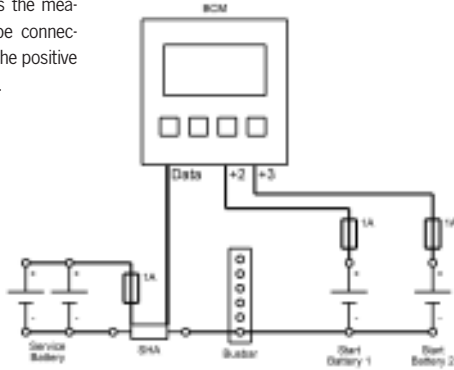


The electric connection of the battery monitor BCM and the active shunt SHA.

The battery monitor BCM and the shunt SHA are connected through a communication line. For the voltage measurement of the main battery, the protected measuring cable of the shunt will be connected to the positive pole of the main battery. For the voltage measurement of the additional battery groups the measurement cables must be connected from the monitor to the positive poles with separate lines.

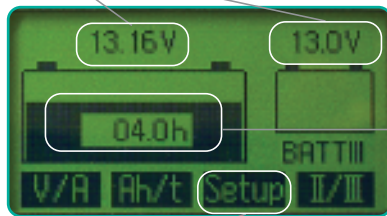


The shunt SHA has to be connected between the negative line of service battery and the negative terminal. No other connection to the negative pole should be made.

A 16 bit micro-controller measures consumers and charging currents with a very high accuracy over an active high-precision shunt unit. On the large LCD display, the precise charge amount of the service battery can be read at any time. Additionally, the charge/discharge current or the battery voltage is indicated. At the same time the voltage of up two starting batteries can be supervised. If one of the attached battery reaches the configured capacity/voltage threshold, an acoustic alarm comes on and an appropriated symbol appears on the display

- Very high accuracy (10mA) and large capacities (150A to 600A)
- Automatic identification of battery full
- Continues adjustments of effective battery capacity
- Indication of the number of load cycles and deep discharging
- Adjustable nominal battery voltage (12V/24V/36V/48V)
- High resolution, energy-saving back light LCD display
- Very low power consumption (2.5 mA / < 1mA in sleep mode at 12 V) allows continuous operation
- Possibility of extension of the data line (up to 100 m). Reliable data transfer via RS485

Voltage indicator of the main battery and the other batteries, (eg. starter battery)



Indication of charge and discharge current

The dynamic indicator is matched for the measurement range (0,01 A, 14,0 A, 123 A) to the corresponding current.



Setup

In the set-up the battery capacity and voltage thresholds for the alarm function will be configured as needed. More information can be retrieved from the battery. Measuring configurations and values are saved by switching off supply

Indication of remaining battery capacity

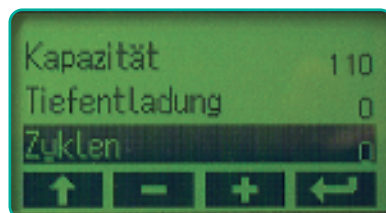
The bar represents the amount of charge conditions in %. Alternatively, by pressing a key, the current discharging and the remaining time will be retrieved

Battery 2 / 3

To switch the display between the two extra batteries (start batteries)

- Battery capacity** Nominal capacity of the battery in Ah
- Charge voltage** Charge voltage of the battery 1 for battery full recognition
- Alarm %** Warning for capacity, alarm of battery 1 in % (ext. switch contact "on", for "Generator on" used by BCM relays)
- Generator off*** At the threshold of the external contact off (Generator)
- * (Generator on/off only at BCM relay.)
- Alarm U2** Alarm for battery voltage 2
- Alarm U3** Alarm for battery voltage 3

Available settings and informations in the setup



Information can be requested from the battery. Useful history of your battery:

- **CEF** Charging efficiency factor
- **Language** (DE, GB, FR, ES, DK, NL)
- **Peukert** Peukert coefficient
- **Cycles** Number of cycles
- **Deep discharge** Number of deep discharges

▶ THE GAUGE FOR YOUR BATTERY PLANT - BCM I



■ BCM 1A (built-on)

Order-No.: 0 7000 1001

Battery monitor (built-on housing) for consumer battery capacity and voltage supervision for two starter batteries. Connection cable included (5m).

