| | | |
|---|---|---|
| **Test Report Number:** | **FTS26AR-00442E** | ***Total Page(s):*** *31* |
| **Applicant Name:** | MIGUELEZ & DEL CUETO DISTRIBUCION SL CIF: B75441295 | |
| **Applicant Address:** | PARQUE DE LOS LIRIOS N7 PRIMERO OFICINA 2 26009 LOGRONO LA RIOJA SPAIN | |
| **Trade Mark** | MC Technology, KENRO climate solutions | |
| **Test item:** | ENERGY RECOVERY VENTILATOR | |
| **Model / Type Reference:** | ZX10190I, ZX10250I | |
| **Date of Issue:** | 2026-02-02 | |
| **Testing Laboratory:** | Guangdong Future Test Services Co., Ltd | |
| **Test Specification:** | EN IEC 55014-1:2021<br>EN IEC 55014-2:2021<br>EN IEC 61000-3-2:2019+A1:2021+A2:2024<br>EN 61000-3-3:2013+A1:2019+A2:2021 | |
| **Test Result:** | Passed | |

| **Compiled by:** | | | **Reviewed by:** | | |
|---|---|---|---|---|---|
| 2026-02-02 | George Wu | George Wu | 2026-02-02 | Gordon Xie | Gordon Xie |
| *Date* | *Name* | *Signature* | *Date* | *Name* | *Signature* |

**Remark:**

*N/A*





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# Test Summary

**6.1.1 Harmonics Current Emission on AC Mains**

RESULT: Pass

**6.1.2 Voltage Changes, Voltage Fluctuations and Flicker**

RESULT: Pass

**6.1.3 Terminal Continuous Disturbance Voltage**

RESULT: Pass

**6.1.4 Disturbance Power on AC Mains**

RESULT: Pass

**6.1.5 Discontinuous Disturbance Voltage on AC mains(Click)**

RESULT: Pass

**7.2.1 Radio-frequency Common Mode / Conducted Susceptibility (CS)**

RESULT: Pass

**7.3.1 Electrical Fast Transients (EFT)**

RESULT: Pass

**7.3.2 Surge**

RESULT: Pass

**7.3.3 Electrostatic Discharges (ESD)**

RESULT: Pass

**7.4.1 Voltage Dips and Interruptions**

RESULT: Pass



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# 1. General Remarks

When applying the basic standards in this test report, please refer to the applied generic or product family standards for edition information:
For dated basic standards, only the edition cited applies. For undated basic standards, the latest edition (including any amendments) applies.

## 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test result.
Appendix 2: Photo of EUT
Appendix 3: List of Test and Measurement Equipment

# 2. Measurement Uncertainty

| Test Item | Uncertainty |
|---|---|
| Uncertainty for Conduction emission test | 3.12dB |
| Uncertainty for Radiation Emission test | 3.56dB |

Note：This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

# 3. Test Sites

## 3.1 Test Facilities

**A. Guangdong Future Test Services Co., Ltd.**
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## 3.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

Refer to attached Appendix 3.

# 4. General Product Information

The new submitted sample are energy recovery ventilator ordinary household electrical appliances.

Model list:

| Model | Rated input | Rated power | PCB | Motor |
|---|---|---|---|---|
| ZX10190I | 220-240V~, 50/60Hz | 87W | PCB1 | Motor1 |
| ZX10250I | | 162W | | Motor2 |

Remark:
All model has same PCB and rated power except for model name and motor.

According to the above information, all tests were performed on following models **ZX10190I** and **ZX10250I.**

## 4.1 Product Function and Intended Use

Refer to Technical Documentation and User Manual

## 4.2 Ratings and System Details

| | |
|---|---|
| Type designation: | Refer to section 4 |
| Rated input: | Refer to section 4 |
| Rated power: | Refer to section 4 |
| Protection class: | Class I |
| Ports: | AC mains, maximum length of the control line < 2m |
| Cables: | Unshielded |

Refer to the Technical Documentation for further information.

## 4.3 Independent Operation Modes

The basic operation modes are:

A. Max power
B. Min power
C. Auto mode
D. OFF

Refer to the user manual for further information.



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## 4.4 Noise Generating and Noise Suppressing Parts

Refer to the Technical Documentation for further information.

## 4.5 Submitted Documents

Difference Declaration
Circuit Diagram
PCB Layout
User Manual
Label

# 5. Test Set-up and Operation Modes

## 5.1 Principle of Configuration Selection

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

**Immunity:** The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the instructions for use.

## 5.2 Physical Configuration for Testing

Refer to relative paragraphs of this test report.

## 5.3 Test Operation and Test Software

Refer to test setup in chapter 6 and chapter 7.



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## 5.4 Special Accessories and Auxiliary Equipment

Product: ERV TOUCHSCREEN CONTROLLER
Model: YT040H01
Manufacturer: DWIN TECHNOLOGY

The auxiliary equipment is provided by the applicant.

## 5.5 Countermeasures to achieve EMC Compliance

No additional countermeasures to the submitted test sample(s) were employed to achieve compliance.



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# 6. Test Results Emission

## 6.1 Emission in the Frequency Range up to 30 MHz

### 6.1.1 Harmonics Current Emission on AC Mains

**RESULT:** **Pass**

**Test Specification**

| | | |
|---|---|---|
| Basic standard | : | EN IEC 61000-3-2:2019+A1:2021+ A2:2024 |
| Measurement equipment requirement | : | IEC 61000-4-7 |
| Measured harmonics | : | 1 – 40 |
| Equipment class | : | A |
| Limits | : | Clause 7.2 |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | Refer to Appendix 1 |
| Input voltage | : | AC 230V,50Hz |
| Operation mode | : | A |
| Test observation period | : | 2.5min |
| Temperature | : | 23°C |
| Humidity | : | 51% |
| Air pressure | : | 101kPA |



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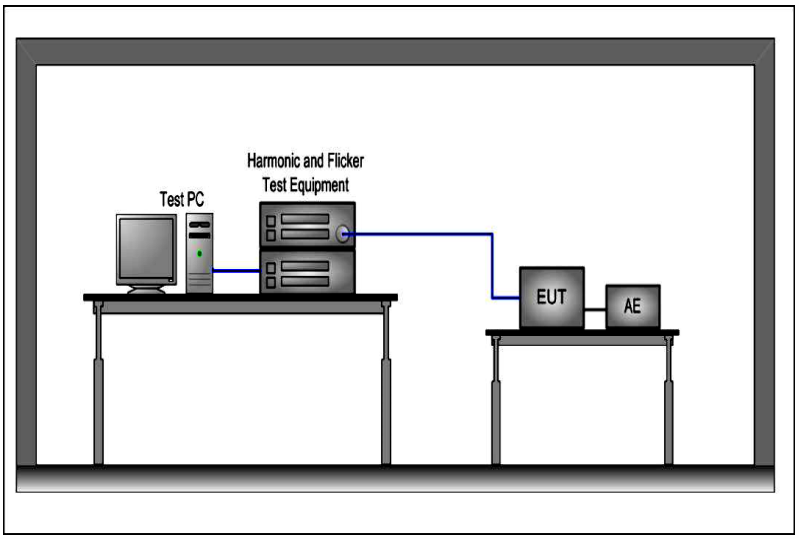
## Test Connection Diagram




For measurement results, please refer to the attached appendix 1



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## 6.1.2 Voltage Changes, Voltage Fluctuations and Flicker

**RESULT:** **Pass**

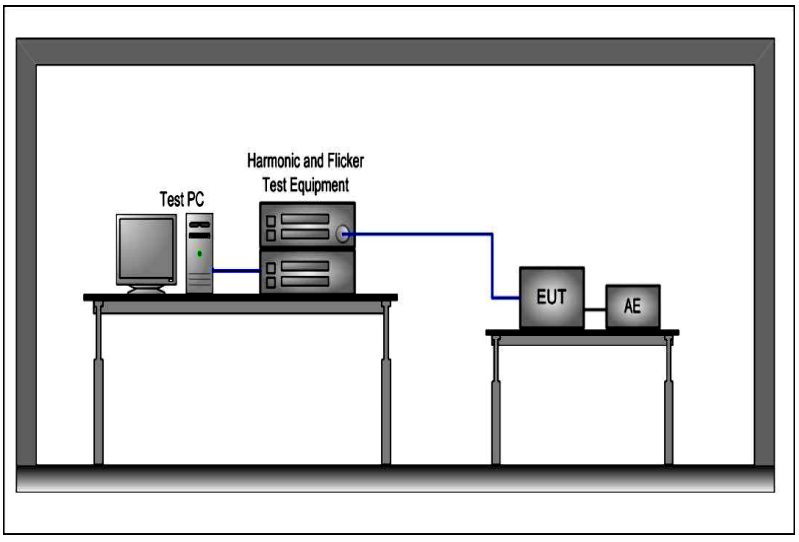
**Test Specification**

| | | |
|---|---|---|
| Basic standard | : | EN 61000-3-3:2013+A1:2019+A2:2021 |
| Measurement equipment requirement | : | IEC 61000-4-15 |
| Limits | : | EN 61000-3-3:2013+A1:2019+A2:2021, Clause 5 |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | Refer to Appendix 1 |
| Input voltage | : | AC 230V,50Hz |
| Operation mode | : | A |
| Test observation period | : | 120min |
| Temperature | : | 22°C |
| Humidity | : | 50% |
| Air pressure | : | 101kPA |

