

# WhisperPower DC Power Distribution

**The weakest link determines the safety and reliability of the system. That's in particular valid for DC systems of 12, 24 or 48 VDC. That is why WhisperPower supplies components and devices of the highest quality.**

Lithium battery technology has pushed the bar even higher: high charge/ discharge currents require heavy duty, well dimensioned components.


## System Links

All our DC devices are designed to link the various system components such as battery chargers, inverters, alternators, solar panels, windgenerators. Those devices have to be connected to one or more battery banks and the DC consumers. Our DC components incorporate safe switch-off technology. Sealed or open lead-acid batteries or lithium batteries have to be protected from overcharge or discharge. This exactly what the WhisperPower devices are designed for. Most of them can be adjusted to the operational situation.



**Power Distribution  
Voltage Guard**

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**Power Distribution  
DC distribution systems**

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**Power Distribution  
Battery Links**

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Technical specifications for WBI-WBL-120:  
 Type : WBI-WBL-120  
 Cranking : 180A  
 Current : 120A  
 Voltage : 9 - 13V  
 Part no. : 60101020  
 Software : 1.2  
 On : Delay 0.5Hz  
 Alarm 2.5Hz





**DC Modular**  
Remote Switches  
500 A | 12/24/48 VDC

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**DC Power Distribution**  
Remote Switches  
12/24/48 VDC

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**Power Distribution**  
DC Switches

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**Power Distribution**  
Battery Isolators

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## DC installations

# Voltage Guard

**The WhisperPower Voltage Guard protects the battery bank against accidental discharge. This is to make sure that the batteries are not damaged before the end of their normal lifespan. The Voltage Guard has to be installed in the DC connection between the battery and the DC consumers. The Voltage Guard is programmable and the desired upper and lower limits of the permissible voltage is easy to set up. Maximum current 200 A.**

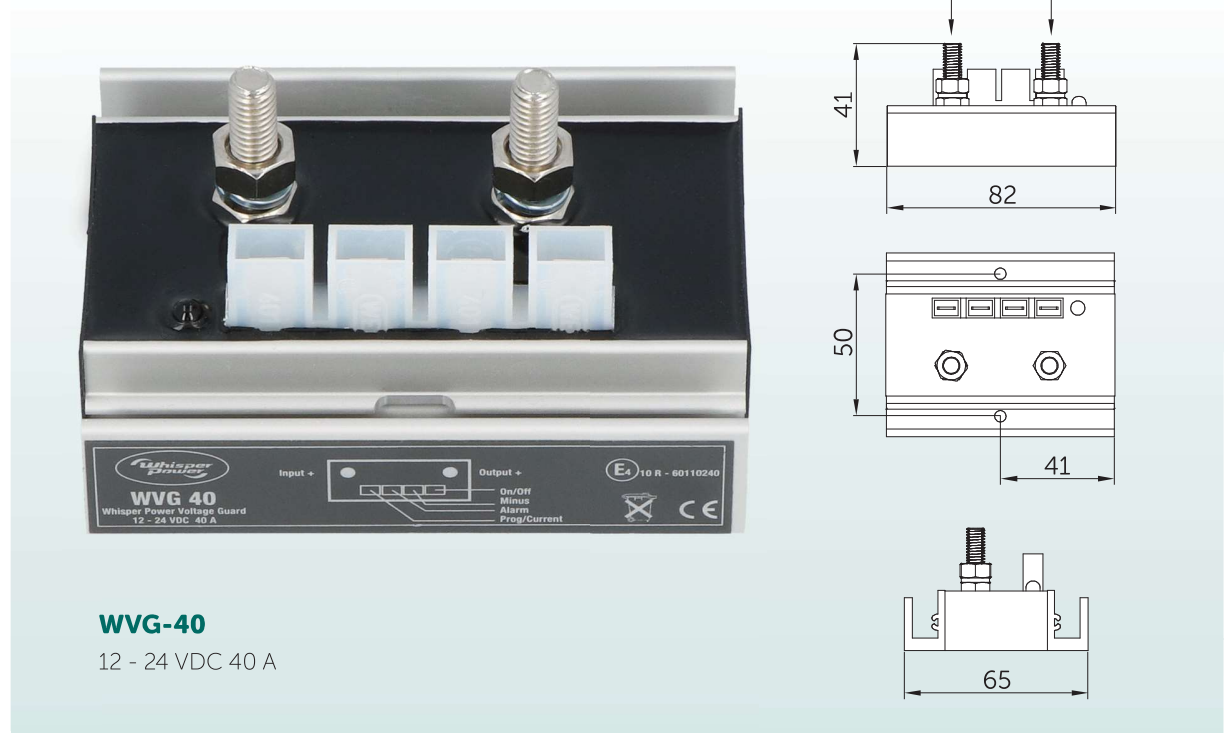


The WhisperPower Voltage Guard is an essential component of a well-equipped battery system ensuring a longer life span for your batteries. The voltage protection maintains your battery system in optimum condition and can also be used as an intelligent battery switch.

The WVG consists of a high current electronic switch capable of switching loads of up to 200 Amps. If the battery voltage drops below a previously set value the load will automatically disconnected.

The ON-and-OFF-values are set by the potentiometer on the front of the unit. When any of these set points are reached, a warning LED will light up and in addition an audible alarm will sound. This is to prevent the battery being discharged below the preset voltage.

Remote monitoring and operation is possible if the WVG is linked to the main panel. A built-in hysteresis allows for a short-term voltage drop caused by switching on a heavy load. The WVG has an extremely low consumption of only 4 mA in standby.



## WVG-200 Diagram

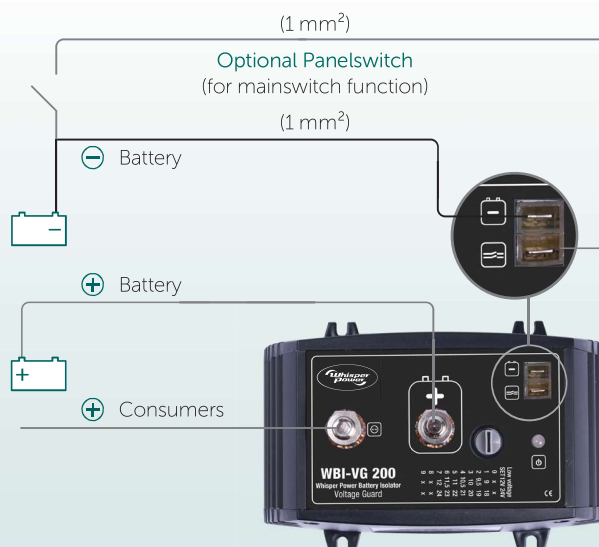
### Voltage Guard 200

WVG-200

Article Number 60110200

#### TECHNICAL SPECIFICATIONS

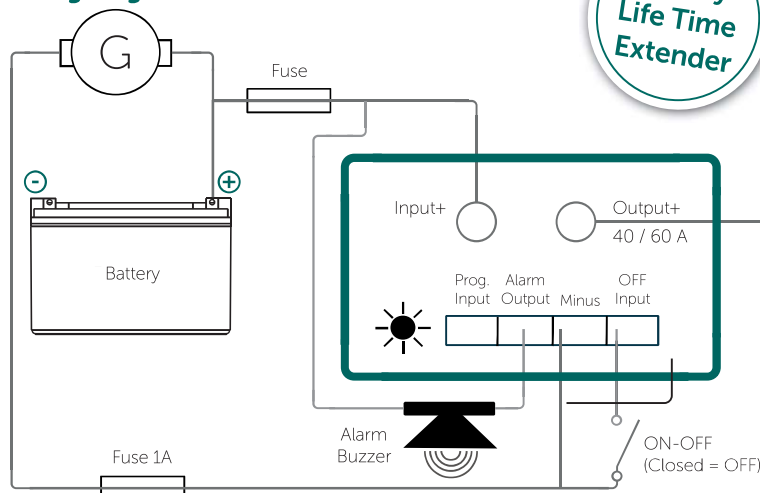
Current (continuous/intermittent)	150 / 200 A
System voltage	12 / 24 VDC
Input voltage range	8 - 31 VDC
Dimensions (W x D x H) in mm	97 x 85 x 146
Weight	600 g
Lower limit battery voltage 12 VDC	9 - 12 VDC
Upper limit battery voltage 12 VDC	15.5 VDC
Lower limit battery voltage 24 VDC	18 - 24 VDC
Upper limit battery voltage 24 VDC	35 VDC
Warranty	5 years



