

**IBScontrol: Makes you free for real adventure.  
Checks energy supply and readiness to perform.**

Brief  
Information



Electronics

- *Intelligent battery sensor with colour display for 12 V vehicle electric systems.*
- *Precise determination and representation of battery capacity, aging and remaining running time.*
- *Convenient retrofit energy management.*

## Product features



IBScontrol is available as a surface-mounted or flush-mounted version

Which motor home or caravan enthusiast hasn't experienced the problem? Shortly before the holiday starts, the caravan or motor home battery is completely charged. The first few days of the holiday are OK, too, but then the battery suddenly gives up the ghost. That's the end of it! There are a multitude of possible reasons. For one thing, vehicles contain more and more consumers. In addition, as batteries get older, they are no longer able to be charged up to 100% of their nominal capacity. Hella's IBScontrol measures the actual battery capacity still available and shows it clearly on a colour display.

- Permanent monitoring of the battery
- The most important information at a glance
- Precision due to battery-specific adjustment
- Energy management of consumers
- Intuitive control
- Very simple mounting thanks to plug-and-play installation



**Ideas today for  
the cars of tomorrow**

# The advantages in detail

## Permanent monitoring of the battery

Continuous calculation and display of the current state of charge and health of the battery.

## The most important information at a glance

Direct indication of battery capacity, battery aging, current consumption and remaining running time on a graphical colour display.

## Precision due to battery-specific adjustment

Battery-specific adjustment of characteristic curves for standard starters, gel and AGM batteries makes high system precision possible.

## Energy management of consumers

The four individually programmable switch outputs of the IBScontrol allow consumers, chargers and alternators to be switched off and on.

## Intuitive control

The menu guidance of IBScontrol makes straightforward and intuitive operation possible.

## Very simple mounting thanks to plug-and-play installation

The prefabricated wire harness and battery pole adapter make installation easier (without the ground cable having to be disconnected).

## Saving energy with automatic switch-off

The automatic switch-off feature of the IBScontrol and three different display brightness levels ensure the system itself only has minimum current consumption.

## Data recording on microSD card

In order to analyse consumer behaviour, all the data can be recorded and evaluated easily via MS Office. Data logging on SD-card with simple evaluation via MS Office.

