

## Reference instrument for Smart Grid **Energomonitor 61850**

“State-of-the-art” instrument for calibration of electronic current/voltage analogue and digital instrument transformers and Merging Units



## General

- Measurement of ratio and angular errors of current and voltage scaling converters (electronic instrument voltage and current transformers) with analogue outputs or digital outputs according IEC 61850-9-2LE.
- Determining metrological parameters of Merging Units
- Measurement of current- and voltage-related quantities with further conversion into IEC 61850-9-2LE compliant digital data streams.
- Energomonitor-61850 itself constitute reference Merging Unit.

## Components

- 4 multi-range input current converters (0.01 ... 100 A);
- 4 multi-range input voltage converters (1 ... 800 V);
- 4 multi-range input voltage converters for electronic transformers (0.025 ... 5 V);
- 8-channel ADC;
- Control unit based on built-in single-board computer and Wi-Fi access point;
- Synchronization unit (PPS/PTP/10 MHz/20 MHz);
- Power supply module;
- External PC or tablet (Microsoft Windows or Android).

## Measurements

Ratio error	Angle error
<b>Measurement errors when testing analogue CTs and VTs</b>	
±0.002%	±0.1'
<b>Measurement errors when testing electronic transformers (0.25 mV ... 7.5 V)</b>	
<25 mV: ±0.05%	±2'
≥25 mV: ±0.02%	±1'
<b>Measurement errors when testing digital transformers (IEC 61580)</b>	
±0.02%	±1'