

Müşteri Adı / Adresi: ALB Enerji Servis Aydınlatma ve Mühendislik Çözümleri Ltd. Şti
Client name/address : Abdurrahmangazi, Sevenler CD. BİNA NO 55 D:5, 34887 Sancaktepe/İstanbul

İş Emri No: 250925-04
Work Order No:

Test Edilen Ürün: Acil Durum Aydınlatma Kiti
Items tested: Emergency Lighting Kit

Açıklamalar DGC'ye TS EN 61347-2-13 standardı uyarınca Sayfa 7'de belirtilen testler uygulanmıştır.
Detaylı Bilgi için 7. sayfaya bakınız.
Remarks: Test at page 7 were applied to EUT according to standard 61347-2-13.
Check page 7 for further information.

Numune Kabul Tarihi: 27.10.2025
The date of receipt of test item:

Deney Tarihi : 29.10.2025 - 13.11.2025
Date of test:

Yayımlandığı Tarih: 27.11.2025
Date of Publication:

Onay Tarihi : 27.11.2025
Date of Approval



Rapor Sorumlusu
Person in Charge of Test Report

Ahmet CANBOLAT

Laboratuvar Müdürü V.
Head of Testing Laboratory D.

Oktay TOSUN

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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.

Bu belge bir bütündür, herhangi bir sebeple ya da amaçla parçalarına ayıramaz ve bütün halinde değerlendirilir. Belge ve bütün versiyonlarının Eldaş test ve Kalibrasyon Elektrik Sanayi ve Tic. A.Ş.'nin izni olmadan değiştirilmesi veya çoğaltılması yasaktır. Islak imza içermeyen deney raporları geçerli değildir. Islak imzalı kağıt baskı ve Elektronik versiyon arasında bir ihtilafın bulunması durumunda ıslak imzalı kağıt baskı versiyon geçerlidir.

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Bu raporda verilen sonuçlar ve değerlendirmeler sadece üretici/başvuru sahibi tarafından test için sağlanan ürün/sistem ile ilgilidir. Üretilen diğer ürünlerin ve versiyonlarının, bu raporda verilen gereksinimleri karşılaması üreticinin/başvuru sahibinin sorumluluğundadır. Test raporu, ürün aile grubunda bulunan ürünler ile ilgili herhangi bir sonuç içermez ve bu işlem tamamen teorik olarak yapıldığı için grupta bulunan ürünler ile ilgili herhangi bir yasal sorumluluk laboratuvar tarafından kabul edilmez.

The results and analysis in content of this report are only about the product/system provided by the manufacturer/applicant for testing. Ensuring all the other models meet the requirements stated in this report is the manufacturer's/applicant's responsibility. The test report does not contain any results regarding the products in the product family group, since this process is carried out completely theoretically, the laboratory does not accept any legal liability regarding the products in the group.

Bu raporun içerisinde belirtilen ürün bilgileri, üretici/başvuru sahibi tarafından sağlanmış olup, test sonuçları ve uygunluk beyanı bu bilgiler doğrultusunda değerlendirilmiştir. Üretici/başvuru sahibi tarafından sağlanan bilgilerde/verilerde meydana gelebilecek değişikliklerden üretici/başvuru sahibi sorumludur.

The test results and conformity assessments in this report are evaluated with the product information written in this report which was provided by the manufacturer/applicant. All responsibilities of any changes in the information about the product belongs to the manufacturer/applicant.

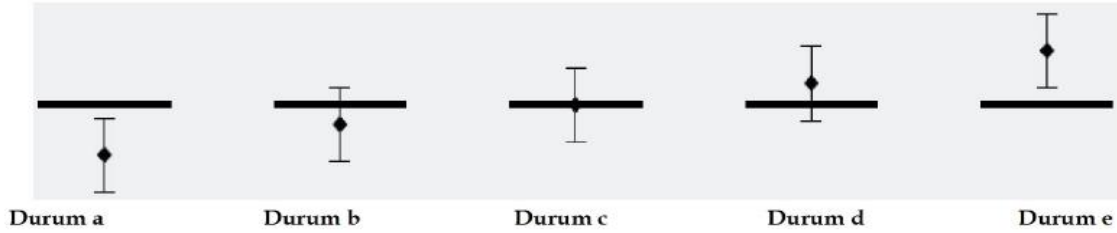
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DOKÜMAN TARİHÇESİ / REVISION HISTORY

Baskı / Edition	Tarih / Date	Açıklama / Remarks
İlk yayın / First edition	27.11.2025	--

Karar Kuralı Seçimi / Decision Rule Choisen



“♦” Ölçüm Sonucu / Measurement Result

“I” Ölçüm Belirsizliği Aralığı / Measurement Uncertainty Range

Durum a/Situation a; Üst sınırın altındadır bu sebeple ürün spesifikasyona uygundur. / EUT results below the upper limit therefore results are OK.

Durum b/Situation b; Üst sınırın altındadır fakat ölçülen sonuç, belirsizlik aralığının yarısından az bir pay ile üst sınırın altındadır; bu sebeple, uygunluk belirtmek mümkün değildir. Laboratuvar bu sınıra kendi ölçüm belirsizliği hesabına göre karar vererek müşteriye bilgilendirme sağlar. / EUT results are but below the upper limit line with a margin of less than half of the uncertainty; therefore it is not possible to state conformity. The laboratory decides this limit according to its own measurements of the uncertainty and informs the customer.

