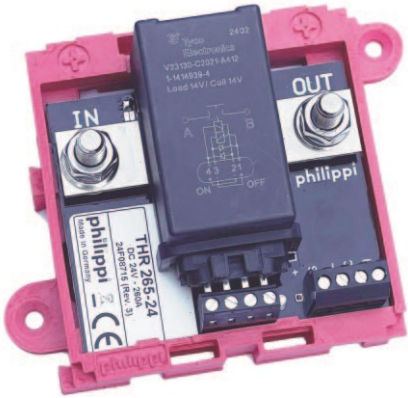
OPERATING INSTRUCTIONS



INTRODUCTION / PURPOSE OF USE

The FHR 265 remote-controlled main switch enables convenient remote switching on and off of DC on-board power supply systems or individual consumers in 12V and 24V DC on-board power supply systems from any location.

The THR 265-12V (-24V) models also protect the battery against damaging deep discharge or overvoltage caused by the devices connected to the THR 265 deep discharge protection.

By connecting the FAR remote control panel or the WS19RG / WS22RG battery control switch, the FHR/THR can be operated and you receive feedback on the switching status via the control LED.

Both models can be seamlessly integrated into the Power-Install 250 system and enable the simple mechanical addition of high-current fuses to protect the vehicle electrical system.

The remote-controlled battery master switches FHR/THR are designed for use on yachts and for connection to DC low voltage 8 - 30 V and may only be operated in closed rooms that are protected from rain, moisture, dust and condensation and are not suitable for outdoor installation. Never use the devices in places where there is a risk of explosion due to gas or dust.

philippi elektrische systeme gmbh
Neckaraue 19
D-71686 Remseck am Neckar

www.philippi-online.de
info@philippi-online.de

WARRANTY

Warranty is granted for a period of two years from the date of purchase. Defects due to material or manufacturing faults will be rectified free of charge if:

- o the device is sent to the manufacturer free of charge.x the proof of purchase is enclosed
- o the device has been handled and used as intended.
- o no third-party spare parts have been installed or modifications made. Thewarranty does not cover

damage caused by

- o Overvoltage at the inputs or polarity reversal
- o Liquids that have entered the appliance or oxidation due to condensation
- o Lightning strike

Consequential costs and natural wear and tear are not covered by the guarantee. When asserting claims under guarantee and warranty, a detailed description of the defect is essential. Detailed information facilitates and accelerates processing. Please understand that we cannot accept consignments that are sent to us carriage forward.

DISCLAIMER

philippi elektrische systeme gmbh cannot monitor compliance with the operating instructions or the conditions and methods of installation, operation, use and maintenance of the FHR / THR 265. We therefore accept no responsibility or liability for losses, damage or costs arising from incorrect installation and improper operation.

SAFETY INSTRUCTIONS

- x No changes may be made to the appliance, otherwise the CE mark will be cancelled
- x The FHR/THR 265 may only be connected by qualified electricians.
- x Ensure that the polarity of the batteries/connections is correct!

These installation and operating instructions are part of the component delivery. They must - important for subsequent maintenance work - should be kept in a safe place and passed on to any subsequent owners of the appliance.

ACCESSORIES (NOT INCLUDED IN THE SCOPE OF DELIVERY)

o Control panel for the remote-controlled main switch relay	Order no.:0 8000 9127
o WS19RG: Control switch 19mm with ring lighting	Order no.:5 2022 1910
o WS22RG Battery: Control switch 22mm with ring lighting and symbol	Order no.: 5 2022 2215

INSTALLATION

- Install the device near the battery / battery bank so that it is easily accessible.
- If possible, the installation location should be cool and dry.
- Provide strain relief for the cables (at a maximum distance of 30 cm)

ELECTRICAL CONNECTION

- The batteries must be disconnected before installation!
- The cable cross-section of the connecting cables to the battery or battery bank and the loads should be between 10 - 95 mm² depending on the maximum load current.

The heat loss and thus the maximum load capacity of the relay is largely dissipated via the connected cables. Therefore, dimension the cable cross-section at least as follows:

