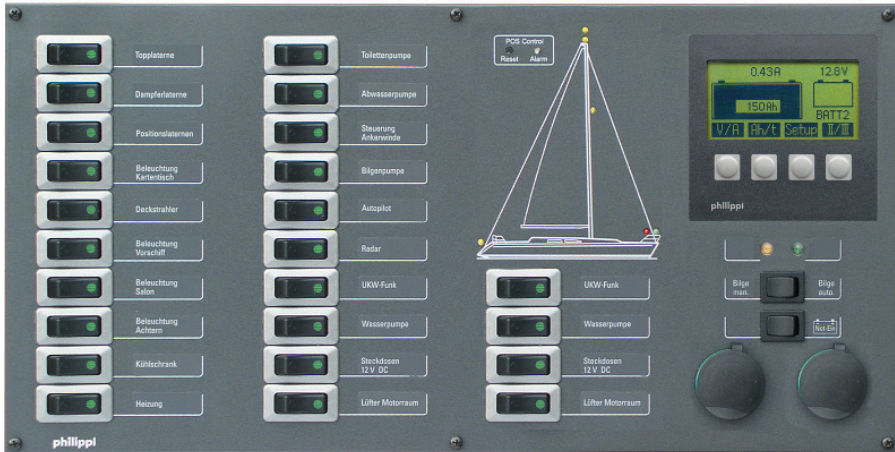


INSTRUCTION MANUAL



Introduction

The power distribution panels series 200 are designed for the distribution and protecting of the electrical 12/24V DC system. At the front panel there are circuit breakers, control switches, monitoring displays and sockets (depending on type).

Each circuit is switched and protected by a thermal circuit breaker with rocker switch. Its integrated light diode is showing the circuit status. In case of a short, the breaker switches automatically off and the light goes off.

Some models are equipped with additional battery voltage meters and/or tank gauges.

The additional current meters inform about the actual flowing discharge current.

Each panel comes with a set of self-adhesive labels, which can be placed at each circuit breaker on the signed fields .

The circuit breakers/switches are suitable for battery voltages of 12V and/or 24V without modification.

SAFETY REFERENCES

- unauthorised change to the equipment will invalidate the CE sign
- the connection of the distribution circuits may be made only by electrical specialists.
- before connecting the distribution circuits the battery terminals must be clamped.
- Important! Pay attention to the correct polarity of the batteries!
- the automatic circuit breakers are securing the wiring for the consumers. The security of the attached consumers has to be done via the built-in safety devices.



The assembly and operating instruction is a component of the STV package. It must be kept (for reference).

Importantly: - for later maintenance work - and for the use of subsequent owners of the equipment.

EXCLUSION OF LIABILITY

Both the adherence to the operating instruction, and the conditions and methods during installation, using and maintenance of the distribution panel cannot be supervised by philippi electrical systems. Therefore we do not take any responsibility for loss, damage or costs, which develop due to incorrect installation and/or inappropriate enterprise.

WARRANTY

philippi elektrische systeme gmbh grants a two year limited and not transferable warranty for the first buyer of this equipment, carried out due to our "general trading conditions".

These trading conditions are basis of all sales and delivery offers, they are printed and attached to all offers and confirmation of orders in our catalogues.

CE-CONFORMITY



This product fulfills the requirements of the European Regulation:
2004/108/EG "electromagnetic compatibility"

Following harmonised standards were implemented::

Immunität:	EN 61000-6-1:2007
Emission:	EN 61000-6-3:2007

The conformity of the equipment is confirmed by the CE mark.

CONTENT

Power distribution panel

This manual

1 set of self adhesive labels SKZ



ACCESSORIES (TO BE ORDERED SEPARATELY)

Self adhesive labels (1set)	SKZ-D, SKZ-GB, SKZ-NL, SKZ-FR, SKZ-ES, SKZ-DK SKZ-Mobil (Automobile)
Stack connectors 6,3mm -2,5mm ²	FSH 6,3/1,5-2,5
Circuit breaker 1-pole	3130-F11B-H7T1-W29AG-10A (6..20A)
Circuit breaker 2-poles	3130-F15B-H7T1-W29AG-10A (6..16A)

TECHNICAL DATA

Dimensions	see cataloge
Rated voltage	DC 10-28V
Fuse size	10 A (Standard), alt.: 6, 16, 20 A (20A only 1-pole)
Panel	Aluminium grey coated

INSTALLATION

Well accessible places inside the boat are suitable for the assembly; usually at the chart table. The rear area should have at least a depth of 15 cm, in order to be able to implement the wiring carefully and clearly and thus surely.