# The control panel

## 1. Remaining running time

Shows the remaining running time with current consumption value

## 2. Current display

Red = Discharge  
Green = Charge

## 3. Current as numerical value

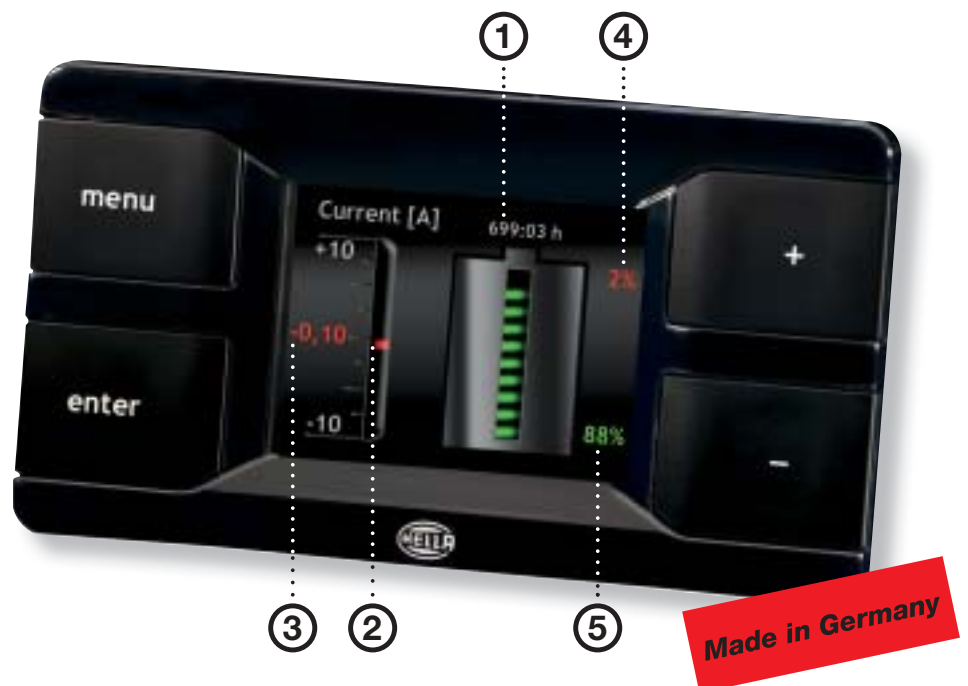
Example: Current drain 0.1 A

## 4. Battery aging

(SOH = State of Health)  
Example: The original battery capacity has already been reduced by 2 %

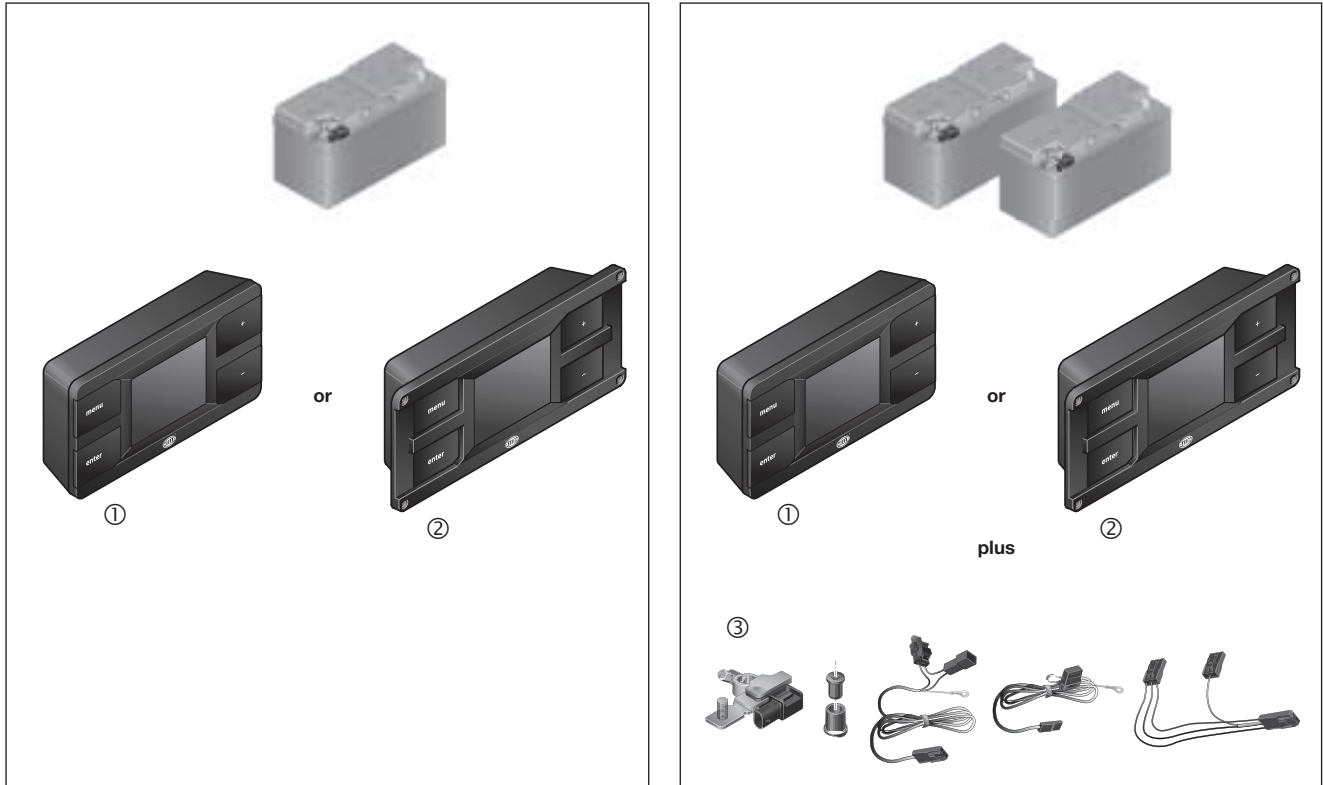
## 5. Charge state

(SOC = State of Charge)  
Current state of charge of the battery  
Example: Charge state 88 %