**Test Connection Diagram**




For measurement results, please refer to the attached appendix 1



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## 6.1.3 Terminal Continuous Disturbance Voltage

**RESULT:** **Pass**

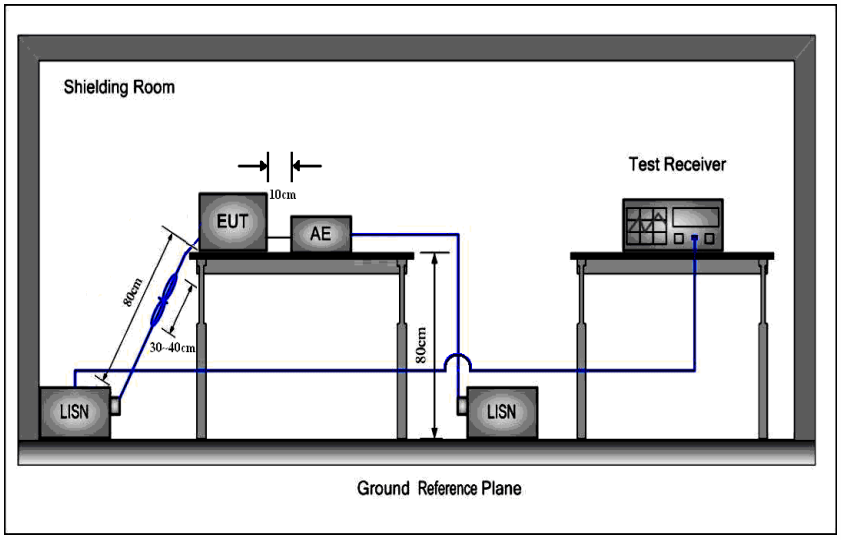
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-1:2021, Clause 5 |
| Port | : | AC Mains, control line |
| Frequency range of Mains | : | 150kHz-30MHz |
| Test site | : | Shielded Room |
| Limits | : | EN IEC 55014-1:2021, Clause 4.3.3.6, Table 5 |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | Refer to Appendix 1 |
| Input voltage | : | Refer to Appendix 1 |
| Operation mode | : | A (worst mode) |
| Test Ports | : | AC Mains, control line |
| Test configuration | : | Table-top |
| Temperature | : | Refer to Appendix 1 |
| Humidity | : | Refer to Appendix 1 |
| Air pressure | : | Refer to Appendix 1 |

**Test Connection Diagram**



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**Test Result**

Measurement uncertainty: 3.12 dB (k=2, σ= 95%)

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector will be omitted.

Disturbances other than those mentioned are small or not detectable.

For measurement results, please refer to the attached appendix 1.



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## 6.1.4 Disturbance Power on AC Mains

**RESULT:** **Pass**

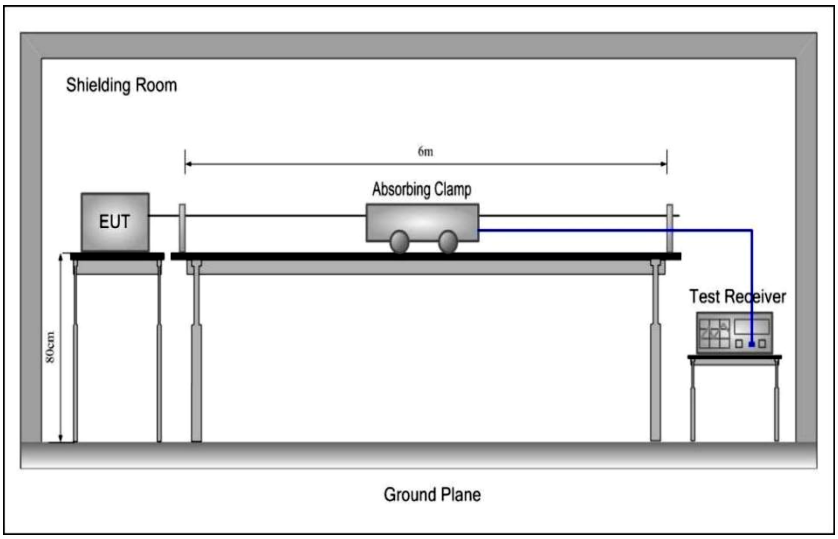
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-1:2021, Clause 5.3.3 |
| Port | : | AC Mains, control port |
| Frequency range of Mains | : | 30MHz-300MHz |
| Test site | : | Shielded Room |
| Limits | : | EN IEC 55014-1:2021, Clause 4.3.4.4, Table 7, 8 |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | Refer to Appendix 1 |
| Input voltage | : | Refer to Appendix 1 |
| Operation mode | : | A (worst mode) |
| Test Ports | : | AC Mains, control port |
| Test configuration | : | Table-top |
| Temperature | : | Refer to Appendix 1 |
| Humidity | : | Refer to Appendix 1 |
| Air pressure | : | Refer to Appendix 1 |

**Test Connection Diagram**



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**Test Result**

Measurement uncertainty: 3.26dB (k=2, σ= 95%)

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector has been omitted.

The power cord had been extended to a length of 6m and routed through an absorber clamp. The clamp was moved along the cable to find the maximal emission.

Disturbances other than those mentioned are small or not detectable.

For measurement results, please refer to the attached appendix 1.



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### 6.1.5 Discontinuous Disturbance Voltage on AC mains(Click)

**RESULT:** **Pass**

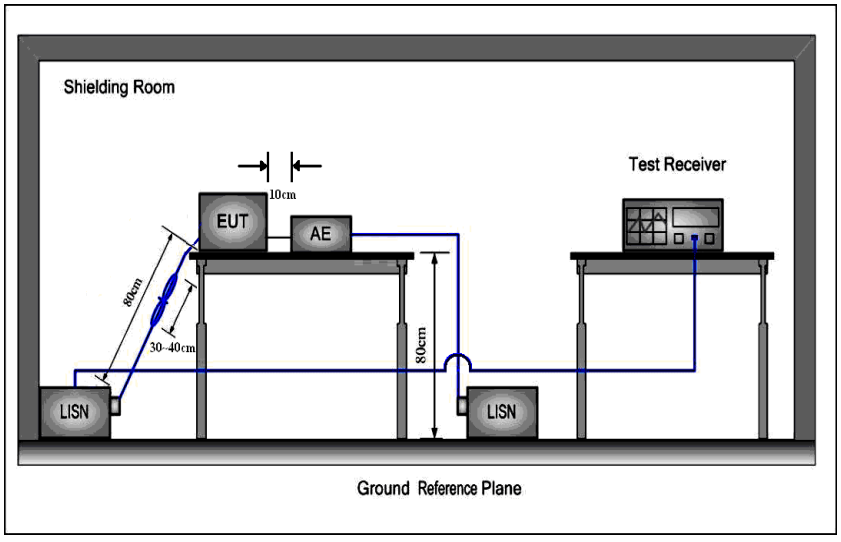
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-1:2021, Annex C |
| Port | : | AC Mains |
| Frequency range of Mains | : | 150kHz-30MHz |
| Test site | : | Shielded Room |
| Limits | : | EN IEC 55014-1:2021, Clause 4.4.2, Table 5 |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | Refer to Appendix 1 |
| Input voltage | : | Refer to Appendix 1 |
| Operation mode | : | C |
| Test Ports | : | AC Mains |
| Test configuration | : | Table-top |
| Temperature | : | Refer to Appendix 1 |
| Humidity | : | Refer to Appendix 1 |
| Air pressure | : | Refer to Appendix 1 |

**Test Connection Diagram**



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**Test Result**

Disturbances other than those mentioned are small or not detectable.

For measurement results, please refer to the attached appendix 1.



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# 7. Test Results Immunity

## 7.1 Immunity requirements

The EUT contains electronic control circuitry with no internal clock frequency or oscillator frequency higher than 15MHz, according to EN IEC 55014-2:2021, clause 4, the EUT is a category II appliance.

