
- **BTM2** (217€) Order-No.: **0 7100 4050**
- **N2K-Kabel** (41€) Order-No: **5 0411 1140**

Battery, tank and charging monitor BTM 2. Intuitive, 3.5" colour TFT touchscreen graphic display with brightness sensor for automatic adjustment of display brightness. Incl. NMEA 2000 interface

The tank sensors, the shunt, the charger interface "ACE-LIN" and the NMEA 2000 connection cable "N2K cable" must be ordered separately.

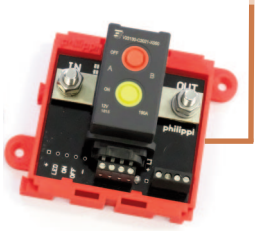
| | |
|---|---|
| **Operating voltage** | 8 - 64 V |
| **Current consumption** | max. 70 mA @ 12V, stand-by: 6 mA |
| **Dimensions** | L 105 x W 105 x H 35 mm |
| **Installation cut-out** | 88 x 88 mm |

Tank sensors

Battery shunt SHE

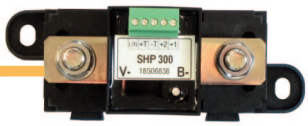



**Expand the BTM 2 monitor by by connecting an ACE series battery charger and a main switch FBR to a fully-fledged Battery Charge Management System**



**the remote controllable main switch FBR 265 with emergency manual override**

Energy shunt SHP



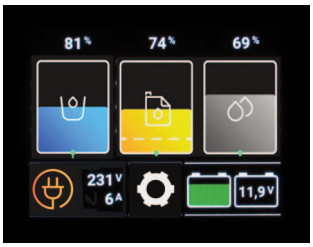

Battery charger ACE


The further development of the proven battery tank monitor BTM includes an integrated NMEA2000 interface that makes the battery and tank data available to the NMEA2000 network. This allows the battery and tank data to be additionally displayed on compatible plotters. Another new feature is operation on 12 - 48 V DC operating voltage, which means that 48 V battery systems can also be monitored in conjunction with the SHE 348 shunt.systems can be monitored.For connection to the NMEA2000 network, the N2K cable is also required. The pluggable cable provides the connection via aT-piece (5 0411 1149) to an NMEA 2000 on-board network or a Raymarine network (adapter cable Seatalk/NMEA 2000 A06045).

### Battery Monitoring

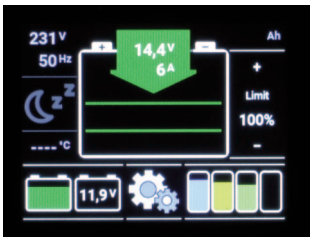

Precise battery information about the current voltage, charging or discharging current, remaining time, temperature and state of charge of the consumer battery. Historical values on the number of charging cycles, deep discharges and average depth of discharge give you an overview of the battery's use. It is possible to monitor the voltages of up to 2 starter or bow batteries.

### Tank Monitoring for up to 4 Tanks




All known philippi tank sensors such as TGT/ TGW, UTV, TDS/TDN and DFS can be connected, also existing tank sensors from other manufacturers with the signals 10-180Ω / 240-33Ω / 0-5 V / 0-10 V/ 4-20 mA are possible. Each tank can be individually Each tank can be individually configured for unique allocation, and adaptation to non-linear tank geometries is also possible. Individual tank alarms can be defined for monitoring.

### Monitoring for ACE-Battery Charger




An interface ACE-LIN integrated in the automatic charger ACE enables the monitoring of the charging process, the display of the mains voltage, the charging phase, the battery temperature and the charging current. Adjustment of the charging power in case of a weak shore connection and of the silent mode (fan off) for models with a high charging power > 60A.

