

Annex to declaration of accreditation (scope of accreditation)  
 Normative document: EN ISO/IEC 17025:2017  
 Registration number: **L 020**

of **KEMA B.V.**  
**High Power Laboratory and High Voltage Laboratory**

This annex is valid from: **07-02-2024** to **01-04-2026**

Replaces annex dated: **01-02-2023**

**Location(s) where activities are performed under accreditation**

**Head Office**

Klingelbeekseweg 195  
 6812 DE  
 Arnhem  
 The Netherlands

Location	Abbreviation/ location code
Klingelbeekseweg 195 6812 DE Arnhem The Netherlands	ARN

No.	Material or product	Type of activity <sup>1</sup>	Internal reference number	Location
<b>Flexible scope<sup>(2)</sup></b>				
Dielectric test				
1.	Electrical equipment	Power-frequency voltage test (AC) (≤ 900 kV, 45-500 Hz)	ISI-GSA-1227	ARN
2.		DC voltage test (≤ 800 kV)		
3.		Lightning impulse voltage test (LI) (≤ 2,4 MV)		
4.		Switching impulse voltage test (SI) (≤ 2,0 MV)		
5.	Electrical equipment	Test under wet conditions (AC / DC / LI / SI)	ISI-GSA-1227	ARN

<sup>1</sup> If there is a referral to a code starting with NAW, NAP, EA or IAF, this concerns a scheme mentioned on the [RvA-BR010-lijst](#).  
 If no date or version number is mentioned for a normative document, the accreditation concerns the most current version of the document or scheme.

This annex has been approved by the Board of the  
 Dutch Accreditation Council, on its behalf,

J.A.W.M. de Haas

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No.	Material or product	Type of activity <sup>1</sup>	Internal reference number	Location
6.	Electrical equipment	Partial discharge measurement (all above noise level)	ISI-GSA-1227	ARN
7.		Radio interference voltage measurement (all above noise level)		
8.		Tan $\delta$ and capacitance measurement		
9.		Impulse puncture test / Steep front-of-wave flashover test ( $\leq 400$ kV)		
10.		Corona measurement (any visible corona)		

Short-circuit test

11.	Electrical equipment	Short-time withstand current and peak withstand current test ( $\leq 1200$ kA <sub>peak</sub> )	ISI-GSA-1227	ARN
12.		Ability to withstand short circuit / Short-circuit current tests / Short-time current tests ( $\leq 1200$ kV and $\leq 400$ kA)		
13.		Short-circuit making and breaking tests / Interruption tests / Terminal fault test ( $\leq 1200$ kV and $\leq 400$ kA)		
14.		Breaking tests / Interruption tests / Time current tests on fuses ( $\leq 245$ kV and $\leq 400$ kA)		
15.		Inrush current withstand test / Discharge current test ( $\leq 600$ kV and $\leq 200$ kA)		
16.		Short-line fault tests ( $\leq 1200$ kV and $\leq 400$ kA)		
17.		Out-of-phase making and breaking tests ( $\leq 1200$ kV and $\leq 400$ kA)		
18.		By-pass making and insertion tests ( $\leq 1200$ kV and $\leq 400$ kA)		
19.		Time current tests on autorecloser ( $\leq 400$ kA)		
20.		Internal arc fault tests / Internal fault test ( $\leq 1200$ kV and $\leq 400$ kA)		
21.		Power arc test on insulators ( $\leq 400$ kA)		
22.		Short-circuit tests on arrester ( $\leq 400$ kA)		

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Switching test				
23.	Electrical equipment	Switching making and breaking test ≤ 1200 kV	ISI-GSA-1227	ARN
24.		Capacitive current switching tests ≤ 1200 kV		
25.		Bus-transfer current switching tests ≤ 1200 kV		
26.		Induced current switching tests ≤ 1200 kV		
27.		Bus-charging current switching tests ≤ 1200 kV		
28.		Inductive load switching tests ≤ 1200 kV		
29.		Verification of coordination with short-circuit protection device ≤ 1200 kV		
30.		Minimum tripping current test		
Accuracy test				
31.	Electrical equipment	Tests for accuracy of instrument transformers (incl. LPIT's) (CT: continuous current ≤ 60 kA, 50-60 Hz) (CT: transient current ≤ 400 kA) (VT: ≤ 500 kV, 50-60 Hz)	ISI-GSA-1227	ARN
32.		Measurement of voltage ratio and check of phase displacement on power transformers and reactors		
Environmental- and temperature test				
33.	Electrical equipment	Climatic and environmental tests, ageing test, (-40 °C to +60 °C, 50-99% rel. humidity)	ISI-GSA-1227	ARN
34.		Condensation test / Salt fog test / Tracking and erosion test		
35.		Pollution test (≤ 350 kV)		
36.		Temperature cycle test / Thermal shock test / Immersion test		