- Extremely low current consumption thanks to automatic switch-off feature
- Four switch outputs and buzzer can be programmed individually, including hysteresis
- Battery-specific adjustment of the system by selecting the respective battery characteristic curves (standard starter, gel and AGM)
- Data logging on SD-card with simple evaluation possibility
- Surface-mounted or flush-mounted version

## Can be used on one or two batteries

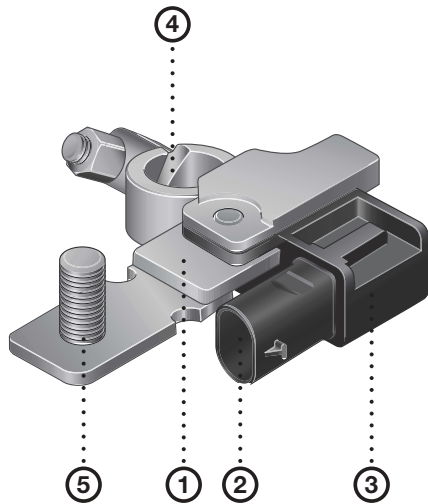


① IBScontrol surface-mounted version ② IBScontrol flush-mounted version ③ IBScontrol extension kit for second battery

## IBScontrol: Product overview

Product photo	Part number	Specification	Scopes of supply
	<b>6PY 178 103-811</b>	IBScontrol set with display for flush-mounted version (illustrated)	<ul style="list-style-type: none"> <li>■ IBScontrol display (high-sheen, black)</li> <li>■ IBS battery sensor</li> <li>■ Battery pole adapter</li> <li>■ Completely prefabricated wire harness</li> <li>■ Operating/mounting instructions (CD ROM)</li> <li>■ Mounting assembly (screw, cable tie, mounting plates depending on variant)</li> </ul>
	<b>6PY 178 103-831</b>	IBScontrol set with display in flush-mounted version (not illustrated)	
	<b>6PY 178 103-841</b>	Extension kit to monitor second battery	<ul style="list-style-type: none"> <li>■ IBS battery sensor</li> <li>■ Battery pole adapter</li> <li>■ Completely prefabricated wire harness</li> </ul>

## Technical details



IBS battery sensor

1. Shunt on the sensor
2. Plug
3. Sensor module
4. Negative pole terminal
5. Attachment bolt  
for battery pole adapter



Mounted to standard battery pole

- Directly mounted to the standard battery pole on account of the integrated shunt on the sensor
- Simple plug and play fitting thanks to the battery pole adapter included in the scope

## Technical explanations

To be able to deal carefully with the vehicle battery, you need to know the state of charge, state of health and about any changes to the battery. The IBScontrol provides information about the current state of the energy balance, thus making it possible to plan energy supplies. It indicates the state of charge, age of the battery, currents flowing in and out, and can intervene actively in the energy balance and issue a warning if the residual capacity reaches a critical value.

### How it works

The IBS (Intelligent Battery Sensor) is located directly on the negative battery pole and registers the following through the integrated shunt and the sensor:

- The battery's open-circuit voltage
- All currents flowing in and out
- The battery's ambient temperature

To enable the provision of reliable information, the IBScontrol can be adapted to the specific battery by selecting the characteristic curve of the battery (gel, AGM, standard starter). The information is provided at a glance on the graphical colour display. Consumers can be switched off or the alternator switched on at a critical energy level via four independent switch outputs which can be programmed individually.

In addition, an acoustic buzzer integrated in the display can be programmed to issue a warning before the battery goes dead.

To avoid the output signal switching on and off all the time, a defined value is set in the IBScontrol display as the switching distance (hysteresis) between the switch-on and switch-off values.