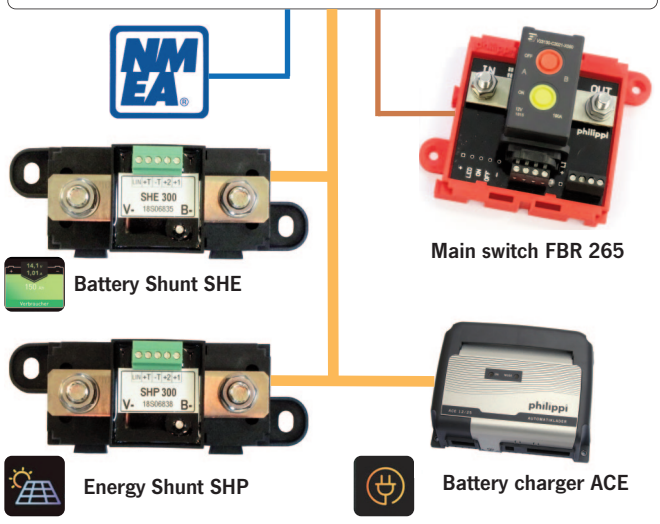
### Alarm-/Relay contact

Another new feature is the potential-free changeover contact, which can be used in conjunction with a remotely controllable FBR 265 main battery switch to implement voltage- and, importantly, capacity-dependent energy management and deep discharge protection. This means that the consumers can be switched off at an early stage before the threat of deep discharge and not only when the battery is is deeply discharged. This is particularly important for lithium battery systems, whose flat discharge characteristic makes timely voltage disconnection impossible.


- **BLM2-Set** (251€) — Order-No.: **0 7100 4210**
- **N2K-Kabel** (41€) — Order-No: **5 0411 1140**

Battery monitor BLM2. Intuitive, 3.5" colour TFT touchscreen graphic display with brightness sensor for automatic adjustment of display brightness. Incl. NMEA 2000 interface (accessory N2K cable). Extension possibilities: Additional measurement of an energy source (solar etc.) via shunt SHP. Battery management via remote-controlled main switch FBR 265.

| | |
|---|---|
| **Operating voltage** | 8 - 64 V |
| **Current consumption** | max. 70 mA @ 12V, stand-by: 6 mA |
| **Dimensions** | L 105 x W 105 x H 35 mm |
| **Installation cut-out** | 88 x 88 mm |




Battery Shunt SHE

Main switch FBR 265

Energy Shunt SHP

Battery charger ACE

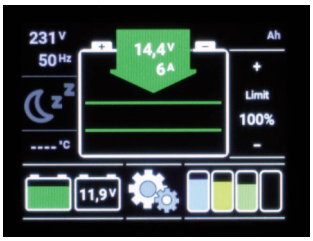
All information about the battery system at a glance and - if required - on your chart plotter via the NMEA2000/Seatalk NG interface.
Monitoring of the consumer and starter battery via the shunt SHE 348 (included in delivery).

- Optional voltage monitoring of a third battery group.
- By means of an additional shunt SHP 300, the power and energy yield of a solar system can be read.
- For connection to an NMEA 2000 or Raymarine network, the N2K cable with M12 connector is required and for Raymarine an additional adapter.

### Battery Monitoring


Precise battery information about the current voltage, charging or discharging current, remaining time, temperature and state of charge of the consumer battery. Historical values on the number of charging cycles, deep discharges and average depth of discharge give you an overview of the battery's use. It is possible to monitor the voltages of up to 2 starter or bow batteries.

### Display of charging current and mains voltage when using one of our ACE battery chargers.




An interface ACE-LIN integrated in the automatic charger ACE enables the monitoring of the charging process, the display of the mains voltage, the charging phase, the battery temperature and the charging current. Adjustment of the charging power in case of a weak shore connection and of the silent mode (fan off) for models with a high charging power > 60A.

### Alarm-/Relay contact

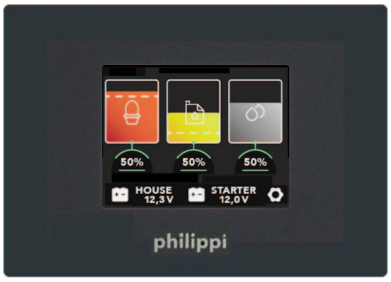
Another new feature is the potential-free changeover contact, which can be used in conjunction with a remotely controllable FBR 265 main battery switch to implement voltage- and, importantly, capacity-dependent energy management and deep discharge protection. This means that the consumers can be switched off at an early stage before the threat of deep discharge and not only when the battery is is deeply discharged. This is particularly important for lithium battery systems, whose flat discharge characteristic makes timely voltage disconnection impossible.

