

Laboratory	Switchgear Testing Laboratories, Larsen & Toubro Ltd., Gate no 1, Powai Campus, Saki-Vihar Road, Powai, Mumbai, Maharashtra		
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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	SWITCHGEAR EQUIPMENT			
1.	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Making & breaking Capacity	IEC 60947-1: 2014 IS/IEC 60947-1: 2007 IEC 60947-3: 2012; Clause. 8.3.3.3 IS/IEC 60947-3: 1999 Clause. 8.3.3.3 IEC 60947-4 -1: 2012 Clause. 9.3.3.5 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.5 IEC 60947-5 -2: 2007 Clause. 8.3.3.5 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.5 IEC 60947-5 -4: 2002 Clause. 8.3.3.5.2 IEC 60947-6 -1: 2013 c 1 9.3.3.5 IEC 60669-1: 2007 Clause. 18	100 A to 1 kA, 1000 V 1 kA to 5 kA, 1000 V 5 kA to 10 kA, 750 V

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Short Circuit Making capacity	IEC 60947-2: 2013 Clause. O.2.3 IS/IEC 60947-2: 2003 Clause. O.2.3 IEC 60947-3: 2012; Clause. 8.3.5.2 IS/IEC 60947-3: 1999 Clause. 8.3.5.2 IEC 60947-4 -1: 2012 Clause. 9.3.3.5 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.5 IEC 60947-5 -2: 2007 Clause. 8.3.3.5 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.5 IEC 60947-5 -4: 2002 Clause. 8.3.3.5.2 IEC 60947-6 -1: 2013 Clause. 9.3.4.2.2 IEC 60669-1: 2007 Clause. 18 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100 A to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Short time withstand current	IEC 60947-2: 2013 Clause. 8.3.6 IS/IEC 60947-2: 2003 Clause. 8.3.6 IEC 60947-3: 2012; Clause. 8.3.5.2 IS/IEC 60947-3: 1999 Clause. 8.3.5.1 IEC 60947-6 -1: 2013 Clause. 9.3.4.3 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	300 A to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Fuse protected short circuit withstand	IEC 60947-3: 2012; Clause. 8.3.6.2.1a IS/IEC 60947-3: 1999 Clause. 8.3.6.2.1a IEC 60947-1: 2014 IS/IEC 60947-1: 2007	1 kA to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Fuse protected short circuit making	IEC 60947-3: 2012; Clause. 8.3.6.2.1b IS/IEC 60947-3: 1999 Clause. 8.3.6.2.1b IEC 60947-1: 2014 IS/IEC 60947-1: 2007	1 kA to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Rated service short circuit breaking capacity	IEC 60947-2: 2013 Clause. 8.3.4.1 IS/IEC 60947-2: 2003 Clause. 8.3.4.1 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100A to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Rated ultimate short circuit breaking capacity	IEC 60947-2: 2013 Clause. 8.3.5.2 IS/IEC 60947-2: 2003 Clause. 8.3.5.2 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100A to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Short circuit Breaking capacity at Maximum short time withstand current	IEC 60947-2: 2013 Clause. 8.3.6.4 IS/IEC 60947-2: 2003 Clause. 8.3.6.4 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	300 A to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Short circuit at selectivity limit current	IEC 60947-2: 2013 Clause. 8.3.7.1 IS/IEC 60947-2: 2003 Clause. 8.3.7.1 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100 A to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Short circuit at 1.1times take over current	IEC 60947-2: 2013 Clause. 8.3.7.5 IS/IEC 60947-2: 2003 Clause. 8.3.7.5 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100 A to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Individual pole short circuit breaking capacity	IEC 60947-2: 2013 Annexure C ; Annexure H IS/IEC 60947-2: 2003 Annexure C ; Annexure H IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100 A to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnectors, Switch Disconnectors and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Verification of rated making and breaking capacities, change over ability and reversibility	IEC 60947-4 -1: 2012 Clause. 9.3.3.5 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.5 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	50 A to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Discrimination between SCPD and overcurrent relay	IEC 60947-2: 2013 Annexure A IS/IEC 60947-2: 2003 Annexure A IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100A to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Conditional short Circuit current	IEC 60947-2: 2013 Annexure L; Annexure M IS/IEC 60947-2: 2003 Annexure L; Annexure M IEC 60947-3: 2012; Clause. 8.3.6 IS/IEC 60947-3: 1999 Clause. 8.3.6 IEC 60947-4 -1: 2012 Clause. 9.3.4.2 IS/IEC60947-4 -1: 2000 Clause. 9.3.4.2 IEC 60947-5 -2: 2007 Clause. 7.2.5 IS/IEC60947-5 -2: 2007 Clause. 7.2.5 IEC 60947-6 -1: 2013 Clause. 9.3.4.4 IEC 60669-1: 2007 Clause. 18 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	1 kA to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Performance under short circuit conditions	IEC 60947-4 -1: 2012 Clause. 9.3.4 IS/IEC60947-4 -1: 2000 Clause. 9.3.4 IEC 60947-5 -2: 2007 Clause. 8.3.4 IS/IEC60947-5 -2: 2007 Clause. 8.3.4 IEC 60947-6 -1: 2013 Clause. 9.3.4 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	1 kA to 5 kA,1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V
		Verification of ability to withstand overload current	IEC 60947-4 -1: 2012 Clause. 9.3.5 IS/IEC60947-4 -1: 2000 Clause. 9.3.5 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	20A to 10 kA 1 s to 20 s
		Verification of the Rated residual making and breaking capacity	IEC 60947-2: 2013 Annexure B IS/IEC 60947-2: 2003 Annexure B IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100 A to 10 kA
		Verification of conventional operational performance	IEC 60947-4 -1: 2012 Clause. 9.3.3.6 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.6 IEC 60947-6 -1: 2013 Clause. 9.3.3.6 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	10 A to 5 kA,1000 V

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		Clearances and creepage Distances	IEC 60947-2: 2013 Clause. 7.1.4 IS/IEC 60947-2: 2003 Clause. 7.1.4 IEC 60947-3: 2012; Clause. 7.1.4; 7.1.7 IS/IEC 60947-3: 1999 Clause. 7.1.4; 7.1.7 IEC 60947-4 -1: 2012 Clause. 8.1.4 IS/IEC60947-4 -1: 2000 Clause. 8.1.4 IEC 60947-5 -2: 2007 Clause. 7.1.3 IS/IEC60947-5 -2: 2007 Clause. 7.1.3 IEC 60947-6 -1: 2013 Clause. 9.1.4 IEC 60669-1: 2007 Clause. 23 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	0 to 100 mm
		Electrical endurance	IEC 60947-2: 2013 Clause. M.8.11 IS/IEC 60947-2: 2003 Clause. M.8.11	0.5 A to 1 kA 1 kA to 6.3 kA

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Temperature rise verification	IEC 60947-2: 2013 Clause. 8.3.2.5; 8.3.4.3; 8.3.6.3 IS/IEC 60947-2: 2003 Clause. 8.3.2.5; 8.3.4.3; 8.3.6.3 IEC 60947-3: 2012; Clause. 8.3.3.1; 8.3.3.6; 8.3.4.4; 8.3.5.5; 8.3.6.5; 8.3.7.4 IS/IEC 60947-3 1999 Clause. 8.3.3.1; 8.3.3.6; 8.3.4.4; 8.3.5.5; 8.3.6.5; 8.3.7.4 IEC 60947-4 -1: 2012 Clause. 9.3.3.3 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.3 IEC 60947-5 -2: 2007 Clause. 8.3.3.3 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.3 IEC 60947-6 -1: 2013 Clause. 9.3.3.3; 9.3.4.3 IEC 60669-1: 2007 Clause. 17 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	10 °K to 100 °K, 1 A to 10 kA

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Dielectric properties	IEC 60947-2: 2013 Clause. 8.3.3.2 IS/IEC 60947-2: 2003 Clause. 8.3.3.2 IEC 60947-3: 2012; Clause. 8.3.3.2 IS/IEC 60947-3: 1999 Clause. 8.3.3.2 IEC 60947-4 -1: 2012 Clause. 9.3.3.4 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.4 IEC 60947-5 -2: 2007 Clause. 8.3.3.4 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.4 IEC 60947-6 -1: 2013 Clause. 9.3.3.4 IEC 60669-1: 2007 Clause. 16 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	0.1 kV to 5 kV, 1 s to 99 s