Durum c/ Situation c ; Ölçülen sonuç sınırın tam üzerindedir, bu sebeple ile “uygun” ya da “uygun değil” diye belirtmek mümkün değildir. Müşteri ile görüşülerek ölçülen değerin limitinin altına indirilmesi sağlanmalıdır. / Eut results are on the limit line therefore, it is impossible to determine whether the test was “passed” or “failed”. In consultation with the customer, it should be ensured, that the measured value is reduced below the limit.

Durum d / Situation d; Üst sınırın üstündedir bu sebeple ürün spesifikasyona uygun değildir. / EUT results are above the limit, therefore the test results are not OK.

Durum e /Situation e ; Üst sınırın üstündedir bu sebeple ürün spesifikasyona uygun değildir. / EUT results are above the limit, therefore the test results are not OK.

Bu sertifika laboratuvarın yazılı izni olmadan kısımları kopyalanıp çoğaltılamaz. İmzasız ve mühürsüz sertifikalar geçersizdir.

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DENEYDEN GEÇİRİLEN CİHAZIN :

(Equipment Under Test's)

Markası : ALBEX
(Brand)

Beyan Gerilimi : 220 - 240 V AC
(Rated Voltage)

Modeli : YFB-200
(Model)

Beyan Frekansı : 50/60 Hz
(Rated Frequency)

Seri No : Prototip
(SN)

Beyan Akımı/Gücü : 5W / 1300mA
(Rated Current/Power)

Kısa Tanımı : Dahili batarya sayesinde şebeke elektriği olmasa da 3 saat ışık sağlar.
(Short Description) : Thanks to its internal battery, it provides light for 3 hours even when there is no mains electricity.

Ürün Ailesi Tanımı:

(Product Family Definition):

Ürün aile grubu 8 modelden oluşmaktadır (YFB-200, YFK-60, YFB-220, YFB-80, YFB-24SV, YFB-24, YFB-12SV, YFB-12). Testler YFB-200 model ürüne uygulanmıştır. Aynıyet beyanında bulunan diğer modeller müşteri beyanı ile rapora eklenmiştir. Müşteri beyanı için 36. Sayfaya bakınız.

There are 8 models in this serial product (YFB-200, YFK-60, YFB-220, YFB-80, YFB-24SV, YFB-24, YFB-12SV, YFB-12). The tests were applied to YFB-200 model products. Other models in the identity declaration have been added to the report with the customer declaration. For customer declaration see page 36.

ÇEVRE ŞARTLARI

(Environmental Conditions)

Deneyler sırasında ölçülen çevre şartları ilgili sayfalarda belirtilmiştir.

(The enviromental conditions are measured during test are determined related pages.)

DENEY RAPORUNDA KULLANILAN SEMBOLLERİN TANIMLARI

(Definations of Symbols Used in This Test Report)

DGC - Deneyden geçirilen cihaz

EUT - (Equipment under test)

☒ - **Siyah kutu, deney raporunda kullanılan cihaz, standard ve koşulları gösterir.**
(The black square indicates that the listed condition standard or equipment is applicable for this report.)

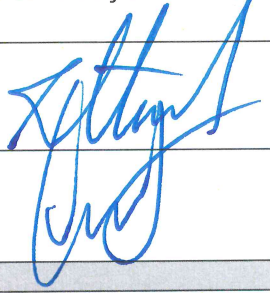
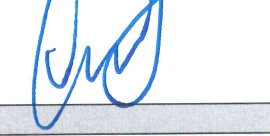
☐ - **Boş kutu, deney raporunda kullanılmayan cihaz, standard ve koşulları gösterir.**
(The empty square indicates that the listed condition standard or equipment isn't applicable for this report.)

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TEST REPORT IEC 61347-2-13 Part 2: Particular requirements: Section 13 – d.c. or a.c. supplied electronic controlgear for LED modules	
Report Number.:	LVD25-131
Date of issue	27.11.2025
Total number of pages	38
Name of Testing Laboratory preparing the Report.....:	ELDAŞ TEST VE KALİBRASYON ELEKTRİK SANAYİ TİCARET A.Ş.
Applicant's name.....:	ALB Enerji Servis Aydınlatma ve Mühendislik Çözümleri Ltd. Şti
Address	Abdurrahmangazi, Sevenler CD. BİNA NO 55 D:5, 34887 Sancaktepe/İstanbul
Test specification:	
Standard	IEC 61347-2-13:2024 used in conjunction with IEC 61347-1:2024
Test procedure	LVD
Non-standard test method	N/A
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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..... :	Emergency Lighting Kit	
Trade Mark..... :	ALBEX	
Manufacturer..... :	ALB Enerji Servis Aydınlatma ve Mühendislik Çözümleri Ltd. Şti	
Model/Type reference..... :	YFB-200	
Ratings..... :	220—240 V AC, 5W / 1300mA	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ Testing Laboratory:	ELDAŞ TEST VE KALİBRASYON ELEKTRİK SANAYİ TİCARET A.Ş.	
Testing location/ address	AHI EVRAN OSB MAH. BÜYÜK SELÇUKLU CAD. NO:2/A SINCAN/ANKARA	
Tested by (name, function, signature)..... :	Ahmet CANBOLAT	
Approved by (name, function, signature) .. :	Oktay TOSUN	
Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature) .. :		
Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name + signature)..... :		
Witnessed by (name, function, signature) .. :		
Approved by (name, function, signature) .. :		
Testing procedure: CTF Stage 3:		
Testing procedure: CTF Stage 4:		
Testing location/ address		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature) .. :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		