**All monitors of the medium size (3.5") at a glance**

| Data access to | needed accessories | BTM2 | BLM2-Set | VTM | LTM |
|---|---|---|---|---|---|
| Battery management | Shunt SHE 300 or 348 | Yes | Yes, included | - | only current |
| Energy shunt | Shunt SHP (0 7003 0350) | Yes | Yes | - | Yes |
| LB Lithium battery | | - | - | - | int. interface |
| ACE-Battery charger | ACE-LIN for Battery charger | Yes | Yes | Yes | YES |
| Tank measurement | Tank sensors (TGx, TDx, ...) | max. 4 Tanks | - | max. 4 tanks | max. 4 tanks |
| Relay contact for alarms | FBR 265 or buzzer | Yes | Yes | Yes | Yes |
| NMEA 2000 | N2K-Kabel | int. interface | int. interface | - | - |

## TANK MONITOR WITH NMEA OUTPUT

The tank monitor BTS-T extends the proven tank monitor TCS with an NMEA2000 interface to make voltage, tank and pressure data available to the NMEA2000 network. This allows the tank levels and pressure values of hydraulic cylinders to be additionally displayed on compatible plotters. It can also be used as a pure NMEA 2000 tank sensor interface, with convenient setting options via the touch screen. In this case, the screen is available e.g. in the engine compartment as additional display energy.




**BTS -T** (184€) Order-No: **0 7100 3070**

Tank monitor BTS-T. Intuitive, 2.4" colour TFT touchscreen graphic display with brightness sensor for automatic adjustment of display brightness. Incl. NMEA 2000 interface cable.

**Dimensions:** W 105 x H 75 x D 40 mm

All known philippi tank sensors as well as already existing tank sensors from other manufacturers with the following signals can be connected:

- Tank sensors 10-180 Ohm (TGW / TGT)
- Tank sensors 240-33 Ohm
- Tank sensors 0-300 Ohm (free input)
- Pressure probe TDS/TDN/TDT 4-20 mA
- Ultrasonic tank sensor 0.5 - 2.5 V (UTV)
- Ultrasonic tank sensor free adjustment of tank depth (UTV 40/ 80)
- Tank sensors 0-3.5 V / 0-10V
- Tank sensors 0-1 (TRS 130 / RSW)

All settings for adapting the tank sensors to the tanks are made conveniently via the screen.
No additional programming tools are necessary.

The unit functions at a glance:

- Acquisition of the levels of up to 3 tanks / pressure transducers
- Acquisition of the voltages of 2 battery groups
- Adjustable alarm function for empty / full tank
- Adjustable alarm function for under / over voltage of the batteries
- Audible alarm via internal buzzer
- Direct connection of up to 3 tank, pressure sensors on the back of the monitor

## ACTIVE SHUNT SHE 348

Digital battery management shunt for installation in the negative lead of the consumer battery. The SHE 348 shunt is compatible with the BTM, BLM and BLS monitors. The shunt is supplied with power via the voltage measurement line of the consumer battery. **Suitable for 12 V, 24 V, 36 V and 48 V battery systems. Continuous charging or discharging currents up to 300 A and battery capacities up to 1000 Ah.**

**SHE 348** (83€) Order-No: **0 7003 0348**

| | |
|---|---|
| **Current rating** | **300 A, 600 A 1 min,** 1500 A 0,5 s |
| **Consumption** | 10 mA@12 V, 5 mA@24 V |
| **Operating voltage** | DC 8-64 V |
| **Measuring range** | 10 mA - 1500 A |
| **Connection** | Bolt M8 |
| **Dimensions** | L 118 x B 40 x H 65 mm |

**The active shunt SHE 348**
detects all charging and load currents directly at the shunt and calculates the current state of charge of the battery by including the voltage.
- High measuring accuracy of 10 mA
- Wide measuring range from 0.01 A to 1500 A
- Automatic battery recognition
- Determination of the state of charge
- Measurement and monitoring of the battery temperature of the consumer battery via the optical temperature sensor "Temp-BT
- Voltage measurement of a second battery group (starter battery)

## HEBELKLEMMEN

Two-sided colour-coded lever terminals for easy extension and branching of cables

- **Terminal 4x2 pole, HKL 2-4** (10 St.: 16,40€) Order-No.: **2 2103 0061**
- **Terminal 3x2 pole, HKL 2-6** (10 St.: 18,50€) Order-No.: **2 2103 0062**
- **Terminal 2 pole HKL 2-2** (10 St.: 6,30€) Order-No.: **2 2103 0063**
- **Terminal 3 pole HKL 3-3** (10 St.: 8,30€) Order-No.: **2 2103 0064**
- **Terminal 4 pole HKL 4-4** (10 St.: 16,40€) Order-No.: **2 2103 0065**

max. Kabelquerschnitt ohne Adernendhülse 4mm², mit Adernendhülse 2,5mm².
max. 32A Strombelastbarkeit

**DIGITAL switching and control via PSM and PSL**

Various control functions (see below) can be visualised and loads switched via the system monitors PSM and PSL. The PSM or PSL monitor displays the switching status or the defective fuse at the output.

