HELLENIC ACCREDITATION SYSTEM

# Annex F1A/6 to Certificate No **90**-9

## SCOPE of ACCREDITATION

of the

## Testing Laboratory

of the

## PPC TESTING, INSPECTION AND CERTIFICATION SINGLE MEMBER S.A. (PPC INSPECTRA)

| Materials/Product to be tested | Type 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 /<br>- Current RMS value<br>- Current peak value<br>- Time<br>- Reactance and its variation | IEC 60076-5: 2006 (entire standard) |
| | Measurement of voltage ratio and check of phase displacement | IEC 60076-1: 2011-04 §11.3 |
| | Measurement of winding resistance | IEC 60076-1: 2011-04§ 11.2 |
| | Measurement of short circuit impedance and load loss | IEC 60076-1: 2011-04 §11.4 |
| | Measurement of no-load loss and current | IEC 60076-1: 2011-04 §11.5 |
| | Applied voltage test (power frequency voltage withstand test) | IEC 60076-1:2011-04<br>IEC 60076-3:2018-03 § 10<br>HEDNO TD DD-01.48/10.2017 § 6.2.7<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Induced voltage withstand test | IEC 60076-1:2011-04<br>IEC 60076-3:2018-03 § 11.1, 11.2<br>HEDNO TD DD-01.48/10.2017 § 6.2.6<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| - AC High Voltage Switchgear and Controlgear<br>- AC metal-enclosed Switchgear and Controlgear<br>- AC prefabricated substations<br><br>for rated voltages above 1kV and up to and including 52 kV | Resistance measurement in the main circuit | IEC 62271-200: 2021 §7.4<br>IEC 62271-1/2017+AMD1:2021 §7.4.4 |
| | Short time withstand current and peak withstand current test | IEC 62271-200: 2021 §7.6<br>IEC 62271-1/2017+AMD1:2021 §7.6<br>IEC 62271-202:2022-06 § 7.6<br>HEDNO TD DD-445/23.10.23 § 6.1.1.2<br>PPC TD DD-148/26.11.08 § 6.1.1.3 |
| | Internal Arc test | IEC 62271-200:2021 +AMD1:2024 §7.105<br>IEC 62271-202:2022-06 § 7.102<br>IEC 62271-1/2017+AMD1:2021<br>PPC TD DKSD-179/31.05.2006 § 6.2.11<br>PPC TD DD-180/04.09.06 § 6.2.11<br>PPC TD DD-132/Revised April 2011 § 6.2.14<br>HEDNO TD DD-445/23.10.23 § 6.1.1.7<br>PPC TD DD-148/26.11.08 § 6.1.1.7<br>HEDNO TD DD-439/20.07.23 § 6.1.12 |
| | Continuous current test<br>(Temperature rise test)<br>-current values up to 2.000 A.<br>-temperatures above 10 °C up to 150 °C | IEC 62271-200 2021 3 ed. §7.5<br>IEC 62271-1/2017+AMD1:2021§7.5 |
| | Lightning impulse voltage test | IEC 62271-1/2017+AMD1:2021 § 7.2.7.3<br>IEC 62271-200:2021-05 Edition 3.0 § 7.2.7.3<br>IEC 62271-202:2022-06 Edition 3.0 § 7.2.101.3<br>IEEE Std C37.20.2-2022 § 6.2.1, § 6.2.1.2<br>PPC DKSD-179/31.05.2006 § 6.2.1.2<br>PPC TD DD-180/04.09.06 § 6.2.1.2<br>PPC DD-132/Revised April 2011 § 6.2.1<br>HEDNO DD-445/23.10.23 § 6.1.1.1.1<br>PPC TD DD-148/26.11.08 § 6.1.1.1.1.1<br>HEDNO TD DD-439/20.07.23 § 6.1.1.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| - AC High Voltage Switchgear and Controlgear<br>- AC metal-enclosed Switchgear and Controlgear<br>- AC prefabricated substations<br><br>for rated voltages above 1kV and up to and including 52 kV<br><br>(continued) | Power-frequency voltage test | IEC 62271-1/2017+AMD1:2021§ 7.2.7.2<br>IEC 62271-200:2021-05 § 7.2.7.2<br>IEC 62271-202:2022-06 § 7.2.101.4<br>IEEE Std C37.20.2-2022 § 6.2.1, § 6.2.1.1<br>PPC DKSD-179/31.05.2006 § 6.2.1.1.1<br>PPC TD DD-180/04.09.06 § 6.2.1.1.1<br>PPC TD DD-132/Revised April 2011 § 6.2.2<br>HEDNO TD DD-445/23.10.23 § 6.1.1.1.1<br>PPC TD DD-148/26.11.08 § 6.1.1.1.1.1<br>HEDNO TD DD-439/20.07.23 § 6.1.1.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Dielectric test on auxiliary and control circuits | IEC 62271-1/2017+AMD1:2021§ 7.2.11<br>IEC 62271-200:2021-05 § 7.2.11<br>IEC 62271-202:2022-06 § 7.2.11<br>PPC DKSD-179/31.05.2006 § 6.2.1.4<br>PPC TD DD-180/04.09.06 § 6.2.1.4<br>PPC TD.DD-132/Revised April 2011 § 6.2.4<br>HEDNO TD DD-445/23.10.23 § 6.1.1.1.1<br>PPC TD DD-148/26.11.08 § 6.1.1.1.1.3<br>HEDNO TD DD-439/20.07.23 § 6.1.1.4<br>IEC 60060-1:2010-09 |

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| | | IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Compact outdoor distribution substation | Ingress Protection (IP) test against: solid particles entry of objects into hazardous parts | IEC 60529: Edition 2.2. 2013-08 §13.1, §13.2, §13.3, §13.4, §13.5, §13.6<br>PPC TD DD-148/26.11.08 §5.3.7 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| - Low voltage switchgear and controlgear assemblies<br><br>- Empty enclosures for Low voltage switchgear and controlgear assemblies<br><br>Equipment within low voltage supply system | Short circuit withstand strength | EN IEC 61439-1: 2021 §10.11<br>IEC 61439-1: 2020 §10.11<br>HEDNO TD DD-407/07.12.2020<br>HEDNO TD DD -403/07.12.2020<br>PPC TD DD-328/08-07-2008<br>PPC TD DKSD-244/22-03-2006 |
| | Temperature rise test:<br>- currents up to 2.000 A.<br>- temperature above 10 °C up to 150 °C | EN IEC 61439-1: 2021 §9.2, §10.10<br>IEC 61439-1:2020 §9.2, §10.10<br>IEC 60269-1:2024 §9.3<br>IEC 60269-2:2013 AMD1:2016, AMD2:2024 § 8.3<br>IEC 60269-3:2006 §8.3<br>IEC 60269-4:2006 §8.3<br>HEDNO TD DD-407/07.12.2020<br>HEDNO TD DD-403/07.12.2020<br>PPC TD DD-328/08-07-2008 § 6.1.1 |
| | Dielectric strength test | EN 61180:2016 §5, §6<br>EN IEC 61439-1:2021 §10.9.2<br>IEC 61439-1:2020 §10.9.2<br>EN IEC 60664-1:2020 §6.5.3, §5.4.3.2, §6.4.5<br>EN 62208:2023 §9.11 |
| | Marking durability test | EN IEC 61439-1:2021 §10.2.7<br>IEC 61439-1: 2020 §10.2.7<br>EN IEC 61439-2:2021 §10<br>EN IEC 61439-3:2012 §10.2.7 |
| | IK mechanical strength test | EN 62262:2002 +A1:2021<br>EN 60068-2-75:2014<br>EN IEC 61439-1:2021<br>IEC 61439-1:2020 §8.2.1, §10.2.6<br>EN IEC 61439-2:2021 §8.2.1, §10.2.6<br>EN 61439-3:2012 §8.2.1, §10.2.6<br>EN 62208:2023 §9.8 |
| | Insulation resistance test | EN IEC 61439-1:2021 §11.9<br>IEC 61439-1:2020 §11.9 |
| | Impulse withstand voltage test | IEC 61439-1:2020 §10.9.3.2<br>IEC 62271-202:2022 §7.2.102.2<br>HEDNO TD DD-445/23.10.23 §6.1.1.1<br>PPC DD-148/26.11.08 §6.1.1.1.2<br>IEC 60060-1:2025<br>IEC 60060-2:2025 |
| | Power-frequency withstand test | EN IEC 61439-1:2021 § 10.9.2<br>IEC 61439-1:2020-05 § 10.9.2<br>IEC 62271-202:2022-06 § 7.2.102.3<br>PPC TD DKSD-244/22-03-2006 § 6.1.1, § 6.2.2<br>PPC TD GR-249/22.4.83 § 4.2.1, § 4.3.2<br>PPC TD DD-328/08-07-2008 § 6.4.3<br>PPC TD HK 07.01/14.6.89 Rev./26.10.1992 (GR-245) § 6.4.3<br>PPC TD HK 07.02/14.6.89 Rev./26.10.1992 (GR-200) § 6.4.3<br>PPC TD HK 07.04/14.6.89 Rev./26.10.1992 (GR-199) § 6.4.3 |