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnectors Switch Disconnectors and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Leakage current	IEC 60947-2: 2013 Clause. 8.3.4.3; 8.3.5.3; 8.3.8.5; 8.3.3.2 IS/IEC 60947-2: 2003 Clause. 8.3.4.3; 8.3.5.3; 8.3.8.5; 8.3.3.2 IEC 60947-3: 2012; Clause. 8.3.7.3; 8.3.3.5; 8.3.4.3; 8.3.5.4; 8.3.6.4; IS/IEC 60947-3: 1999 Clause. 8.3.7.3; 8.3.3.5; 8.3.4.3; 8.3.5.4; 8.3.6.4; IEC 60947-4 -1: 2012 Clause. 9.3.3.4 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.4 IEC 60947-5 -2: 2007 Clause. B.8.1.2.6 IS/IEC60947-5 -2: 2007 Clause. B.8.1.2.6 IEC 60947-6 -1: 2013 Clause. 9.3.3.6.2 d IEC 60947-1: 2014 IS/IEC 60947-1: 2007	100 V to 1000 V 0 to 6 mA
		Strength of actuator mechanism	IEC 60947-3: 2012; Clause. 8.3.3.7 IS/IEC 60947-3: 1999 Clause. 8.3.3.7 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	500 g to 60 kg

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnectors, Switch Disconnectors and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Operational performance	IEC 60947-2: 2013 Clause. 8.3.3.3; 8.3.4.2; 8.3.4.4; Annexure B IS/IEC 60947-2: 2003 Clause. 8.3.3.3; 8.3.4.2; 8.3.4.4; Annexure B IEC 60947-3: 2012; Clause. 8.3.4; Annexure A IS/IEC 60947-3: 1999 Clause. 8.3.4; Annexure A IEC 60947-4 -1: 2012	1 A to 5 kA, 690 V
		Tripping limits and Characteristics	Clause. 9.3.3.6; IS/IEC60947-4 -1 2000 Clause. 9.3.3.6 IEC 60947-5 -2: 2007 Clause. 8.3.3.5 IEC 60947-6 -1: 2013 Clause. 8.2.4.2;c9.3.3.6 IEC 60669-1: 2007 Clause. 19 IEC 60947-1: 2014 IS/IEC 60947-1: 2007 IEC 60947-2: 2013 Clause. 8.3.3.1 IS/IEC 60947-2: 2003 Clause. 8.3.3.1 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	5 A to 10 kA 1 s to 9999 s

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnectors, Switch Disconnectors and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Overload performance	IEC 60947-2: 2013 Clause. 8.3.3.4 IS/IEC 60947-2: 2003 Clause. 8.3.3.4 IEC 60947-3: 2012; Clause. 8.3.7 IS/IEC 60947-3: 1999 Clause. 8.3.7 IEC 60947-4 -1: 2012 Clause. 8.2.4 IS/IEC60947-4 -1: 2000 Clause. 8.2.4 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	50 A to 5 kA
		Verification of Overload Releases	IEC 60947-2: 2013 Clause. 8.3.3.7; 8.3.3.7; 8.3.4.4; 8.3.5.1; 8.3.5.4; 8.3.6.1; 8.3.6.6; 8.3.7.4;8.3.7.8; 8.3.8.1;8.3.8.6 IS/IEC 60947-2: 2003 Clause. 8.3.3.7; 8.3.3.7; 8.3.4.4; 8.3.5.1; 8.3.5.4; 8.3.6.1; 8.3.6.6; 8.3.7.4;8.3.7.8; 8.3.8.1;8.3.8.6 IEC 60947-4 -1: 2012 Clause. 5.7 IS/IEC60947-4 -1: 2000 Clause. 5.7 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	1A to 10 kA 1 s to 9999 s

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Marking, dimensions, visual examination, General, constructional requirements	IEC 60947-2: 2013 Clause. 5.2; 5.3; 7 IS/IEC 60947-2: 2003 Clause. 5.2; 5.3; 7 IEC 60947-3: 2012; Clause. 5.2; 5.3; 7 IS/IEC 60947-3: 1999 Clause. 5.2; 5.3; 7 IEC 60947-4 -1: 2012 Clause. 5.4.1; 6.2; 8.1; 8.2 IS/IEC60947-4 -1: 2000 Clause. 5.4.1; 6.2; 8.1; 8.2 IEC 60947-5 -2: 2007 Clause. 5.2; 7 IS/IEC60947-5 -2: 2007 Clause. 5.2; 7 IEC 60947-6 -1: 2013 Clause. 6.2;8.1;8.2 IEC 60669-1: 2007 Clause. 8; 9; 13 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	1 mm to 1.5 m

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnectors, Switch Disconnectors and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Mechanical operational performance capability	IEC 60947-2: 2013 Clause. 8.3.3.3; 8.4.1; Annexure M IS/IEC 60947-2: 2003 Clause. 8.3.3.3; 8.4.1 Annexure M IEC 60947-3: 2012; Clause. 8.1.3.2; Annexure A IS/IEC 60947-3 1999 Clause. 8.1.3.2; Annexure A IEC 60947-4 -1: 2012 Annexure B IS/IEC60947-4 -1: 2000 Annexure B IEC 60947-6 -1: 2013 Clause. 8.2.4.2.2 IEC 60669-1: 2007 Clause. 20; IEC 60947-1: 2014 IS/IEC 60947-1: 2007	0 to 3 x 10 ⁸ Count

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Environment test, Dry heat	IEC 60947-2: 2013 Annexure F IS/IEC 60947-2: 2003 Annexure F IEC 60947-4 -1: 2012 Clause. 9.1.5.2 IS/IEC60947-4 -1: 2000 Clause. 91.5.2 IEC 60947-5 -2: 2007 Clause. 8.3.3.5 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.5 IEC 60947-5 -4: 2002 Clause. 8.2 IEC 60947-6 -1: 2013 Clause. 9.5 IEC 60669-1: 2007 Clause. 25; 15 IEC 60947-1: 2014 IS/IEC 60947-1: 2007 IEC 60068-2-14: 2009 IEC 60068-2-30: 2005	(-40 °C to 250 °C 1 to168 hr
		Moisture and humidity test	IEC 60947-5 -2: 2007 Clause. 7.2.1.4 IS/IEC60947-5 -2: 2007 Clause. 7.2.1.4 IEC 60947-6 -1: 2013 Clause. 9.3.4.2.2 IEC 60669-1: 2007 Clause. 15 IEC 60068-2-14: 2009 IEC 60068-2-30: 2005 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	25 % to 97 % RH 1 hr to168 hr

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Verification of operation and operating limits	IEC 60947-2: 2013 Clause. 8.3.3.8 IS/IEC 60947-2: 2003 Clause. 8.3.3.8 IEC 60947-4 -1: 2012 Clause. 9.3.3.1; 9.3.3.2 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.1; 9.3.3.2 IEC 60947-5 -2: 2007 Clause. 7.2.1.2; 8.3.3.2 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.2 IEC 60947-6 -1: 2013 Clause. 9.3.3.4.12;8.2.1.2 IEC 60669-1: 2007 Clause. 119 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	(-)10 °C to 70 °C 10 V to 1000 V
		Degree of protection; Protection against electric shock	IEC 60947-4 -1: 2012 Clause. 9.3.4.2.3 b IEC 60529: 2013 IEC 60947-1: 2014 Annexure C IS/IEC 60947-1: 2007 Annexure C	IP10 to IP40
		Verification of undervoltage and shunt releases	IEC 60947-2: 2013 Clause. 8.3.3.8 IS/IEC 60947-2: 2003 Clause. 8.3.3.8 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	10 V to 1000 V

