

Instruction Manual for Motorboat Panel

305,306, Cockpit and Power Unit

We have examined the contents of this manual for compliance with the hardware and software described. However, since deviations are still possible, we shall not accept liability for complete compliance. The contents of this documentation are regularly checked and may be subject to corrections in the subsequent issues.

We welcome any suggestions for improvement. If you have any questions about this manual or need more information about specific subjects, please contact your Bavaria dealer.

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1 Introduction and Overview

1.1 About This Manual

This manual supplements the boat manufacturer's operating manual. It describes the function and operation of the individual operating panel and its electrical connections.

1.1.1 Where to Get Information

If you have any questions about this manual or need more information about specific subjects, please contact your Bavaria dealer.

1.2 Introduction

Three panels and one power unit are available for the operation and power supply. For details about the installation position, please refer to the boat manufacturer's operating manual.

Panel 305

Panel 305 is designed for central monitoring and control of all electrical functions in your boat interior.

Panel 306

Panel 306 supplies the 230V devices with power when there is a land connection or optional generator.

Cockpit panel

The **cockpit panel** is designed for central monitoring and control of **all** electrical functions on board a motorboat.

Power unit

The **power unit** serves as an interface to the electrical consumers. It contains electrical connections and the micro fuses for the individual consumers.

1.2.1 The Different Operating Panels



Fig. 1 Overall view - panel 305, 306 and cockpit panel

Key

- (1) Panel 305
- (2) Panel 306
- (3) Cockpit panel

1.2.2 The Power Unit

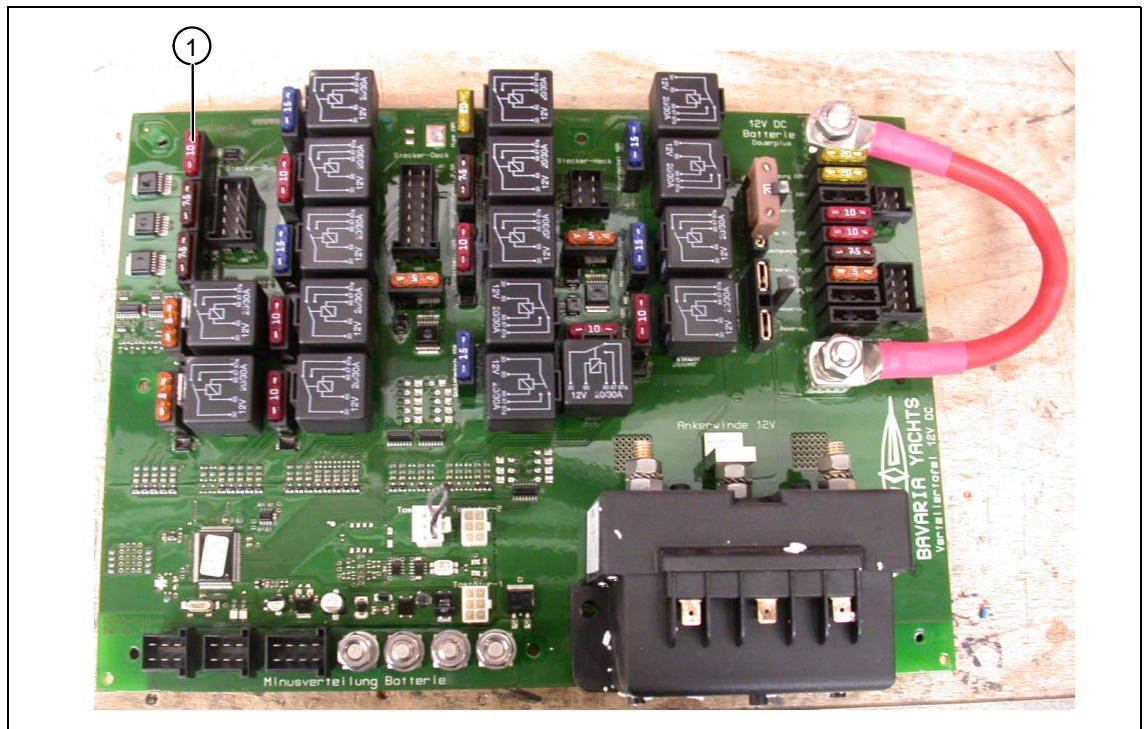


Fig. 2 Overall view - power unit

Key

- (1) Example of a micro fuse

For the overview, function and values of all micro fuses, refer to Section 2.4 "Overview of Power Unit".

1.3 Panel 305 Controls

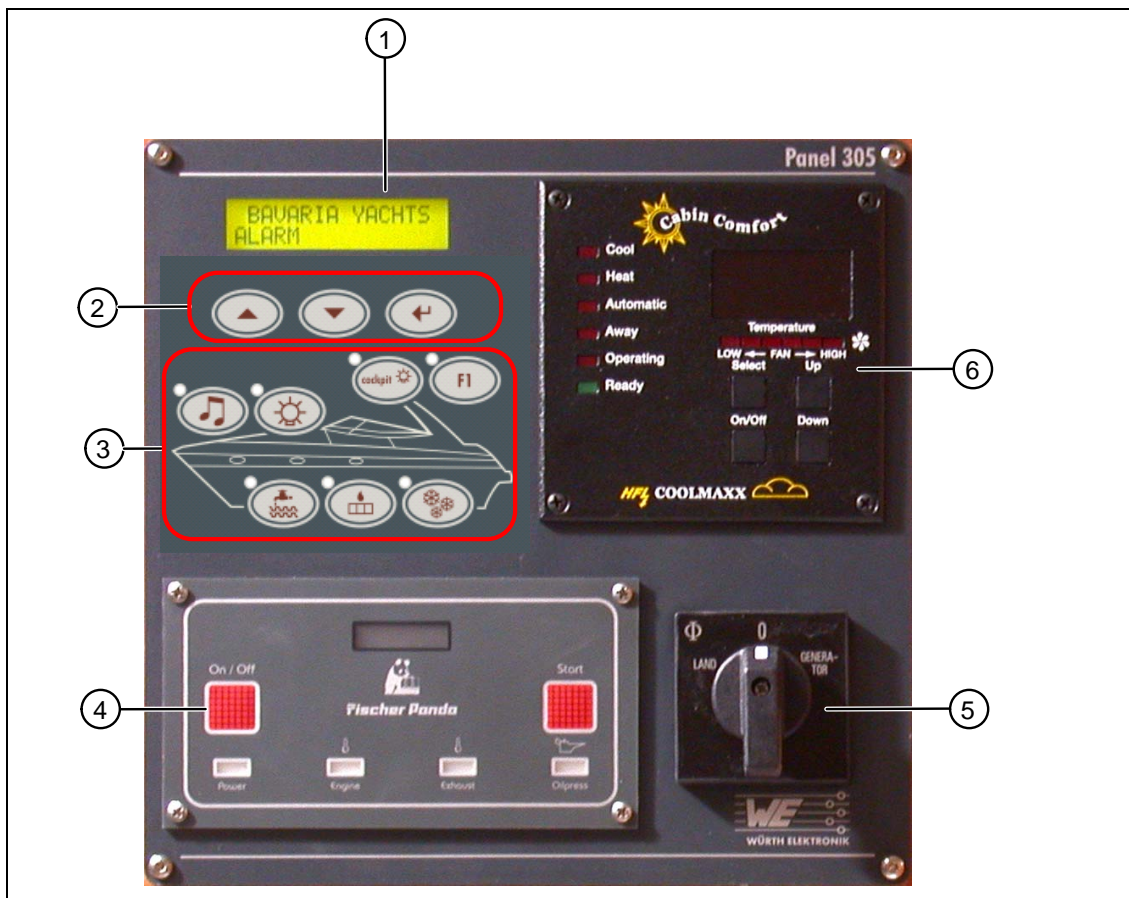


Fig. 3 Overview of panel 305








Key

- | | |
|---|--|
| (1) Display | (2) Scroll and acknowledgment buttons |
| (3) Function buttons | (4) Operation of generator (optional) |
| (5) Switch for land connection generator (optional) | (6) Operation of air conditioning (optional) |

The current status of the function and lighting buttons is shown by the respective LED.

