



OMEGA TEST BELGELENDİRME TİCARET
LİMİTED ŞİRKETİ
İKİTELLİ OSB MAH. BAĞCILAR GÜNGÖREN
SAN. SİT. METRO İŞ MERKEZİ NO:1 B BLOK İÇ
KAPI NO:36 BAŞAKŞEHİR İSTANBUL TÜRKİYE
Deney Raporu
Test Report

22OMG0409.00

10-22

Müşterinin Adı / Adresi:
Customer name/address

GÜVENİR ELEKTRİK İTHALAT İHRACAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ
BÜYÜKHENDEK CD. ERSOY PASAJI NO:25/52 ŞİŞHANE BEYOĞLU/İSTANBUL

Üretici Adı / Adresi :
Manufacturer name/address

GÜVENİR ELEKTRİK İTHALAT İHRACAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ
BÜYÜKHENDEK CD. ERSOY PASAJI NO:25/52 ŞİŞHANE BEYOĞLU/İSTANBUL

İstek Numarası :
Order no.

T04092022.00.rev00

Numunenin Adı ve Tarihi :
Name and identity of test item

EB 002; Anahtar
EB 002; Push button

Numunenin Kabul tarihi :
The date of receipt of test item

06-09-2022

Açıklamalar :
Remarks

DGC'ye EN IEC 61058-1:2018 Standardı uyarınca sayfa 3'teki Güvenlik Deneyleri yapılmıştır.
Lütfen raporu inceleyiniz.
Safety tests have been applied to EUT according to EN IEC 61058-1:2018 on page three. Please see the report below.

Deneyin Yapıldığı Tarih :
Date of test

13-09-2022 to 05-10-2022

Raporun Sayfa Sayısı:
Number of pages of the report

42 sayfa / pages

Deney ve /veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metotları bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.
The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Mühür/Kaşe
Seal



Tarih
Date

07-10-2022

Deney Sorumlusu
Person in charge of test

Harun ÇELİK

Onaylayan
Approval

Timur GÜSER

Bu rapor laboratuvarın izni olmadan kısmen kopyalanıp çoğaltılamaz.


İmzasız ve mühürsüz raporlar geçersizdir.

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Test Report IEC 61058-1 Switches for appliances Part 1: General requirements	
Report reference No.....:	22OMG0409.00
Date of issue.....:	2022-10-07
Total number of pages.....:	42
Name of Testing Laboratory preparing the Report.....:	OMEGA TEST BELGELENDİRME TİCARET LİMİTED ŞİRKETİ İKİTELLİ OSB MAH. BAĞCILAR GÜNGÖREN SAN. SİT. METRO İŞ MERKEZİ NO:1 B BLOK İÇ KAPI NO:36 BAŞAKŞEHİR İSTANBUL TÜRKİYE
Applicant's name.....:	GÜVENİR ELEKTRİK İTHALAT İHRACAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ
Address.....:	BÜYÜKHENDEK CD. ERSOY PASAJI NO:25/52 ŞİŞHANE BEYOĞLU/İSTANBUL
Test specification:	
Standard.....:	EN IEC 61058-1:2018 IEC 61058-1:2016;
Test procedure.....:	Type test
Non-standard test method.....:	N/A
Test Report Form No.....:	F510.15.rev00
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed. This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.	
General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	
Test item description.....:	Push button
Trademark.....:	O.C.M.
Manufacturer.....:	GÜVENİR ELEKTRİK İTHALAT İHRACAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ
Model/type reference.....:	EB 002
Rating.....:	250V~, 50/60Hz, 2A ,



List of Attachments:	
Summary of testing:	
Tests performed (name of test and test clause): EN IEC 61058-1:2018	Testing location: OMEGA TEST BELGELENDİRME TİCARET LİMİTED ŞİRKETİ İKİTELLİ OSB MAH. BAĞCILAR GÜNGÖREN SAN. SİT. METRO İŞ MERKEZİ NO:1 B BLOK İÇ KAPI NO:36 BAŞAKŞEHİR İSTANBUL TÜRKİYE
Copy of marking plate:	
	
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.	



Possible test case verdicts:

- test case does not apply to the test object.. : N/A
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement.. : F (Fail)

Testing

Date of receipt of test item : 06-09-2022

Date (s) of performance of tests : 13-09-2022 to 05-10-2022

General remarks:

The test results presented in this report relate only to the object tested.

