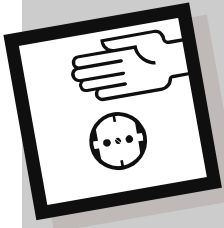


- All the important electric safety measures on one Board
- Built-in power supply, single-phase mains socket suffices
- Optimum safety for the user due to protective low voltage
- Short setup time because all accessories are integrated directly in the unit
- TT mains, TN-C-S mains, IT mains possible by replugging
- Detailed experiment instructions with solutions

- Protective measures in the TN system
- Protective measures in the TT system
- Measuring the earthing resistance
- Protective measures in the IT system
- Protective insulation
- Protective isolation
- Earth electrodes

- Protection against direct and indirect contact
- Protection by protective low voltage
- Autotransformer
- Protective devices against overcurrent
- Summation current transformer
- Protection against leakage current

hps SystemTechnik also offers the experiment manual „Electric Safety Technology“ in conjunction with the SAFETY BOARD.



Safety Board Type 2330

To conduct the experiments, the SAFETY BOARD is placed on a table or suspended in an hps rack for demonstration purposes.

The SAFETY BOARD can be converted into a portable training unit by simply screwing it into a Box:

All the experiments can be conducted directly in the Box. Dust-free storage and protection against transport damages are further advantages of the Box version.

Accessories Recommended

Experiment manual: „Electric Safety Technology“ (Type V 0119)

- Set of Accessories (Type 2330.1), consisting of connecting plugs and leads (2 mm)

Subject to technical modifications.

Protective Engineering

Technical Data

Mains connection

- Voltage: 230 V AC / 115 V AC (110 V AC);
50 ... 60 Hz; 40 VA

Output voltage for experimenting

- $U_1 = 23 \text{ V}$; $1.5 \text{ A} \triangleq \frac{1}{10}$ of the mains voltage; for experimenting without danger

Fault current circuit breaker

- 1phase; with test button $I_F = 30 \text{ mA}$

Insulation monitor

- With test and reset button; adjustable earthing resistance: $20 \text{ k}\Omega$... $120 \text{ k}\Omega$; with built-in meter

Man symbol

- With pluggable body resistor: $2.4 \text{ k}\Omega$ and 820Ω

Fuse

- For free application up to 2 A;
connectable through 2 mm jacks

Loads(simulation)

- Motor: body contacts can be simulated by connectable resistors 2.2Ω ; 10Ω ; 820Ω
- Lamp: body contacts can be simulated by connectable resistors 2.2Ω ; $1\text{k}\Omega$

Transformer

- The transformer can be used as a low voltage transformer, an auto-transformer, an isolating transformer and a summation current transformer.

Earth contact, auxiliary earth contact

- With the measuring points for voltage measurement at 1 / 2 / 5 / 10 / 20 m

Mechanical Data

The front panel of the SAFETY BOARD is made of 5 mm thick Laminate, matt blue in colour with white engraving representing the built-in function groups.

The rear of the Board is protected with a grey plastic cover. Its shape allows the Board to be placed at an ergonomically favourable angle for example on a table.

Dimensions and weights

- Board version (Type 2330):
532 x 297 x 110 mm (w x h x d)
weight: ca. 4.5 kg
- Box version, consisting of:
SAFETY BOARD (Type 2330) and
Box (Type 2330.20): 580 x 450 x 155 mm
total weight: approx. 7.25 kg