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TEST REPORT
IEC 60669-2-1
Switches for household and similar fixed-electrical installations
Part 2-1: Particular requirements - Electronic switches

Report Reference No. ..... :	190300268SHA-001
Date of issue ..... :	2019-04-03
Total number of pages ..... :	9
Applicant's name ..... :	ADVANCE DIMMING TECHNOLOGY LTD
Address ..... :	Unit 15, 6/F Kenning Industrial Building, 19 Wang Hoi Road, Kowloon Bay, H.K.
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 ..... :	Testing
Non-standard test method ..... :	N/A
Test Report Form No..... :	IEC60669_2_1F
Test Report Form(s) Originator ..... :	IMQ S.p.A.
Master TRF ..... :	Dated 2010-12

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Dimmer
Trade Mark ..... :	**ADT**
Manufacturer ..... :	Same as applicant
Model and/or type reference ..... :	ATE-VRT100EU (declared)
Rating(s) ..... :	220-240V~, 50HZ Dimmable LED lamp: 2-100W (declared) Incandescent lamps: 10-100W (declared) High voltage halogen lamps and electronic step-down converter for extra low-voltage incandescent lamps: 10-100W (declared)

Testing procedure and testing location:	
☒ **Testing Laboratory:**	Intertek Testing Services Shanghai
Testing location/ address.....:	Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China
Tested by (name + signature) .....:	Ken Chen (Project Engineer)
Approved by (+ signature).....:	Kent Wu (Mandated Reviewer)
☐ **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.....:	

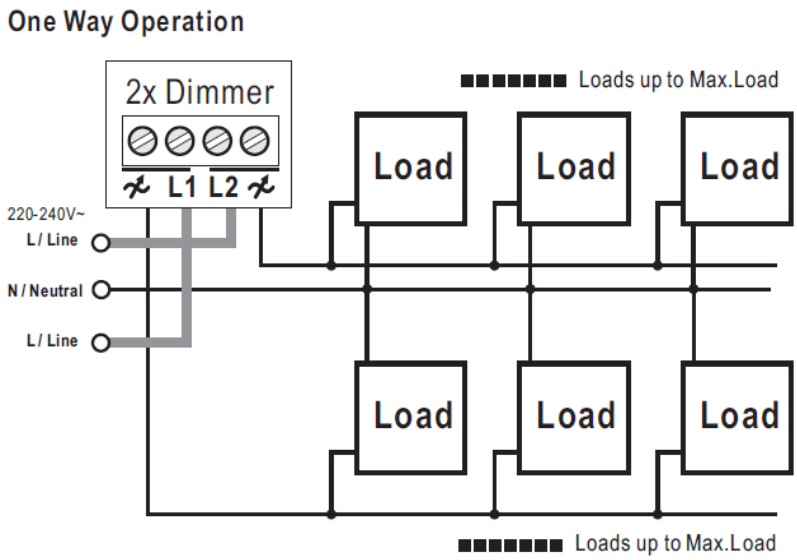
Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
1. Only subclause 101.3 was performed on ATE-VRT100EU as the request of the client. 2. The test is subcontracted to Zhejiang Fang Yuan Electric Equipment Test Co., Ltd. 3. Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty. 4. We conclude that the products presented in this report comply with the requirement of subclause 101.3 on the submitted samples.	Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China

Copy of marking plate and terminal identification

N/A

Wiring diagrams



Test item particulars:		
Type of electronic switch and its function (examples given in Annex AA)	:	Dimmer
Pattern number	:	**1+1**
Contact opening (gap) and switch performance	:	normal gap / mini-gap / **micro-gap** / without contact gap / electronic disconnection
Degree of protection against access to hazardous parts and against harmful effects due to the ingress of solid foreign objects	:	**IP2X**
Degree of protection against harmful effects due to the ingress of water	:	**IPX0**
Method of actuating	:	**rotary** / 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)	:	2-100W for LED load; 10-100W for INC & HAL
Minimum current (A) / Minimum load (VA or W)	:	2W for LED load; 10W for INC & HAL
Kind of load controlled by the switch	:	**incandescent lamp** / fluorescent lamps / motors / **declared load(LED)** / **electronic step-down converter for extra low voltage incandescent lamp**
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)	:	220V-240V
Rated frequency (Hz)	:	50Hz
Characteristic of fuses	:	N/A
Electronics RCS or TDS having	:	SELV parts / PELV parts
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	:	2019-03-05
Date (s) of performance of tests	:	2019-03-05 to 2019-04-02

General remarks:

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.

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

Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:

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).....:

Same as applicant

General product information:

The device under evaluation is a dimmers of type ATE-VRT100EU.

