



**ORDER**  
**Nº A 330**  
**Sofia, 30.08.2024**

Pursuant to Art. 10, para. 1, item 4, Art. 28, para. 1 of the Law on National Accreditation of Conformity Assessment Bodies, item 6 of the BAS QR 2 Accreditation Procedure, in connection with an open procedure reg. Nº 26/23 ЛК/ПА/09.02.2024, reports reg. Nº 26/23 ЛК/7/В/30.05.2024, reg. Nº 26/23 ЛК/10/В/17.07.2024 and statement of the Accreditation Commission reg. Nº 26/23 ЛК/ПА/11/В/12.08.2024, I hereby

**RE-ACCREDIT**  
**EMSYST-6 LTD.**

**CALIBRATION LABORATORY EMSYST**

**Management and Laboratory address:**

Bulgaria, 1784 Sofia, 133 Tsarigradsko Shosse Blvd, BIC IZOT, Office 304

**To perform calibrating of:**

| <b>Type of the scope: Fixed</b> |   |                                       |   |   |                             |
|---------------------------------|---|---------------------------------------|---|---|-----------------------------|
| <b>№</b>                        | <b>Measuring Instrument</b>   | <b>Measure and, Measure ment Unit</b> | <b>Measurement Range</b>  | <b>Measurement Uncertainty</b>  | <b>Calibration Method</b>   |
| <b>1</b>                        | <b>2</b>  | <b>3</b>                              | <b>4</b>  | <b>5</b>  | <b>6</b>                    |
| 1.                              | Standard Electricity Meters, Electronic, Single-Phase and Three-Phase for Active Energy | Electrical Energy, Active, kWh        | Per phase<br>From 1,25 Ws to 21,6.10 <sup>6</sup> Ws<br><br>Voltage (U):<br>From 50 V to 300 V<br><br>Current (I):<br>from 0,05 A to 120 A<br><br>Power Factor:<br>From 1 to 0,5 lagging,<br>or from 1 to 0,8 leading | 0,020 %<br>at<br>cos phi=1<br>U ≤ 230 V<br><br>0,025 %<br>at<br>cos phi=1<br>U > 230 V<br><br>and at<br>cos phi=0,5 i/<br>cos phi=0,8 c<br>U ≤ 230 V<br>I ≤ 12 A<br><br>0,030 % | WI 7.6.1-1<br>Nº E-MK-01/20 |

Type of the scope: *Fixed*

| №  | Measuring Instrument   | Measure and, Measurement Unit                       | Measurement Range   | Measurement Uncertainty   | Calibration Method          |
|----|--|---|---|---|-----------------------------|
| 1  | 2  | 3   | 4   | 5   | 6                           |
|    |  |   | Time<br>from 1 s to 600 s   | at<br>cos phi=0,5 i/<br>cos phi=0,8 c<br>I > 12 A   |                             |
| 2. | Standard Electricity Meters, Electronic, Single-Phase and Three-Phase for Reactive Energy  | Electrical Energy, Reactive, kvarh                  | Per phase<br>From 0,625 vars to 21,6.10 <sup>6</sup> vars<br><br>Voltage (U)<br>from 50 V to 300 V<br><br>Current (I)<br>from 0,05 A to 120 A<br><br>Power Factor<br>From 1 to 0,25 lagging, or leading<br><br>Time from 1 s to 600 s                               | 0,025 %<br>at<br>sin phi=1<br>U ≤ 230 V<br><br>0,030 %<br><br>at sin phi=1<br>U > 230 V<br><br>and at<br>sin phi=0,25 i/c<br>U ≤ 230 V<br>I ≤ 12 A<br><br>0,035 %<br>at<br>sin phi=0,25 i/c<br>I > 12 A                           | WI 7.6.1-1<br>№ E-MK-01/20  |
| 3. | Test Benches with Standard Electricity Meter for Metrological Verification of Electricity Meters, Single-Phase and Three-Phase, for Active and Reactive Energy | Electrical Energy, Active, kWh, and Reactive, kvarh | For active energy, per phase<br>from 1,25 Ws to 21,6.10 <sup>6</sup> Ws<br><br>Voltage (U)<br>From 50 V to 300 V<br><br>Current (I)<br>from 0,05 A to 120 A<br><br>Power Factor<br>from 1 to 0,5 lagging, or from 1 to 0,8 leading<br><br>Time<br>from 1 s to 600 s | 0,020 %<br>at cos phi=1<br>U ≤ 230 V<br><br>0,025 %<br>at<br>cos phi=1<br>U > 230 V<br><br>and at<br>cos phi=0,5 i/<br>cos phi=0,8 c<br>U ≤ 230 V<br>I ≤ 12 A<br><br>0,030 %<br>at<br>cos phi=0,5 i/<br>cos phi=0,8 c<br>I > 12 A | WI 7.6.1-4<br>№ EY-MK-04/20 |