List of Attachments (including a total number of pages in each attachment):**Summary of testing:****Tests performed (name of test and test clause):**

Clause 7(7): Marking
Clause 8(10): Protection Against Accidental Contact With Live Parts
Clause 11(11): Moisture Resistance And Insulation
Clause 12(12): Electric Strength
Clause 14(14): Fault Conditions
Clause 15(-):Transformer Heating
Clause 16(15): Construction
Clause 17(16): Creepage Distances And Clearances
Clause 18(17): Screws, Current-Carrying Parts And Connections
Clause 19(18): Resistance to heat, fire and tracking

Testing location:

ELDAŞ TEST VE KALİBRASYON ELEKTRİK
SANAYİ TİCARET A.Ş.
AHİ EVRAN OSB MAH. BÜYÜK SELÇUKLU CAD.
NO:2/A SİNCAN – ANKARA

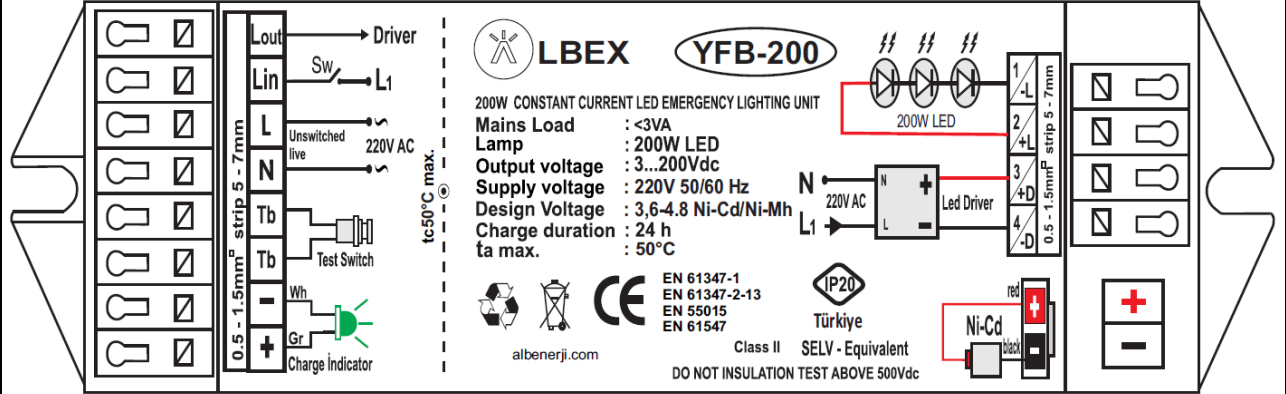
Summary of compliance with National Differences:**List of countries addressed:**

☐ The product fulfils the requirements of (insert standard number and edition and delete the text in parenthesis or delete the whole sentence if not applicable)



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.



Test item particulars	
Classification of installation and use	Emergency Lighting Kit
Supply Connection	Supply cord
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	27.10.2025
Date (s) of performance of tests	29.10.2025 – 13.11.2025
General remarks:	
"(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. Clause numbers between brackets refer to clauses in IEC 61347-1	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 61347-1:	
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	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	
General product information:	



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

4 (4)	GENERAL REQUIREMENTS		P
- (4)	<u>Insulation materials</u> for double or reinforced insulation according requirements in Annex N of IEC 61347-1	(see Annex N)	P
- (4)	Compliance of <u>independent controlgear enclosure</u> with IEC 60 598-1		P
- (4)	<u>Built-in electronic controlgear</u> with double or reinforced insulation comply with Annex O of IEC 61347-1	(see Annex O)	N/A
4 (4)	<u>SELV controlgear</u> comply with Annex I of this part 2 and Annex L of IEC 61347-1	(see Annex L)	P
4 (-)	Transformer comply with IEC 61558		P
	Dielectric strength test of insulated winding wires is limited to 3 kV if input voltage ≤ 300 V		P

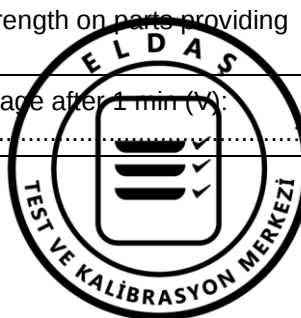
6 (6)	CLASSIFICATION		P
	Built-in controlgear	Yes ☐ No ☐	—
	Independent controlgear	Yes ☒ No ☐	—
	Integral controlgear	Yes ☐ No ☐	—
6 (-)	Auto-wound controlgear	Yes ☐ No ☐	—
	Separating controlgear	Yes ☐ No ☐	—
	Isolating controlgear	Yes ☐ No ☐	—
	SELV controlgear	Yes ☒ No ☐	—

7 (7)	MARKING		P
7.1 (7.1)	Mandatory markings		P
	a) mark of origin	LBEX	P
	b) model number or type reference	YFB-200	P
	c) symbol for independent controlgear, if applicable		N/A
	d) correlation between interchangeable parts and controlgear marked		N/A
	e) rated supply voltage (V)	220 V AC	P
	supply frequency (Hz)	50/60 Hz	P
	supply current (A)	1300mA	P
	f) earthing symbol		N/A
	k) wiring diagram		P