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"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a comma / point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60300-2-1:**General product information:**

Test items particulars:				
Type reference (3.1.8 and 3.1.9).....:	<input type="checkbox"/> unique (U.T.)	<input checked="" type="checkbox"/> common (C.T.)		
Type of switch (3.3.1 to 3.3.9).....:	<input type="checkbox"/> incorporated	<input type="checkbox"/> integrated	<input type="checkbox"/> rotary	
	<input type="checkbox"/> lever	<input type="checkbox"/> rocker	<input checked="" type="checkbox"/> push-button	
	<input type="checkbox"/> cord-operated	<input type="checkbox"/> push-pull	<input type="checkbox"/> biased switch	
	<input type="checkbox"/> other:			
Operation of the switch (3.4.1 to 3.4.4).....:	<input type="checkbox"/> actuation – of the actuating member by human activity			
	<input type="checkbox"/> indirect actuation – of the actuating member indirectly			
	<input checked="" type="checkbox"/> actuating member – pulled, pushed, turned or otherwise influenced to cause an operation (Electronic switch push by a button could also operated by a APP on phone)			
	<input type="checkbox"/> actuating means – part between the actuating member and the contact mechanism			
	(A button switches to control the product and the disconnection device by a relay. The switch is an electronic switch which control by phone.)			
Connections to the switch (3.5).....:	<input checked="" type="checkbox"/> external conductor	<input type="checkbox"/> integrated conductor		
Terminals and terminations (3.6.1 to 3.6.8).....:	<input type="checkbox"/> terminal:			
	<input type="checkbox"/> screw type terminal (7.20.12)			
	<input type="checkbox"/> screw less terminal (Push-in terminals / 7.20.13)			
	<input type="checkbox"/> termination:			
	<input type="checkbox"/> flat quick-connect termination (7.20.14)			
	Tab terminals:			
	<input type="checkbox"/> 2.8 x 0.5 mm	<input type="checkbox"/> 2.8 x 0.8 mm	<input type="checkbox"/> 4.7 x 0.5 mm	
	<input type="checkbox"/> 4.7 x 0.8 mm	<input type="checkbox"/> 6.3 x 0.8 mm	<input type="checkbox"/> 9.5 x 1.2 mm	
	Female connector:			
	<input type="checkbox"/> 2.3 x 3.8 mm	<input type="checkbox"/> 2.9 x 6.0 mm	<input type="checkbox"/> 3.5 x 7.8 mm	
	<input type="checkbox"/> 4.0 x 11.1 mm			
	<input type="checkbox"/> solder (7.20.15)			
	<input type="checkbox"/> PCB (Printed Circuit Board)			
	<input checked="" type="checkbox"/> special declared type:			
	Relating to insulation (3.7.8 to 3.7.11).....:	<input type="checkbox"/> a class 0 appliance;		a class I appliance;
<input checked="" type="checkbox"/> a class II appliance;		a class III appliance;		
CTI (V) (3.7.12).....:	---			
PTI (V) (Annex C).....:	---			
Material group (20.4.11).....:	<input type="checkbox"/> I	<input type="checkbox"/> II	<input checked="" type="checkbox"/> IIIa <input checked="" type="checkbox"/> IIIb	
Pollution, micro inside the switch (3.8.1).....:	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	
Pollution, macro outside the switch (3.8.2).....:	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	
Nature of supply (7.1.1 to 7.1.3).....:	<input checked="" type="checkbox"/> AC	<input type="checkbox"/> DC	<input type="checkbox"/> both AC and DC	