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnecter Switch Disconnecter and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Verification of main contact position	IEC 60947-2: 2013 Clause. 8.3.3.9 IS/IEC 60947-2: 2003 Clause. 8.3.3.9 IEC 60947-4 -1: 2012 Clause. 8.1.6 IS/IEC60947-4 -1: 2000 Clause. 8.1.6 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	500 g to 60 kg
		Dielectric test (Impulse test)	IEC 60947-2: 2013 Clause. 8.4.5; Annexure B; Annexure M; IS/IEC 60947-2: 2003 Clause. 8.4.5; Annexure B; Annexure M; IEC 60947-3: 2012; Clause. 7.2.3 IS/IEC 60947-3: 1999 Clause. 7.2.3 IEC 60947-4 -1: 2012 Clause. 9.3.3.4.1 IS/IEC60947-4 -1: 2000 Clause. 9.3.3.4.1; Annexure F IEC 60947-5 -2: 2007 Clause. 8.3.3.5; Annexure F IS/IEC60947-5 -2: 2007 Clause. 8.3.3.4; 7.2.3.1 IEC 60947-6 -1: 2013 Clause. 9.3.3.4.1 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	2 kV to 24 kV Rise time- 1.2 μ s Fall time- 50 μ s

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	Low Voltage Switchgear and Control Gear Circuit Breakers Switches, Disconnectors Switch Disconnectors and Fuse Combination Units Contactors and Motor Starters Control Circuit Devices and Switching Elements	Dielectric test (Power frequency voltage withstand test)	IEC 60947-2: 2013 Clause. 8.4.5 2; 8.3.3.5; 8.3.4.3; 8.3.5.3; 8.3.6.5; 8.3.7.3; 8.3.7.7; 8.3.8.5 IS/IEC 60947-2: 2003 Clause. 8.4.5 2 IEC 60947-3: 2012; Clause. 8.3.3.4;8.3.4.2;8.3.5.3; 8.3.6.3; 8.3.7.2 IS/IEC 60947-3: 1999 Clause. 8.3.3.4 IEC 60947-4 -1: 2012 Clause. 9.3.6.3, 9.3.3.4; 9.3.3.6.6; 9.3.4.2.3; Annexure B; IS/IEC60947-4 -1: 2000 Clause. 9.3.3.4 IEC 60947-5 -2: 2007 Clause. 8.3.3.4 IS/IEC60947-5 -2: 2007 Clause. 8.3.3.4 IEC 60947-6 -1: 2013 Clause. 8.2.3;9.3.3.4; IEC 60669-1: 2007 Clause. 16 IEC 60947-1: 2014 IS/IEC 60947-1: 2007	0.1 kV to 5 kV, 1 s to 99 s
		Glow wire test	IEC 60669-1: 2007 Clause. 24 IEC 60947-1: 2014 Clause. 7.1.2.2 IS/IEC 60947-1: 2007 Clause. 7.1.2.2 IEC60695-2-10: 2013 IEC 60695-2-11: 2014	650 °C to 960 °C

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2.	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Coordination at Inc	IEC 61008-1: 2013 Clause. 9.11.2.4 a IEC/EN 61008-1: 2006 Clause. 9.11.2.4 a IEC 61008-2-1: 1990 Clause. 9.11.2.4 a IEC 61008-2-2: 1990 Clause. 9.11.2.4 a	1 kA to 10 kA
Performance at Im		IEC/EN 60898-2: 2006 Clause. 9.12.11.4.4; 9.12.12 IEC 61008-1: 2013 Clause. 9.11.2.4 c IEC/EN 61008-1: 2006 Clause. 9.11.2.4 c IEC 61008-2-1: 1990 Clause. 9.11.2.4 c IEC 61008-2-2: 1990 Clause. 9.11.2.4c	100 A to 10 kA	
Coordination at Im		IEC 61008-1: 2013 Clause. 9.11.2.4b IEC/EN 61008-1: 2006 Clause. 9.11.2.4 b IEC 61008-2-1: 1990 Clause. 9.11.2.4b IEC 61008-2-2: 1990 Clause. 9.11.2.4 b	100 A to 10 kA	
Coordination at I _{Δc}		IEC 61008-1: 2013 Clause. 9.11.2.2 IEC/EN 61008-1: 2006 Clause. 9.11.2.2 IEC 61008-2-1: 1990 Clause. 9.11.2.2 IEC 61008-2-2: 1990 Clause. 9.11.2.2	100 A to 10 kA	

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Non operating current under overcurrent conditions	IEC 61008-1: 2013 Clause. 9.18 IEC/EN 61008-1: 2006 Clause. 9.18 IEC 61008-2-1: 1990 Clause. 9.18 IEC 61008-2-2: 1990 Clause. 9.18 IEC/EN 61009-1: 2006 Clause. 9.18 IEC 61009-2-1: 1991 Clause. 9.18 IEC 61009-2-2: 1991 Clause. 9.18	3 A to 500 A
		Resistance of insulation of open contacts and basic insulation against an impulse voltage	IEC 60898-1: 2015 Clause. 9.7.5.4 IEC 61008-1: 2013 Clause. 9.7.7.4 IEC/EN 61008-1: 2006 Clause. 9.7.7.4 IEC 61008-2-1: 1990 Clause. 9.7.7.4 IEC 61008-2-2: 1990 Clause. 9.7.7.4 IEC 61009-1: 2013 Clause. 9.7.7.4 IEC/EN 61009-1: 2006 Clause. 9.7.7.4 IEC 61009-2-1: 1991 Clause. 9.7.7.4 IEC 61009-2-2: 1991 Clause. 9.7.7.4 IS 12640-1: 2008 Clause. 9.20 IS 12640-12: 2008 Clause. 9.20	2 kV to 24 kV Rise time- 1.2 μ s Fall time- 50 μ s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Verification of behaviour of components bridging the basic insulation	IEC/EN 61008-1: 2006 Clause. 9.7.7.5 IEC 61008-2-1: 1990 Clause. 9.7.7.5 IEC 61008-2-2: 1990 Clause. 9.7.7.5 IEC 61009-1: 2013 Clause. 9.7.7.4 IEC/EN 61009-1: 2006 Clause. 9.7.7.5 IEC 61009-2-1: 1991 Clause. 9.7.7.5 IEC 61009-2-2: 1991 Clause. 9.7.7.5	0.1 kV to 5 kV, 1 s to 99 s
		Secondary circuit detection transformers	IEC/EN 61008-1: 2006 Clause. 9.7.5 IEC 61008-2-1: 1990 Clause. 9.7.5 IEC 61008-2-2: 1990 Clause. 9.7.5 IEC 61009-1: 2013 Clause. 9.7.5 IEC/EN 61009-1: 2006 Clause. 9.7.5 IEC 61009-2-1: 1991 Clause. 9.7.5 IEC 61009-2-2: 1991 Clause. 9.7.5	Qualitative

