

## EM-TRF-USV

### FOR THE CONNECTION OF EASYLAB TO THE 230 V MAINS AND FOR UNINTERRUPTIBLE POWER SUPPLY

Expansion module for the direct connection of EASYLAB controllers  
Type TCU3 and adapter modules Type TAM to the 230 V mains, including  
uninterruptible power supply

- Double-stack terminal blocks for 230 V supply voltage connection
- Electric plug connection to the main PCB
- The expansion module is fitted into the casing with the EASYLAB base component
- Uninterruptible power supply for the connected modules
- Integral battery charging electronics with charge status indicator
- Power failure is signalled to the EASYLAB control panels
- Controller action in case of a power failure can be defined

## Application



### Application

- Expansion module Type EM-TRF-USV for the EASYLAB system
- For the connection of EASYLAB base components (controller TCU3 or adapter module TAM) to the 230 V AC supply voltage (mains)
- Power supply for the base component and the connected modules
- Battery pack ensures uninterrupted power supply even in case of a mains power failure
- Control and/or alarm signalling even in case of a power failure
- Factory mounted or for retrofitting into the EASYLAB base component casing

### Special characteristics

- Ready for installation, can be easily connected to the main PCB
- Double-stack terminal blocks for 230 V AC supply voltage connection
- Simple electrical connection of expansion module and EASYLAB main PCB using a connection plug
- Simple wiring of switch-operated fume cupboard lighting in combination with the EM-LIGHT expansion module

- Intelligent charge control with trickle charging, deep discharge protection, and reverse voltage protection
- Operating state indicator light
- Controlled response in case of a power failure can be defined (EASYLAB TCU3 with expansion module EM-TRF-USV)
- In case of a power failure: Optical signal on the control panel; configurable alarm signalling

## Description



### Parts and characteristics

- Mains transformer 230 V AC (primary), 24 V AC (secondary)
- Intelligent charge control with trickle charging, deep discharge protection, and reverse voltage protection
- Operating state indicator light
- PCB plug connector to connect the module to the EASYLAB main PCB

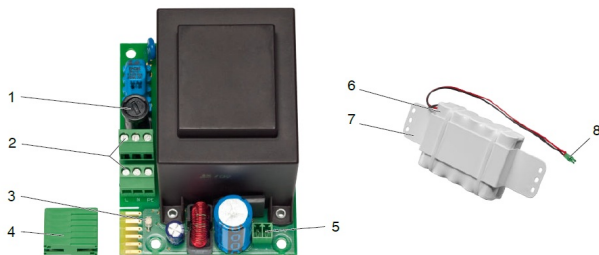
### Useful additions

- EasyConnect: Configuration software for the commissioning and diagnosis of EASYLAB components

### Construction features

- PCB dimensions and fixing points correspond to the EASYLAB main PCB and the casing
- Fixing with screws
- Double-stack terminal blocks for simply 230 V supply voltage connection

## INFORMACIÓN TÉCNICA



<b>Supply voltage</b>	230 V AC $\pm$ 10 %, 50/60 Hz
<b>Primary fuse</b>	50 mA slow blow, 250 V
<b>Power consumption</b>	up to 40 VA for a controller with all expansion modules; up to 35 VA for a fume cupboard controller with control panel; up to 33 VA for a room controller with control panel; up to 29 VA for a room controller without control panel; up to 9 VA for an EASYLAB adapter module TAM
<b>Operation in case of a power failure</b>	One controller (TCU3 or TAM) with control panel, standard operation will be maintained for approx. 4.5 h, defined damper blade positions and power failure signalling will be maintained for approx. 6 h
<b>Battery pack charging</b>	1500 mAh
<b>Battery life</b>	up to 4 years; when stored without trickle charging, 6 months
<b>Double-stack terminals</b>	Cable cross-section up to 2.5 mm <sup>2</sup>
<b>Operating temperature</b>	0 – 50 °C
<b>IEC protection class</b>	I (protective earth)
<b>Protection level</b>	IP 20
<b>EC conformity</b>	EMC to 2004/108/EG, low voltage to 2006/95/EG
<b>Weight</b>	2.4 kg (including 1.1 kg for battery pack)

Expansion module for the EASYLAB base component (controller TCU3 or adapter module TAM) that can be directly connected to a 230 V AC supply voltage. The expansion module includes a transformer whose secondary voltage (24 V) is equal to the supply voltage for the controller and the expansion modules connected to it.

Uninterruptible power supply (UPS) by means of a battery pack that maintains defined functions in case of a power failure.

#### Special characteristics

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- Double-stack terminal blocks for 230 V AC supply voltage connection
- Simple electrical connection of expansion module and EASYLAB main PCB using a connection plug
- Simple wiring of switch-operated fume cupboard lighting in combination with the EM-LIGHT expansion module
- Intelligent charge control with trickle charging, deep discharge protection, and reverse voltage protection
- Operating state indicator light
- Controlled response in case of a power failure can be defined (EASYLAB TCU3 with expansion module EM-TRF-USV)
- In case of a power failure: Optical signal on the control panel; configurable alarm signalling

#### Technical data

- Supply voltage: 230 V AC  $\pm$  10 %, 50/60 Hz
- Power consumption: up to 40 VA for a controller with all expansion modules; up to 35 VA for a fume cupboard controller with control panel; up to 33 VA for a room controller with control panel; up to 29 VA for a room controller without control panel; up to 9 VA for an EASYLAB adapter module TAM
- Operation in case of a power failure: One controller (TCU3 or TAM) with control panel, standard operation will be maintained for approx. 4.5 h, defined damper blade positions and power failure signalling will be maintained for approx. 6 h
- Battery pack charging: 1500 mA
- Battery life: up to 4 years
- Double-stack terminal blocks: Cable cross-section up to 2.5 mm<sup>2</sup>
- Protection level: IP 20

#### Order code detail for control component ELAB (TCU3) or TAM

ELAB / ... / U... / ...

#### Expansion module EM-TRF-USV for retrofit

EM-TRF-USV