LED Status	Meaning
Yellow LED on	Button function is switched on
Yellow LED flashes	Malfunction
Yellow LED off	Button function is switched off

1.3.1 Function Buttons

Button	Description/Function
	<p>Radio</p> <p>These buttons are used to switch the power supply to the radio on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.</p>
	<p>Cabin lighting</p> <p>These buttons are used to switch the cabin lighting on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>
	<p>Cockpit lighting</p> <p>These buttons are used to switch the lighting on the equipment rack on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>
	<p>F1</p> <p>Switches a spare output on and off. This extra output is provided in addition to the functions set by the shipyards and is reserved for the use of other equipment. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>
	<p>Fridge</p> <p>Switches the fridge on and off. Depending on your boat, there may be one or two fridges present. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.</p>
	<p>Heating</p> <p>Switches the heating control on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>
	<p>Fresh water</p> <p>Switches the fresh water pump on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p> <p>CAUTION: Do not dry run the fresh water pump!</p>

1.3.2 Operation of Air Conditioning (Optional)

For details about the operation and functions, refer to the boat manufacturer's operating manual.

1.3.3 Operation of Generator (Optional)

For details about the operation and functions, refer to the boat manufacturer's operating manual.

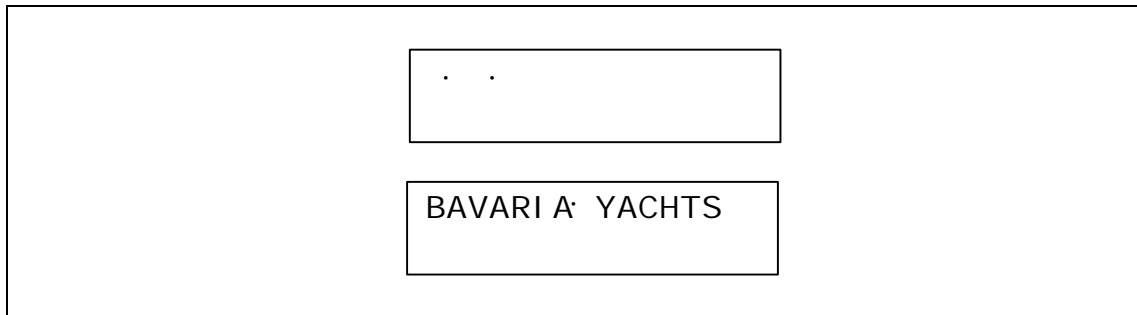
1.3.4 Menu Structure

This section describes how to access the various menu functions and how to change settings.




As soon as the panel is connected to the power source, a function test will be performed and the LEDs will light up for approx. 1 second. After this, the panel is ready for operation.

Alarms will be shown when triggered. See also section 1.3.5.1.

After activating the main switch, you will see the following start screen on the display:



With the help of the scroll buttons and the acknowledgment button, you can select and view the various information and menus.

Button	Description/Function
	Scroll button - up Navigates up the menu.
	Scroll button - down Navigates down the menu.
	Acknowledgment button Saves or confirms your entries.

You can now perform the required settings at the panel.

1.3.5 Menu

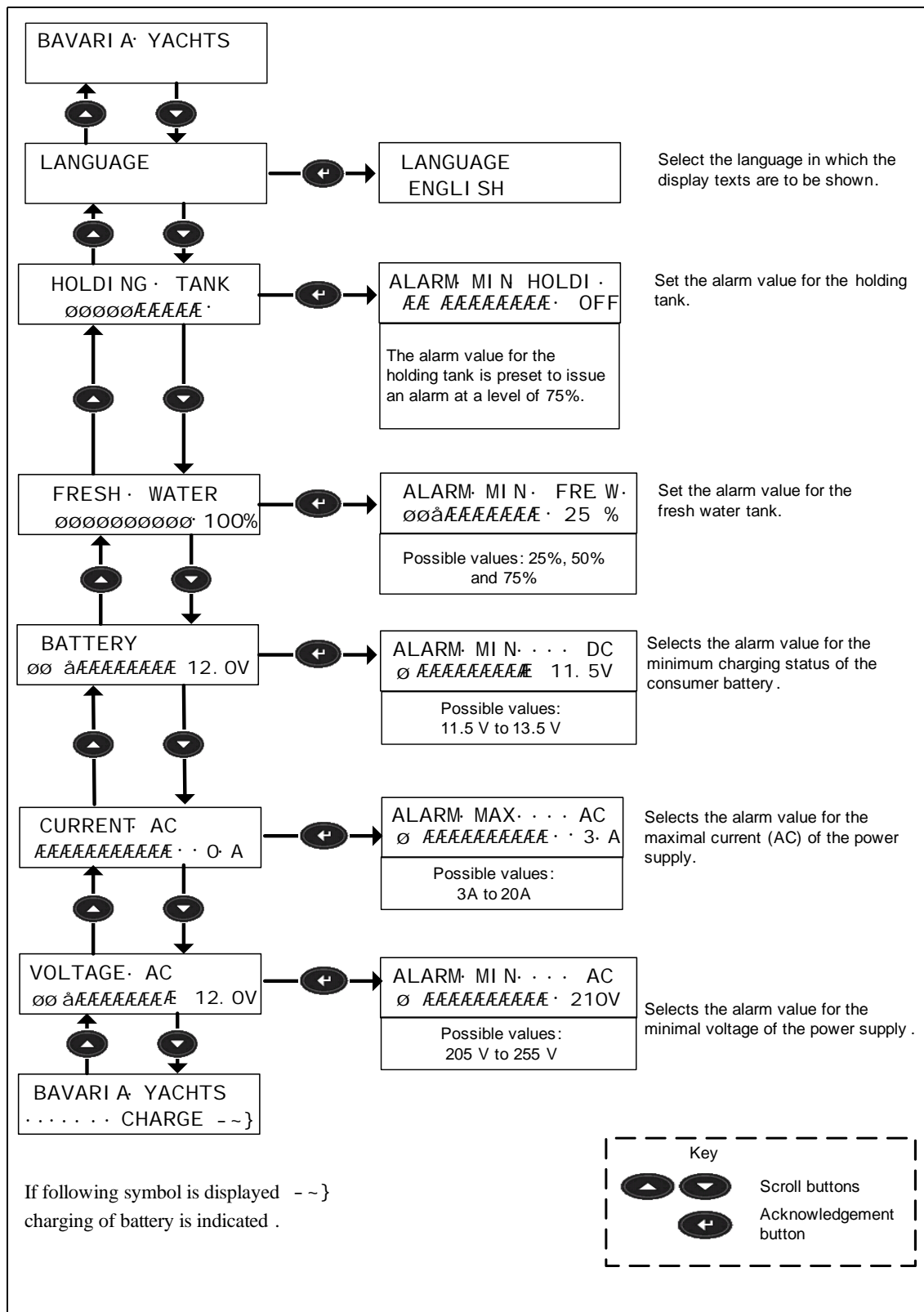


Fig. 4 Panel 305 menu

1.3.5.1 Alarms

If an alarm is triggered, the red LED next to the display will flash. The display will show the menu which has issued the alarm and the alarm itself will be shown by a flashing exclamation mark next to the menu bar. To acknowledge the alarm, press the acknowledgment button for 2 seconds.

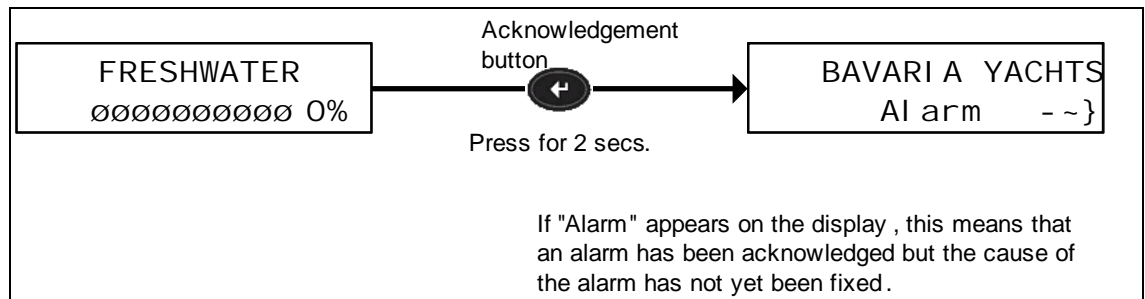


Fig. 5 Alarm display (Example)

The red LED extinguishes when you acknowledge the alarm.

1.4 Overview of Panel 306

Panel 306 supplies the 230V devices with power when there is a land connection.



Observe the current consumption and power input

- The consumer devices connected must not exceed a **total** power input of 3.600 W and a max. current consumption of 16 A.

