

Hellenic Accreditation System



Annex F1A/1 to the Certificate No. **90-7**

SCOPE of ACCREDITATION

of the

Testing Laboratory

of the

Innovation Hub (DKK) of PPC S.A.

Materials/ Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Electrical tests		
Category I power transformers	Ability to withstand the dynamic effects of short-circuit / - Current RMS value - Current peak value - Time - Reactance and its variation	IEC 60076-5: 2006 (entire standard)
	Measurement of voltage ratio and check of phase displacement / - Voltage ratio - Phase displacement	IEC 60076-1: 2011 §11.3
	Measurement of winding resistance/ Winding ohmic resistance	IEC 60076-1: 2011§ 11.2
	Measurement of load losses. Measurements of AC voltage, current, power	IEC 60076-1: 2011 §11.4
	Measurement of no-load losses. Measurements of AC voltage, current, power	IEC 60076-1: 2011 §11.5
AC metal-enclosed switchgear and controlgear for rated voltages from 1 kV to 52 kV	Measurement of resistance of main circuit	IEC 62271-200: 2021 §6.4 IEC 62271-1: 2017+A1 §7.4
	Ability to withstand the effects of: - Short time current - Peak current	IEC 62271-200: 2021 §6.6 IEC 62271-1:2017+A1 §7.6
	Temperature rise test (continuous current test): - For currents from 0 A up to 2000 A. - For Temperature ranging from 10 °C to 150 °C	IEC 62271-200 2021 3 ed. §7.5 IEC 62271-1:2017-07 2 ed. §7.5
Low voltage switchgear and controlgear assemblies	Ability to withstand the effects of: - Short time current - Peak current	EN IEC 61439-1: 2021 IEC 61439-1: 2020 §10.11
	Temperature rise test: - For currents from 0 A up to 2000 A.	EN IEC 61439-1: 2021 IEC 61439-1:2020 2 ed. §9.2 & §10.10

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	For Temperature ranging from 10 °C to 150 °C	IEC 60269-1:2006 4 ed. §8.3 IEC 60269-2:2013+AMD1:2016 5.1 ed. §8.3 IEC 60269-3:2006 3 ed. § 8.3 IEC 60269-4:2006 3 ed. § 8.3
	Dielectric Strength Test	EN 61180:2016 §5, §6 IEC 61439-1:2000 §10.9.2
	Marking and instructions	EN IEC 61439-1:2021 §10.2.7
	Mechanical strength	EN 62262:2002 +A1:2021 EN 60068-2-75:2014 EN IEC 61439-1:2021 IEC 61439-1:2000 §8.2.1, §10.2.6 EN IEC 61439-2:2021 §8.2.1, §10.2.6 EN 61439-3:2012 §8.2.1, §10.2.6
	Insulation Resistance Test	EN IEC 61439-1:2021 IEC 61439-1:2020 §10.9
Low-voltage switchgear and controlgear assemblies: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations	Resistance to mechanical impact	EN IEC 61439-7:2020 §10.2.701.2
	Marking and instructions	EN IEC 61439-7:2020 §10.2 (EN IEC 61439-1:2021 §10.2.7)
AC Disconnectors: Single Pole Disconnecter	Temperature rise test (Continuous current test): - For currents from 0 A up to 2000 A. For Temperature ranging from 10 °C to 150 °C	IEC 62271-102 2022 CSV 2.1 ed. §5.5, §7.5 IEC 62271-1:2017-07 2 ed. §7.5
AC Disconnectors: Triple Pole Disconnecter	Temperature rise test (Continuous current test): - For currents from 0 A up to 2000 A. For Temperature ranging from 10 °C to 150 °C	IEC 62271-102 2022 CSV 2.1 ed. §5.5, §7.5 IEC 62271-1:2017-07 2 ed. §7.5
AC Disconnectors: Fuse Cutout	Temperature rise test (Continuous current test): - For currents from 0 A up to 2000 A. For Temperature ranging from 10 °C to 150 °C	IEC 62271-102 2022 CSV 2.1 ed. §5.5, §7.5 IEC 62271-1:2017-07 2 ed. §7.5
Electric Vehicle Battery Charger / Charging Station	Dielectric Strength Test	EN IEC 61851-1:2019 §12.7.1 EN 61180:2016 §5 & 6 EN 61851-21:2002 §8.1.1 EN 61851-22:2002 §10.1.1 EN 61851-23:2014 §11.4
	Insulation Resistance Test	EN IEC 61851-1:2019 §12.5 EN 61851-21:2002 §8.1.2 EN 61851-22:2002 §10.1.3 EN 61851-23:2014 §11.5
	Leakage/Touch current	EN 60990:2016 EN IEC 61851-1:2019 §12.6 EN 61851-21:2002 § 8.2 EN 61851-22:2002 §10.2 EN 61851-23:2014 §11.7
	Mechanical strength	EN 62262:2002 +A1:2021 EN 60068-2-75:2014 EN IEC 61851-1:2019 §12.11 EN 61851-22:2002 §11.2.2