Type of load – A.C. circuits (IEC 61058-1-1:2016, Table 102)	<input checked="" type="checkbox"/> Substantially resistive <input type="checkbox"/> General purpose load <input type="checkbox"/> Resistive and/or motor <input type="checkbox"/> Circuit for specific load of motor with a locked rotor <input type="checkbox"/> Circuit for an inductive load <input type="checkbox"/> Resistive and capacitive <input type="checkbox"/> Tungsten filament lamp load <input type="checkbox"/> Circuit for specific lamp load(Self-ballasting lamps) <input type="checkbox"/> Specific declared																																
Type of load – D.C. circuits. (IEC 61058-1-1:2016, Table 103)	<input type="checkbox"/> Substantially resistive <input type="checkbox"/> Tungsten filament lamp load <input type="checkbox"/> Resistive and capacitive load <input type="checkbox"/> Circuit for specific lamp load <input type="checkbox"/> Declared specific load																																
Ambient temperature (7.3)	<input checked="" type="checkbox"/> 7.3.1: $0\text{ }^{\circ}\text{C} \leq T \leq 55\text{ }^{\circ}\text{C}$ <input type="checkbox"/> 7.3.2: not classified as 7.3.1 and 7.3.3 <input type="checkbox"/> 7.3.3: accessible member and parts $0\text{ }^{\circ}\text{C} \leq T \leq 55\text{ }^{\circ}\text{C}$ and other parts of the switch not within $0\text{ }^{\circ}\text{C} \leq T \leq 55\text{ }^{\circ}\text{C}$																																
Ambient temperature, actuating member ($^{\circ}\text{C}$) :	<input checked="" type="checkbox"/> 0-55 $^{\circ}\text{C}$																																
Ambient temperature, other parts ($^{\circ}\text{C}$)	<input checked="" type="checkbox"/> 0-55 $^{\circ}\text{C}$																																
Number of cycles (7.4)	1E3																																
IP number (7.5 and 7.6)	IP20																																
Glow wire temperature ($^{\circ}\text{C}$) (7.11)	<input type="checkbox"/> 650 <input type="checkbox"/> 750 <input checked="" type="checkbox"/> 850 <input type="checkbox"/> 960																																
Rated Impulse Voltage U_{imp} (V) (7.12)	2500V																																
Over voltage category (7.13)	<input type="checkbox"/> Category I; <input checked="" type="checkbox"/> Category II; <input type="checkbox"/> Category III																																
Disconnection (3.4.5 to 3.4.9 and 7.14)	<input checked="" type="checkbox"/> disconnection <input type="checkbox"/> micro-disconnection <input type="checkbox"/> electronic-disconnection <input type="checkbox"/> full-disconnection <input type="checkbox"/> all-pole disconnection (7.16.4) <input type="checkbox"/> combination declared																																
Coating for rigid printed board (7.15)	<input type="checkbox"/> type 1 <input type="checkbox"/> type 2																																
According to type and/or connection of switches (7.16)	<input type="checkbox"/> 7.16.1 number of poles: Single poles <input checked="" type="checkbox"/> 7.16.2 number of ways: <input type="checkbox"/> 7.16.3 polarity reversal <input type="checkbox"/> 7.16.5 number of non-switchable through connections:																																
Type of circuit (7.16.6 according to code of switch type given in Table 2)	<table border="0"> <tr> <td><input type="checkbox"/> 1.2</td> <td><input type="checkbox"/> 2.2 [1.2]</td> <td><input type="checkbox"/> 3.2</td> <td><input type="checkbox"/> 4.2</td> </tr> <tr> <td><input type="checkbox"/> 1.3</td> <td><input type="checkbox"/> 2.3</td> <td><input type="checkbox"/> 3.3</td> <td><input type="checkbox"/> 4.3</td> </tr> <tr> <td><input type="checkbox"/> 1.4 [1.2]</td> <td><input type="checkbox"/> 2.4 [1.3]</td> <td><input type="checkbox"/> 3.4</td> <td><input type="checkbox"/> 4.4</td> </tr> <tr> <td><input type="checkbox"/> 1.5 [1.2] [1.4]</td> <td><input type="checkbox"/> 2.5</td> <td><input type="checkbox"/> 3.5</td> <td><input type="checkbox"/> 4.5</td> </tr> <tr> <td><input type="checkbox"/> 1.6</td> <td><input type="checkbox"/> 2.6</td> <td><input type="checkbox"/> 3.6</td> <td></td> </tr> <tr> <td><input type="checkbox"/> 1.7</td> <td><input type="checkbox"/> 2.7</td> <td><input type="checkbox"/> 3.7 [3.3]</td> <td></td> </tr> <tr> <td><input type="checkbox"/> 1.8</td> <td><input type="checkbox"/> 2.8</td> <td><input type="checkbox"/> 3.8</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Special</td> <td><input type="checkbox"/> 2.9</td> <td><input type="checkbox"/> 3.9 [3.3]</td> <td></td> </tr> </table>	<input type="checkbox"/> 1.2	<input type="checkbox"/> 2.2 [1.2]	<input type="checkbox"/> 3.2	<input type="checkbox"/> 4.2	<input type="checkbox"/> 1.3	<input type="checkbox"/> 2.3	<input type="checkbox"/> 3.3	<input type="checkbox"/> 4.3	<input type="checkbox"/> 1.4 [1.2]	<input type="checkbox"/> 2.4 [1.3]	<input type="checkbox"/> 3.4	<input type="checkbox"/> 4.4	<input type="checkbox"/> 1.5 [1.2] [1.4]	<input type="checkbox"/> 2.5	<input type="checkbox"/> 3.5	<input type="checkbox"/> 4.5	<input type="checkbox"/> 1.6	<input type="checkbox"/> 2.6	<input type="checkbox"/> 3.6		<input type="checkbox"/> 1.7	<input type="checkbox"/> 2.7	<input type="checkbox"/> 3.7 [3.3]		<input type="checkbox"/> 1.8	<input type="checkbox"/> 2.8	<input type="checkbox"/> 3.8		<input type="checkbox"/> Special	<input type="checkbox"/> 2.9	<input type="checkbox"/> 3.9 [3.3]	
<input type="checkbox"/> 1.2	<input type="checkbox"/> 2.2 [1.2]	<input type="checkbox"/> 3.2	<input type="checkbox"/> 4.2																														
<input type="checkbox"/> 1.3	<input type="checkbox"/> 2.3	<input type="checkbox"/> 3.3	<input type="checkbox"/> 4.3																														
<input type="checkbox"/> 1.4 [1.2]	<input type="checkbox"/> 2.4 [1.3]	<input type="checkbox"/> 3.4	<input type="checkbox"/> 4.4																														
<input type="checkbox"/> 1.5 [1.2] [1.4]	<input type="checkbox"/> 2.5	<input type="checkbox"/> 3.5	<input type="checkbox"/> 4.5																														
<input type="checkbox"/> 1.6	<input type="checkbox"/> 2.6	<input type="checkbox"/> 3.6																															
<input type="checkbox"/> 1.7	<input type="checkbox"/> 2.7	<input type="checkbox"/> 3.7 [3.3]																															
<input type="checkbox"/> 1.8	<input type="checkbox"/> 2.8	<input type="checkbox"/> 3.8																															
<input type="checkbox"/> Special	<input type="checkbox"/> 2.9	<input type="checkbox"/> 3.9 [3.3]																															
According to configuration of switching device Electronic switch with (7.17.1 – 7.17.5)	<input type="checkbox"/> SD without mechanical switching device; <input type="checkbox"/> SD with series mechanical switching device; <input type="checkbox"/> SD with parallel mechanical switching device; <input type="checkbox"/> SD with series and parallel mechanical switching device; <input type="checkbox"/> only mechanical switching device without SD. SD to be provided in the end application																																



