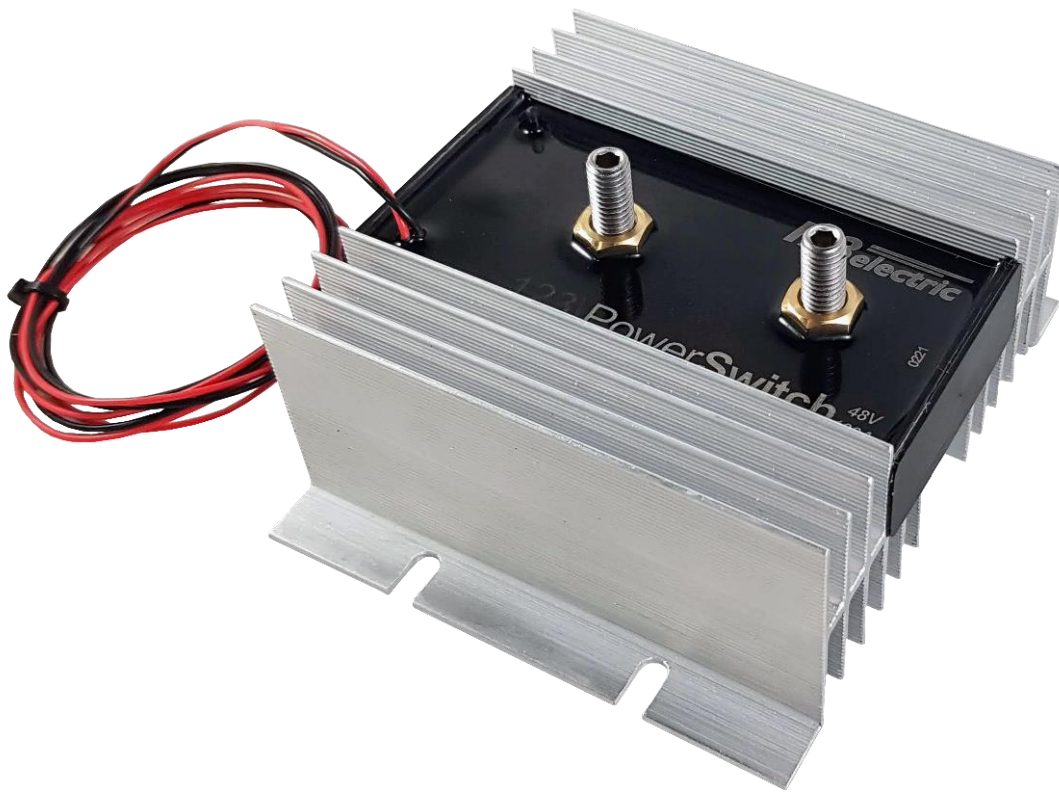


123\PowerSwitch^{48V}_{100A}

Manual

Rev 3



The 123\PowerSwitch is a bidirectional, isolated solid state relay with very low power consumption when turned on. This will ensure that it can operate for a very long time, even if the battery is almost empty. A second benefit is that it can switch bidirectional currents. This means that it can be used with devices which both can charge and discharge, like a combined charger/inverter.

Electrical specifications

Description		Value / range
Maximum switching voltage		62VDC
Maximum continuous current		120A
Peak current <1 minute		200A
Peak current <1 ms		1200A
Operating temperature range (air)	Full load	-40 to 40°C
	70% load	-40 to 50°C
Control operating voltage		4.8V – 70V
Current consumption when on		0.8mA
Electrical resistance		0.65mΩ
Voltage drop	@ 100A	0.065V
Isolation voltage	control to power terminals	2.5kV
IP rating	Electronics	IP67
	Power terminals	IP00

Mechanical specifications

Description	Value
Total dimensions LxWxH	126 x 110 x 65mm
Power terminals	M8
Control cable size	0.5mm ²
Weight	0.5kg

Status LED

The status LED gives information about the operation of the 123\PowerSwitch.