IEC 60669-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

101	**ABNORMAL CONDITIONS**		
101.3	Short circuit test: prospective short circuit of the supply: 1500 A; I^2t: 15000 A^2s:		
	Test voltage Vn (V) .....:	220-240	—
	Type of fuse recommended by the manufacturer ...:	No fuse recommended	—
	N° of short circuits; N° of specimens used .....:	6	—
	During the test: emission of flames or burning particles not occur		P
	After the test:		
	- accessible metal parts not live		N/A
	- emissions of flame or burning particles have not visibly perforated the film when examined without magnification		P
	- the conductors, the flush mounting box and mounting surface shall not show traces of burns. Traces which can be cleaned are ignored		P
	- the specimen is re-energized in its normal operating position, and its behaviour is monitored for 4 h . The specimen shall show no dangerous behaviour, maximum temperature of Table 102 shall not be exceeded.		P
	- the electronic switches shall withstand the dielectric strength test of Clause 16. Overcurrent protective devices which can be manually reset shall be switched on before the test.	See appended table 101.3	P

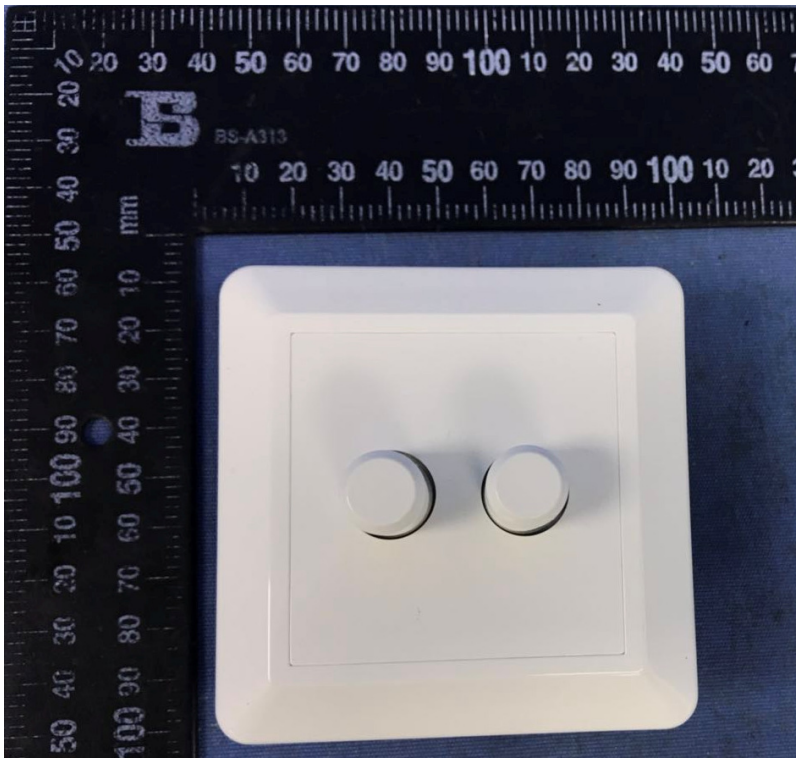
101.3	TABLE: electric strength			P
item per table 14	test voltage applied between:	test voltage (V)	flashover / breakdown (Yes/No)	
1)	Between all poles connected together and the body, with the switch in the “on” position	2000	No	
supplementary information:				