## Voltage Guard Series

	40 A	60 A
Article Number	60110240	60110250
<b>TECHNICAL SPECIFICATIONS</b>		
Cable diameter	10 mm <sup>2</sup>	15 mm <sup>2</sup>
Automatic detection of 12 or 24 VDC system	8 - 20 VDC 12 VDC mode 20 - 35 VDC 24 VDC mode	8 - 20 VDC 12 VDC mode 20 - 35 VDC 24 VDC mode
Adjustable undervoltage programs	10	10
Overvoltage disconnect voltage	12 VDC mode 16 VDC 24 VDC mode 32 VDC	12 VDC mode 16 VDC 24 VDC mode 32 VDC
Maximum load / shutdown	approx 40 A - 45 A	approx 60 A - 65 A
Surge	120 A	120 A
Voltage drop	0.1 VDC at 40 A	0.1 VDC at 60 A
Current consumption	Output active: 4 mA Output active: 2 mA	Output active: 4 mA Output active: 2 mA
Shutdown at overload / short circuit	After 5 seconds (switch on again after 1 minute)	After 5 seconds (switch on again after 1 minute)
Voltage accuracy	2 %	2 %
Current accuracy	20 %	20 %
IP-code	IP66	IP66
Dimensions (W x D x H) in mm	82 x 41 x 65	82 x 41 x 65
Weight	185 g	185 g

### Wiring diagram



Battery Life Time Extender

**The WhisperPower Voltage Guard is the best in its class for a well equipped battery system!**



## DC installations

# Intelligent Battery Links



**WhisperPower Battery Links are smart switch regulators that automatically connect two battery banks if the charge voltage rises above a certain value for at least five seconds. This means that the battery banks can be charged from the same source. To protect the battery banks they are separated from each other as soon as the voltage drops. There are four models available: the 100 A, 120 A, 140 A and the 160 A version.**

This is a smart, independent and automatic device. For extra starting power there is a start assist function. With a simple push of a button the service battery bank is temporarily connected to the starter battery. The connection is terminated after 30 seconds. The WhisperPower Battery Link clearly indicates when the batteries are connected. If the LED is not lit, the relay is open. Whenever one of the batteries is being charged, the LED starts to blink slowly indicating a 30 seconds period until the relay closes to connect the batteries. Whilst the relay remains closed, the LED remains illuminated.

### Features and Benefits

- Simultaneous charging of two batteries
- Intelligent battery monitoring function
- Safe connect algorithm
- Temporary additional power with start assist function
- Simultaneous charging of two batteries
- Simple to install, no programming required
- Compact and robust
- Automatic relay to connect battery banks
- Automatic isolation with voltage drop
- Remote control possible (optional)
- Connect battery banks in parallel for emergency start
- LED indicators

WhisperPower  
microprocessor  
controlled  
Battery  
Combiners



LED status



## WBL Series

	WBL-100	WBL-120	WBL-140
Article Number	60110118	60110120	60110170
<b>AUTOMATIC OPERATION</b>			
Switch-on voltage (minimum)	> 13 VDC at 12 VDC / > 26 VDC for 24 VDC installations		
Connection delay	7 seconds	5 seconds	5 seconds
Switch-on voltage (maximum)	16 VDC at 12 VDC 32 VDC for 24 VDC installations	15 VDC at 12 VDC 30 VDC for 24 VDC installations	15 VDC at 12 VDC 30 VDC for 24 VDC installations
Disconnection voltage	12.75 VDC at 12 VDC / 25.5 VDC for 24 VDC installations		
<b>DC-CONSUMPTION</b>			
OFF-Mode (relay not powered)	1.5 mA	1.0 mA at 12 VDC 1.1 mA at 24 VDC	1.0 mA at 12 VDC 1.1 mA at 24 VDC
ON-Mode (inrush current)	360 mA at 12 VDC 160 mA at 24 VDC	0.5 A at 12 VDC 0.4 A at 24 VDC	0.5 A at 12 VDC 0.4 A at 24 VDC
ON-Mode (relay powered)	360 mA at 12 VDC 160 mA at 24 VDC	50 mA at 12 VDC 40 mA at 24 VDC	50 mA at 12 VDC 40 mA at 24 VDC
<b>LED STATUS</b>			
On	N/A	Relay connected	N/A
Flashing slowly (0.5 Hz)	N/A	Delay whilst connecting	N/A
Flashing fast (2.5 Hz)	N/A	Alarm: Relay not powered as voltage difference is too big in OFF-Mode (> 8 VDC) or due to voltage drop being too large in ON-Mode (0.5 VDC)	N/A
<b>TECHNICAL SPECIFICATIONS</b>			
Weight	94 g	125 g	125 g
Dimensions (W x D x H) in mm	46 x 46 x 80	46 x 46 x 80	46 x 46 x 80
Continuous capacity	100 A	120 A	140 A
Peak capacity /inrush current 10 sec.	180 A	180 A	180 A
Input voltage	8 - 35 VDC	9 - 35 VDC	8 - 35 VDC
Operating temperature	-20 up to 60 °C	-40 up to 65°C	-40 up to 65°C
Maximum voltage drop	0.5 VDC (Approx. 10 seconds delay during disconnection)		
Maximum allowable voltage difference	8 VDC	8 VDC	8 VDC
<b>CONFORMITY</b>			
CE	Yes	Yes	Yes

## Example set up



	WBL-160
Article Number	60110160
<b>INPUT</b>	
Smart battery switch	4 c 6
Nominal input voltage	12 / 24 VDC self detection
Input range no defects	7 - 32 VDC
<b>OUTPUT</b>	
Nominal output voltage	Equal to input voltage
Surge outgoing	480 A
Max. charge current 3 sec.	240 A
Continuous charging current	160 A
Continuous charging current at 40°C	160 A
<b>GENERAL</b>	
Consumption in Standby	± 2 mA
Consumption whilst charging 12 / 24 VDC	340 / 170 mA
Consumption whilst connecting 12 / 24 VDC	340 / 170 mA
Ambient operating temperature	-10 up to 40°C
Storage temperature	-25 up to 85°C
International Protection rating	IP66
Voltage accuracy	2 %
Switch-on voltage 12 / 24 VDC	13.2 / 26.4 VDC
Disconnection voltage 12 / 24 VDC	12.8 / 25.4 VDC
Accelerated disconnection voltage 12 / 24 VDC	11.8 / 23.6 VDC
Connection delay	5 seconds
Disconnection delay	60 seconds
Accelerated disconnection	4 seconds
<b>PROTECTIONS</b>	
Polarity	Yes
Voltage too low	Yes
Voltage too high	16 / 32 VDC
<b>FEATURES</b>	
Controlled microprocessor	Yes
Voltage too low	Yes
Voltage too high	Yes
Start assist	Yes
LED display	Yes
Output status	No
Input status	Yes
Remote shutdown	No
<b>TECHNICAL SPECIFICATIONS</b>	
Connection in / out	M8
Connections min. / status / remote	Faston 6.3 mm
Dimensions (W x D x H) in mm	108 x 72 x 58
Mounting holes	Dia 6 mm, 88.5 mm
Weight	500 g
Housing / colour	Polyurethane / Black

## WhisperPower

# Modular DC Distribution Compact & heavy duty range

With an increase in the use of offgrid electrical devices and systems inside vehicles, boats and land-based objects, AC appliances via the inverter, DC systems and accompanying batteries also need to be able to cope with these heavier loads. WhisperPower now also supplies turnkey “bespoke” DC distribution systems made up of high quality electrical components. These components can either be combined to form a system by the installer or, if required, be delivered by WhisperPower as a Plug and Play ready-made connection set.



