

Power distribution

AC Power Distribution

To connect a yacht or ship safely to shore power a number of additional items are needed. Having just covered the actual shore connection, we will now look at the extra components needed to be installed on board.

- Galvanic separators in the form of a simple galvanic isolator or isolation transformer: see page 118
- Earth leakage protection in the form of a cabinet with breaker
- A fuse box or distribution system is necessary for extensive installations with AC power consumers connected directly to the shore power.
- If there are multiple AC power sources present, such as an inverter and generator, then it is recommended to install an automatic switching system.

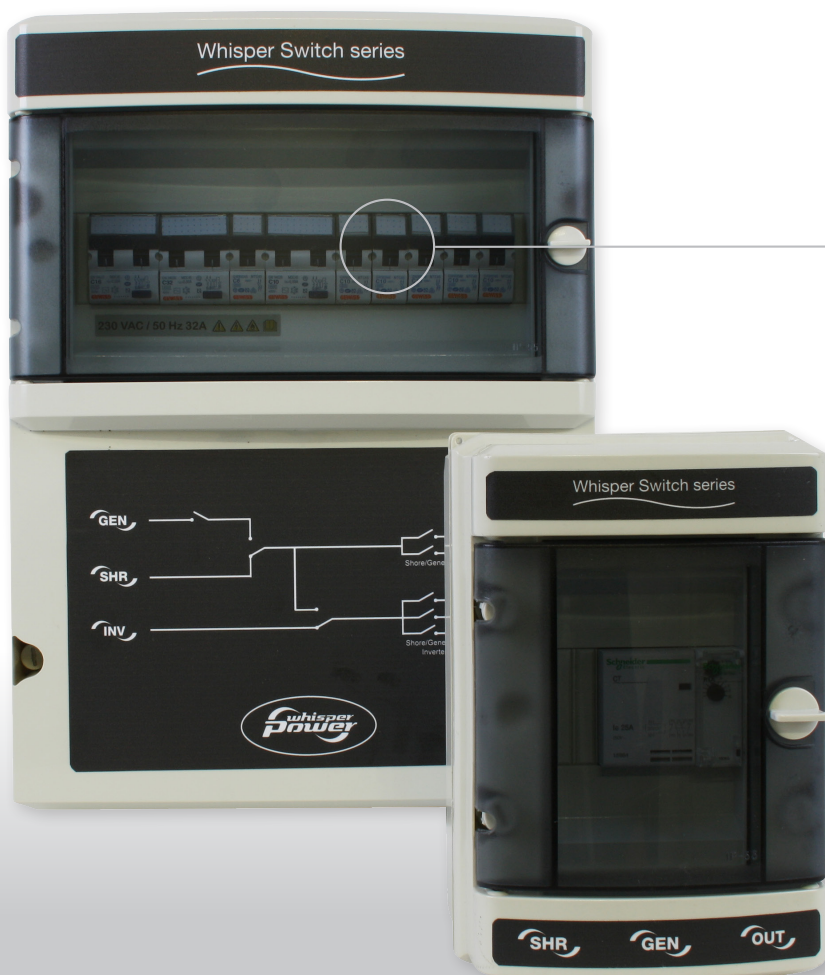
The WhisperPower "All-in-One" systems and the WPC contain the various switching and distribution functions already integrated.

WhisperSwitch transfer system

The traditional WhisperSwitch systems regulate the power distribution between energy sources fully automatically. AC and generator / inverter IN, 230/120 V onboard groups OUT, everything in one cabinet. The connected devices make use of the sources (maximum two) which are available at the time.

WhisperSwitch is available in the following versions:

- 2 inputs, for example shore / inverter or shore / generator with 1 output. Capacity 6kW/26 A at 230 V/50 Hz
- 2 inputs, for example shore / inverter or shore / generator with 1 output for consumers. Capacity 10 kW/42 A at 230 V/50 Hz
- 2 inputs, 1 output. Capacity 6kW/50 A at 120 V/60 Hz
- 2 inputs, 1 output. Capacity 10 kW/83 A at 120 V/60 Hz



AC Transfer Systems: 3 inputs

These analogue switching devices are able to feed the onboard power supply from three different sources: shore power, generator and inverter. There are three output circuits, available with different capacities. As an alternative solution, it is also possible to install two standard WhisperSwitches.