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	l) value of t_c	50°C	P
	m) symbol for declared temperature		N/A
	t) LUM earthing symbol		N/A
	u) if not SELV maximum working voltage U_{out} between:		N/A
	- output terminals (V)		N/A
	- output terminals and earth (V)		N/A
7.1 (-)	Constant voltage type:	Yes ☐ No ☐	—
	- rated output power P_{rated} (W)	200 W	P
	- rated output voltage U_{rated} (V)	3-200 VDC	P
	Constant current type:	Yes ☐ No ☒	—
	- rated output power P_{rated} (W)		N/A
	- rated output current I_{rated} (A)		N/A
	Indication if for LED modules only		N/A
7.1 (7.2)	Marking durable and legible		P
	Rubbing 15 s water, 15 s petroleum; marking legible		P
7.2 (7.1)	Information to be provided, if applicable		P
	h) declaration of protection against accidental contact		N/A
	i) cross-section of conductors (mm ²)		P
	j) number, type and wattage of lamp(s)		N/A
	s) SELV symbol		N/A
7.2 (-)	- declaration of mains connected windings		N/A

8 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		P
- (10.1)	Controlgear protected against accidental contact with live parts		P
- (A2)	Voltage measured with 50 kΩ	(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 μF: voltage after 1 min (V): < 50 V		P



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

- (10.3)	Controlgear providing SELV		P
	Accessible conductive parts are insulated from live parts by double or reinforced insulation in SELV controlgear		P
	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		P
	SELV outputs separated by at least basic insulation		P
	ELV conductive parts insulated as live parts		N/A
	Tests according Annex L of IEC 61347-1	(see Annex L)	P
- (10.4)	Accessible conductive parts in SELV circuits		P
	Output voltage under load ≤ 25 V r.m.s. or ≤ 60 V d.c.		P
	If output voltage > 25 V r.m.s. or > 60 V d.c.; No load output ≤ 35 V peak or ≤ 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		P
	Y1 or Y2 capacitors comply with IEC 60384-14		P
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A

9 (8)	TERMINALS		N/A
- (8.1)	Integral terminals		N/A
	Screw terminals according section 14 of IEC 60598-1:		N/A
	Separately approved; component list	(see Annex 1)	N/A
	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
- (8.2)	Terminals other than integral terminals		N/A



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	Comply with relevant IEC standard	(see Annex 1)	N/A
	Suit the conditions		N/A
	Satisfy additional relevant requirements of this standard		N/A

10 (9)	PROVISION FOR PROTECTIVE EARTHING		N/A
- (9.1)	Provisions for protective earthing		N/A
	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
	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)	Provision for functional earthing		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)	Lamp controlgear with conductors for protective earthing by tracks on printed circuit board		N/A
	Test with a current of 25 A between earthing terminal or earthing contact and each of the accessible metal parts; measured resistance (Ω) at ≥ 10 A according 7.2.3 of IEC 60598-1: $< 0,5 \Omega$		N/A
- (9.4)	Earthing of built-in lamp controlgear		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)	Earthing via independent controlgear		N/A
- (9.5.1)	Earth connection to other equipment		N/A
	Looping or through connection conductor min. $1,5 \text{ mm}^2$ 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



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
- (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 (Ω) between earthing terminal or earthing contact and each of the accessible metal parts at ≥ 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

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

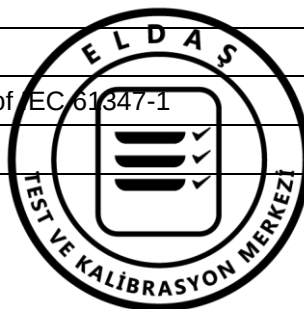
12 (12)	ELECTRIC STRENGTH		P
- (12)	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V		P
	Working voltage $\leq 50 \text{ V}$, test voltage 500 V		P
	Working voltage $> 50 \text{ V} \leq 1000 \text{ V}$, test voltage (V):		N/A
	Basic insulation, $2U + 1000 \text{ V}$		N/A
	Supplementary insulation, $2U + 1000 \text{ V}$		N/A
	Double or reinforced insulation, $4U + 2000 \text{ V}$		N/A
	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

14 (14)	FAULT CONDITIONS		P
- (14.1)	When operated under fault conditions the controlgear:		P
	- does not emit flames or molten material		P
	- does not produce flammable gases		P



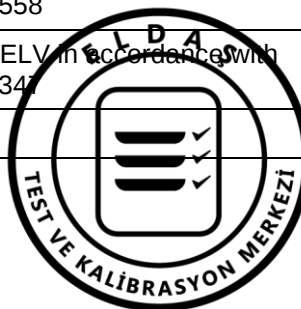
IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	- protection against accidental contact not impaired		P
	Thermally protected controlgear does not exceed the marked temperature value		N/A
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	P
- (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
	Short-circuit or interruption of SPDs	(see appended table)	N/A
14 (-)	Reversed voltage polarity if d.c. supplied control gear	(see appended table)	N/A
- (14.6)	After the tests has been carried out on three samples:		P
	The insulation resistance $\geq 1 \text{ M}\Omega$: $> 1 \text{ M}\Omega$		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 and in turn to a d.c. supply		—
14 (-)	Temperature declared thermally protected lamp controlgear fulfil requirements in Annex C		N/A

