



<b>TEST REPORT</b> <b>IEC 61347-2-11</b> <b>Part 2: Particular requirements:</b> <b>Section 11: Miscellaneous electronic circuits used with luminaires</b>	
<b>Report Number.....:</b>	AOC250516004S
<b>Date of issue.....:</b>	2025-05-16
<b>Total number of pages.....</b>	37 pages
<b>Name of Testing Laboratory preparing the Report.....:</b>	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
<b>Applicant's name.....:</b>	SUG New Energy Co.,Ltd
<b>Address.....:</b>	281#, Avenue Zhongxin,Industrial Zone Yueqing,ZheJiang,China
<b>Test specification:</b>	
<b>Standard.....:</b>	<input checked="" type="checkbox"/> IEC 61347-2-11:2001+A1:2017 <input checked="" type="checkbox"/> IEC 61347-1:2015+A1:2017
<b>Test procedure.....:</b>	Type testing
<b>Non-standard test method.....:</b>	N/A
<b>Test Report Form No.....:</b>	IEC61347_2_11E
<b>Test Report Form(s) Originator.....:</b>	Intertek Semko AB
<b>Master TRF.....:</b>	2015-10
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<b>Test item description..... :</b>	Solar Controller	
<b>Trade Mark..... :</b>	N/A	
<b>Manufacturer..... :</b>	SUG New Energy Co.,Ltd 281#, Avenue Zhongxin,Industrial Zone Yueqing,ZheJiang,China	
<b>Model/Type reference..... :</b>	20A, 30A, 40A, 50A, 60A, 70A, 80A, 90A, 100A, 110A, 120A, 160A	
<b>Ratings..... :</b>	12/24/48V, 20A, 30A, 40A, 50A, 60A, 70A, 80A, 90A, 100A, 110A, 120A, 160A	
<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>		
<input checked="" type="checkbox"/>	<b>Testing Laboratory:</b>	Shenzhen AOCE Electronic Technology Service Co., Ltd
<b>Testing location/ address..... :</b>		Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
<b>Tested by (name, function, signature)..... :</b>		ZhiCong Xian Technical Engineer <i>ZhiCong Xian</i>
<b>Approved by (name, function, signature)... :</b>		Robin Liu Technical Manager <i>Robin. Liu</i>
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 1:</b>	
<b>Testing location/ address..... :</b>		
<b>Tested by (name, function, signature)..... :</b>		
<b>Approved by (name, function, signature)... :</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 2:</b>	
<b>Testing location/ address..... :</b>		
<b>Tested by (name + signature)..... :</b>		
<b>Witnessed by (name, function, signature).. :</b>		
<b>Approved by (name, function, signature)... :</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 3:</b>	
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 4:</b>	
<b>Testing location/ address..... :</b>		
<b>Tested by (name, function, signature)..... :</b>		
<b>Witnessed by (name, function, signature).. :</b>		
<b>Approved by (name, function, signature)... :</b>		
<b>Supervised by (name, function, signature) :</b>		

**List of Attachments (including a total number of pages in each attachment):****Attachment No.1:** Photo document.**Summary of testing:****Tests performed (name of test and test clause):**

- EN 61347-1:2015+A1:2021
- EN 61347-2-11:2001+A1:2019

**Testing location:**

Shenzhen AOCE Electronic Technology Service Co., Ltd  
 Room 202, 2nd Floor, No.12th Building of Xinhe  
 Tongfuyu Industrial Park, Fuhai Street, Baoan  
 District, Shenzhen, Guangdong, China

**Summary of compliance with National Differences:**

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

☒ The product fulfils the requirements of EN 61347-1:2015+A1:2021& EN 61347-2-11:2001+A1:2019

**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.**

**Remark:**

1. The above mark is the minimum requirements required by the safety standard. For the final production, the additional mark which do not give rise to misunderstanding may be added.
2. The marking of other models are identical with the marking of model 60A, except model designation and rated power.

<b>Test item particulars.....:</b>	
<b>Classification of installation and use..... :</b>	Built-in controlgear
<b>Supply Connection..... :</b>	Charging port
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing..... :</b>	
<b>Date of receipt of test item..... :</b>	2025-05-06
<b>Date (s) of performance of tests..... :</b>	2025-05-06 to 2025-05-16
<b>General remarks:</b>	
<p>The tested sample(s) and the sample information are provided by the client.          "(See Enclosure #)" refers to additional information appended to the report.          "(See appended table)" refers to a table appended to the report.  <b>Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF.</b>  <b>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</b>  <b>Clause numbers between brackets refer to clauses in IEC 61347-1</b>  <b>Note: clauses marked “*” not included in CNAS scope.</b>          The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.          When determining for test conclusion, measurement uncertainty of tests has been considered.</p>	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC 61347-1:</b>	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	<input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>Not applicable</b>
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies) .....</b>	SUG New Energy Co.,Ltd 281#, Avenue Zhongxin,Industrial Zone Yueqing,ZheJiang,China

**General product information:**

N/A

IEC 61347-2-11			
Clause	Requirement + Test	Result - Remark	Verdict

<b>4 (4)</b>	<b>GENERAL REQUIREMENTS</b>		-
- (4)	Insulation materials according requirements in Annex N of IEC 61347-1	(see Annex N)	P
- (4)	Compliance of independent controlgear enclosure with IEC 60 598-1		N/A
- (4)	Built-in electronic controlgear with double or reinforced insulation comply with Annex O of IEC 61347-1	(see Annex O)	P
- (4)	SELV controlgear comply with Annex L of IEC 61347-1	(see Annex L)	P

