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

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).

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!
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
\[ I_{\text{Rated}} = 14 \, \text{A} \]

2. step EBU10-T setting matching the UPS
EBU10-T \[ \Rightarrow I_{\text{b}} \text{ UPS}: \]
Adjusted to 14 A
\[ \Rightarrow I_{\text{Rated UPS}} = 14 \, \text{A} \]

3. step EBU10-T setting matching the load
EBU10-T \[ \Rightarrow I_{\text{b}} \text{ Load}: \]
Adjusted to 3 A
\[ \Rightarrow \text{rated current load} = 3 \, \text{A} \]

Selection of trip characteristic and current rating:
Characteristic curve:
C \[ \Rightarrow \text{SMPS cut-in current} \]
Rated current:
10 A \[ \Rightarrow \text{cable protection for cable cross sections of 1.5 mm}^2 \]

EBU10-T10-TA1-003-AC230V-C-10A
Load SMPS DC 24 V: \[ I_{\text{Rated}} = 3 \, \text{A} \]
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.

The 2-pole version of the EBU guarantees reliable all-pole disconnection where necessary or required, e.g. in unearthed systems.
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 $I_p$, UPS (selection switch), rated current $I_p$, 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)