



TEST REPORT
BS 1363-1 (partially)
Specification for rewirable and non-rewirable 13A fused plugs

Report reference No. : LCS171219051AS

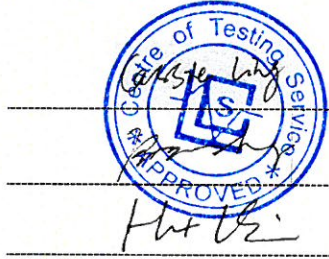
Tested by (+ signature) : Cassie Ling

Reviewed by (+ signature) : Kizard Zhang

Approved by (+ signature)..... : Hart Qiu

Date of issue : January 02, 2018

Contents : 11 pages



Testing laboratory

Name : Shenzhen LCS Compliance Testing Laboratory Ltd.

Address : 1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China

Testing location : Same as above

Client

Name : Shenzhen Saintland Electronics Co., Ltd.

Address : Rm.602, Guidu Building, No.3007, Chunfeng Road, Luohu District, Shenzhen, China

Test specification

Standard : Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Test procedure : Compliance with Clause 12 of BS 1363-1: part 1: 1995 + A4: 2012

Non-standard test method : N.A.

Test item Description : Plug (Used in MOUSE REPELLER)

Trademark : SAINTLAND

Model and/or type reference : SD-066

Manufacturer : Shenzhen Saintland Electronics Co., Ltd.

Address : Rm.602, Guidu Building, No.3007, Chunfeng Road, Luohu District, Shenzhen, China

Factory : Shenzhen Saintland Electronics Co., Ltd.

Address : 3th Floor, Block A East, Huachuangda Science Park, Hangcheng Road, Gushu, Xixiang, Baoan District, Shenzhen, China

Rating(s) : 250VAC, 2A



Particulars: test item vs. test requirements

Degree of protection..... : IPX0

Class of protection against electrical shock..... : Class II

Proof tracking index (PTI) : 175

Test case verdicts

Test case does not apply to the test object : N (.A.)

Test item does meet the requirement..... : P(ass)

Test item does not meet the requirement..... : F(ail)

Testing

Date of receipt of test item : December 20, 2017

Date(s) of performance of test..... : December 20, 2017 – January 02, 2018

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.

Remark:

1. All tests were conducted in the model SD-066.
2. The report includes attachment document:
 - Plug Portion Dimension measurement: 3 pages
 - Photographs: 2 pages
3. The samples for each group of testing were selected randomly from the samples provided by the manufacturer.
4. This report suitable for UK plug portion on Direct Plug-in Appliance only.

General Product information:

1. The Plug has the ISOD.
2. Clauses 12.4, 12.5, 12.6, 12.7, 12.8, 12.9.2, 12.9.3, 12.9.5, 12.10, 12.13, 12.14 and 12.15 were not applicable.

**Partially of BS 1363-1: part 1: 1995 + A4: 2012**

| Clause | Requirement – Test | Result – Remark | Verdict |
|---------|---|--|---------|
| 12 | Construction of Plugs | | P |
| 12.1 | The disposition of the pins shall be shown as figure 4. | The dispositions of the pins were shown as specified. | P |
| 12.2 | Pin and sleeve dimensions, body outline were checked according to figure 4 of BS1363: part 1. | The outline of the plug did not exceed the specified dimensions at a distance of 11.82mm the engagement surface. (limit: >6.35mm) The measured dimensions of item shown in fig. 4 were found within the specified limits. | P |
| | The plug portion should enter the gauge fully with a force less than 10N was applied to the centre of the sample at right angle. | Sample was entered into the gauge completely. | P |
| 12.3 | No part of a line or neutral pin shall be less than 9,5mm from the periphery of the plug measured along the engagement surface. | 9.57mm | P |
| 12.9 | Plug pins were constructed of brass | Complied. | P |
| 12.9.1 | Exposed surface of plug pins were smooth and free from burrs or sharp edges and other irregularities, which could cause damage or excessive wear to sockets or shutters. | Complied. | P |
| 12.9.4 | The adaptor plug pins were tested as specified in the standard. | Complied. After being subjected to a forced of 1100N for L, N pin, 400N for ISOD pin of the pin portion could fit the relevant gauge. | P |
| 12.9.6 | Each pin of the adaptor was subjected to a torque of 1Nm for 60s as specified in the standard. | Complied. After the test, the pin portion could fit the relevant gauge. | P |
| 12.11 | The adaptors were tested as specified in the standard. After being placed in an oven at 70°C for 1 hour, each pin of the samples was subjected for 60 sec. to a pull of 100N in the oven. | Complied. After the above test, no plug pin was detached and the plug pins could fit the relevant gauge. | P |
| 12.12 | The degree of flexibility of mounting of the plug pins was checked according to 12.12.1 | Measured value: Max. 1° (test on each sources of enclosure, max. value measured) (limit: Max. 3° 30'). | P |
| 12.16 | Line and neutral plug pin shall be fitted with insulating sleeves. The dimensions of the pin and sleeve shall fall within the specific limit. | Complied. Both line and neutral pins were fitted with insulating sleeves. | P |
| 12.17.1 | Plug pin sleeve shall be compliance with 12.17.2 to 12.17.4 | Complied. | P |