Example of a pre-assembled DC distribution assembly, as a Plug and Play solution

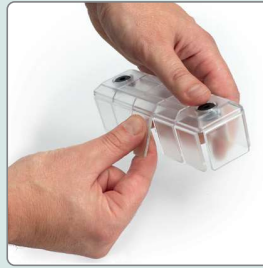
We can  
pre-fab the  
DC distribution  
system for you

# DC Modular high current Busbars and Fuse holders

Due to the ever increasing complexity of electrical DC systems on board of vehicles or in stationary applications, there is a growing need for a uniform set of products that significantly improves the installation time and flexibility. The WhisperPower DC Modular product range offers a perfect solution for this. It contains a wide range of high current busbars, fuse holders and interconnection materials. Compared to more traditional and often incompatible DC distribution products, the DC Modular system offers many innovative features.

The DC Modular product range is also a perfect companion for WhisperPower battery monitoring devices.

All DC Modular products are equipped with stainless steel studs, washers and nuts for optimal corrosion resistance. Tin plated high purity copper busses provide maximum conductivity, reducing heat and improving efficiency. The base material used for the DC Modular products is made from a special fibre reinforced compound. This material offers excellent high temperature properties, good chemical resistance and high strength. This focus on the highest quality materials ensures long life in harsh environments. All DC Modular products are designed and assembled in The Netherlands.



Transparent poly carbonate cover with break-out side skirts at each side, for easy cable entry



The optional adapter plate allows a mixture of high- and low power cables to be connected to the same stud



Multiple fuse holders and busbars can be connected to each other with the optional link plates



Smart terminal design allows dual mirrored cable lug connections

Easy in-system connection access due to top locked covers by convenient thumb screws

Special fiber reinforced base material offers excellent high temperature properties, good chemical resistance and high strength

Smart terminal design allows dual mirrored cable lug connections

Top sides of transparent covers are equipped with recessed locations to properly add custom labels

Robust transparent covers with breakouts to allow wire access from any direction

Tin plated high purity copper busses provide maximum conductivity, reducing heat and improving efficiency

Stainless steel studs, nuts and washers for optimal corrosion resistance



## DC Modular insulated studs

The DC Modular single and dual insulated studs are ideal parts to extend cables, add power taps or form termination end-points.

The solid and compact design, as well as the possibility to link these up with other DC Modular family members, make these products the best choice for all professional DC power systems. The insulated studs are available with M8 or M10 stud sizes.

### Features:

- Stainless steel studs, nuts and washers for optimal corrosion resistance
- Special fiber reinforced base material offers excellent high temperature properties, good chemical resistance and high strength
- Unique grid optimized footprints allow space saving arrangements of multiple products
- Common interconnection heights for easy combining of multiple products using link plates
- Robust transparent covers with breakouts to allow wire access from any direction
- Top sides of transparent covers are equipped with recessed locations to properly add custom labels (Dual insulated stud only)
- Smart terminal design allows dual mirrored cable lug connections
- Easy in-system connection access due to top locked covers

# WP-Modular



### Single Stud | 1x M8/M10



### Busbar Series

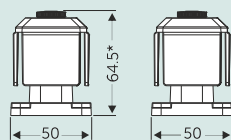


SINGLE STUD  
1x M8

SINGLE STUD  
1x M10

Article Number	50212005	50212006
<b>TECHNICAL SPECIFICATIONS</b>		
Grid size	1 x 1	1 x 1
Dimensions (W x D x H) in mm	50 x 50 x 64.5	50 x 50 x 64.5
Fuse range	N/A	N/A
Max. Voltage *)	50 VDC	50 VDC
Connection studs	M8	M10
Size A / Size B	38 / 38 mm	38 / 38 mm

### Busbar Dimensions



\*) Total height without cover is 56.3 mm

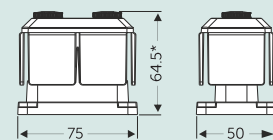
### Dual Stud | 2x M8/M10



DUAL STUD  
2x M8

DUAL STUD  
2x M10

Article Number	50212007	50212008
<b>TECHNICAL SPECIFICATIONS</b>		
Grid size	1 x 1.5	1 x .5
Dimensions (W x D x H) in mm	50 x 50 x 64.5	50 x 50 x 64.5
Fuse range	N/A	N/A
Max. Voltage *)	50 VDC	50 VDC
Connection studs	M8	M10
Size A / Size B	38 / 63 mm	38 / 63 mm



\*) Total height without cover is 56.3 mm

## DC Modular high current busbars

The DC Modular high current busbars are used to distribute high DC currents to a number of connected cables, or other DC Modular family members. The solid and compact design, as well as the possibility to link up multiple busbars on a fixed grid, make these products the best choice for all professional DC power systems. The high current busbars are available with M8 or M10 stud sizes.



## Features:

- Stainless steel studs, nuts and washers for optimal corrosion resistance
- Tin plated high purity copper busses provide maximum conductivity, reducing heat and improving efficiency
- Special fiber reinforced base material offers excellent high temperature properties, good chemical resistance and high strength
- Unique grid optimized footprints allow space saving arrangements of multiple products
- Common interconnection heights for easy combining of multiple products using link plates
- Robust transparent covers with breakouts to allow wire access from any direction
- Smart terminal design allows dual mirrored cable lug connections
- Easy in-system connection access due to top locked covers

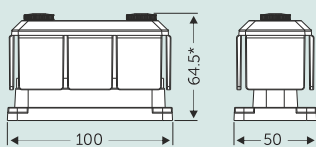
### 3 Stud | 3x M8/M10



**3 STUD**  
3x M8  
50212009

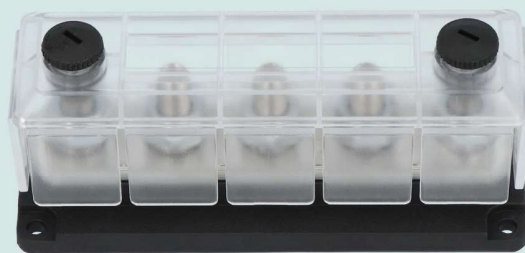
**3 STUD**  
3x M10  
50212010

1 x 2	1 x 2
50 x 100 x 64.5	50 x 100 x 64.5
600 A	600 A
50 VDC	50 VDC
M8	M10
38 / 88 mm	38 / 88 mm



\*1) Total height without cover is 56.3 mm

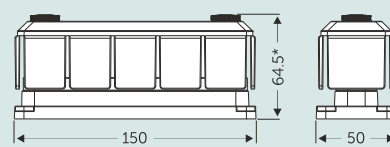
### 5 Stud | 5x M8/M10



**5 STUD**  
5x M8  
50212011

**5 STUD**  
5x M10  
50212012

1 x 3	1 x 3
50 x 100 x 64.5	50 x 100 x 64.5
600 A	600 A
50 VDC	50 VDC
M8	M10
38 / 138 mm	38 / 138 mm



\*1) Total height without cover is 56.3 mm

\*1) Higher voltages may require additional safety measures

## DC Modular fuse holders

A wide range of fuse holders are available in the DC Modular lineup, covering fuse Amp ratings from 35 A up to 600 A. Fuse holders are offered for the Mega®, ANL and Class-T type of fuses, providing solutions for a wide range of applications. The solid and compact design, as well as the possibility to link up multiple fuse holders on a fixed grid, make these products the best choice for all professional DC power systems.