Dimensions L 100 x W 100 x H 30 mm



■ BCM 1

Order-No.: 0 7000 1000

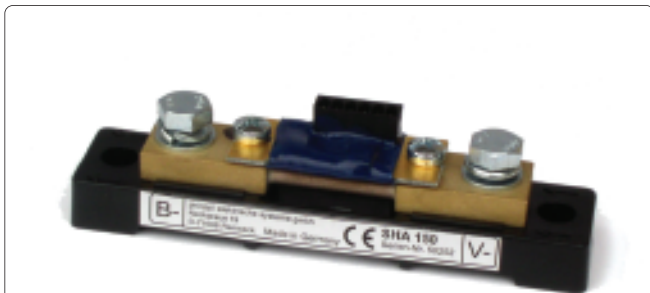
■ BCM 1- 48V

Order-No.: 0 7000 1048

Battery monitor for a consumer battery capacity and voltage supervision for two starter batteries. Connection cable included (5m).

Dimensions W 105 x H 105 x D 40 mm
Cut-out measurement 90 x 90 mm

▶ MATCHING ACTIVE SHUNT



■ SHA 150

Order-No.: 0 7000 0150

Active shunt for 150A. Suitable for max. power of 1800 W/12 V or 3600 W/24 V.

Dimensions L 135 x W 30 x H 35 mm



■ SHA 600

Order-No.: 0 7000 0600

Active shunt for 600A. Suitable for max. power of 7200 W/12 V or 14400 W/24 V.

Dimensions L 185 x W 44 x H 62 mm



■ ASH 1-1A

Order-No.: 6 0030 3411

Fuseholder for blade fuse to protect voltage measuring lines e.g. of the BCM. Blade fuse (1A) included. Flat terminals 6,3mm.



■ SAS 4

Order-No.: 0 8000 9014

Bus bar to attach direct on the shunt SHA 600 to connect multiple lines (M12, 2x M10, M8)

Dimensions L 140 x W 30 x H 30 mm



■ SHA Kabel 10m

Order-No.: 0 7000 1091

Cable for the connection of the battery monitor BCM and the active shunt SHA when the cable supplied with the battery monitor BCM is too short. Cable length 10 m.

BATTERY MONITOR WITH CHARGER CONTROL

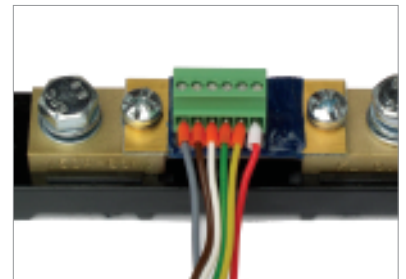
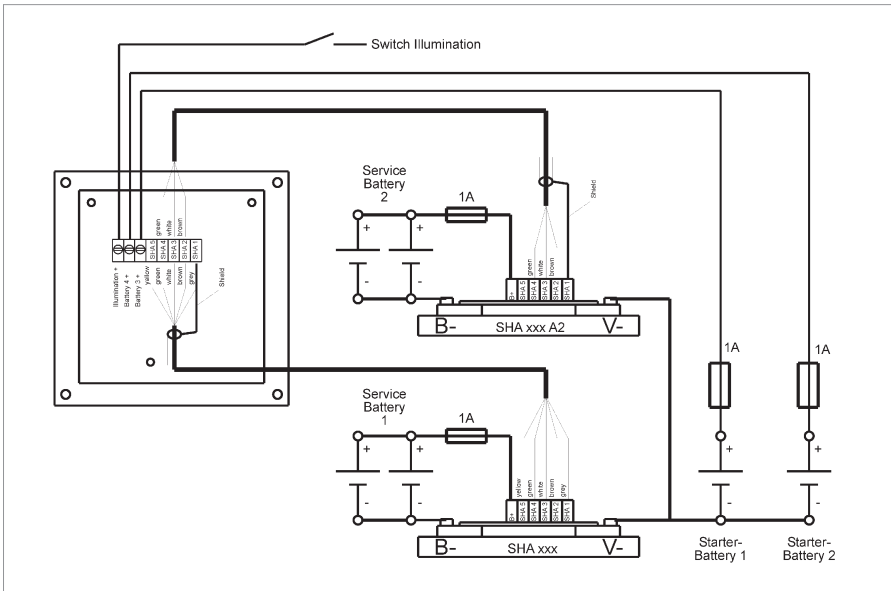
The BLM I combines the functions of the BCM monitor and charging monitor LCM and is designed to connect to the automatic charger series AL (15 A or higher). In addition to the functions of the BCM are the controls from the LCM, as current limiting in low shore power supply, activation of sleep mode and the setup functions. For existing shore power connection by the automatic charger AL, the BLM shows the charging current, the battery voltage and any error messages (over temperature, temperature error ...) of the charger.