Apparatus of the category II shall fulfill the requirement of:

| | |
|---|---|
| **Radio-frequency Common Mode / Conducted Susceptibility (CS)** | **Criterion A** |
| **Electrical Fast Transients (EFT)** | **Criterion B** |
| **Surges** | **Criterion B** |
| **Electrostatic Discharge (ESD)** | **Criterion B** |
| **Voltage Dips** | **Criterion C** |



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# 7.2 Continuous Disturbances

## 7.2.1 Radio-frequency Common Mode / Conducted Susceptibility (CS)

**RESULT:** **Pass**

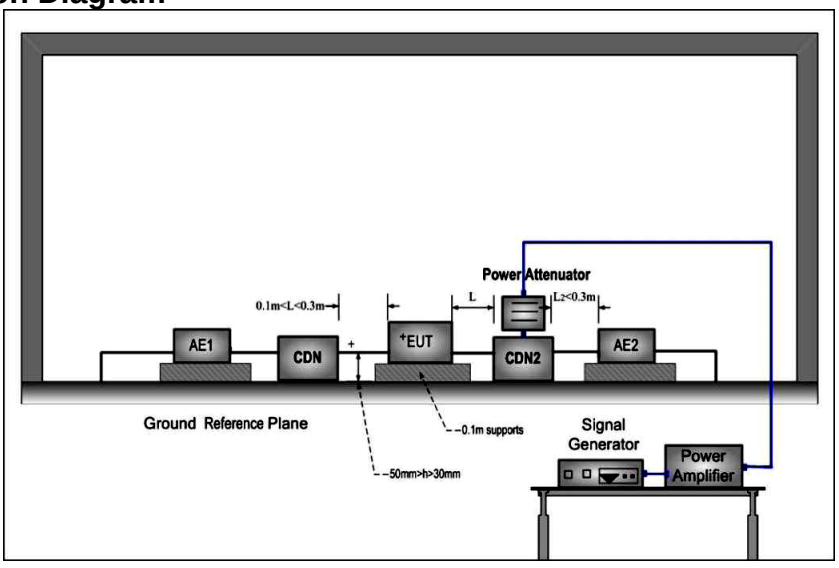
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-2:2021 |
| Basic standard | : | IEC 61000-4-6 |
| Characteristics of the test generator | | |
| Output impedance | : | 50 Ω |
| Amplitude modulation | : | AM 80 %, 1 kHz sine-wave |
| Frequency bandwidth | : | 150kHz to 230MHz |
| Frequency step | : | 1% with 1 s dwell time |
| Performance criterion | : | A |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 18 Dec, 2025 |
| Input voltage | : | AC 230V, 50Hz |
| Operation mode | | A |
| Temperature | : | 23°C |
| Humidity | : | 51% |
| Air pressure | : | 101kPA |

**Test Connection Diagram**



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## Test Result

### Table 2: Immunity against Radio-frequency Common Mode / Conducted Susceptibility (CS)

| Coupling port | Application | Strength | Result | Remarks |
|---|---|---|---|---|
| AC power port | CDN-M3 | 3V(r.m.s) | Pass | A |
| DC power port* | N/A | N/A | N/A | |
| Signal/Control lines* | N/A | N/A | N/A | |
| note:<br>A:Equipment operated as intended, no degradation of function.<br>*:The control cable is less than 2m, so the test on control terminal is not applicable. | | | | |



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# 7.3 Transient Disturbances

## 7.3.1 Electrical Fast Transients (EFT)

**RESULT:** **Pass**

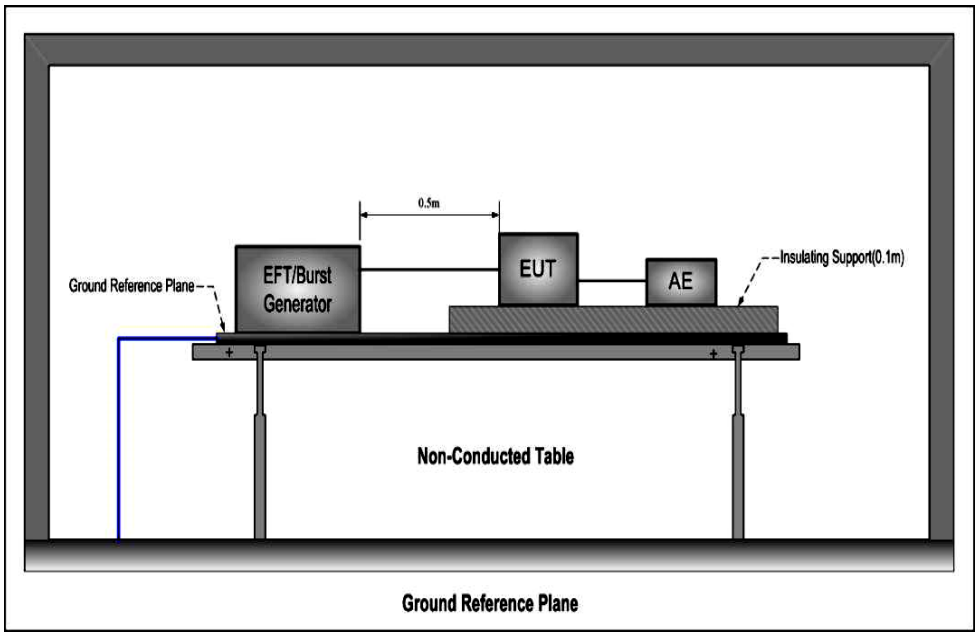
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-2:2021 |
| Basic standard | : | IEC 61000-4-4 |
| Rise time | : | 5 ns |
| Duration | | 50 ns |
| Repetition Freq | : | 5 kHz |
| Test duration | : | 2 minute per level & polarity |
| Performance criterion | : | B |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 18 Dec, 2025 |
| Input voltage | : | AC 230V, 50Hz |
| Operation mode | | A |
| Temperature | : | 23°C |
| Humidity | : | 51% |
| Air pressure | : | 101kPA |

**Test Connection Diagram**



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## Test Result

### Table 3: Immunity against Electrical Fast Transients (EFT)

| Coupling point | Application | Level (kV) | Result | Remark |
|---|---|---|---|---|
| AC power port | Coupling network | ±1 | Pass | A |
| DC power port* | Coupling network | N/A | N/A | |
| Signal lines* | Coupling clamp | N/A | N/A | |
| Control lines | Coupling clamp | N/A | N/A | |
| note:<br>A:Equipment operated as intended, no degradation of function.<br>*:The control cable is less than 2m, so the test on control terminal is not applicable. | | | | |



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## 7.3.2 Surge

**RESULT:** **Pass**

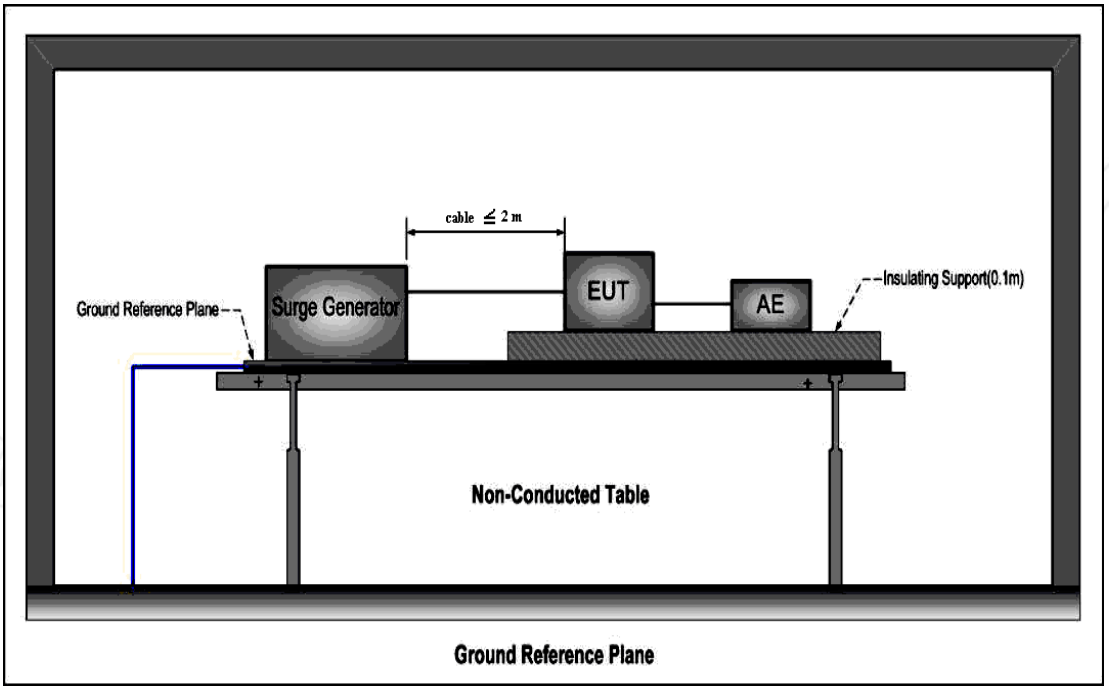
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-2:2021 |
| Basic standard | : | IEC 61000-4-5 |
| Pulse form | : | $T_r/T_h$=1.2/50μs |
| Coupling | | Coupling Network for AC Mains |
| Coupling phases | : | 90°,270° |
| Number of surges / polarity /phase angle | : | 5 |
| Repetition rate | : | 60s |
| Performance criterion | : | B |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 18 Dec, 2025 |
| Input voltage | : | AC 230V, 50Hz |
| Operation mode | | A |
| Temperature | : | 23°C |
| Humidity | : | 51% |
| Air pressure | : | 101kPA |

**Test Connection Diagram**



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## Test Result

### Table 4: Surge Immunity Tests

| Coupling point | Application | Level (kV) | Polarity | Remark |
|---|---|---|---|---|
| AC power port | Between phase and neutral | 1 | + | Applied, *) |
| | | 1 | - | Applied, *) |
| AC power port | Between phase and earth | 2 | + | Applied, *) |
| | | 2 | - | Applied, *) |
| AC power port | Between neutral and earth | 2 | + | Applied, *) |
| | | 2 | - | Applied, *) |

*) Remark: No degradation was found.



