



## 1 General Safety

This guide supports safe handling of the product. Use the product only in accordance with its intended use:

The BW 801e battery monitor is a two-stage safety system for preventing deep discharge for batteries with a nominal voltage of 12 V or 24 V.

Audible and visual alarms warn you of an approaching deep discharge. If power continues to be removed from the battery, the battery monitor disconnects consumers from the battery to prevent deep discharge. The threshold values for the alarm and for switching off the consumers are set via DIP switches.

Any modifications to the product or its components are prohibited and do not conform to its intended use. Only use original LEAB or LEAB-approved accessories.

Observe the safety instructions:

**WARNING! Incorrect assembly or inadequate wiring can cause a fire: Only install the unit as described in these instructions and select a sufficient cable cross-section for connecting the device.**

**WARNING! Risk of injury from electric shock: Disconnect the battery negative lead prior to assembly/disassembly.**

**NOTE! Incorrect usage can damage the device: Only use the device within the specified operating parameters.**

**NOTE! Install the device in a dry and cool location.**

**NOTE! Residual voltage can cause damage: Do not place the positive lead on the vehicle bodywork.**

## 2 Package Contents

No.	Name
1x	BW 801e battery monitor
2x	Insulating cap (400N9V02)
1x	3-colour LED

### Accessories

Part number	Name
1401036701	3-colour LED in socket with cable (5m)
1401036702	3-colour LED in socket with cable (1m)

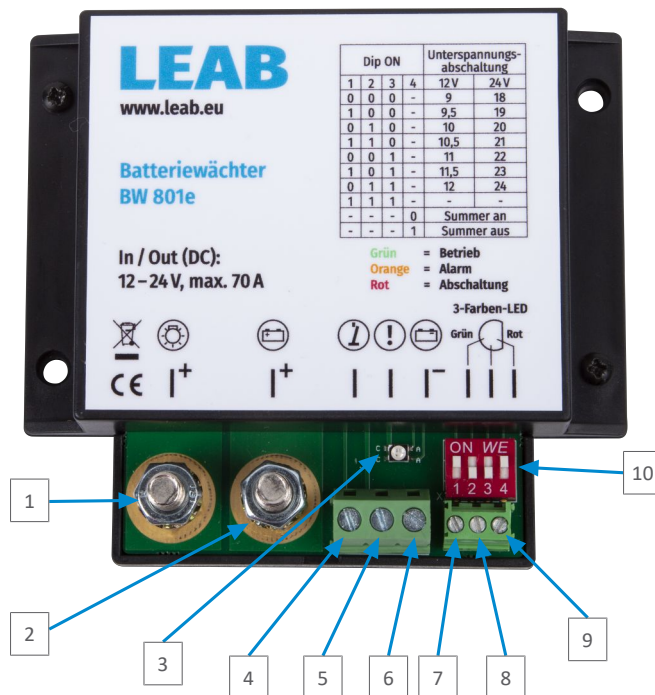
## 3 Technical Specifications

	Part no.: 1305041043
Model	BW 801e
Nominal voltage (DC)	12 V or 24 V
Continuous load	50 A
Overload (10 s)	70 A
Switch-off voltage	12 V: 9 V ... 12 V; 24 V: 18 V ... 24 V (adjustable)
Operating temperature	-30 °C ... +70 °C
Self consumption	6 mA
Dimensions (L x W x H)	100 mm x 90 mm x 25 mm
Weight	0.11 kg

## 4 Setting the Threshold Values (DIP Switches)

DIP ON				Switch-off voltage [V]		Alarm threshold [V]		Switch-on voltage [V]	
1	2	3	4	12 V	24 V	12 V	24 V	12 V	24 V
0	0	0	-	9	18	9.5	19	10.5	21
1	0	0	-	9.5	19	10	20	11	22
0	1	0	-	10	20	10.5	21	11.5	23
1	1	0	-	10.5	21	11	22	12	24
0	0	1	-	11	22	11.5	23	12.5	25
1	0	1	-	11.5	23	12	24	13	26
0	1	1	-	12	24	12.5	25	13.5	27
1	1	1	-	-	-	-	-	-	-
-	-	-	0	Internal buzzer on					
-	-	-	1	Internal buzzer off					

## 5 Installation



1	Consumer connector	2	Battery connector
3	Operating display	4	"External switch" connector
5	"Alarm output" connector	6	"Ground" connector
7	"Green" LED connector (+)	8	LED connector (-)
9	"Red" LED connector (+)	10	DIP switch

To install the device, proceed as follows:

1. Disconnect the battery from the vehicle power circuit.  
**WARNING! Disconnect the negative cable first.**
2. Set the desired switch-off voltage on the DIP switches (10).
3. Connect an earth wire from the battery monitor's ground (6) connector to the battery's negative terminal.  
**NOTE! Only the switching current (1 A) is permissible. The consumer load must not lead via the 'ground' connector (6).**
4. Disconnect the positive lead from the battery to the consumers and connect the battery monitor at the screw terminals (1) and (2).
5. Connect the battery to the vehicle power circuit.  
⇒ The device is ready for operation. When the battery voltage is sufficient, the operating display (3) lights green.

### Optional connections

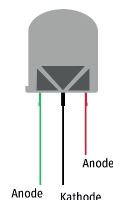


Fig. 1: 3-colour LED

- Connect an external buzzer via the 'alarm output' connector (5).  
**NOTE! Contact to ground, max. 1 A.**
- Use the battery monitor as a main switch for connected consumers by running a line with a switch between the negative terminal of the battery and the connector for "external switch" (4).
- Connect the 3-colour LED by connecting the anode for green to the "Green" LED connector (7), the cathode (longest leg) to the LED connector (8) and the anode for red (shortest leg) to the "Red" LED connector (9).





## 6 Operating status

Indicator	Operating status
LED lit green Alarm output inactive Internal buzzer off	Battery voltage is above the alarm threshold setting, device is active.
LED flashes green Alarm output inactive Internal buzzer off	External switch (4) is closed, consumers are switched off.
LED lit orange Alarm output active Internal buzzer beeps at interval*	<b>Safety level 1:</b> Below alarm threshold. Battery voltage will soon reach the switch-off voltage. 1. Switch the consumers off or charge the battery
LED flashes red Alarm output inactive Internal buzzer beeps 1x	<b>Safety level 2:</b> Below switch-off voltage. Consumers have been disconnected from the battery to avoid deep discharge. 1. To supply consumers again, charge the battery to the switch-on voltage.
LED no colour	Device is switched off or incorrectly installed.

\* Internal buzzer interval: 600 s – 300 s – 150 s – 75 s – 37 s – 18 s – 9 s.

After that: Internal buzzer beeps every 9 seconds until the switch-off voltage is reached.

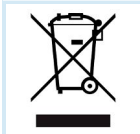
**NOTE! The operating status of the device is shown by the operating display (3), the 3-colour LED, the alarm output (5) and the internal buzzer.**

## 7 Decommissioning

To decommission the device, proceed as follows:

1. Disconnect the battery from the vehicle power circuit.  
**WARNING! Disconnect the negative cable first.**
2. Remove the leads on the connectors (1), (2), (4), (5) and (6) from the vehicle.  
⇒ The device is decommissioned.

## 8 Disposal



Dispose of the device in accordance with the Waste Electrical and Electronic Equipment Regulations (WEEE).

The system must not be disposed of with household waste. Take it to a recycling point or return it to your point of sale.

## 9 EU Declaration of Conformity



The **BW 801e** complies with the requirements of the following directives:

- 2014/30/EU: EMV
- 2011/65/EU: RoHS