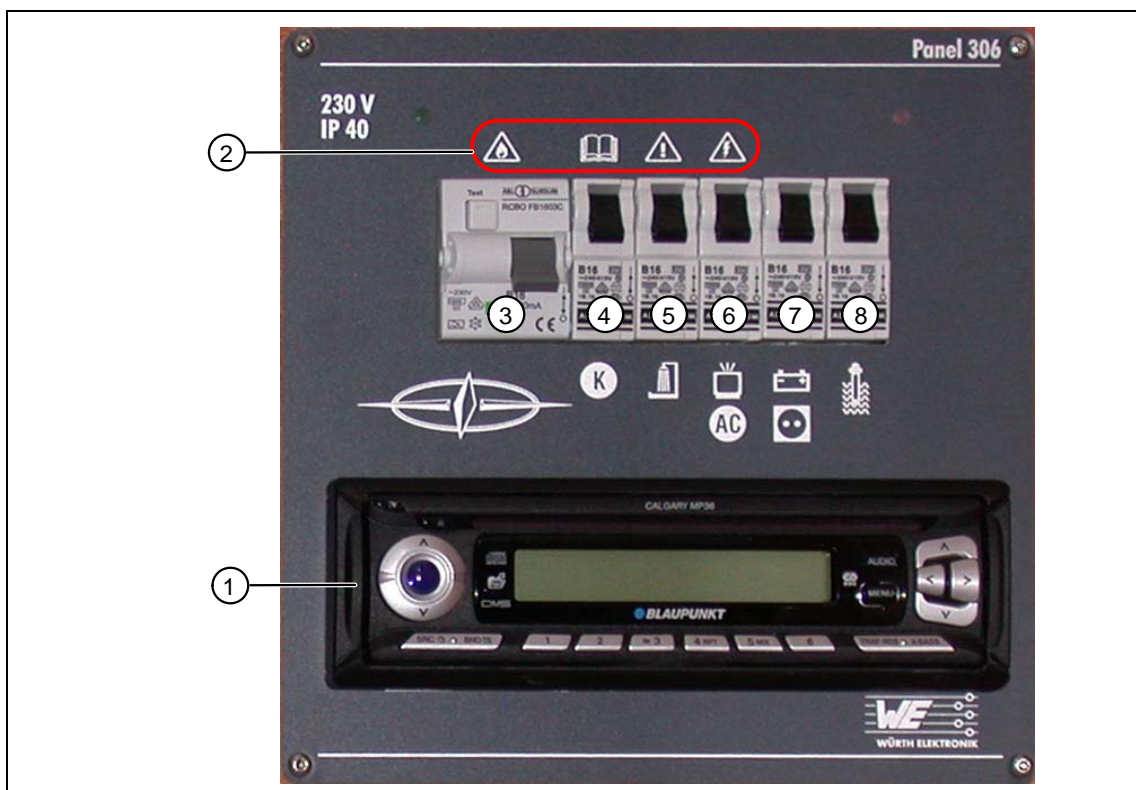


Fig. 6 Overview of panel 306





Key

- | | |
|--|---|
| (1) Radio | (2) Observe warning symbols |
| (3) Residual current circuit breaker FI / B16 | (4) Automatic circuit breaker for cooking (16A) |
| (5) Automatic circuit breaker - shower socket (16A) | (6) Automatic circuit breaker - TV/air conditioning (16A) |
| (7) Automatic circuit breaker - battery charger socket (16A) | (8) Automatic circuit breaker - boiler (16A) |

Function description

- When the residual current circuit breaker is switched on, a green LED indicates the existing land connection.
- The red LED indicates that the heating boiler is switched on.
- The residual current circuit breaker and fuse B16 are connected upstream of the five automatic circuit breakers (4,5,6,7,8).

1.4.1 Warning Symbols on Panel 306

Warning Symbols	Description
	Fire or heat warning <ul style="list-style-type: none"> – Panel 305/306 must be protected against fire and extreme heat.
	Read the operating instructions <ul style="list-style-type: none"> – Read and observe the information in this instruction manual. – The safety instructions and hazard warnings in the boat manufacturer's operating manual take precedence.
	Warning against unauthorized opening of panels 305/306 <ul style="list-style-type: none"> – Measurement and service work to panels 305/306 may only be performed by specially qualified personnel.
	Warning against dangerous voltages. <ul style="list-style-type: none"> – Potentially lethal voltages are still present at some parts on the rear of panels 305/306. – Before performing any work, always switch off the residual current circuit breaker (FI) and the main switch of the consumer. For details about the installation position of the consumer main switch, please refer to the boat manufacturer's operating manual. – Disconnect panel 306 from the power supply.

1.5 Cockpit Panel Controls

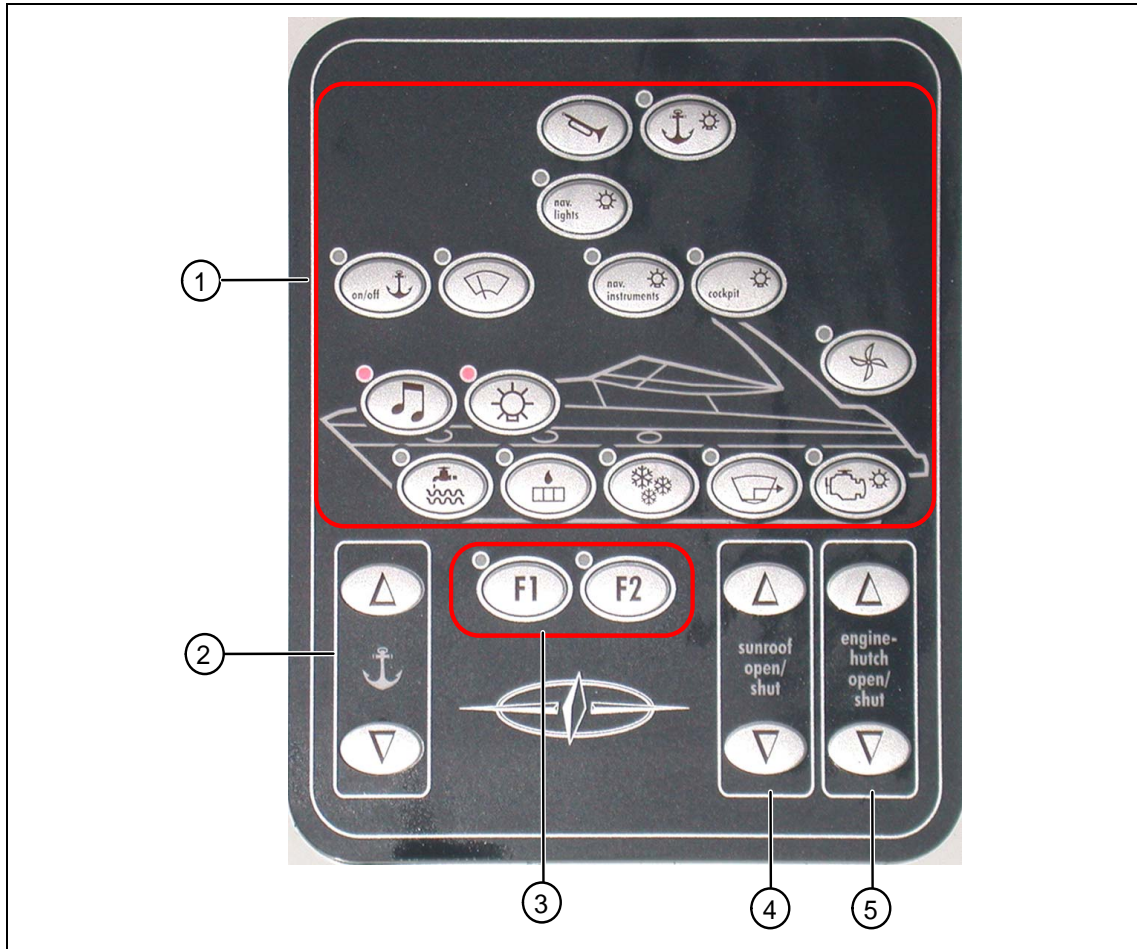


Fig. 7 Overview - cockpit panel









Key







- | | |
|-------------------------------|---------------------------|
| (1) Function buttons | (2) Operation of windlass |
| (3) Reserve | (4) Operation of sunroof |
| (5) Operation of engine hutch | |



The current status of the function and lighting buttons is shown by the respective LED.

LED Status	Meaning
Yellow LED on	Button function is switched on
Yellow LED flashes	Malfunction
Yellow LED off	Button function is switched off



1.5.1 Function Buttons

Button	Description/Function
	Horn Switches the horn on and off. The horn remains on as long as the button is pressed.
	Anchor light Switches the anchor light on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.
	Navigation lighting Switches the navigation lighting on and off. The anchor light is also switched on. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.
	Windlass Switches the windlass on and off. This activates the windlass up/down function button. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.
	Windscreen wipers Switches the windscreen wipers on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.
	Navigation instruments Switches the navigation device on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.
	Cockpit lighting These buttons are used to switch the lighting on the equipment rack on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.
	Radio Switches the radio on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.