### MEGA 300 A | M8 + suitable fuses

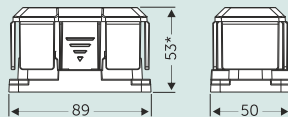


#### Fuse Holder Series

MEGA 300 A | M8  
COMPACT SERIES

Article Number	50212013
<b>TECHNICAL SPECIFICATIONS</b>	
Grid size	1 x 1.78
Dimensions (W x D x H) in mm	50 x 89 x 53
Fuse range	40 - 300 A
Max. Voltage *)	50 VDC
Connection studs	M8
Size A / Size B	38 / 77 mm

#### Fuse Holder Dimensions



\*) Total height without cover is 43.5 mm

#### FUSE MEGA SERIES

Art.Nr.	Model
50212023	Mega 100 A   58 VDC   M8
50212024	Mega 150 A   58 VDC   M8
50212025	Mega 200 A   58 VDC   M8
50212026	Mega 300 A   58 VDC   M8
50212044	Mega 40 A   32 VDC   M8
50212027	Mega 80 A   32 VDC   M8
50212028	Mega 100 A   32 VDC   M8
50212029	Mega 150 A   32 VDC   M8
50212030	Mega 200 A   32 VDC   M8
50212032	Mega 300 A   32 VDC   M8
50212046	Mega 400 A   32 VDC   M8

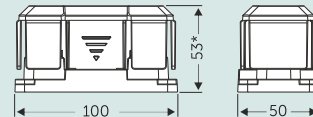
### ANL 300 A | M8/M10 + suitable fuses



ANL 300 A | M8 \*\*)

ANL 300 A | M10  
COMPACT SERIES

Article Number	50212014	50212015
<b>TECHNICAL SPECIFICATIONS</b>		
Grid size	1 x 2	1 x 2
Dimensions (W x D x H) in mm	50 x 100 x 53	50 x 100 x 53
Fuse range	35 - 300 A	35 - 300 A
Max. Voltage *)	50 VDC	50 VDC
Connection studs	M8	M10
Size A / Size B	38 / 88 mm	38 / 88 mm



\*) Total height without cover is 43.5 mm

#### FUSE ANL SERIES

Art.Nr.	Model
50212041	ANL 35 A   48 VDC   M10
50212042	ANL 63 A   48 VDC   M10
50212033	ANL 100 A   48 VDC   M10
50212034	ANL 150 A   48 VDC   M10
50212043	ANL 200 A   48 VDC   M10
50212035	ANL 300 A   48 VDC   M10



**Features:**

- Stainless steel studs, nuts and washers for optimal corrosion resistance
- Tin plated high purity copper busses provide maximum conductivity, reducing heat and improving efficiency
- Special fiber reinforced base material offers excellent high temperature properties, good chemical resistance and high strength

- Unique grid optimized footprints allow space saving arrangements of multiple products
- Common interconnection heights for easy combining of multiple products using link plates (except Mega and ANL (300 A) fuse holders)
- Robust transparent covers with breakouts to allow wire access from any direction
- Smart terminal design allows dual mirrored cable lug connections
- Easy in-system connection access due to top locked covers (except Mega and ANL (300 A) fuse holders)

**ANL 600 A | M10  
+ suitable fuses**



**ANL 600 A | M10  
HEAVY DUTY SERIES**

50212017

1 x 3

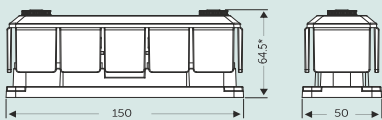
50 x 150 x 64.5

35 - 600 A

50 VDC

M10

38 / 138 mm



\*1 Total height without cover is 56.3 mm

**FUSE ANL SERIES**

Art.Nr.	Model
50212041	ANL 35 A   48 VDC   M10
50212042	ANL 63 A   48 VDC   M10
50212033	ANL 100 A   48 VDC   M10
50212034	ANL 150 A   48 VDC   M10
50212043	ANL 200 A   48 VDC   M10
50212035	ANL 300 A   48 VDC   M10
50212036	ANL 400 A   48 VDC   M10



**Class-T 400/600 A | M10  
+ suitable fuses**



**CLASS-T 400 A | M10  
HEAVY DUTY SERIES**

50212018

1 x 3

50 x 150 x 64.5

225 - 400 A

50 VDC

M10

38 / 138 mm

**CLASS-T 600 A | M10  
HEAVY DUTY SERIES**

50212019

1 x 3

50 x 150 x 64.5

450 - 600 A

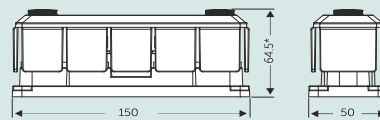
50 VDC

M10

38 / 138 mm

\*1 Higher voltages may require additional safety measures

\*\*1 For M8 ANL type fuses



\*1 Total height without cover is 56.3 mm

**FUSE CLASS-T SERIES  
SUITABLE FOR ANL 400 A**

Art. Nr.	Model
50212037	Class-T   225 A   M10
50212047	Class-T   300 A   M10
50212038	Class-T   400 A   M10



**FUSE CLASS-T SERIES  
SUITABLE FOR ANL 600 A**

Art. Nr.	Model
50212039	Class-T   450 A   M12
50212040	Class-T   600 A   M12



# DC Modular accessories

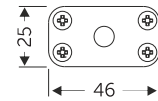
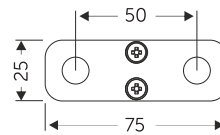
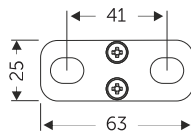
## Link / Adapter Plate Series



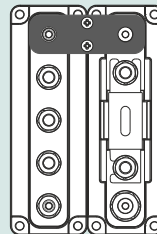
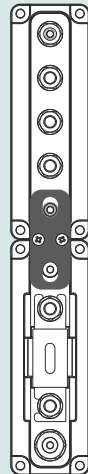
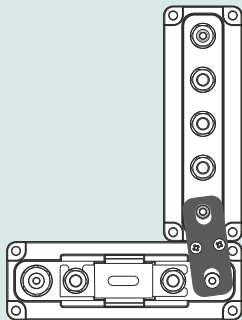
	41 mm (set of 2) Max. 600 A	50 mm (set of 2) Max. 600 A	46 mm (set of 2) Max. 600 A
Article Number <sup>*1</sup>	50212020	50212021	50212022
<b>TECHNICAL SPECIFICATIONS</b>			
Maximum Current <sup>**1</sup>	600 A	600 A	600 A
Dimensions (L x W)	63 x 25 mm	75 x 25 mm	46 x 25 mm
Accepts stud size	M8 + M10	M8 + M10	M8 + M10

<sup>\*1</sup> Not compatible with "Mega" and "ANL (300 A)" Fuse holders  
<sup>\*\*1</sup> Current capacity can be doubled by stacking two Link Plates (after removal of M4 screws)

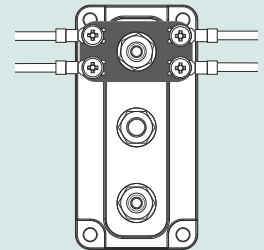
## Link / Adapter Plate Dimensions



## Link / Adapter Plate Connect examples



For converting an M8 or M10 stud to 4xM4 fork/ring terminals



FOR LINKING TO AND FROM:	
<b>BUSBARS</b>	
Single Stud 1x M8	50212005
Single Stud 1x M10	50212006
Dual Stud 2x M8	50212007
Dual Stud 2x M10	50212008
3 Stud 3x M8	50212009
3 Stud 3x M10	50212010
5 Stud 5x M8	50212011
5 Stud 5x M10	50212012
<b>FUSEHOLDERS</b>	
ANL 600 A   M8	50212016
ANL 600 A   M10	50212017
Class-T 400 A   M10	50212018
Class-T 600 A   M10	50212019

FOR LINKING TO AND FROM:	
<b>BUSBARS</b>	
Dual Stud 2x M8	50212007
Dual Stud 2x M10	50212008
3 Stud 3x M8	50212009
3 Stud 3x M10	50212010
5 Stud 5x M8	50212011
5 Stud 5x M10	50212012
<b>FUSEHOLDERS</b>	
ANL 600 A   M8	50212016
ANL 600 A   M10	50212017
Class-T 400 A   M10	50212018
Class-T 600 A   M10	50212019