Mechanical switch with (7.17.6 – 7.17.7)	<input checked="" type="checkbox"/> or without electronics, which does not impact the safety of the switch; <input type="checkbox"/> electronics, which impacts the safety of the switch
According to duty type (7.18)	<input type="checkbox"/> S1 – continuous duty <input type="checkbox"/> S2 – short-time duty with defined ON and OFF <input type="checkbox"/> S3 – intermittent periodic duty with defined ON and OFF <input checked="" type="checkbox"/> as declared for a specific application
Linkage between contact and actuator speed (7.19) Speed of contact closure	<input type="checkbox"/> or opening is dependent on the actuator speed <input checked="" type="checkbox"/> and opening is independent of the actuator speed
According to the type of terminals (7.20) for ...:	<input type="checkbox"/> unprepared conductors (7.20.1) <input type="checkbox"/> prepared conductors (7.20.2) <input type="checkbox"/> flexible stranded conductors (7.20.3) <input type="checkbox"/> rigid stranded conductors (7.20.4) <input type="checkbox"/> solid conductors (7.20.5) <input type="checkbox"/> conductor size range according to Table 4 (7.20.6) <input type="checkbox"/> a declared limited conductor size range (7.20.7) <input type="checkbox"/> only one conductor (7.20.8) <input type="checkbox"/> the interconnection of two or more conductors (7.20.9) <input type="checkbox"/> assembling one time (7.20.10) <input type="checkbox"/> assembling and disassembling more than one time (7.20.11) <input checked="" type="checkbox"/> welding or ridged terminals (7.20.16) <input type="checkbox"/> wires for connections (7.20.17) <input type="checkbox"/> piercing conductors (7.20.18) <input type="checkbox"/> declared by the manufacturer (7.20.19)
Type of built in protection (7.21).....	<input type="checkbox"/> Built in protection provided; <input checked="" type="checkbox"/> None provided
Type of forced cooling (7.22).....	<input type="checkbox"/> Not requiring forced cooling. <input type="checkbox"/> Forced cooling required, with description of forced cooling.
According to the capacitor provided with the switch (7.23.1 – 7.23.5)	<input type="checkbox"/> Capacitor class X1 <input type="checkbox"/> Capacitor class X2 <input type="checkbox"/> Capacitor class X3 <input type="checkbox"/> Capacitor class Y2 <input type="checkbox"/> Capacitor class Y4