-When the LED does not flash, the 123\PowerSwitch does not get any power from the two control wires. In that case, the relay does not conduct (open state).

-When the LED flashes 1x per five seconds, the relay is conducting (closed state).

-When the LED flashes fast several times and after this no flashing for 5 seconds, the relay is too warm and it will not conduct (open state). When the relay has cooled down, operation will restart.

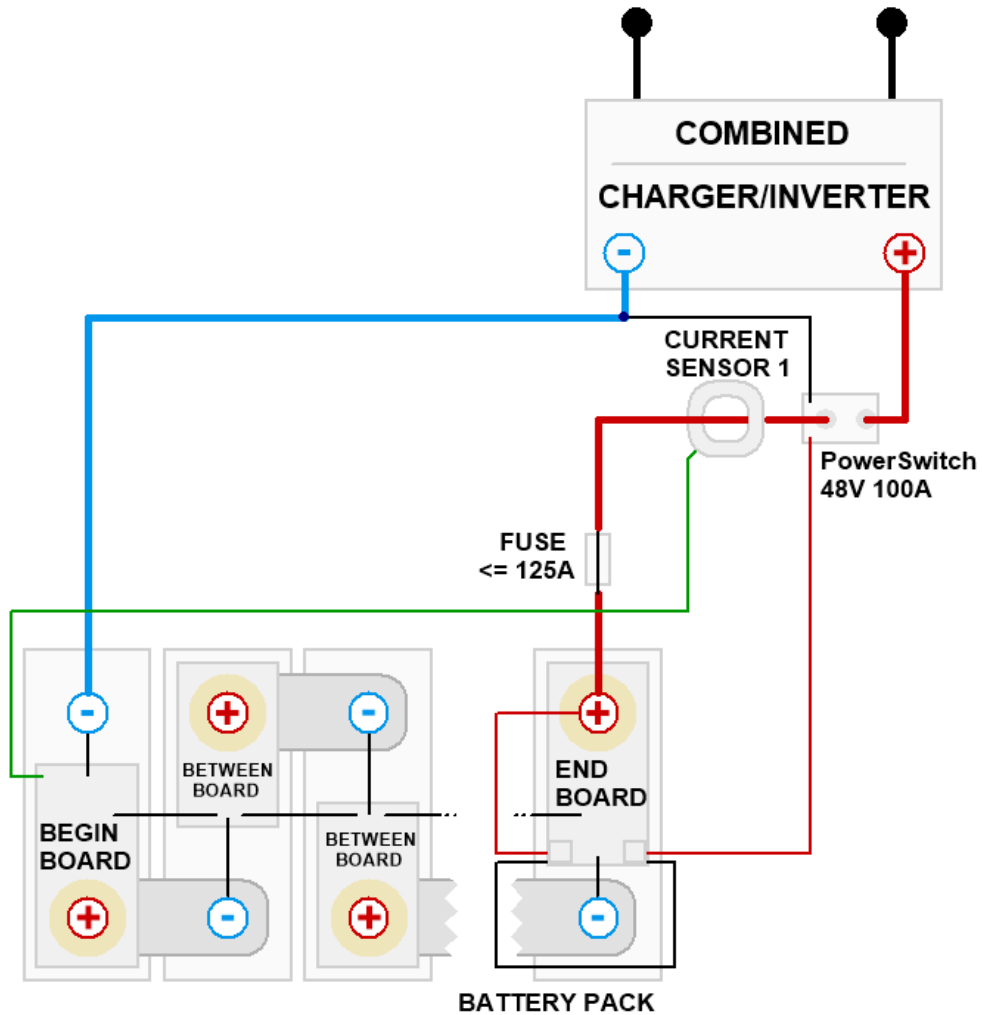
Parallel operation

Up to three 123\PowerSwitch units can be connected in parallel to increase the current switching.

Give all power cables to each PowerSwitch about the same length to distribute the total current evenly over the units and add a fuse (max 125A) for every PowerSwitch.

Wiring examples with 123\SmartBMS

Example with a combined charger/inverter



Example with a separate charger and separate inverter