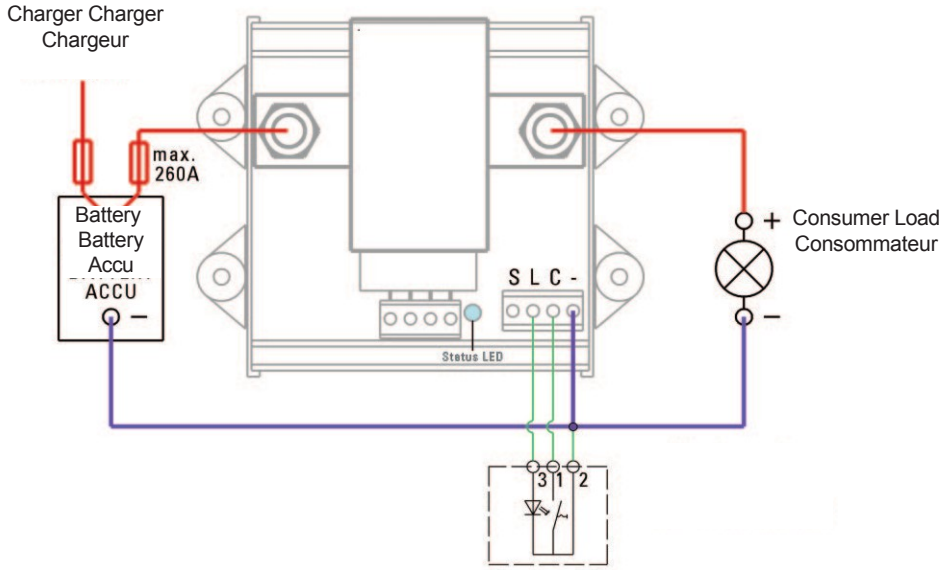
up to 65A / 16 mm²	up to 120A / 35 mm²	up to 210 A / 70 mm²
up to 90A / 25 mm²	up to 150A / 50 mm²	up to 265 A / 95 mm²

Please ensure that the supply cable near the battery is correctly fused!

- **Connection bolt A (IN):** PLUS power supply
- **Connection bolt B (OUT):** PLUS consumer

When connecting the FAR remote control panel or WS19/22 control switch, the cross-section of the control/monitoring cables must be at least 1 mm².

- **Negative terminal:** Must be connected to the negative of the vehicle electrical system and the negative of the remote control panel FAR (pin 2) or WS (black + green).
- **Terminal C:** Connection for the FAR remote control panel switch (pin 1) or WS22 (yellow).
- **Terminal L:** Connection for the control LED of the remote control panel FAR (pin 3) or WS22 (red).
- **Terminal S:** Without function



FAR / WS remote control connection

THR 265 -please note:

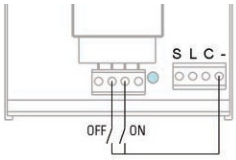
Consumers that are not connected to the THR 265 deep discharge protection can the battery continues to discharge! If no remote control switch is used, terminal C must be connected to minus.

OPERATION

The internal LED flashes briefly to indicate that the relay is ready for operation. When the relay is switched on, the internal LED and the LED light on the remote control panel light up continuously.

While the delay time for switching off is running, both the internal LED and the LED light on the remote control panel flash on the THR models. If the main switch has switched off due to undervoltage or overvoltage, the main switch can be switched on again by switching it on again at the control panel. If the voltage is still outside the valid range, it will be switched off again after the delay time.

Manual emergency operation:
In the event of failure of the control electronics, the relay can then be switched directly by means of a short switching pulse (1 second) via an external cable break between the minus and the upper screw heads of the centre relay terminal, see diagramm.



TECHNICAL DATA

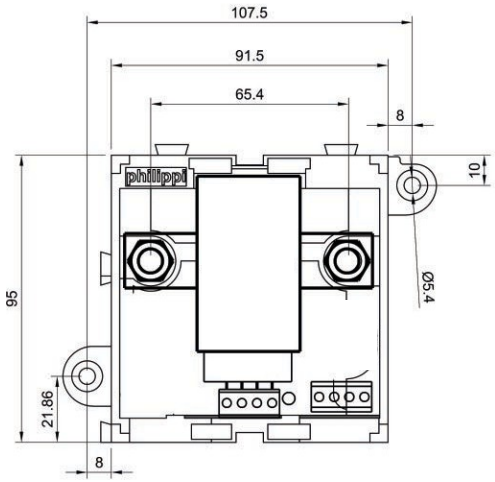
Model		FHR	THR 12V	THR 24V
Operating voltage:		8 - 30 V	8 - 16 V	8 - 30 V
Switch-off in the event of undervoltage,	T = 300s	-	11,2 V	22,4 V
Restart after undervoltage,	T = 10s	-	12,5 V	25 V
Switch-off in the event of overvoltage,	T = 60s	-	15,6 V	31,2 V
Restart after overvoltage,	T = 10s	-	14,5 V	29 V
(T = delay time)				

Rated current260 — A with cable cross-section 95 mm² @ 20 °C
Overload current — 400 A (5s), 1500 A (0.2s)
Current consumption — Stand by: 1.5 mA @ 13 V, 3 mA @ 26V

Relay ON: 2.5 mA @ 13 V, 5.5 mA @ 26 V

Connection terminals / protection class — M8 max. 12.6 Nm / IP 20

Dimensions: L 124 x W 95 x H 60 mm



CE CONFORMITY

This device fulfils the requirements of the EU Directive: 2004/108/EC" Electromagnetic compatibility"

The conformity of the appliance with the above-mentioned directive is confirmed by the CEmark.

DISPOSAL INSTRUCTIONS

When disposing of this appliance, observe the applicable local regulations and use the Collection services/points for oldelectrical/electronic appliances.