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| | | PPC TD HK 07.58/02.02.2000 (GR-258) § 6.4.3<br>HEDNO TD DD-407/07.12.2020 § 6.2.3<br>HEDNO TD DD-403/07.12.2020 § 6.2.3<br>PPC TD DD-148/26.11.08 § 6.1.1.1.2<br>HEDNO TD DD-445/23.10.23 § 6.1.1.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Short circuit withstand strength | HEDNO TD DD-407/07.12.2020<br>HEDNO TD DD-403/07.12.2020<br>PPC TD DD-328/08-07-2008 |
| | Ground/Earth Continuity Test | EN IEC 61439-1:2021 §10.5.2<br>IEC 61439-1: 2020 §10.5.2 |
| | Ingress Protection (IP) test against: solid particles, water entry of objects into hazardous parts | IEC 60529: Edition 2.2. 2013-08 §13.1, §13.2, §13.3, §13.4, §13.5, §13.6<br>IEC 62208: 2023-06 §9.9.1.2<br>EN IEC 61439-1:2021 §8.2.2, §10.3<br>IEC 61439-1: 2020 §8.2.2 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| AC Disconnectors and earthing switches: Triple Pole Disconnector | Temperature rise test (Continuous current test):<br>- currents up to 2000 A.<br>- temperature above 10 °C up to 150 °C | IEC 62271-102 2022 CSV §5.5, §7.5<br>IEC 62271-1/2017+AMD1:2021 §7.5<br>PPC TD DD-310/27.03.23 § 6.1.2<br>PPC TD DD-312/07.06.23 § 6.1.2 |
| | Short-time withstand current and peak withstand current tests | IEC 62271-102:2022-04 CSV § 5.6, §5.7, §5.8, §7.6<br>IEC 62271-1/2017+AMD1:2021 §7.6<br>PPC TD DD-310/27.03.23 § 6.1.4<br>PPC TD DD-312/07.06.23 § 6.1.4 |
| | Tests intended to control the breaking and making capability of the circuit | IEC 62271-102:2022-04 CSV<br>IEC 62271-1/2017+AMD1:2021<br>HEDNO TD DD-310/27.03.23 § 6.1.1, § 5.2.1<br>HEDNO TD DD-312/07.06.23 § 6.1.1, § 5.2.1 |
| | Lightning impulse voltage tests | IEC 62271-1/2017+AMD1:2021 § 7.2.7.3<br>IEC 62271-102:2022-04, CSV § 7.2.7<br>PPC TD DD-310/27.03.23 § 6.1.3.1<br>PPC TD DD-312/07.06.23 § 6.1.3.1<br>PPC TD-69/2 :2011-01<br>PPC TD-68/2 :2011-01<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage tests (in dry conditions) | IEC 62271-1/2017+AMD1:2021 § 7.2.7.2<br>IEC 62271-102:2022-04, CSV §7.2.7<br>PPC TD DD-310/27.03.23 § 6.1.3.2, § 6.4.1<br>PPC TD DD-312/07.06.23 § 6.1.3.2, § 6.3.1, § 6.4.1<br>PPC TD-69/2 :2011-01<br>PPC TD-68/2 :2011-01<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Operating and mechanical endurance tests | IEC 62271-1/2017+AMD1:2021<br>IEC 62271-102:2022-04, CSV<br>HEDNO TD DD-310/27.03.23 § 6.1.5, § 6.1.6, § 6.3.3, § 6.4.3<br>HEDNO TD DD-312/07.06.23 § 6.1.5, § 6.1.6, § 6.3.3, § 6.4.3 |

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| AC Disconnectors and earthing switches: Single Pole Disconnector | Continuous current test<br>(Temperature rise test)<br>- current values up to 2.000 A.<br>- temperatures above 10°C up to 150°C | IEC 62271-102 2022 CSV §5.5, §7.5<br>IEC 62271-1/2017+AMD1:2021 §7.5 |
| | Short-time withstand current and peak withstand current tests | IEC 62271-102:2022-04 CSV § 5.6, §5.7, §5.8, §7.6<br>IEC 62271-1/2017+AMD1:2021 §7.6 |
| | Lightning impulse voltage tests | IEC 62271-1/2017+AMD1:2021 § 7.2.7.3<br>IEC 62271-102:2022-04, CSV § 7.2.7<br>PPC TD DD-309/14.03.23 § 6.1.2.1<br>PPC TD DD-311/06.06.23 § 6.1.2.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage test<br>(in dry conditions) | IEC 62271-1/2017+AMD1:2021 § 7.2.7.2<br>IEC 62271-102:2022-04 CSV § 7.2.7<br>PPC TD DD-309/14.03.23 § 6.3.1<br>PPC TD DD-311/06.06.23 § 6.3.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage wet test | IEC 62271-1/2017+AMD1:2021 § 7.2.7.2<br>IEC 62271-102:2022-04 CSV § 7.2.7<br>PPC TD DD-309/14.03.23 § 6.1.2.2<br>PPC TD DD-311/06.06.23 § 6.1.2.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Operating and mechanical endurance tests | IEC 62271-1/2017+AMD1:2021<br>IEC 62271-102:2022-04 CSV<br>HEDNO TD DD-309/14.03.23 § 6.1.4, § 6.1.5, § 6.3.3, § 6.4.3<br>HEDNO TD DD-311/06.06.23 § 6.1.4, § 6.1.5, § 6.3.3, § 6.4.3 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/<br>Techniques to be used |
|---|---|---|
| AC Disconnectors: Fuse Cutout | Continuous current test<br>(Temperature rise test)<br>-current value up to 2.000 A.<br>-temperatures from 10 °C up to 150 °C | IEEE Std C37.41 -2016 §11<br>IEC 62271-102 2022 CSV §5.5, §7.5<br>IEC 62271-1/2017+AMD1:2021 §7.5<br>PPC TD DD-313/23.09.2009 § 6.2.3<br>HEDNO TD DD-314/01.07.22 § 6.2.3<br>HEDNO TD DD-437/31.01.23 § 6.2.3 |
| | Interrupting tests<br>(Series 1, 2, 3, 4 and 5.<br>Series 4 only for Class B Fuse Cutouts) | IEEE Std C37.41 -2016 §9<br>PPC TD DD-313/23.09.2009 § 6.2.1<br>HEDNO TD DD-314/01.07.22 § 6.2.1<br>HEDNO TD DD-437/31.01.23 § 6.2.1 |
| | Operating and mechanical endurance test | IEEE Std C37.41 -2016 §13.2<br>IEC 62271-1/2017+AMD1:2021<br>IEC 62271-102:2022-04 CSV<br>PPC TD DD-313/23.09.2009 § 6.2.3<br>HEDNO TD DD-314/01.07.22 § 6.2.3<br>HEDNO TD DD-437/31.01.23 § 6.2.3 |
| | Lightning impulse voltage tests | IEEE Std C37.41-2016 § 8.5<br>IEEE Std C37.41-2024 § 8.5<br>IEC 62271-1/2017+AMD1:2021 § 7.2.7.3<br>IEC 62271-102:2022-04 CSV § 7.2.7<br>PPC TD DD-313/23.09.2009 § 6.2.6.1<br>HEDNO TD DD-314/01.07.22 § 6.2.6.1 |

