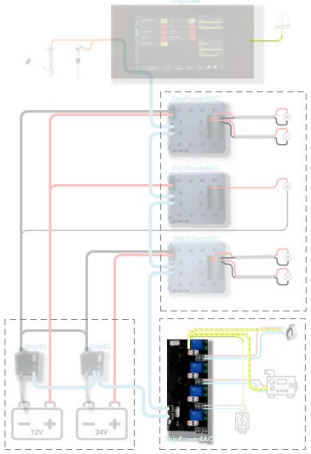

Features and key points

The **ShipPower4AC** module **drives and controls 4 AC circuits of a ShipHeart™ system**.

DIN rail-mounted, it can be connected in a matter of seconds and requires no configuration to be recognized by the ShipBase module to which it is connected. Its position on the bus distinguishes it from other modules, and the termination resistors are automatically adjusted according to this new configuration.

Connected after the protection circuit-breakers, ShipPower4AC monitors and controls each of its 4 circuits completely independently.

This allows **an AC circuit to be controlled in exactly the same way as a DC circuit**: one touch of a finger on the ShipBase screen and the heater is energized...

But also to **use a ShipPower4AC as an AC source selector**: the voltage supplied by the shore power is too high? the generator output frequency is too low? the on-board AC input is automatically cut or switched to the appropriate source.

Each circuit has a two-point plug-in input connector: neutral on the left and phase on the right, like on a circuit-breaker... A male connector of the same type is available for the corresponding output. Simply slide one of the conductors through the current-measuring toroid, and the circuit wiring is complete!

As there is only one on-board earth, only one connection is required to the module, via a quick-acting terminal block.

ShipPower4AC then monitors each circuit: **voltage, current, apparent power, frequency, as well as the presence of a valid ground circuit or phase/neutral inversion**. All this information is, of course, visible on the ShipBase screen, with curves showing its evolution over time.

And like all the modules in a ShipHeart™ system, the ShiPpower4AC has been designed to ensure that your equipment can always be used. To this end, the input and output connectors have been chosen so that each circuit can be bypassed by connecting the input directly to the output. Simple and effective.

Last but not least, **all connections are made on plug-in, polarized, lockable and spring-loaded connectors,** ensuring rapid connection without the need for special tools and, above all, insensitive to vibration and sea air.

ShipHeart

Every ShipPower4AC comes with a 5-year warranty

MADE IN FRANCE

Specifications

Circuits		
Number	4	
Voltage	90 - 276VAC	
Frequency	45Hz - 65Hz	
Maximum current per circuit	10A 32A with external contactor	
Input connectors	2-pin female plug-in terminal block	
Output connectors	2-pin male plug-in terminal block	
Conductor cross-section (toroid)	8mm max.	
Conductor cross-section	0.2-2.5mm² (AWG24-12)	
Measurements for each circuit		
Voltage	90 - 276V_{eff}	± 2%
Current	0 - 32A_{eff}	± 5%
Apparent power	0 - 9kVA	± 10%
Frequency	45 - 65Hz	± 0.1Hz
Phase/Neutral position		
Other measures		
Presence of soil		
Module temperature	-10°C - +70°C	± 0.1°C
Protections		
Supply voltage	Low and high threshold detection	
Internal circuit current	10A fuse	
Total circuit current	Adjustable trip 0-32A	
Circuit frequency	Low and high threshold detection	
Control not possible if no earth		
Alert/circuit break if phase/neutral inversion		
Manual controls		
Each circuit can be bypassed by connecting the input connector (female) to the output connector (male).		
Information LEDs (in ascending order of priority)		
Double blue flash (4s)	Optimum operation	
Double yellow flash (2s)	≥ 1 circuit with undervoltage or phase/neutral inversion	
Double red flash (2s)	≥ 1 circuit breaker or load shedder	
Red flashing (1s)	Invalid earth on module	
8 white flashes (1s)	Location from ShipBase	
Alternating red/green (1s)	In and Out cable inversion	
Consumption		
On K-Bus - normal mode	4mA	
On K-Bus - standby mode	800µA	
K-Bus extension bus		
Number of ShipPower4AC	64 max (256 circuits)	
Connections	2 RJ45 connectors (In and Out)	
Termination resistors	Fully automatic	
Environment		
Operating temperature	-10°C to +70°C	
Protection class	IP20	
Mechanical engineering		
Mechanical mass	Isolated	
Weight	890g	± 50g
Overall dimensions	233mm x 100mm x 40*mm (*) ≈ 60mm with DIN rail clips	
Mounting	3 DIN rail clips	

Interfaces