FOR LINKING TO AND FROM:	
<b>BUSBARS</b>	
Single Stud 1x M8	50212005
Single Stud 1x M10	50212006
Dual Stud 2x M8	50212007
Dual Stud 2x M10	50212008
3 Stud 3x M8	50212009
3 Stud 3x M10	50212010
5 Stud 5x M8	50212011
5 Stud 5x M10	50212012
<b>FUSEHOLDERS</b>	
ANL 600 A   M8	50212016
ANL 600 A   M10	50212017
Class-T 400 A   M10	50212018
Class-T 600 A   M10	50212019



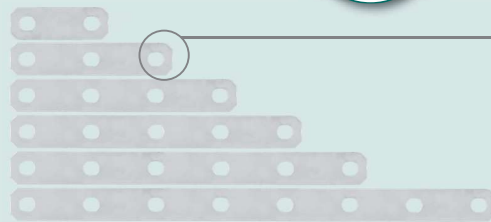
Due to the common interconnection heights, smart space saving arrangements of multiple DC Modular products can be made by linking these together using the optional Link Plates. We have two Link Plate sizes available between which we are able to create all possible combinations. Both Link Plates are compatible with M8 and M10 studs. Additionally, we have equipped the Link Plates with two M4 screws to provide convenient connection points for smaller cables. Should this be required, we also offer an Adapter Plate which allows a mixture of high and low power cables to be connected to the same stud. The Adapter Plate can be used on M8 and M10 studs and offers four connection points for smaller cables.

**Features:**

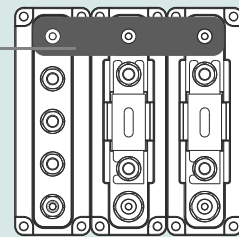
- Tin plated high purity copper busses provide maximum conductivity, reducing heat and improving efficiency
- Stainless steel M4 screws and washers provide convenient connection points for smaller cables
- Compatible with M8 and M10 studs

**Link Bar Series**

LINK BARS	
Art. Nr.	Model
50212084	2 Holes ( 50.5 mm pitch)
50212085	3 Holes ( 50.5 mm pitch)
50212086	4 Holes ( 50.5 mm pitch)
50212087	5 Holes ( 50.5 mm pitch)
50212088	6 Holes ( 50.5 mm pitch)
50212091	8 Holes ( 50.5 mm pitch)

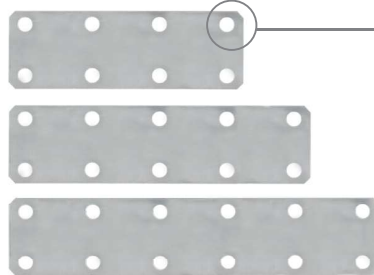


**Link Bar Connect examples**

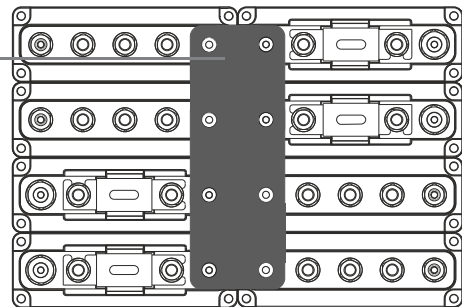


**Link Plate Series**

LINK PLATES	
Art. Nr.	Model
50212080	4 Top - 4 Down
50212090	5 Top - 5 Down
50212082	6 Top - 6 Down

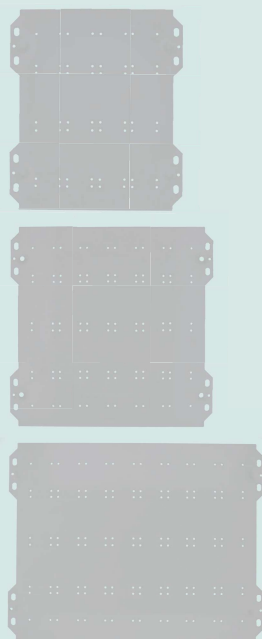


**Link Plate Connect examples**

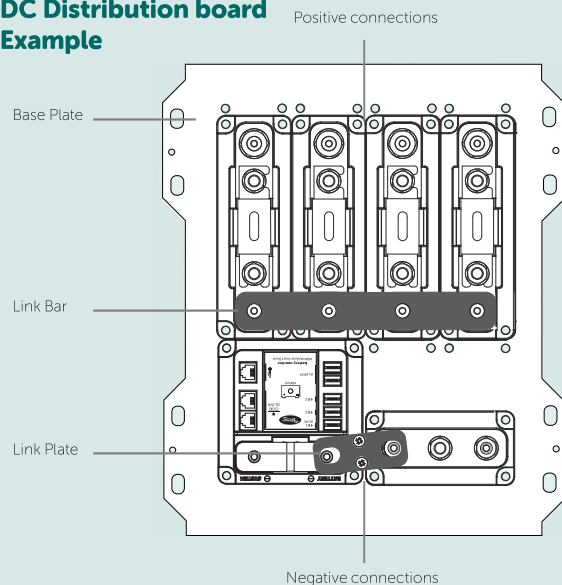


**Base Plate Series**

BASE PLATES	
Art. Nr.	Model
50212081	4 Top - 4 Down
50212083	6 Top - 6 Down
50212089	8 Top - 8 Down
50211363	Taptite Bolt Torx M4 x 8



**DC Distribution board Example**



## DC installations

# Remote Battery Switch (500A)

**The DC Modular Remote Battery Switch (the Switch) is a smart high current magnetic latching contactor, that can handle continuous DC currents of up to 500 Amps. The Switch can easily be installed in an engine room or battery compartment, while being controlled from a more convenient location by a small panel mounted Switch. But the Switch can for instance also be controlled by a battery monitor or Lithium battery, as a discharge / overcharge protection.**

Besides controlling the Switch remotely, buttons positioned at the top also provide a way to open or close the main contact locally. For external control, the Switch is equipped with a 5 wire interface cable. It can be configured to accept two wire or single wire ON-OFF commands for optimal flexibility.

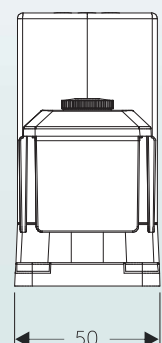
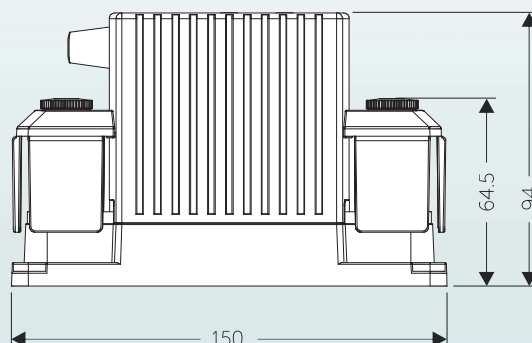
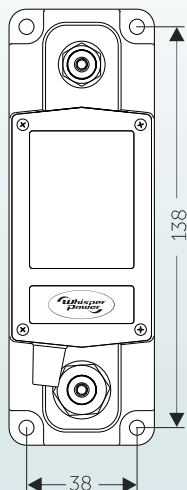
The Switch is a magnetic latching relay, which means that there is no current draw from the battery when the contact is closed. This is a great benefit compared to regular relays which do require a (sometimes significant-) hold current to keep the contact closed.

Another benefit of the Switch are the built in protections. It is protected against high / low supply voltage and high temperature. On top of this, there is a smart function available to automatically fix light to medium contact weldings. And finally, the Switch is also ignition protected according to ISO8846.

The Switch can be part of a very compact DC distribution system (see page 104). The Switch footprint is around 50 % smaller compared to some competing products, which is perfect for space constrained installations.