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## 7.3.3 Electrostatic Discharges (ESD)

**RESULT:** **Pass**

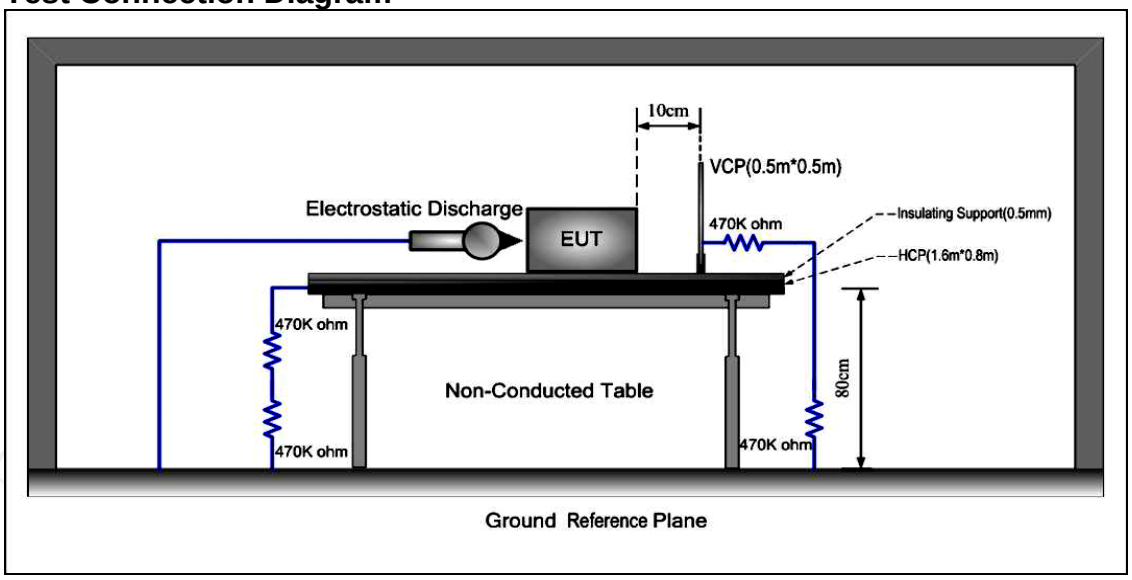
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-2:2021 |
| Basic standard | : | IEC 61000-4-2 |
| Charge voltage | : | ±4kV (contact, VCP, HCP)<br>±8kV (air discharge) |
| Number of discharges | : | > 10 |
| Polarity | : | Positive / Negative |
| Performance criterion | : | B |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 18 Dec, 2025 |
| Input voltage | : | AC 230V, 50Hz |
| Operation mode | | A |
| Temperature | : | 23°C |
| Humidity | : | 51% |
| Air pressure | : | 101kPA |

**Test Connection Diagram**



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**Test Result**

**Table 5: Electrostatic Discharge**

| Direct discharges | | | |
|---|---|---|---|
| Air discharges<br>Discharge location | Air discharge voltage (kV) | Polarity | Remark |
| Non-conductive parts | 8 | +/- | Applied, *) |
| Contact discharges<br>Discharge location | Contact discharge voltage (kV) | Polarity | Remark |
| Conductive parts | 4 | +/- | Applied, *) |
| Indirect discharges | | | |
| Contact discharges<br>Discharge location | Contact discharge voltage (kV) | Polarity | Remark |
| HCP | 4 | +/- | Applied, *) |
| VCP | 4 | +/- | Applied, *) |

*) Remark: No degradation was found.



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# 7.4 Power Supply Alterations

## 7.4.1 Voltage Dips and Interruptions

**RESULT:** **Pass**

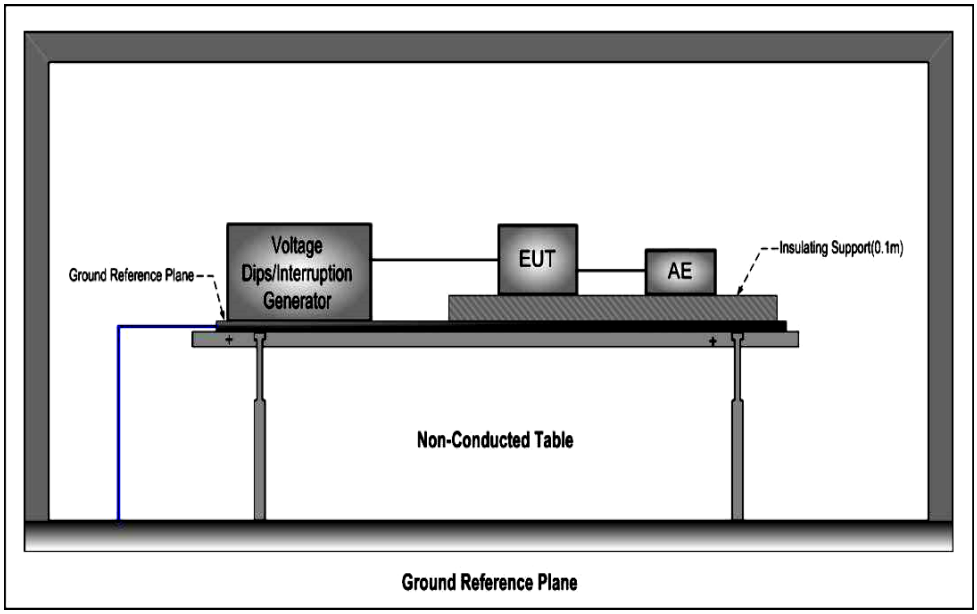
**Test Specification**

| | | |
|---|---|---|
| Family standard | : | EN IEC 55014-2:2021 |
| Basic standard | : | IEC 61000-4-11 |
| Phase angle | : | 0° |
| Test level | | Refer to table 6 |
| Number of voltage dips/ interruptions | : | 3 |
| Interval | : | >10s |
| Performance criterion | : | C |

**Test Setup**

| | | |
|---|---|---|
| Date of testing | : | 18 Dec, 2025 |
| Input voltage | : | AC 230V, 50Hz/AC 230V, 60Hz |
| Operation mode | | A |
| Temperature | : | 23°C |
| Humidity | : | 51% |
| Air pressure | : | 101kPA |

**Test Connection Diagram:**



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## Test Result

### Table 6: Voltage Dip and Interruptions Immunity

| Interruptions | | | |
|---|---|---|---|
| Test level (% Ut) | Duration (cycle) | Number of interruptions | Result |
| 0 | 0.5 | 3 | Applied, *) |
| Voltage dips | | | |
| Test level (% Ut) | Duration (cycle) | Number of voltage dips | Result |
| 40 | 10/12 | 3 | Applied, *) |
| 70 | 25/30 | 3 | Applied, *) |

*) Remark: No degradation was found.



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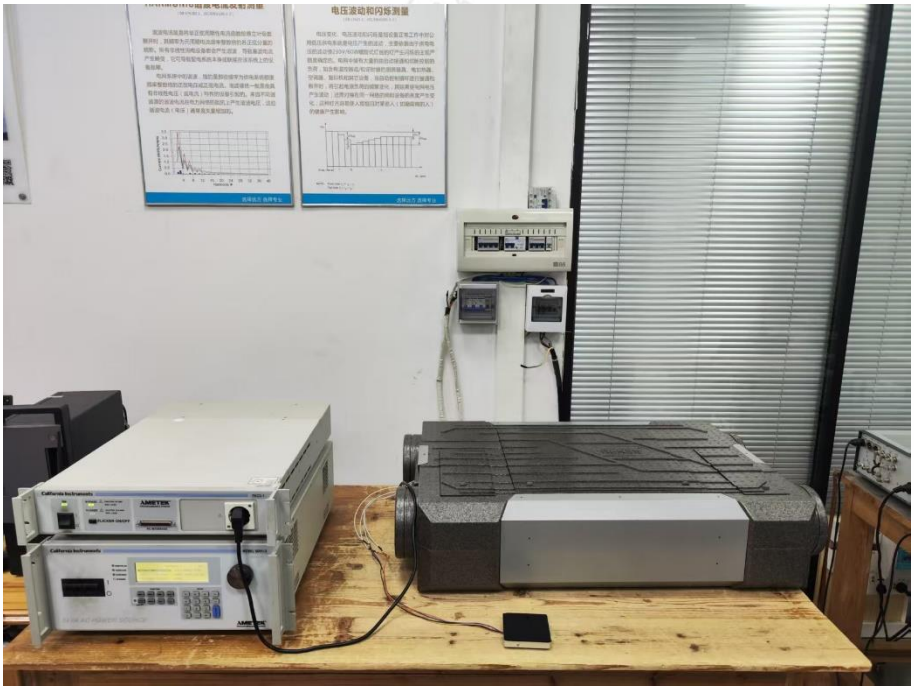
# 8. The photos of test setting

Harmonics and flick on AC Mains:



Terminal Continuous Disturbance Voltage:



