4.7.1. Test Requirements and Procedures Summary

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

TEST DESCRIPTION	REQUIREMENT	PROCEDURE
Visual examination of product	Meets requirements of product drawing and Meets visual requirements	
ELECTRICAL		
Measurement of contact resistance		Contact 108-94375 Crimp 108-94348
Insulation resistance Test	The insulation resistance shall be not less than 5 MΩ.	IEC 62196-1, 21.1; 21.2
Comparative Tracking Index Test	The material under test shall pass at a proof tracking index of 175 V	IEC 62196-1 29.6 / IEC 60112 A flat surface at least 15 mm – 15 mm and 3 mm thick is placed in the horizontal position on the apparatus. Test solution A with an interval between drops of 30 s ± 5 s
Flammability glow-wire test	No flame or glowing of the specimen or the surroundings extinguish within 30 s after removal of the glow-wire, and the surrounding parts have not burned away completely. There shall be no ignition of the tissue paper or scorching of the board.	IEC 62196-1, 29.5
Dielectric Strength	1 minute hold with no breakdown or flashover, no deformation that effects mating polarization or proper functioning of specimen	IEC 62196-1, 21.3 Subject 3 unmated specimens between live parts of opposite polarity, secondary circuits and ground, and secondary circuits and live parts to 2000Vac at 50 – 60Hz, uniformly and rapidly applied, beginning at ½ the voltage. Number of samples: at least 6
Current Load Cyclic	Temperature Rise < 35 K Change of Resistance acc. to 108-94348 Table: contact resistance overview: initial and after aging	TE internal 16 Amps, DC load 120 min ON., 60 min OFF, 25 cycles 70°C ambient temperature Use testing-device for fixation of plugs with continuity check of temperature and resistance.
Temperature Rise Test	The temperature rise of terminals shall not exceed 50 K.	IEC 62196-1, 24.1 The test current is an alternating current of the value shown in IEC 62196-1, table 18. For the purpose of this test, a length of at least 2 m of the

		cable shall be connected to the terminals.
Contact Resistance and Temperature Monitoring	High Voltage 1 GOhm Low Voltage: Limit for Connection test: 100 Ohm Limit for short circuit test: 20 kOhm	VDE 0623 Part 5 and VDE – AR-E 2623-2-2 PM 348 E 2010-06-18 High Voltage: Testing Voltage: 1500V DC (ISO) Testing Voltage: 2000V AC (Dielectric Withstanding Test) Duration: 1s Low Voltage Testing Voltage: 20V
Derating temp rise	contact temperature rise < 50K after 1 hour test duration	IEC 60512-5-2 16 A
Breaking capacity	An accessory classified "Not suitable for making and breaking an electrical circuit under load" shall have sufficient breaking capacity to interrupt the circuit in case of a fault, without any indication of a fire or shock hazard. The accessory need not remain functional after the completion of the test. It shall not be used for any further tests. Compliance is checked by testing the mating accessories in accordance with 22.2 for up to three making and breaking operations, if the accessory permits, under the indicated load. Following the test, the accessories shall comply with a dielectric test in accordance to 21.3	IEC62196-1,22.3
MECHANICAL		
Polarization Integrity Test	The devices shall not be able to mate in any manner that would energize the grounding feature of the device. The force required to mate the devices shall not exceed 180 N (40 lbf).	DIN EN 61984:2009, 6.9.1 (TE-Intern) Compliance with the requirements specified in shall be determined by using each of three devices assembled in its intended housing with the polarization feature removed.
Cable Pull Test / Torque Test	During the tests, the cable shall not be damaged.	IEC 62196-1, 25.3 The cable is then subjected 100 times to a pull of the value shown in IEC 62196-1, table 19. Each pull is applied without jerks and has a duration of 1 s.
Drop test	No defect adversely affecting correct operation	IEC 62196-1, 26.3 Plug (and socket) samples are preconditioned at (-30±2)°C for 16 hours