IEC 61058-1			
Clause	Requirement - Test	Result - Remark	Verdict
8	MARKING AND DOCUMENTATION		--
8.1	Switch information		P
8.1.1	The switch manufacturer provide adequate information to ensure that the:		P
	<ul style="list-style-type: none"> • appliance manufacturer can select and install a switch; • end user can use a switch as intended by the switch manufacturer; • corresponding tests can be performed in accordance with this standard 		P
	Information is provided in one or more of the following ways, as in Table 3.		P
8.1.2	By switch marking.	<input checked="" type="checkbox"/> Ma	P
8.1.3	By documentation.	<input checked="" type="checkbox"/> Do	P
	Documentation available in any suitable format.	Instruction	P

Table No.	Switch information Characteristic	Means of information: <input type="checkbox"/> C.T. <input checked="" type="checkbox"/> U.T.		Verdict
1	SWITCH IDENTIFICATION			P
1.1	Manufacturer's name or trade mark.	See marking label		P
1.2	Type reference.	See marking label		P
2	SWITCH ENVIRONMENT/MOUNTING			--
2.1	Degree of protection provided for the switch when mounted according to documentation.	IP 20	code of IEC 60529	P
2.2	Degree of protection against electric shock, from outside an appliance.	See page 7 and (3.7.8 to 3.7.11).		P
2.3	Method of mounting and actuating the switch.			P
	Method of providing earthing if appropriate.			N/A
	Method(s) of mounting and orientation(s) declared.			P
2.4	Pollution degree micro.	See page 7 and (3.8.1).		N/A
2.5	Pollution degree macro.	See page 7 and (3.8.2).		P
3	TEMPERATURE			--
3.1	Ambient temperature limits if $\neq 0 - 55^{\circ}\text{C}$.	$^{\circ}\text{C}$		N/A
4	ELECTRICAL LOAD / CONNECTION			--
4.1	Rated voltage or voltage range.	250	V	P
4.2	Nature of supply.	~		P
4.3	Frequency or frequency range.	50/60	Hz	P
4.4	The rated current and the electrical load type.	See page 3 "Rating".		P
4.5	For switches for more than one circuit, the current applicable to each circuit and to each terminal.	See page 3 "Rating".		N/A




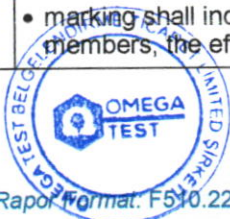
	If these are different from each other, then it shall be made clear to which circuit or which terminal the information applies.			N/A
4.6	Rated impulse withstand voltage.	2500	V	P
4.7	Overvoltage category.	Category II		P
4.8	Duty-type and relevant (ON/OFF-time)	Continues		N/A
4.9	Type and/or connection of switch.			P
4.10	Configuration of switching device:			N/A
5	TERMINALS / CONDUCTORS			--
5.1	All terminals suitably identified			P
	<input checked="" type="checkbox"/> or their purpose self-evident <input type="checkbox"/> or the switch circuitry visually apparent			P
	For terminals intended for the connection of supply conductors, the identification may take the form	<input type="checkbox"/> of a letter L, <input type="checkbox"/> a number <input type="checkbox"/> or of an arrow		N/A
5.2	Terminals for earthing marked with the protective earth symbol	Class II		N/A
5.3	The method of connection and disconnection for push-in terminals.	No such terminals		N/A
5.4	The type of conductor to be connected to the terminal.	<input type="checkbox"/> solid, <input type="checkbox"/> stranded and/or <input type="checkbox"/> flexible		N/A
5.5	The suitability of the terminal for connection of conductors indicated:			--
	• maximum conductor diameter		mm	N/A
	• minimum conductor diameter		mm	N/A
5.6	Suitability for interconnection of two or more conductors to terminals.			N/A
5.7	The type of solder terminal mechanical securement before soldering, iron, bath, etc.			N/A
5.8	For terminals with specific connection method, such as:			--
	• solder temperatures or process declared			N/A
5.9	Terminals for prepared conductors indicate the method for preparing the conductors.			N/A
5.10	For tabs with dimensions other than those according to IEC 61210:			--
	• the appropriate female connector			N/A
6	OPERATING CYCLES / SEQUENCE			--
6.1	Number of operating cycles.	1E3		P
6.2	Operating sequence for switches with more than one circuit.			N/A
6.3	Forces applied to end stops or full travel of actuating member.			N/A
7	SIGNAL INDICATORS			--
7.1	Maximum power of tungsten filament signal lamps.		W	N/A
	Marking visible when replacing lamp.			N/A
7.2	Intended function or operation of the signal indicator.			N/A