The new relay modules enable the protected switching of loads via the integrated fuse or circuit breaker.

Potential-free switching is also possible. Via the digital switching input on the CMR, the respective channel can also be switched via a push-button. The relay modules are available as single-pole or double-pole versions.

**Integrated emergency operation:**

Each output channel can be bridged by reconnecting the fuse or the circuit breaker. Thus, each circuit can be operated manually in the event of a system failure. In this case, the protection provided by the circuit breaker or fuse is maintained.

**New additional functions:**

1) Main/Secondary

Each switching channel can be assigned to a second switching channel. This means that several outputs can be switched simultaneously with one switching command. E.g. for emergency functions (panic switch switches on all lamps) or for scenario switches.

2) Enable function

The output is only switched when a push-button is pressed at the control input. This means that, for example, all lighting circuits can be enabled centrally at the monitor and switched locally in the cubicles. Thus all lamps can be switched off centrally. Several push-buttons can be connected in parallel per channel in order to switch the light on and off from several places (impulse switch function).


3) Message function

The signalling function enables the visualisation of states and events on the monitor and a corresponding warning message.

By means of the 4 control channels (PWM), LED luminaires or LED power drivers with control input for dimming (e.g. Prebit - Secondary luminaires) can be controlled from the PSM / PSL monitor.

| Type | Order-No.: (Fused) | Order-No.: - (S)=mit Breakers) | Relay channel | Rated current per channel | Input | Additional function | Dimensions |
|---|---|---|---|---|---|---|---|
| **CMR 411 (S)** | **0 7100 0411** (167€) | **0 7100 1411** (214€) | 4 (1-polig) | 10 A | 4 | 4 PWM-Dimmer | B 140 x L 120 x H 50 mm |
| **CMR 811 (S)** | **0 7100 0811** (251€) | **0 7100 1811** (357€) | 8 (1-polig) | 10 A | 8 | 4 PWM-Dimmer | B 140 x L 180 x H 50 mm |
| **CMR 431 (S)** | **0 7100 0431** (234€) | **0 7100 1431** (281€) | 4 (1-polig) | 30 A | 4 | | B 140 x L 180 x H 50 mm |
| **CMR 412 (S)** | **0 7100 0412** (251€) | **0 7100 1412** (357€) | 4 (2-polig) | 10 A | 4 | 4 PWM-Dimmer | B 140 x L 180 x H 50 mm |
| **CMR 232 (S)** | **0 7100 0232** (234€) | **0 7100 1232** (281€) | 2 (2-polig) | 30 A | 2 | | B 140 x L 180 x H 50 mm |

## FURTHER SWITCHING AND MONITORING FUNCTIONS OF THE RELAY MODULE CMR

### ENERGY MANAGEMENT

For switching off consumers when the remaining battery capacity is adjustable, e.g. for automatic deactivation of inverters. The switching information is supplied by a battery management shunt SHX. Monostable or bistable high-current relays can be controlled.

### CONTROL OF AN AC GENERATOR

For controlling an AC generator with automatic start or start/stop buttons. The information for switching the generator on and off is supplied by the battery management shunts SHX (setting generator ON/OFF). One or more shunts can provide the start/stop signal. To block generator operation, e.g. when the shore connection is active, a control signal can be connected and an operating time can also be stored.

### VISUALISATION OF ALARM MESSAGES

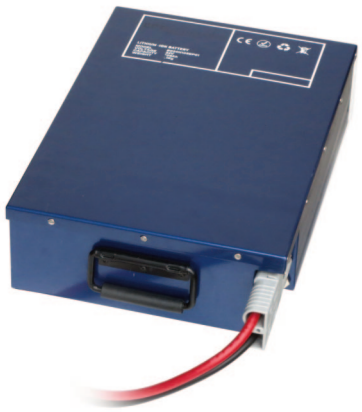
Alarm messages can be additionally displayed via external buzzers or indicator lights, provided the system monitor is mounted elsewhere.

### PUMP CONTROL

By means of adjustable switch-on and switch-off thresholds, a pump can be switched on (automatic refilling of a day tank) or deactivated (toilet pump when the tank is full) for a defined time, for example.

### TEMPERATURE SWITCH-OFF

By means of adjustable switch-on and switch-off thresholds, e.g. the battery charge can be switched off for a defined time in order to prevent overcharging of the battery system at high temperatures.



