

LOVAG Registered Laboratory 2014

LOVAG CB	Id Code	Name	Address	Observer
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LOVAG Scheme Scope

Main Standards in the LOVAG Scheme			
	Category	Standards	Description
<input checked="" type="checkbox"/>	POW	IEC/EN 60947-1	Low-voltage switchgear and controlgear
<input type="checkbox"/>	POW	IEC/EN 60947-2	Circuit-breakers
<input checked="" type="checkbox"/>	POW	IEC/EN 60947-3	Switches, disconnectors, switch-disconnectors and fuse-combination units
<input type="checkbox"/>	POW	IEC/EN 60947-4-1	Electromechanical contactors and motor starters
<input type="checkbox"/>	POW	IEC/EN 60947-5-1	Auxiliary Switch
<input type="checkbox"/>	POW	IEC/EN 60439-1 IEC/EN 61439-1 & IEC/EN 61439-2	Low-voltage switchgear and controlgear assemblies Part 2: Power switchgear and controlgear assemblies
<input type="checkbox"/>	POW	IEC/EN 61439-1 & IEC/EN 61439-6	Low-voltage switchgear and controlgear assemblies Part 6: Busbar trunking systems (busways)
<u>Additional standards tested by MERSEN</u>			
<input checked="" type="checkbox"/>	POW	IEC/EN 60296-1	Low-voltage fuses –Part 1: General requirements
<input checked="" type="checkbox"/>	POW	IEC/EN 60296-2	Low-voltage fuses-Part 2: Supplementary requirements for fuses for use by authorized persons
<input checked="" type="checkbox"/>	POW	IEC/EN 60296-3	Low-voltage fuses-Part 3: Supplementary requirements for fuses for use by unskilled persons (Fuses mainly for household and similar applications)
<input checked="" type="checkbox"/>	POW	IEC/EN 60296-4	Low-voltage fuses-Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices
<input checked="" type="checkbox"/>	POW	IEC/EN 60296-6	Low-voltage fuses-Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems

General Overview of Scope of tests (*)

Type of tests:	Test description:	Maximum Test limits:
<input type="checkbox"/> High-current tests	<input type="checkbox"/> Short-circuit switching capacity <input type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> Overload switching capacity <input type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> Making/breaking capacity <input type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/> Short-time withstand current <input type="checkbox"/> Impulse withstand current <input type="checkbox"/> Arc fault withstand capacity	Voltage : / Current : Voltage : / Current : Voltage : / Current : Voltage :.../ Current : Voltage : / Current : Voltage : / Current : Current : Time : s Current : A Energy : kA²s
<input checked="" type="checkbox"/> Insulation tests	<input checked="" type="checkbox"/> High voltage <input checked="" type="checkbox"/> Impulse withstand voltage <input checked="" type="checkbox"/> Leakage current detection	Voltage : 100 kV Voltage : 20 kV 1.2/50µs Current : 0 up to 1000 mA
<input checked="" type="checkbox"/> Temperature-rise tests	<input checked="" type="checkbox"/> AC / <input checked="" type="checkbox"/> DC max. current <input checked="" type="checkbox"/> Impedance measurement	Current : 9200 A / Current : 2500 A 100µΩ up to 20 Ω
<input checked="" type="checkbox"/> Tripping behaviour	<input checked="" type="checkbox"/> AC / <input checked="" type="checkbox"/> DC max. current	Current : 9200 A / Current : 2500 A
<input checked="" type="checkbox"/> Lifespan	<input checked="" type="checkbox"/> Mechanical lifespan <input checked="" type="checkbox"/> Electrical durability: <input checked="" type="checkbox"/> AC <input checked="" type="checkbox"/> DC	Opening/closing operations Voltage : 6 to 12 V / Current up to 9200 A Voltage : 10 to 100 V / Current: up to 2500 A
<input checked="" type="checkbox"/> Mechanical properties of terminals		Flexion/pulling withstand, 100kN pulling test, 16Nm screwing torque, 6000g centrifugal acceleration
<input type="checkbox"/> EMC tests		
<input checked="" type="checkbox"/> Climatic tests		-40 up to 200°C, 20 up to 95% humidity, salt spray enclosure
<input checked="" type="checkbox"/> Vibration and shock tests		250N sinusoidal vibration
<input checked="" type="checkbox"/> Degree of protection tests	<input checked="" type="checkbox"/> IP-code (water and solid bodies) <input type="checkbox"/> IK-code (impact resistance of enclosures)	IP20 only IK

(*) The provided technical information are not contractual and could be different, according to the relevant test specifications of a specific product standard. For more technical specifications or details, please refer to laboratory documentations or website.