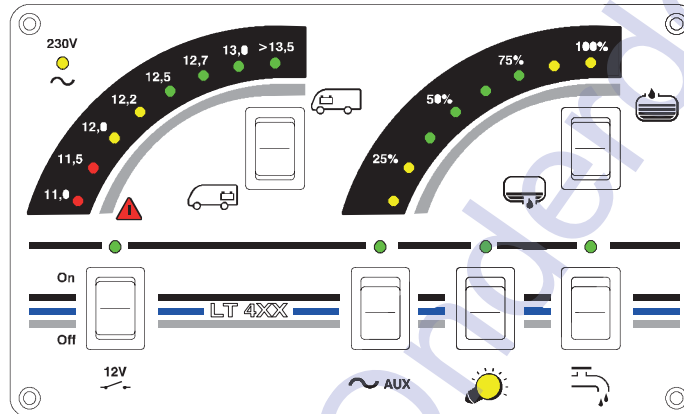


## Installation instructions



## LT 4XX Family of Switch Panels

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## 1 Safety Information

### 1.1 Meaning of safety symbols



Y **DANGER!**

Failure to heed this warning may result in death or serious injury.



Y **WARNING!**

Failure to heed this warning may result in personal injuries.



Y **ATTENTION!**

Failure to heed this warning may result in damage to the device or connected consumers.

### 1.2 General safety information



Y **WARNING!**

Hot components!

Burns:

- F Blown fuses should only be replaced once the system has been completely disconnected from the power supply.
- F Only replace blown fuses once the cause of the fault has been identified and rectified.
- F The rear of the device may become hot during operation. Do not touch.



On the PCB of the device are components that can be destroyed by electrostatic discharge (ESD). Do not touch the components on the PCB.

## 2 Introduction

**These installation instructions are aimed at trained personnel.**

They contain important information on the connection and safe operation of the device. The safety information provided must be observed.

Always follow the relevant instruction manual in addition to the installation instructions.

### 3 Mechanical installation

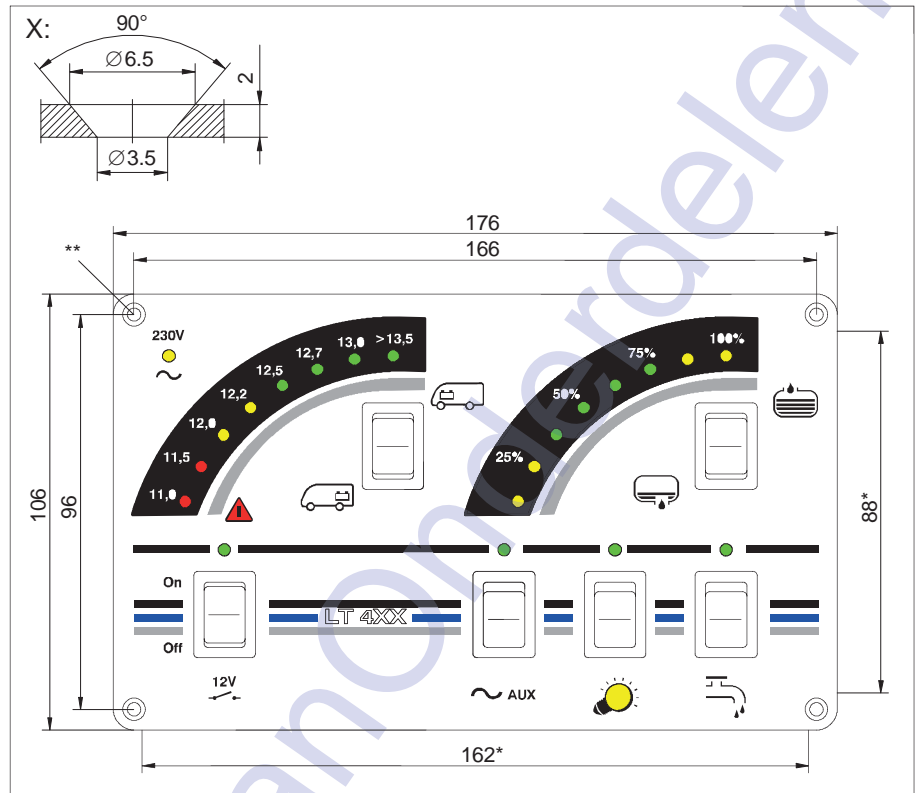


Fig. 1 Dimension diagram for switch panel LT 400, LT 402, LT 410, LT 411 and LT 420 (dimensions in mm)