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Capability of control circuits units connected to the main circuits withstanding high d.c. voltages due to insulation measurements	IEC/EN 61008-1: 2006 Clause. 9.7.6 IEC 61008-2-1: 1990 Clause. 9.7.6 IEC 61008-2-2: 1990 Clause. 9.7.6 IEC 61009-1: 2013 Clause. 9.7.6 IEC/EN 61009-1: 2006 Clause. 9.7.6 IEC 61009-2-1: 1991 Clause. 9.7.6 IEC 61009-2-2: 1991 Clause. 9.7.6	550 V to 650 V DC, 1 min.
		Overcurrent operating characteristics	IEC 61009-1: 2013 Clause. 9.9.2 IEC/EN 61009-1: 2006 Clause. 9.9.2 IEC 61009-2-1: 1991 Clause. 9.9.2 IEC 61009-2-2: 1991 Clause. 9.9.2 IS 12640-1: 2008 Clause. 9.9.2 IS 12640-2: 2008 Clause. 9.9.2	0.5 A to 500 A, 1 s to 9999 s 5 mA to 500 A 1 ms to 9999 s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Residual operating characteristic	IEC/EN 61008-1: 2006 Clause. 9.9 IEC 61008-2-1: 1990 Clause. 9.9 IEC 61008-2-2: 1990 Clause. 9.9 IEC 61009-1: 2013 Clause. 9.9 .1 IEC/EN 61009-1: 2006 Clause. 9.9.1 IEC 61009-2-1: 1991 Clause. 9.9.1 IEC 61009-2-2: 1991 Clause. 9.9.1 IS 12640-1: 2008 Clause. 9.9.1 IS 12640-1: 2008 Clause. 9.9.1	2 kV to 24 kV Rise time- 1.2 μ s Fall time- 50 μ s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Dielectric Strength of main circuit	IEC 60898-1: 2015 Clause. 9.7.3 IEC 60898-2: 2003 Clause. 9.7 IEC/EN 60898-2: 2003 Clause. 9.7 IEC 61008-1: 2013 Clause. 9.7.3 IEC/EN 61008-1: 2006 Clause. 9.7.3 IEC 61008-2-1: 1990 Clause. 9.7.3 IEC 61008-2-2: 1990 Clause. 9.7.3 IEC 61009-1: 2013 Clause. 9.7.3 IEC/EN 61009-1: 2006 Clause. 9.7.3 IEC 61009-2-1: 1991 Clause. 9.7.3 IEC 61009-2-2: 1991 Clause. 9.7.3 IS 12640-1: 2008 Clause. 9.7 IS 12640-1: 2008 Clause. 9.7	0.1 kV to 5 kV, 1 s to 99 s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Verification of clearances with the impulse withstand voltage	IEC 60898-1: 2015 Clause. 9.7.5.2 IEC 60898-2: 2003 Clause. 8.1.3 IEC/EN 60898-2: 2003 Clause. 8.1.3 IEC 61008-1: 2013 Clause. 9.7.7.2 IEC/EN 61008-1: 2006 Clause. 9.7.7.2 IEC 61008-2-1: 1990 Clause. 9.7.7.2 IEC 61008-2-2: 1990 Clause. 9.7.7.2 IEC 61009-1: 2013 Clause. 9.7.7.2 IEC/EN 61009-1: 2006 Clause. 9.7.7.2 IEC 61009-2-1: 1991 Clause. 9.7.7.2 IEC 61009-2-2: 1991 Clause. 9.7.7.2 IS 12640-1: 2008 Clause. 8.1.3 IS 12640-1: 2008 Clause. 8.1.3	2 kV to 24 kV Rise time- 1.2 μ s Fall time- 50 μ s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Behaviour in case of earth fault current comprising a D.C. component	IEC 61008-1: 2013 Clause. 9.21 IEC/EN 61008-1: 2006 Clause. 9.21 IEC 61008-2-1: 1990 Clause. 9.21 IEC 61008-2-2: 1990 Clause. 9.21 IEC 61009-1: 2013 Clause. 9.21 IEC/EN 61009-1: 2006 Clause. 9.21 IEC 61009-2-1: 1991 Clause. 9.21 IEC 61009-2-2: 1991 Clause. 9.21 IS 12640-1: 2008 Clause. 9.21 IS 12640-1: 2008 Clause. 9.21	1 mA to 2 A

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Reliability	IEC 61008-1: 2013 Clause. 9.22 IEC/EN 61008-1: 2006 Clause. 9.22 IEC 61008-2-1: 1990 Clause. 9.22 IEC 61008-2-2: 1990 Clause. 9.22 IEC 61009-1: 2013 Clause. 9.22 IEC/EN 61009-1: 2006 Clause. 9.22 IEC 61009-2-1: 1991 Clause. 9.22 IEC 61009-2-2: 1991 Clause. 9.22 IS 12640-1: 2008 Clause. 9.22 IS 12640-2: 2008 Clause. 9.22	20 °C to 70 °C 25 % to 97 % RH 1 hr to 672 hr

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Ageing of electronic Component	IEC 61008-1: 2013 Clause. 9.23 IEC/EN 61008-1: 2006 Clause. 9.23 IEC 61008-2-1: 1990 Clause. 9.23 IEC 61008-2-2: 1990 Clause. 9.23 IEC 61009-1: 2013 Clause. 9.23 IEC/EN 61009-1: 2006 Clause. 9.23 IEC 61009-2-1: 1991 Clause. 9.23 IEC 61009-2-2: 1991 Clause. 9.23 IS 12640-1: 2008 Clause. 9.23 IS 12640-2: 2008 Clause. 9.23	40 °C; 168 hr 5 mA to 1.25 A

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Insulation resistance	IEC 60898-1: 2015 Clause. 9.7.2 IEC 61008-1: 2013 Clause. 9.7.2 IEC/EN 61008-1: 2006 Clause. 9.7.2 IEC 61008-2-1: 1990 Clause. 9.7.2 IEC 61008-2-2: 1990 Clause. 9.7.2 IEC 61009-1: 2013 Clause. 9.7.2 IEC/EN 61009-1: 2006 Clause. 9.7.2 IEC 61009-2-1: 1991 Clause. 9.7.2 IEC 61009-2-2: 1991 Clause. 9.7.2	0 to 5 MΩ, 500 V DC
		Insulation resistance and dielectric strength of auxiliary circuits	IEC 60898-1: 2015 Clause. 9.7.4 IEC 61008-1: 2013 Clause. 9.7.4 IEC/EN 61008-1: 2006 Clause. 9.7.4 IEC 61008-2-1: 1990 Clause. 9.7.4 IEC 61008-2-2: 1990 Clause. 9.7.4 IEC 61009-1: 2013 Clause. 9.7.4 IEC/EN 61009-1: 2006 Clause. 9.7.4 IEC 61009-2-1 : 1991 Clause. 9.7.4 IEC 61009-2-2: 1991 Clause. 9.7.4	0 to 5 MΩ, 500 VDC 0.1 kV to 5 kV, 1 s to 99 s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Behaviour of circuit breakers in case of failure of the line voltage	IEC 61008-1: 2013 Clause. 9.17 IEC/EN 61008-1: 2006 Clause. 9.17 IEC 61008-2-1: 1990 Clause. 9.17 IEC 61008-2-2: 1990 Clause. 9.17 IEC 61009-1: 2013 Clause. 9.17 IEC/EN 61009-1: 2006 Clause. 9.17 IEC 61009-2-1: 1991 Clause. 9.17 IEC 61009-2-2: 1991 Clause. 9.17 IS 12640-1: 2008 Clause. 9.17 IS 12640-2: 2008 Clause. 9.17	180 V to 500 V 5 mA to 1 A
		Unwanted tripping	IEC 61008-1: 2013 Clause. 9.19 IEC/EN 61008-1: 2006 Clause. 9.19 IEC 61008-2-1: 1990 Clause. 9.19 IEC 61008-2-2: 1990 Clause. 9.19	5 A to 3000 A 5 mA to 1 A 1 ms to 150 ms

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Behaviour in case of surge currents	IEC 61008-1: 2013 Clause. 9.19 IEC/EN 61008-1: 2006 Clause. 9.19 IEC 61008-2-1: 1990 Clause. 9.19 IEC 61008-2-2: 1990 Clause. 9.19 IEC 61009-1: 2013 Clause. 9.19 IEC/EN 61009-1: 2006 Clause. 9.19 IEC 61009-2-1: 1991 Clause. 9.19 IEC 61009-2-2: 1991 Clause. 9.19 IS 12640-1: 2008 Clause. 9.19 IS 12640-2: 2008 Clause. 9.19	5 A to 3000 A 5 mA to 1 A 1 ms to 150 ms

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Resistance to mechanical shock and impact	IEC 60898-1: 2015 Clause. 9.13 IEC 61008-1: 2013 Clause. 9.12 IEC/EN 61008-1: 2006 Clause. 9.12 IEC 61008-2-1: 1990 Clause. 9.12 IEC 61008-2-2: 1990 Clause. 9.12 IEC 61009-1: 2013 Clause. 9.13 IEC/EN 61009-1: 2006 Clause. 9.13 IEC 61009-2-1 : 1991 Clause. 9.13 IEC 61009-2-2: 1991 Clause. 9.13 IS 12640-1: 2008 Clause. 9.13 IS 12640-1: 2008 Clause. 9.13	50 N/1 min Dia. of ball: 12.7 mm

