



POWER SAFETY FOR UPS OPERATION

EBU - Electronic Breaker Unit for AC 230 V

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EBU10-T – EBU - Electronic Breaker Unit for AC 230 V

In the event of a short circuit, uninterruptible power supplies only provide limited current, which is not sufficient to trip a conventional thermal-magnetic overcurrent protection. This means, that in the event of a failure, the entire UPS system will be switched off.

The mechatronic EBU10-T circuit breaker provides selective overcurrent protection for UPS systems with AC 230 V. The unit includes a miniature circuit protector equipped with measuring and analysis electronics for short circuit detection, approved for short circuit disconnections up to 10 kA.





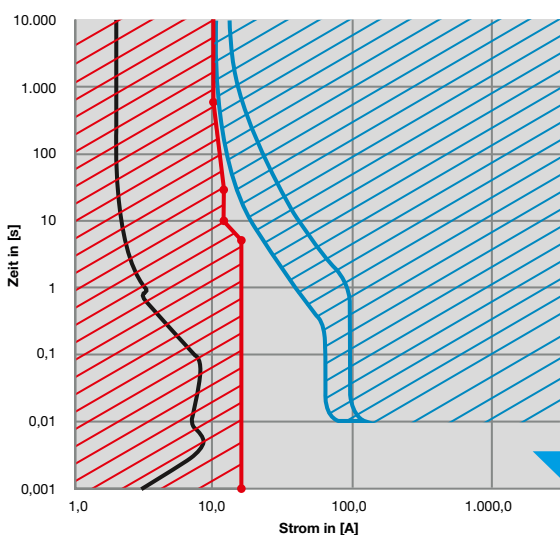
INCREASED SYSTEM AVAILABILITY

through selective protection

The EBU10-T can be adjusted to the capability of the respective UPS unit and the actual load conditions via two selection switches, providing a reliable trip performance in the event of a failure.

Only the faulty load path will be disconnected, while all other supply paths will remain unaffected. The EBU unit tolerates high cut-in currents that occur during switch-on operations.

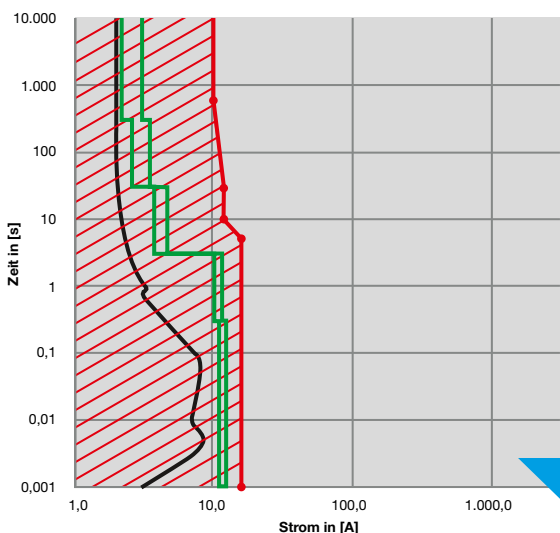
INCREASED SYSTEM AVAILABILITY THROUGH EFFECTIVE PROTECTION



- Load characteristic curve
Example: 3 A power supply
- Output characteristic **UPS**
battery-powered 14 A
- Characteristic curve
MCB C 10 A

In the event of a short circuit, UPS systems only provide a limited current (red characteristic curve), which is not sufficient to trip a thermal-magnetic overcurrent protection (blue characteristic curve).

*The trip curve of the MCB does not coincide with the operating range of the UPS!
No disconnection in the event of a failure!*

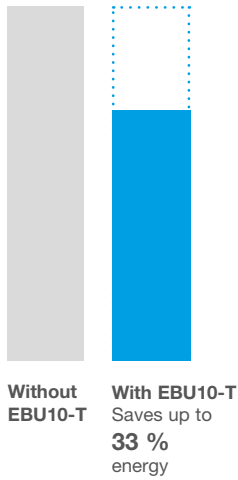


- Load characteristic curve
Example: 3 A power supply
- Output curve **UPS**
battery-powered 14 A
- Characteristic curve
EBU10-T

When adjusted correctly, the trip curve of the EBU10-T coincides with the operating range of the UPS. This ensures reliable power safety for the UPS!

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REQUIRED UPS POWER



ENERGY COSTS



REDUCED TOTAL COSTS

THANKS TO A 1/3 MORE EFFICIENT DESIGN

UPS systems can be designed by 1/3 smaller thanks to the EBU10-T, reducing annual energy costs by approx. 40 %.