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| | | HEDNO TD DD-437/31.01.23 § 6.2.6.1<br>HEDNO TD DD-458/20.09.24 § 6.1.6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04<br>IEEE Std 4-2013 |
| | Power-frequency voltage test (in dry conditions) | IEEE Std C37.41-2016 § 8.2<br>IEEE Std C37.41-2024 § 8.2<br>IEC 62271-1/2017+AMD1:2021 § 7.2.7.2<br>IEC 62271-102:2022-04 CSV § 7.2.7<br>PPC TD DD-313/23.09.2009 § 6.3.2<br>HEDNO TD DD-314/01.07.22 § 6.3.2<br>HEDNO TD DD-437/31.01.23 § 6.3.2<br>HEDNO TD DD-458/20.09.24 § 6.2.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04<br>IEEE Std 4-2013 |
| | Power-frequency voltage wet test | IEEE Std C37.41-2016 § 8.3<br>IEEE Std C37.41-2024 § 8.3<br>IEC 62271-1/2017+AMD1:2021 § 7.2.7.2<br>IEC 62271-102:2022-04 CSV § 7.2.7<br>PPC TD DD-313/23.09.2009 § 6.2.6.2<br>HEDNO TD DD-314/01.07.22 § 6.2.6.2<br>HEDNO TD DD-437/31.01.23 § 6.2.6.2<br>HEDNO TD DD-458/20.09.24 § 6.1.6.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04<br>IEEE Std 4-2013 |
| Metal oxide surge arresters without gaps | Arrester disconnector operation | IEC 60099-4:2014 § 8.9.3<br>HEDNO TD DD-399/04.06.19 § 6.1.8, §5.3 |
| Voltage Instrument Transformer (medium voltage) | Power-frequency voltage withstand test on primary terminals | IEC 61869-1:2023-6 §7.3.1<br>IEC 61869-1:2007-10 §7.3.1 (*)<br>IEC 61869-3:2011 §7.3.1<br>HEDNO TD DD-362/10.01.2022 § 6.3, § 6.4<br>HEDNO DED/421/14.01.2022 § 6.2 item 1, § 6.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage withstand test on secondary terminals | IEC 61869-1:2023 §7.3.4<br>IEC 61869-1:2007-10 §7.3.4 (*)<br>IEC 61869-3:2011<br>HEDNO TD DD-362/10.01.2022 § 6.3, § 6.4<br>HEDNO DED/421/14.01.2022 § 6.2 item 4, § 6.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage withstand tests between sections | IEC 61869-1:2023 §7.3.3<br>HEDNO TD DD-362/10.01.2022 § 6.3, § 6.4 (Only the test outlined in Table 4)<br>HEDNO DED/421/14.01.2022 § 6.2 item 3, § 6.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04 |

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| | | IEC 60060-2:2025-04 |
| | Lightning impulse voltage withstand test on primary terminals | IEC 61869-1:2023 § 7.2.3<br>IEC 61869-3:2011 § 7.2.3<br>HEDNO TD DD-362/10.01.2022 § 6.2, § 6.4<br>HEDNO DED/421/14.01.2022 § 6.1 item 2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage withstand wet test for outdoor type voltage instrument transformer | IEC 61869-1:2023 § 7.2.4<br>IEC 61869-3:2011<br>HEDNO TD DD-362/10.01.2022 § 6.2, § 6.4<br>HEDNO DED/421/14.01.2022 § 6.1 item 3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Short-circuit withstand capability test:<br>-Active current | IEC 61869-3:2011 § 7.2.301<br>HEDNO TD DD-362/10.01.2022 |
| | Temperature rise test | HEDNO TD DD-362/10.01.2022<br>IEC 61869-1:2023 § 7.2.2,<br>IEC 61869-3:2011 § 7.2.2 |
| Current Instrument transformer (medium & low voltage) | Power-frequency voltage withstand test on primary terminals | IEC 61869-1: 2023 §7.3.1<br>IEC 61869-1:2007-10 § 7.3.1 (*)<br>EN IEC 61869-2:2012 §7.3.1<br>HEDNO TD DD-362/10.01.2022 § 6.3, § 6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage withstand test on secondary terminals | IEC 61869-1: 2023 §7.3.4<br>IEC 61869-1:2007-10 § 7.3.4 (*)<br>EN IEC 61869-2:2012<br>HEDNO TD DD-362/10.01.2022 § 6.3, § 6.4 (Only the test outlined in Table 4)<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Current Instrument transformer (medium & low voltage)<br><br>(continued) | Lightning impulse voltage withstand test on primary terminals | IEC 61869-1:2023 § 7.2.3<br>EN IEC 61869-2:2012 § 7.2.3<br>HEDNO TD DD /362/10.01.2022 § 6.2, § 6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage withstand wet test for outdoor type current instrument transformer | IEC 61869-1:2023 § 7.2.4<br>EN IEC 61869-2:2012-09<br>HEDNO TD DD /362/10.01.2022 § 6.2, § 6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Inter-turn overvoltage test | IEC 61869-1:2023<br>EN IEC 61869-2:2012 § 7.3.204<br>HEDNO TD DD /362/10.01.2022 § 6.3, § 6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11 |

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| | | IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage withstand test on primary terminals | IEC 61869-1:2023-06 § 7.3.1<br>EN IEC 61869-2:2012-09 § 7.3.1<br>HEDNO TD DD-404/10.12.2018 § 6.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Current Instrument transformer (medium voltage) | Power-frequency voltage withstand tests between sections | IEC 61869-1:2023 §7.3.3<br>HEDNO TD DD-362/10.01.2022 § 6.3, § 6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Short time current tests | EN IEC 61869-2:2012 § 7.2.201<br>HEDNO TD DD-362/10.01.2022 |
| | Temperature rise test<br>- current values up to 2.000 A.<br>- temperatures from 10 °C up to 150 °C | EN IEC 61869-2:2012 §7.2.2<br>IEC 61869-1:2023 §7.2.2 |
| - Low voltage supply cables<br>- Power cables with extruded insulation for rated voltages 1 kV and 3 kV<br>- Low voltage Aerial Bundled Cables for use by distribution utilities | Insulation resistance measurement test<br>- at ambient temperature<br>- at maximum conductor temperature | IEC 60502-1:2021 §17.2, 17.3<br>PPC TD KK 03.02/ 13.07.1993 (GR - 104A) §6.2.1.<br>PPC TD GR - 269/17.09.1981 §7.3.<br>PPC DMKLD-211/29.05.97 §6.2.2<br>PPC TD KT 10.01/23.11.90 §6.2.2<br>PPC TD KK 03.05./13.07.1993 (GR-105A) § 6.2, § 6.2.1<br>PPC TD KK 03.06/13.07.1993 (GR-105B) § 6.2, § 6.2.1<br>IEC 502/1983(*) |
| | 4 hours voltage test | IEC 60502-1:2021 §17.4<br>PPC TD KK 03.02/ 13.07.1993 (GR - 104A) §6.2.2<br>PPC TD GR-269/17.09.1981 §7.3<br>PPC TD KK 03.05./13.07.1993 (GR-105A) § 6.2.2.<br>PPC TD KK 03.06/13.07.1993 (GR-105B) § 6.2.2<br>IEC-502/1978 (§16.2)(*) |
| | Impulse test at ambient temperature | IEC 60502-1:2021 §17.5<br>PPC TD DMKLD-211/29.05.97 § 6.2.6<br>PPC TD KT 10.01/23.11.90 § 6.2.6<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11 |
| | Electrical resistance of conductors | IEC 60502-1:2021 §15.2<br>PPC TD KK 03.02/13.07.1993 (GR-104A) §6.4.1<br>PPC TD GR-269 §7.2 |
| | AC dielectric test | IEC 60502-1:2021 §15.3<br>PPC TD DMKLD-211/29.05.97 § 6.2.5<br>PPC TD KT 10.01/23.11.90 § 6.2.5<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Short-circuit withstand capability test | IEC 60949:1988, IEC 60724:2000 |
| Power cable of rated voltage DC or AC up to 3,6 kV | Insulation resistance measurement test<br>- at ambient temperature<br>- at maximum conductor temperature | BS 7870-1:2011+A1:2022 Annex B (Table .1, & B.2)<br>BS 7870-2:2022 §3.3.1, §3.3.2, §3.3.4<br>BS 7870-3.40:2023 §6, §16.2 |
| | AC dielectric test | BS 7870-3.40:2023 §14.3<br>BS 7870-2.40:2022 §8.2.1 |
| | Short-circuit withstand capability test | IEC 60949:1988, IEC 60724:2000 |
| Low voltage insulated | Measurement of electrical resistivity of | BS 7870-2:2022 §3.9 |

