



**MARSENERGO**  
INSTRUMENTS FOR POWER INDUSTRY

# HIGH-VOLTAGE MOBILE TEST LAB MarsLab-61850

Applied to calibration/verification of electronic transformers with IEC 61850-9-2 digital outputs:

- ✓ Current transformers up to 5 kA  
(IEC 60044-8-2010, MI 3602-2018)
- ✓ Voltage transformers up to  $330/\sqrt{3}$  kV  
(IEC 60044-7-2010, MI 3603-2018)

## Operation principle

The IEC 61850-9-2 digital stream coming from the transformer under test output is compared to the analogue output of the reference transformer. As a result of the comparison, ratio, phase and composite errors of the transformer under test are obtained.

## Accuracy characteristics

Accuracy class of reference current* or voltage** transformer	Permissible limits of measurement errors		
	ratio, %	phase, min	composite, %
<b>0.05</b>	<b>0.056</b>	<b>3.32</b>	<b>0.12</b>

\* Operating current range – 50 A ... 6 kA.

\*\* Operating voltage range –  $6/\sqrt{3}$  ...  $110/\sqrt{3}$  ...  $330/\sqrt{3}$  kV.

## Basic components:

- ✓ Reference instrument Energomonitor 61850 (**1**)
- ✓ Adjustable sources of voltage and current (**2** and **3**)
- ✓ Reference transformers of voltage and current (**4** and **5**)