<b>6 (6)</b>	<b>CLASSIFICATION</b>		-
	Built-in controlgear .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Independent controlgear.....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	Integral controlgear .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

<b>7 (7)</b>	<b>MARKING</b>		-
<b>7.1 (7.1)</b>	<b>Mandatory markings</b>		<b>P</b>
	a) mark of origin		P
	b) model number or type reference		P
	d) correlation between interchangeable parts and controlgear marked		P
	e) rated supply voltage (V)		P
	supply frequency (Hz)		P
	supply current (A)		P
	f) earthing symbol		N/A
	Information if permitted to use without connection to earth		N/A
	k) wiring diagram		N/A
	l) value of tc alternative ta		N/A
7.1 (-)	control terminals identified		P
	classification of insulation between live parts and control circuits		N/A
7.1 (7.2)	Marking durable and legible		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Rubbing 15 s water, 15 s petroleum; marking legible		P
<b>7.2 (7.1)</b>	<b>Information to be provided, if applicable</b>		N/A
	h) declaration of protection against accidental contact		N/A
	i) cross-section of conductors (mm <sup>2</sup> )		N/A
	j) number, type and wattage of lamp(s)		N/A
<b>7.1 (7.2)</b>	Marking durable and legible		P
	Rubbing 15 s water, 15 s petroleum; marking legible		P

<b>8 (10)</b>	<b>PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS</b>		-
- (10.1)	Controlgear protected against accidental contact with live parts		P
- (A2)	Voltage measured with 50 k $\Omega$	(see Annex A)	P
- (A3)	Voltage > 35 V peak or > 60 V d.c. or protective impedance device	(see Annex A)	N/A
- (10.1)	Lacquer or enamel not used for protection or insulation		P
	Adequate mechanical strength on parts providing protection		P
- (10.2)	Capacitors > 0,5 $\mu$ F: voltage after 1 min (V): < 50 V ..... : .....		P
<b>- (10.3)</b>	<b>Controlgear providing SELV</b>		N/A
	Accessible conductive parts are insulated from live parts by double or reinforced insulation in SELV controlgear		N/A
	No connection between output circuit and the body or protective earthing circuit		N/A
	No possibility of connection between output circuit and the body or protective earthing circuit through other conductive parts		N/A
	SELV outputs separated by at least basic insulation		N/A
	ELV conductive parts insulated as live parts		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Tests according Annex L of IEC 61347-1		N/A
<b>- (10.4)</b>	<b>Accessible conductive parts in SELV circuits</b>		N/A
	Output voltage under load $\leq 25$ V r.m.s. or $\leq 60$ V d.c.		N/A
	If output voltage $> 25$ V r.m.s. or $> 60$ V d.c.; No load output $\leq 35$ V peak or $\leq 60$ V d.c and touch current does not exceed 0,7 mA (peak) or 2 mA d.c. .... :		N/A
	One conductive part is insulated if output voltage or current exceeding the values above and withstand test voltage 500 V		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A

<b>9 (8)</b>	<b>TERMINALS</b>		-
	Screw terminals according section 14 of IEC 60598-1:		<b>P</b>
	Separately approved; component list	(see Annex 1)	P
	Part of the controlgear	(see Annex 2)	N/A
	Screwless terminals according section 15 of IEC 60598-1:		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the controlgear	(see Annex 3)	N/A

<b>10 (9)</b>	<b>PROVISION FOR PROTECTIVE EARTHING</b>		-
<b>- (9.1)</b>	<b>Provisions for protective earthing</b>		<b>N/A</b>
	Terminal complying with clause 8		N/A
	Locked against loosening and not possible to loosen by hand		N/A
	Not possible to loosen clamping means unintentionally on screwless terminals		N/A
	All parts of material minimizing the danger of electrolytic corrosion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Made of brass or equivalent material		N/A
	Contact surface bare metal		N/A
	Test according 7.2.3 of IEC 60598-1		N/A
- (9.2)	<b>Provision for functional earthing</b>		N/A
	Comply with clause 8 and 9.1		N/A
	Functional earth insulated from live parts by double or reinforced insulation		N/A
- (9.3)	<b>Lamp controlgear with conductors for protective earthing by tracks on printed circuit board</b>		N/A
	Test with a current of 25 A between earthing terminal or earthing contact and each of the accessible metal parts; measured resistance ( $\Omega$ ) at $\geq 10$ A according 7.2.3 of IEC 60598-1: $< 0,5 \Omega$ .....		N/A
- (9.4)	<b>Earthing of built-in lamp controlgear</b>		N/A
	Earth by means of fixing to earthed metal of luminaire in compliance of 7.2 of IEC 60598-1		N/A
	Earthing terminal only for earthing the built-in controlgear		N/A
- (9.5)	<b>Earthing via independent controlgear</b>		N/A
- (9.5.1)	Earth connection to other equipment		N/A
	Looping or through connection, conductor min. 1,5 mm <sup>2</sup> and of copper or equivalent		N/A
	Protective earthing wires in line with 5.3.1.1 and clause 7 of IEC 60598-1		N/A
- (9.5.2)	Earthing of the lamp compartments powered via the independent lamp controlgear		N/A
	Test with a current of 25 A between input and output earth terminals; measured resistance ( $\Omega$ ) between earthing terminal or earthing contact and each of the accessible metal parts at $\geq 10$ A according 7.2.3 of IEC 60598-1: $< 0,5 \Omega$ .....		N/A
	Output earthing terminal marked as in 7.1 t) of IEC 61347-1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