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| cable with semi conducting screen | the semi conducting screen | |
| Low voltage XLPE – PVC insulated underground cables | Electrical resistance of conductors | PPC TD GR-269 §7.2 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Medium voltage power cable | Short-circuit withstand capability test | IEC 60949:1988, IEC 60986:2000<br>NF C33-226 |
| | AC Voltage withstand test on sheath | PPC TD DMKLD-182/15.11.94 § 6.2.16<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Lightning impulse voltage test (at elevated temperature) followed by a power frequency voltage test (at ambient temperature) | IEC 60502-2:2014 § 18.2.8<br>BS 7870-2:2022 § 8.2.4<br>PPC TD DMKLD-182/15.11.94 § 6.2.13<br>PPC TD DKSD-143/October 2001 § 6.3.1<br>PPC TD DMKD/Φ 142 GR-268 6.11.80 § 7.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Power-frequency voltage test for 4 hours | IEC 60502-2:2014 § 18.2.9<br>BS 7870-2:2022 § 8.2.5<br>PPC TD DMKLD-182/15.11.94 § 6.2.14<br>PPC TD DKSD-143/October 2001 § 6.3.1<br>PPC TD DMKD/Φ 142 GR-268 6.11.80 § 7.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Voltage test | IEC 60502-2:2014 § 16.4<br>PPC TD DMKD/Φ 142 GR-268 6.11.80 § 7.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-3:2006-02<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Resistivity of semiconducting screens | BS 7870-2:2022 §3.9 |
| Accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV:<br><br>- Indoor and outdoor terminations<br>- straight-joints, branch-joints suitable for use underground, indoors or outdoors | AC voltage withstand dry test | HD 629-1 S3 March 2019<br>IEC 61442:2023 § 5.1<br>PPC TD DKSD-213/11.6.04 § 6.2<br>PPC TD DKSD-160/02.08.04 § 6.2.2<br>PPC TD DKSD-159/02.08.04 § 6.2.2<br>HEDNO TD DD-361/23.07.12 § 6.3<br>PPC TD DKSD-184/11.06.04§ 6.2<br>PPC TD GR-277/01.10.84 § 4.1.1<br>PPC TD DD-340/22.12.10 § 6.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Lightning impulse voltage test at ambient temperature | HD 629-1 S3 March 2019<br>IEC 61442:2023 § 7.1, § 7.2<br>PPC TD DCD-213/11.6.04 § 6.2<br>PPC TD DKSD-160/02.08.04 § 6.2.2.2<br>PPC TD DKSD-159/02.08.04 § 6.2.2.2<br>HEDNO TD DD-361/23.07.12 §6.3 |

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| | | PPC TD DKSD-184/11.06.04 § 6.2<br>PPC TD GR-277/01.10.84 § 4.1.4<br>PPC TD DD-340/22.12.10 § 6.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Lightning impulse voltage test at elevated temperature | HD 629-1 S3 March 2019<br>IEC 61442:2023 § 7, § 9<br>PPC TD DKSD-213/11.6.04 § 6.2<br>PPC TD DKSD-160/02.08.04 § 6.2.2<br>PPC TD DKSD-159/02.08.04 § 6.2.2<br>HEDNO TD DD-361/23.07.12 § 6.3<br>PPC TD DKSD-184/11.06.04 § 6.2<br>PPC TD DD-340/22.12.10 § 6.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV:<br><br>- Indoor and outdoor terminations<br>- straight-joints, branch-joints suitable for use underground, indoors or outdoors<br><br>(continued) | AC voltage withstand wet test | HD 629-1 S3 March 2019<br>IEC 61442:2023 § 5<br>PPC TD DKSD-159/02.08.04 § 6.2.2<br>PPC TD DKSD-184/11.06.04 § 6.2<br>PPC TD GR-277/01.10.84 § 4.1.2<br>PPC TD DD-340/22.12.10 § 6.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Accessories for use on power cables of rated medium voltage<br><br>(continued) | Short circuit test:<br>- Active current value in screen<br>- Thermal (screen)<br>- Thermal (conductor)<br>- Dynamic (conductor) | IEC 61442:2023 §11, §12, §13<br>HD 629.2-S2:2016 §7, §8<br>HD 629.1-S3:2023 §7.1, §8<br>PPC TD DKSD-213/11.6.04 §6.2.1<br>PPC TD DKSD-159/02.08.04<br>PPC TD GR-277/01.10.84 |
| Accessories for use on distribution cables of rated voltage 0,6 / 1,0 (1,2) kV:<br>- Joints<br>- outdoor terminations | Short circuit test:<br>-Active current price | IEC EN 50393: 2015 §8.9<br>BS EN 50393: 2015 §8.9<br>HEDNO TD PP 381:2017 §6.2.1 |
| | Insulation resistance test | BS EN 50393:2015 §8.4 |
| | Dielectric withstand test | BS EN 50393:2015 § 8.3 |
| Permanent Connections used in substation grounding/earthing | Electromagnetic Force (EMF) test | IEEE 837:2014 § 5, § 7.2 |
| | Fault Current Test | IEEE 837:2014 § 5, §11 |
| | Current temperature cycling test | IEEE Std 837-2014 §5, §8 |
| Rotating Electrical Machines | Measurement of insulation resistance and polarization index of winding insulation | IEC 60034-27-4:2018-01<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-3:2006-02<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Dielectric dissipation factor | IEC 60034-27-3:2015-02 § 5.3, § 6.3 |

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| | measurement on stator winding insulation | IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-3:2006-02<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Measurement of winding capacitance and inductance | IEC 60034 |
| | Measurement of winding resistance | IEC 60034 |
| Luminaires | Insulation resistance test | ELOT EN IEC 60598-1:2021 § 10.2, §10.2.1 |
| | Dielectric Strength Test | EN IEC 60598-1 (2021-03-19) § 10.2 |
| | Leakage/contact current test | EN IEC 60598-1 (2021-03-19) §10.3 |
| | Ingress Protection (IP) test against: solid particles, water entry of objects into hazardous parts | EN IEC 60598-1:2024 §11.2.1, §11.2.2, §11.2.3, §11.2.10, §11.2.11 |
| | Dry Heat test | EN IEC 60598-1:2024 §14.3 |
| | Temperature rise test | EN IEC 60598-1:2024 §14.4 |
| | Resistance to heat (Ball pressure test) | EN IEC 60598-1:2024 §15.2 |
| | Humidity Test (Damp heat test) | EN IEC 60598-1:2024 §11.3 |
| Fixed general purpose luminaires | Dry heat test | EN IEC 60598-2-1:2021 §1.13 |
| | Temperature rise test | EN IEC 60598-2-1:2021 §1.13 |
| Portable general purpose luminaires | Dry heat test | EN IEC 60598-1:2024 §14.3<br>EN 60598-2-4:2018 §4.13 |
| | Temperature rise test | EN IEC 60598-1:2024 §14.4<br>EN 60598-2-4:2018 §4.13 |
| Recessed luminaires and recessed air-handling luminaires | Dry heat test | EN IEC 60598-2-2:2024 §2.13 |
| | Temperature rise test | EN IEC 60598-2-2:2024 §2.13 |
| Floodlights | Dry heat test | EN IEC 60598-1:2024 §14.3<br>EN 60598-2-5:2015 §5.12 |
| | Temperature rise test | EN IEC 60598-1:2024 §14.4<br>EN 60598-2-5:2015 §5.12 |
| Equipment for general purpose luminaires | ElectroStatic Discharge (ESD) Immunity testing | EN 61547:2009<br>EN IEC 61547:2023<br>IEC 61547:2020 § 5.2 |
| | Burst EFT Immunity testing | EN 61547:2009<br>EN IEC 61547:2023<br>IEC 61547:2020 §5.5 |
| | Voltage dips, short interruptions and voltage variations immunity tests | EN 61547:2009<br>EN IEC 61547:2023<br>IEC 61547:2020 §5.8 |
| | Surge Immunity testing | EN 61547:2009<br>EN IEC 61547:2023<br>IEC 61547:2020 § 5.7 |
| Electrical and electronic devices intended for use in residential, commercial, public and light-industrial environments | Surge Immunity testing | EN 61000-4-5:2014+A1:2017<br>(IEC 61000-4-5:2014) |
| | Burst EFT Immunity testing (power lines only) | EN 61000-4-4:2012<br>(IEC 61000-4-4:2012) |
| | ElectroStatic Discharge (ESD) Immunity testing) | EN 61000-4-2:2009<br>(IEC 61000-4-2:2025) |
| | Voltage dips, short interruptions voltage variations immunity tests | EN IEC 61000-4-11:2020<br>(IEC 61000-4-11:2020)<br>EN 61000-4-29:2001 |
| Electrical and electronic devices intended for use in industrial environment | Surge Immunity testing | EN 61000-4-5:2014+A1:2017<br>(IEC 61000-4-5:2014) |
| | Burst EFT Immunity testing (power lines only) | EN 61000-4-4:2012 |
| | Voltage dips, short interruptions | EN IEC 61000-6-2:2019 (IEC 61000-6-2:2016) |

