

TEST REPORT IEC 60669-2-1 Switches for household and similar fixed-electrical installations Part 2-1: Particular requirements - Electronic switches	
Report Reference No.	170501036SHA-001
Date of issue	2017-09-16 Amendment 1: 2021-02-02
Total number of pages	5
Applicant's name	Legrand Intelligent Electrical (Huizhou) Co., Ltd.
Address	Bldg. B1-B3, East No.39 Hechang 6th Rd., HZZK Hi-tech Industrial Development Zone, Huizhou, Guangdong, P. R. China
Test specification:	
Standard	IEC 60669-2-1:2002 (Fourth edition) + A1:2008 used in conjunction with IEC 60669-1:1998 (Third edition) + A1:1999 + A2:2006 EN 60669-2-1:2004 + A1: 2009 + A12:2010) (used in conjunction with EN 60669-1:1999 + A1:2002 + A2:2008)
Test procedure	Type testing
Non-standard test method	N/A
Test Report Form No.	IEC60669_2_1E
Test Report Form(s) Originator	IMQ S.p.A.
Master TRF	Dated 2010-12
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Test item description	Dimmer
Trade Mark	Legrand
Manufacturer	Same as applicant
Model and/or type reference	617031, 617331, 617431, 617231, 617032
Rating(s)	127V~ or 230V~ 50/60Hz 617031, 617331, 617431, 617231: 60-500W (127V) / 60-1000W (230V) 617032: 60-750W (127V) / 60-1500W (230V)

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Testing procedure and testing location:

☒ **Testing Laboratory:**

Testing location/ address : Intertek Testing Services Shanghai
Building No.86, 1198 Qinzhou Road (North), Shanghai
200233, China

☐ **Associated CB Test Laboratory:**

Testing location/ address

Tested by (name + signature) Steven Lu (Engineer)

Approved by (+ signature) Kent Wu (Mandated reviewer)

Steven Lu

Kent Wu

☐ **Testing procedure: TMP**

Tested by (name + signature)

Approved by (+ signature)

Testing location/ address

☐ **Testing procedure: WMT**

Tested by (name + signature)

Witnessed by (+ signature)

Approved by (+ signature)

Testing location/ address

☐ **Testing procedure: SMT**

Tested by (name + signature)

Approved by (+ signature)

Supervised by (+ signature)

Testing location/ address

☐ **Testing procedure: RMT**

Tested by (name + signature)

Approved by (+ signature)

Supervised by (+ signature)

Testing location/ address

List of Attachments (including a total number of pages in each attachment):

Amendment 2 to IEC 60669-2-1: page 53-55

Photo attachment: page 56-62

Summary of testing:

1. The device under evaluation is flush-type dimmer switch for fixed installation. Both ON/OFF and dimming function could be obtained by rotating knob. The largest brightness can be reached after knob is rotated to the largest position.
2. There are totally 5 models included in this report: 617031, 617331, 617431, 617231 and 617032. The difference between 31 series and 617032 are rated power, size of heat sink and thermal link, which are listed as below. The only difference among 31 series is colour of cover plate.

Model name	Ratings	Size of cover plate	Ratings of thermal link
617031 617331 617431 617231	127V~ 50/60Hz 60-500W 230V~ 50/60Hz 60-1000W	86x86mm	250VAC 5A 130°C
617032	127V~ 50/60Hz 60-750W 230V~ 50/60Hz 60-1500W	146x86mm	250VAC 10A T _F : 142°C

Based on above differences, the following models are selected for testing and only the highest temperature rises are recorded in this report.

617032: full test; 617031: (sub) clause 9, 17, 18, 19, 101.1.1.2

Note: after evaluation, tests for lower ratings can be covered by higher ratings.

3. As the request of client, clause 26 (EMC requirements) was not tested, thus they are omitted in this test report.
4. Amendment 2: 2015 to this standard was also checked in this report, and details see the Annex A (page 53 to 55).
5. Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods.
6. We conclude that the product(s) presented in this test report complies (comply) with the standard IEC 60669-2-1:2002 (Fourth edition) + A1:2008 +A2: 2015 used in conjunction with IEC 60669-1:1998 (Third edition) + A1:1999 + A2:2006 according to the test results on the submitted samples, EXCEPT FOR EMC.