<b>11 (11)</b>	<b>MOISTURE RESISTANCE AND INSULATION</b>		-
	After storage 48 h at 91- 95% relative humidity and 20- 30 °C measuring of insulation resistance:		P
	For basic insulation $\geq 2 \text{ M}\Omega$ .....		P
	For double or reinforced insulation $\geq 4 \text{ M}\Omega$ .....		P
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		P

<b>12 (12)</b>	<b>ELECTRIC STRENGTH</b>		-
	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V		N/A
	Working voltage $\leq 50 \text{ V}$ , test voltage 500 V		N/A
	Working voltage $> 50 \text{ V} \leq 1000 \text{ V}$ , test voltage (V):		P
	Basic insulation, $2U + 1000 \text{ V}$		P
	Supplementary insulation, $2U + 1000 \text{ V}$		P
	Double or reinforced insulation, $4U + 2000 \text{ V}$		P
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		P

<b>14 (14)</b>	<b>FAULT CONDITIONS</b>		-
- (14.1)	When operated under fault conditions the controlgear:		P
	- does not emit flames or molten material		P
	- does not produce flammable gases		P
	- protection against accidental contact not impaired		P
	Thermally protected controlgear does not exceed the marked temperature value		P
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict
- (14.2)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (after any reduction in 14.2 - 14.5)	(see appended table)	P
- (14.3)	Short-circuit or interruption of semiconductor devices	(see appended table)	P
- (14.4)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	N/A
- (14.5)	Short-circuit across electrolytic capacitors	(see appended table)	P
- (14.6)	After the tests has been carried out on three samples:		P
	The insulation resistance $\geq 1 \text{ M}\Omega$ .....		P
	No flammable gases		P
	No accessible parts have become live		P
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		P
- (14.7)	Relevant fault condition tests with high-power a.c. supply		—

<b>15 (15)</b>	<b>CONSTRUCTION</b>		-
- (15.1)	<b>Wood, cotton, silk, paper and similar fibrous material</b>		<b>P</b>
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P
- (15.2)	<b>Printed circuits</b>		<b>P</b>
	Printed circuits used as internal connections complies with clause 14		P
- (15.3)	<b>Plugs and socket-outlets used in SELV or ELV circuits</b>		N/A
	No dangerous compatibility between output socket-outlet and a plug for socket-outlets for input circuit in relation to installation rules, voltages and frequencies		N/A
	Plugs and socket-outlets for SELV comply with IEC 60906-3 and IEC 60884-2-4		N/A
	Plugs and socket-outlets for SELV $\leq 3 \text{ A}$ , $\leq 25 \text{ V}$ r.m.s. or $\leq 60 \text{ V d.c.}$ and $\leq 72 \text{ W}$ comply with IEC 60906-3 and IEC 60884-2-4 or:		N/A
	- plugs not able to enter socket-outlets of other standardised system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- socket-outlets not admit plugs of other standardised system		N/A
	- socket-outlets without protective earth		P
<b>- (15.4)</b>	<b>Insulation between circuits and accessible parts</b>		N/A
- (15.4.2)	SELV circuits		N/A
	Source used to supply SELV circuits:		N/A
	- safety isolating transformer in accordance with relevant part 2 of IEC 61558		N/A
	- controlgear providing SELV in accordance with relevant part 2 of IEC 61347		N/A
	- another source		N/A
	Voltage in the circuit not higher than ELV		N/A
	SELV circuits insulated from LV by double or reinforced insulation		N/A
	SELV circuits insulated from non SELV circuits by double or reinforced insulation		N/A
	SELV circuits insulated from FELV circuits by supplementary insulation		N/A
	SELV circuits insulated from other SELV circuits by basic insulation		N/A
	SELV circuits insulated from accessible conductive parts according Table 6 in 15.4.5		N/A
- (15.4.3)	FELV circuits		N/A
	Source used to supply FELV circuits:		N/A
	- separating transformer in accordance with relevant part 2 of IEC 61558		N/A
	- separating controlgear providing basic insulation between input and output circuits in accordance with relevant part 2 of IEC 61347		N/A
	- another source		N/A
	- source in circuits separated by the LV supply by basic insulation		N/A
	Voltage in the circuit not higher than ELV		N/A
	FELV circuits insulated from LV supply by at least basic insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	FELV circuits insulated from other FELV circuits if functional purpose		N/A
	FELV circuits insulated from accessible conductive parts according Table 6 in 15.4.5		N/A
	Plugs and socket-outlets for FELV system comply with:		N/A
	- plugs not able to enter socket-outlets of other voltage systems		N/A
	- socket-outlets not admit plugs of other voltage systems		N/A
	- socket-outlets have a protective conductor contact		N/A
- (15.4.4)	Other circuits		N/A
	Insulation between circuits other than SELV or FELV and accessible conductive parts in according Table 6 in 15.4.5.		N/A
- (15.4.5)	Insulation between circuits and accessible conductive parts		N/A
	Accessible conductive parts insulated from active parts of electric circuits by insulating according Table 6		N/A
	Requirements for Class II construction with equipotential bonding for protection against indirect contact with live parts:		N/A
	- all conductive parts are connected together		N/A
	- conductive parts are reliably connected together according test of IEC 60598-1 cl. 7.2.3		N/A
	- conductive parts comply with requirements of Annex A in case of insulation fault		N/A