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Mechanism/ Trip free mechanism	IEC 60898-1: 2015 Clause. 8.1.2 IEC 60898-2: 2003 Clause. 8.1.2 IEC/EN 60898-2: 2003 Clause. 8.1.2 IEC 61008-1: 2013 Clause. 9.3; 9.1.5 IEC/EN 61008-1: 2006 Clause. 9.3; 9.1.5 IEC 61008-2-1: 1990 Clause. 9.3; 9.1.5 IEC 61008-2-2: 1990 Clause. 9.3; 9.1.5 IEC 61009-1: 2013 Clause. 9.3; 9.11 IEC/EN 61009-1: 2006 Clause. 9.3; 9.11 IEC 61009-2-1 : 1991 Clause. 9.3; 9.11 IEC 61009-2-2: 1991 Clause. 9.3; 9.11 IS 12640-1: 2008 Clause. 8.1.2; 9.11 IS 12640-1: 2008 Clause. 8.1.2; 9.11	5 mA to 1.5 A

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Indelibility of marking	IEC 60898-1: 2015 Clause. 9.3 IEC 60898-2: 2003 Clause. 9.3 IEC/EN 60898-2: 2003 Clause. 9.3 IEC 61008-1: 2013 Clause. 9.3 IEC/EN 61008-1: 2006 Clause. 9.3 IEC 61008-2-1: 1990 Clause. 9.3 IEC 61008-2-2: 1990 Clause. 9.3 IEC 61009-1: 2013 Clause. 9.3 IEC/EN 61009-1: 2006 Clause. 9.3 IEC 61009-2-1: 1991 Clause. 9.3 IEC 61009-2-2: 1991 Clause. 9.3 IS 12640-1: 2008 Clause. 9.3 IS 12640-2: 2008 Clause. 9.3	Qualitative

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Clearances and creepage Distances	IEC 60898-1: 2015 Clause. 8.1.3 IEC 60898-2: 2003 Clause. 8.1.3 IEC/EN 60898-2: 2003 Clause. 8.1.3 IEC 61008-1: 2013 Clause. 8.1.3 IEC/EN 61008-1: 2006 Clause. 8.1.3 IEC 61008-2-1: 1990 Clause. 8.1.3 IEC 61008-2-2: 1990 Clause. 8.1.3 IEC 61009-1: 2013 Clause. 8.1.3 IEC/EN 61009-1: 2006 Clause. 8.1.3 IEC 61009-2-1: 1991 Clause. 8.1.3 IEC 61009-2-2: 1991 Clause. 8.1.3 IS 12640-1: 2008 Clause. 8.1.3 IS 12640-2: 2008 Clause. 8.1.3	0 to 100 mm

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Non Interchangeability	IEC 60898-1: 2015 Clause. 8.1.6 IEC 60898-2: 2003 Clause. 8.1.6 IEC/EN 60898-2: 2003 Clause. 8.1.6 IEC 61009-1: 2013 Clause. 8.1.6 IEC/EN 61009-1: 2006 Clause. 8.1.6 IEC 61009-2-1 : 1991 Clause. 8.1.6 IEC 61009-2-2: 1991 Clause. 8.1.6 IS 12640-1: 2008 Clause. 8.1.6 IS 12640-1: 2008 Clause. 8.1.6	0.2 Nm to 4 Nm; 0 to 100 Nm;

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Reliability of screws, current carrying parts and connectors	IEC 60898-1: 2015 Clause. 9.4 IEC 60898-2: 2003 Clause. 9.4 IEC/EN 60898-2: 2003 Clause. 9.4 IEC 61008-1: 2013 Clause. 9.4 IEC/EN 61008-1: 2006 Clause. 9.4 IEC 61008-2-1: 1990 Clause. 9.4 IEC 61008-2-2: 1990 Clause. 9.4 IEC 61009-1: 2013 Clause. 9.4 IEC/EN 61009-1: 2006 Clause. 9.4 IEC 61009-2-1 : 1991 Clause. 9.4 IEC 61009-2-2: 1991 Clause. 9.4 IS 12640-1: 2008 Clause. 9.4 IS 12640-2: 2008 Clause. 9.4	0.2 Nm to 4 Nm; 0 to 20 Nm;

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Reliability of terminals for external conductors	IEC 60898-1: 2015 Clause. 9.5 IEC 60898-2: 2003 Clause. 9.5 IEC/EN 60898-2: 2003 Clause. 9.5 IEC 61008-1: 2013 Clause. 9.4 IEC/EN 61008-1: 2006 Clause. 9.5 IEC 61008-2-1: 1990 Clause. 9.5 IEC 61008-2-2: 1990 Clause. 9.5 IEC 61009-1: 2013 Clause. 9.5 IEC/EN 61009-1: 2006 Clause. 9.5 IEC 61009-2-1: 1991 Clause. 9.5 IEC 61009-2-2: 1991 Clause. 9.5 IS 12640-1: 2008 Clause. 9.5 IS 12640-1: 2008 Clause. 9.5	0.2 Nm to 4 Nm; 0 to 20 Nm; 40 N to 100 N/1 min.

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Protection against electric shock	IEC 60898-1: 2015 Clause. 9.6 IEC 60898-2: 2003 Clause. 9.6 IEC/EN 60898-2: 2003 Clause. 9.6 IEC 61008-1: 2013 Clause. 9.6 IEC/EN 61008-1: 2006 Clause. 9.6 IEC 61008-2-1: 1990 Clause. 9.6 IEC 61008-2-2: 1990 Clause. 9.6 IEC 61009-1: 2013 Clause. 9.6 IEC/EN 61009-1: 2006 Clause. 9.6 IEC 61009-2-1 : 1991 Clause. 9.6 IEC 61009-2-2: 1991 Clause. 9.6 IS 12640-1: 2008 Clause. 9.6 IS 12640-2: 2008 Clause. 9.6	IP10 to IP40

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Resistance to heat	IEC 60898-1: 2015 Clause. 9.14 IEC 60898-2: 2003 Clause. 9.14 IEC/EN 60898-2: 2003 Clause. 9.14 IEC 61008-1: 2013 Clause. 9.6 IEC/EN 61008-1: 2006 Clause. 9.13 IEC 61008-2-1: 1990 Clause. 9.13 IEC 61008-2-2: 1990 Clause. 9.13 IEC 61009-1: 2013 Clause. 9.14 IEC/EN 61009-1: 2006 Clause. 9.14 IEC 61009-2-1 : 1991 Clause. 9.14 IEC 61009-2-2: 1991 Clause. 9.14 IS 12640-1: 2008 Clause. 9.14 IS 12640-2: 2008 Clause. 9.14	0 °C to 150 °C 0.2 N to 20 N 5 mA to 1.5 A

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Resistance to rusting / humidity	IEC 60898-1: 2015 Clause. 9.16 IEC 60898-2: 2003 Clause. 9.16 IEC/EN 60898-2: 2003 Clause. 9.16 IEC 61008-1: 2013 Clause. 9.25 IEC/EN 61008-1: 2006 Clause. 9.16 IEC 61008-2-1: 1990 Clause. 9.13 IEC 61008-2-2: 1990 Clause. 9.25 IEC 61009-1: 2013 Clause. 9.25 ; 9.7.1 IEC/EN 61009-1: 2006 Clause. 9.25; 9.7.1 IEC 61009-2-1: 1991 Clause. 9.25; 9.7.1 IEC 61009-2-2: 1991 Clause. 9.25; 9.7.1	10 °C to 100 °C 1 s to 999 s

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Resistance to abnormal heat and to fire	IEC 60898-1: 2015 Clause. 9.15 IEC 60898-2: 2003 Clause. 9.15 IEC/EN 60898-2: 2003 Clause. 9.15 IEC 61008-1: 2013 Clause. 9.14 IEC/EN 61008-1: 2006 Clause. 9.14 IEC 61008-2-1: 1990 Clause. 9.14 IEC 61008-2-2: 1990 Clause. 9.14 IEC 61009-1: 2013 Clause. 9.15 IEC/EN 61009-1: 2006 Clause. 9.15 IEC 61009-2-1 : 1991 Clause. 9.15 IEC 61009-2-2: 1991 Clause. 9.15 IS 12640-1: 2008 Clause. 9.15 IS 12640-2– 2008 Clause. 9.15	650 °C to 960 °C
		28-day testing	IEC 60898-1: 2015 Clause. 9.9 IEC 60898-2: 2003 Clause. 9.9 IEC/EN 60898-2: 2003 Clause. 9.9	0.5 A to 500 A, 20 °K to 100 °K 1 s to 9999 s 0.5 A to 125 A, 6 mA to 500 mA 1 to 5000 count