Display in charging mode



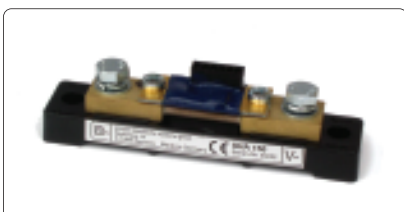
- BLM 1 Order-No.: 0 7000 1200
- BLM 1A (Built-on) Order-No.: 0 7000 1201



BATTERY MONITOR FOR 2 BATTERY BANKS

The battery monitor BCM 2 monitors simultaneously the battery capacity of two banks. All the features of the BCM 1 are available in BCM 2 for both battery banks.

The BCM 2 connects two active shunts of the series SHA with different addresses. It has to be ordered a shunt SHA xxx and a shunt SHA xxx-A2 also for different currents (150 A, 600 A).



- SHA 150 Order-No.: 0 7000 0150
- SHA 150-A2 Order-No.: 0 7000 0152



- SHA 600 Order-No.: 0 7000 0600
- SHA 600-A2 Order-No.: 0 7000 0602



- BCM 2 Order-No.: 0 7000 2000
- BCM 2A (Built-on) Order-No.: 0 7000 2001

BATTERY MONITOR WITH POTENTIAL FREE CONTACT

With the BCM R, to assure an operational readiness of the battery system, an integrated relay with potential free contacts will be used to control an external generator.

The relay activation/deactivation capacity threshold is freely configurable. When the battery is recognized empty the generator will be activated.

In addition, a second external potential free contact can activate an external buzzer. The relay contacts are fused on the back side of the unit.

Connection by screw terminals

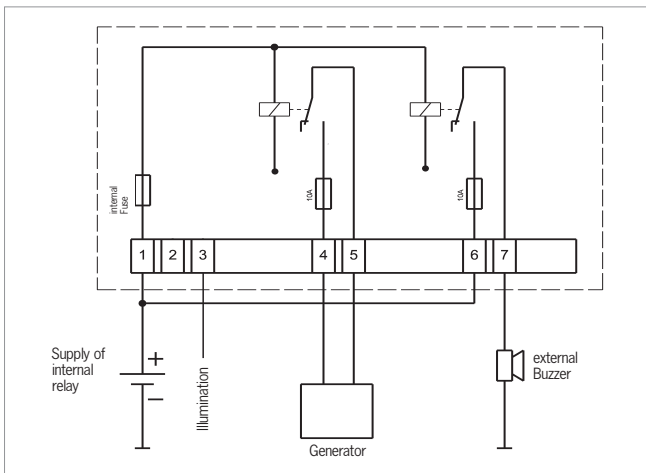


Enhanced set-up for generator control



■ BCM R 12V
■ BCM R 24V

Order-No.: 0 7000 1112
Order-No.: 0 7000 1124



To construct an automatic generator support system, we recommend the use of generators Fischer Panda that have very compact dimensions and very low noise.

Particularly interesting is the AGT- Generator with a DC high current capacity that can load batteries directly.

In combination with a powerful inverter you can avail an optimal power and efficient installation regardless of the use.



AC MONITOR FOR AC-VOLTAGE

The AC-Monitor ACM shows all interesting values of the AC voltage supply on board.

When the AC voltage is detected by the transducer unit, the current voltage, frequency and the power will be displayed.

The integrated monitoring function constantly monitors the values of current and voltage.

Using the built-in buzzer, the AC-Monitor alarms when one of the monitored values goes out of the range.

The required supply voltage for operation of the transducer comes directly from the measured line. For measurements greater than 16 A, is necessary the use of a current transformers (60/5A).

■ **ACW 1** Order-No.: 0 7000 2401

Transducer for AC-Monitor ACM 1.

Dimensions L 130 x W 80 x H 42 mm

■ **ASK 41** Order-No.: 6 0485 9001

Transformer 60/5A for transducer.

Dimensions L 60 x W 72 x H 79 mm



■ **ACM 1**

Order-No.: 0 7000 2310

AC-Monitor for a single phase AC-System.
Built-in version.

Dimensions W 105 x H 105 x D 40 mm