

## MelfBox®

Vehicle electrical input system



## User Manual

## Welcome

With the LEAB MelfBox, you have opted for a modern and technically innovative vehicle electrical input system. Read this manual carefully before installing and commissioning, and retain it for future reference. If you have any suggestions or comments about this manual, please let us know by email: [techdoc@leab.eu](mailto:techdoc@leab.eu).

Our website, [www.leab.eu](http://www.leab.eu), contains further product information as well as the latest version of the manual. Here you will also find information about optional accessories or variants of your product.

## Table of Contents

1	About this Guide.....	1
2	General Safety .....	2
3	Package Contents .....	2
4	About the MelfBox .....	3
5	Assembly and Installation.....	4
5.1	Creating a Body Cutout.....	4
5.2	Connecting and Assembling the Supply Unit .....	5
6	Operation .....	6
7	Cleaning and Maintenance .....	7
8	Disposal .....	8
9	Technical Specifications.....	8
10	Accessories .....	8
11	EU Declaration of Conformity.....	9
12	Warranty.....	9

## 1 About this Guide

The technical data, information and illustrations are carefully compiled and correspond to the state of the art at the time of printing. LEAB reserves the right to change products and documentation without prior notice at any time in accordance with technical requirements and new developments.

Throughout the manual, you will be alerted to warnings and safety notices about potential hazards associated with handling the product. The colours and signal words indicate the severity of the hazard:

Signal word	Meaning
 <b>DANGER</b>	Warns of imminent danger resulting in death or serious injury.
 <b>WARNING</b>	Warns of a potentially dangerous situation that can result in death or serious injury.
 <b>CAUTION</b>	Warns of a potentially dangerous situation that can result in moderate or minor injuries.
<b>NOTICE</b>	Warns of a potentially dangerous situation that can result in material and environmental damage.

In this manual you will also find the following symbols:



Shows you useful tips and information about the product.



Indicates a mandatory requirement for the following handling instruction.



Shows the result of a handling instruction.

It is prohibited to copy, duplicate, translate or otherwise pass on the content of this manual to third parties without the express written permission of LEAB.

## 2 General Safety

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

The LEAB MelfBox is a vehicle electrical input system.

Assembly and installation should only be carried out by qualified electricians. 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.

When installing and using the MelfBox, observe the basic safety instructions:

- Electric current hazard: Before operation, make sure there are no open or damaged cables.
- Replace defective parts or damaged cables immediately.
- Only use the MelfBox within the specified voltage limits.
- Reverse polarity can damage the unit: Before operation, make sure that all cables are connected correctly.

## 3 Package Contents

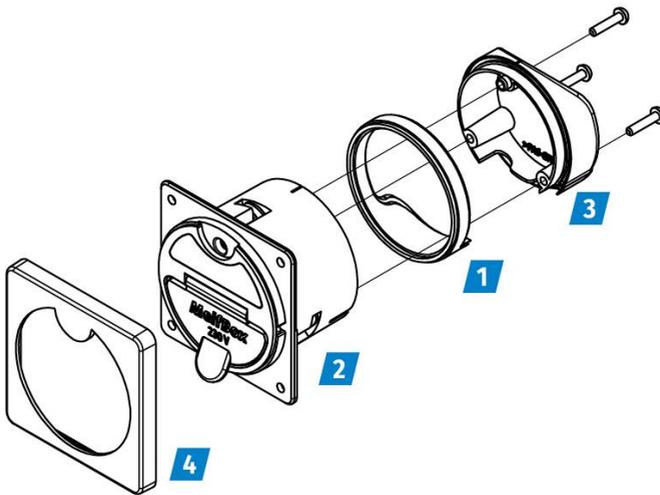
Item	No.
Housing	1x
Housing seal	1x
Cap	1x
Screw 3.5 x 14	3x
Body seal	1x
Cover	1x
Quick start guide	1x

## 4 About the MelfBox

The LEAB MelfBox is a vehicle electrical input system and has an integrated start-locking mechanism. An electronic system prevents contact erosion. The status display provides reliable information about the current system status.



Number	Description
1	Status indicator
2	Flap



Number	Description
1	Housing seal
2	Housing
3	Cap
4	Cover

## 5 Assembly and Installation

### Notes on Assembly Site

To ensure perfect operation, observe the following notes on the assembly site:

- Choose a vertical surface.
- Choose a site that has minimum dust and is protected from jet water.
- Make sure that there is sufficient space at the assembly site (see Figure 1).

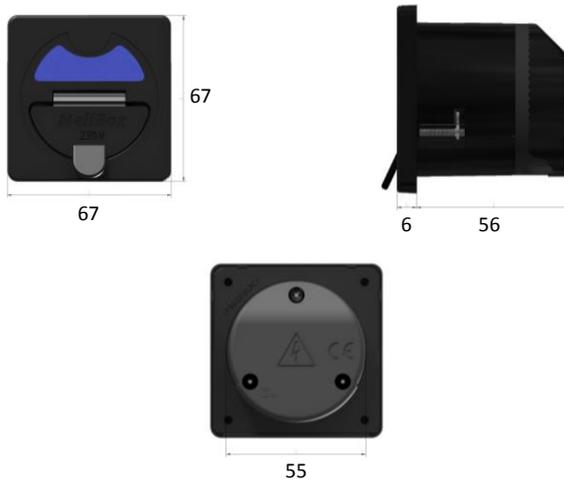


Figure 1: Supply unit dimensions [mm]

### 5.1 Creating a Body Cutout

1. Saw a hole (diameter: 55 mm) in the vehicle body.
2. To prevent corrosion, seal the cut surfaces.



The body cutout is created and you can connect the supply unit.