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37.	Electrical equipment	Heating cycle test / Heating cycle voltage test / Long term stability test / Long duration test	ISI-GSA-1227	ARN
38.		Temperature-rise test / Continuous current test / thermal stability test (≤ 25 kA, three-phase) (≤ 50 kA, single-phase)		
Material test				
39.	Electrical equipment	Porosity test porcelain on insulators	ISI-GSA-1227	ARN
40.		Water absorption test on insulators		
41.		Water penetration test on cables (≤ 3 bar)		
42.		Galvanizing test		
Mechanical test				
43.	Electrical equipment	Pressure withstand test for gas-filled compartments (≤ 20 bar)	ISI-GSA-1227	ARN
44.		Tensile test / mechanical test / (electro-)mechanical failing load test / verification of the locking system (≤ 500 kN)		
45.		Impact test (Insulators: ≤ 10 Nm) (Cable accessories)		
46.		Mechanical endurance/operation tests at ambient temperature / Low- and High-temperature tests (-40°C to +60°C)		
47.		Operation during the application of rated static mechanical terminal loads (≤ 1000 kN)		
48.		Thermal-mechanical performance test on insulators (≤ 300 kN; -50°C to +70°C)		
49.		Test to verify the proper functioning of the position-indicating device		
50.		Mechanical shock tests on fuses		

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51.	Electrical equipment	Striker operation tests on fuses	ISI-GSA-1227	ARN
52.		Cantilever load- and internal pressure test on insulators		
53.		Mechanical test on instrument transformers		
54.		Bending tests on cables		
Resistance and impedance measurement				
55.	Electrical equipment	Resistance measurement	ISI-GSA-1227	ARN
56.		Impedance measurement		
57.		Measurement of blocking impedance		
Verification of degree of protection				
58.	Electrical equipment	Verification of the IP coding ( $\leq$ IP56)	ISI-GSA-1227	ARN
59.		Mechanical impact test (IK07-IK10)		
Tightness and leakage test				
60.	Electrical equipment	Tightness tests / Gas Tightness test / Leak test of tightness test / Enclosure tightness test	ISI-GSA-1227	ARN
Sound level measurement				
61.	Electrical equipment	Sound level measurement	ISI-GSA-1227	ARN
Power measurement				
62.	Electrical equipment	Power measurement	ISI-GSA-1227	ARN
SFRA measurement				
63.	Electrical equipment	SFRA measurement	ISI-GSA-1227	ARN
Examination				
64.	Electrical equipment	Determination of dimensions / Gauging	ISI-GSA-1227	ARN

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65.	Electrical equipment	Verification of displacements on insulators	ISI-GSA-1227	ARN
Operation tests				
66.	Electrical equipment	On load tap changer tests	ISI-GSA-1227	ARN
<b>Material Testing Laboratory</b>				
67.	Electrical equipment	Solar radiation	ISI-GSA-1227	ARN
68.		Glow wire test		
69.		Determination of temperature of deflection under load temperature of 135 °C pressure of 1,8 MPa		
70.		Measurement of insulation thickness		
71.		Measurement of thickness of non-metallic sheath		
72.		Measurement of overall dimensions		
73.		Thermal ageing methods. Ageing in an air oven		
74.		Water absorption test		
75.		Loss of mass test for thermoplastic insulations and sheath		
76.		Tests for determining the mechanical properties of insulating and sheathing compounds: tensile strength and elongation		
77.		Shrinkage test for insulations		
78.		Shrinkage test for sheaths		
79.		Elongation at low temperature for insulations and sheaths		
80.		Impact test at low temperature for insulations and sheaths		
81.	Hot set test for crosslinked materials			

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82.	Electrical equipment	Pressure test at high temperature for insulation and sheaths	ISI-GSA-1227	ARN
83.		Test for resistance of insulations and sheaths to cracking (heat shock test)		
84.		Measurement of carbon black and/or mineral filler in polypropylene compounds		

<sup>(2)</sup> "The laboratory is obliged to maintain an up-to-date version of the reference document ISI-GSA-1227 under this flexible scope. RvA may request to submit a copy of this document from the laboratory."