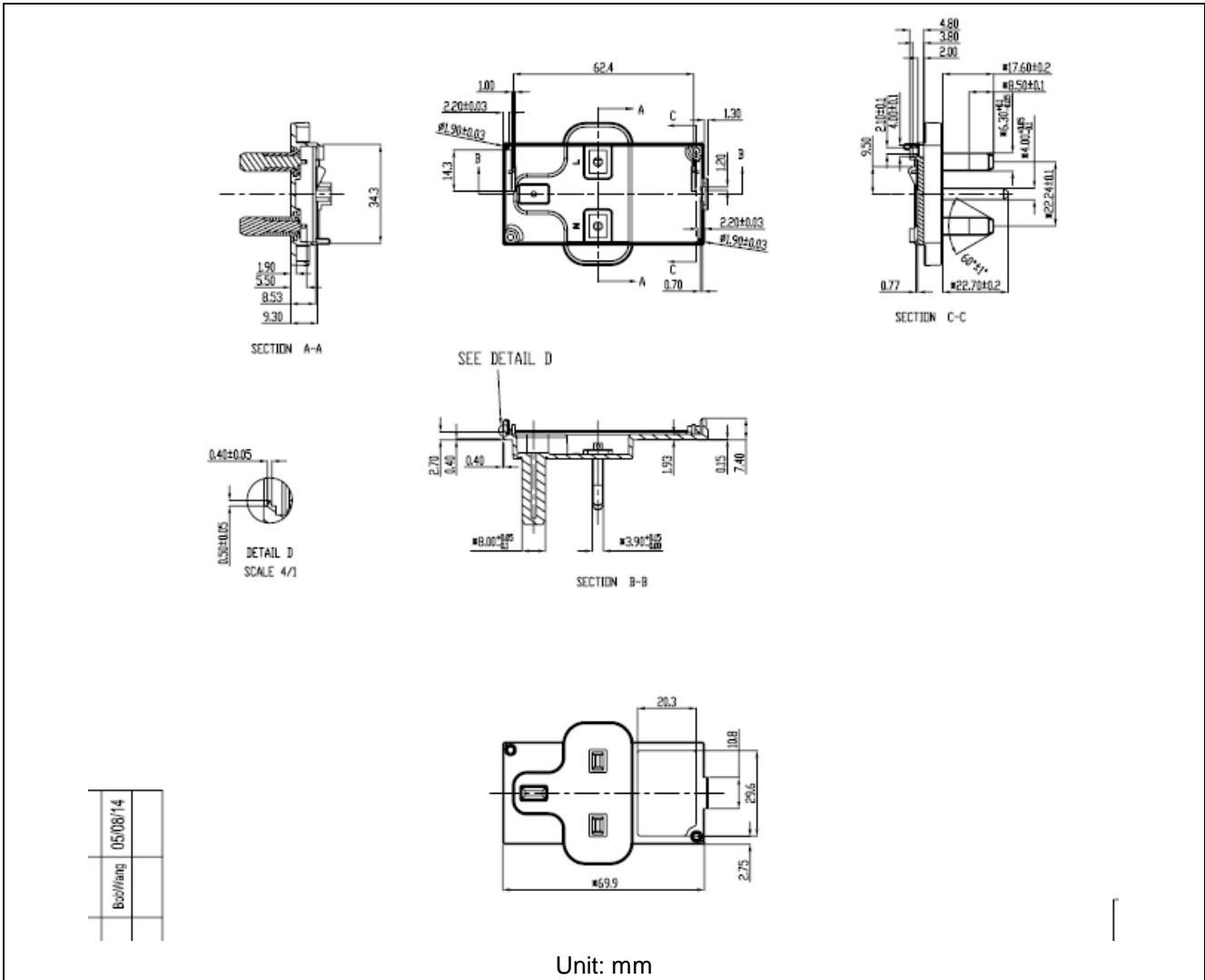
| Partially of BS 1363-1: part 1: 1995 + A4: 2012 | | | |
|---|--|---|---------|
| Clause | Requirement – Test | Result – Remark | Verdict |
| 12.17.2 | Electric strength test applied between the metal part of plug pin and the sleeve (1250±30V) | Complied. No breakdown or flashover occurs. | P |
| 12.17.3 | Abrasion test for plug pin sleeve The plug pin sleeves were subjected to 20000 movements of abrasion as specified in the standard. | Complied. After the test, the sleeves showed no damage that impaired further use and could satisfy the electric strength test in 12.17. 2 | P |
| 12.17.4 | The plug pins with sleeves were placed in a heating cabinet at 200°C and tested according to the standard for 120min. Arrange the test as Figure 10 of BS 1363-1. | After the test, the thickness of sleeves of plug pins (Line and neutral pins) remaining at the impression point reduced by max. 5.2% less than 50%. | P |