<b>16 (16)</b>	<b>CREEPAGE DISTANCES AND CLEARANCES</b>		-
- (16)	Creepage distances and clearances according to 16.2 and 16.3		P
	Controlgears providing SELV comply with additional requirements in Annex L		N/A
	Insulating lining of metallic enclosures		N/A
	Controlgear protected against pollution comply with Annex P		N/A
- (16.2)	<b>Creepage distances</b>		<b>P</b>

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Clause	Requirement + Test	Result - Remark	Verdict
- (16.2.2)	Minimum creepage distances for working voltages		P
	Creepage distances according to Table 7	(see appended table)	P
- (16.2.3)	Creepage distances for working voltages with frequencies above 30 kHz		N/A
	Creepage distances according to Table 8	(see appended table)	N/A
- (16.3)	<b>Clearances</b>		P
- (16.3.2)	Clearances for working voltages		P
	Clearances distances according to Table 9	(see appended table)	P
- (16.3.3)	Clearances for ignition voltages and working voltages with higher frequencies		N/A
	Clearances distances for basic or supplementary insulation according to Table 10	(see appended table)	N/A
	Clearances distances for reinforced insulation according to Table 11	(see appended table)	N/A

<b>17 (17)</b>	<b>SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS</b>		-
	Screws, current-carrying parts and connections in compliance with IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)		P
<b>(4.11)</b>	<b>Electrical connections</b>		<b>P</b>
(4.11.1)	Contact pressure		P
(4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
(4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
(4.11.4)	Material of current-carrying parts		P
(4.11.5)	No contact to wood or mounting surface		P
(4.11.6)	Electro-mechanical contact systems		N/A
<b>(4.12)</b>	<b>Mechanical connections and glands</b>		N/A
(4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Torque test: torque (Nm); part..... :		N/A
(4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
(4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm)..... :		N/A
	- lampholder; torque (Nm)..... :		N/A
	- push-button switches; torque 0,8 Nm..... :		N/A
(4.12.5)	Screwed glands; force (Nm)..... :		N/A

<b>18 (18)</b>	<b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>		-
- (18.1)	Ball-pressure test:		P
	- part tested; temperature (°C)..... :		P
	- part tested; temperature (°C)..... :		N/A
- (18.2)	Test of printed boards:		P
	- part tested..... :		P
	- part tested..... :		N/A
- (18.3)	Glow- wire test (650°C):		P
	- part tested..... :		P
	- part tested..... :		N/A
- (18.4)	Needle flame test (10 s):		P
	- part tested..... :		N/A
	- part tested..... :		N/A
- (18.5)	Tracking test:		N/A
	- part tested..... :		N/A
	- part tested..... :		N/A

<b>19 (19)</b>	<b>RESISTANCE TO CORROSION</b>		-
	- test according 4.18.1 of IEC 60598-1		N/A
	- adequate varnish on the outer surface		N/A

<b>20 (-)</b>	<b>ANNEXES</b>		-
	Comply with appropriate annexes of IEC 61347-1	(see Annexes)	N/A



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Clause	Requirement + Test	Result - Remark	Verdict

<b>14</b>	<b>TABLE: tests of fault conditions</b>	<b>P</b>
Part	Simulated fault	Hazard
BD1	short circuit - current fuse opened, unrecoverable	YES/NO
U1	short circuit - current fuse opened, unrecoverable	YES/NO
EC2	short circuit - current fuse opened, unrecoverable	YES/NO
R3	short circuit - fuse open, no flame, no flammable gas, no molten parts, no hazard	YES/NO

<b>16 (16)</b>	<b>TABLES: Creepage distances and clearances (mm)</b>	<b>P</b>
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<b>Table 7</b>	<b>Minimum creepage distances for working voltages</b>						<b>P</b>
RMS working voltage (V) not exceeding	50	150	250	500	750	1000	
Required basic or supplementary insulation, PTI $\geq$ 600	0,6	0,8	1,3	2,5	3,8	5,0	
Measured	-	-	-	-	-	-	
Supplementary information	-	-	-	-	-	-	
Required basic or supplementary insulation, PTI < 600	1,2	1,6	2,5	5	7,6	10	
Measured	-	-	> 2.5	-	-	-	
Supplementary information	-	-	-	-	-	-	
Required reinforced insulation, PTI $\geq$ 600	-	1,6	2,6	5	7,6	10	
Measured	-	-	-	-	-	-	
Supplementary information	-	-	-	-	-	-	
Required reinforced insulation, PTI < 600	-	3,2	5	10	16	20	
Measured	-	-	> 5.0	-	-	-	
Supplementary information	-	-	-	-	-	-	

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Clause	Requirement + Test	Result - Remark	Verdict

Table 8	Minimum creepage distances for sinusoidal or non-sinusoidal working voltages at different frequency range; basic or supplementary insulation	N/A
Peak value of the working voltage $\hat{U}_{out}$ kV .....	-	—
Frequency .....	-	—
Required distance.....	-	—
Measured .....	-	
Supplementary information	-	—