Tests performed (name of test and test clause):

Full tests except EMC requirements of clause 26

Testing location:

Intertek Testing Services Shanghai

Summary of compliance with National Differences:

N/A

Copy of marking plate (617031 as example)



Note: other modes have the same marking format as 617032 except model name and power.

Test item particulars:

Type of electronic switch and its function (examples given in Annex AA)	Electronic dimmer
Pattern number	6
Contact opening (gap) and switch performance	normal gap / mini-gap / micro-gap / without contact gap (semiconductor switching device)
Degree of protection against access to hazardous parts and against harmful effects due to the ingress of solid foreign objects	IP2X / IP4X / IP5X
Degree of protection against harmful effects due to the ingress of water	IPX0 / IPX4 / IPX5
Method of actuating	Rotary (potentiometer) / tumbler / rocker / push-button / cord-operated / momentary contact / touch / proximity / optical / acoustic / Electronic RCS / Electronic TDS / other external influences
Method of mounting	surface-type / flush-type / semi flush-type / panel-type / architrave-type / height > 1,7 m
Method of installation	design A / design B
Type of terminals	screw-type / screwless (rigid) / screwless (rigid and flexible)
Flexible cable outlet	without / with
Rated current (A) / Rated load (VA or W)	31 series: 500W (127V) / 1000W (230V) 617032: 750W (127V) / 1500W (230V)
Minimum current (A) / Minimum load (VA or W)	60W
Kind of load controlled by the switch	incandescent lamp / fluorescent lamps / motors / declared load:
Type of switching mechanism	directly operated / sequentially operated / bistable / monostable (only for RCS)
Kind of energization of the control circuit	Electronic RCS energized by impulses / Electronics RCS permanently energized
Type of control mechanism	mechanical / thermal / pneumatic / hydraulic / electrical / combination(s) of the previous (only TDS)
Rated control voltage (V)	a.c. / d.c.
Rated control current (A)	a.c. / d.c.
Rated voltage (V)	127 / 250V
Rated frequency (Hz)	50 / 60
Characteristic of fuses	Thermal link
Electronics RCS or TDS having	SELV parts / PELV parts

<p>Possible test case verdicts:</p> <ul style="list-style-type: none"> - 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)
<p>Testing:</p> <p>Date of receipt of test item 2017-05-10</p> <p>Date (s) of performance of tests 2017-05-15 to 2017-09-08</p>
<p>General remarks:</p> <p>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 testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p>
<p>Manufacturer's Declaration per sub-clause 6.2.5 of IEC 60669-2:</p> <p>The application for obtaining a CB Test Certificate <input type="checkbox"/> Yes includes more than one factory location and a <input checked="" type="checkbox"/> Not applicable declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided</p> <p>When differences exist; they shall be identified in the General product information section.</p>
<p>Name and address of factory (ies): Same as applicant</p>
<p>General product information:</p> <p>Flush-type dimmer for fixed installation.</p>
<p>Amendment 1:</p> <p>The original test report 170501036SHA-001 dated 2017-09-16 was modified on 2021-02-02 to include the following changes as the request of the client.</p> <ul style="list-style-type: none"> • Change name of the applicant, manufacturer and factory from "TCL-Legrand International Electrical (Huizhou) Co., Ltd." to "Legrand Intelligent Electrical (Huizhou) Co., Ltd." • Change address of applicant, manufacturer and factory from "Bldg. B1-B3, East No.39 Hechang 6th Rd., HZZK Hi-tech Industrial Development Zone, Huizhou, Guangdong, China" to "Bldg. B1-B3, East No.39 Hechang 6th Rd., HZZK Hi-tech Industrial Development Zone, Huizhou, Guangdong, P. R. China". <p>After review, no additional tests were re-evaluated.</p>