| ADDITIONAL REQUIREMENT FOR THE SOLID INSULATED SHUTTER OPENING DEVICE (ISOD) ACCORDING TO BS1363-1/A2: 2003 | | | |
|---|--|---|---|
| 12.2 | Plug fitted with an ISOD shall comply with all the dimensions specified in Fig. 4a with exception of the width of the ISOD, which should be 4,05mm max. and 3,90mm min. and its height which should be 8,05mm max. and 7,75mm min. | See measured dimensions in Table 3 | P |
| 12.9.4.3 | Solid insulated opening device were tested as specified in the standard. | After being subjected to a forced of 400N, the pin could fit the relevant gauge. | P |
| 12.9.5.2 | Plugs with ISOD shall not cause excessive wear to socket contacts or shutters of sockets-outlets The test use a separate sample of plug with ISOD for each type of socket-outlet, with each sample being inserted into and withdrawn from the socket-outlet at a rate of 6 insertions and 6 withdrawals per minute, the speed of travel of the plug being approximately 150mm/s | After 5000 insertions and withdrawals completed, socket outlets show no damage that would impair further use. Plugs show no damage and suit for the dimensional requirements according to clause 12.2. The shutters of the socket-outlets operate satisfactorily and socket contacts safety shielded. | P |
| 22.2 | Resistance to heat | | P |
| | After 1h in heating cabinet at 80°C and a force of 20 N through the jaws no damage shown | Test performed on plug portion (including ISOD) and 0.9 mm measured after 1 hour. Limit: 2mm | P |
| 23 | Resistance of insulating material to abnormal heat and fire | | P |
| | Insulating material not unduly affected by abnormal heat and by fire | Glow wire test performed on enclosure with: 650°C. | P |



Partially of BS 1363-1: part 1: 1995 + A4: 2012

| Clause | Requirement – Test | Result – Remark | Verdict |
|--------|--|--|---------|
| | Insulating material not unduly affected by abnormal heat and by fire | Glow wire test performed on plug portion (including ISOD) with: 750°C. | P |



(Construction drawing of UK plug portion)

**Partially of BS 1363-1: part 1: 1995 + A4: 2012**

| Clause | Requirement – Test | Result – Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