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	Marking and instructions	EN IEC 61851-1:2019 §16.5 EN 61851-21:2002 §12.2 EN 61851-22:2002 §14.2
Inductive Voltage Transformer	Power-frequency withstand test on primary windings	IEC 61869-1:2007 §7.3.1 IEC 61869-3:2011 §7.3.1
	Power-frequency withstand test on secondary windings	IEC 61869-1:2007 §7.3.4 IEC 61869-3:2011
LV or HV Current Transformer	Power-frequency withstand test on primary windings	IEC 61869-1:2007 §7.3.1 IEC 61869-2:2012 §7.3.1
	Power-frequency withstand test on secondary windings	IEC 61869-1:2007 §7.3.4 IEC 61869-2:2012
Low Voltage Power Cable	Insulation Resistance measurement test - at ambient temperature - at maximum conductor temperature	IEC 60502-1:2021 § 17.2, 17.3 ΔEH A.E. KK 03.02/13.07.1993 (GR - 104A) § 6.2.1. GR - 269/17.09.1981 § 7.3.
	4h Voltage test	IEC 60502-1:2021 §17.4 ΔEH A.E. KK 03.02/13.07.1993 (GR-104A) § 6.2.2.
Electrical equipment of machines	Dielectric Strength Test	EN 61180:2016 §5 & 6 EN 60204: 2006 +A1:2009 §18.4 EN 60204: 2018 §18.4
	Protection against residual voltages	EN 60204: 2006 +A1:2009 §18.5 EN 60204: 2018 §18.5
	Insulation Resistance Test	EN 60204: 2006 +A1:2009 §18.3 EN 60204: 2018 §18.3
	Functional tests	EN 60204: 2006 +A1:2009 §18.6 EN 60204: 2018 §18.6
	Verification of the continuity of the protective bonding circuit	EN 60204: 2006 +A1:2009 §18.6 EN 60204: 2018 §18.2.2
	Leakage/Touch current	EN 60990:2016 EN 60204: 2006 +A1:2009 §8.2.6 EN 60204: 2018 §8.2.8
Audio/video, information and communication technology equipment	Dielectric Strength Test	EN 61180:2016 §5 & 6 EN IEC 62368-1:2020 +A11:2020 §5.4.9
	Leakage/Touch current	EN 60990:2016 EN IEC 62368-1:2020 +A11:2020 §5.7
	Mechanical strength	EN 62262:2002 +A1:2021 EN 60068-2-75:2014 EN IEC 62368-1:2020 +A11:2020 §4.4.3.4, §4.8.4.5, §T.6, §T.9, Y.6.2
	Marking and instructions	EN IEC 62368-1:2020 +A11:2020 §F.3.10
Electrical installations in ships	Insulation Resistance Test	IEC 60092-504:2016 §5.2 Table 1, Test 5
	Dielectric Strength Test	EN 61180:2016 §5 & 6 IEC 60092-504:2016 §5.2 Table 1, Test 3
Control, protection and safety Maritime equipment	Insulation Resistance Test	IACS E10 ((Rev.8 Feb 2021) (Corr.1 Jan 2022)), Table, Test N. 9
	Dielectric Strength Test	EN 61180:2016 §5 & 6 IACS E10 ((Rev.8 Feb 2021) (Corr.1 Jan 2022)), Table, Test N.10

Materials/ Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Maritime navigation and radiocommunication equipment and systems	Extreme test conditions	EN 60945:2002 + COR:2008 IEC 60945:2002 + COR:2008, §5.2.2

Site of assessment: **Laboratory permanent premises, 9 Leondariou Str., Kantza, Pallini, Attiki, Greece.**

Approved signatories: M. Bomboulos, M. Valsamakis, E. Thirios, G. Lytras, A. Petrakos, E. Tsafos, C. Manoukian.

This Scope of Accreditation replaces the previous one dated 07.09.2023.

The Accreditation Certificate No. **90-7**, to ELOT EN ISO/IEC 17025: 2017, is valid until 02.07.2027.

Athens, 01.07.2024

Christos Nestoras
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