\* Furniture cut-out, installation depth including plug-in connector ca. 35 mm  
 \*\* 4 x counterbores - see X

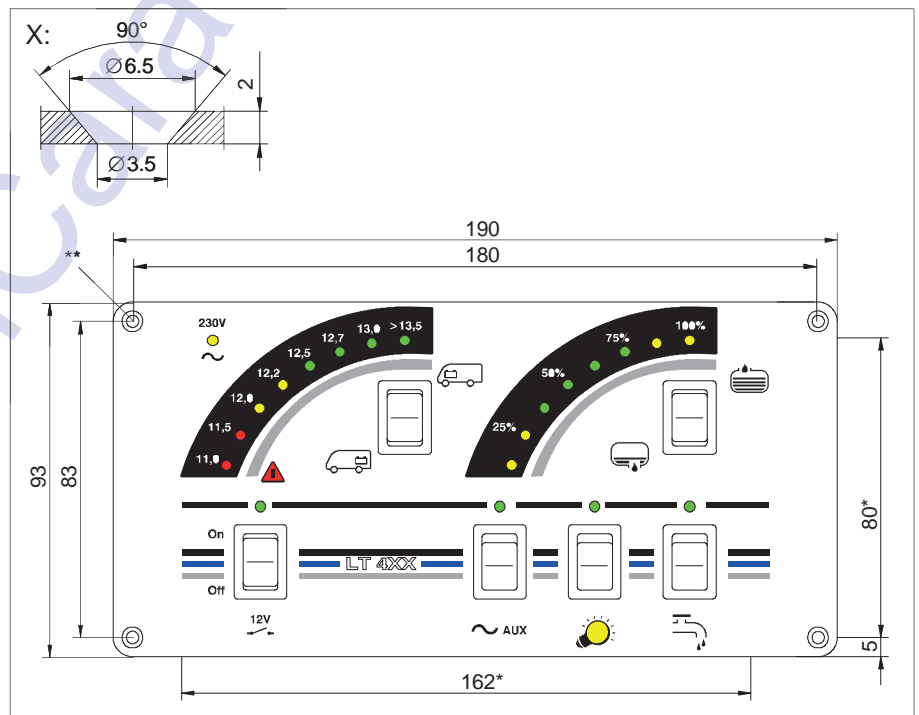


Fig. 2 Dimensional diagram for LT 421, LT 412, LT413-2 switch panel (dimensions in mm)

\* Furniture cut-out, installation depth including plug-in connector ca. 35 mm  
 \*\* 4 x counterbores - see X