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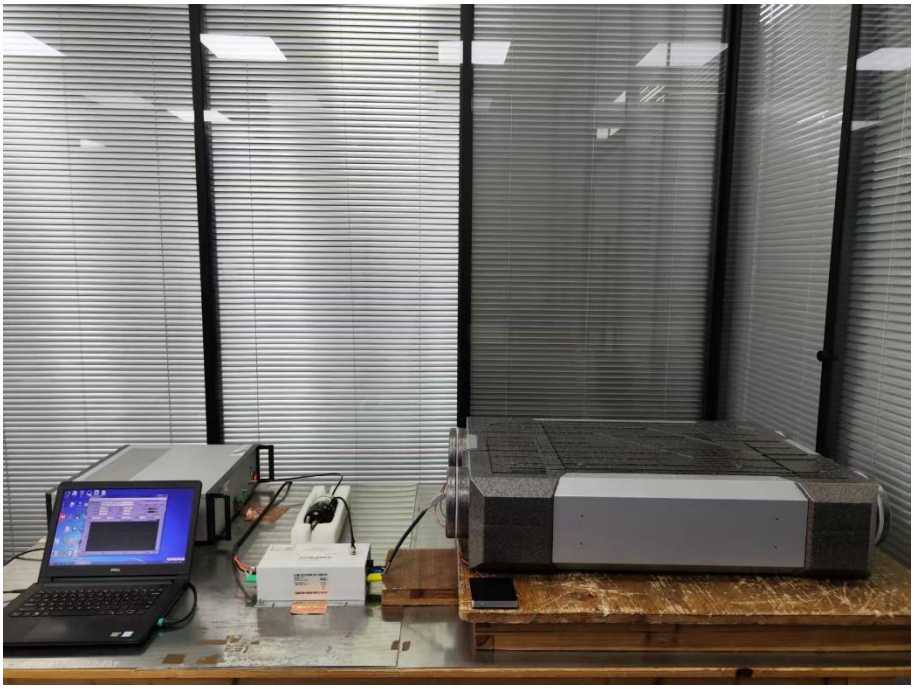
Disturbance Power:

Radio-frequency Common Mode / Conducted Susceptibility (CS):





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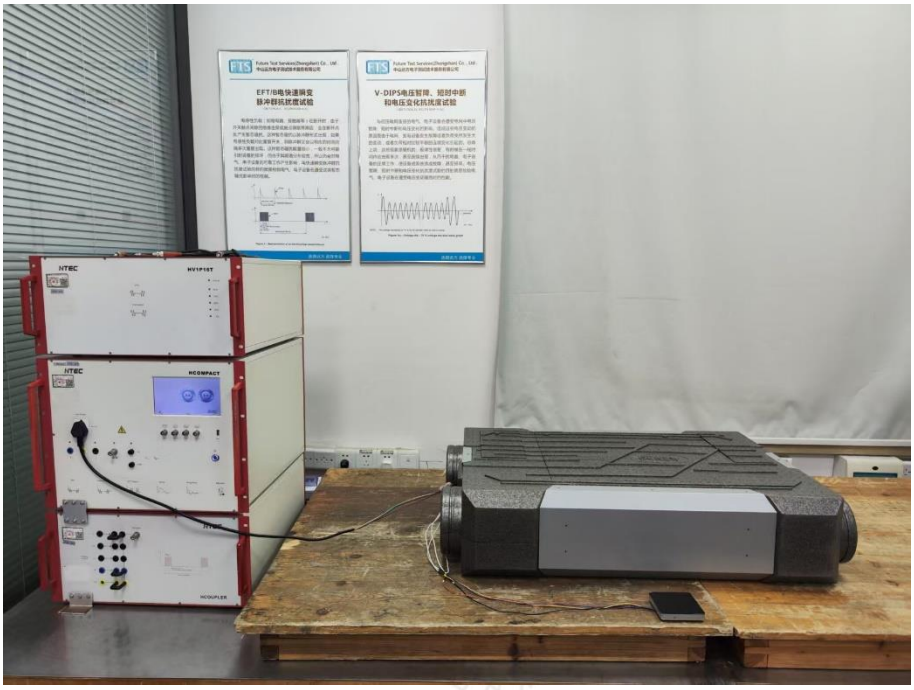
Electrical Fast Transients (EFT)/ Voltage Dip and Interruptions:




Electrostatic Discharges (ESD):

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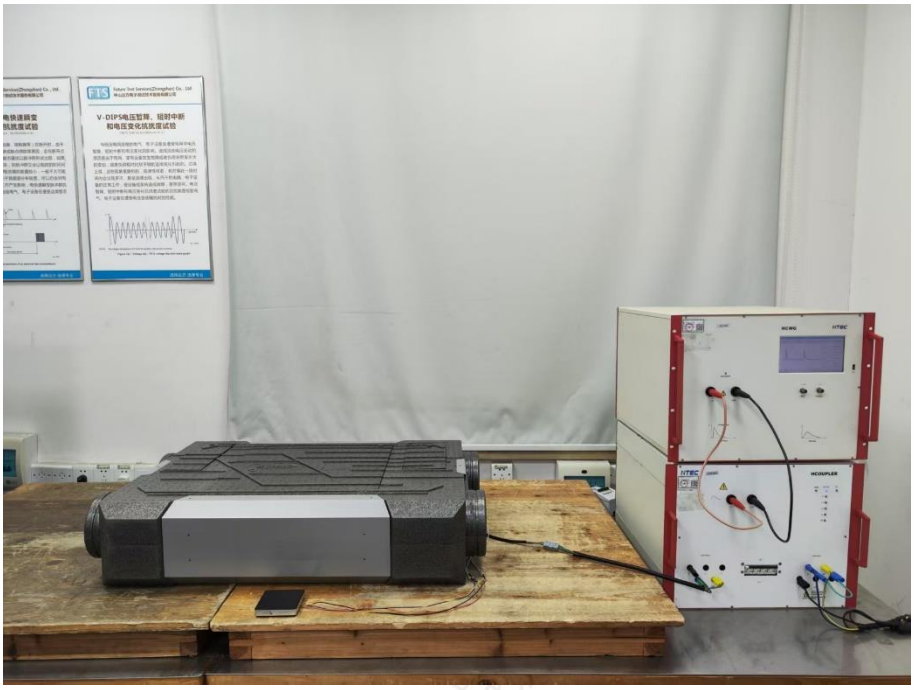
Surge:





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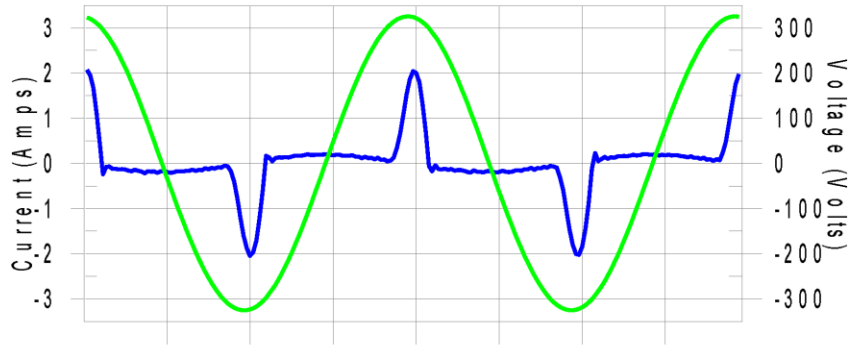
San Diego, California

## Harmonics – Class-A per IEC 61000-3-2:2018+A1:2020+A2:2024(Run time)

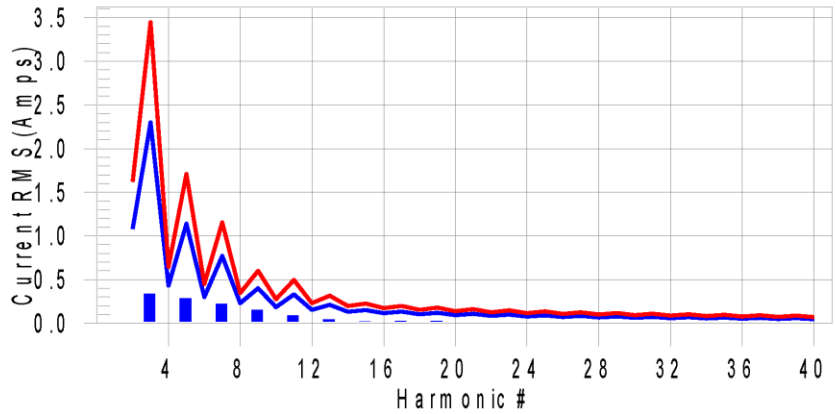
**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: Class-A (European limits)** **Test Margin: 100**
**Test date: 2025/12/17** **Start time: 16:44:24** **End time: 16:47:05**
**Test duration (min): 2.5** **Data file name: H-001235.cts_data**
**Comment: ZX10190I**
**Customer: Max power**

**Test Result: Pass** **Source qualification: Normal**

**Current & voltage waveforms**




**Harmonics and Class A limit line** **European Limits**




**Test result: Pass Worst harmonics H9-25.4% of 150% limit, H9-37.6% of 100% limit**



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## Current Test Result Summary (Run time)