Critical components:

| Object/part no. | Manufacturer/ trademark | Type/model | Technical data | Standard | Mark(s) of conformity |
|-------------------------------|-----------------------------------|------------|---------------------------|------------------|--------------------------|
| Enclosure material | Chang Chun Sb(Changshu) Co Ltd | EME-5051 | V-0, 130°C | UL 94 UL 746C | UL E223871 |
| Pin sleeving & Pin holder | Chang Chun Sb(Changshu) Co Ltd | EME-5051 | V-0, 130°C | UL 94 UL 746C | UL E223871 |
| Metal material of Plug pin | -- | -- | Copper content: 60-61% | -- | -- |



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|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

PLUG PORTION DIMENSIONS

| Linear Dimensions (mm) | | Measurement | | Limit | |
|------------------------|---------|-------------|--|---------------|-------------------------|
| *A | | 25.20 | | 25.370 max. | |
| *B | | 34.26 | | 34.6 max. | |
| *C | | 15.31 | | 15 min. | |
| D | | 9.75 | | 9.5 min. | |
| *E | L -> E | 11.10 | | 11.05 - 11.18 | |
| | N -> E | 11.10 | | | |
| *F | L -> E | 22.17 | | 22.10 - 22.36 | |
| | N -> E | 22.17 | | | |
| G1 | | 6.28 | | 6.22 - 6.48 | |
| G2 | | 6.28 | | 6.22 - 6.48 | |
| H | | 4.01 | | 3.90 - 4.05 | |
| *I | | 22.48 | | 22.23 - 23.23 | |
| J | | 1.70 | | 1.35 - 1.85 | |
| K | | 8.01 | | 7.80 - 8.05 | 7.75 - 8.05 For ISOD |
| L | line | 9.02 | | 9.5 max. | |
| | neutral | 9.01 | | | |
| M | line | 8.84 | | 9.2 max. | |
| | neutral | 8.83 | | | |
| N (sleeve) | line | 3.99 | | 3.90 - 4.05 | |
| | neutral | 3.99 | | | |
| O | line | 17.85 | | 17.20 - 18.20 | |
| | neutral | 17.84 | | | |
| P | Line | 1.57 | | 1.35 - 1.85 | |
| | neutral | 1.56 | | | |
| | earth | 1.58 | | | |
| Q (metal) | line | 3.97 | | 3.90 - 4.05 | |
| | neutral | 3.96 | | | |
| | earth | -- | | | |
| R | Line | 1.85 | | 1.2 - 2.0 | |
| | neutral | 1.84 | | | |
| | earth | 1.89 | | | |
| S | line | 1.56 | | 1.35 - 1.85 | |
| | neutral | 1.57 | | | |

*Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Partially of BS 1363-1: part 1: 1995 + A4: 2012

| Clause | Requirement – Test | Result – Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

| Angular Dimensions (°) | | Measurement | | Limits |
|------------------------|---------|-------------|--|-----------|
| 01 | | 60°11'' | | 58° - 62° |
| 02 | line | 70°20'' | | 60° - 80° |
| | neutral | 70°20'' | | |
| | earth | 70°30'' | | |
| 03 | line | 60°12'' | | 58° - 62° |
| | neutral | 60°13'' | | |