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Mechanical and electrical endurance test	IEC 60898-1: 2015 Clause. 9.11 IEC 60898-2: 2003 Clause. 9.11 IEC/EN 60898-2: 2003 Clause. 9.11 IEC 61008-1: 2013 Clause. 9.10 IEC/EN 61008-1: 2006 Clause. 9.10 IEC 61008-2-1: 1990 Clause. 9.10 IEC 61008-2-2: 1990 Clause. 9.10 IEC 61009-1: 2013 Clause. 9.10 IEC/EN 61009-1: 2006 Clause. 9.10 IEC 61009-2-1 : 1991 Clause. 9.10 IEC 61009-2-2: 1991 Clause. 9.10 IS 12640-1: 2008 Clause. 9.10 IS 12640-2: 2008 Clause. 9.10	0.5 A to 500 A 1 s to 9999 s
		Tripping characteristic	IEC 60898-1: 2015 Clause. 9.10 IEC 60898-2: 2003 Clause. 9.10 IEC/EN 60898-2: 2003 Clause. 9.10	0.5 A to 500 A 1 s to 9999 s

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Verification of performance of test device	IEC 60898-1: 2015 Clause. 9.13.1.1 IEC 61008-1: 2013 Clause. 9.10 IEC/EN 61008-1: 2006 Clause. 9.16 IEC 61008-2-1: 1990 Clause. 9.16 IEC 61008-2-2: 1990 Clause. 9.16 IEC 61009-1: 2013 Clause. 9.16 IEC/EN 61009-1: 2006 Clause. 9.16 IEC 61009-2-1 : 1991 Clause. 9.16 IEC 61009-2-2: 1991 Clause. 9.16 IS 12640-1: 2008 Clause. 9.16 IS 12640-1: 2008 Clause. 9.16	180 V to 500 V 5 mA to 1 A

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Performance at reduced short circuit currents	IEC 60898-1: 2015 Clause. 9.12.11.2.1 IEC 60898-2: 2003 Clause. 9.12.11.4.3 IEC/EN 60898-2: 2003 Clause. 9.12.11.4.3 IEC 61009-1: 2013 Clause. 9.12.11.2.1 IEC/EN 61009-1: 2006 Clause. 9.12.11.2.1 IEC 61009-2-1 : 1991 Clause. 9.12.11.2.1 IEC 61009-2-2: 1991 Clause. 9.12.11.2.1 IS 12640-1: 2008 Clause. 9.12.11.2; 9.12.12 IS 12640-2: 2008 Clause. 9.12.11.2; 9.12.12	500 A to 1250 A
		Short circuit Performance at 1500A	IEC 60898-1: 2015 Clause. 9.12.11.3 IEC 60898-2: 2003 Clause. 9.12.11.3 IS 12640-1: 2008 Clause. 9.12.11.3 ; 9.12.12 IS 12640-2: 2008 Clause. 9.12.11.3 ; 9.12.12	1500 A

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Service short circuit capacity	IEC 60898-1: 2015 Clause. 9.12.11.4.2 IEC 60898-2: 2003 Clause. 9.12.11.4.2 IEC/EN 60898-2: 2003 Clause. 9.12.11.4.2 IEC 61009-1: 2013 Clause. 9.12.11.4 b) IEC/EN 61009-1: 2006 Clause. 9.12.11.4 b); 9.12.12 IEC 61009-2-1 : 1991 Clause. 9.12.11.4 b); 9.12.12 IEC 61009-2-2: 1991 Clause. 9.12.11.4 b); 9.12.12 IS 12640-1: 2008 Clause. 9.12.11.4 b); 9.12.12 IS 12640-2: 2008 Clause. 9.12.11.4 b); 9.12.12	1 kA to 50 kA
		Performance at rated short circuit capacity	IEC 60898-1: 2015 Clause. 9.12 11.4.3b IEC 60898-2: 2003 Clause. 9.12 11.4.3b) IEC/EN 60898-2: 2003 Clause. 9.12 11.4.3b) IEC 61009-1: 2013 Clause. 9.12.11.4 c); 9.12.12 IEC/EN 61009-1: 2006 Clause. 9.12.11.4 c); 9.12.12 IEC 61009-2-1 : 1991 Clause. 9.12.11.4 c); 9.12.12 IEC 61009-2-2: 1991 Clause. 9.12.11.4 c); 9.12.12 IS 12640-1: 2008 Clause. 9.12.11.4 c); 9.12.12 .2 IS 12640-2: 2008 Clause. 9.12.11.4 c); 9.12.12 .2	1 kA to 50 kA

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Short Circuit test for verifying the suitability of circuit breakers for use in IT	IEC 60898-1: 2015 Clause. 9.12.11.2.2 IEC 60898-2: 2003 Clause. 9.12.11.2.2 IEC/EN 60898-2: 2003 Clause. 9.12.11.2.2 IEC 61008-1: 2013 Clause. 9.11.2.3 c) IEC/EN 61008-1: 2006 Clause. 9.11.2.3 c) IEC 61008-2-1: 1990 Clause. 9.11.2.3 c) IEC 61008-2-2: 1990 Clause. 9.11.2.3 c) IEC 61009-1: 2013 Clause. 9.12.11.2.2 IEC/EN 61009-1: 2006 Clause. 9.12.11.2.2 IEC 61009-2-1 : 1991 Clause. 9.12.11.2.2 IEC 61009-2-2: 1991 Clause. 9.12.11.2.2	500 A to 2500 A

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Verification of circuit breaker after short circuit test	IEC 60898-1: 2015 Clause. 9.12.12 IEC 60898-2: 2003 Clause. 9.12.12 IEC/EN 60898-2: 2003 Clause. 9.12.12 IEC 61009-1: 2013 Clause. 9.12.12 IEC/EN 61009-1: 2006 Clause. 9.12.12 IEC 61009-2-1 : 1991 Clause. 9.12.12 IEC 61009-2-2: 1991 Clause. 9.12.12 IS 12640-1: 2008 Clause. 9.12.12 IS 12640-2: 2008 Clause. 9.12.12	0.5 A to 500 A, 0.1 μ A to 2 mA 0.1 kV to 5 kV 1 s to 9999 s

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Temperature Rise and power loss	IEC 60898-1: 2015 Clause. 9.8 IEC 60898-2: 2003 Clause. 9.8 IEC/EN 60898-2: 2003 Clause. 9.8 IEC 61008-1: 2013 Clause. 9.8 IEC/EN 61008-1: 2006 Clause. 9.8 IEC 61008-2-1: 1990 Clause. 9.8 IEC 61008-2-2: 1990 Clause. 9.8 IEC 61009-1: 2013 Clause. 9.8 IEC/EN 61009-1: 2006 Clause. 9.8 IEC 61009-2-1 : 1991 Clause. 9.8 IEC 61009-2-2: 1991 Clause. 9.8 IS 12640-1: 2008 Clause. 9.8 IS 12640-2: 2008 Clause. 9.8	0.5 A to 500 A, 20 °K to 100 °K 1 s to 9999 s

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Performance at I Δ m	IEC 60898-1: 2015 Clause. 9.12.11.4.4;9.12.12 IEC/EN 60898-2: 2003 Clause. 9.12.11.4.4;9.12.12 IEC 61008-1: 2013 Clause. 9.11.2.3 IEC/EN 61008-1: 2006 Clause. 9.11.2.3 IEC 61008-2-1: 1990 Clause. 9.11.2.3 IEC 61008-2-2: 1990 Clause. 9.11.2.3 IEC 61009-1: 2013 Clause. 9.12.13 IEC/EN 61009-1: 2006 Clause. 9.12.13 IEC 61009-2-1 : 1991 Clause. 9.12.13 IEC 61009-2-2: 1991 Clause. 9.12.13	500 A to 10 kA 30 mA to 10 A