- switch from shore to generator
- switch between generator and inverter

Earth leakage protection

WhisperPower supplies plug and play earth leakage breakers for single and three phase systems. An earth leakage switch protects the electrical installation against leakage current preventing dangerous situations.

We supply the WP-ShoreConnect system as a plug and play solution: the shore power is connected on one side and the on-board installation on the other. See page 1118 for the 100% safe solution with the WP-GI isolation transformer.



AVAILABLE ON REQUEST

WP-AC TRANSFER SYSTEM SWITCH

for 3 phase generator, inverter

for 25 and 32kW

WHISPERSWITCH	6 – 6 KW (2 X IN, 1 X OUT)	10 – 10 KW (2 X IN, 1 X OUT)	6 – 5 KW (2 X IN, 1 X OUT)
Art.nr.	50214670	50214671	50214672
TECHNICAL SPECIFICATIONS			
Nominal input voltage	230 V (50/60 Hz)		120 V
Input voltage range	200-250 V		100-250 V
No. of AC inputs	2 x (Shore/ Generator)		
No. of AC outputs	1		
Dimensions (h x w x d) in mm	240x140x100	240x210x100	240x140x100
Weight	1 kg	1,7 kg	1 kg
TECHNICAL SPECIFICATIONS			
Nominal output current generator	26 A	42 A	45 A
Nominal input current shore power	26 A	42 A	45 A
Nominal output current inverter	25 A	32 A	45 A
Earth leakage switch	Not integrated		
Input generator monitoring	Continuous voltage and frequency monitoring		
Delay generator input	0-10 sec (adjustable)		
Nominal output current	25 A		
Automatic fuses	Not integrated		
Energy consumption (AC, all inputs)	27W		
Power consumption (inverter capacity only)	< 1W		
Switching time	Switch on 12-22 ms / switch off 4-19 ms		
Temperature range (specified)	-5°C to 60°C / 23 to 140°F		
Temperature range (ambient)	-25°C to 70°C / -13 to 158°F		
Temperature range (not working)	-60°C to 80°C / -76 to 176°F		
Relative humidity	max. 95%, non-condensing		
Frequency monitoring	Yes		
Cable diameter	0,5 - 10 mm ² / AWG 20-7		
International Protection rating	IP23		
WP – AC TRANSFER SYSTEM SWITCH	5 KW	10 KW	16KW
Art.nr.	50214690	50214691	50214692
GENERAL SPECIFICATIONS			
Power rating	5 kW	10 kW	16kW
Nominal input voltage	230 V (50/60 Hz)		
Input voltage range	200-250 V		
No. of AC inputs	3 (shore, generator, inverter)		
No. of AC outputs	3 output groups		
Dimensions, hxwx d	340 x 261 x 144 mm / 13,4 x 10,3 x 5,7 inch		
Weight	4.4 kg / 9.7 lb		
TECHNICAL SPECIFICATIONS			
LED indicators on cabinet	Power sources present indication and 'load on inverter' mode		
Nominal input current generator	25 A	42 A	68A
Nominal input current shore power	25 A	42 A	68A
Nominal input current inverter	25 A	42 A	68A
Earth leakage switch	Not integrated		
Input generator monitoring	Continuous voltage and frequency monitoring		
Delay generator input	0-10 sec (adjustable)		
Nominal output Short circuit current	25 A	42 A	68A
Nominal output current	25 A	42 A	68A
Automatic fuses	No, depends on system		
Energy consumption (AC, all inputs)	27W		
Power consumption (inverter capacity only)	< 1W		
Switching time	switch on 12-22 ms / switch off 4-19 ms		
Temperature range (specified)	-5°C to 60°C / 23 to 140°F		
Temperature range (ambient)	-25°C to 70°C / -13 to 158°F		
Temperature range (not working)	-60°C to 80°C / -76 to 176°F		
Relative humidity	max. 95%, non-condensing		
Frequency monitoring	Yes		
Cable diameter	0.5-10 mm ² /AWG 20-7, remote control 0.14-2.5 mm ² /AWG 26-13		
International Protection rating	IP23		