Table 9	Minimum clearances distances for working voltages						P
RMS working voltage (V) not exceeding	50	150	250	500	750	1000	
Clearances with mains supply transients according impulse withstand category II							
- Required basic or supplementary insulation	0,2	0,5	1,5	3	5,5	5,5	
- Measured	-	-	> 1.5	-	-	-	
Supplementary information							
- Required reinforced insulation	0,4	1,6	3	5,5	8	8	
- Measured	-	-	> 3.0	-	-	-	
Supplementary information							
Clearances without mains supply transients							
- Required basic or supplementary insulation	0,2	0,2	0,2	0,2	0,3	0,7	
- Measured	-	-	-	-	-	-	
Supplementary information							
- Required reinforced insulation	0,2	0,2	0,2	0,4	1,0	1,6	
- Measured	-	-	-	-	-	-	
Supplementary information							

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Clause	Requirement + Test	Result - Remark	Verdict

Table 10	Minimum distances of clearances for sinusoidal or non-sinusoidal voltages; inhomogeneous field conditions; basic or supplementary insulation		N/A
Voltage $\hat{U}_{out}$ kV .....	-	—	
Frequency.....	-	—	
Transients or ignition pulse voltage			
Required distance.....	-	—	
Measured.....	-		
Supplementary information	-	—	
Ignition voltage or working voltage			
Required distance.....	-	—	
Measured.....	-		
Supplementary information	-	—	

Table 11	Minimum distances of clearances for sinusoidal or non-sinusoidal voltages; inhomogeneous field conditions; reinforced insulation	N/A
Voltage $\hat{U}_{out}$ kV .....	-	—
Frequency.....	-	—
Transients or ignition pulse voltage		
Required clearance.....	-	—
Measured.....	-	
Supplementary information	-	—
Ignition voltage or working voltage		
Required clearance.....	-	—
Measured.....	-	
Supplementary information	-	—

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Clause	Requirement + Test	Result - Remark	Verdict

<b>(A)</b>	<b>ANNEX A - TEST TO ESTABLISH WHETHER A CONDUCTIVE PART IS A LIVE PART WHICH MAY CAUSE AN ELECTRIC SHOCK</b>		-
(A.1)	Comply with A.2 or A.3		N/A
(A.2)	Voltage $\leq 35$ V peak or $\leq 60$ V d.c. ....:		N/A
(A.3)	If voltage measured according Clause A.2 exceeds the limit value; touch current does not exceed 0,7 mA (peak) or 2 mA d.c. ....:		N/A
	Comply with Annex G.2 of IEC 60598-1		N/A

<b>(C)</b>	<b>ANNEX C – PARTICULAR REQUIREMENTS FOR ELECTRONIC LAMP CONTROLGEAR WITH MEANS OF PROTECTION AGAINST OVERHEATING</b>		-
<b>(C3)</b>	<b>GENERAL REQUIREMENTS</b>		N/A
(C3.1)	Thermal protection means integral with the convertor, protected against mechanical damage		N/A
	Renewable only by means of a tool		N/A
	If function depending on polarity, for cord-connected equipment protection means in both leads		N/A
	Thermal links comply with IEC 60691		N/A
	Electrical controls comply with IEC 60730-2-3		N/A
(C3.2)	No risk of fire by breaking (clause C7)		N/A
<b>(C5)</b>	<b>CLASSIFICATION</b>		N/A
	a) automatic resetting type		—
	b) manual resetting type		—
	c) non-renewable, non-resetting type		—
	d) renewable, non-resetting type		—
	e) other type of thermal protection; description ...:		—
<b>(C6)</b>	<b>MARKING</b>		N/A
(C6.1)	Symbol for temperature declared thermally protected ballasts		N/A
(C6.2)	Declaration of the type of protection provided		N/A
<b>(C7)</b>	<b>LIMITATION OF HEATING</b>		N/A
<b>(C7.1)</b>	<b>Preselection test:</b>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Test sample placed for at least 12 h in an oven having temperature ( $t_c - 5$ ) K		N/A
	No operation of the protection device		N/A
<b>(C7.2)</b>	<b>Functioning of protection means:</b>		N/A
	Normal operation of the sample in a test enclosure according to Annex D at an ambient temperature such that ( $t_c + 0$ ; $-5$ ) °C is obtained		N/A
	No operation of the protection device		N/A
	Introducing of the most onerous test condition determined during test of clause 14.2 to 14.5		N/A
	Output of windings connected to the mains supply short-circuited, and other part of the controlgear operated under normal conditions		N/A
	Increasing of the current through the windings continuously until operation of the protection means		N/A
	Continuous measuring of the highest surface temperature		N/A
	Ballasts according to C5 a) or C5 e) operated until stable conditions are achieved		N/A
	Automatic-resetting thermal protectors working 3 times		N/A
	Ballasts according to C5 b) working 6 times		N/A
	Ballasts according to C5 c) and C5 d) working once		N/A
	Highest temperature does not exceed the marked value		N/A
	Any overshoot of 10% over the marked value within 15 min		N/A
	After 15 min value not exceed marked value		N/A

<b>(D)</b>	<b>ANNEX D – REQUIREMENTS FOR CARRY OUT THE HEATING TESTS OF THERMALLY PROTECTED LAMP CONTROLGEAR</b>		-
	Tests in C7 performed in accordance with Annex D, if applicable		N/A
			N/A

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Clause	Requirement + Test	Result - Remark	Verdict