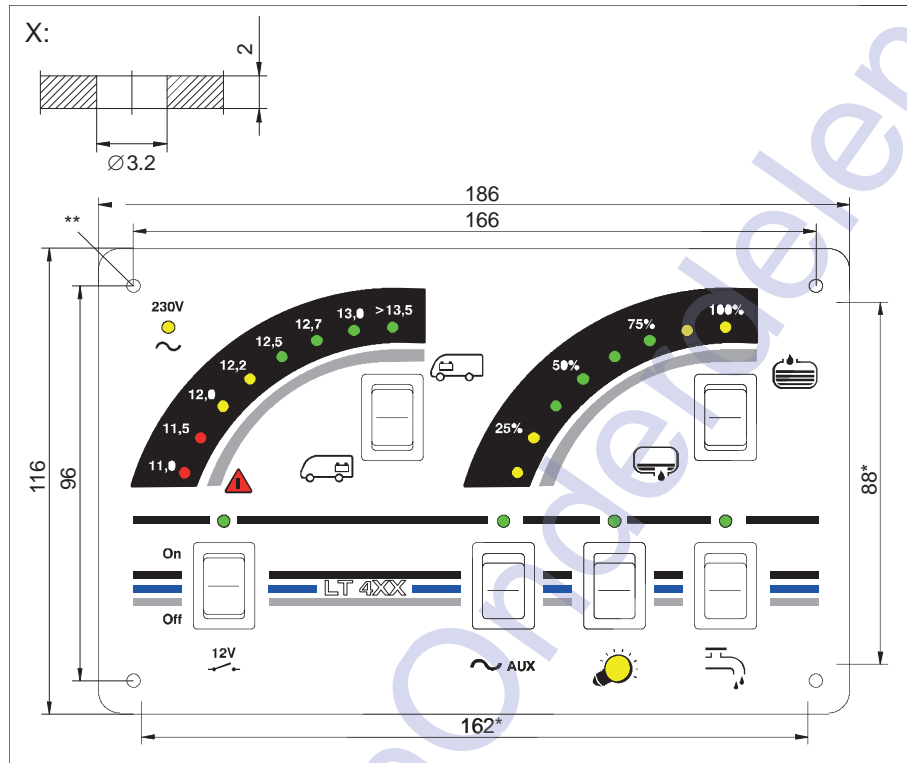


Fig. 3 Dimensional diagram for LT 400a switch panel (dimensions in mm)  
 \* Furniture cut-out, installation depth including plug-in connector ca. 35 mm  
 \*\* 4 x counterbores – see X

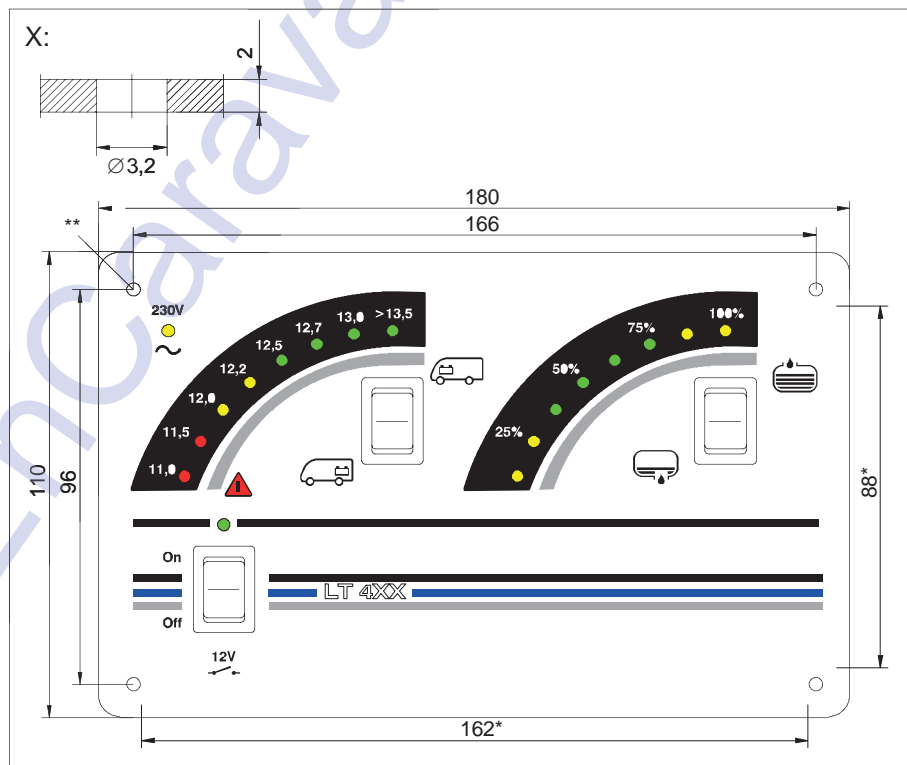


Fig. 4 Dimensional diagram for LT 410 a, LT 419 switch panel (dimensions in mm)  
 \* Furniture cut-out, installation depth including plug-in connector ca. 35 mm  
 \*\* 4 x counterbores – see X