15 (-)	TRANSFORMER HEATING		P
15.1	General		P
	Transformer comply with clause L.6 and L.7 of IEC 61347-1		P
	Output voltage of SELV controlgear not exceed limits in 10.4 of IEC 61347-1 during the test of 15.1 and 15.2		N/A
15.2 (-)	Normal operation		P
	Comply with clause L.6 of IEC 61347-1		P
15.3 (-)	Abnormal operation		P



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	Comply with clause L.7 of IEC 61347-1		P
	Double LED modules or equivalent load connected in parallel to the output terminals of constant voltage type		N/A
	Double LED modules or equivalent load connected in serial to the output terminals of constant current type		P
15 (-)	During and at the end of the tests no defect impairing safety, nor any smoke or flammable gases produced		P

16 (15)	CONSTRUCTION		P
- (15.1)	Wood, cotton, silk, paper and similar fibrous material		P
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P
- (15.2)	Printed circuits		P
	Printed circuits used as internal connections complies with clause 14		P
- (15.3)	Plugs and socket-outlets used in SELV or ELV circuits		P
	No dangerous compatibility between output socket-outlet and a plug for socket-outlets for input circuit in relation to installation rules, voltages and frequencies		P
	Plugs and socket-outlets for SELV comply with IEC 60906-3 and IEC 60884-2-4		N/A
	Plugs and socket-outlets for SELV ≤ 3 A, ≤ 25 V r.m.s. or ≤ 60 V d.c. and ≤ 72 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
	- socket-outlets not admit plugs of other standardised system		N/A
	- socket-outlets without protective earth		N/A
- (15.4)	Insulation between circuits and accessible parts		P
- (15.4.2)	SELV circuits		P
	Source used to supply SELV circuits:		P
	- 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		P
	- another source		N/A



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	Voltage in the circuit not higher than ELV		N/A
	SELV circuits insulated from LV by double or reinforced insulation		P
	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		P
	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
	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 accordance Table 6 in 15.4.5		N/A
- (15.4.5)	Insulation between circuits and accessible conductive parts		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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

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

18 (17)	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS		P
	Screws, current-carrying parts and connections in compliance with IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)		P
(4.11)	Electrical connections		P



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Clause	Requirement + Test	Result - Remark	Verdict
(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
(4.12)	Mechanical connections and glands		P
(4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part		P
	Torque test: torque (Nm); part		N/A
	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

19 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
- (18.1)	Ball-pressure test	See Test Table 19 (18.1)	P
- (18.2)	Test of printed boards	See Test Table 19 (18.2)	P
- (18.3)	Glow-wire test	See Test Table 19 (18.3)	P
- (18.4)	Needle flame test	See Test Table 19 (18.4)	N/A
- (18.5)	Tracking test	See Test Table 19 (18.5)	N/A

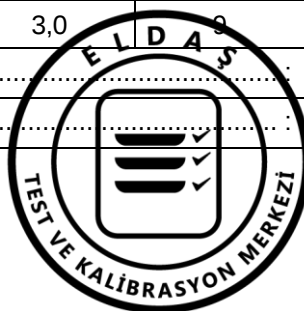
20 (19)	RESISTANCE TO CORROSION		N/A
	- test according 4.18.1 of IEC 60598-1		N/A
	- adequate varnish on the outer surface		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
21 (-)	MAXIMUM WORKING VOLTAGE (U_{out}) IN ANY LOAD CONDITION		N/A
	Not exceed declared maximum working voltage U_{out} in any load condition		N/A

14	TABLE: tests of fault conditions		
Part	Simulated fault		Hazard
Capacitor (C1)	Short circuit		YES/NO
Capacitor (C2)	Short circuit		YES/NO
Resistance (R1)	Short circuit		YES/NO

17 (16)		TABLE: clearance and creepage distance measurements (mm)						P
Applicable part of IEC 61347-1 Table 7 – 11*								
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:	B	2,37	1,5	9	2,37	2,5	7	
Working voltage (V)					220 V		—	
Frequency if applicable (kHz)					<30 kHz		—	
PTI					< 600 ☒ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)					-		—	
Pulse voltage if applicable (kV)					2,5 kV		—	
Supplementary information: Between L and N								
Distance 2:	B	5,27	1,5	9	5,27	2,5	7	
Working voltage (V)					220 V		—	
Frequency if applicable (kHz)					<30 kHz		—	
PTI					< 600 ☒ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)					-		—	
Pulse voltage if applicable (kV)					2,5 kV		—	
Supplementary information: Two pole of relay								
Distance 3:	R	6,2	3,0	9	6,2	5,0	7	
Working voltage (V)					220 V		—	
Frequency if applicable (kHz)					<30 kHz		—	



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Clause	Requirement + Test	Result - Remark	Verdict
PTI	< 600 ☒ $\geq$ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)	-		—
Pulse voltage if applicable (kV)	2,5 kV		—
Supplementary information: Between live parts and accessible parts			

** Insulation type: B – Basic; S – Supplementary; R – Reinforced

19 (18.1)	TABLE: Ball Pressure Test			P
Allowed impression diameter (mm)	2			—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Plastic Enclosure	-	125	1,67	
Supplementary information:				