<b>(F)</b>	<b>ANNEX F - DRAUGHT-PROOF ENCLOSURE</b>		-
	Draught-proof enclosure in accordance with the description		N/A
	Dimensions of the enclosure		N/A
	Other design; description		N/A

<b>(H)</b>	<b>ANNEX H - TESTS</b>		-
	All tests performed in accordance with the advice given in Annex H, if applicable		N/A

<b>(L)</b>	<b>ANNEX L: PARTICULAR ADDITIONAL REQUIREMENTS FOR CONTROLGEARS PROVIDING SELV</b>		-
<b>(L.3)</b>	<b>Classification</b>		<b>N/A</b>
	Class I	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	Class II	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	Class III	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	non-inherently short circuit proof controlgear	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	inherently short circuit proof controlgear	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	fail safe controlgear	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	non-short-circuit proof controlgear	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
<b>(L.4)</b>	<b>Marking</b>		N/A
	Adequate symbols are used		N/A
<b>(L.5)</b>	<b>Protection against electric shock</b>		N/A
	Comply with clause 9.2 of IEC 61558-1		N/A
<b>(L.6)</b>	<b>Heating</b>		N/A
	No excessive temperatures in normal use		N/A
	Value if capacitor $t_c$ marked .....		—
	Winding insulation classified as Class .....		—
	Comply with tests of clause 14 of IEC 61558-1 with adjustments		N/A
<b>(L.7)</b>	<b>Short-circuit and overload protection</b>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Comply with tests of clause 15 of IEC 61558-1 with adjustments		N/A
<b>(L.8)</b>	<b>Insulation resistance and electric strength</b>		N/A
(L.8.1)	Conditioned 48 h between 91 % and 95 %		N/A
(L.8.2)	Insulation resistance		N/A
	Between input- and output circuits not less than 5 MΩ .....		N/A
	Between metal parts of class II convertors which are separated from live parts by basic insulation only and the body not less than 5 MΩ .....		N/A
	Between metal foil in contact with the inner and outer surfaces of enclosures of insulating material not less than 2 MΩ .....		N/A
(L.8.3)	Electric strength		N/A
	1) Between live parts of input circuits and live parts of output circuits .....		N/A
	2) Over basic or supplementary insulation between:		N/A
	a) live parts having different polarity .....		N/A
	b) live parts and body if intended to be connected to protective earth .....		N/A
	c) accessible metal parts and a metal rod of the same diameter as the flexible cable or cord .....		N/A
	d) live parts and an intermediate metal part .....		N/A
	e) intermediate metal parts and the body .....		N/A
	f) each input circuit and all other input circuits .....		N/A
	3) Over reinforced insulation between the body and live parts .....		N/A
<b>(L.9)</b>	<b>Construction</b>		N/A
(L.9.1)	Transformer comply with 19.12 of IEC 61558-1 and 19 of IEC 61558-2-6		N/A
	HF transformer comply with 19 of IEC 61558-2-16		N/A
<b>(L.10)</b>	<b>Components</b>		N/A
	Protective devices comply with 20.6 – 20.11 of IEC 61558-1		N/A
<b>(L.11)</b>	<b>Creepage distances, clearances and distances through insulation</b>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Creepage distances and clearances not less than in Clause 16		N/A
	Distance through insulation according Table L.5 in IEC 61347-1		N/A
	1) Basic distance through insulation		N/A
	Required distance (mm) .....		—
	Measured (mm) .....		N/A
	Supplementary information		—
	2) Supplementary distance through insulation		N/A
	Required distance (mm) .....		—
	Measured (mm) .....		N/A
	Supplementary information		—
	3) Reinforced distance through insulation		N/A
	Required distance (mm) .....		—
	Measured (mm) .....		N/A
	Supplementary information		—

(N)	<b>ANNEX N: REQUIREMENTS FOR INSULATION MATERIALS USED FOR DOUBLE OR REINFORCED INSULATION</b>		-
(N.4)	<b>General requirements</b>		N/A
(N.4.1)	Material comply with IEC 60085 and IEC 60216 series		N/A
(N.4.2)	<b>Solid insulation</b>		N/A
	Electric strength test at least 5 kV or 1,35 x test voltage in Table N.1		N/A
	If not classified according IEC 60085 and IEC 60216 series: Electric strength test increased 10 % of 5,5 kV or 1,5 x test voltage in Table N.1		N/A
(N.4.3)	<b>Thin sheet insulation</b>		N/A
(N.4.3.1)	Thickness and composition of thin sheet insulation		N/A
	- Inside the ballast and not subjected to handling or abrasion during the production and during maintenance		N/A
	- Non-separated layers: Min. 3 layers and fulfil mandrel test of 150N		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	- Separated layers: Min. 2 layers and each layer fulfil mandrel test of 50N		N/A
	- Separated layers (alternative): Min. 3 layers and 2/3 of the layers fulfil mandrel test of 100N		N/A
(N.4.3.2)	Mandrel test (electric strength test during mechanical stress)		N/A
	Electric strength test after mandrel test:		N/A
	- Non-separated layers: min. 5 kV or 1,35 x test voltage in Table N.1		N/A
	- 2/3 of min. 3 separated layers: min. 5 kV or 1,25 x test voltage in Table N.1		N/A
	- one of 2 separated layers: min. 5 kV or 1,25 x test voltage in Table N.1		N/A
	No flashover or breakdown occurred		N/A