### Dimensions





## DC Modular Series

	REMOTE BATTERY SWITCH 12 VDC   500 A	REMOTE BATTERY SWITCH 24 VDC   500 A	REMOTE BATTERY SWITCH 48 VDC   350 A	BATTERY PROTECT RELAY 12 VDC   500 A	BATTERY PROTECT RELAY 24 VDC   500 A	BATTERY PROTECT RELAY 48 VDC   350 A
Article Number	50214733	50214734	50214718	50214737	50214739	50214740
<b>TECHNICAL SPECIFICATIONS</b>						
Rated voltage	60 VDC	60 VDC	60 VDC	60 VDC	60 VDC	60 VDC
Nominal current	500 A	500 A	350 A	500 A	500 A	350 A
Cranking current (1 min.)	1000 A	1000 A	1000 A	1000 A	1000 A	1000 A
Nominal make / break current	500 A (0 - 34 VDC) / 350 A (35 - 60 VDC)			500 A (0 - 34 VDC) / 350 A (35 - 60 VDC)		
Peak make / break current	1600 A (0 - 34 VDC) / 1200 A (35 - 60 VDC)			1600 A (0 - 34 VDC) / 1200 A (35 - 60 VDC)		
<b>CONTROL CIRCUIT (ELECTRICAL)</b>						
Coil / supply voltage (+ VDC)	7.5 - 17 VDC	15 - 34 VDC	34 - 68 VDC	7.5 - 17 VDC	15 - 34 VDC	34 - 68 VDC
Coil / supply current (idle state) *)	< 100 µA	< 100 µA	< 100 µA	< 100 µA	< 100 µA	< 100 µA
Coil / supply current (state change) *)	< 6 A	< 3 A	< 1.5 A	< 6 A	< 3 A	< 1.5 A
<b>GENERAL</b>						
Remote control	By control wires	By control wires	By control wires	By control wires	By control wires	By control wires
Local control **)	Top side buttons (ON/Standby, Close contact, Open contact)			ON/Standby, Open and Close contact, Override mode		
Indicators	Top side LEDs for Contact open, Contact closed, Error and Setup			Contact open/close, Undervoltage disconnect, Override mode, Error and Setup		
Mechanical life	100000 cycles	100000 cycles	100000 cycles	100000 cycles	100000 cycles	100000 cycles
Electrical life	10000 cycles	10000 cycles	10000 cycles	10000 cycles	10000 cycles	10000 cycles
Operating temperature range	-20 up to 60°C	-20 up to 60°C	-20 up to 60°C	-20 up to 60°C	-20 up to 60°C	-20 up to 60°C
Connection stud size	M10	M10	M10	M10	M10	M10
DC Modular grid size	1 x 3	1 x 3	1 x 3	1 x 3	1 x 3	1 x 3
Protection class	IP65	IP65	IP65	IP65	IP65	IP65
Dimensions (W x D x H) in mm	50 x 94 x 150	50 x 94 x 150	50 x 94 x 150	50 x 94 x 150	50 x 94 x 150	50 x 94 x 150
Weight	800 g	800 g	800 g	800 g	800 g	800 g
Standards	CE certified (EMC Directives UNECE Regulation 10 and 2014/30/EU, Low voltage Directive 2014/35/EU, RoHS Directive 2011/65/EU and Ignition protection standard ISO 8846)					

\*) Due to the magnetic latch construction, the DCM-RBS draws virtually no current in the ON or OFF state.

A current draw only exists shortly (500 ms max.) when changing the state of the contact.

\*\*) Using the top side buttons, one can manually override the switch state as commanded through the control wires.

A dedicated 'On / Standby' button also allows the user to put the DCM-RBS in a standby mode with open contact.

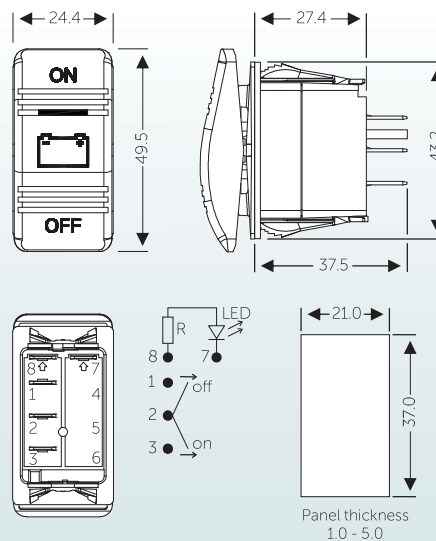
In this mode any command from the control wires and/or manual override buttons are ignored.

## WP-Panel Switch Indicator



WP-Panel Switch  
Art. Nr. 50214730

## Dimensions





## DC installations

# Remote battery switches - 500 A

**These are robust, quality products engineered for harsh environments and built to last. The WP-ML is a heavy duty remote battery switch. It features a 500 Amp magnetic latching (bi-stable) switch providing high-amp switching under load, which can be operated both manually or remotely.**

- 500 Amp continuous load
- Bi-stable or auto magnetic latching, very low consumption at no-load mode
- Manual override knob provides an added level of safety allowing control with or without power and LOCK- OFF option for service / maintenance
- Remote LED indicator for switch state possible (optional)
- Tin-plated M10 copper studs for maximum conduction and corrosion resistance
- Multiple cable terminals, 22 mm thread
- Silver alloy contacts provide high reliability for switching live loads
- Optional Contura Switch to operate the Latch Relay
- IP66 protection rating



Included on the ML-RBS

Included on the ML-ACR





## WP-ML series

	ML-RBS REMOTE BATTERY SWITCH 12 VDC	ML-RBS REMOTE BATTERY SWITCH 24 VDC	ML-ACR CHARGING RELAY 12 VDC	ML-ACR CHARGING RELAY 24 VDC
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Article Number	50214731	50214732	50214735	50214736
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### TECHNICAL SPECIFICATIONS

Product type	12 VDC remote magnetic battery switch	24 VDC remote magnetic battery switch	12 VDC magnetic latch charger relay	24 VDC magnetic latch charger relay
Switching / Circuit type	ON-OFF bi-stable	ON-OFF bi-stable	bi-stable ACR	bi-stable ACR

### INPUT

Number of batteries	1	1	2	2
Number of switching positions	2	2	2	2
Primary manual operation	Locked ON-OFF	Locked ON-OFF	Locked ON-OFF	Locked ON-OFF
I 10 inrush current 10 sec.	2500 A	2500 A	2500 A	2500 A
I 60 inrush current 1 min.	1100 A	1100 A	1100 A	1100 A
I 300 C interrupted 5 min.	700 A	700 A	700 A	700 A
I C continuously	500 A	500 A	500 A	500 A
Maximum operating voltage	32 VDC	32 VDC	32 VDC	32 VDC
Operating circuit voltage	10.1 - 16.5 VDC	20.2 - 32.9 VDC	10.1 - 16.5 VDC	20.2 - 32.9 VDC
Consumption in Standby	0 mA	0 mA	< 40 mA	< 40 mA
Consumption during charging	7 A	4 A	<7 A	<7 A
Remote control during switching	100 mA	100 mA	100 mA	100 mA

Battery banks automatically combined when voltage levels go above:

	-	-	13.5 VDC for 30 seconds 13.0 VDC for 90 seconds	27 VDC for 30 seconds 26 VDC for 90 seconds
--	---	---	--	--

Battery banks automatically isolated when voltage levels are:

- below 9.6 VDC (shut down low voltage)
- below 12.35 VDC for 10 seconds
- below 12.37 VDC for 30 seconds
- above 16.2 VDC (shut down high voltage)

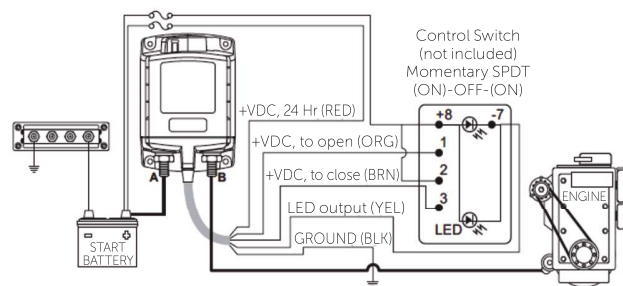
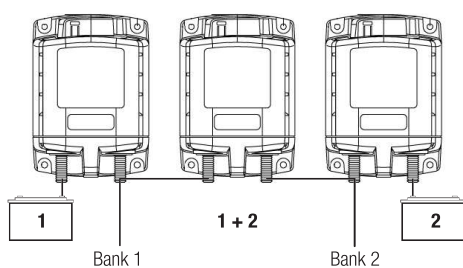
- below 19.2 VDC (shut down low voltage)
- below 24.7 VDC for 10 seconds
- below 25.5 VDC for 30 seconds
- above 32.4 VDC (shut down high voltage)