19 (18.2)	TABLE: Test of printed boards				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (s)	Ignition of specified layer Yes/No	Duration of burning (s)	Verdict
PCB	-	30s	No	0s	P
Supplementary information:					



IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

19 (18.3)	TABLE: Glow-wire test			P
Glow wire temperature		650°C		—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (s)	Verdict
Plastic Enclosure	-	No	0s	P
Supplementary information:				

19 (18.4)	TABLE: Needle-flame test				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (s)	Ignition of specified layer Yes/No	Duration of burning (s)	Verdict
Supplementary information:					

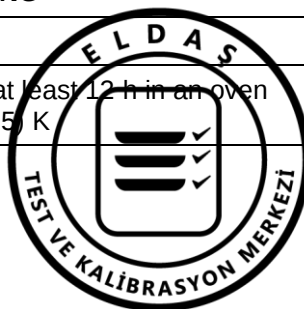
19 (18.5)	TABLE: Proof tracking test				N/A
Test voltage PTI		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					



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Clause	Requirement + Test	Result - Remark	Verdict

(A)	ANNEX A - TEST TO ESTABLISH WHETHER A CONDUCTIVE PART IS A LIVE PART WHICH MAY CAUSE AN ELECTRIC SHOCK		N/A
(A.1)	Comply with A.2 or A.3		N/A
(A.2)	Voltage ≤ 35 V peak or ≤ 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

(C)	ANNEX C – PARTICULAR REQUIREMENTS FOR ELECTRONIC LAMP CONTROLGEAR WITH MEANS OF PROTECTION AGAINST OVERHEATING		N/A
(C3)	GENERAL REQUIREMENTS		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
(C5)	CLASSIFICATION		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 .. :		—
(C6)	MARKING		N/A
(C6.1)	Symbol for temperature declared thermally protected ballasts		N/A
(C6.2)	Declaration of the type of protection provided		N/A
(C7)	LIMITATION OF HEATING		N/A
(C7.1)	Preselection test:		N/A
	Test sample placed for at least 12 h in an oven having temperature ($t_c - 5$) K		N/A

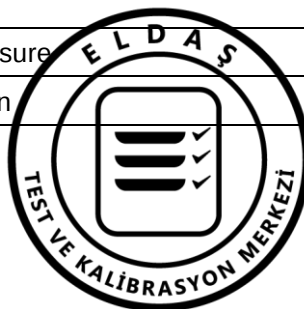


IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

	No operation of the protection device		N/A
(C7.2)	Functioning of protection means:		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

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

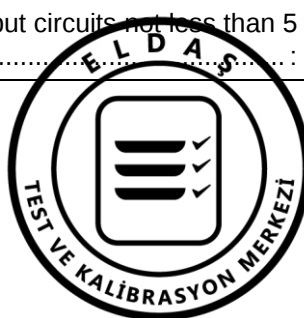
(F)	ANNEX F – DRAUGHT-PROOF ENCLOSURE		N/A
	Draught-proof enclosure in accordance with the description		N/A
	Dimensions of the enclosure		N/A
	Other design; description		N/A



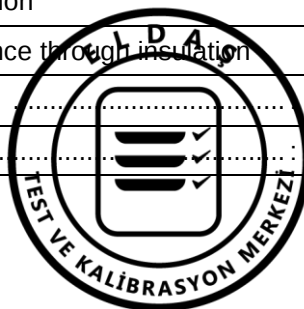
IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

(H)	ANNEX H - TESTS		P
	All tests performed in accordance with the advice given in Annex H, if applicable		P

I (L)	ANNEX I IN THIS PART 2 – PARTICULAR ADDITIONAL REQUIREMENTS FOR SELV D.C. OR A.C. SUPPLIED ELECTRONIC CONTROLGEARS FOR LED MODULES		P
(L.3)	Classification		P
	Class I	Yes ☐ No ☒	—
	Class II	Yes ☒ No ☐	—
	Class III	Yes ☐ No ☒	—
	non-inherently short circuit proof controlgear	Yes ☐ No ☒	—
	inherently short circuit proof controlgear	Yes ☐ No ☒	—
	fail safe controlgear	Yes ☐ No ☒	—
	non-short-circuit proof controlgear	Yes ☐ No ☒	—
(L.4)	Marking		P
	Adequate symbols are used		P
(L.5)	Protection against electric shock		P
	Comply with clause 9.2 of IEC 61558-1		P
(L.6)	Heating		P
	No excessive temperatures in normal use		P
	Value if capacitor t_c marked	105°C	—
	Winding insulation classified as Class	Class B	—
	Comply with tests of clause 14 of IEC 61558-1 with adjustments		P
(L.7)	Short-circuit and overload protection		P
	Comply with tests of clause 15 of IEC 61558-1 with adjustments		P
(L.8)	Insulation resistance and electric strength		P
(L.8.1)	Conditioned 48 h between 91 % and 95 %		P
(L.8.2)	Insulation resistance		P
	Between input- and output circuits not less than 5 MΩ		P