It's a good advise to install the panel in such a way that it is accessible for extensions, changes and subsequent repairs from the rear side.

For the installation a cutout of 10mm smaller per side of the instrument panel dimensions is to be planned. The instrument panel can be fastened with screws of your choice by using the four (six) mounting holes.

WARNING

High currents can cause overheating of the wiring or connections due to too thin lines or transition resistance by corroded contacts. Overheating can cause fire!

Consider therefore the printed cable diameter table and pay attention to safe and firm connection.

CONNECTION

the pre-wired red inlet cables (+) 6mm² have to be attached to the positive terminal of the service battery. When extending the inlet-line installed at the distribution circuit the diameter of the extension cable may not be smaller - risk of fire!

The inlet must be attached at the battery over an inserted high current safety device dimensioned correctly to the inlet cross section.

The consumer outlet lines have to be attached or screwed at the stack- or screwing contacts of the automatic circuit breakers.

The black negative conductor (-) has to be attached to the negative pole of the battery. It serves the integrated LEDs and other eventually integrated electronic devices such as voltmeter, digital displays and position light monitoring.

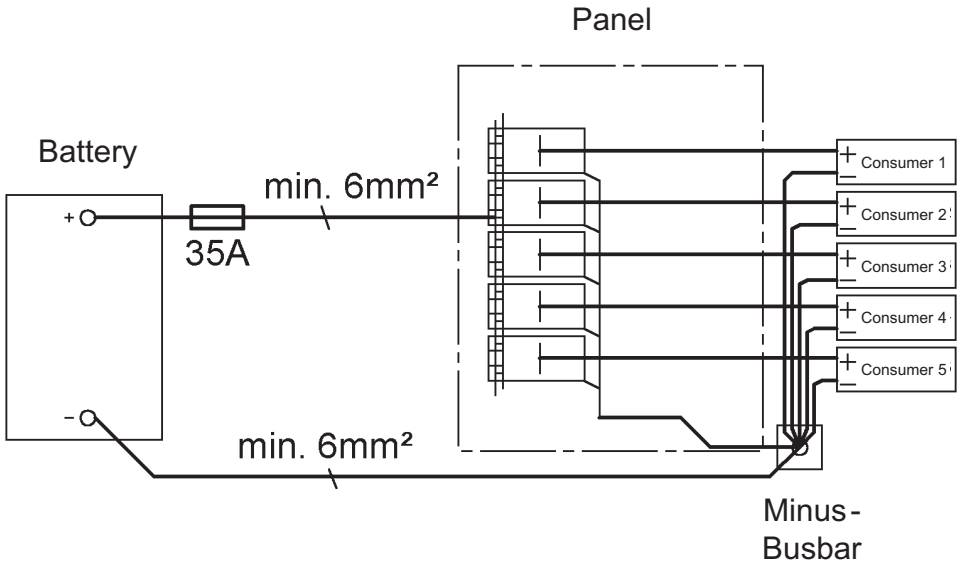
OVERLOAD

in the case of overloading or short-circuit of an electric circuit the connected consumers are switched off by the integrated circuit breaker and the light-emitting diode display expires. After the overloading or short-circuit condition is suspended the respective automatic circuit can be used again by re-switching.