Button	Description/Function
	Cabin lighting <p>These buttons are used to switch the cabin lighting on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>
	Engine room fan <p>Switches the engine room fan on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.</p>
	Fresh water <p>Switches the fresh water pump on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p> <p>CAUTION: Do not dry run the fresh water pump!</p>
	Heating <p>Switches the heating control on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>
	Fridge <p>Switches the fridge on and off. Depending on your boat, there may be one or two fridges present. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.</p>
	Bilge pump <p>Switches the bilge pump on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.</p> <p>CAUTION: Do not dry run the bilge pump!</p>

Button	Description/Function
	<p>Engine room lighting (only for boat type BMB 38 S/HT and BMB 42 S/HT)</p> <p>These buttons are used to switch the engine room lighting on and off. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again. In the event of a malfunction, the yellow LED will flash until the fault has been removed.</p>
	<p>F1 to F2</p> <p>Switches the two extra outputs on and off. These extra outputs are provided in addition to the functions set by the shipyards and are reserved for the use of other equipment. The button status is saved when the power supply has been switched off and is kept until the power is switched back on again.</p>

1.5.2 Operation of Windlass

Button	Description/Function
	<p>Windlass up/down</p> <p>Use the arrow buttons to raise or lower the windlass. Before you can use this function, make sure that the windlass button has been switched on first.</p> 

1.5.3 Operation of Sunroof



ATTENTION

Risk of trapped limbs in electrical sunroof (e.g. engine hatch; hardtop)!

Button	Description/Function
	Sunroof open/shut Use the arrow buttons to open or close the sunroof.

1.5.4 Operation of Engine Hatch



ATTENTION

Risk of trapped limbs in electrical sunroof (e.g. engine hatch; hardtop)!

Button	Description/Function
	Engine hatch open/shut Use the arrow buttons to open or close the engine room roof.

2 Electrical Connections

2.1 Safety Instructions

DANGER



Panel 306 is supplied with 230 V~ \pm 5 %, 50/60 Hz line voltage.

- Potentially lethal voltages are therefore still present at some parts on the rear of this panel (input B16/FI) - even when the panel has been switched off at the residual current circuit breaker.
 - Measurement and service work to panels 305/306 may only be performed by specially qualified personnel.
 - Incorrect usage of panels 305/306 may cause serious or even lethal injuries and considerable damage to property.
 - The safety instructions and hazard warnings in the boat manufacturer's operating manual take precedence when using panels 305/306.
 - Observe the applicable accident prevention and DIN regulations (particularly DIN EN 60 204, Part 1) or the respective regulations in your country.
 - Before performing any work, always switch off the residual current circuit breaker (FI) and the main switch of the consumer. For details about the installation position of the consumer main switch, please refer to the boat manufacturer's operating manual.
 - Disconnect panel 306 from the power supply.
 - Secure the panel to prevent unauthorized reconnection of the power supply. Touching live parts can lead to serious or lethal injuries.
-

2.2 Rear View of Panel 305

The connections can be found on the rear of the operating panel 305. The fixtures vary between boat models.

- Loosen the fastening screws (4 or 2, depending on the model) at the front and carefully lift the panel out. Observe how the cables for the cable harness are run.
- Make sure that you do not damage any of the electrical components on the printed circuit board.

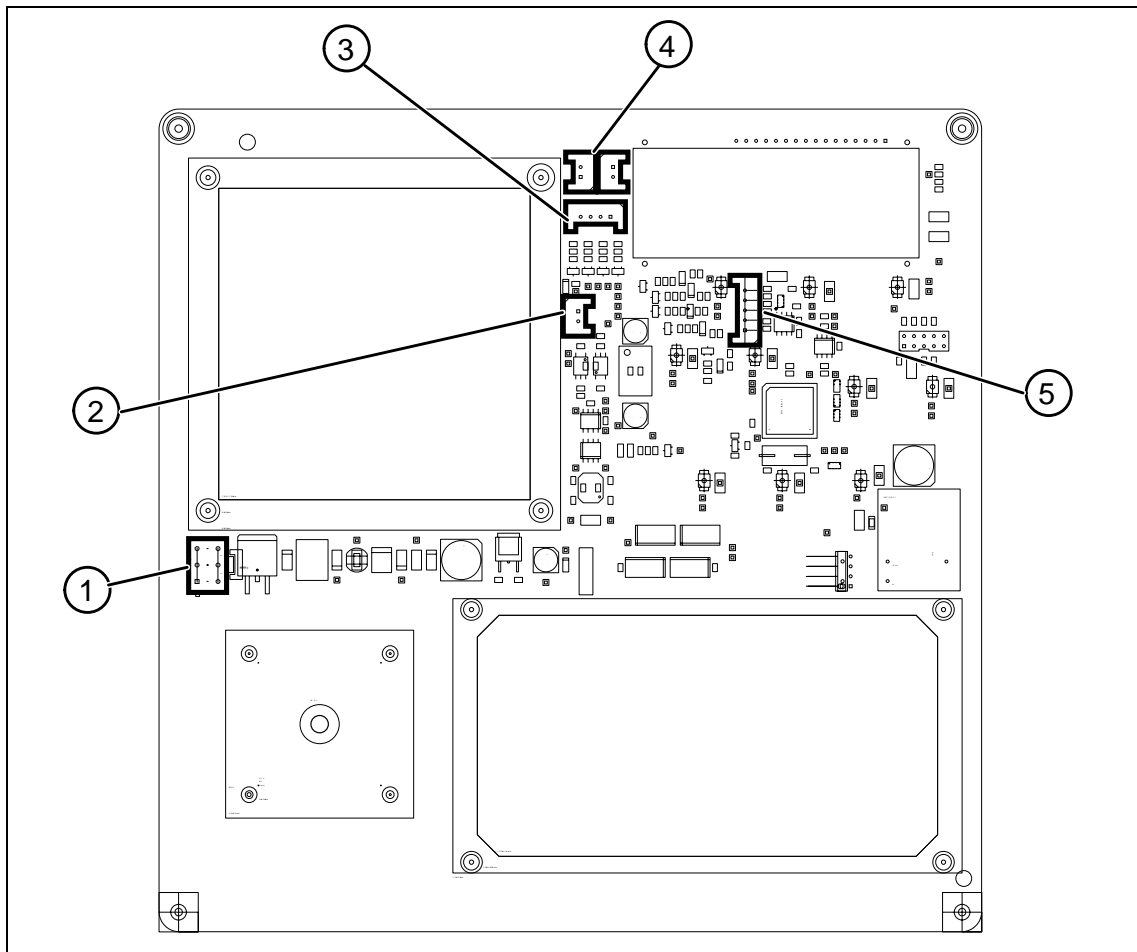


Fig. 8 Rear view of the panel 305 - terminal assignment

Key

- | | |
|---|---|
| (1) Connection to power unit | (2) Connection to charger |
| (3) Connection to 230VAC supply for panel 306 | (4) Connection to waste tank (waste water tank) |
| (5) Connection to fresh water tank | |

2.2.1 Terminal Assignment

Pin	[1] Connection to power unit	Cable
1	+12 V battery	
2	Minus battery (GND)	
4	CAN_LOW	
5	CAN_GND	
6	CAN_HIGH	

Connector	[2] Connection to charger	Cable
1	Charger, LED connection	
2	COM/GND	

Pin	[3] Connection to 230VAC panel 306	Cable
1	+12 V battery	
2	Minus battery (GND)	
3	Land connection - current	
4	Land connection - voltage	

Connector	[4] Connection to waste tank (waste water tank)	Cable
1	Waste tank 1 (waste water tank 1)	3/4
2	Waste tank 1 (waste water tank 1)	COM/GND
1	Waste tank 2 (waste water tank 2)	3/4
2	Waste tank 2 (waste water tank 2)	COM/GND

Connector	[5] Connection to fresh water tank	Cable
1	Tank	COM/GND
2	Tank	1/4
3	Tank	2/4
4	Tank	3/4
5	Tank	4/4

2.3 Rear View of Panel 306



Panel 306 is supplied with 230 V~ ± 5 %, 50/60 Hz line voltage.

- Observe the safety instructions in Section „Safety Instructions“ on page 21.