- The device is intended for installation into the front of a piece of furniture.
- Environment** " Install in a dry, sufficiently ventilated location.
- Minimum clearance** " Ensure a minimum clearance to the surrounding fixtures and fittings:
- ⌘ The installation depth, including free space necessary for the connectors and cables, is 35mm.
  - ⌘ The ambient temperature may not exceed +45 °C during operation.
- Fitting** Screwing down the display panel:
- " Mark out the hole pattern (see Figs. 1 & 2).
  - " Pre-drill the holes (2mm diameter).
  - " Use four 2.9 DIN 7997 screws.
    - ⌘ LT 400, LT 4100, LT 411, LT 412, LT 420, LT 421: 2.9 DIN 7997 or similar (countersunk screw with 90°)
    - ⌘ LT 400 a: 2.9 DIN 7996 or similar (cylinder head screw)
  - " Torque: Tighten to max. 1 Nm.
- Removal** If a switch panel needs to be removed, first carry out the steps described in "Preparation for the connection" (Section 4.2.1). Only then unplug the electrical connections.

## 4 Electrical connection

**Connection sequence** Connect the rear of the switch panel in the following sequence (please also refer to the block diagram and the rear view in the instruction manual):

1. Connectors to sensors/probes
2. Connection to an electroblock

**Disconnection** Disconnect in the reverse order.

### 4.1 Block diagram/wiring diagram



Y The block diagram and wiring diagram are appended to the instruction manual for the LT 4XX switch panel.

### 4.2 Connecting peripheral devices

#### 4.2.1 Preparations for the connection

- " Detach the CEE power plug from the vehicle.
- " Disconnect the battery terminals of the living area battery.
- " Disconnect the battery terminals of the vehicle battery.

### 4.2.2 Peripheral devices

- " Connect the tank sensors:
  - 6-pin connector on X1 (left): Water tank
  - 5-pin connector on X2 (middle): Waste water tank

### 4.2.3 Electroblock

- " Plug the ready-made cable (12-pin) into the LT 4XX switch panel.
- " Plug the ready-made cable (12-pin) into the EBL ... electroblock.

## 5 Initial use

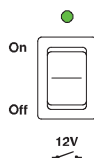
### 5.1 Checks prior to initial use

#### Before starting up

- " Ensure the leisure area battery is connected.
- " Ensure the vehicle battery is connected.
- " Ensure that an EBL ... electroblock is connected (also refer to the instruction manual and the installation instructions for that electroblock).
- " Ensure that the accessory for measuring the fill level of the tanks is connected and operational.

### 5.2 Starting up the system

- " After connecting the battery or after a battery change: 12V main switch on the switch panel must be turned on briefly to start up the consumers.
- " Briefly press the left-hand button upwards.



### 6 Technical details

#### 6.1 Mechanical details

**Dimensions** (W x H x D in mm) 176 x 106 x 35 including plug-in connectors  
**LT 400, LT 410, LT 420**

**Dimensions** (W x H x D in mm) 186 x 116 x 35 including plug-in connectors  
**LT 400 a**

**Dimensions** (W x H x D in mm) 190 x 93 x 35 including plug-in connectors  
**LT 421**

**Installation depth** 35 mm

**Weight** 140 g

**Front** Acrylic glass

#### 6.2 Electrical details

**Operating voltage** 12 V (10–14.5 V), powered via electroblock

**Standby current from living area battery**  $\leq$  For 12.6V supply voltage with Main switch OFF: ca. 3.5 mA

**Fill level reading** The fill level reading is only applicable for plastic water tanks.

#### 6.3 Environmental parameters

**Operating temperature** -10 °C to +45 °C

**Storage temperature** -20 °C to +70 °C

**Humidity** Operation in dry environment only

**CE** CE mark

### 7 Storage - Packaging - Transportation

Only transport and store the switch block when the packaging is suitable and ambient conditions are dry.

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