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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Between metal foil in contact with the inner and outer surfaces of enclosures of insulating material not less than 2 MΩ		P
(L.8.3)	Electric strength		P
	1) Between live parts of input circuits and live parts of output circuits		P
	2) Over basic or supplementary insulation between:		P
	a) live parts having different polarity		P
	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		P
(L.9)	Construction		P
(L.9.1)	Transformer comply with 19.12 of IEC 61558-1 and 19 of IEC 61558-2-6		P
	HF transformer comply with 19 of IEC 61558-2-16		N/A
(L.10)	Components		N/A
	Protective devices comply with 20.6 – 20.11 of IEC 61558-1		N/A
(L.11)	Creepage distances, clearances and distances through insulation		P
	Creepage distances and clearances not less than in Clause 16		P
	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



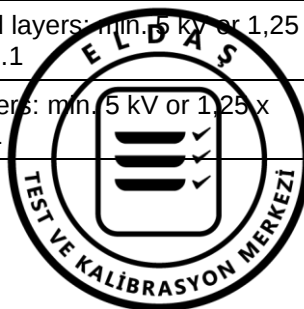
IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	Supplementary information		—
	3) Reinforced distance through insulation		P
	Required distance (mm)		—
	Measured (mm)		P
	Supplementary information		—

J (-)	ANNEX J IN THIS PART 2 – PARTICULAR ADDITIONAL SAFETY REQUIREMENTS FOR A.C., A.C./D.C. OR D.C. SUPPLIED ELECTRONIC CONTROLGEAR FOR EMERGENCY LIGHTING		N/A
J.1	General		N/A
	Intended for centralized emergency power supply	Yes ☐ No ☐	—
J.2	Marking		N/A
J.2.1	Mandatory markings		N/A
	a) symbol EL		N/A
	b) rated emergency supply voltage (V)		N/A
J.2.2	Information to be provided if applicable		N/A
	a) Limits of ambient temperature		N/A
	b) Emergency output factor (EOF _x)		N/A
	c) Information if intended for use in luminaires for high-risk task area lighting		N/A
J.3	General notes on tests		N/A
	Length of output cable in tests.....		N/A
	Load instead of LED lamps/modules.....		N/A
J.4	Starting conditions		N/A
	Start rated load in emergency mode without adversely affecting the performance		N/A
J.5	Operating condition		N/A
	Comply with the requirements of 7.2 of IEC 62384 at 90% and 110% of rated emergency supply voltage		N/A
J.6	Emergency supply current		N/A
	Emergency supply current not differ more than $\pm 15\%$		N/A
	Supply of low impedance and low inductance		N/A
J.7	EMC immunity		N/A
	Comply with the requirements of IEC 61547		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
J.8	Pulse voltage from central battery systems		N/A
	Withstand pulses according Table J.1		N/A
J.9	Tests for abnormal conditions		N/A
	Comply with the requirements of 12 of IEC 62384		N/A
J.10	Comply with the requirements of 13 of IEC 62384		N/A
J.11	Functional safety (EOF _x)		N/A
	Declared emergency output factor (EOF _x) achieved during emergency operation		N/A

(N)	ANNEX N: REQUIREMENTS FOR INSULATION MATERIALS USED FOR DOUBLE OR REINFORCED INSULATION		N/A
(N.4)	General requirements		N/A
(N.4.1)	Material comply with IEC 60085 and IEC 60216 series		N/A
(N.4.2)	Solid insulation		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 % to 5,5 kV or 1,5 x test voltage in Table N.1		N/A
(N.4.3)	Thin sheet insulation		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
	- 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

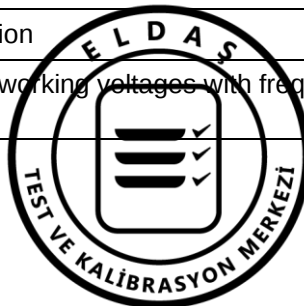


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Clause	Requirement + Test	Result - Remark	Verdict
	No flashover or breakdown occurred		N/A
(O)	ANNEX O: ADDITIONAL REQUIREMENTS FOR BUILT-IN ELECTRONIC CONTROLGEAR WITH DOUBLE OR REINFORCED INSULATION		N/A
(O.6)	Marking		N/A
	Marking according clause 7 (7)	See clause 7	N/A
	Special symbol		N/A
	Meaning of the special symbol explained in catalogue		N/A
(O.7)	Protection against accidental contact with live parts		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)	Terminals		N/A
	Clause 9 (8)	See clause 9	N/A
(O.9)	Provision for earthing		N/A
	Functional earthing terminals comply with clause 9 of part 1		N/A
	No protective earthing terminal		N/A
(O.10)	Moisture resistance and insulation		N/A
	Clause 11 (11)	See clause 11	N/A
(O.11)	Electric strength		N/A
	Clause 12 (12)	See clause 12	N/A
(O.13)	Fault conditions		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 according clause 12 reduced to 35 % of values according Table 3 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
(O.14)	Construction		N/A
	Clause 17 (15)	See clause 17	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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
(O.15)	Creepage distances and clearances		N/A
	Clause 18 (16)	See clause 18	N/A
	Comply with corresponding values for luminaries in IEC 60598-1		N/A
(O.16)	Screws, current-carrying parts and connections		N/A
	Clause 19 (17)	See clause 19	N/A
(O.17)	Resistance to heat and fire		N/A
	Clause 20 (18)	See clause 20	N/A
(O.18)	Resistance to corrosion		N/A
	Clause 21 (19)	See clause 21	N/A

