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|---|-------------------------------|----------------------------|--------------------------|----------|
| TEST-2020(DSH) - 機械壽命測試報告 TEST-2020(DSH) - Mechanical life test report | 測試日期 test date | 2019.02.26 ~ 2019.03.11 | 測試單位 test unit | QA |
| | 測試人員 test personnel | Jane Lin | 審核者 Inspector | Ryan Lin |

一、機械壽命測試 Mechanical life test

1. 測試目的： 驗證 DSH 競業對手樣品與 DW 手工樣品 (TEST-2020) 之機械壽命測試。

Test Purpose: Verification of mechanical life testing of DSH competitors' samples and DW manual samples (TEST-2020)

2. 測試方法： Test Methods

a. 測試樣品數量：3pcs。

a. Number of test samples: 3pcs

b. 測試前/後的開關, 進行絕緣阻抗/耐壓/接觸阻抗/克重測試。

b. Compare the switch before and after the testing through insulation resistance test / pressure test / contact impedance / gram test

c. 絕緣電阻：1000MΩ(min), 耐壓：1KV/0.5mA/60sec, 接觸阻抗：100mΩ(max), 克重：2000grams。

c. Insulation resistance: 1000MΩ(min), pressure test: 1KV/0.5mA/60sec, contact impedance: 100mΩ(max), gram weight: 2000grams

d. 將樣品固定在壽命測試機台上。

d. Fix the sample on the life test machine

e. 測試次數: 75,000 次。

e. Number of tests: 75,000

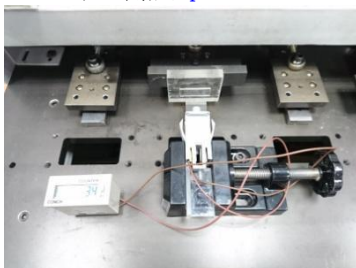
g. 速度：50 ~ 60 次/1 Min。

g. Speed: 50 ~ 60 times / 1 Min

3. 測試照片： Test photo



絕緣阻抗測試 insulation resistance test 耐壓測試 pressure test 接觸阻抗測試 contact impedance test



克重測試 Gram test

機械壽命測試 Mechanical life test

东莞市悦势电子有限公司
YESWITCH ELECTRONICS CO., LTD.

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4. 測試結果 : Test Results (please refer to the excel table)

| 測試項目 (Test Items) | No.1 競業對手樣品 competitors' samples | | No.2 DW手工樣品(TEST-2020) DW manual sample (TEST-2020) | | No.3 DW手工樣品(TEST-2020) DW manual sample (TEST-2020) 端子腳用Epoxy固定 Terminal pins are fixed with Epoxy | |
|-------------------------------------|--|------------------|---|------------------|--|------------------|
| | 測試前before testing | 測試後after testing | 測試前before testing | 測試後after testing | 測試前before testing | 測試後after testing |
| 絕緣阻抗 Insulation resistance | Pass | Pass | Pass | Pass | Pass | Pass |
| 耐壓測試 Pressure test | Pass | Pass | Pass | Pass | Pass | Pass |
| 接觸阻抗 Contact impedance (mΩ) | 9.83/6.27 | 23.1/14.5 | 42.8/6.93 | 85.2/49.3 | 11.5/12.9 | 54.5/42.3 |
| 克重測試 Gram test (grams) | 1658 | 1573 | 1781 | 1336 | 1670 | 1625 |
| 壽命測試 life span test 次數 cycles | - | 75,000 | - | 75,000 | - | 75,000 |
| 外接計數器次數 External counter count | - | 84,321 | - | 109,688 | - | 92,927 |

5. 结论conclusion

競業對手樣品與DW手工樣品經機械壽命測試後，功能檢驗無異常，但外接計數器次數均大於壽命測試次數

After the mechanical life test of the competitor's sample and DW manual sample, the function test is normal, but the number of external counters is greater than the number of life tests.

研發:

NO.3 經點膠固定端子後測試情況未能改善，故此問題應該不是這問題，需重新分析，安排測試品示波器彈跳的測試以確證彈跳發生位置及發生點

Research & development:

NO.3 After the fixed terminal is glued, the test condition has not been improved. Therefore, this problem should not be the problem. It needs to be re-analyzed to arrange the test oscilloscope bounce test to confirm the position and occurrence point of the bounce.