**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: Class-A (European limits)** **Test Margin: 100**
**Test date: 2025/12/17** **Start time: 16:44:24** **End time: 16:47:05**
**Test duration (min): 2.5** **Data file name: H-001235.cts_data**
**Comment: ZX10190I**
**Customer: Max power**

**Test Result: Pass** **Source qualification: Normal**
**THC(A): 0.529** **I-THD(%): 138.8** **POHC(A): 0.036** **POHC Limit(A): 0.251**

**Highest parameter values during test:**

| | | | |
|---|---|---|---|
| V_RMS (Volts): | 230.47 | Frequency(Hz): | 50.00 |
| I_Peak (Amps): | 2.090 | I_RMS (Amps): | 0.658 |
| I_Fund (Amps): | 0.381 | Crest Factor: | 3.185 |
| Power (Watts): | 85.1 | Power Factor: | 0.562 |

| Harm# | Harms(avg) | 100%Limit | %of Limit | Harms(max) | 150%Limit | %of Limit | Status |
|---|---|---|---|---|---|---|---|
| 2 | 0.002 | 1.080 | N/A | 0.002 | 1.620 | N/A | Pass |
| 3 | 0.338 | 2.300 | 14.7 | 0.343 | 3.450 | 9.9 | Pass |
| 4 | 0.001 | 0.430 | N/A | 0.002 | 0.645 | N/A | Pass |
| 5 | 0.286 | 1.140 | 25.1 | 0.290 | 1.710 | 16.9 | Pass |
| 6 | 0.000 | 0.300 | N/A | 0.001 | 0.450 | N/A | Pass |
| 7 | 0.220 | 0.770 | 28.6 | 0.223 | 1.155 | 19.3 | Pass |
| 8 | 0.000 | 0.230 | N/A | 0.001 | 0.345 | N/A | Pass |
| 9 | 0.151 | 0.400 | 37.6 | 0.153 | 0.600 | 25.4 | Pass |
| 10 | 0.001 | 0.184 | N/A | 0.001 | 0.276 | N/A | Pass |
| 11 | 0.089 | 0.330 | 26.8 | 0.090 | 0.495 | 18.2 | Pass |
| 12 | 0.001 | 0.153 | N/A | 0.001 | 0.230 | N/A | Pass |
| 13 | 0.043 | 0.210 | 20.5 | 0.044 | 0.315 | 14.0 | Pass |
| 14 | 0.001 | 0.131 | N/A | 0.001 | 0.197 | N/A | Pass |
| 15 | 0.024 | 0.150 | 15.8 | 0.024 | 0.225 | 10.8 | Pass |
| 16 | 0.001 | 0.115 | N/A | 0.001 | 0.173 | N/A | Pass |
| 17 | 0.025 | 0.132 | 18.8 | 0.025 | 0.198 | 12.7 | Pass |
| 18 | 0.000 | 0.102 | N/A | 0.001 | 0.153 | N/A | Pass |
| 19 | 0.024 | 0.118 | 20.3 | 0.024 | 0.178 | 13.7 | Pass |
| 20 | 0.000 | 0.092 | N/A | 0.000 | 0.138 | N/A | Pass |
| 21 | 0.019 | 0.107 | 17.6 | 0.019 | 0.161 | 12.0 | Pass |
| 22 | 0.000 | 0.084 | N/A | 0.001 | 0.125 | N/A | Pass |
| 23 | 0.014 | 0.098 | 14.6 | 0.015 | 0.147 | 9.9 | Pass |
| 24 | 0.000 | 0.077 | N/A | 0.001 | 0.115 | N/A | Pass |
| 25 | 0.013 | 0.090 | 14.0 | 0.013 | 0.135 | 9.5 | Pass |
| 26 | 0.001 | 0.071 | N/A | 0.001 | 0.107 | N/A | Pass |
| 27 | 0.012 | 0.083 | 14.2 | 0.012 | 0.125 | 9.8 | Pass |
| 28 | 0.002 | 0.066 | N/A | 0.002 | 0.099 | N/A | Pass |
| 29 | 0.011 | 0.078 | 13.6 | 0.011 | 0.116 | 9.3 | Pass |
| 30 | 0.001 | 0.061 | N/A | 0.001 | 0.092 | N/A | Pass |
| 31 | 0.010 | 0.073 | 13.3 | 0.010 | 0.109 | 9.1 | Pass |
| 32 | 0.002 | 0.058 | N/A | 0.002 | 0.086 | N/A | Pass |
| 33 | 0.009 | 0.068 | 13.6 | 0.010 | 0.102 | 9.3 | Pass |
| 34 | 0.001 | 0.054 | N/A | 0.001 | 0.081 | N/A | Pass |
| 35 | 0.008 | 0.064 | 13.0 | 0.009 | 0.096 | 8.9 | Pass |
| 36 | 0.000 | 0.051 | N/A | 0.000 | 0.077 | N/A | Pass |
| 37 | 0.007 | 0.061 | 11.3 | 0.007 | 0.091 | 7.7 | Pass |
| 38 | 0.000 | 0.048 | N/A | 0.000 | 0.073 | N/A | Pass |
| 39 | 0.006 | 0.058 | 10.9 | 0.006 | 0.087 | 7.4 | Pass |
| 40 | 0.001 | 0.046 | N/A | 0.001 | 0.069 | N/A | Pass |

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San Diego, California

## Voltage Source Verification Data (Run time)

**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: Class-A (European limits)** **Test Margin: 100**
**Test date: 2025/12/17** **Start time: 16:44:24** **End time: 16:47:05**
**Test duration (min): 2.5** **Data file name: H-001235.cts_data**
**Comment: ZX10190I**
**Customer: Max power**

**Test Result: Pass** **Source qualification: Normal**

**Highest parameter values during test:**

| | | | |
|---|---|---|---|
| Voltage (Vrms): | 230.47 | Frequency(Hz): | 50.00 |
| I_Peak (Amps): | 2.090 | I_RMS (Amps): | 0.658 |
| I_Fund (Amps): | 0.381 | Crest Factor: | 3.185 |
| Power (Watts): | 85.1 | Power Factor: | 0.562 |

| Harm# | Harmonics V-rms | Limit V-rms | % of Limit | Status |
|---|---|---|---|---|
| 2 | 0.063 | 0.461 | 13.61 | OK |
| 3 | 0.510 | 2.074 | 24.60 | OK |
| 4 | 0.070 | 0.461 | 15.10 | OK |
| 5 | 0.060 | 0.922 | 6.47 | OK |
| 6 | 0.036 | 0.461 | 7.80 | OK |
| 7 | 0.100 | 0.691 | 14.49 | OK |
| 8 | 0.012 | 0.461 | 2.51 | OK |
| 9 | 0.051 | 0.461 | 11.17 | OK |
| 10 | 0.016 | 0.461 | 3.39 | OK |
| 11 | 0.045 | 0.230 | 19.59 | OK |
| 12 | 0.015 | 0.230 | 6.56 | OK |
| 13 | 0.031 | 0.230 | 13.48 | OK |
| 14 | 0.009 | 0.230 | 3.89 | OK |
| 15 | 0.021 | 0.230 | 9.17 | OK |
| 16 | 0.005 | 0.230 | 2.30 | OK |
| 17 | 0.021 | 0.230 | 8.92 | OK |
| 18 | 0.009 | 0.230 | 3.70 | OK |
| 19 | 0.026 | 0.230 | 11.08 | OK |
| 20 | 0.035 | 0.230 | 15.26 | OK |
| 21 | 0.023 | 0.230 | 10.15 | OK |
| 22 | 0.006 | 0.230 | 2.58 | OK |
| 23 | 0.017 | 0.230 | 7.17 | OK |
| 24 | 0.003 | 0.230 | 1.22 | OK |
| 25 | 0.016 | 0.230 | 6.89 | OK |
| 26 | 0.003 | 0.230 | 1.22 | OK |
| 27 | 0.019 | 0.230 | 8.42 | OK |
| 28 | 0.004 | 0.230 | 1.65 | OK |
| 29 | 0.015 | 0.230 | 6.67 | OK |
| 30 | 0.003 | 0.230 | 1.20 | OK |
| 31 | 0.014 | 0.230 | 6.08 | OK |
| 32 | 0.002 | 0.230 | 0.99 | OK |
| 33 | 0.016 | 0.230 | 6.76 | OK |
| 34 | 0.003 | 0.230 | 1.21 | OK |
| 35 | 0.015 | 0.230 | 6.54 | OK |
| 36 | 0.003 | 0.230 | 1.16 | OK |
| 37 | 0.011 | 0.230 | 4.88 | OK |
| 38 | 0.003 | 0.230 | 1.45 | OK |
| 39 | 0.011 | 0.230 | 4.88 | OK |
| 40 | 0.020 | 0.230 | 8.83 | OK |