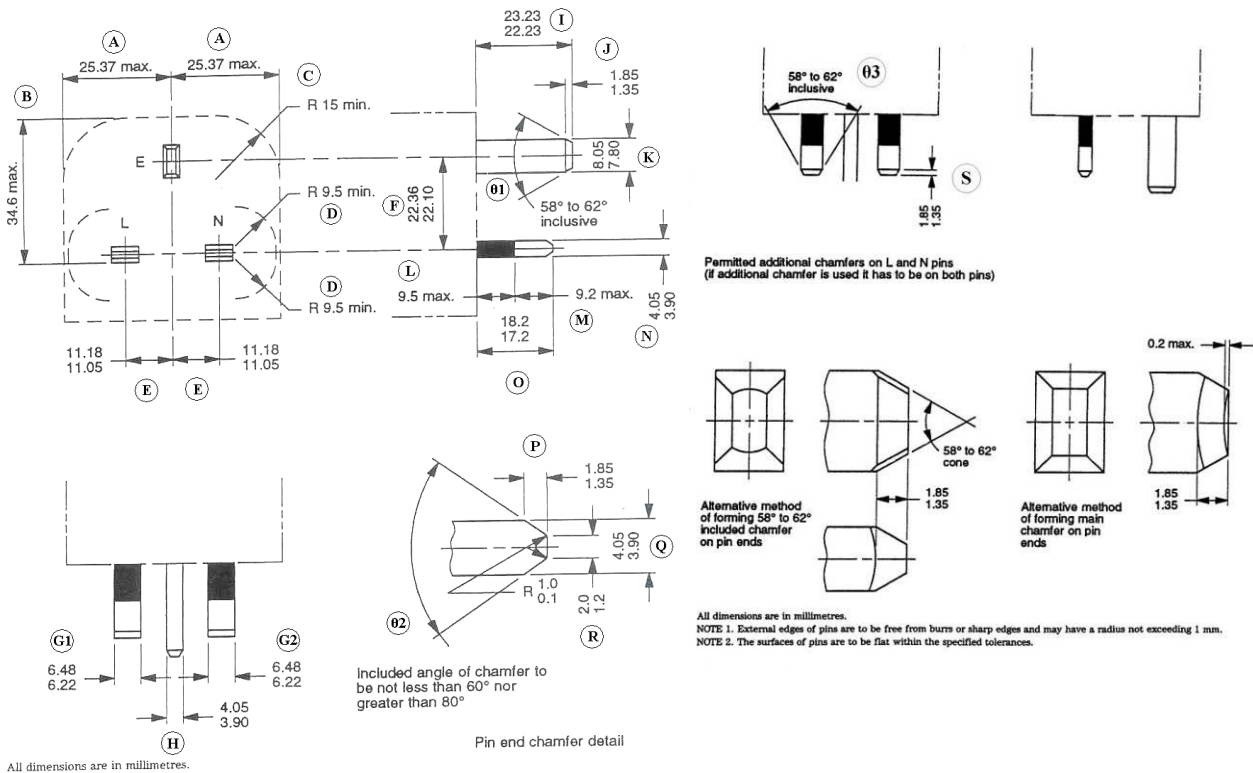


Figure 4a of BS 1363: Part 1

* Remark: all these dimensions were checked by the relevant gauge (based on BS1363: Part 1:1995 Figure 5)

Partially of BS 1363-1: part 1: 1995 + A4: 2012

| Clause | Requirement – Test | Result – Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

Plug Portion Dimensions (Solid insulated shutter opening device ISOD)

| Linear Dimensions (mm) | | Sample A | Limit |
|------------------------|-----|----------|-------------|
| T | | 7.94 | 7.75 - 8.05 |
| U | | 3.96 | 3.90 - 4.05 |
| V | 0.1 | 0.10 | 0.15 max |
| | 0.1 | 0.10 | 0.15 max |
| W | 0.1 | 0.10 | 0.15 max |
| | 0.1 | 0.10 | 0.15 max |