### GENERAL

Ambient operating temperature	-20 up to 40°C	-20 up to 40°C	-20 up to 40°C	-20 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	95 %, non-condensing	95 %, non-condensing	95 %, non-condensing	95 %, non-condensing
Number of switching cycles (with load)	100.000 cycles	100.000 cycles	100.000 cycles	100.000 cycles

### MECHANICAL SPECIFICATIONS

Thread connections	M10 (3/8"-16)	M10 (3/8"-16)	M10 (3/8"-16)	M10 (3/8"-16)
Length threaded stud	23 mm	23 mm	23 mm	23 mm
Maximum torque	15.5 Nm	15.5 Nm	15.5 Nm	15.5 Nm
Material threaded stud	Tin plated copper	Tin plated copper	Tin plated copper	Tin plated copper
Dimensions (W x D x H) in mm	95 x 52 x 139	95 x 52 x 139	95 x 52 x 139	95 x 52 x 139
Weight	800 g	800 g	800 g	800 g
Mounting diameter behind panel	114.3 x 76.2 mm	114.3 x 76.2 mm	114.3 x 76.2 mm	114.3 x 76.2 mm
Connection screws	4 mm	4 mm	4 mm	4 mm
International Protection rating	IP66	IP66	IP66	IP66
Housing colour	RAL9011 graphite black	RAL9011 graphite black	RAL9011 graphite black	RAL9011 graphite black
Cable opening	28.4 mm	28.4 mm	28.4 mm	28.4 mm
Ignition protection	SAE J1171	SAE J1171	SAE J1171	SAE J1171
Certification	CE, ISO 8846	CE, ISO 8846	CE, ISO 8846	CE, ISO 8846



## DC installations - switches

# Robust and reliable switches-compact series

**WhisperPower's philosophy is simple and clear: every single part of the electrical system must be robust and reliable. It is vital from the perspective of safety that all parts and components related to the battery comply with this principle.**

From the perspective of safety on board it is vital that all parts and components related to the battery comply with this principle. We guarantee a safe and secure connection from your batteries - from starter batteries to large Lithium battery banks, because we have the right components for your system requirements.

### Components for DC installations:

- Remote-controlled battery switches see page 112/114
- Intelligent battery switches see page 116
- Heavy duty manual battery switches see page 118
- Battery isolators see page 120

## DC installations - switches

# WP Compact - 300 A

**Designed for battery banks of 12, 24 or 48 VDC, manually operated COMPACT series DC Switches are the best choice when it comes to connecting or disconnecting DC devices to / from a battery bank.**



### Features and Benefits

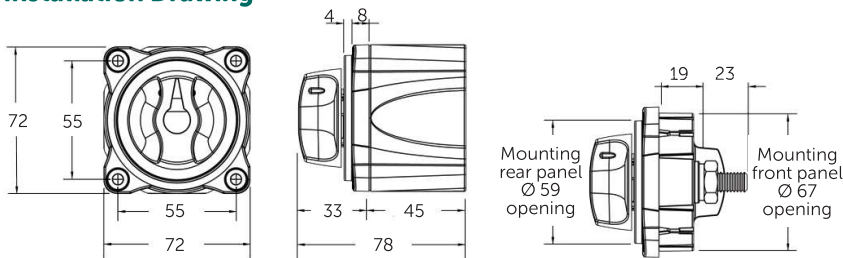
- Robust and compact design
- Tin-plated copper studs for maximum conduction and corrosion resistance
- Multiple cable terminals, 22 mm thread
- One-piece terminal prevents parts loosening
- Multiple cable input enables front or built-in panel mounting
- Circuit identification labels included
- CE marked
- UL certified in accordance with UL 1701 (power switches)
- ABYC compliant
- Conforms to UL 1500 SAE J 1171 external ignition protection requirements
- IP66 protection rating



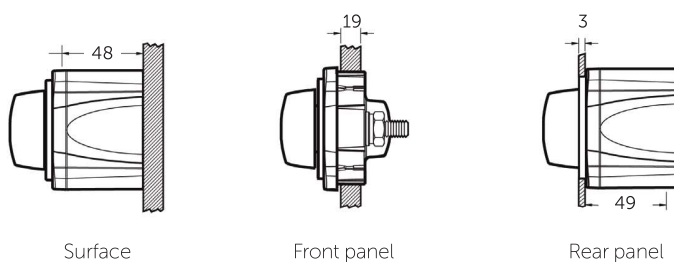
## WP-Compact series

	DC SWITCH 300 A SINGLE CIRCUIT	DC SWITCH 300 A DUAL CIRCUIT	DC SWITCH 300 A DUAL CIRCUIT + COMB.
Article Number	50214701	50214702	50214703
<b>TECHNICAL SPECIFICATIONS</b>			
Product type	Hand operated battery switch	Hand operated battery switch	Hand operated battery switch
Switching	ON-OFF	Selection	Selection + Combination
<b>INPUT</b>			
Number of batteries	1	2	2
Number of switching positions	2	4	3
Combine batteries	-	Yes	Yes
I 10 inrush current 10 sec.	1500 A	1500 A	1500 A
I 60 inrush current 1 min.	775 A	775 A	775 A
I 300 C interrupted 5 min.	500 A	500 A	500 A
I C continuously	300 A	300 A	300 A
Maximum operating voltage	48 VDC	32 VDC	32 VDC
<b>GENERAL</b>			
Ambient operating temperature	-20 up to 40°C	-20 up to 40°C	-20 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	95 %, non-condensing	95 %, non-condensing	95 %, non-condensing
<b>MECHANICAL SPECIFICATIONS</b>			
Thread connections	M10 (3/8"-16)	M10 (3/8"-16)	M10 (3/8"-16)
Length threaded stud	22 mm	23 mm	24 mm
Maximum torque	13.6 Nm	13.6 Nm	13.6 Nm
Material threaded stud	Tin plated copper	Tin plated copper	Tin plated copper
Dimensions (W x D x H) in mm	72 x 78 x 72	72 x 78 x 72	72 x 78 x 72
Weight	280 g	280 g	280 g
Borehole spacings	55 mm	56 mm	57 mm
Mounting diameter behind panel	59 mm	60 mm	61 mm
Connection screws	10 mm	11 mm	12 mm
International Protection rating	IP66	IP67	IP68
Housing colour	RAL9011 graphite black	RAL9011 graphite black	RAL9011 graphite black
Cable opening	28 mm	29 mm	30 mm
Ignition protection	UL 1500 SAE J1171	UL 1500 SAE J1172	UL 1500 SAE J1173
Certification	CE, ISO 8846	CE, ISO 8847	CE, ISO 8848

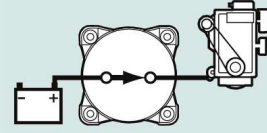
## Installation Drawing



## Mounting Options

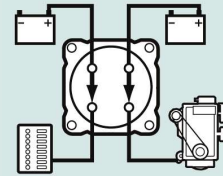


## Circuit type ON-OFF

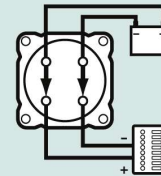


Switch set to 'ON'

## Dual circuit

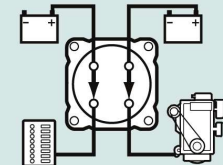


Switch set to 'ON'  
Battery banks isolated

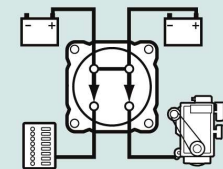


Switch set to 'ON'  
One battery bank

## Dual + Combine circuit



Switch set to 'ON'



