

Test bundles for electrical safety

ITEM TO CHECK	OPTION S	OPTION M	OPTION L
Marking and instructions	⊖	☑	☑
Hazardous radiations	⊖	⊖	☑
Heating under normal operating conditions	⊖	⊖	☑
Constructional requirements with regard to the protection against electric shock	⊖	☑	☑
Insulation requirements (Leakage current, high voltage, Insulation resistance, PE resistance)	☑	☑	☑
Fault conditions	⊖	⊖	☑
Stability and mechanical hazards	⊖	☑	☑
Clearances and Creepage distances	⊖	☑	☑
Components Validation	⊖	☑	☑
Terminals	⊖	☑	☑
Mains power cord	⊖	☑	☑
Resistance to fire (Ball pressure, needle flame, glow wire)	⊖	⊖	☑
Minimum number of samples required	1	2	4

☑ test included in package ⊖ test NOT included in package

OPTION S

Option S offers a general basic safety with regard to electrical shock and is ideally suited for accompanying the development phase. It consists of the modules leakage current, high voltage, insulation resistance and PE resistance test. During this, a visual inspection of the test specimen is carried out, from which initial conclusions regarding the safety level can be derived.

OPTION M

Option M represents an increased safety aspect as compared to Option S. Apart from the tests for the leakage current, high voltage, insulation resistance and PE resistance, there are checks for markings, for access to active parts and for the mechanical strength. In addition, tests are carried out for the air gap and creep distance at the agreed test voltage. The test voltage is not determined by measurement. In consequence, the components are evaluated according to their deployment and the respective component standard.

OPTION L

Option L corresponds to the highest safety requirements. A complete test according to the standard is carried out. Additional modules for the safety of devices are considered in this test. Over and above Options S and L, this option mainly deals with the heating up of devices and the danger that arises as a result when there is a fault. In addition, based on the submitted data and certificates, the hazards of the spread of fire, radiation and environmental influences are validated according to the desired device standard.