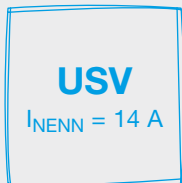
The smaller system also requires less space.

SIMPLE PLANNING

Simple planning thanks to an adjustable overcurrent protection

1. step EBU10-T selection

Uninterrupted power supply/UPS
 $I_{RATED} = 14 \text{ A}$

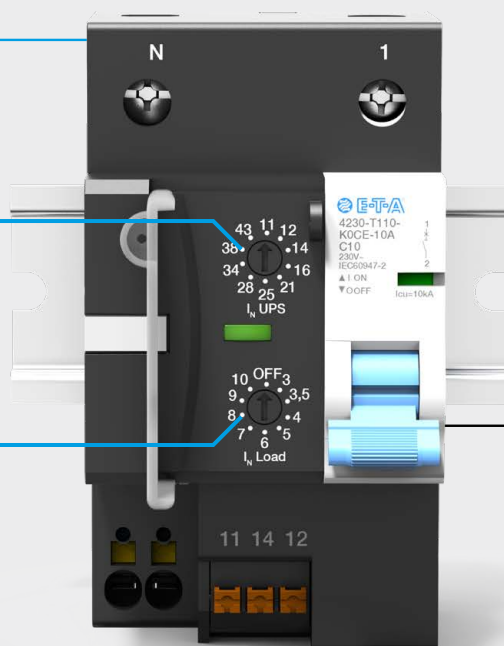


2. step EBU10-T setting matching the UPS

EBU10-T $\Rightarrow I_N$ UPS:
Adjusted to 14 A
 $\Rightarrow I_{RATED} \text{ UPS} = 14 \text{ A}$

3. step EBU10-T setting matching the load

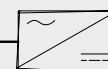
EBU10-T $\Rightarrow I_N$ Load:
Adjusted to 3 A
 \Rightarrow rated current load =
3 A



Selection of trip characteristic and current rating:

Characteristic curve:
C \Rightarrow SMPS cut-in current
Rated current:
10 A \Rightarrow cable protection for cable cross sections of 1.5 mm²

EBU10-T10-TA1-003-AC230V-C-10A

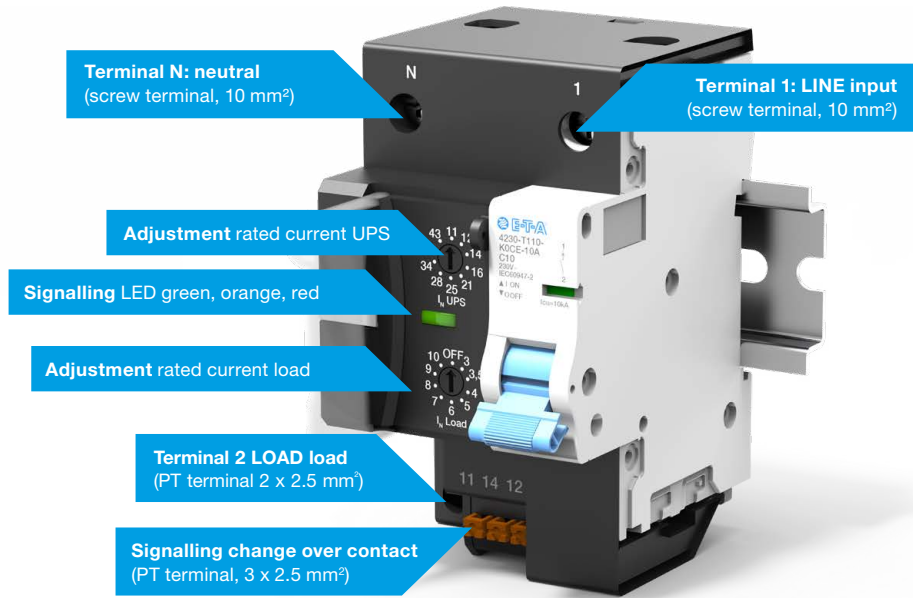


Load SMPS DC 24 V: $I_{RATED} = 3 \text{ A}$

EBU10-T

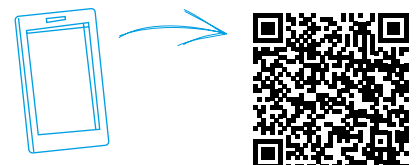
Connection and operating elements

The product is available with the typical MCB ratings of 4 A, 6 A, 10 A and 16 A, with B and C characteristics, and is directly operated at the output of the respective UPS.