2.3.1 Terminal Assignment

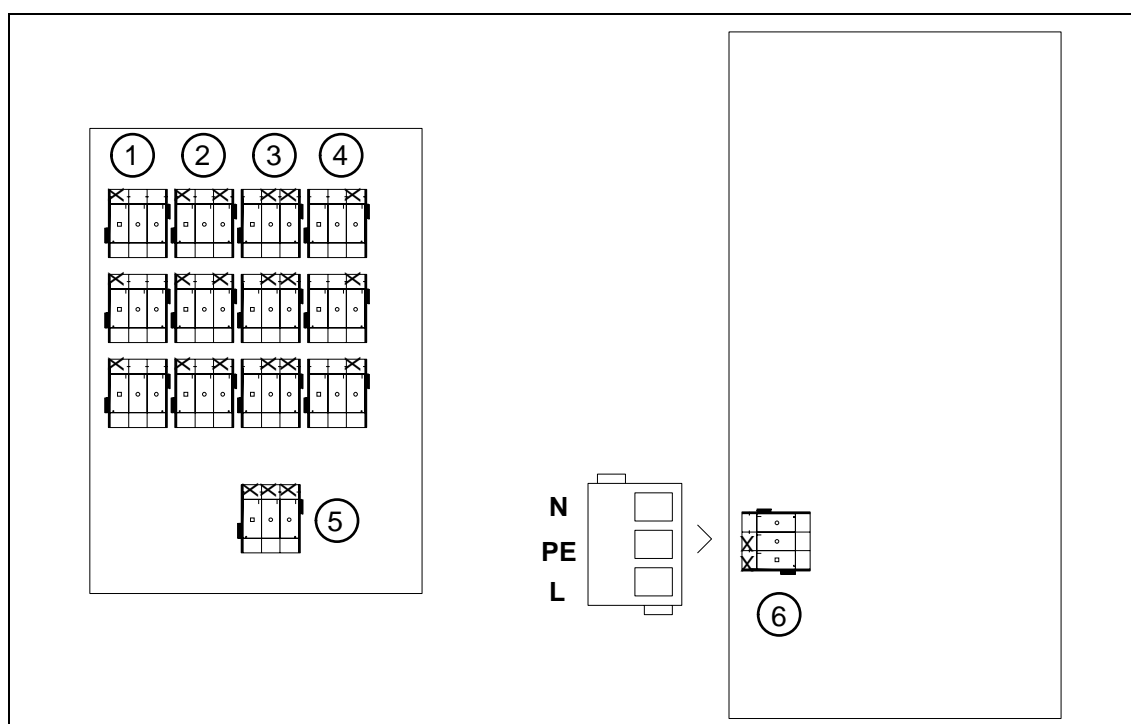


Fig. 9 Rear view of the panel 306 - terminal assignment

Key

- | | |
|-------------------------------------|---|
| (1) 3 x cooking | (2) WC socket + reserve |
| (3) TV / air conditioning + reserve | (4) Charger / sockets for kitchen + reserve |
| (5) 1 x Boiler | (6) Land connection |

NOTE:

The protective earth conductor (PE) must be attached to the middle pin.

From	To	Color	Cross-section	Cable	Voltage
Land connection socket	Terminal (6)	brown/gnye/blue	2.5 mm ²	1.0	220 V in
Generator (optional)	Distributor switch	brown/gnye/blue	2.5 mm ²	1.1	220 V in
Terminal (5)	Boiler	brown/gnye/blue	1.5 mm ²	2	220 V out
Terminals (1)	Stove	brown/gnye/blue	1.5 mm ²	3	220 V out
Terminals (1)	Microwave (optional)	brown/gnye/blue	1.5 mm ²	4	220 V out
Terminals (1)	Cockpit grill (optional)	brown/gnye/blue	1.5 mm ²	5	220 V out
Terminals (4)	Charger	brown/gnye/blue	1.5 mm ²	6	220 V out
Terminals (4)	Kitchen socket	brown/gnye/blue	1.5 mm ²	7	220 V out
Terminals (2)	WC socket, bow	brown/gnye/blue	1.5 mm ²	8	220 V out
Terminals (2)	WC socket, stern	brown/gnye/blue	1.5 mm ²	8.1	220 V out
Terminals (3)	TV (optional)	brown/gnye/blue	1.5 mm ²	9	220 V out
Terminals (3)	Air conditioning (optional)	brown/gnye/blue	1.5 mm ²	11	220 V out

2.4 Overview of Power Unit

The power unit installed varies between boat models (either version **a** or version **b**).
Version **b** has two microfuses and a positive connection fewer.

2.4.1 Overview of Power Unit Connectors - Version "a"

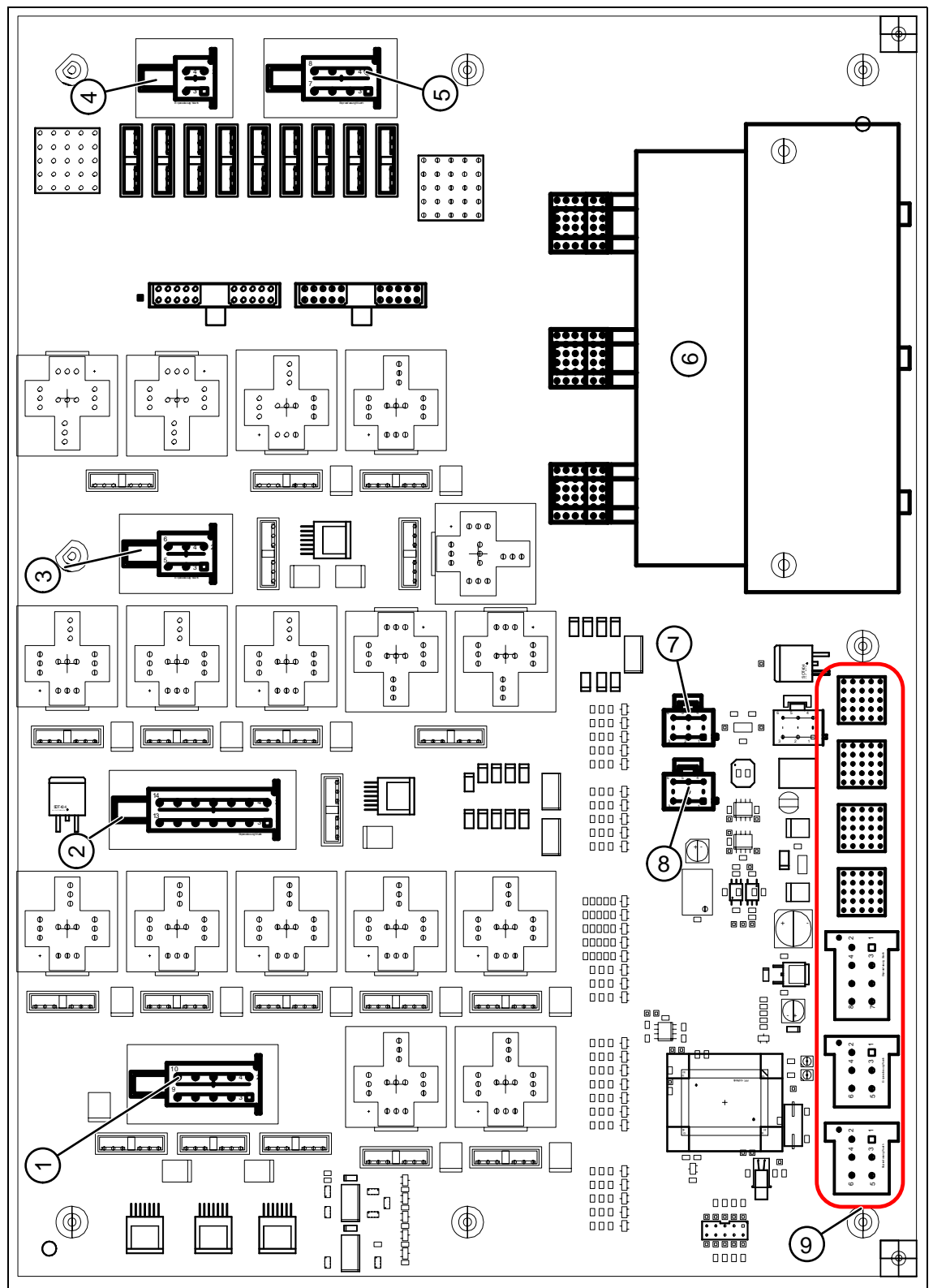


Fig. 10 Overview of power unit "version a" - position of connectors

Legend for Fig. 10 "Overview of power unit "version a" - position of connectors"

- | | |
|---|---|
| (1) Connector for bow | (2) Connector for deck |
| (3) Connector for stern | (4) 4 pin connection for unswitched consumers |
| (5) 8 pin connection for unswitched consumers | (6) Relay box for windlass |
| (7) Connection to operating panel 305 | (8) Connection to cockpit panel |
| (9) Ground connectors 1 to 3 for distribution of negative for battery | |