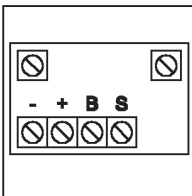
Connection to the battery

Fuse size max. 35A for 6 mm²- wire

Fuse size max. 50A for 10 mm²- wire

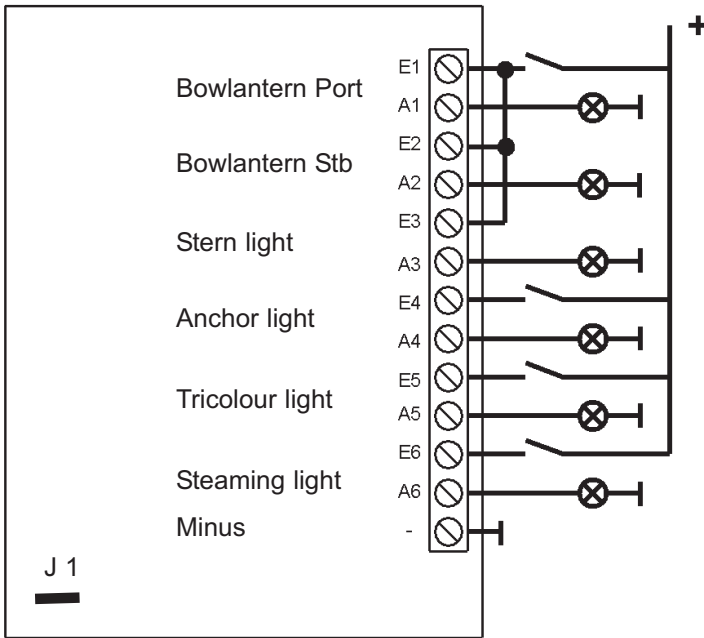


Connection of the instruments



- : minus battery
- + : power supply 12/24V
- B : illumination 12/24V
- S : tank sensor inlet (10 - 180 Ohm)
TGT / TGW / UTN

Connection of the position light monitor POS6E



Wire cross section:

of the connection of the position lights: 2,5 mm² (normal bulbs), min. 1 mm² for LED-navigation lights.

Bowlantern:

If you're using a twocolour - bowlantern, you have to connect it to outlet A1 and the jumper has to remain (delivery status).

If there are two separate position lights (port/starboard), you have to remove the jumper J1.

Connection of the control switches

Needed switches:

Voltmeter-switch-over: 1-0-2

Ord.no. 5 1808 1103

Tanksensor-switch-over: 1-2

Ord.no. 5 1803 1102

Illumination switch: 0-1

Ord.no. 5 1801 1102

Batt.-main switch FBH: (1)-0-(2)

