400 g	630 g	1400 g
IP20	IP20	IP20	IP20
frame 8	frame 8	frame 6	frame 8
Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps	Anodized Aluminum, ABS end caps
RAL 9006 white Aluminum	RAL 9006 blank Aluminum	RAL 9011 graphite black	RAL 9006 white Aluminum

EN61000-6-3 (EN55022), EN61000-6-2 (EN61000-2/3/4, EN61000-4-3), LVD 2006/95/EC (EN60335-1), Automotive EMC 2004/104/EC, RoHS 2011/65/EU Note: The above specifications are subject to change without prior notice

Diagram MG Series