- **LB 12/150 LiFePO4 12V / 150 Ah** (1343€) Order-No.: **6 0138 1012**
- **LB 24/109 LiNMC 24V / 109 Ah** (1898€) Order-No.: **6 0138 1024**

Lithium Power Pack (LiFePO4 or Li-NMC) with integrated BMS (cell balancing and shutdown in case of under- and overvoltage). No additional external safety circuit necessary. CAN communication interface via P-bus interface CBO-EPT or suitable monitors LBS, LBM, LTM

The Lithium Power Pack combines advanced technology with intelligent software, making this lithium battery a robust, safe and user-friendly energy storage system with integrated BMS and safety relay.

The 12 V version is equipped with LiFePo4 cells, the Lithium Power Packs in 24V and 48 V are equipped with Li-NMC cells, which have a further improved energy density with comparable safety.

The integrated Battery Management System (BMS) constantly monitors the status
constantly monitors the status of each individual cell and protects it against deep discharge, overload, overcharge, overvoltage and overtemperature, among other things. This prevents premature failure of the battery due to environmental influences or incorrect use.
Apart from an external fuse, no further safety circuit is necessary. The connection is made via the SB 175 battery connectors supplied.

The fully integrated lithium battery systems are suitable to replace lead-acid batteries such as AGM or gel one-to-one, without having to change the charging or discharging structure as a rule, if the chargers offer a lithium charging characteristic.

| **Type** | **LB 12/150** | **LB 24/109** |
|---|---|---|
| Order-No. | 6 0138 1012 | 6 0138 1024 |
| Technology | LiFePO4 | LiNMC |
| Capacity | 150 Ah / 2 kWh | 109 Ah / 2,8 kWh |
| Nominal voltage | 12,8 V | 25,6 V |
| Cylces | ≥ 3000 | ≥ 2500 |
| Charging | 14,2 V/13,4 V | 28,6 V/27,8 V |
| Cont. charge | 60 A | 60 A |
| Cont. discharge | 120 A (max. 200 A@1 s) | 120 A (max. 200 A@1 s) |
| Temperature | Discharge: -10°C .. +45°C, Charge: 0°C .. +40°C, Storage: -20°C .. +50°C | |
| Housing / - Dimensions | Stainless steel enclosure, 21 kg, IP 54, W 300 x D 420 x H 115 mm | |
| Connection Battery connector | SB 175 (counterpart for 70 mm² cable included in delivery, cable set as special accessory) | |
| Battery management system BMS, | integrated cell balancing with disconnection in case of under- and overvoltage | |
| | and CAN bus interface for monitors LBS, LBM, LTM. P-bus interface CBO-EPT for monitors PSM and PSL | |
| Application (interconnection) | Parallel connection of several batteries of the same type is possible. | |

## Advantages of the Lithium Power Packs

**Maximum power during total discharge**
The high current output capacity per battery of 120 A continuously provides the maximum power over the complete capacity (no "voltage or capacity drop", as with lead-acid batteries) and makes it very interesting for use with high-current consumers and chargers, as is the case with combi inverters, for example.

**Efficient charging**
Fast charging up to 100%. The saturation effects known from lead batteries, which drag out the charging process in the last 15% to full charge, are completely eliminated. This results in significantly shorter charging times to fully charge the battery.

**Existing capacity can be used completely**
The full battery capacity (recommended 90%) is available, whereas with lead batteries only about 50% of the nominal capacity is actually available.
n Very good price-performance ratio
Sturdy housing also in professional rack technology

**Higher energy density, maximum performance**
Compared to lead-acid batteries, a significant reduction in weight, enormous energy reserves and stable voltage even under extreme loads.

**Internal BMS with shutdown**
The integrated battery management system, in conjunction with the internal protection circuit, protects the lithium cells from overcharging and deep discharge and monitors the cell temperature. Individual cell balancing is also carried out.

**TIP: Optimised charging under power**
Lithium batteries should be charged under machine power with a DC-DC converter
(philippi DCE) or a suitable alternator (Balmar) with an adapted regulator.
Further information at www.philippi-online.de/Lichtmaschinen

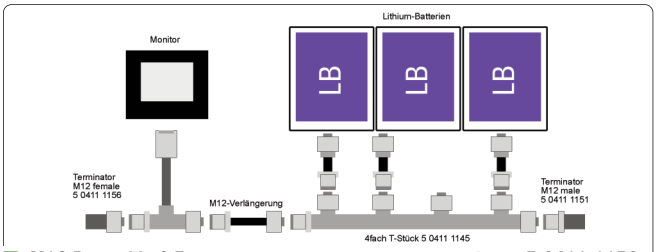
For safe mounting of several Lithium Power Packs, we recommend the racks with which batteries can be mounted in any position.
If the Lithium Power Packs are to be mounted in the floor area, we offer the mounting plate LB-MP. The battery(ies) can be arranged vertically or horizontally.