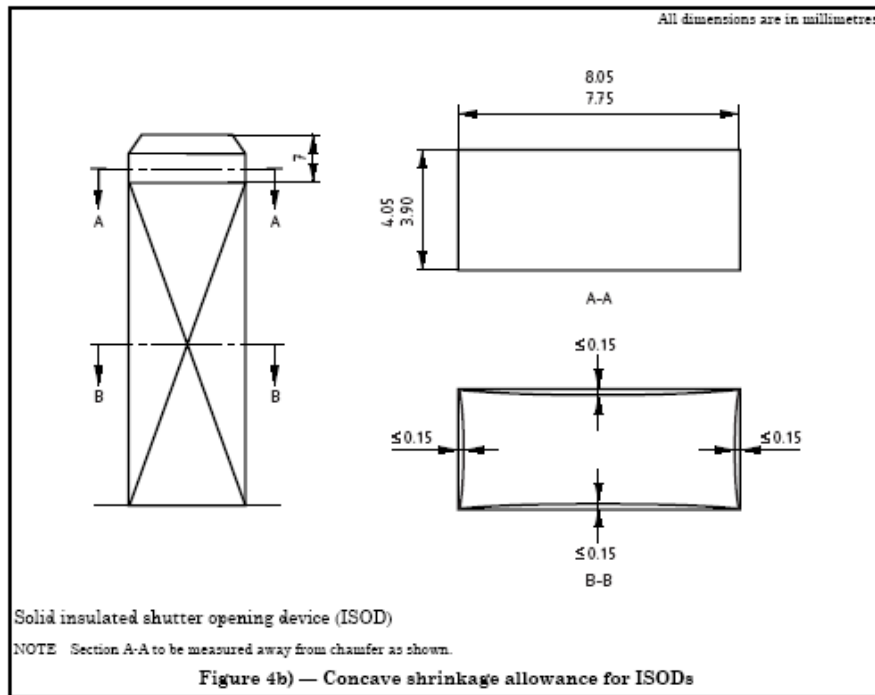


Figure 4b of BS 1363: Part 1

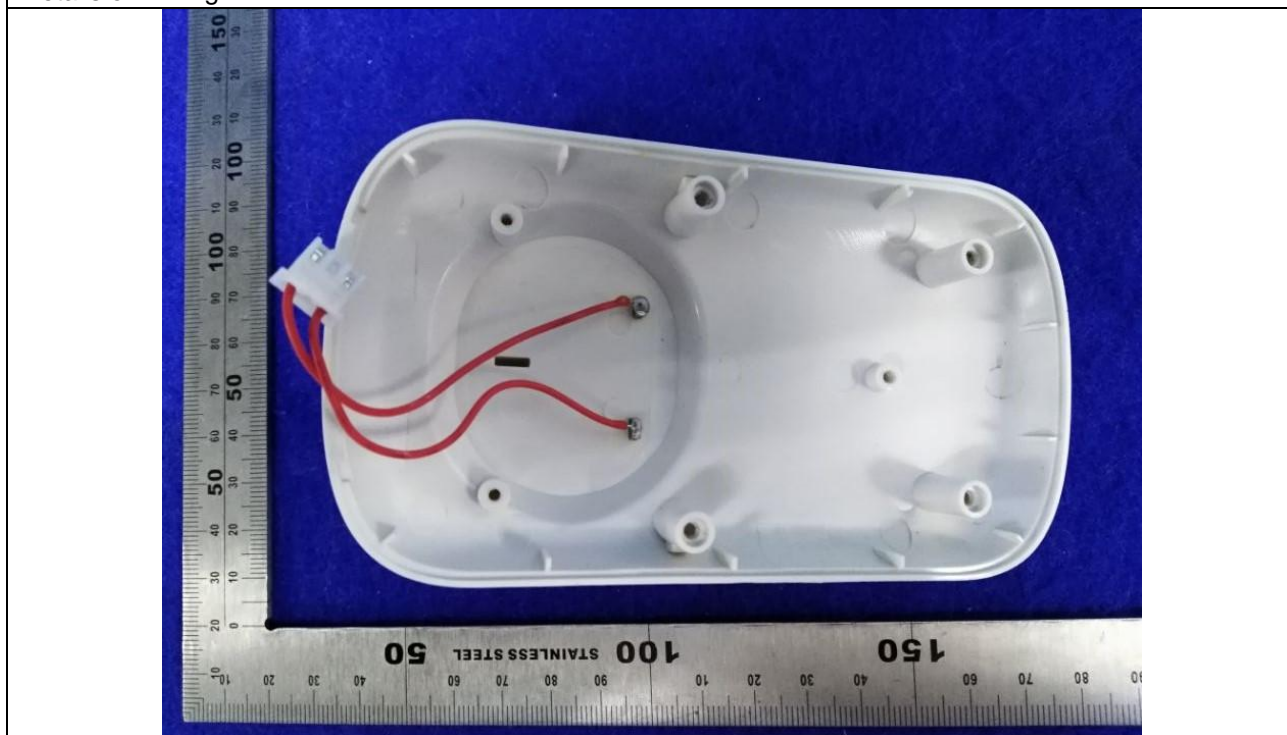
Photo documentation





Photo documentation

Details of: Figure 3. Internal view for unit



-----End of test report-----