IEC 60669-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

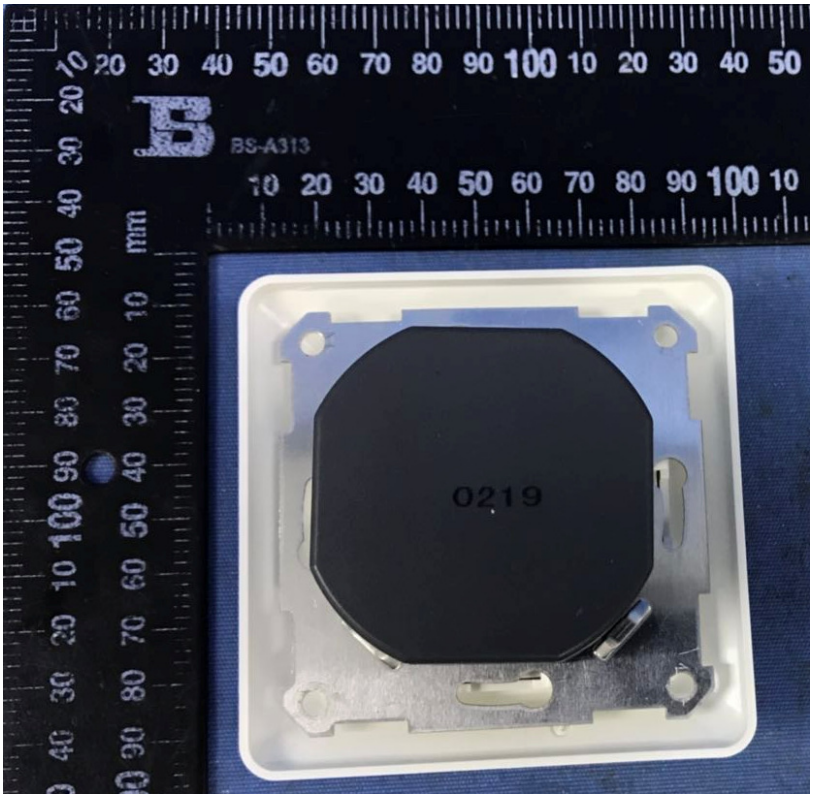
ATTACHMENT TO TEST REPORT IEC 60669-2-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Switches for household and similar fixed-electrical installations Part 2-1: Particular requirements - Electronic switches			
Differences according .....:	EN 60669-2-1:2004 + A1:2009 + A12:2010) (used in conjunction with EN 60669-1:1999 + A1:2002 + A2:2008)		
Attachment Form No.....:	EU_GD_IEC60669_2_1F (to be used with Test Report Form No. IEC60669_2_1F)		
Attachment Form Originator.....:	IMQ S.p.A.		
Master Attachment Form.....:	2010-12		
101	**ABNORMAL CONDITIONS**		
101.1.1.2	Addition of the following NOTE:		
	The tripping current of the protective devices (e.g. fuses, automatic protective devices, etc.) to be used for the verification of electronic switches without incorporated temperature-limiting devices and without incorporated fuses is in accordance with the rated current of the protective device, specified by the manufacturer, intended to protect the electronic switch		N/A
	Information regarding the protective device which is intended to protect the electronic switch are specified by the manufacturers in the instruction sheets provided with the products		N/A

ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS**		
101.1.1.2	BELGIUM, FRANCE, SPAIN, SWITZERLAND: Electronic switches designed without an associated incorporated protection are loaded for one hour with the conventional tripping current of the associated protection of the lighting circuit (10 A for fuses and 16 A for CB's) .....:		N/A