8	CIRCUIT DISCONNECTION		--
8.1 – 8.4	<input type="checkbox"/> Electronic <input type="checkbox"/> Micro <input type="checkbox"/> Full <input type="checkbox"/> Combination	Disconnection by a certified relay	P
9	INSULATING MATERIALS		--
9.1	Tracking <input type="checkbox"/> PTI or <input type="checkbox"/> CTI		N/A
9.2	Glow-wire temperatures.	See table glow wire test.	P
10	COOLING CONDITION		--
10.1	<input type="checkbox"/> Not requiring forced cooling		N/A
10.2	<input type="checkbox"/> Requiring cooling		
10.3	<input type="checkbox"/> Direction of air for forced cooling		
10.4	<input type="checkbox"/> Speed of air for forced cooling		
10.5	<input type="checkbox"/> Thermal resistance of heat sink		
10.6	<input type="checkbox"/> Incoming temperature, density and other details of the air stream		
11	PROTECTIVE DEVICE		--
11.1	Rated current/fusing characteristic/breaking capacity of replaceable built-in protection	Fuse used	P
11.2	Type/function of non-replaceable built-in protection.	Fuse used	P
11.3	External protective device rated current, fusing characteristic, breaking capacity.		N/A
12	TEST CONDITIONS		--
12.1	Test condition for switches having a contact making and breaking speed independent from the speed of actuation		N/A
12.2	Special requirements for testing such as minimum electric load in 3.2.11, thermal current I_{th} (3.2.12)		N/A
8.2	Symbols (when used)		--
	<input checked="" type="checkbox"/> Ampere (A) <input checked="" type="checkbox"/> Volt (V) <input type="checkbox"/> Watt (W) <input type="checkbox"/> Volt-amperes (VA)		P
	Alternating current (<i>single-phase</i>) <input type="checkbox"/> or a.c. <input type="checkbox"/> or a.c.		
	Direct current <input type="checkbox"/> or d.c. <input type="checkbox"/> or ___d.c.		
	Tungsten filament lamp load:		N/A
	Protective earth symbol:		N/A
	Hertz – Frequency of supply	Hz	50/60Hz
	Number of operating cycles	See 8.5	P
	Symbol for micro-disconnection	μ	N/A
	<input type="checkbox"/> "OFF"-position or the direction of actuation to the "OFF" position		0, 1, 2, 0
	<input type="checkbox"/> "ON"-position or the direction of actuation to the "ON" position		
	Electronic disconnection	ε	N/A
8.3	Load rating		--
8.3.2	Substantially resistive		P
8.3.3	Resistive load and motor load		N/A
8.3.4	Resistive load and capacitive load		N/A