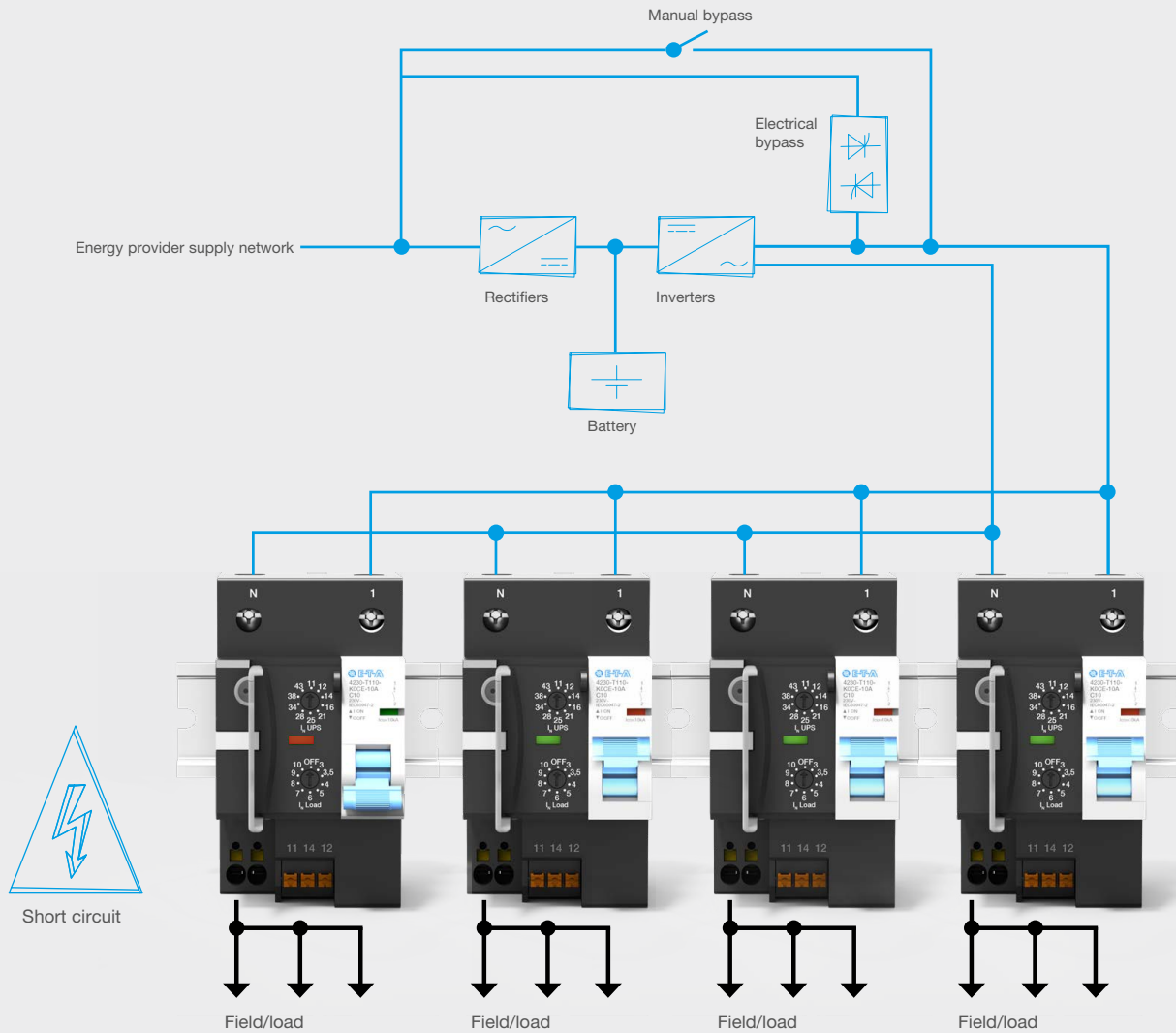


2-pole MCB for reliable all pole disconnection

The 2-pole version of the EBU guarantees reliable all-pole disconnection where necessary or required, e.g. in unearthed systems.



YOUR APPLICATION



Technical data

Rated voltage	AC 230 V (50 Hz)
Current ratings	Current 4 A, 6 A, 10 A, 16 A (MCBs)
Characteristic curve	B (6 A...16 A) / C (4 A...16 A)
Trip method	Mechatronic
Number of poles	1- and 2-pole
Electronics setting	Rated current I_N UPS (selection switch), rated current I_N Load (selection switch)
Signalling	Auxiliary contact, change-over, LED on the device
Connection technology	Screw terminal (power supply); PT terminals (load output and signalling)
Dimensions (W x H x D):	54 x 95 x 72 (1-pole), 72 x 95 x 72 (2-pole)

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