

# ALC-110-EUR Leakage Current Clamp

## Designed according IEC/EN61557-13, VDE 0413-13

The ALC-110-EUR true-rms leakage current clamp meter helps users detect, document and compare leakage current readings over time as a means of preventing unplanned downtime, and identifying intermittent RCD/RCCB trips, all without downtime or switching equipment off.

The ALC-110-EUR is designed for industrial applications for leakage current testing in installations as well as for appliance testing.

## Features

- **Following the standard** for leakage current clamps IEC/EN 61557-13
- **Low influence of external low frequency magnetic fields:**  $\leq 30 \text{ A/m}$ , operating class 2 @  $I_n$ : 3.500 mA – 600.0 mA
- **True-rms measurements** for accuracy when measuring complex, non-sinusoidal waveforms
- **Mechanical lock of the jaw;** jaw opening 30 mm (1.2 in)
- **Highest resolution of 0.001 mA,** measure up to 60 A
- **Selectable filter function** removes unwanted noise
- **Selectable filters:**
  - Low Pass Filter Function for appliance measuring (acc. IEC/EN 61557-16 amendment A)
  - 50/60 Hz filter
  - no filter
- **Broad frequency range 15 Hz to 1 kHz** which makes this clamp ideal for a wide range of applications including industrial and railway application
- **Selectable limits:** 0.25 mA, 0.5 mA, 3.5 mA, 10 mA, 12 mA
- **Max readings and hold function**
- **High safety rating:** CAT III 600 V
- **Auto power-off** to save battery life
- **Backlight display;** auto backlight off and auto power off for extended battery life

## Applications

- **Measurement of earth leakage current**
- **Measurement of differential leakage currents**
- **Measurement of leakage current** through the earth (PE) conductor
- **Tracing the source** of earth leakage current
- **Measurement of current consumption** of appliances in service or customer service sector without interruption to the circuit



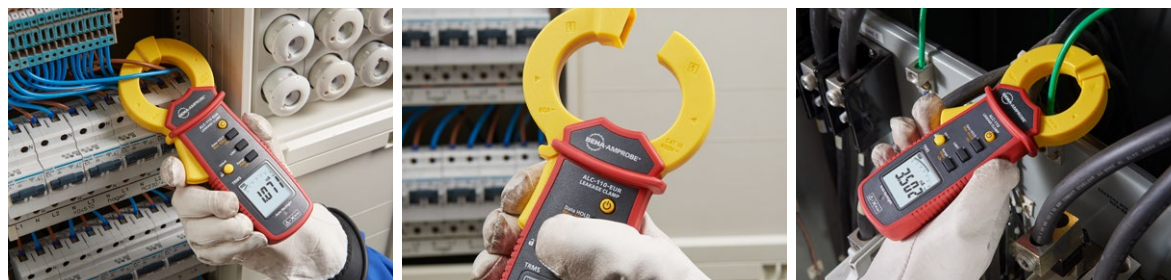
**ALC-110-EUR**  
Leakage Current Clamp



## Safety Certification

All Beha-Amprobe tools, including the Beha-Amprobe ALC-110-EUR, are rigorously tested for safety, accuracy, reliability, and ruggedness in our state-of-the-art test lab. In addition, Beha-Amprobe products that measure electricity are listed by a 3rd party safety lab, either UL or CSA. This system assures that Beha-Amprobe products meet or exceed safety regulations and will perform in a tough, professional environment for many years to come.





## Specifications

| Features                           | ALC-110-EUR                                                                      |
|------------------------------------|----------------------------------------------------------------------------------|
| Complies with IEC/EN 61557-13      | •                                                                                |
| Built according IEC/EN 61010-2-032 | •                                                                                |
| Low frequency magnetic fields      | $\leq 30$ A/m, operating class 2 @ $I_n$ : 3.500 mA to 600.0 mA / 40 Hz to 1 kHz |
| Safety, measurement category       | CAT III 600 V                                                                    |
| True-rms                           | •                                                                                |
| AC frequency                       | 15 Hz to 1 kHz                                                                   |
| Low pass filter                    | 50 – 60 Hz, for appliance measuring acc. EN61557-16 amendment A, no filter       |
| Limit judgement                    | 0.25 mA, 0.5 mA, 3.5 mA, 10 mA, 12 mA                                            |
| Jaw opening                        | 30 mm (1.2 in) max.                                                              |
| Jaw locking                        | •                                                                                |
| Backlight function                 | •                                                                                |
| Overload Protection                | 60 A                                                                             |
| Auto power off                     | Idle 20 minutes                                                                  |
| Auto ranging                       | •                                                                                |
| Max hold                           | •                                                                                |
| Data hold                          | •                                                                                |

