



**Signatory to the EA Multilateral Agreement in this field**

**ORDER**

**№ A 247**

**Sofia, 28.07.2025**

Pursuant to Art. 10, para. 1, item 2a, Art. 20, para. 6 of the Law on National Accreditation of Conformity Assessment Bodies, item 5.3.1 e) of the BAS QR 2 Accreditation Procedure, in connection with an open procedure reg. № 26/23 ЛК/ПА/09.02.2024, assessment report reg. № 26/23 ЛК/4/В/22.05.2025 and EA BAS order reg. № A 246/28.07.2025, I hereby

**AMEND**

EA BAS order reg. № A 330/30. 08. 2024 of

**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:**

Type of the scope: <i>Fixed</i>					
№	Measuring Instrument	Measure and, Measure ment Unit	Measurement Range	Measurement Uncertainty	Calibration Method
1	2	3	4	5	6
1.	Standard Electricity Meters, Electronic, Single-Phase and Three-Phase for Active Energy at frequency 50 Hz	Electrical Energy, Active, kWh	Per phase From 1,25 Ws to 21,6.10 <sup>6</sup> Ws  Voltage (U): From 50 V to 300 V  Current (I): From 0,05 A to 120 A  Power Factor: From 1 to 0,5 ind, or from 1 to 0,8 cap  Time interval from 1 s to 600 s	0,020 % at cos $\varphi$ = 1 U ≤ 230 V  0,025 % at cos $\varphi$ = 1 U > 230 V  and at cos $\varphi$ = 0,5 ind/ cos $\varphi$ = 0,8 cap U ≤ 230 V I ≤ 12 A  0,030 % at cos $\varphi$ = 0,5 ind/ cos $\varphi$ = 0,8 cap	WI 7.6.1-1 № E-MK-01/20

**Type of the scope: Fixed**

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

Type of the scope: Fixed					
Nº	Measuring Instrument	Measure and, Measure ment Unit	Measurement Range	Measurement Uncertainty	Calibration Method
1	2	3	4	5	6
		and Reactive, kvarh	For reactive energy, per phase From 0,625 vars to 21,6.10 <sup>6</sup> vars  Voltage (U) from 50 V to 300 V  Current (I) from 0,05 A to 120 A  Power factor from 1 to 0,25 ind or cap  Time interval from 1 s to 600 s	0,025 % at sin $\varphi$ = 1 U ≤ 230 V  0,030 % at sin $\varphi$ = 1 U > 230 V and at sin $\varphi$ = 0,25 ind/cap U ≤ 230 V I ≤ 12 A  0,035 % at sin $\varphi$ = 0,25 ind/cap 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>  (at the range from 0,006 m <sup>3</sup> /h to 30,0 m <sup>3</sup> /h)  (at the range from 30,0 m <sup>3</sup> /h to 70,0 m <sup>3</sup> /h)	0,10 %      0,20%	WI 7.6.1-2 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-04/25 Calibration Methodology for Test Benches with an Electronic Standard Electricity Meter for Metrological Verification of single-phase and three-phase electricity meters for active and reactive energy, validated on 22.05.2025;
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/28.07.2025, 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, Sofia, head of the Calibration Laboratory EMSYST, at EMSYST-6 Ltd, Sofia, 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/30.08.2024, valid until 30.08.2028 and its enclosure - EA BAS order reg.№ A 330/30.08.2024.

This order shall be notified to the Calibration Laboratory EMSYST, at EMSYST-6 Ltd, Sofia, within 3(three) days from its issuance.

**Eng. Irena Borislavova**

*Executive Director  
of Executive agency Bulgarian accreditation service.*