2.4.2 Overview of Power Unit Connectors - Version "b"

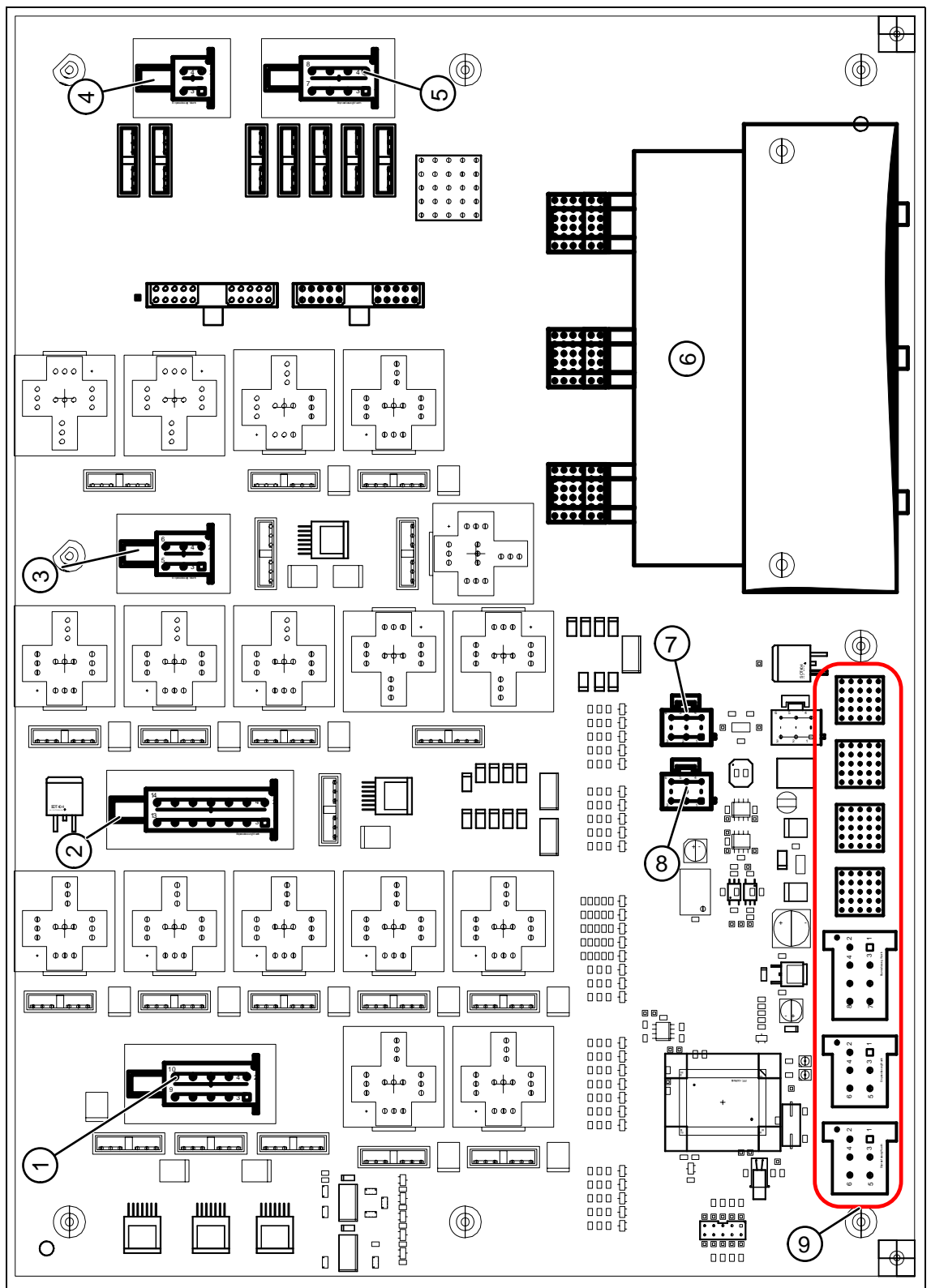


Fig. 11 Overview of power unit "version b" - position of connectors

Legend for Fig. 11 "Overview of power unit "version b" - position of connectors"

- | | |
|---|---|
| (1) Connector for bow | (2) Connector for deck |
| (3) Connector for stern | (4) 4 pin connection for unswitched consumers |
| (5) 8 pin connection for unswitched consumers | (6) Relay box for windlass |
| (7) Connection to operating panel 305 | (8) Connection to cockpit panel |
| (9) Ground connectors 1 to 3 for distribution of negative for battery | |

2.4.3 Connector Assignment on Power Unit (Version "a" and "b")

Connector	[1] Connector for bow	Color	Cross-section	Voltage
2.1	Relax windlass up/down	Red	1.5 mm ²	12V
2.2	Reserve F1	Red	1.5 mm ²	--
2.3	Relax windlass up/down	Red	1.5 mm ²	12V
2.4	Radio	Red	1.5 mm ²	12V
2.5	Navigation instrument	Red	1.5 mm ²	12V
2.6	Fridge(s)	Red	1.5 mm ²	12V
2.7	Heating (control lead)	Red	1.5 mm ²	12V
2.8	Windscreen wipers	Red	1.5 mm ²	12V
2.9	Fresh water	Red	1.5 mm ²	12V
2.10	Inside lighting	Red	1.5 mm ²	12V

Connector	[2] Connector for deck	Color	Cross-section	Voltage
1.1	Do not use - assigned internally.	--		--
1.2	Anchor light	Red	1.5 mm ²	12V
1.3	Do not use - assigned internally.	--		--
1.4	Sunroof open/shut	Red	1.5 mm ²	12V
1.5	Do not use - assigned internally.	--		--
1.6	Cockpit lighting	Red	1.5 mm ²	12V
1.7	Do not use - assigned internally.	--		--
1.8	Sunroof open/shut	Red	1.5 mm ²	12V

Connector	[2] Connector for deck	Color	Cross-section	Voltage
1.9	Do not use - assigned internally.	--		--
1.10	Position lamp starboard	Red	1.5 mm ²	12V
1.11	Do not use - assigned internally.	--		--
1.12	Position lamp port	Red	1.5 mm ²	12V
1.13	Do not use - assigned internally.	--		--
1.14	Horn	Red	1.5 mm ²	12V

Connector	[3] Connector for stern	Color	Cross-section	Voltage
3.1	Engine room lighting	Red	1.5 mm ²	12V
3.2	Bilge pump	Red	1.5 mm ²	12V
3.3	Reserve F2	Red	1.5 mm ²	--
3.4	Engine room fan	Red	1.5 mm ²	12V
3.5	Engine hatch open/shut	Red	1.5 mm ²	12V
3.6	Engine hatch open/shut	Red	1.5 mm ²	12V

Connector	[4] 4 pin connector for unswitched consumers	Color	Cross-section	Voltage
4.1	--	--	--	--
4.2	--	--	--	--
4.3	QL balance assy	Red	2.5 mm ²	12V
4.4	Heating overrun	Red	2.5 mm ²	12V

Connector	[5] 8 pin connector for unswitched consumers	Color	Cross-section	Voltage
5.1	Electrical WC flush (only for boats of type "42 Sport/HT")	Red	1.5 mm ²	12V
5.2	Electrical WC flush (only for boats of type "42 Sport/HT")	Red	1.5 mm ²	12V
5.3	--	--		--
5.4	--	--		--
5.5	--	--		--
5.6	--	--		--
5.7	TV amplifier	Red	1.5 mm ²	12V
5.8	Shower pump	Red	1.5 mm ²	12V

The windlass relay box has various features and can be installed in various positions, according to the type of boat you have.