Switch set to 'Combine Batteries'



## DC installations

# Battery switches Heavy duty - Series

Quality products designed for harsh environments and built to last



### Features and Benefits

- Robust and compact design
- Tin-plated copper studs for maximum conduction and corrosion resistance
- Multiple cable terminals, 22 mm thread
- One-piece terminal prevents parts loosening
- Multiple cable input enables surface front or built-in panel mounting
- Circuit identification labels included
- CE marked
- UL certified in accordance with UL 1701 (power switches)
- ABYC compliant
- Conforms to UL 1500 SAE J 1171 external ignition protection requirements
- IP66 protection rating



## WP-HD Heavy Duty Series



DC SWITCH 600 A ON-OFF

50214711

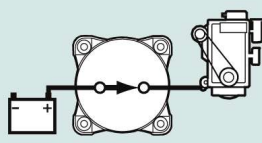


DC SWITCH 500 A SELECTOR 4 POS

50214712

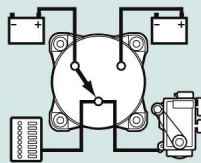
TECHNICAL SPECIFICATIONS		
Product type	Hand operated battery switch	Hand operated battery switch
Switching	ON-OFF	Select from 4 positions
INPUT		
Number of batteries	1	2
Number of switching positions	2	4
Combine batteries	-	Yes
I 10 inrush current 10 sec.	2750 A	2750 A
I 60 inrush current 1 min.	1325 A	1150 A
I 300 C interrupted 5 min.	900 A	700 A
I C continuously	600 A	500 A
Maximum operating voltage	32 VDC	32 VDC
GENERAL		
Ambient operating temperature	-20 up to 40°C	-20 up to 40°C
Storage temperature	-25 up to 85°C	-25 up to 85°C
Relative humidity	95 %, non-condensing	95 %, non-condensing
MECHANICAL SPECIFICATIONS		
Thread connections	M12	M12
Length threaded stud	22 mm	22 mm
Maximum torque	24.86 Nm	24.86 Nm
Material threaded stud	Tin plated copper	Tin plated copper
Dimensions (W x D x H) in mm	98 x 79 x 98	98 x 79 x 98
Weight	590 g	590 g
Borehole spacings	76 mm	77 mm
Mounting diameter behind panel	92 mm	92 mm
Connection screws	M6	M6
International Protection rating	IP66	IP67
Housing colour	RAL9011 graphite black	RAL9011 graphite black
Cable opening	27.9 mm	27.9 mm
Ignition protection	UL 1500 SAE J1170	UL 1500 SAE J1171
Certification	CE, ISO 8845	CE, ISO 8846

### Circuit type ON-OFF

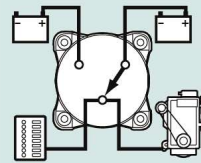


Switch set to 'ON'

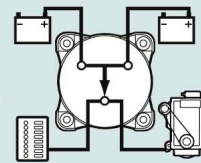
### Circuit type selector 4 positions



Switch set to '1'

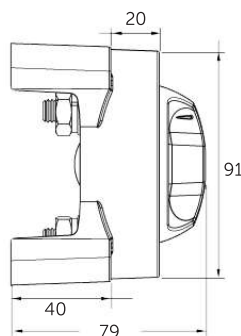
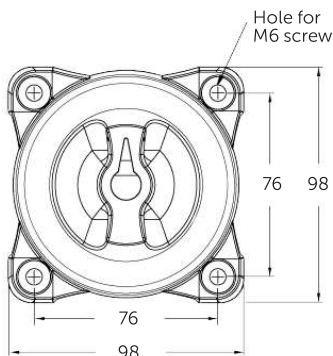


Switch set to '2'

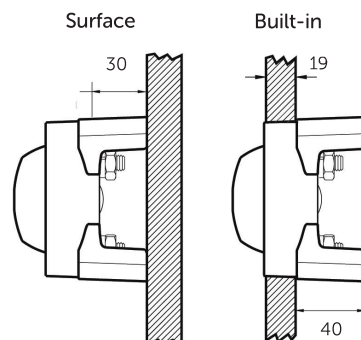


Switch set to '1+2'

### Installation Drawing



### Mounting Options



## DC installations

# Charging individual battery banks

**Our electronic WBI Battery Isolators are designed to charge two or more individual batteries or battery banks from one power source: a battery charger or a DC alternator. The WBI is an ideal solution when the output voltage of a charge device cannot be adjusted to compensate for a voltage drop which occurs when an ordinary Battery Isolator is being used. The WBI keeps the charge voltage at the correct charge level.**



The WhisperPower electronic Battery Isolator is the best on the market for simultaneously charging multiple battery banks. Plus it can be combined with any alternator or battery charger. It is designed for both existing and new installations without the need to adjust to the alternator. Because the voltage loss between the alternator and the battery is negligible, an electronic Battery Isolator performs much better than conventional models. As a result, the batteries are charged quickly and completely. The WhisperPower Battery Isolator uses electronics ensuring that the charging voltage remains at the correct level even with multiple battery banks, whereas conventional Battery Isolators use less efficient diode isolators. WhisperPower Battery Isolators can be used anywhere, even on standard alternators with external reinforcement and voltage measurers when it can then be connected to the start contact IG.

### Benefits:

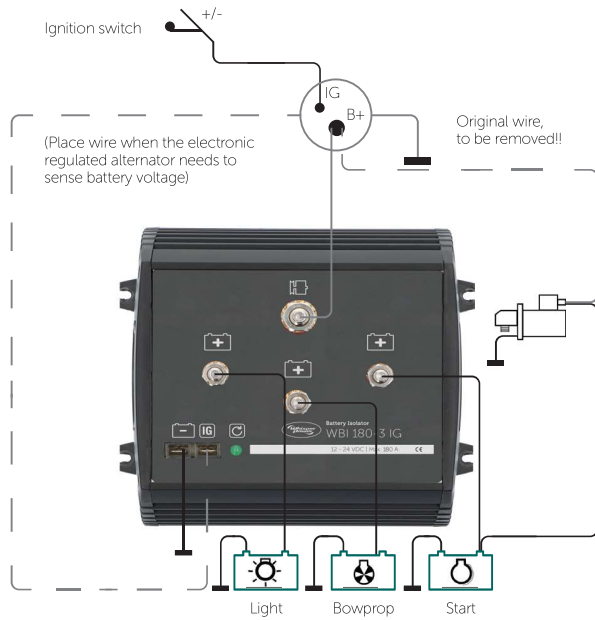
- 2 or 3 battery banks quickly and completely charged
- Significant extension of battery life
- Suitable for charge current up to 180 A
- Combine with each alternator and / or battery charger - no adjustments required
- Start Contact compatible with all types of alternators for external excitation and voltage measurement
- Hardly any voltage drop over the Battery Isolator
- No voltage drop if the batteries are fully charged
- Prevents current flow from one battery to the other
- Ensures that the (starter) battery remains fully charged



## WBI Series

180 A | 2 OUTPUTS | IG    180 A | 3 OUTPUTS | IG

Article Number	60115012	60115013
<b>TECHNICAL SPECIFICATIONS</b>		
Number of outputs	2	3
Maximum current	180 A	180 A
Nominal system voltage	12 or 24 VDC	12 or 24 VDC
Input voltage range	8 - 30 VDC	8 - 30 VDC
Voltage drop	0,0 VDC at 10 A / 0,1 VDC at 20 A	0,0 VDC at 10 A / 0,1 VDC at 20 A
Isolation to ground	> 500 VAC at 60 Hz	> 500 VAC at 60 Hz
Operating temperature	-40 up to 85°C	-40 up to 85°C
Conforms to	EN 50081-1 (Emission) EN 50082-1 (immunity) EN 60950-1 (safety)	
Dimensions (W x D x H) in mm	146 x 85 x 97	158 x 85 x 146
Weight	810 g	810 g
Warranty	5 years	5 years



### Dimensions WBI