- **LB-Halter (for 1 Battery)** (94€) Order-No.: **6 0138 1005**
- **LB-RACK 2** (377€) Order-No.: **6 0138 1002**
- **LB-RACK 3** (452€) Order-No.: **6 0138 1003**
- **LB-RACK 4** (528€) Order-No.: **6 0138 1001**

Battery racks for multiple Lithium Power Packs. Several racks can be screwed together, mounted on the floor or on vibration rubber feet. Racks can be manufactured in other battery numbers on request.
Mounting plate for 1 Lithium Power Pack with securing straps for floor mounting.
Basic dimensions LB rack: W 364 x D 463 mm.
Height of 2 / 3 / 4-piece rack: H 290 / 415 / 540 mm.

- **LB 35-1 Battery connection wire 1m** (38€) Order-No: **6 0138 9351**

Cable 35 qmm with battery plug and tubular cable lugs M10, length 1m.




- **M12-Bus cable 0,5 m** Order-No.: **5 0411 1158**
- **M12-Bus cable 1 m** Order-No.: **5 0411 1152**
- **M12 T-connector 4** Order-No: **5 0411 1145**

M12 bus cable for connecting the batteries to the monitors LBS or LBM.

## LITHIUM-BATTERY-SYSTEM LB COMPATIBLE BATTERY-MONITORS

The integrated CAN bus interface in conjunction with the monitors LBS, LBM, LTM enables seamless monitoring of all important battery data at a glance.
For the P-Bus monitors PSM and PSL, the interface CBO-EPT is available for displaying all important parameters.

Via an optional shunt SHP, the resolution of the current measurement can be extended from 1 A to up to 10 mA.

The lithium battery monitors LBS and LBM display the state of charge of one or more lithium batteries of the LB series connected in parallel or in series (LBM only).

In the event of an imminent deep discharge or other error conditions such as overvoltage, the monitors warn by means of an acoustic alarm and error information in plain text.

In addition to displaying the battery information of all connected batteries (voltage, charge or discharge current, remaining time, temperature and state of charge), detailed data of all individual batteries can be called up via the info button. This is especially helpful for systems that consist of several batteries.


In addition, with the BLM monitor, the data can be logged on an SD card for subsequent fault diagnosis.


Display of battery error messages.


- **LBS** (167€) Order-No: **0 7100 3300**

Lithium battery monitor LBS. Intuitive, 2.4" colour TFT touchscreen graphic display with light sensor. Supplied with M12-T cable and terminators.
**Suitable for up to 6 batteries LB (12 or 24 V) connected in parallel.**
Dimensions W 105 x H 75 x D 40 mm


- **LBM** (217€) Order-No: **0 7100 4300**

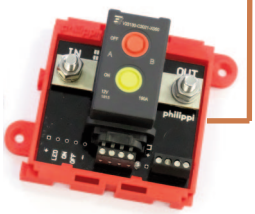
Lithium battery monitor LBM. Intuitive, 3.5" colour TFT touchscreen graphic display with light sensor. Supplied with M12-T cable and terminators.
**Suitable for up to 20 LB batteries (12, 24, 48 V) connected in parallel and in series.**
Dimensions W 105 x H 105 x D 40 mm


**LTM** (251€) Order-No.: **0 7100 4320**
**Shunt SHP** (83€) Order-No: **0 7003 0350**

Battery, tank and charging monitor LTM. Intuitive, 3.5" colour TFT touchscreen graphic display with brightness sensor for automatic adjustment of display brightness.
The tank sensors, the optional shunts SHE and SHP and the charger interface "ACE-LIN" must be ordered separately.