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| | voltage variations immunity tests | Table 4 §4.2, §4.3<br>EN IEC 61000-4-11:2020<br>(IEC 61000-4-11:2020)<br>EN 61000-4-29:2001 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Electric vehicle conductive charging system | Dielectric strength test | EN IEC 61851-1:2019 §12.7.1<br>EN 61180:2016 §5 & 6<br>EN 61851-21:2002 §8.1.1<br>EN 61851-22:2002 §10.1.1<br>EN 61851-23:2014 §11.4 |
| | Insulation resistance test | EN IEC 61851-1:2019 §12.5<br>EN 61851-21:2002 §8.1.2<br>EN 61851-22:2002 §10.1.3<br>EN 61851-23:2014 §11.5 |
| | Leakage/contact current test up to 22KW | EN 60990:2016<br>EN IEC 61851-1:2019 §12.6<br>EN 61851-21:2002 §8.2<br>EN 61851-22:2002 §10.2<br>EN 61851-23:2014 §11.7 |
| | IK mechanical strength test | EN 62262:2002 +A1:2021<br>EN 60068-2-75:2014<br>EN IEC 61851-1:2019 §12.11<br>EN 61851-22:2002 §11.2.2 |
| | Marking durability test | EN IEC 61851-1:2019 §16.5<br>EN 61851-21:2002 §12.2<br>EN 61851-22:2002 §14.2 |
| | Surge Immunity testing | EN IEC 61851-21-2-2:2021 §5<br>EN 61000-4-5:2014+A1:2017<br>(IEC 61000-4-5:2014) |
| | Burst EFT Immunity testing (power lines only) | EN IEC 61851-21-2:2021 §5<br>EN 61000-4-4:2012<br>(IEC 61000-4-4:2012) |
| | ElectroStatic Discharge (ESD) Immunity testing | EN IEC 61851-21-2:2021 §5<br>EN 61000-4-2:2009<br>(IEC 61000-4-2:2025) |
| | Voltage dips, short interruptions voltage variations immunity tests | EN IEC 61851-21-2:2021 §5<br>EN IEC 61000-4-11<br>(IEC 61000-4-11:2020)<br>EN 61000-4-29:2001 |
| Electric vehicle conductive charging system | Ingress Protection against (IP): solid particles, water, entry of objects into hazardous parts | EN IEC 61851-1:2019 §12.4<br>EN 61851-22:2002 §8.4<br>EN 61851-23:2014 §101.1.2<br>IEC 60529:2013 §12, §13, §14.1, §14.2.3 §14.2.4, §14.3, §15 |
| | Temperature rise test up to 22KW | EN IEC 61851-1:2019 §12.8<br>EN 61851-22:2002 §8.3<br>EN IEC 61439-1: 2021 §10.10<br>EN IEC 61439-7:2023 §10.10 |
| | Damp heat test | IEC 61851-1:2017 §12.5, §12.6, §12.9<br>EN IEC 61851-1:2019 §12.5, §12.6, §12.9<br>EN 61851-22:2002 §11.1.4<br>EN 60068-2-78:2013<br>IEC 60068-2-30<br>EN 60068-2-30:2005 |
| | Test Z/AD: Composite temperature/ humidity cyclic test | IEC 60068-2-38: 2009-01 |
| | Low temperature test (Cold test) | EN IEC 61851-1:2019 §12.10<br>IEC 61851-1: 2017 §12.10<br>EN 61851-22:2002 §11.1.5 |

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| | | EN 60068-2-1:2007 |
| | Dry Heat test | EN 60068-2-2:2007<br>EN 61851-22:2002 §11.1.3 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Electrical equipment of machines | Dielectric strength test | EN 61180:2016 §5 & 6<br>EN 60204-1: 2006 +A1:2009 §18.4<br>EN 60204-1: 2018 §18.4 |
| | Insulation resistance test | EN 60204-1:2006 +A1:2009 §18.3<br>EN 60204-1:2018 §18.3 |
| | Functionality test | EN 60204-1:2006 +A1:2009 §18.6<br>EN 60204-1:2018 §18.6 |
| | Test to verify the continuity of the protection circuit | EN 60204-1:2006 +A1:2009 §18.6, §18.2.2<br>EN 60204-1:2018 §18.6, §18.2.2 |
| | Leakage/contact current test | EN 60990:2016<br>EN 60204-1:2006 +A1:2009 §8.2.6<br>EN 60204-1:2018 §8.2.8 |
| Electrical installations on ships | Insulation resistance test | IEC 60092-504:2016 §5.2 Table 1, Test 5 |
| | Dielectric strength test | EN 61180:2016 §5 & 6<br>IEC 60092-504:2016 §5.2 Table 1, Test 3 |
| | Surge Immunity testing | EN 61000-4-5:2014+A1:2017<br>(IEC 61000-4-5:2014) |
| | Damp heat test | IEC 60068-2-78:2013<br>IEC 60068-2-30 (2005-08) |
| | Burst EFT Immunity testing (power lines only) | EN 61000-4-4:2012<br>(IEC 61000-4-4:2012) |
| | ElectroStatic Discharge (ESD) Immunity testing | EN 61000-4-2:2009<br>(IEC 61000-4-2:2025) |
| | Voltage dips, short interruptions and voltage variations immunity tests | EN IEC 61000-4-11:2020<br>(IEC 61000-4-11:2020)<br>EN 61000-4-29:2001 |
| Audio/video, information and communication technology equipment | Dielectric strength test | EN 61180:2016 §5 & 6<br>EN IEC 62368-1:2020 +A11:2020 §5.4.9 |
| | Leakage/contact current test | EN 60990:2016<br>EN IEC 62368-1:2020 +A11:2020 §5.7 |
| | IK mechanical strength test | EN 62262:2002 +A1:2021<br>EN 60068-2-75:2014<br>EN IEC 62368-1:2020 +A11:2020 §4.4.3.4, §4.8.4.5, §T.6, §T.9, Y.6.2 |
| | Test to verify the continuity of the protection circuit | EN IEC 62368-1:2020 +A11:2020 § 5.6.6 |
| | Marking durability test | EN IEC 62368-1:2020 +A11:2020 §F.3.10 |
| Shipping control, protection and safety 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<br>IACS E10 ((Rev.8 Feb 2021) (Corr.1 Jan 2022)), Table, Test N.10 |
| Electrical – Electronic equipment | Surge Immunity testing | EN 61000-4-5:2014+A1:2017<br>(IEC 61000-4-5:2014) |
| | Burst EFT Immunity testing (power lines only) | EN 61000-4-4:2012<br>(IEC 61000-4-4:2012) |
| | Immunity to Electrostatic Discharge (ESD) test | EN 61000-4-2:2009<br>(IEC 61000-4-2:2025) |
| | Voltage dips, short interruptions and voltage variations immunity tests | EN IEC 61000-4-11:2020<br>(IEC 61000-4-11:2020)<br>EN 61000-4-29:2001 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Fiber optic interconnection devices | Damp heat test | EN 61300-2-21:2010 §5<br>EN IEC 61300-2-46:2019 |

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| and passive components | Low temperature test (Cold test) | EN 61300-2-17:2011 §5<br>IEC 60068-2-1:2007 |
| | Dry Heat test | EN 61300-2-18:2005 §5<br>IEC 60068-2-2 (2007-07) |
| | Environmental Testing, Test N: Change of temperature | IEC 61300-2-22 §5<br>EN 60068-2-14 |
| Fibre optic cables | Water penetration test | IEC 60794-1-22 Edition 1.0 2012-06<br>§ 7/ Method F5B |
| Defence equipment | Damp heat test | MIL-STD-810G:2008 Method: 507.5 proc II |
| Fuses, ignition safety devices other related parts | Damp heat test | MIL-STD-331C:2005 Test C1 |
| Components for overhead power lines and power cables | Electrical aging test | PPC TD 11.01/11.11.87 §6.4<br>PPC TD EK. 03.20/17.01.95 (GR-261A) § 6.1.2 |
| Insulation Piercing Connectors of Aerial Bundled Cable of rated voltage 0,6/1,0 (1,2) kV | Test for checking electrical continuity, breaking torque of screw shear heads | PPC TD DKSD-289:2004 § 6.1.2.1.1 |
| | Installation test at low temperature (Low temperature connector assembly test) | EN 50483-4: 2009 § 8.1.4<br>PPC TD GR-324 24.07.86 § 6.1.1<br>NF C 33-020: 1998 § 2.5.1(*) |
| | AC dielectric voltage withstand test and water-tightness test<br>4kV, power frequency @ 30 min in water | EN 50483-1:2009 § 9<br>EN 50483-4:2009 § 8.1.3<br>PPC TD DKSD-289:2004 § 6.1.2.5<br>NF C 33-020/1998 § 2.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test and water-tightness test<br>6kV, power frequency @ 30 min in water | PPC TD GR-324 (24.07.86) § 6.2.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test, 4 kV / 6 kV, power frequency @ 1 min with metallic balls in air | EN 50483-1:2009 § 9<br>EN 50483-4:2009 § 8.1.3.1.3.2.1, § 8.1.5.2.4.1<br>PPC TD DKSD-289:2004 § 6.1.2.6.3, § 6.1.2.6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test in water, 1kV power frequency @ 1 min (under conditions of artificial rain), climatic ageing test criterion | EN 50483-1:2009 § 9<br>EN 50483-4:2009 § 8.1.5.2.4.1<br>PPC TD DKSD-289:2004 § 6.1.2.6.5 |
| | Test for permanent marking (Durability test for marking) | PPC TD DKSD-289:2004 § 6.1.2.9<br>EN 50483-1:2009 § 6, § 9.2<br>EN 50483-4 § 6<br>NF C 33-020/1998 §3.2 |
| | Electrical aging test | PPC TD DKSD-289:2004 § 6.1.2.7<br>PPC TD GR-324 24.07.86 §6.1.3<br>EN 50483-5 (2009)<br>EN 50483-1 (2009) § 9.1 |
| Insulation Piercing Portable equipment of Aerial Bundled Cable of rated voltage 0,6/1,0 (1,2) kV for earthing or earthing and short-circuiting | Installation test at low temperature (Low temperature connector assembly test) | EN 50483-4: 2009 § 8.1.4<br>PPC TD DMKLD 153 19/11/1999 § 6.1.2.4<br>NF C 33-020: 1998 § 2.5.1 (*) |
| | AC dielectric power frequency voltage withstand test and water-tightness test | PPC TD DMKLD 153 19/11/1999 § 6.1.2.5<br>NF C 33-020/1998 § 2.4(*)<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04 |