(P)	Creepage distances and clearances and distance through isolation (DTI) for lamp controlgear which are protected against pollution by the use of coating or potting		N/A
(P.1)	General		N/A
	P.2 applies if creepage distances less than the minimum in Table 7 and 8		N/A
	P.3 applies if clearance less than the minimum in Table 9, 10 and 11		N/A
(P.2)	Creepage distances		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



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Clause	Requirement + Test	Result - Remark	Verdict
	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
(P.3)	Distance through isolation		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		—
	Impulse voltage.....		N/A
	Supplementary information		—
	Reinforced insulation:		N/A
	Working/rated voltage		—
	Impulse voltage.....		N/A
	Supplementary information		—



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Clause	Requirement + Test	Result - Remark	Verdict

TABLE: List of critical components					
Component/ Part No.	Manufacturer/ Trademark	Type No./ model No.	Technical data	Standard No./, Edition	Mark(s) & Certificates of conformity
Trafo (Transformer)	SUNRISE ELK. ELEK. SAN. VE TIC. LTD. STI.	EL30/10.5	230V 1.4A	EN 61558	VDE0570
Role (Relay)	SUNRISE ELK. ELEK. SAN. VE TIC. LTD. STI.	HLS-14F3L	DC5V 5A	IEC 60079-0:2011 IEC60079-15:2010	ATS0411191
Klemens (Terminal Block)	SUNRISE ELK. ELEK. SAN. VE TIC. LTD. STI.	DG3.5KP250 A-3.50-4P	250V 3A	IEC 60947-7-2 IEC60947/UL1059	-
Klemens (Terminal Block)	SUNRISE ELK. ELEK. SAN. VE TIC. LTD. STI.	DG3.5KP250 A-3.50-8P	250V 3A	IEC 60947-7-2 IEC60947/UL1059	-
Transistör (Transistor)	SUNRISE ELK. ELEK. SAN. VE TIC. LTD. STI.	TIP41C	100V 6A	GB/T 13555 / GB/T 14552	UL 1411 / UL 94
Şok Bobin (Inductor)	SUNRISE ELK. ELEK. SAN. VE TIC. LTD. STI.	68UH 8x12	50V 2A	IEC 60289, IEC 60938, IEC 61558, IEC 61051	UL 94 V-0



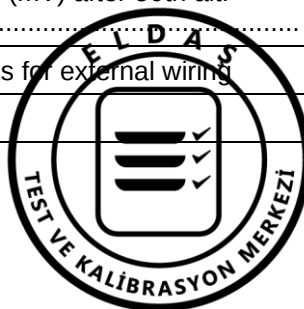
IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		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 ²)		—
(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

ANNEX 3	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		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
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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	
voltage drop (mV)												
Supplementary information:												





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Clause	Requirement + Test	Result - Remark	Verdict

Identity Declaration:

02.10.2025

**AYNIYET BEYANI****IDENTITY DECLARATION**

YFB-200, YFK-60, YFB-220, YFB-80, YFB-24SV, YFB-24, YFB-12SV, YFB-12 model ürünlerin bütün teknik özelliklerinin (örn. tasarım, konstrüksüyon, özellikler, kritik komponentler) aynı olduğunu beyan ederiz.

We declare that the product(s) is (are) identical in all technical respects (e.g. design, construction, properties, critical components).

Model/Type Ref: YFB-200, YFK-60, YFB-220, YFB-80, YFB-24SV, YFB-24, YFB-12SV, YFB-12



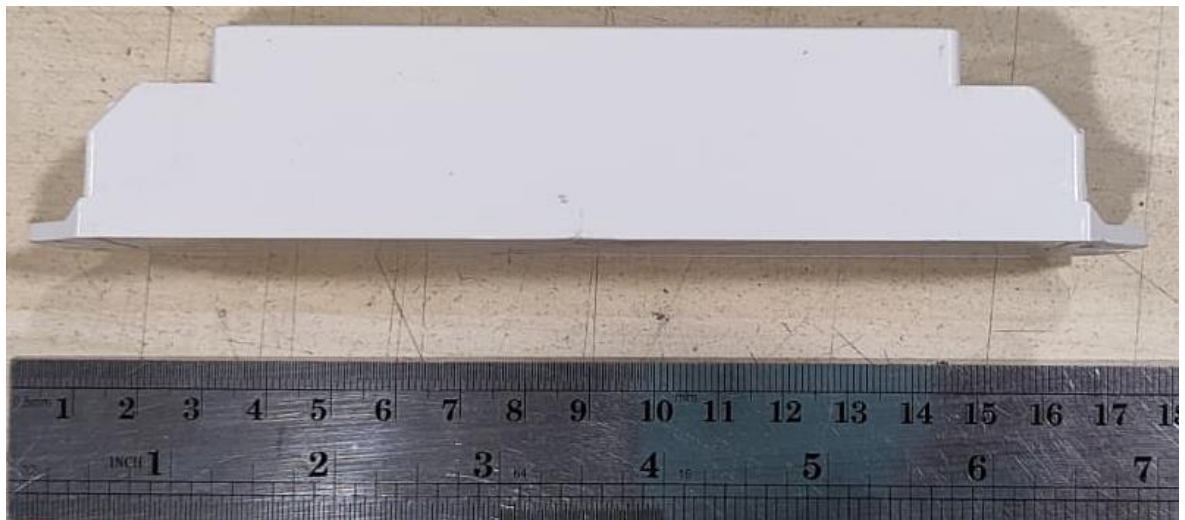
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