| Type of the scope: <i>Fixed</i> |  |                               |  |  |                             |
|---------------------------------|--|-------------------------------|--|--|-----------------------------|
| Nº                              | Measuring Instrument   | Measure and, Measurement Unit | Measurement Range  | Measurement Uncertainty  | Calibration Method          |
| 1                               | 2  | 3                             | 4  | 5  | 6                           |
|                                 |  |                               | For reactive energy per phase<br><br>From 0,625 vars to 21,6.10 <sup>6</sup> vars<br><br>Voltage (U)<br>From 50 V to 300 V<br><br>Current (I)<br>from 0,05 A to 120 A<br><br>Power Factor<br>from 1 to 0,25 lagging, or leading<br><br>Time<br>from 1 s to 600 s | 0,025 %<br>at sin phi=1<br>U ≤ 230 V<br><br>0,030 %<br>at sin phi=1<br>U > 230 V<br><br>and at<br>sin phi=0,25 i/c<br>U ≤ 230 V<br>I ≤ 12 A<br><br>0,035 %<br>at<br>sin phi=0,25 i/c<br>I > 12 A |                             |
| 4.                              | Flow Meters and Portable Flow Meter Stations, Calibrated with Operating Fluid Water in the range from 0,006 m <sup>3</sup> /h to 70,00 m <sup>3</sup> /h | Volume, m <sup>3</sup>        | From 0,001 m <sup>3</sup> to 0,3 m <sup>3</sup><br>(at the range from 0,006 m <sup>3</sup> /h to 30,0 m <sup>3</sup> /h)<br><br>(at the range from 30,0 m <sup>3</sup> /h to 70,0 m <sup>3</sup> /h)   | 0,10 %<br><br>0,20%  | WI 7.6.1-2<br>Nº P-MK-01/20 |

**References:**

1. WI 7.6.1-1 Nº E-MK-01/20 Calibration Methodology for Standard Electronic Electricity Meters, validated on 17.07.2020;
2. WI 7.6.1-4 Nº EY-MK-04/20 Calibration Methodology for Test Benches with a Standard Electricity Meter for Metrological Verification of single-phase and three-phase electricity meters for active and reactive energy, validated on 18.06.2024;
3. WI 7.6.1-2 Nº P-MK-01/20 Calibration Methodology for Flow Meters and Portable Flow Meter Stations, validated on 03.09.2020.

**Note:**

*The calibrations of measurement instruments for positions 1, 2 and 3 shall be carried out in the Laboratory premises, and on the customer's site.*

*The calibrations of measurement instruments for position 4 shall be carried out only in the Laboratory premises.*

## I ORDER

To issue the certificate of accreditation reg. № 23 ЛК/30.08.2024, valid until 30.08.2028 and this order as an integral part of it.

The certificate of accreditation with the enclosure should be obtained from the manager of EMSYST-6 LTD, head of the Calibration Laboratory EMSYST, at EMSYST-6 LTD, or other authorized person in the office of EA BAS.

Upon receipt of the certificate issued and enclosure, the accredited person is obliged to return to EA BAS the originals of the certificate of accreditation reg. № 23 ЛК/25.01.2024, valid until 31.08.2024 and its enclosure - EA BAS order reg.№ A 45/25.01.2024.

This order shall be notified to the EMSYST-6 LTD within 3(three) days from its issuance.

**Eng. Irena Borislavova**

*Executive Director of EA BAS*