(O)	<b>ANNEX O: ADDITIONAL REQUIREMENTS FOR BUILT-IN ELECTRONIC CONTROLGEAR WITH DOUBLE OR REINFORCED INSULATION</b>		-
(O.6)	<b>Marking</b>		N/A
	Marking according clause 7 (7)	See clause 7	N/A
	Special symbol		N/A
	Meaning of the special symbol explained in catalogue		N/A
(O.7)	<b>Protection against accidental contact with live parts</b>		N/A
	Requirements of clause 8 (10)	See clause 8	N/A
	Test finger not possible to make contact with basic insulated metal parts		N/A
(O.8)	<b>Terminals</b>		N/A
	Clause 9 (8)	See clause 9	N/A
(O.9)	<b>Provision for earthing</b>		N/A
	Functional earthing terminals comply with clause 9 of part 1		N/A
	No protective earthing terminal		N/A
(O.10)	<b>Moisture resistance and insulation</b>		N/A
	Clause 11 (11)	See clause 11	N/A
(O.11)	<b>Electric strength</b>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Clause 12 (12)	See clause 12	N/A
<b>(O.13)</b>	<b>Fault conditions</b>		N/A
	Clause 14 (14)	See clause 14	N/A
	End of test, between live part and accessible metal parts or external parts of insulating material in contact with the supporting surface comply with dielectric strength test reduced to 35 % of values according Table 1 in part 1		N/A
	Insulation resistance according to O.10 between live part and accessible metal parts or external parts of insulating material in contact with the supporting surface not less than 4 MΩ		N/A
<b>(O.14)</b>	<b>Construction</b>		N/A
	Clause 17 (15)	See clause 17	N/A
	Accessible metal parts insulated from live parts by double or reinforced insulation		N/A
	Live part insulated from supporting surface in contact with external faces by double or reinforced insulation		N/A
<b>(O.15)</b>	<b>Creepage distances and clearances</b>		N/A
	Clause 18 (16)	See clause 18	N/A
	Comply with corresponding values for luminaries in IEC 60598-1		N/A
<b>(O.16)</b>	<b>Screws, current-carrying parts and connections</b>		N/A
	Clause 19 (17)	See clause 19	N/A
<b>(O.17)</b>	<b>Resistance to heat and fire</b>		N/A
	Clause 20 (18)	See clause 20	N/A
<b>(O.18)</b>	<b>Resistance to corrosion</b>		N/A
	Clause 21 (19)	See clause 21	N/A

<b>(P)</b>	<b>Creepage distances and clearances and distance through isolation (DTI) for lamp controlgear which are protected against pollution by the use of coating or potting</b>		-
<b>(P.1)</b>	<b>General</b>		N/A
	P.2 applies if creepage distances less than the minimum in Table 7 and 8		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	P.3 applies if clearance less than the minimum in Table 9, 10 and 11		N/A
<b>(P.2)</b>	<b>Creepage distances</b>		N/A
(P.2.2)	Minimum creepage distances for working voltages and rated voltages with frequencies up to 30 kHz (Table P.1)		N/A
	Basic or supplementary insulation:		N/A
	Required creepage.....:		—
	Measured.....:		N/A
	Supplementary information		—
	Reinforced insulation:		N/A
	Required creepage.....:		—
	Measured.....:		N/A
	Supplementary information		—
(P.2.3)	Creepage distances for working voltages with frequencies above 30 kHz (Table P.2)		N/A
	Voltage $\hat{U}_{out}$ kV .....		—
	Frequency.....:		—
	Required distance.....:		—
	Measured.....:		N/A
	Supplementary information		—
(P.2.4)	Compliance with the required creepage distances		N/A
(P.2.4.1)	Compliance in accordance with 16.3.3 and test according P.2.4.2		N/A
(P.2.4.3)	Electrical tests after conditioning		N/A
(P.2.4.3.1)	Insulation resistance and electric strength according Clause 11 and 12		N/A
<b>(P.3)</b>	<b>Distance through isolation</b>		N/A
(P.3.4)	Electrical tests after conditioning		N/A
(P.3.4.1)	Insulation resistance and electric strength according Clause 11 and 12		N/A
(P.3.4.2)	Impulse voltage dielectrical test		N/A
	Basic or supplementary insulation:		N/A
	Working/rated voltage .....		—

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Clause	Requirement + Test	Result - Remark	Verdict

	Impulse voltage.....:		N/A
	Supplementary information		—
	Reinforced insulation:		N/A
	Working/rated voltage .....		—
	Impulse voltage.....:		N/A
	Supplementary information		—

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1</sup> )
Plastic enclosure	B	Sabic Innovative Plastics US L L C	945(GG)	PC, V-0, Min.120°C, Min, 1.5mm thick	IEC 61347-1 IEC 61347-2-13	UL E121562 tested with appliance
PCB	B	Fujian Lihao Electronic Technology Co Ltd	L-40F	V-0, 130°C	IEC 61347-1 IEC 61347-2-13	UL E193288 tested with appliance
-Alternative	D	Kingboard Laminates Holdings Ltd	KB-5150	V-0, 130°C	IEC 61347-1 IEC 61347-2-13	UL E123995 tested with appliance
Fuse (F1)	B	Shenzhen Lanson Electronics Co. Ltd.	SNT	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40044990
-Alternative	D	Suzhou Walter Electronic Co. Ltd.	2010 Serie(s)	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40018781
-Alternative	D	Dongguan Reomax Electronics Technology Co., Ltd.	MTS	T2A, 250Vac	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40039420
Y-Capacitor (CY1)	B	Dongguan Jyhwei Electronics Co., Ltd	JN	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	VDE 40047520