AMETEK Programmable Power CTS 4 V4.33.0 Page 3 of 3



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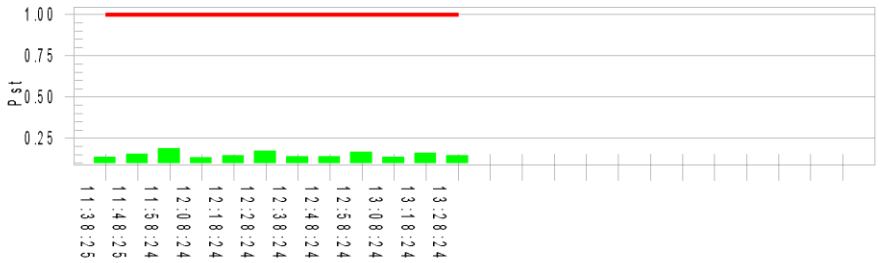
San Diego, California

## Flicker Test Summary per IEC61000-3-3:2013+A1:2017+A2:2021 (Run time)

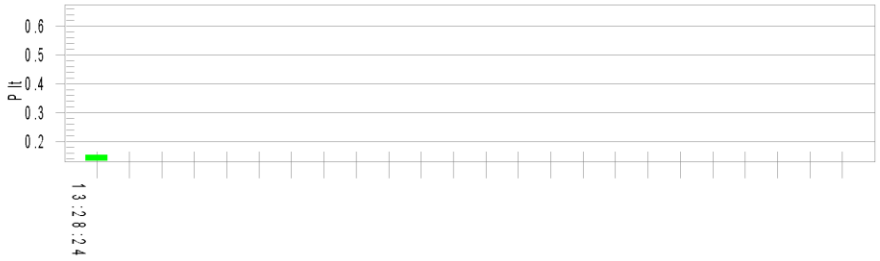
**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: All parameters (European limits)** **Test Margin: 100**
**Test date: 2025/12/18** **Start time: 11:28:04** **End time: 13:29:37**
**Test duration (min): 120** **Data file name: F-001160.cts_data**
**Comment: ZX10190I**
**Customer: Auto mode**

**Test Result: Pass** **Status: Test Completed**

**$Pst_i$ and limit line** **European Limits**




**Plt and limit line**




**Parameter values recorded during the test:**

| | | | | |
|---|---|---|---|---|
| **Vrms at the end of test (Volt):** | **230.45** | | | |
| **T-max (mS):** | **0** | **Test limit (mS):** | **500.0** | **Pass** |
| **Highest dc (%):** | **0.00** | **Test limit (%):** | **3.30** | **Pass** |
| **Highest dmax (%):** | **0.00** | **Test limit (%):** | **4.00** | **Pass** |
| **Highest Pst (10 min. period):** | **0.188** | **Test limit:** | **1.000** | **Pass** |
| **Highest Plt (2 hr. period):** | **0.154** | **Test limit:** | **0.650** | **Pass** |

AMETEK Programmable Power CTS 4 V4.33.0 Page 1 of 1



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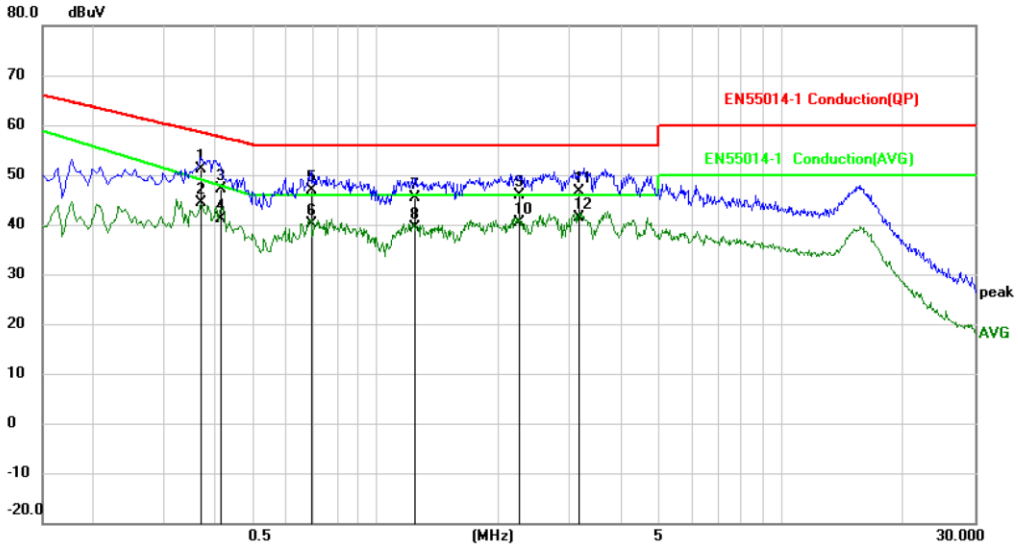
**Conducted Emission Measurement**

File :1 Data :#13 Date: 2025/12/17 Time: 1:38:42




Site LAB
Limit: EN55014-1 Conduction(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: Max power
Note:

Phase: *L1*
Power: AC230V/50Hz

Temperature: 23.6
Humidity: 42 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.3695 | 31.09 | 20.05 | 51.14 | 58.51 | -7.37 | QP | |
| 2 | | 0.3695 | 24.22 | 20.05 | 44.27 | 49.27 | -5.00 | AVG | |
| 3 | | 0.4151 | 27.03 | 20.05 | 47.08 | 57.55 | -10.47 | QP | |
| 4 | | 0.4151 | 21.03 | 20.05 | 41.08 | 48.01 | -6.93 | AVG | |
| 5 | | 0.6900 | 27.07 | 19.83 | 46.90 | 56.00 | -9.10 | QP | |
| 6 | | 0.6900 | 20.25 | 19.83 | 40.08 | 46.00 | -5.92 | AVG | |
| 7 | | 1.2389 | 26.07 | 19.27 | 45.34 | 56.00 | -10.66 | QP | |
| 8 | | 1.2389 | 20.05 | 19.27 | 39.32 | 46.00 | -6.68 | AVG | |
| 9 | | 2.2559 | 26.47 | 19.30 | 45.77 | 56.00 | -10.23 | QP | |
| 10 | | 2.2559 | 21.10 | 19.30 | 40.40 | 46.00 | -5.60 | AVG | |
| 11 | | 3.1650 | 27.15 | 19.38 | 46.53 | 56.00 | -9.47 | QP | |
| 12 | * | 3.1650 | 21.91 | 19.38 | 41.29 | 46.00 | -4.71 | AVG | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

*File :1\Data :#13* *Page: 1* Engineer Signature:



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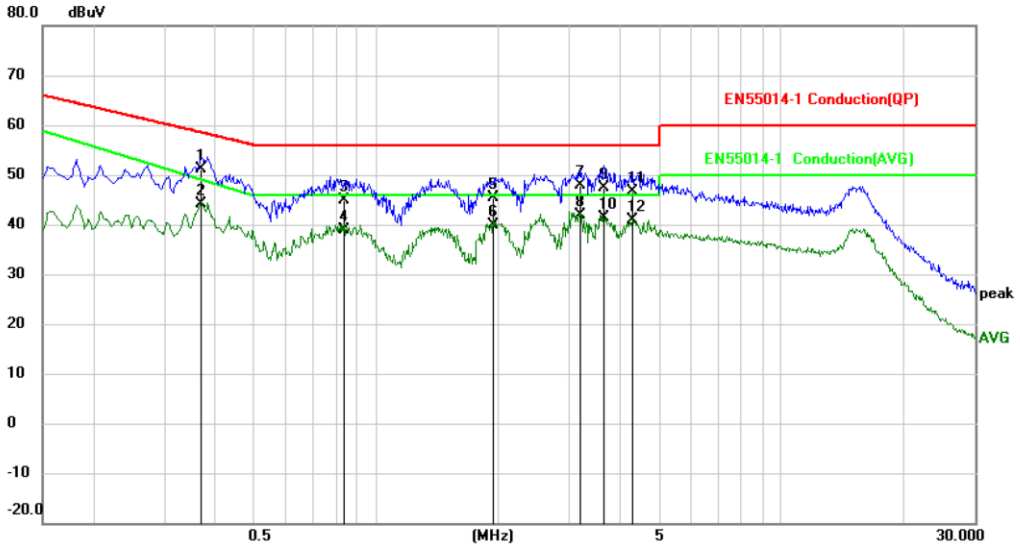
**Conducted Emission Measurement**

File :1 Data :#14 Date: 2025/12/17 Time: 1:42:30




Site LAB
Limit: EN55014-1 Conduction(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: Max power
Note:

Phase: *N*
Power: AC230V/50Hz

Temperature: 23.6
Humidity: 42 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.3704 | 31.17 | 20.06 | 51.23 | 58.49 | -7.26 | QP | |
| 2 | | 0.3704 | 24.01 | 20.06 | 44.07 | 49.24 | -5.17 | AVG | |
| 3 | | 0.8339 | 25.21 | 19.59 | 44.80 | 56.00 | -11.20 | QP | |
| 4 | | 0.8339 | 19.30 | 19.59 | 38.89 | 46.00 | -7.11 | AVG | |
| 5 | | 1.9454 | 25.98 | 19.29 | 45.27 | 56.00 | -10.73 | QP | |
| 6 | | 1.9454 | 20.53 | 19.29 | 39.82 | 46.00 | -6.18 | AVG | |
| 7 | | 3.1875 | 28.56 | 19.33 | 47.89 | 56.00 | -8.11 | QP | |
| 8 | * | 3.1875 | 22.55 | 19.33 | 41.88 | 46.00 | -4.12 | AVG | |
| 9 | | 3.6600 | 27.95 | 19.35 | 47.30 | 56.00 | -8.70 | QP | |
| 10 | | 3.6600 | 21.93 | 19.35 | 41.28 | 46.00 | -4.72 | AVG | |
| 11 | | 4.3125 | 27.33 | 19.36 | 46.69 | 56.00 | -9.31 | QP | |
| 12 | | 4.3125 | 21.40 | 19.36 | 40.76 | 46.00 | -5.24 | AVG | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