8.3.5	Resistive load and tungsten filament lamp load		P
8.3.6	Declared specific load		N/A
8.3.7	Inductive loads		N/A
8.3.8	General Purpose loads		N/A
8.4	Temperature rating		--
8.4.1	<input type="checkbox"/> 25 T 85 (-25 °C up to +85 °C) (example) <input type="checkbox"/> T 85 (0 °C up to +85 °C) (example)		N/A
	If no information is given:		P
	• rated ambient temperature range is 0 – 55 °C		P
8.4.2	Switches only partially suitable for a rated ambient temperature > 55 °C:		N/A
	• T85/55 or 25T85/55 (examples)		N/A
8.5	Operating cycles		--
	Information about rated operating cycles by using symbol "E", indicating exponent.	1E3	P
8.6	Switches intended for use in Class II equipment or appliances		--
	The symbol  shall not be marked on the switch.		P
8.7	Required marking		--
	Shall preferably be on the body of the switch.	On the enclosure	P
	Not on screws, removable washers or other removable.		P
	Marking for replaceable fuse incorporated in a switch shall be placed on the fuse-holder or in the proximity of the fuse.	Incorporated fuse, non-replaceable	N/A
	The characteristics may be indicated by symbols (see IEC 60127).	Incorporated fuse, non-replaceable	N/A
8.8	Legibility and durability of marking		--
	The requirements of 8.1 to 8.8 is checked by inspection and by rubbing the marking by hand for 15 s with a piece of cotton cloth:		--
	a) soaked with water and		P
	b) again for 15 s soaked with aliphatic solvent hexane		P
	After these tests, the marking shall still be legible.		P
8.9	Switches with their own enclosure		--
	• "OFF"-position, clearly indicated	0	P
	Switches with micro-disconnection or electronic disconnection:		--
	• not marked with symbol "O" for the "OFF" position		N/A
	Switches where marking of switch position is impossible or leads to misunderstanding:		--
	• direction of actuation(s) is marked		N/A
	Switches having more than one actuating member:		--
	• marking shall indicate, for each of the actuating members, the effect achieved by its operation		N/A



	For switches classified as unique type, 7.10.1, the OFF marking is according to the manufacturer's declaration.		N/A
	For push-button switches with a single button the OFF position is not required to be marked.		N/A

9	PROTECTION AGAINST ELECTRIC SHOCK		--
9.1	Switches shall be constructed so that there is adequate protection against contact with live parts in any position of use when the switch is mounted and operated as in normal use. Checked by inspection and by the following test:		--
	a) applied to accessible parts of the switch when mounted in accordance with the manufacturer's documentation, with any detachable parts, except lamps with caps, removed;		P
	b) The insulating properties of lacquer, enamel, paper, cotton, oxide film on metal parts, beads and sealing compounds which soften in heat:		--
	<ul style="list-style-type: none"> shall not be relied upon to give the required protection against contact with live parts 		P
	c) Probe B according to IEC 61032 (IEC 60529:1989, Figure 1) jointed test finger is:		--
	<ul style="list-style-type: none"> applied without force in every possible position 		P
	If Probe B is able to enter the opening:		--
	<ul style="list-style-type: none"> the finger is repeated with an electrical contact indicator to show contact 		N/A
	d) Probe 11 according to IEC 61032 straight unjointed test finger is applied:		--
	<ul style="list-style-type: none"> with 20 N of force to any opening that prevents the entry of probe B 		P
	e) Test pin Probe 13 according to IEC 61032 is applied to:		--
	<ul style="list-style-type: none"> openings in insulation materials and unearthed metal parts without force in every possible position 		P
	It shall not be possible to touch bare live parts.		P
	For switches which have any parts of double insulation construction:		--
	<ul style="list-style-type: none"> not possible to touch with the jointed test finger unearthed metal parts separated from live parts by basic insulation, or by the basic insulation itself 		P
9.1.1	Accessible metal parts which are needed for the operation of a switch may be connected to live parts by means of a protective impedance:		--
	The protective impedance shall consist of resistors and/or capacitors comply with one of the following at least:		N/A
	<input type="checkbox"/> a) 2 independent resistors of the same nominal value in series complying with 24.4; <input type="checkbox"/> b) 2 independent capacitors in series, of the same value complying with class Y2 according to IEC 60384-14; <input type="checkbox"/> c) 1 resistor complying with 24.4 and 1 capacitor complying with class Y2 according to IEC 60384-14 in series		N/A
	The removal of protective impedances, or their short-circuiting, possible:		--