## 5.2 Connecting and Assembling the Supply Unit

Before connecting the supply unit:

1. Route a connection cable (H07RN-F, 3 x 2.5) in the vehicle.
2. Attach the connection cable to the vehicle installation.
3. Optional: Route a cable (H05RN-F, 2 x 0.5) for the start-locking in the vehicle and connect it to the specific vehicle installation (control module or similar).



**Notice:** Install a suitable fuse in the vehicle (up to 16 A).

**Notice:** Install a suitable fuse in the vehicle (up to 1 A).

### Connecting the Supply Unit

1. Pierce the housing seal at the intended location with a pointed tool.
2. Feed the connection cable (H07RN-F, 3 x 2.5) through the hole.
3. Connect the wires of the connection cable to the corresponding screw terminals (see Figure 2).

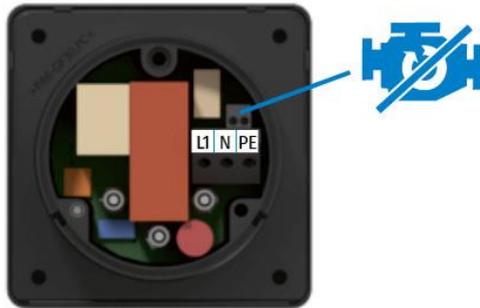


Figure 2: Connections

### Optional: Creating the Start-Locking Mechanism

1. Insert the start-locking cable (H05RN-F, 2 x 0.5) through the second hole of the housing seal.
2. Insert the wires of the start-locking cable into the push-in terminals



(max. current: 1 A).

## Assembling the Supply Unit



Before assembly the supply unit:

Check the correct connection of the cables in the MelfBox housing.

Check that the body seal is seated on the housing.

1. Place the housing seal in the cap.
2. Attach the cap with the 3 screws (3.5 x 14).
3. Check the tightness of the housing seal.
4. Push the supply unit into the body cutout.
5. Tighten the 3 screws on the front until the supply unit is firmly seated in the body cutout (maximum torque: 1 Nm).
6. Attach the cover.



The MelfBox supply unit is assembled and ready to use.

## 6 Operation

### NOTICE

#### Device defect from inactive start-locking mechanism

- Note that start-locking only works when the MelfBox is active (lit status indicator).

1. Open the flap of the supply unit.
2. Plug the coupling into the supply unit.



The voltage input is provided at the load output of the supply unit. Connected consumers are supplied. The status display shows the operating status of the MelfBox.

### Operating Status Overview

Status indicator	Operating status
Blue, flashing	The MelfBox is active. A minimum of 50 W power is removed from the supply unit (the greater the power, the faster the flashing).
Yellow, steady light	The MelfBox is active. No power is removed. <ul style="list-style-type: none"> <li>• Check the connection of the consumers.</li> <li>• Check the fuse at the outlet of the MelfBox.</li> </ul>

## 7 Cleaning and Maintenance

<b>⚠ WARNING</b>
<b>Injury from electric shock</b> <ul style="list-style-type: none"> <li>• Before doing any work, make sure that the MelfBox system is de-energised.</li> </ul>
<b>NOTICE</b>
<b>Strong jet water can damage the unit</b> <ul style="list-style-type: none"> <li>• Do not aim the pressure washer or other devices directly at the MelfBox supply unit.</li> </ul>

### Regular Activities

- Check the MelfBox for external damage each time before you use it.
- Clean the supply unit once a month with compressed air.
- Protect the coupling and cables from being run over, getting wet and other liquids.
- Regularly check the tightness of the supply unit in the vehicle body.

## 8 Disposal

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



The device must not be disposed of with household waste. Take it to a recycling point or return it to your sales outlet.

## 9 Technical Specifications

MelfBox, Supply Unit	
Part no.	1105002001
Nominal voltage (AC)	230 V (+/- 10 %)
Current, max. (AC)	16 A
Frequency	50 Hz
Status indicator	LED
Installation diameter	55 mm
Installation depth	56 mm
Length	62 mm
Width	67 mm
Height	67 mm
Cable cross section	2.5 mm <sup>2</sup>
Material	Polyamide, glass fibre reinforced (PA6 GF30)
Contacts	L1 / N / PE
IP rating	IP55
Protection class	I
Weight	0.12 kg

## 10 Accessories

You can order accessories either through your dealer or directly from LEAB.

Just visit our Webshop at [www.leab.eu](http://www.leab.eu) or call us on:

☎ +49(0) 4621 9 78 60-110.

Part no.	Description
1105001001	Connection cable, 2.5 m
1105001002	Connection cable, 5 m
1105001003	Connection cable, 10 m

## 11 EU Declaration of Conformity

The **LEAB MelfBox** product complies with the requirements of Directives 2014/35/EU, 2014/30/EU and 2011/65/EU.

The current and complete document is available on request from [techdoc@leab.eu](mailto:techdoc@leab.eu).



## 12 Warranty

LEAB grants a legal guarantee from the date of purchase if the installation of the product has been carried out by a specialist and if it has been used in accordance with the intended use.

If defects or malfunctions occur during normal use within this time, LEAB will, at its discretion, repair or replace the device free of charge.

Requirements for the completion of work under warranty are:

- Invoice or delivery note
- Model name or type
- Detailed description of the fault and the installation

### Procedure

If the device does not operate correctly following the instructions in this manual, or if the error persists, contact your dealer or LEAB.

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