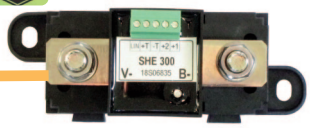
| | |
|---|---|
| **Operating voltage** | 8 - 64 V |
| **Current consumption** | max. 60 mA @ 13V, stand-by: 6 mA |
| **Dimensions** | L 105 x W 105 x H 35 mm |
| **Installation cut-out** | 88 x 88 mm |

**Tank sensors**

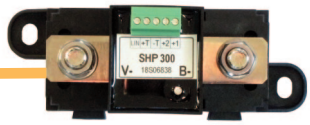


**Remote control Main switch FBR 265 with emergency manual override**

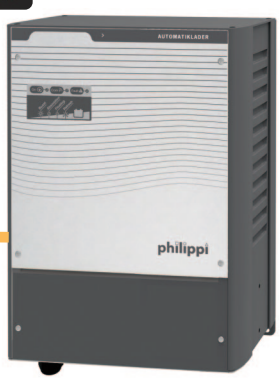
**Current shunt SHE**




**Energy shunt SHP**




**Battery charger ACE**




The lithium battery tank monitor LTM is based on the well-known battery tank monitor BTM and is extended by a data interface that displays the data of one or more lithium batteries of the LB series.

By means of an additional shunt SHE, the current display of the lithium battery LB can be improved from 1A to up to 10 mA.

By means of an additional shunt SHP, the power and energy yield of e.g. a solar system can be read.

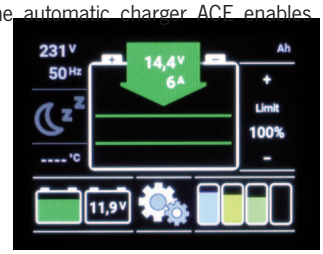
**Detailed battery information**


In addition to displaying the battery information of all connected batteries (voltage, charge or discharge current, remaining time, temperature and state of charge), detailed data of all individual batteries is available. This is especially helpful for systems that consist of several batteries. In addition, the data can be logged on an SD card for subsequent fault diagnosis.

**Tank monitoring for up to 4 tanks**


All known philippi tank sensors such as TGT/ TGW, UTV, pressure sensors TDS/TDN and DFS can be connected, also existing tank sensors from other manufacturers with the signals 10-180Ω / 240-33Ω / 0-5 V / 0-10 V/ 4-20 mA are possible. Each tank can be individually configured for unique assignment, and adaptation to non-linear tank geometries is also possible. Individual tank alarms can be defined for monitoring.

**If a battery charger of our ACE series is connected, the charging current and the mains voltage are additionally displayed.**




An interface ACE-LIN integrated in the automatic charger ACE enables monitoring of the charging process, display of the mains voltage, the charging phase, the battery temperature and the charging current. Adjustment of charging power in case of weak shore power and silent mode (fan off) for models with high charging power > 60A.

**Effective protection against deep discharge and capacity-dependent energy management via the optional remotely controllable battery main switch FBR 265.**

The potential-free changeover contact in combination with a remote-controllable battery main switch FBR 265 enables voltage- and - importantly! - capacity-dependent energy management and deep discharge protection. This means that the consumers can be switched off at an early stage before the threat of deep discharge and not only when the battery is deeply discharged. This is particularly important for lithium battery systems, whose flat discharge characteristic makes timely disconnection impossible.

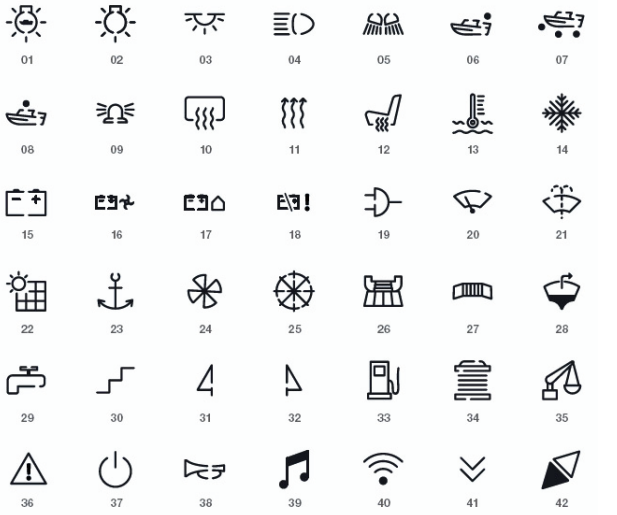
Two-colour illuminated stainless steel pushbutton switch (or pushbutton) with a current carrying capacity of DC 5 A. Protection class IP67 for outdoor mounting. Diameter 19 mm and 22 mm

**Version rt/gn illuminated neutral**

- **Latching button WS 19 RG** (18,40€) Order-No.: **5 2022 1910**
- **Latching button WS 22 RG** (18,40€) Order-No.: **5 2022 2210**
- **Push button WT 19 RG** (18,40€) Order-No.: **5 2022 1900**
- **Push button WT 22 RG** (18,40€) Order-No.: **5 2022 2200**

Two-colour red / green illuminated pressure switch. Mounting hole diameter 19 or 22 mm, for panel thickness 1-6 mm. The LEDs can be connected directly to the DC 12/24 V supply voltage. Current-carrying capacity of switching contact NO/NC: 5 A. Supplied with plug-in connection cable 20 cm and with silicone cap to protect against mechanical blockages caused by salt water crusts.