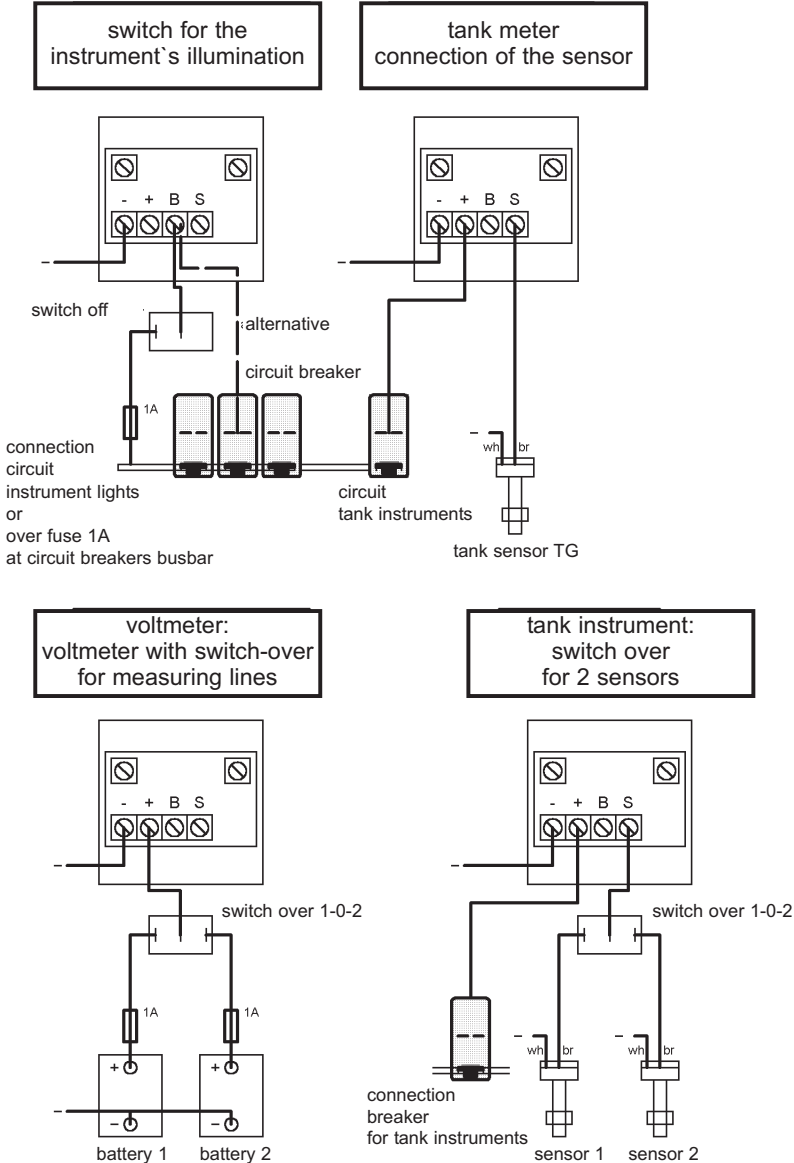
Ord.no. 5 1808 1302

Bilge Auto-Man.switch: 1-0-2

Ord.no. 5 1808 1103

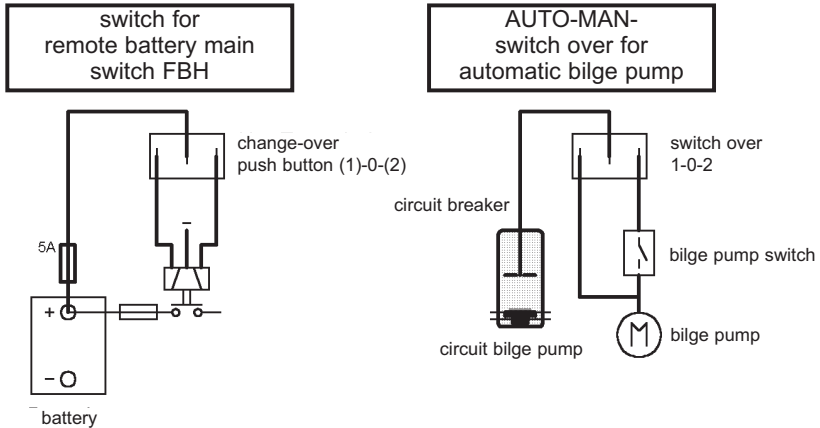
Connection of the instruments

view is from the rear side of the panel



please fuse measuring lines directly at the battery !

Further connection examples for control switches



The tank monitor TCM can also be switched on/off by using a control switch. Also the display lighting of the BCM/TCM monitors can be switched by them. Please pay attention, that the supply wires are fused!

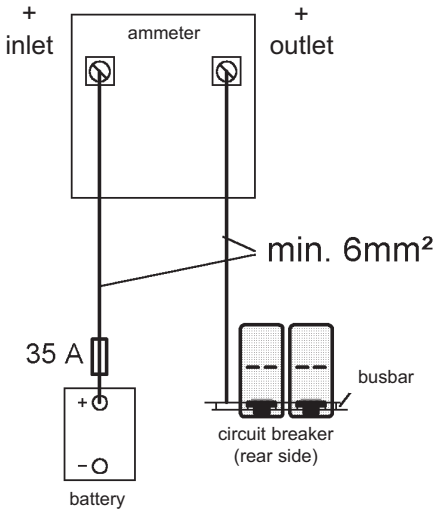
Table of cable diameters

Single conductor referring to „Germanischer Lloyd“

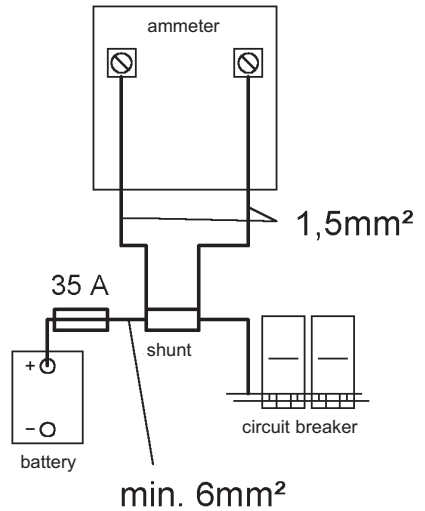
Conductor-Cross SectionArea mm ²	Current rating A	Recommended circuit breaker rating A
1,5	12	10
2,5	17	16
4	23	20
6	29	25
10	40	35
16	54	50

Connection of the ammeter and the TSA

Ammeter with integrated shunt



Ammeter with external shunt



Remote control for deep discharge protection TSA