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| | | IEC 60060-2:2025-04 |
| | AC dielectric power frequency voltage withstand test with metallic balls in air | PPC TD DMKLD 153 19/11/1999 § 6.1.2.7.2<br>NF C 33-020/1998 § 2.6(*)<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test in water, 1kV power frequency @ 1 min (under conditions of artificial rain), climatic ageing test criterion | PPC TD DMKLD 153 19/11/1999 § 6.1.2.7.2<br>NF C 33-020/1998 § 2.6(*) |
| | Test for permanent marking (Durability test for marking) | PPC TD DMKLD 153 19/11/1999 § 6.1.2.10<br>NF C 33-020/1998 §3.2(*) |
| | Equipment handling endurance test | PPC TD DMKLD 153 19/11/1999 §6.1.2.3 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
|---|---|---|
| Low Voltage Single Pole Bridge, low voltage aerial bundled cable accessories | Equipment handling endurance test | HEDNO TD DED-163/12.05.2023 §6.1.1, §6.2.2 |
| | AC dielectric voltage withstand test and tightness under conditions of artificial rain | HEDNO TD DED-163/12.05.2023 §6.1.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Screw-type and non-screw- type clamping units for connecting devices, for the electrical connection of copper | Bolt tightening torque test | IEC 60999-1: 1999 §9.6 |
| Live working - Portable equipment for earthing or earthing and short circuiting (at medium voltage network) | Short circuit current test | IEC 61230:2008<br>UNE EN 61230:2011<br>IEC 61138:2007<br>PPC TD DD-200:2010 |
| Live working - Portable equipment for earthing or earthing and short circuiting (at low voltage network) | Short circuit current test | IEC 61230:2008<br>UNE EN 61230:2011<br>IEC 61138:2007<br>PPC TD DMKLD-165:1998<br>PPC TD DMKLD-234:1999 |
| Tension clamps for low voltage aerial bundled cable (accessories) | AC dielectric voltage withstand test 4kV / 30 kV power frequency AC | EN 50483-1:2009 § 9<br>EN 50483-2:2009 § 8.3.1<br>EN 50483-3:2009 § 8.1.5.1<br>PPC TD DKSD-288/March 2004 §6.1.2.1, §6.1.2.2<br>PPC TD DD-336/10.11.09 § 6.1.5.1<br>PPC TD GR-325/31.3.86 § 5.1.1.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test 4 kV /6 kV/30 kV, power frequency AC for criterion of climatic ageing test | EN 50483-1:2009 § 9<br>EN 50483-2:2009 § 8.3.1<br>EN 50483-3:2009 § 8.1.5.2<br>PPC TD DKSD-288/March 2004 §6.1.2.2, §6.1.2.4.3.1<br>PPC TD DD-336/10.11.09 § 6.1.5.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |

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| | AC dielectric voltage withstand test in water 4kV/10kV, power frequency, 30 min for criterion of tensile test at high temperature | EN 50483-1:2009 § 9<br>EN 50483-3:2009 § 8.1.5.3<br>PPC TD DD-336/10.11.09 § 6.1.5.3<br>PPC TD DKSD-288/March 2004 §6.1.2.5.2<br>PPC TD DMKLD-211/29.05.97 § 6.1.2.4a<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test in water 4kV power frequency, 4h for criterion of tensile test at high temperature | EN 50483-1:2009 § 9<br>EN 50483-2:2009 § 8.3.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Electrical insulating matting | AC dielectric power frequency voltage withstand test | IEC 61111:2009-04, Edition 2.0 §5.6.4.2.1 §5.6.4.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric power frequency voltage withstand test– Periodic test | IEC 61111:2009-04, Edition 2.0 § 5.6.4.2.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Insulating foam-filled tubes and solids rods – tubes and rods of a circular cross-section | AC dielectric power frequency voltage withstand dry test | IEC 60855-1:2016-04 Edition 2.0 § 5.4.2.2.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
| Suspension clamps for low voltage aerial bundled cable (accessories) | AC dielectric voltage withstand test 4 kV/ 30 kV, power frequency | EN 50483-1:2009 § 9<br>EN 50483-2:2009 § 8.3.1<br>EN 50483-3:2009 § 8.2.4.1<br>PPC TD DD-335/10.11.09 § 6.1.3.1<br>PPC TD DKSD- 287/March 2004 § 6.1.2.1, § 6.1.2.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test, in water, 4 kV/10 kV, power frequency, 30 min | EN 50483-1:2009 § 9<br>EN 50483-3:2009 § 8.2.4.2<br>PPC TD DD-335/10.11.09 § 6.1.3.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test, in water, 4 kV, power frequency, 4h | EN 50483-1:2009 §9<br>EN 50483-2:2009 §8.3.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test in water (10kV, power frequency /30min) 1st criterion for swing test | PPC TD DKSD-287/ March 2004 § 6.1.2.6.4<br>PPC TD DMKLD-211/ 29.05.1997 § 6.2.5<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11 |

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| | | IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric voltage withstand test (30kV)<br>2º criterion for swing test | PPC TD DKSD-287/ March 2004 § 6.1.2.2, § 6.1.2.6.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Electrical insulating gloves | AC dielectric power frequency voltage withstand test | IEC 60903:2014-07, § 5.6.1.4.2, § 5.6.1.4.3<br>HEDNO Code. TD- XEPI-2 22/09/2023<br>HEDNO Code. TD- XEPI-3 22/09/2023<br>HEDNO Code E110-2/1 15/01/2018<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric power frequency voltage withstand test - periodic test | IEC 60903:2014-07, Edition 3.0 § 5.6.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Multi-purpose insulating sticks | Leakage current test | EN 50508:2009 § 5.2.2, § 5.2.4<br>HEDNO TD DYAE Code: TD-YΨO-1 Edition 5th, 25/05/2022 §5.1.2.θ.<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Bridging test | EN 50508:2009 § 5.2.3<br>HEDNO TD DYAE Code: TD-YΨO-1 Edition 5th, 25/05/2022 §5.1.2.θ.<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Water fire extinguisher, aerosol fire extinguisher | Dielectric test | EN 3-7:2004+A1 August 2007 § 9, Annex C<br>EN 16856 April 2020 § 5.9, Annex J<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Fire extinguishing media - powder | Electrical insulation test | ISO 7202:2012 § 11, § 13.8, Annex C<br>ISO 7202:2018 § 11, § 13.8, Annex C<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Insulating aerial devices for mounting on a chassis | Periodic AC dielectric testing | ANSI/SAIA A92.2-2021 § 5.4.3.2, § 5.4.3.4<br>IEC 61057:2017 § E.5.1.1, § E.5.1.3, § E.5.1.4<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-3:2006-02<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Insulating basket /liner | Dielectric test in water | IEC 61057:2017 § 6.6.3, § E.5.1.8<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11 |