| AC current <sup>[1] [2] [3]</sup> |            | Accuracy        |                 |                 |                 |
|-----------------------------------|------------|-----------------|-----------------|-----------------|-----------------|
| Range                             | Resolution | 15 to 40 Hz     | 40 to 50 Hz     | 50 to 60 Hz     | 60 to 1 kHz     |
| 6.000mA                           | 0.001mA    | $\pm(5.0\%+5D)$ | $\pm(2.0\%+5D)$ | $\pm(1.0\%+5D)$ | $\pm(2.0\%+5D)$ |
| 60.00mA                           | 0.01mA     | $\pm(5.0\%+5D)$ | $\pm(2.0\%+5D)$ | $\pm(1.0\%+5D)$ | $\pm(2.0\%+5D)$ |
| 600.0mA                           | 0.1mA      | $\pm(5.0\%+5D)$ | $\pm(2.0\%+5D)$ | $\pm(1.0\%+5D)$ | $\pm(2.0\%+5D)$ |
| 6.000A                            | 0.001A     | Unspecified     | $\pm(2.0\%+5D)$ | $\pm(1.0\%+5D)$ | $\pm(2.0\%+5D)$ |
| 60.00A                            | 0.01A      | Unspecified     | $\pm(2.0\%+5D)$ | $\pm(1.0\%+5D)$ | $\pm(2.0\%+5D)$ |

<sup>[1]</sup> Crest Factor (C.F.) may be up to 3.0 as 3000 counts. For non-sinusoidal waveforms: Add 1.0% for C.F. 1.0 to 2.0 / Add 2.5% for C.F. 2.0 to 2.5 / Add 4.0% for C.F. 2.5 to 3.0. Position error of clamp:  $\pm 1\%$  of LCD reading

<sup>[2]</sup> Minimum reading is 0.010 mA.

<sup>[3]</sup> When operating in magnetic fields up to 30 A/m, add  $\pm 0.3$  mA error to accuracy.

| General Specifications  |                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display                 | Digital: 6000 counts, updates 5/sec                                                                                                                     |
| Range                   | Auto ranging                                                                                                                                            |
| Over range indication   | OL or -OL                                                                                                                                               |
| Operating temperature   | 0 °C to 30 °C (32 °F to 86 °F), $\leq 80\%$ RH<br>30 °C to 40 °C (86 °F to 104 °F), $\leq 75\%$ RH<br>40 °C to 50 °C (104 °F to 122 °F), $\leq 45\%$ RH |
| Operating altitude      | $\leq 2000$ m                                                                                                                                           |
| Storage temperature     | -20 °C to 60 °C (-4 °F to 140 °F)                                                                                                                       |
| Pollution degree        | 2                                                                                                                                                       |
| Temperature coefficient | 0.1 x (specified accuracy) / °C (<21 °C, >25 °C)                                                                                                        |
| Vibration requirement   | acc. IEC 61557-1 clause 4.10                                                                                                                            |
| Drop proof              | 1.2 m (4 ft)                                                                                                                                            |
| Battery                 | 2x batteries 1.5 V IEC LR03 AAA                                                                                                                         |
| Battery life            | 60 hours typical                                                                                                                                        |
| Low battery indication  |                                                                     |
| Safety compliance       | IEC/EN 61010-1, IEC/EN 61010-2-030, IEC/EN 61010-2-032, IEC/EN 61557-13                                                                                 |
| EMC compliance          | IEC/EN 61326-1, IEC/EN 61326-2-2                                                                                                                        |
| Agency approvals        |                                                                     |
| Dimensions (H x W x L)  | 221 x 89 x 48 mm (8.7 x 3.5 x 1.8 in)                                                                                                                   |
| Weight                  | 410 g (0.9 lb) with batteries installed                                                                                                                 |

Included: Battery (2x, IEC LR03, Alkaline (AAA)), soft carrying case and user manual