Product photos

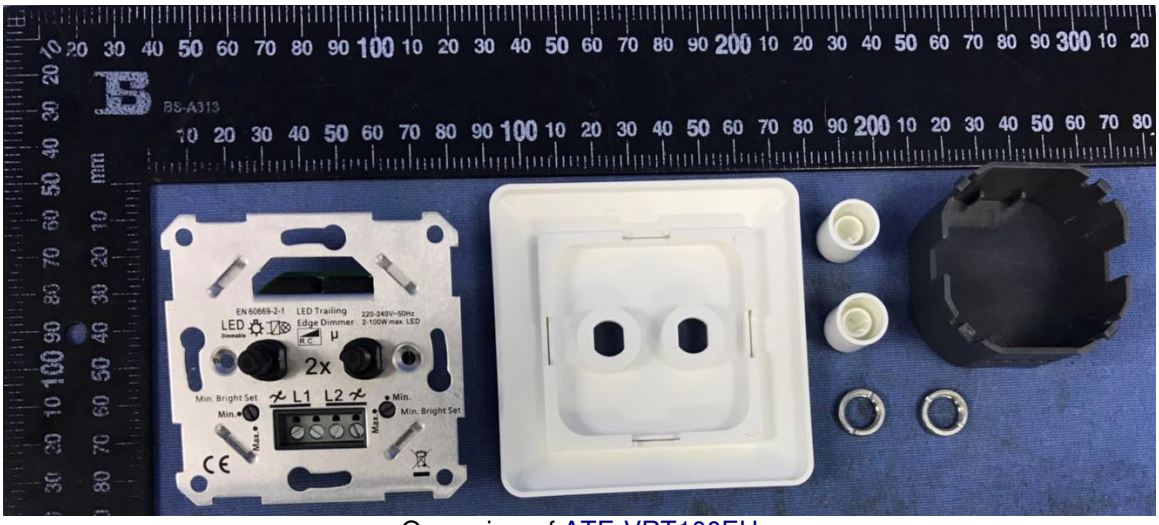


Front view of ATE-VRT100EU

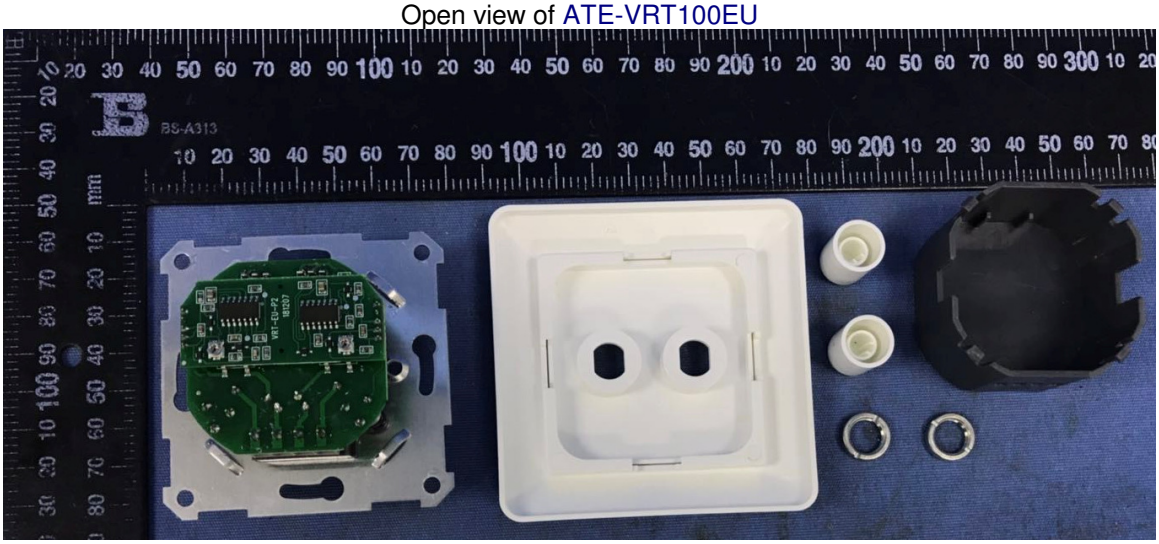


Back view of ATE-VRT100EU

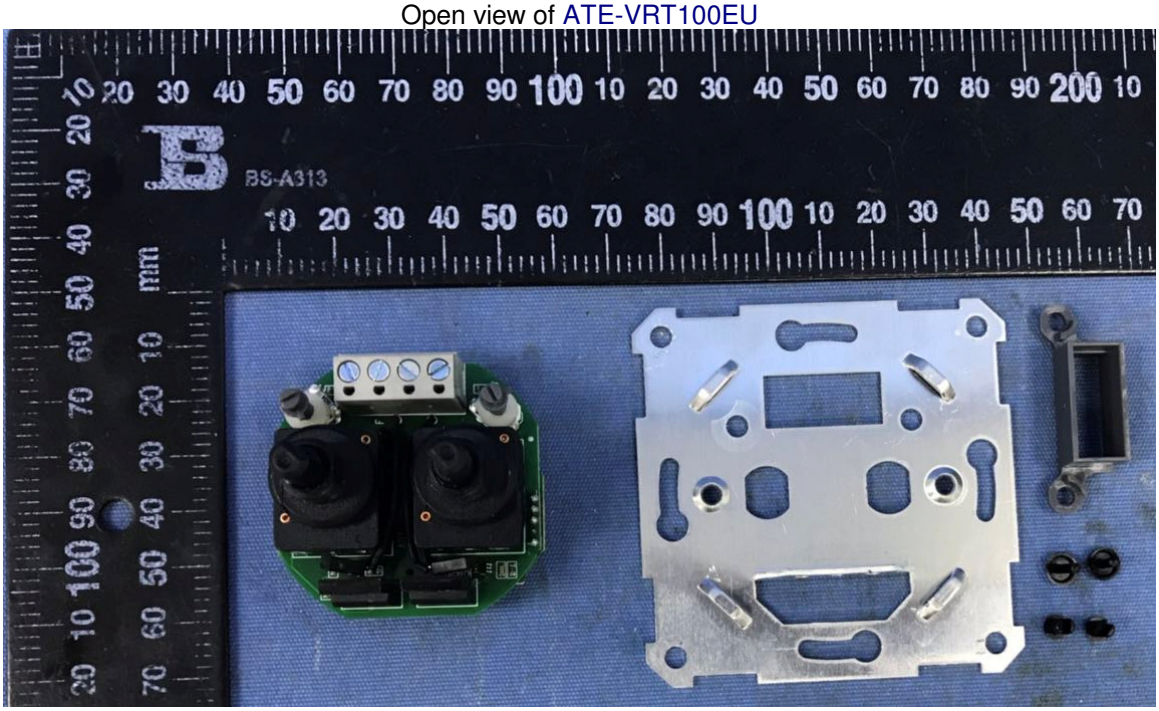
Product photos



Open view of ATE-VRT100EU



Open view of ATE-VRT100EU



Open view of ATE-VRT100EU