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| | | IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Protective safety footwear | Electric hazard resistant on footwear | ASTM F2412 – 24 § 9<br>ASTM F2413 – 24 § 5.6<br>ASTM F2412 - 18a § 9<br>ASTM F2413 - 18 § 5.6<br>HEDNO DYAE Code.: TD-ΥΠΟ-1, Edition: 4th, 17.07.2024 § 6α, § 6β<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Electrical tests AC, 50 Hz, in the water | EN 50321-1:2018 §5.2.1, §5.2.2.2, §5.2.2.3, §5.2.2.4<br>T.D. HEDNO S.A. Code: TD-ΥΠΟ-2 Edition: 4th 11/7/2023 § 7.1, § 7.2<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Insulating oils | Determination of the breakdown voltage at power frequency | IEC 60156:2018-08, Edition 3.0 § 9, § 10<br>IEC 60156:2025-01, Edition 4.0 § 9, § 10<br>HEDNO TD DEED DD-394/09.2018<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Measurement of dielectric dissipation factor (tan δ) | IEC 60247:2004-02 § 12<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |

| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
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| Electrical insulators and other solid materials | Test for evaluating resistance to tracking and erosion | IEC 60587: 2007<br>EN IEC 60587: 2022-05-13 §6.1, §6.2, §6.4<br>HEDNO TD DD-204-06.06.23 §6.3.1<br>PPC TD DD-204/07.06.2021 §6.3.1.1.1, §6.3.2.1<br>PPC TD DD-441: 2010 (§6.1.4)<br>PPCTD DD-204/20.11.2008 §6.2.1.3, §6.2.2.3 |
| | Glow wire test | IEC 60695-2-13: 2010-10 §8, §9, §10<br>IEC 60695-2-12: 2010-10 §8, §9, §10<br>IEC 60695-2-11: 2021-12-03 §8, §9, §10<br>IEC 60695-2-10: 2021-12-03 §7 |
| | Ball pressure test | IEC 60695-10-2:2014 §8 |
| | Dielectric Strength Test | IEC 60243-1: 2013 §6, §7.4, §9, §10.1, §11, §12<br>PPC TD GR 226/ 23.09.2004 §6.2.2.6, Tables 9.1.1, 9.1.3, 9.1.5<br>HEDNO TD DD-GR 226A/Revision 22.07.2021. §6.2.2.6, Tables 9.1.1, 9.1.3<br>HEDNO TD DD/380/Revision 29.04.2021 §6.2.2.6, Tables 9.1.1, 9.1.3, 9.1.5<br>HEDNO TD DD 151/Revision 02.08.2021 §6.2.2.6, Table 9.1.1 |
| Insulating stools for electrical work | AC dielectric power frequency voltage withstand test – periodic test | UNE 204001<br>HEDNO TD Code:E-110-2/1 1/3/2013<br>IEC 60060-1:2010-09 §6.3.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Household and similar electrical appliances | Ball pressure test | IEC 60335-1 § 30.1<br>IEC 60695-10-2:2014 §8 |
| Surge protective devices (SPD) to low voltage power systems | Ball pressure test | IEC 61643-11: 2011-03 §8.5.3<br>IEC 60695-10-2:2014 §8 |
| | Dry Heat test | IEC 61643-11: 2011 §8.5.2 |
| Mounting polyester boxes reinforced with fiber glass (SMC) used for metering equipment in low voltage loads | Glow wire test | HEDNO TD DD-380/Rev. 29.04.21 §6.2.2.7 (a)<br>HEDNO TD DD-GR 226A/Add. 22.07.2021. §6.2.2.7 (a)<br>IEC 60695-2-11: 2021-12-03 (§8, §9, §10) |
| | Protection against (IP) test: solid particles, water ingress, entry of objects into hazardous parts | IEC 60529:2013 §12, §13, §14.1, §14.2.3, §14.2.4, §14.3, §15<br>HEDNO TD DD-380/Rev. 29.04.21 §5.2.3, §6.2.2.5 a, §6.2.2.5 b<br>HEDNO TD DD-GR 226A/Rev 22.07.2021 §5.2.6, §6.2.2 §6.2.2.5 (α) |
| | Dielectric Strength Test | PPC TD GR 226/ 23.09.2004 §6.2.2.6<br>HEDNO TD DD-GR 226A/Rev 22.07.2021. §6.2.2.6, §9.1.3<br>HEDNO TD DD-380/Rev. 29.04.21 §6.2.2.6, §9.1.3, §9.1.5<br>HEDNO TD DD 151/Rev.02.08.2021 §6.2.2.6 |
| | Dry Heat test | EN IEC 60068-2-2:2007 (Test Bd) |
| | Damp heat test | HEDNO TD DD/380/Rev. 29.04.2021 § 6.2.2.4(α)<br>HEDNO TD DD-GR 226A/Rev. 22.07.2021 § 6.2.2.4(α)<br>EN/IEC 60068-2-30 Db |
| | Ingress Protection (IP) test against: | IEC 60529:2013 §12, §13, §14.1, §14.2.3, §14.2.4, |

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| Low voltage fuse boxes | solid particles, water entry of objects into hazardous parts | §14.3, §15<br>HEDNO TD DD-403/07.12.20 §6.1.4<br>HEDNO TD DD-328/10.05.2024 §6.1.4 |
| | Dielectric Strength Test | HEDNO TD DD -328/ 10.05.2024, §5.5 §6.2.3 §6.2.4 |
| Underground coupling boxes synthetic material | Protection test against (IP): water ingress | PPC TD DKSD-244/22-03-2006 §6.1.4<br>PPC TD GR- 249/22.4.83 §4.2.3<br>IEC 60529:2013 §14.2.8, §14.3 |
| | Equipment handling endurance test | PPC TD DKSD-244/22-03-2006 §6.1.3 |
| -Enclosures and boxes, general<br>-Devices | IPX7 protection degree test against temporary water immersion (waterproofing) | IEC 60529: Edition 2.2 2013-08 (§14.2.7)<br>(Reviewed in the 2024 evaluation) |
| Materials/Product to be tested | Type of test/ Properties to be Measured | Applied methods/ Techniques to be used |
| Live working – Hand tools for use up to 1.000 V AC and 1.500 V DC | Dielectric testing | IEC 60900:2018-06 § 5.5<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Industrial head protection Protective Helmet | AC dielectric power frequency voltage withstand test | ANSI/ISEA Z/89.1/2014 § 10.7.4.2<br>HEDNO TD E110-2/1 01/03/2013<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-5<br>Edition 4th 06/09/2022 § 4.2.8.c, § 4.3<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-6<br>Edition 4th 14/10/2022 §4.2.8.c, §4.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Industrial head protection Protective Helmet<br><br>(continued) | Electrical tests after and without headform | EN 397+A1:2013 § 5.2.3, § 6.10<br>HEDNO TD E110-2/1 01/03/2013<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-5<br>Edition 4th 06/09/2022 § 4.2.8.a, § 4.3<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-6<br>Edition 4th 14/10/2022 §4.2.8.a, §4.3<br>HEDNO TD DSYAE Code.: TD- ΚΕΦ-9 Edition 1th 05/03/2025 §4.2.8.a, §4.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | AC dielectric power frequency voltage withstand test in water bath immersion test | EN 50365:2002 § 6.3<br>EN 50365:2023 § 5.3.1, § 5.3.2, § 5.3.3, § 5.3.4, § 5.3.5, § 6, § C.6<br>HEDNO TD E110-2/1 01/03/2013<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-5<br>Edition 4th 06/09/2022 § 4.2.8.b, § 4.3<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-6<br>Edition 4th 14/10/2022 §4.2.8.b, §4.3<br>HEDNO TD DYAE Code.: TD- ΚΕΦ-9<br>Edition 1th 05/03/2025 §4.2.8.b, §4.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |

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| Voltage detector – Capacitive type to be used for voltages exceeding 1 kV AC (Medium Voltage) | Measurement of threshold voltage Periodic test | IEC 61243-1:2021-04, Edition 3.0 § 6.2.1.2.2.2<br>HEDNO TD DED-185/10.11.2021 § 6.2, § 6.3<br>HEDNO TD DED-199/10.11.2021 § 6.2, § 6.3<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Measurement of threshold voltage | IEC 61243-1:2021-04, Edition 3.0 § 6.2.1.2.1<br>HEDNO TD DED -185/10.11.2021 § 6.1<br>HEDNO TD DED -199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Influence of in-phase interference field | IEC 61243-1:2021-04, Edition 3.0 § 6.2.1.3<br>HEDNO TD DED -185/10.11.2021 § 6.1<br>HEDNO TD DED -199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Influence of phase opposition interference field | IEC 61243-1:2021-04, Edition 3.0 § 6.2.1.4<br>HEDNO TD DED -185/10.11.2021 § 6.1<br>HEDNO TD DED -199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Influence of interference voltage | IEC 61243-1:2021-04, Edition 3.0 § 6.2.1.5<br>HEDNO TD DED -185/10.11.2021 § 6.1<br>HEDNO TD DED - 199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Time rating | IEC 61243-1:2021-04, § 6.2.10<br>HEDNO TD DED-185/10.11.2021 § 6.1<br>HEDNO TD DED-199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Test for stand-by state | IEC 61243-1:2021-04, § 7.2<br>HEDNO TD DED -185/10.11.2021 § 6.1<br>HEDNO TD DED -199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Test for ready to operate state | IEC 61243-1:2021-04, § 5.4, § 7.3<br>HEDNO TD DED-185/10.11.2021 § 6.1<br>HEDNO TD DED 199/10.11.2021 § 6.1 |
| | Check of testing element | IEC 61243-1:2021-04, § 6.2.8<br>HEDNO TD DED-185/10.11.2021 § 6.1<br>HEDNO TD DED-199/10.11.2021 § 6.1 |
| | Protection against bridging | IEC 61243-1:2021-04 § 6.3.2<br>HEDNO TD DED-185/10.11.2021 § 6.1<br>HEDNO TD DED-199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11 |