# Technical data

Technical data: IBS	
Supply voltage	6 to 18 V
Working temperature range	- 40 °C to + 105 °C
Excess temperature range	+105 °C to + 125 °C
Working current range	- 200 to + 200 A
Max. current measuring range	-1200 to + 1200 A
Max. battery capacity	249 Ah
Installation area	Engine compartment, interior
Protection class	IP 6K9K
Current consumption at 12 V	ca. 15 mA
a) in operation	< 1 mA
b) in standby mode	

Technical data: Display	
Supply voltage	6 to 18 V
Working temperature range	- 20 °C to + 70 °C
Storage temperature range	- 30 °C to + 80 °C
Installation area	Interior
Protection class	IP 30
Current consumption at 12 V	
a) Display full brightness	ca. 60 mA
b) Display medium brightness	ca. 50 mA
c) Display low brightness	ca. 40 mA
d) Screen switched off	< 1 mA
e) In standby mode*	
Outputs	max. 100 mA per output, protected from excess load and short-circuit

\*:

- With active outputs and connected load, the load current must be added
- In "Data logging" mode, the IBS display remains active and requires a current of ca. 20 mA with the screen switched off
- In "Buzzer active" mode, the IBS display remains active and requires a current of ca. 20 mA with the screen switched off
- In "Output 1..4 active" mode, the IBS display remains active and requires a current of ca. 20 mA with the screen switched off

## Explanations

**Shunt:** The shunt is a high-precision measuring resistor for indirect current measurement.

**Buzzer:** Integrated acoustic signal for indicating certain values e.g. state of charge has reached 25 %

## Mounting

The accessories included enable the device to be mounted quickly and easily.

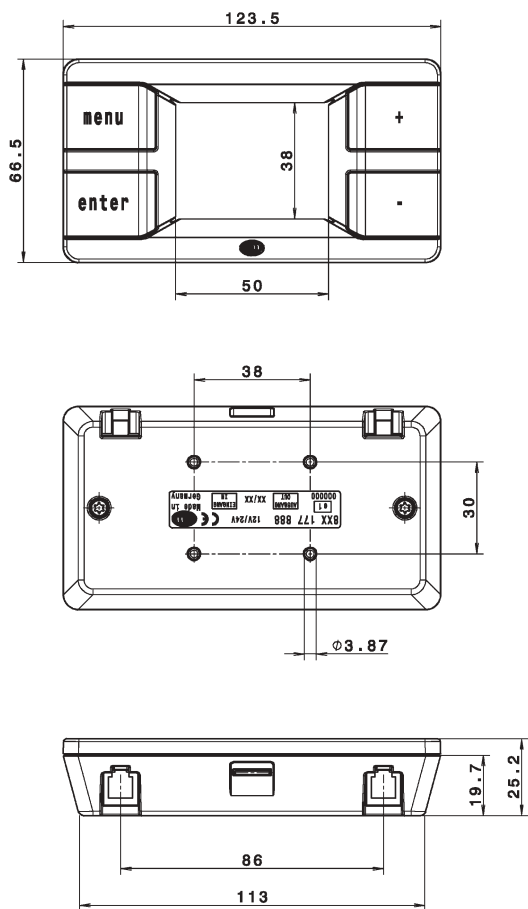
Thanks to the screw-on battery pole, the IBS can be used like the "normal" negative battery pole, so that there is no need to disconnect the existing ground cable.

The IBS is connected to the display by plug and play using the wire harness provided. The display now shows the data delivered by the sensor and informs the user about the current battery voltage, remaining battery capacity, state of health of the battery and any currents flowing in or out.