[6] Windlass relay box	Special features
12V / 500W / fuse 70A	None
12V / 800W / fuse 70A	None
12V / 1000W / fuse 70A	Relay installed on the windlass

Connector	[9] Ground connector 1 to 3	Color	Cross-section	Voltage
6 pin	Ground connector 1	Black	1.5 mm ²	12V
6 pin	Ground connector 3	Black	1.5 mm ²	12V
8 pin	Ground connector 2	Black	1.5 mm ²	12V
Connection	Negative distribution battery	Cable		Voltage
M8	Negative, consumer battery	Black	50 mm ²	12V
M8	Negative from charger	Black	16 mm ²	12V

2.4.4 Power Unit Microfuses - Version "a"

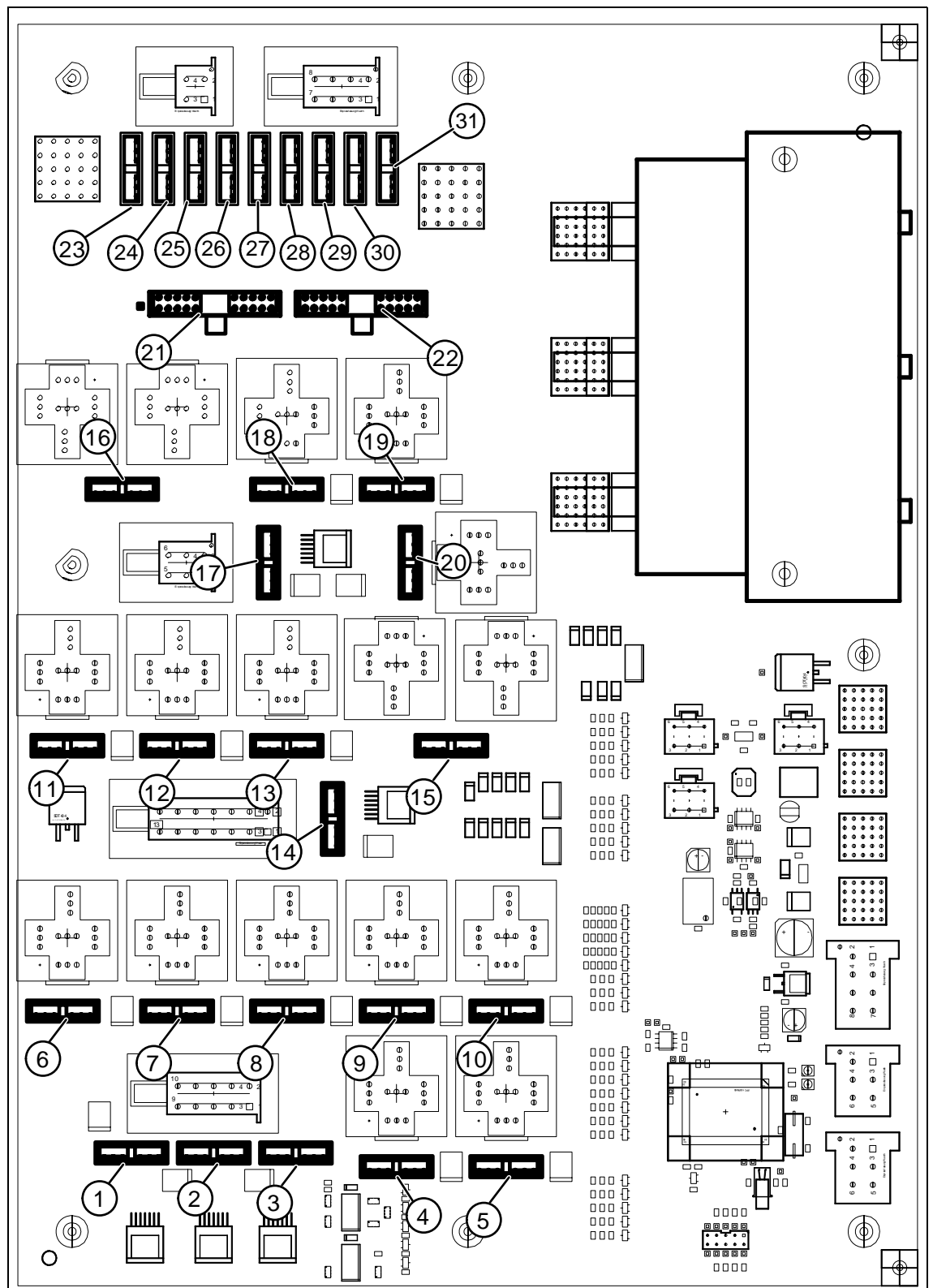


Fig. 12 Overview of power unit "version a" - microfuses

Legend for Fig. 12 "Overview of power unit "version a" - microfuses"

- | | |
|---|--|
| (1) Fresh water pump (10A) | (2) Heating (control lead) |
| (3) Navigation instruments (7.5A) | (4) Windlass "down" (5A) |
| (5) Windlass "up" (5A) | (6) Inside lighting (15A) |
| (7) Windscreen wipers (10A) | (8) Fridge (15A) |
| (9) Radio (10A) | (10) Reserve F1 (10A) |
| (11) Horn (20A) | (12) Navigation lighting (7.5A) |
| (13) Cockpit lighting (10A) | (14) Anchor light (5A) |
| (15) Sun roof (15A) | (16) Engine room roof (15A) (electronic control) |
| (17) Engine room lighting (5A) | (18) Engine room fan (15A) |
| (19) Bilge pump (10A) | (20) Reserve F2 (10A) |
| (21) Main fuse - board power supply (70A) | (22) Fuse - windlass |
| | – 70A/500W |
| | – 70A/800W |
| | – 70A/1.000W |
| (23) Heating - main cable (20A) | (24) QL balance assy (7,5A) |
| (25) Reserve | (26) Reserve |
| (27) Shower pump (10A) | (28) TV amplifier (7.5A) |
| (29) Reserve | (30) Reserve |
| (31) Reserve | |
- Only for boats of type "42 Sport/HT"
 - => electrical WC flush (20A)
 - The automatic circuit breaker (7.5A) for the **QL trim panel** is located under the flap at the helmstand (with the relay for the external accessories).
 - The fuse (20A) for the input "relay ext. accessories" can be found in the engine compartment, near the main engine switch.

2.4.5 Power Unit Microfuses - Version "b"

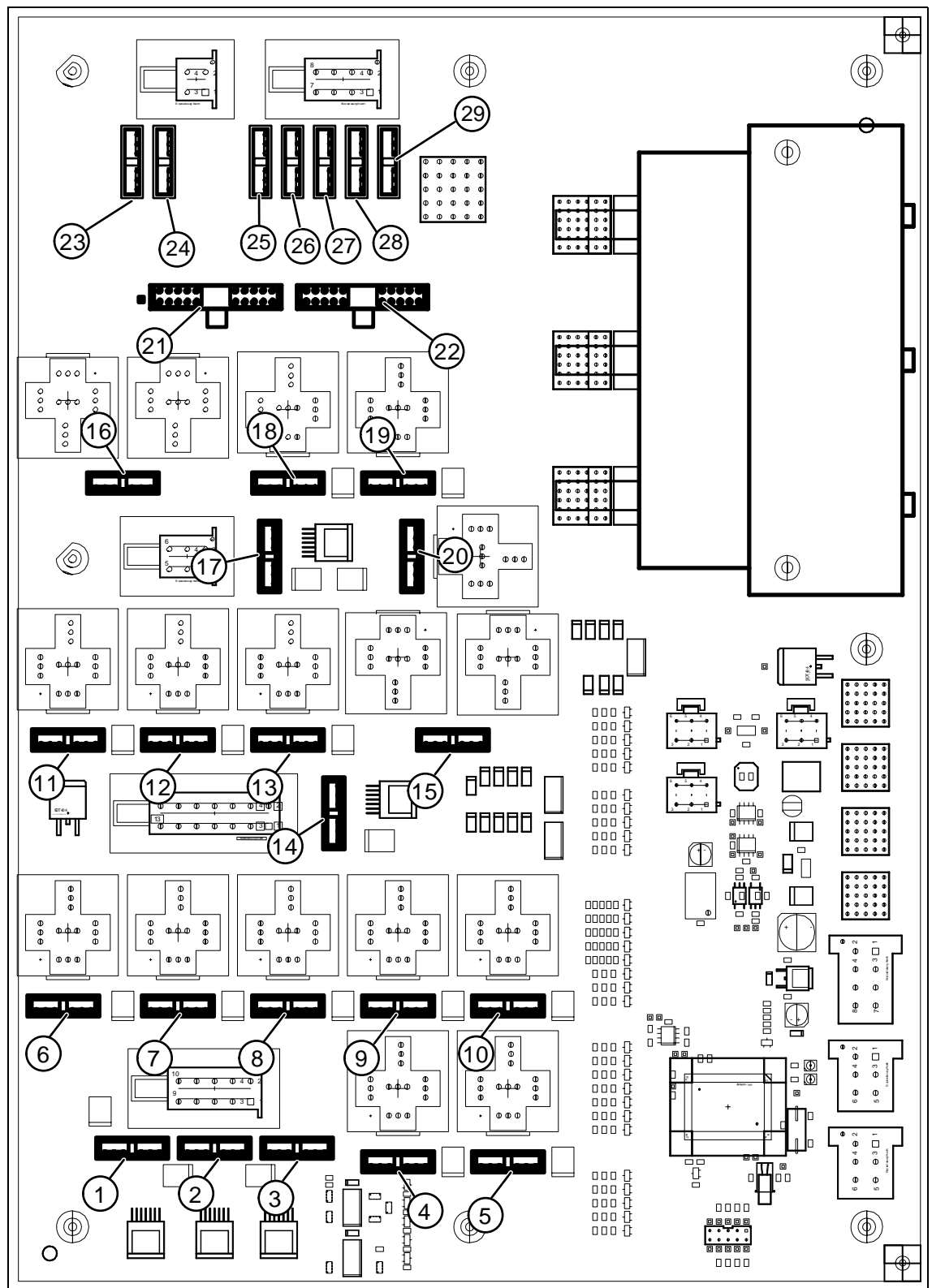


Fig. 13 Overview of power unit "version b" - microfuses

Legend for Fig. 13 "Overview of power unit "version b" - microfuses"