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| | | IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Spark resistance | IEC 61243-1:2021-04 § 6.3.4<br>HEDNO TD DED-185/10.11.2021 § 6.1<br>HEDNO TD DED-199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| | Non-response to DC voltage | IEC 61243-1:2021-04 § 6.2.9<br>HEDNO TD DED-185/10.11.2021 § 6.1<br>HEDNO TD DED-199/10.11.2021 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Phase comparators – Capacitive type to be used for voltages exceeding 1 kV a.c. | Distance range for two-pole phase comparators with wireless connection | IEC 61481-1:2014 § 5.2.3<br>HEDNO TD DED -441/11.05.2023 § 6.1 |
| | Protection against bridging | IEC 61481-1:2014 § 5.3.2<br>HEDNO TD DED -441/11.05.2023 § 6.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Insulators for overhead lines with a nominal voltage greater than 1.000 V (Medium Voltage) | Dry lightning impulse withstand voltage test on M.V. insulator. | IEC 61952:2008-05, Edition 2.0 § 11.1<br>IEC 61109:2008-05, Edition 2.0 § 11.1<br>IEC 60383-1:2023-07, Edition 5.0 § 12<br>ANSI/NEMA C29.8-2017 (R2023) § 8.2.3<br>ANSI/NEMA C29.9-2017 § 8.2.3<br>ANSI/NEMA C29.1-2018 § 4.8<br>HEDNO TD ND-204/07.06.2021 § 6.2.1.1, § 6.2.2.1<br>HEDNO TD ND-204/06.06.23 § 6.2.1.1, § 6.2.2.1<br>HEDNO TD ND-458/20.09.24 § 6.4.2.1<br>PPC ND-284/20.11.2008 § 6.1.2<br>HEDNO TD ND-311/06.06.23 §6.2.2.1<br>HEDNO TD ND-312/07.06.23 §6.2.2.1<br>HEDNO TD ND-453/04.11.24 §6.2.1<br>HEDNO TD ND-437/31.01.23 §6.6.2.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04<br>IEEE Std 4-2013 |
| | AC dielectric power frequency voltage withstand test in water on M.V. insulator | IEC 61952:2008-05, Edition 2.0 § 11.1<br>IEC 61109:2008-05, Edition 2.0 § 11.1<br>IEC 60383-1:2023-07, Edition 5.0 § 13<br>ANSI/NEMA C29.8-2017 (R2023) § 8.2.1<br>ANSI/NEMA C29.9-2017 § 8.2.1<br>ANSI/NEMA C29.1-2018 § 4.5<br>HEDNO TD ND-204/07.06.2021 § 6.2.1.1, § 6.2.2.1<br>HEDNO TD ND-204/06.06.23 § 6.2.1.1, § 6.2.2.1<br>HEDNO TD ND-458/20.09.24 § 6.4.2.1 |

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| | | PPC TD ND-284/20.11.2008 § 6.1.3<br>HEDNO TD ND-284/14.07.23 §6.1.3<br>HEDNO TD ND-311/06.06.23 §6.2.2.1<br>HEDNO TD ND-312/07.06.23 §6.2.2.1<br>HEDNO TD ND-453/04.11.24 §6.2.1<br>HEDNO TD ND-437/31.01.23 §6.6.2.1<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04<br>IEEE Std 4-2013 |
| | Low-frequency dry flashover voltage test on insulator M.V. | ANSI/NEMA C29.1-2018 § 4.2<br>ANSI/NEMA C29.2A-2020 § 8.2.3<br>ANSI/NEMA C29.2B-2013 (R2023) § 8.2.1<br>ANSI/NEMA C29.3-2015 (R2022) § 8.2.1<br>ANSI/NEMA C29.4-2022 § 8.2.1<br>ANSI/NEMA C29.5-2022 § 8.2.1<br>ANSI/NEMA C29.6-2022 § 8.2.1<br>ANSI/NEMA C29.7-2015 (R2023) § 8.2.1<br>HEDNO TD ND-329/02.06.23 § 6.1.1<br>HEDNO TD ND-309/14.03.23 §6.2.1<br>HEDNO TD ND-310/27.03.23 §6.2.1<br>PPC TD GR-47S/14.10.81 § 4.1.1<br>PPC TD GR-47P/14.10.81 § 6.1.1<br>PPC TD ND-330/20.11.2008 § 6.1.1<br>HEDNO TD ND-330/29.05.23 § 6.1.1<br>IEEE Std 4-2013 |
| | Critical impulse flashover voltage test on M.V. insulator. | ANSI/NEMA C29.8-2017 (R2023) § 8.2.2<br>ANSI/NEMA C29.9-2017 § 8.2.2<br>ANSI/NEMA C29.1-2018 § 4.7<br>ANSI/NEMA C29.2A-2020 § 8.2.5<br>ANSI/NEMA C29.2B-2013 (R2023) § 8.2.3<br>ANSI/NEMA C29.5-2022 § 8.2.3<br>ANSI/NEMA C29.6-2022 § 8.2.3<br>ANSI/NEMA C29.7-2015 (R2023) § 8.2.3<br>IEC 60383-1:2023-07, Edition 5.0 § 12<br>PPC TD ND-329/02.06.2023 § 6.1.3<br>PPC TD GR-47S/14.10.81 § 4.1.3<br>PPC TD GR-47P/14.10.81 § 6.1.3<br>HEDNO TD ND-284/14.07.23 §6.1.2<br>HEDNO TD ND-309/14.03.23 §6.2.1<br>HEDNO TD ND-310/27.03.23 §6.2.1<br>IEEE Std 4-2013<br>IEC 60060-1:2010-09<br>IEC 60060-2:2010-11<br>IEC 60060-1:2025-04<br>IEC 60060-2:2025-04 |
| Insulators for overhead lines<br>with a nominal voltage greater than 1.000 V (medium voltage)<br><br>(continued) | Low-frequency wet flashover voltage test on insulator M.V. | ANSI/NEMA C29.1-2018 § 4.3<br>ANSI/NEMA C29.2A-2020 § 8.2.4<br>ANSI/NEMA C29.2B-2013 (R2023) § 8.2.2<br>ANSI/NEMA C29.3-2015 (R2022) § 8.2.2<br>ANSI/NEMA C29.4-2022 § 8.2.2<br>ANSI/NEMA C29.5-2022 § 8.2.2<br>ANSI/NEMA C29.6-2022 § 8.2.2<br>ANSI/NEMA C29.7- 2015 (R2023) § 8.2.2<br>PPC TD ND-329/02.06.2023 § 6.1.2<br>PPC TD GR-47S/14.10.81 § 4.1.2<br>PPC TD GR-47P/14.10.81 § 6.1.2<br>PPC TD ND-330/20.11.2008 § 6.1.2<br>HEDNO TD ND-330/29.05.23 § 6.1.2 |

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| | | HEDNO TD ND-309/14.03.23 §6.2.1<br>HEDNO TD ND-310/27.03.23 §6.2.1<br>IEEE Std 4-2013 |

(*) Standards that are maintained in the Accreditation due to contractual obligations of the laboratory with its client.

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

Approved signatories: M. Valsamakis, E. Thirios, G. Lytras, A. Petrakos, E. Tsafos, K. Stampolas, C. Gourdoupis.

This Scope of Accreditation replaces the previous one dated 25.02.2026.
The Accreditation Certificate No. **90**-9, to ELOT EN ISO/IEC 17025: 2017, is valid until 23.06.2027.

Athens, 01.09.2026

Konstantinou Evangelos Apostolos
*CEO of E.SY.D.*