Hellenic Accreditation System

Annex F2/13 to the Certificate No. **547**-6

SCOPE of ACCREDITATION

of the

Renewable Energy Laboratory

of

INTERNATIONAL WINDENGINEERING S.A.

for the performance of calibrations

Calibration item / Parameters	Range of measurement	Expanded measurement uncertainty (k=2) *	Remarks
Air speed measurements			
- Cup anemometers, uniaxial propeller anemometers, ultrasonic anemometer, hot wires/films, air flow meters - Directly indicating transmitters - Transmitters with analog output 0 to 20 mA, 0 to 10 V DC - Transmitters with digital output - Instruments with pulse output	4 m/s to 16 m/s	0,13 m/s (at 4m/s) 0,08 m/s (at 10m/s) 0,10 m/s (at 16m/s)	IEC61400-50-1:2022, Section 8 Calibration is performed in a closed-circuit wind tunnel.
	1 m/s to 4 m/s	0,19 m/s (at 1 m/s) 0,16 m/s (at 2 m/s) 0,13 m/s (at 4 m/s)	Internal method CLP-07 based on: IEC61400-50-1:2022, Section 8 Calibration is performed in a closed-circuit wind tunnel.
	16 m/s to 20 m/s	0,10 m/s (at 16 m/s) 0,14 m/s (at 20m/s)	
Wind direction measurements			
Wind direction sensors: - Potentiometric sensors with voltage measurement - Sensors with serial output - Sensors connected to conditioning modules - Sensors connected to digital/analogue devices (ultrasonic, hot-wire, 2-3 D propeller anemometers)	0° to 360°	0,8°	IEC61400-50-1:2022, Annex A Calibration is performed in a closed-circuit wind tunnel.
Pressure measurements			

Calibration item / Parameters	Range of measurement	Expanded measurement uncertainty (k=2) *	Remarks
Pressure transducers with analog or digital or pulse output in mV or mA	500 hPa to 1100 hPa	0,21 hPa	Comparative calibration using reference barometer and controlled pressure chamber, according to internal method CLP-08 based on: DKD-R 6-1: 2014
Electrical Measurements			
DC Voltage / Recorders, multimeters, DC voltage measuring equipment	[1 μV to 100 Mv]	0,0050%Voltage + 3,5 μV	Comparative calibration using standard calibrator and standard multimeter according to internal method CLP10-02 based on: EURAMET cg15, v.3: 2015
	(100 mV to 1 V]	0,0035%Voltage + 7 μV	
	(1 V to 10 V]	0,0030%Voltage + 0,05 mV	
	(10 V to 30 V]	0,0040%Voltage + 0,6 mV	
DC Current / Recorders, multimeters, DC current measuring equipment	100 μA	0,05%Amperage + 0,025 μA	
	(100 μA to 1 mA]	0,05%Amperage + 0,06 μA	
	(1 mA to 10 mA]	0,05%Amperage + 2 μA	
	(10 mA to 20 mA]	0,05%Amperage + 5 μA	
Frequency / Recorders, multimeters, DC frequency measuring equipment	[3 Hz to 5 Hz)	0,07 %	
	[5 Hz to 10 Hz)	0,04 %	
	[10 Hz to 40 Hz)	0,02 %	
	[40 Hz to 1100Hz]	0,007 %	

** Where expanded uncertainty (with a probability of 95% coverage) is accompanied by the corresponding unit, it is absolute, while where it is not accompanied by a unit, it is relative.*

The Calibration & Measurement Capability (CMC) includes the measured quantity, measurement range and measurement uncertainty and expresses the smallest measurement uncertainty that can be achieved during a calibration.

Permanent laboratory premises address: **Theotokopoulou 24, 153 44 Gerakas, Attiki, Greece**
Approved signatories: **E. Morfiadakis, K. Papadopoulos**

This Scope of Accreditation replaces the previous one dated 16.05.2025.
The Accreditation Certificate No. **547**-6, to ELOT EN ISO/IEC 17025:2017, is valid until 18.05.2030.

Athens, 20.10.2025

Konstantinou Evangelos Apostolos
CEO of ESYD