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Resistance against unwanted tripping due to current surges	IEC 61008-1: 2013 Clause. 9.19 IEC/EN 61008-1: 2006 Clause. 9.19 IEC 61008-2-1: 1990 Clause. 9.19 IEC 61008-2-2: 1990 Clause. 9.19 IEC 61009-1: 2013 Clause. 9.19 IEC/EN 61009-1: 2006 Clause. 9.19 IEC 61009-2-1 : 1991 Clause. 9.19 IEC 61009-2-2: 1991 Clause. 9.19 IS 12640-1: 2008 Clause. 9.19 IS 12640-2: 2008 Clause. 9.19	5 A to 3000 A 5 mA to 1 A 1 ms to 150 ms

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Glow wire test, Resistance to abnormal heat and to fire	IEC 60898-1: 2015 Clause. 9.15 IEC 60898-2: 2003 Clause. 9.15 IEC/EN 60898-2: 2003 Clause. 9.15 IEC 61008-1: 2013 Clause. 9.15 IEC/EN 61008-1: 2006 Clause. 9.14 IEC 61008-2-1: 1990 Clause. 9.14 IEC 61008-2-2: 1990 Clause. 9.14 IEC 61009-1: 2013 Clause. 9.15 IEC/EN 61009-1: 2006 Clause. 9.15 IEC 61009-2-1 : 1991 Clause. 9.15 IEC 61009-2-2: 1991 Clause. 9.15 IS 12640-1: 2008 Clause. 9.15 IS 12640-2: 2008 Clause. 9.15	650 °C to 960 °C

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	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Degree of protection, Protection against Electric shock	IEC 60898-1: 2015 Clause. 9.6 IEC 60898-2: 2003 Clause. 9.6 IEC/EN 60898-2: 2003 Clause. 9.6 IEC 61008-1: 2013 Clause. 9.10 IEC/EN 61008-1: 2006 Clause. 9.6 IEC 61008-2-1: 1990 Clause. 9.6 IEC 61008-2-2: 1990 Clause. 9.6 IEC 61009-1: 2013 Clause. 9.6 IEC/EN 61009-1: 2006 Clause. 9.6 IEC 61009-2-1 : 1991 Clause. 9.6 IEC 61009-2-2: 1991 Clause. 9.6 IS 12640-1: 2008 Clause. 9.6 IS 12640-2: 2008 Clause. 9.6	IP10 to IP40

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Climatic test	IEC 61008-1: 2013 Clause. 9.22 IEC/EN 61008-1: 2006 Clause. 9.22 IEC 61008-2-1: 1990 Clause. 9.22 IEC 61008-2-2: 1990 Clause. 9.22 IEC 61009-1: 2013 Clause. 9.22 IEC/EN 61009-1: 2006 Clause. 9.22 IEC 61009-2-1 : 1991 Clause. 9.22 IEC 61009-2-2: 1991 Clause. 9.22 IS 12640-1: 2008 Clause. 9.22 IS 12640-2: 2008 Clause. 9.22	(-)40 °C to 180 °C 1 hr to 168 hr

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Household and Similar Applications MCB, RCCB, RCBO, Isolators	Marking, dimensions, visual examination, General, constructional requirements	IEC 60898-1: 2015 Clause. 6;8 IEC/EN 60898-2: 2003 Clause. 6;8 IEC 61008-1: 2013 Clause. 6;8 IEC/EN 61008-1: 2006 Clause. 6;8 IEC 61009-1: 2013 Clause. 6;8 IEC/EN 61009-1: 2006 Clause. 6;8 IEC 61009-2-1 : 1991 Clause. 9.10 IEC 61009-2-2: 1991 Clause. 9.10 IS 12640-1: 2008 Clause. 6;8 IS 12640-2: 2008 Clause. 6;8	1 mm to 1.5 m
3.	Low Voltage Fuses for Voltages	Breaking capacity	IS 13703-1: 1993 Clause. 8.5 IS 13703-2-1: 1993 Clause. 5.7.2; IS 13703-2-2: 1993 Clause. 5.7.2 IEC 60269-1: 2014 Clause. 8.5 IEC 60269-2: 2013 Clause. 5.7.2	100 A to 5 kA, 1000 V 5 kA to 50 kA, 750 V 50 kA to 80 kA, 437 V

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Constructional requirements, Dimensions, Marking, General	IS 13703-1: 1993 Clause. 6;7 IS 13703-2-1: 1993 Clause. 6;7 IS 13703-2-2: 1993 Clause. 6;7 IEC 60269-1: 2014 Clause. 6;7 IEC 60269-2: 2013 Clause. 6;7	1 mm to 1.5 m
		Temperature Rise & Power dissipation	IS 13703-1: 1993 Clause. 8.3 IS 13703-2-1: 1993 Clause. 8.3; IEC 60269-1: 2014 Clause. 8.3 IEC 60269-2: 2013 Clause. 8.3	1 A to 10 kA 20 °K to 200 °K 1 W to 100 W
		Operation & operating limits	IS 13703-1: 1993 Clause. 8.4 IS 13703-2-1: 1993 Clause. 8.4; IEC 60269-1: 2014 Clause. 8.4 IEC 60269-2: 2013 Clause. 8.4	2 A to 2000 A 1 s to 4.2 hr

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Dielectric tests (Impulse test)	IS 13703-1: 1993 Clause. 8.5 IS 13703-2-1: 1993 Clause. 5.7.2; IS 13703-2-2: 1993 Clause. 5.7.2 IEC 60269-1: 2014 Clause. 8.2.3 IEC 60269-2: 2013 Clause. 8.2.3	2 kV to 24 kV Rise time- 1.2 μs Fall time- 50 μs
		Dielectric tests (Power frequency voltage withstand tests), Insulating Properties	IS 13703-1: 1993 Clause. 8.2 IEC 60269-1: 2014 Clause. 8.2	0.1 kV to 5 kV, 1 s to 99 s
		Conventional non fusing current	IS 13703-2-1: 1993 Clause. 5.6.2; IS 13703-2-2: 1993 Clause. 5.6.2 IEC 60269-1: 2014 Clause. 8.4.3.1 IEC 60269-2: 2013 Clause. 8.4.3.1	2 A to 2000 A 1 s to 4.2 hr
		Conventional fusing current	IS 13703-2-1: 1993 Clause. 5.6.2; IS 13703-2-2: 1993 Clause. 5.6.2 IEC 60269-1: 2014 Clause. 8.4.3.1 IEC 60269-2: 2013 Clause. 8.4.3.1	2 A to 2000 A 1 s to 4.2 hr

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Verification of rated current	IS 13703-1: 1993 Clause. 5.3 IS 13703-2-1: 1993 Clause. 5.3; IS 13703-2-2: 1993 Clause. 5.3 IEC 60269-1: 2014 Clause. 8.4.3 IEC 60269-2: 2013 Clause. 5.3	2 A to 1250 A
		Time-current characteristics, gates	IS 13703-1: 1993 Clause. 5.6 IS 13703-2-1: 1993 Clause. 5.6.1;5.6.3 IS 13703-2-2: 1993 Clause. 5.7.2 IEC 60269-1: 2014 Clause. 8.4.3.3 IEC 60269-2: 2013 Clause. 5.6.1;5.6.3	0.1 A to 10 kA 1 s to 4.2 hr
		Overload	IEC 60269-1: 2014 Clause. 8.4.3.4	0.1 A to 10 kA
		Conventional cable overload protection	IS 13703-1: 1993 Clause. 8.4.3.5 IS 13703-2-1: 1993 Clause. 8.4.3.5; IEC 60269-1: 2014 Clause. 8.4.3.5 IEC 60269-2: 2013 Clause. 8.4.3.5	2 A to 700 A 1 s to 4.2 hr