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Clause	Requirement + Test		Verdict

-Alternative	D	Dongguan City Dersonic Electronic Co., Ltd.	CD	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	VDE 40040706
-Alternative	D	Jyh Hsu (Jec) Electronics Ltd	JD	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	VDE 40038642
-Alternative	D	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD-Series	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	VDE 40025754
-Alternative	D	Dongguan City Dafu Electronics Co. Ltd	CT7 Y1 Series	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	VDE 40041523
-Alternative	D	Dongguan Qinhong (QNR) Electronic Technology Co., LTD	CT7 series	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	VDE 40046285
-Alternative	D	Jya-Nay Co., Ltd.	JNA09B8R 0C Y02N	Max. 2200pF, min. 250VAC, 125°C, Y1 type	IEC/EN 60384-14	TUV R 50232059
Transformer (T1)	C	Shenzhen Mingdafa Electronics Co Ltd	EE22L001	Class B (For rated output voltage 9.0-20.9Vdc models)	IEC/AS NZS 61347-1 IEC/AS NZS 61347-2-13	Tested with appliance

Supplementary information:

<sup>1)</sup> Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

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Clause	Requirement + Test	Result - Remark	Verdict

<b>ANNEX 2</b>	<b>Screw terminals (part of the luminaire)</b>		N/A
<b>(14)</b>	<b>SCREW TERMINALS</b>		N/A
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm <sup>2</sup> ).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread).....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm).....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

<b>ANNEX 3</b>	<b>Screwless terminals (part of the luminaire)</b>		N/A
<b>(15)</b>	<b>SCREWLESS TERMINALS</b>		N/A
(15.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples).....:		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples).....:		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples).....:		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										
	Voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV).....:										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV).....:										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV).....:										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV).....:										—
terminal	1	2	3	4	5	6	7	8	9	10	



IEC 61347-2-11			
Clause	Requirement + Test	Result - Remark	Verdict

voltage drop (mV)										
Supplementary information: -										

**Attachment No.1****Product Photos**

Details of: Fig.1



Details of: Fig. 2



**Attachment No.1****Product Photos**

Details of: Fig.3

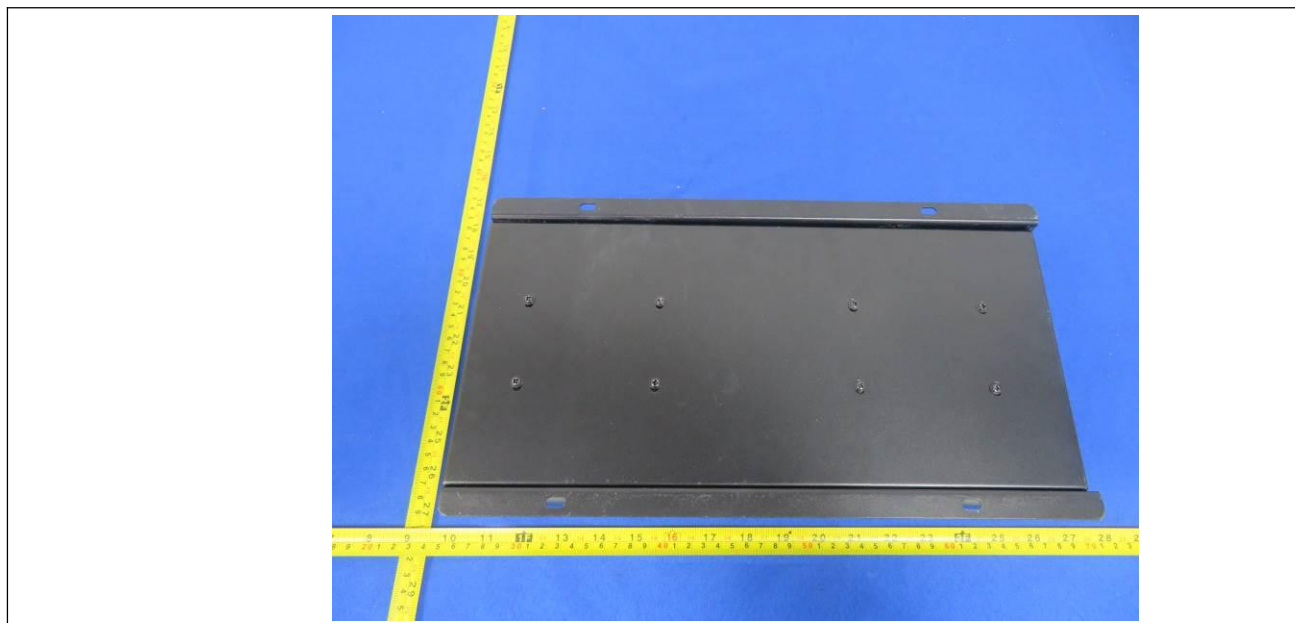


Details of: Fig. 4



**Attachment No.1****Product Photos**

Details of: Fig.5



Details of: Fig. 6



**Attachment No.1****Product Photos**

Details of: Fig.7

**- End of test report -**