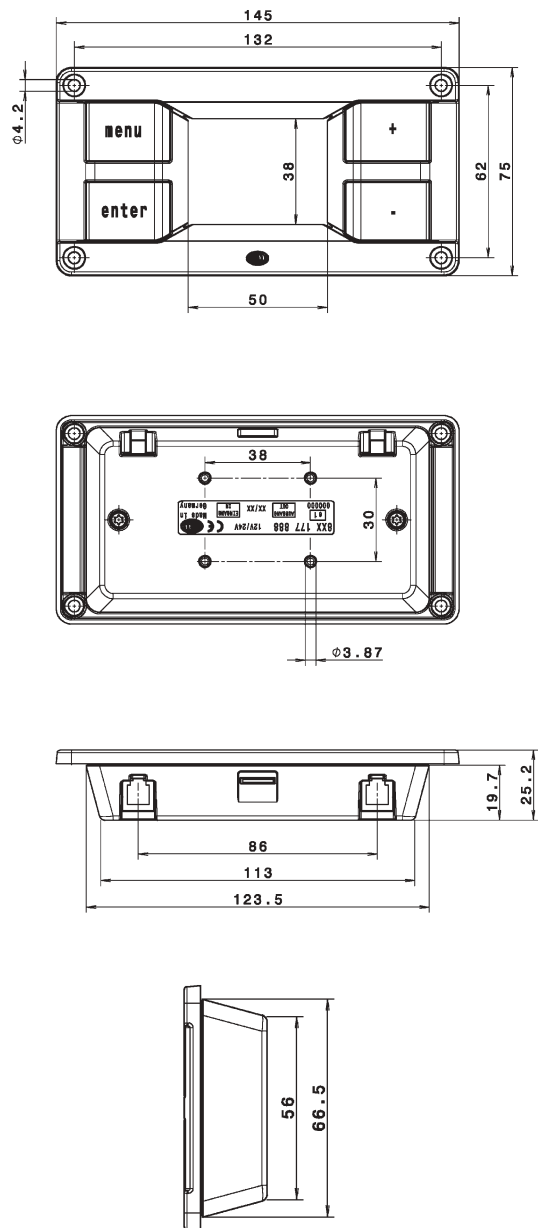
The extension kit can be used to monitor a further battery using a second intelligent battery sensor and the completely prefabricated cable set provided. The display automatically recognises the connection of a second sensor and adapts the display screen accordingly.

# Technical drawings

## Surface-mounted version



## Flush-mounted version



Dimensions	Surface-mounted version	Flush-mounted version
Length	123.5 mm	145 mm
Height	66.5 mm	75 mm
Installation height	25.2 mm	5.5 mm
Installation depth	–	19.7 mm