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Operation of indicating device and striker	IS 13703-1: 1993 Clause. 8.4.3.6 IS 13703-2-1: 1993 Clause. 8.4.3.6; IEC 60269-1: 2014 Clause. 8.4.3.6 IEC 60269-2: 2013 Clause. 8.4.3.6	5A to 5000 A 1 s to 4.2 hr
		Cut-off current characteristics	IS 13703-1: 1993 Clause. 8.6 IS 13703-2-1: 1993 Clause. 8.6; IS 13703-2-2: 1993 Clause. 8.6 IEC 60269-1: 2014 Clause. 8.6 IEC 60269-2: 2013 Clause. 8.6	0.1 A to 10 kA 1 s to 4.2 hr
		12t characteristics and overcurrent discrimination	IS 13703-1: 1993 Clause. 8.7 IS 13703-2-1: 1993 Clause. 8.7; IS 13703-2-2: 1993 Clause. 8.7 IEC 60269-1: 2014 Clause. 8.7 IEC 60269-2: 2013 Clause. 8.7	0.1 A to 10 kA 1 s to 4.2 hr

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Degree of protection, Protection against electric shock	IS 13703-1: 1993 Clause. 8.8 IS 13703-2-1: 1993 Clause. 7.9; IEC 60269-1: 2014 Clause. 8.8 IEC 60269-2: 2013 Clause. 7.9	IP10 to IP40
		Resistance of heat	IS 13703-1: 1993 Clause. 8.9 IS 13703-2-1: 1993 Clause. 8.9 IS 13703-2-2: 1993 Clause. 8.9 IEC 60269-1: 2014 Clause. 8.9 IEC 60269-2: 2013 Clause. 8.9	2A to 1250A
		Non-deterioration of contacts	IS 13703-1: 1993 Clause. 8.10 IS 13703-2-1: 1993 Clause. 8.10; IEC 60269-1: 2014 Clause. 8.10 IEC 60269-2: 2013 Clause. 8.10	Qualitative

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Mechanical strength	IS 13703-1: 1993 Clause. 8.11 IS 13703-2-1: 1993 Clause. 8.11; IS 13703-2-2: 1993 Clause. 8.11 IEC 60269-1: 2014 Clause. 8.11 IEC 60269-2: 2013 Clause. 8.11	Qualitative
		Resistance to abnormal heat and fire	IS 13703-1: 1993 Clause. 8.11 IS 13703-2-1: 1993 Clause. 8.11 IEC 60269-1: 2014 Clause. 8.11 IEC 60269-2: 2013 Clause. 8.11	650° to 960°C
		Resistance to rusting	IS 13703-1: 1993 Clause. 8.11 IS 13703-2-1: 1993 Clause. 8.11 IEC 60269-1: 2014 Clause. 8.11 IEC 60269-2: 2013 Clause. 8.11	(-)40 °C to 180 °C 25 % to 97 % RH
		Insulation resistance	IS 13703-1: 1993 Clause. 8.1.5 IEC 60269-1: 2014 Clause. 8.1.5	1 Ω to 2000 MΩ. 1000 V

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Fuses for Voltages	Temperature cycle test; Verification of non deterioration of contacts	IS 13703-1: 1993 Clause. 8.10 IS 13703-2-1: 1993 Clause. 5.7.2; IEC 60269-1: 2014 Clause. 8.10; 8.4.3.2 IEC 60269-2: 2013 Clause. 8.10; 8.11.2.4	2 A to 2000 A (-40 °C to 180 °C 25 % to 97 % Rh
4.	Low Voltage Switchgear and Controlgear Assemblies	Constructional requirements, Dimensions, Marking, General	IS 8623-1: 1993 Clause. 5.2 IEC 61439-1: 2011 Clause. 6.1; 10.7 IEC 61439-2: 2011 Clause. 6.1 IEC 61439-3 2012 Clause. 6.1 IEC 61439-6: 2012 Clause. 6.1; 10.7	1 mm to 1.5 m
		Verification of temperature rise limits	IS 8623-1: 1993 Clause. 7.3; 8.2.1 IS 8623-2: 1993 Clause. 8.1.1 IS 8623-3: 1993 Clause. 8.2.1 IEC 61439-1: 2011 Clause. 10.10 IEC 61439-3 2012 Clause. 8.2.1 IEC 61439-6: 2012 Clause. 10.10	16 A to 10 kA 20 °K to 100 °K 1 s to 9999 s

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Low Voltage Switchgear and Controlgear Assemblies	Verification of dielectric properties	IS 8623-1: 1993 Clause. 8.2.4 IS 8623-2: 1993 Clause. 8.2.2 IS 8623-3: 1993 Clause. 8.2.2 IEC 61439-1: 2011 Clause. 10.9 IEC 61439-3 2012 Clause. 10.9 IEC 61439-6: 2012 Clause. 10.5	0.01 kV to 5 kV 1 s to 99 s 0 to 2000 MΩ, 1000 V
		Verification of the effective connection between the exposed conductive parts of the ASSEMBLY and the protective circuit by inspection or by resistance measurement	IS 8623-1: 1993 Clause. 8.3.1 IS 8623-2: 1993 Clause. 8.2.4 IS 8623-3: 1993 Clause. 8.2.4 IEC 61439-3 2012 Clause. 8.2.4 IEC 61439-6: 2012 Clause. 8.2.4	Qualitative
		Verification of short-circuit withstand strength of the protective circuit	IS 8623-1: 1993 Clause. 8.2.3 IS 8623-2: 1993 Clause. 8.2.3 IS 8623-3: 1993 Clause. 8.2.3 IEC 61439-1: 2011 Clause. 10.11 IEC 61439-2: 2011 Clause. 10.11 IEC 61439-3 2012 Clause. 8.2.3 IEC 61439-6: 2012 Clause. 10.11	100 A to 50 kA, 1 s

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	Low Voltage Switchgear and Controlgear Assemblies	Verification of clearance and creepage distances	IS 8623-1: 1993 Clause. 8.2.5 IS 8623-2: 1993 Clause. 8.2.5 IS 8623-3: 1993 Clause. 8.2.5 IEC 61439-1: 2011 Clause. 10.4 IEC 61439-3 2012 Clause. 8.2.5 IEC 61439-6: 2012 Clause. 10.4	0 to 300 mm
		Verification of mechanical operation	IS 8623-1: 1993 Clause. 8.2.6 IS 8623-2: 1993 Clause. 8.2.6 IS 8623-3: 1993 Clause. 8.2.6 IEC 61439-1: 2011 Clause. 10.13 IEC 61439-2: 2011 Clause. 10.13 IEC 61439-3 2012 Clause. 10.13 IEC 61439-6: 2012 Clause. 10.13	Qualitative

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	Low Voltage Switchgear and Controlgear Assemblies	Verification of degree of protection	IS 8623-1: 1993 Clause. 8.2.7 IS 8623-2: 1993 Clause. 8.2.7 IS 8623-3: 1993 Clause. 8.2.7 IEC 61439-1: 2011 Clause. 10.3 IEC 61439-2: 2011 Clause. 10.3 IEC 61439-3 2012 Clause. 10.3 IEC 61439-6: 2012 Clause. 10.3	IP10 to IP 40
		Verification of resistance to rusting and humidity	IS 8623-3: 1993 Clause. 8.2.10; 8.2.13 IEC 61439-1: 2011 Clause. 10.2 IEC 61439-2: 2011 Clause. 10.2 IEC 61439-3 2012 Clause. 10.2 IEC 61439-6: 2012 Clause. 10.2	(-)40 °C to 180° C 25% to 97% RH
		Verification of resistance of insulation materials to abnormal heat and fire	IS 8623-3: 1993 Clause. 8.2.12 IEC 61439-1: 2011 Clause. 10.2 IEC 61439-2: 2011 Clause. 10.2 IEC 61439-3 2012 Clause. 10.13 IEC 61439-6: 2012 Clause. 8.2.13	650 °C & 960 °C
		Verification of Mechanical Strength of Fastening means of Enclosures	IS 8623-3: 1993 Clause. 8.2.14 IEC 61439-3 2012 Clause. 8.2.15	Qualitative

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