



CERTIFICATE OF ACCREDITATION

LK-384-IDN

Date of issue : 22 June 2022

Date of expiry : 21 June 2027

Granted to

PT Esco Bintang Indonesia

at

**Jl. Asoka Blok D6-D10, Bintang Industrial Estate, Lobam Pulau Bintang,
Kabupaten Bintang, Kepulauan Riau**

which has shown its competence as

CALIBRATION LABORATORY

by implementing consistently

SNI ISO/IEC 17025:2017 (ISO/IEC 17025:2017)

General Requirements for the Competence of Testing and Calibration Laboratories

for the scope of accreditation as specified in the annex

KOMITE AKREDITASI NASIONAL



Drs. KUKUH S. ACHMAD, M.Sc

CHAIRMAN



Dokumen ini telah ditandatangani secara elektronik menggunakan Sertifikat Elektronik yang diterbitkan BSR E

SCOPE OF ACCREDITATION LK 384 IDN - SNI ISO/IEC 17025 : 2017 (ISO/IEC 17025:2017)

Laboratory Name	: PT. Esco Bintan Indonesia	granted on 22 June 2022 valid until 21 June 2027
Address	: Jl. Asoka Blok D6-D10, Bintan Industrial Estate, Lobam - Pulau Bintan, Kabupaten Bintan, Kepulauan Riau	
Phone	: (0770) 696033	
Fax	: (0770) 696034	

CALIBRATION MEASUREMENT AND CAPABILITY (CMC) CALIBRATION LABORATORY

No.	Measurement Group	Type of Standard, Measuring Devices, or Objects Measured and / or Calibrated	Range	Expanded Uncertainty*)	Test method, standard document and technique to be used	Remarks
1	Temperature and Humidity	Temperature sensor with display unit Termocouple PRT	-80 °C ~ 0 °C 0 °C ~ 37 °C 37 °C ~ 90 °C 90 °C ~ 140 °C -80 °C ~ 0 °C 0 °C ~ 37 °C 37 °C ~ 90 °C 90 °C ~ 140 °C	0.18 °C 0.11 °C 0.19 °C 0.29 °C 0.80 °C 0.80 °C 0.80 °C 0.80 °C	INM/GTM-T/01 Ver. 1	
2	Temperature and Humidity	Enclosure Chamber	20 °C ~ 50 °C	2.5 °C	TLAS G-20 : 2008	
3	Temperature and Humidity	Thermohygrometer %RH at 30°C	20 °C 25 °C 30 °C 40 %RH 60 %RH 80 %RH	0.65 °C 0.59 °C 0.56 °C 1.7 %RH 1.9 %RH 2.4 %RH	DKD-R 5-8:2019	
4	Mass	Electronical balance	0 g ~ 200 g 200 g ~ 1000 g 1000 g ~ 1500 g	0.013 g 13 g 26 g	MSL TG-25 : 2018	
5	Pressure	Bourdon pressure gauge	0 bar ~ 20 bar -5 mbar ~ 5 mbar	0.0080 bar 0.40 mbar	DKD-R 6-1:2018	1 bar = 10 ⁵ Pa
6	Length	Caliper	0 mm ~ 150 mm	0.058 mm	JIS B 7507 2016	

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7	Electricity	AC Voltage f = 50 Hz	25 V ~ 50 V 50 V ~ 100 V 100 V ~ 150 V 150 V ~ 200 V 200 V ~ 240 V	0.12 V 0.15 V 0.18 V 0.19 V 0.21 V	EURAMET/cg-15/v. 3.0 (2015)	
8	Electricity	AC Voltage f = 60 Hz	25 V ~ 50 V 50 V ~ 100 V 100 V ~ 150 V 150 V ~ 200 V 200 V ~ 240 V	0.12 V 0.15 V 0.18 V 0.19 V 0.21 V	EURAMET/cg-15/v. 3.0 (2015)	
9	Electricity	DC Voltage	0.6 V ~ 3 V 3 V ~ 6 V 6 V ~ 9 V 9 V ~ 12 V 12 V ~ 15 V 15 V ~ 24 V	0.005 V 0.051 V 0.011 V 0.011 V 0.079 V 0.079 V	EURAMET/cg-15/v. 3.0 (2015)	
10	Electricity	Resistance	1 Ω ~ 5 Ω 5 Ω ~ 10 Ω 10 Ω ~ 20 Ω 20 Ω ~ 50 Ω 50 Ω ~ 100 Ω 100 Ω ~ 150 Ω 150 Ω ~ 500 Ω 500 Ω ~ 1000 Ω 1000 Ω ~ 10000 Ω 10000 Ω ~ 100000 Ω	0.057 Ω 0.057 Ω 0.057 Ω 0.057 Ω 0.061 Ω 0.061 Ω 0.061 Ω 0.061 Ω 0.23 Ω 2.3 Ω	EURAMET/cg-15/v. 3.0 (2015)	