# IBScontrol: Connection system

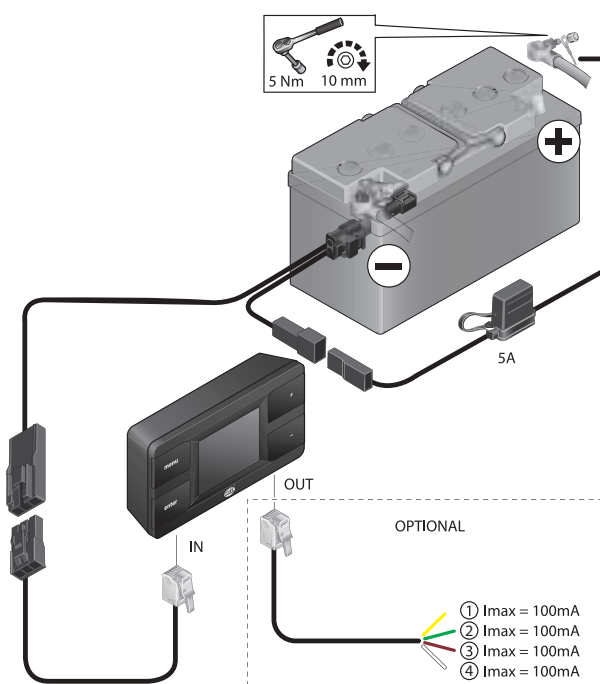


Shown here: Example with two batteries and two IBS battery sensors

## Schematic diagram of IBScontrol connection

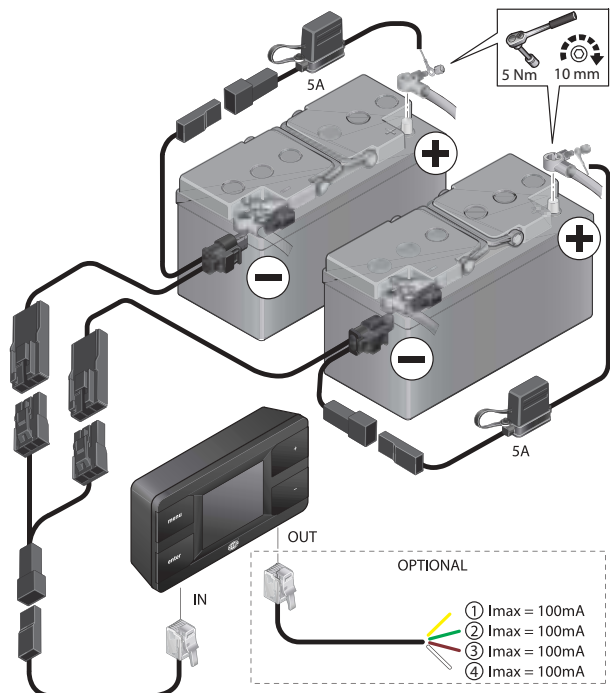
### Connection to one battery

You need the IBScontrol kit surface-mounted or flush-mounted version for connection

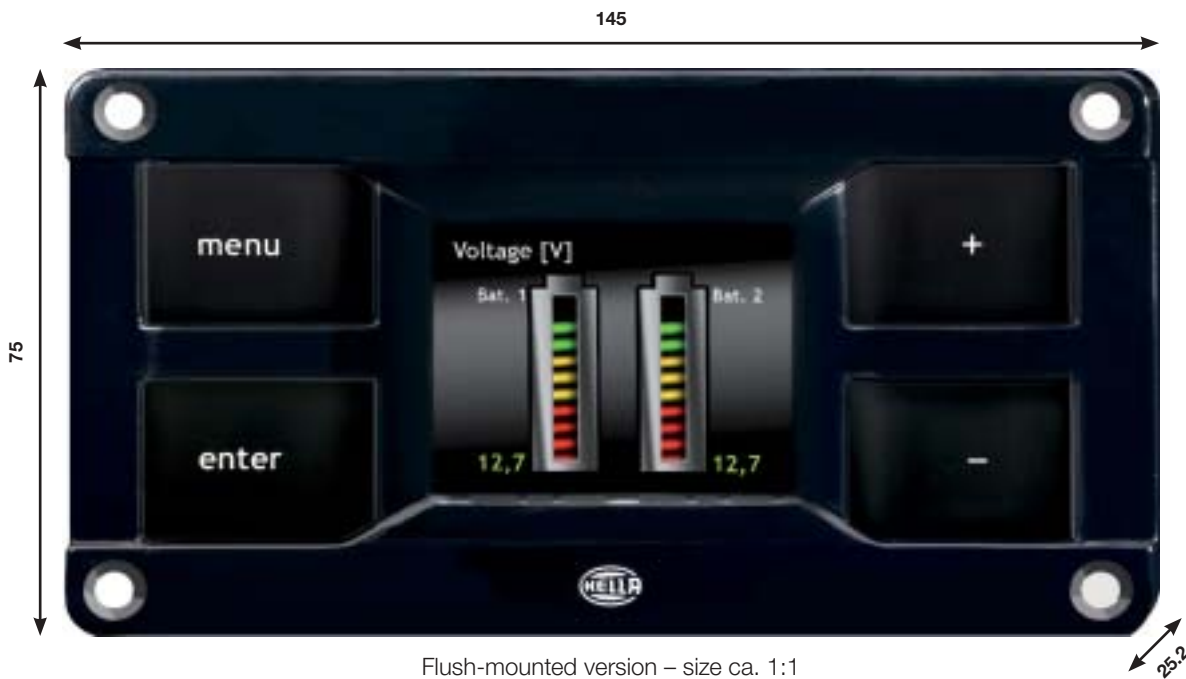


### Connection to two batteries

You require the extension kit 6PY 178 103-841 in addition for connection



# Attractive design in a piano lacquer look



The display shows the state of charge of 2 batteries. (To connect the second battery, you will need the extension set)

Please note that when you copy or print out this document, size scaling can be carried out by your printer. So please only use this illustration as a placement aid – not as a marking or drilling template!

For more information about IBScontrol visit [www.hella.com/caravan](http://www.hella.com/caravan)