- | | |
|---|--|
| (1) Fresh water pump (10A) | (2) Heating (control lead) |
| (3) Navigation instruments (7.5A) | (4) Windlass "down" (5A) |
| (5) Windlass "up" (5A) | (6) Inside lighting (15A) |
| (7) Windscreen wipers (10A) | (8) Fridge (15A) |
| (9) Radio (10A) | (10) Reserve F1 (10A) |
| (11) Horn (20A) | (12) Navigation lighting (7.5A) |
| (13) Cockpit lighting (10A) | (14) Anchor light (5A) |
| (15) Sun roof (15A) | (16) Engine room roof (15A) (electronic control) |
| (17) Engine room lighting (5A) | (18) Engine room fan (15A) |
| (19) Bilge pump (10A) | (20) Reserve F2 (10A) |
| (21) Main fuse - board power supply (70A) | (22) Fuse - windlass |
| | – 70A/500W |
| | – 70A/800W |
| | – 70A/1.000W |
| (23) Heating - main cable (20A) | (24) QL balance assy (7,5A) |
| (25) Shower pump (10A) | (26) TV amplifier (7.5A) |
| (27) Reserve | (28) Reserve |
| (29) Electrically-powered WC flush (20A) | |
| – Only for boats of type "42 Sport/HT" | |
| – The automatic circuit breaker (7.5A) for the QL trim panel is located under the flap at the helmstand (with the relay for the external accessories). | |
| – | |

2.5 Circuit Diagram

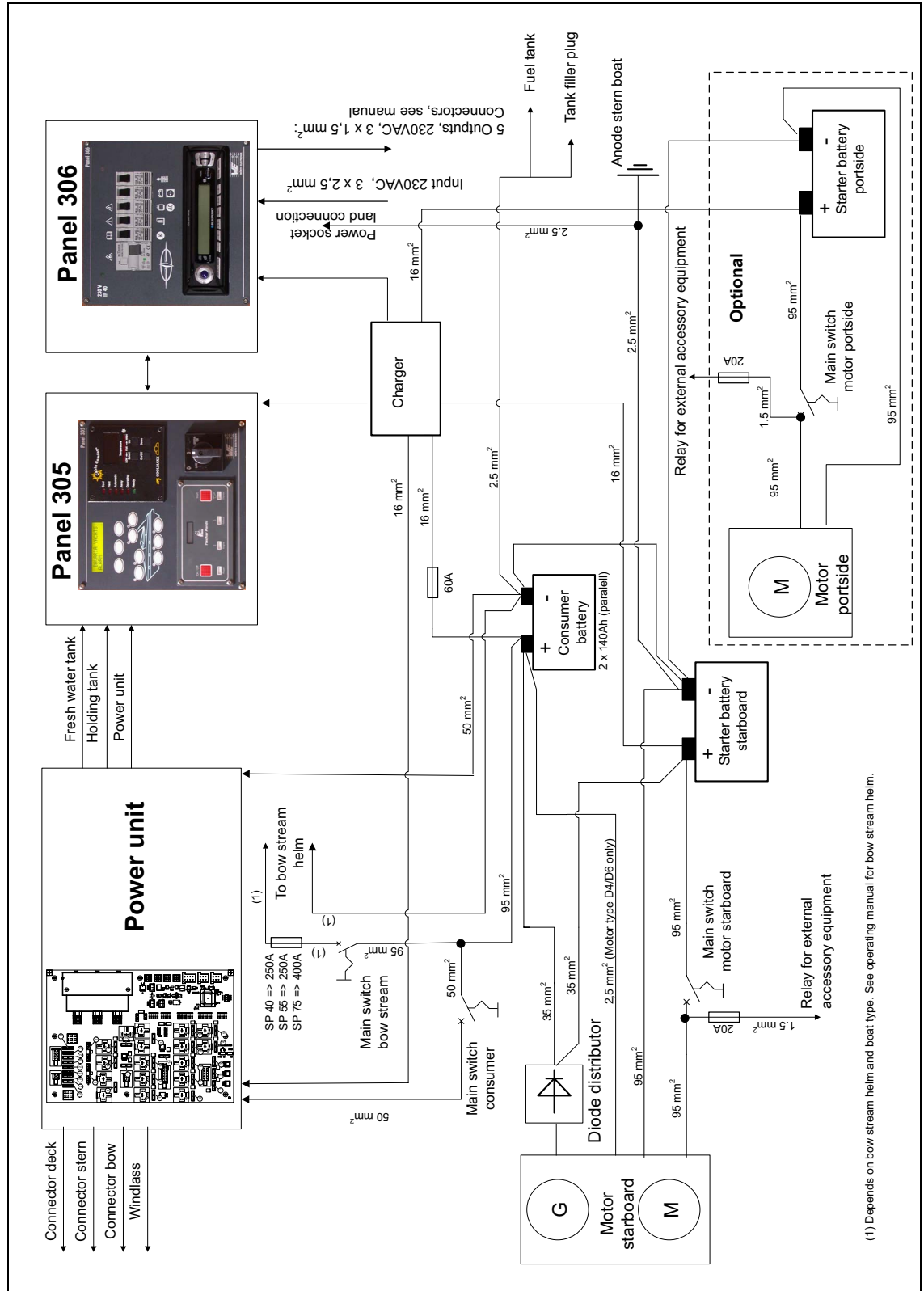


Fig. 14 Circuit diagram 305/306

2.5.1 Circuit Diagram Cables

From	To	Color	Cross-section	Designation	Voltage
Starter battery, starboard +	Main switch, engine, starboard	Red	95 mm ²	1.0	12V
Main switch, engine, starboard	Engine, starboard +	Red	95 mm ²	1.1	12V
Starter battery, starboard -	Engine, starboard -	Black	95 mm ²	--	--
Starter battery, starboard -	Anode stern boat, Power socket land connection	green/yellow	2.5 mm ²	--	--
Starter battery, port +	Main switch, engine, port	Red	95 mm ²	2.0	12V
Main switch, engine, port	Engine, port +	Red	95 mm ²	2.1	12V
Starter battery, port -	Engine, port -	Black	95 mm ²	--	--
Consumer battery +	Main switch bow reactive rudder	Red	95 mm ²	3.0	12V
Main switch, consumer	Power unit 12V	Red	50 mm ²	3.1	12V
Consumer battery -	Power unit 12V	Black	50 mm ²	--	--
Consumer battery -	Fuel tank, Tank filler plug	green/yellow	2.5 mm ²	--	--
Main switch bow reactive rudder	Fuse, bow reactive rudder	Red	(1)	4.1	12V
Fuse, bow reactive rudder	Engine, bow reactive rudder	(1)	(1)	4.2	12V
Consumer battery -	Engine, bow reactive rudder	Black	(1)	--	--
Generator	Diode converter	Red	35 mm ²	B+	12V
Diode converter	Consumer battery	Red	35 mm ²	BV	12V
Diode converter	Starter battery	Red	35 mm ²	BM	12V
Generator	Consumer battery (only for boats of type D4/D6)	Pink	1.5 mm ²	Sensor	--
Charger	Power unit	Black	16 mm ²	--	12V
Charger	Consumer battery	Red	16 mm ²	BV	12V
Charger	Starter battery, starboard +	Red	16 mm	BM 1	12V
Charger	Starter battery, port +	Black	16 mm	BM 2	12V

2.5.2 Other Cables

Cable	From	To	Color	Cross-section	Voltage
6	Tank sensor fuel	Tank display	Gray	1.5 mm ²	12V
stb	Main switch, engine, starboard	Relay ext., accessories	Red	1.5 mm ²	12V
port	Main switch, engine, port	Relay ext., accessories	Red	1.5 mm ²	12V
11	Relay ext., accessories	Fuel valve	Gray	1.5 mm ²	12V
12	Relay ext., accessories	Fuel valve	Gray	1.5 mm ²	12V

2.5.3 Optional Cables

From	To	Color	Cross-section	Designation	Voltage
Main switch, consumer	Main switch, generator	Red	35 mm ²	5.0	12V
Main switch, generator	Generator +	Red	35 mm ²	5.1	12V
Consumer battery -	Generator -	Black	35 mm ²	--	--