Two-colour illuminated stainless steel pushbutton (or switch) with laser-cut symbol. This means that the symbol itself is also illuminated and cannot be removed.
Current carrying capacity of DC 5 A. Mounting diameter 22 mm, thread length 10 mm for panel thickness up to 6 mm.
Pluggable connection with cable harness 20 cm.
Both LEDs can be controlled potential-free
(e.g. night lighting red + function lighting green).




**Push button rt/gn illuminated with symbol**

- **WT22RG „Battery“** (20,08) Order-No.: **5 2012 2215**
- **WT22RG „Battery Emergency“** (20,08€) Order-No.: **5 2012 2218**
- **WT22RG „Bilge pump“** (20,08€) Order-No.: **5 2012 2228**
- **WT22RG „Horn“** (20,08€) Order-No.: **5 2012 2238**
- **WT22RG „UP/DOWN (Arrow)“** (20,08€) Order-No.: **5 2012 2241**

**Latching button rt/gn illuminated with symbol**

- **WS22RG „Light“** (20,08€) Order-No.: **5 2022 2202**
- **WS22RG „Ambient light“** (20,08€) Order-No.: **5 2022 2203**
- **WS22RG „Search light“** (20,08€) Order-No.: **5 2022 2204**
- **WS22RG „Exterior Light“** (20,08€) Order-No.: **5 2022 2205**
- **WS22RG „Position latern“** (20,08€) Order-No.: **5 2022 2206**
- **WS22RG „Underwaterlight“** (20,08€) Order-No.: **5 2022 2207**
- **WS22RG „Anchor light“** (20,08€) Order-No.: **5 2022 2208**
- **WS22RG „Blue light“** (20,08€) Order-No.: **5 2022 2209**
- **WS22RG „Heating“** (20,08€) Order-No.: **5 2022 2211**
- **WS22RG „Refrigerator“** (20,08€) Order-No.: **5 2022 2214**
- **WS22RG „Battery“** (20,08€) Order-No.: **5 2022 2215**
- **WS22RG „Socket“** (20,08€) Order-No.: **5 2022 2219**
- **WS22RG „Wiper“** (20,08€) Order-No.: **5 2022 2220**
- **WS22RG „Anchor“** (20,08€) Order-No.: **5 2022 2223**
- **WS22RG „Ventilator/Bowthruster“** (20,08€) Order-No.: **5 2022 2224**
- **WS22RG „Autopilot“** (20,08€) Order-No.: **5 2022 2225**
- **WS22RG „Water“** (20,08€) Order-No.: **5 2022 2229**
- **WS22RG „Stairs“** (20,08€) Order-No.: **5 2022 2230**
- **WS22RG „Foresail”** (20,08€) Order-No.: **5 2022 2232**
- **WS22RG „Winch“** (20,08€) Order-No.: **5 2022 2234**
- **WS22RG „ON/OFF“** (20,08€) Order-No.: **5 2022 2237**
- **WS22RG „Audio“** (20,08€) Order-No.: **5 2022 2239**
- **WS22RG „WIFI“** (20,08€) Order-No.: **5 2022 2240**
- **WS22RG „Navigation“** (20,08€) Order-No.: **5 2022 2242**

**The last two digits of the order number contain the symbol number!**

Single-colour blue illuminated stainless steel pushbutton with a current carrying capacity of DC 5 A. Protection class IP67 for outdoor mounting. Mounting diameter 30 mm.
Supplied with silicone cap to prevent mechanical problems due to salt crystal deposits when used in seawater areas. Pluggable connection with cable harness 20 cm.
Version with laser-cut symbol and illumination red/green on request.

- **Button momentary WT 30 RG** (20,08 €) Bestell-Nr.: **5 2012 3000**
- **Button latching WS 30 RG** (20,08 €) Bestell-Nr.: **5 2022 3000**