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11	Electricity	DC Current	0.1 A ~ 0.5 A 0.5 A ~ 1 A 1 A ~ 1.5 A 1.5 A ~ 2 A 2 A ~ 2.5 A 2.5 A ~ 3 A 3 A ~ 3.5 A 3.5 A ~ 4 A 4 A ~ 4.5 A 4.5 A ~ 5 A	0.012 A 0.013 A 0.076 A 0.076 A 0.076 A 0.076 A 0.12 A 0.12 A 0.12 A 0.12 A	EURAMET/cg-15/v. 3.0 (2015)	
12	Electricity	AC Current f = 50 ~ 60 Hz	0.1 A ~ 0.5 A 0.5 A ~ 1 A 1 A ~ 1.5 A 1.5 A ~ 2 A 2 A ~ 2.5 A 2.5 A ~ 3 A 3 A ~ 3.5 A 3.5 A ~ 4 A 4 A ~ 4.5 A 4.5 A ~ 5 A	0.0099 A 0.014 A 0.014 A 0.014 A 0.014 A 0.014 A 0.014 A 0.014 A 0.014 A 0.015 A	EURAMET/cg-15/v. 3.0 (2015)	
13	Electricity	AC Voltage Supply f = 1 kHz	25 V ~ 25 V 25 V ~ 50 V 50 V ~ 100 V 100 V ~ 150 V 150 V ~ 200 V 200 V ~ 250 V	0.080 V 0.11 V 0.11 V 0.11 V 0.11 V 0.11 V	EURAMET/cg-15/v. 3.0 (2015)	

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14	Electricity	Frequency Supply	10 kHz	0.59 kHz	EURAMET/cg-15/v. 3.0 (2015)	
15	Electricity	AC Current Supply f = 1 kHz	0.5 A ~ 1.0 A 1.0 A ~ 1.5 A 1.5 A ~ 2.0 A 2.0 A ~ 2.5 A 2.5 A ~ 3.0 A 3.0 A ~ 3.5 A 3.5 A ~ 4.0 A 4.0 A ~ 4.5 A 4.5 A ~ 5.0 A	0.081 A 0.081 A 0.081 A 0.081 A 0.081 A 0.081 A 0.081 A 0.081 A 0.081 A	EURAMET/cg-15/v. 3.0 (2015)	
16	Electricity	DC Voltage Supply	0.1 V ~ 4 V 4 V ~ 8 V 8 V ~ 12 V 12 V ~ 16 V 16 V ~ 20 V 20 V ~ 24 V 24 V ~ 28 V 28 V ~ 32 V	0.0057 V 0.0057 V 0.0057 V 0.0057 V 0.0057 V 0.0057 V 0.0057 V 0.011 V	EURAMET/cg-15/v. 3.0 (2015)	
17	Electricity	DC Current Supply	0.03 A ~ 0.5 A 0.5 A ~ 1.0 A 1.0 A ~ 1.5 A 1.5 A ~ 2.0 A	0.0057 A 0.0057 A 0.0057 A 0.0057 A	EURAMET/cg-15/v. 3.0 (2015)	

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18	Analytical Instruments	Gas analyzer			SOP-CAL-06C	
		CO ₂	2 cmol/mol	0.061 cmol/mol		
			5 cmol/mol	0.076 cmol/mol		
			10 cmol/mol	0.12 cmol/mol		
		O ₂	2 cmol/mol	0.070 cmol/mol		
			5 cmol/mol	0.12 cmol/mol		
			10 cmol/mol	0.21 cmol/mol		

Catatan :

- 1) *) Expanded uncertainty, is expressed at approximately 95 % level of confidence using a coverage factor of $k = 2$, is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing routine calibration with laboratory's resources.
- 2) Without a written consent by KAN, this scope of accreditation must not be reproduced unless as a whole.



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