	<ul style="list-style-type: none"> only by destruction of the switch or by rendering the electronic switch obviously unusable 		N/A
	The protective impedances so designed and arranged that along their surfaces and between their surfaces:		--
	<ul style="list-style-type: none"> the requirements according to Clause 20 are met 		N/A
9.1.2	If a cover or cover-plate or a fuse can be removed without the use of a tool or if the instruction for use specifies that, for the purpose of maintenance, when replacing the fuse, covers and cover-plates fastened by means of a tool have to be removed:		--
	<ul style="list-style-type: none"> protection against contact with live parts assured even after removal of the cover or cover-plate 		N/A
	Checked with Probe C according to Figure 3 IEC 61032:1997, through the hole, applying up to 20 N of force.		--
	The pin shall not touch live parts.		N/A
9.1.3	An actuating member fixed adequately if the removal of the actuating member gives access to live parts.	No such actuating member	N/A
9.2	For switches for appliances other than of Class III, actuating members shall be of one of the following types:		--
	a) insulating material;		P
	b) metal separated from basic insulated parts by supplementary insulation;		N/A
	c) metal separated from live parts by double or reinforced insulation;		N/A
	d) for electronic switches, metal separated from live parts by protective impedances		N/A
	Item d) measurements carried out between either a single accessible metal part or any combination of accessible metal parts and earth, through a non-inductive resistor of 2 k Ω :		--
	<input type="checkbox"/> at rated voltage (and rated load in ON-state) <input type="checkbox"/> in ON- and OFF-state <input type="checkbox"/> and/or at lowest and highest setting value		N/A
	The current not exceed, in any measurement:		--
	<ul style="list-style-type: none"> 0,7 mA (<i>peak</i>) for a.c. \leq 1 kHz or 2 mA for d.c. 	mA	N/A
	For frequencies > 1 kHz:		
	<ul style="list-style-type: none"> the limit of 0,7 mA is multiplied by the value of the frequency in kHz, but shall not exceed 70 mA 	mA	N/A
9.3	Capacitors not connected to unearthed metal parts which are accessible when the switch is mounted.	No such capacitors	N/A
	Metal casing of capacitors separated by supplementary insulation from accessible unearthed metal parts, when the switch is mounted.		N/A
10	PROVISION FOR EARTHING		--
10.1	Switches for Class II appliances:		--
	<ul style="list-style-type: none"> have no provision for earthing the switch or parts thereof 		P
	Interconnections for maintaining the earthing circuit are permitted.		N/A

10.2	Earthing terminals, earthing terminations and other earthing means:		--
	• not connected electrically to any neutral terminal		N/A
10.3	Accessible metal parts of switches for Class I appliances:		--
	• have provision for earthing		N/A
10.3.1	Parts separated from live parts by double or reinforced insulation, and parts screened from live parts by metal parts connected to an earthing terminal, earthing termination, or other earthing means:		--
	• not regarded as likely to become live in the event of an insulation fault		N/A
10.3.2	Accessible metal parts of switches connected to earth through their fixing means:		--
	• provided the provision is made for clean metallic surfaces at the connection points		N/A
10.4	The connection between an earthing terminal/termination or other earthing means, and parts required to be connected thereto, is of low resistance.		--
	a) a current of $1.5I_R$ but ≥ 25 A a.c. with ≤ 12 V, passed between the type of used earthing and each of the parts in turn	A	N/A
	The resistance not exceeding 50 m Ω .	m Ω	N/A
10.5	Earthing terminals of all types for unprepared conductors:		--
	• is of a size \geq required for the corresponding current carrying terminal		N/A
	Not possible to loosen the clamping means without the aid of a tool, and they be adequately locked against unintentional loosening.		N/A
10.5.1	Terminals according to 11.1 and 11.2:		--
	• provide sufficient resilience for adequate locking against unintentional loosening		N/A
10.5.2	Switch subjected to excessive vibration or temperature cycling:		--
	• special provisions are used		N/A
10.6	Thread-cutting and thread-forming screws may be used to provide earthing continuity;		--
	• provided it is not necessary to disturb the connection in normal use		N/A
	• and at least 2 screws are used for each connection (see tests in 19.2)		N/A
10.7	All parts of an earthing terminal:		--
	• no risk of corrosion		N/A
10.8	The body of an earthing terminal shall be:		--
	<input type="checkbox"/> of brass <input type="checkbox"/> or other metal no less resistant to corrosion		N/A
	Unless:		--
	<input type="checkbox"/> it is a part of the enclosure when any screws or nuts be of brass plated steel complying with 19.3 <input type="checkbox"/> or other metal no less resistant to corrosion and rusting		N/A