*File :1\Data :#14* *Page: 1* Engineer Signature:



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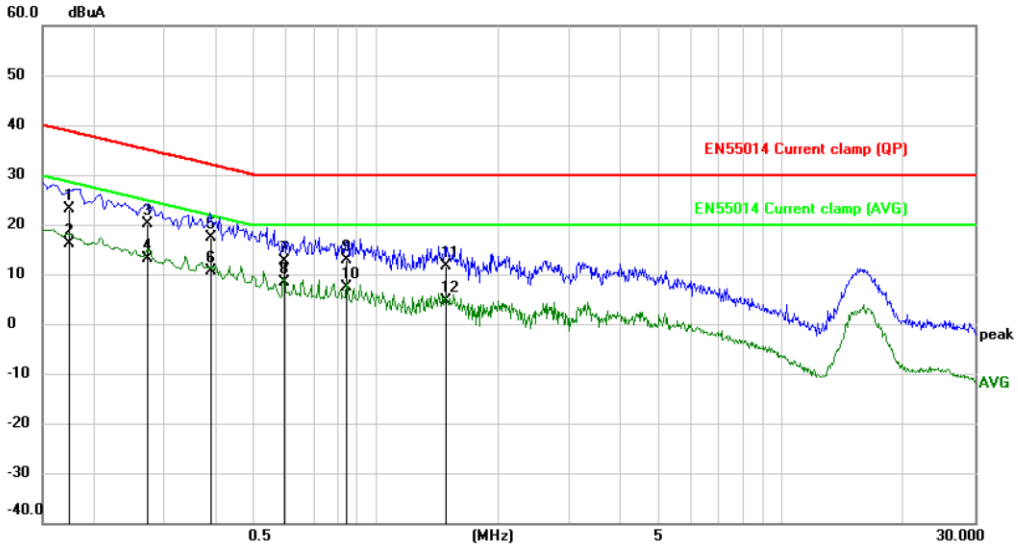
**Conducted Emission Measurement**

File :1 Data :#11 Date: 2025/12/18 Time: 22:26:48




Site LAB
Limit: EN55014 Current clamp (QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: max power
Note:

Phase: *L1*
Power: AC230V/50Hz

Temperature: 24
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuA | dBuA | dB | Detector | Comment |
| 1 | | 0.1748 | 19.94 | 3.26 | 23.20 | 38.73 | -15.53 | QP | |
| 2 | | 0.1748 | 12.80 | 3.26 | 16.06 | 28.73 | -12.67 | AVG | |
| 3 | | 0.2714 | 20.71 | -0.49 | 20.22 | 35.07 | -14.85 | QP | |
| 4 | | 0.2714 | 13.50 | -0.49 | 13.01 | 25.07 | -12.06 | AVG | |
| 5 | | 0.3930 | 20.51 | -3.03 | 17.48 | 32.00 | -14.52 | QP | |
| 6 | * | 0.3930 | 13.74 | -3.03 | 10.71 | 22.00 | -11.29 | AVG | |
| 7 | | 0.5909 | 18.46 | -5.72 | 12.74 | 30.00 | -17.26 | QP | |
| 8 | | 0.5909 | 14.06 | -5.72 | 8.34 | 20.00 | -11.66 | AVG | |
| 9 | | 0.8474 | 20.21 | -7.39 | 12.82 | 30.00 | -17.18 | QP | |
| 10 | | 0.8474 | 14.85 | -7.39 | 7.46 | 20.00 | -12.54 | AVG | |
| 11 | | 1.4865 | 20.42 | -8.68 | 11.74 | 30.00 | -18.26 | QP | |
| 12 | | 1.4865 | 13.36 | -8.68 | 4.68 | 20.00 | -15.32 | AVG | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

*File :1\Data :#11* *Page: 1* Engineer Signature:



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FUTURE TEST SERVICES

## Click test data

**Project No: FTS26AP-00442**
**EUT: ENERGY RECOVERY VENTILATOR**
**Model: ZX10190I**
**Test Voltage/Freq.: AC 230V/50Hz**
**Operation mode: Auto mode**
**Observation time (min.): 120 min**

**Standard: EN IEC 55014-1:2021**
**Temperature : 23 ℃**
**Humidity : 50 %;**
**Atmosphere : 101 kPa**

| | 150 kHz | 500 kHz | 1.4 MHz | 30 MHz |
|---|---|---|---|---|
| **First Run** | | | | |
| Short | 0 | 0 | 0 | 0 |
| Long | 0 | 0 | 0 | 0 |
| Long (10< t ≤20 ms) | 0 | 0 | 0 | 0 |
| Tot. Clicks Corr | 0 | 0 | 0 | 0 |
| Events | 0 | 0 | 0 | 0 |
| Time(s) | 0.00 | 0.00 | 0.00 | 0.00 |
| Sw.Op. | 0 | 0 | 0 | 0 |
| Limit dBuV | 66 | 56 | 56 | 60 |
| N | 0.00 | 0.00 | 0.00 | 0.00 |
| NewLimit [dBuV] | --- | --- | --- | --- |
| Allowed Clicks | ---- | ---- | ---- | ---- |
| **Second round (☐YES,☒NO)** | | | | |
| Short | --- | --- | --- | --- |
| Long | ---- | ---- | ---- | ---- |
| Tot. Clicks Corr | --- | --- | --- | --- |
| Events | ---- | ---- | ---- | ---- |
| Time(s) | --- | --- | --- | --- |
| 4.2.3.4 events | ---- | ---- | ---- | ---- |
| Complies with the limit (Pass/Fail) | **PASS** | **PASS** | **PASS** | **PASS** |

The appliance was deemed to comply with the limits if fulfilling the three conditions below:
– the click rate is not more than 5.
– none of the caused clicks has a duration longer than 20 ms.
– 90 % of the caused clicks have a duration less than 10 ms.

Tested By/ Date: Charles 2025/12/17 Reviewer/Date: George Wu 2025/12/17



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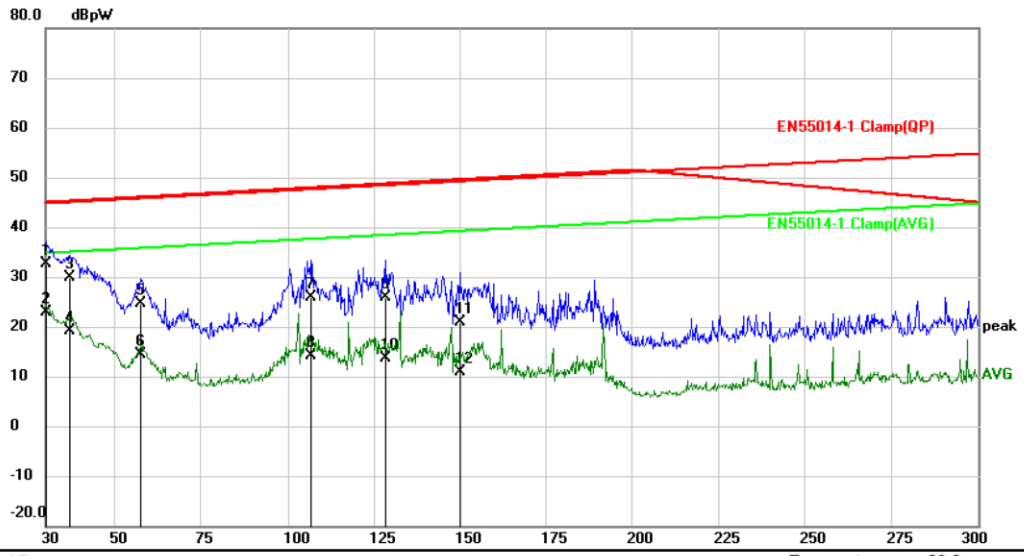
**Disturbance Power Measurement**

File :1 Data :#24 Date: 2025/12/17 Time: 2:24:54




Site LAB
Limit: EN55014-1 Clamp(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: Max power
Note: AC Port

Power: AC230V/50Hz

Temperature: 23.6
Humidity: 42 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | Position | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 1 | | 30.3386 | 5.34 | 27.27 | 32.61 | 45.01 | -12.40 | QP | | |
| 2 | * | 30.3386 | -4.36 | 27.27 | 22.91 | 35.01 | -12.10 | AVG | | |
| 3 | | 37.1400 | 3.69 | 26.30 | 29.99 | 45.27 | -15.28 | QP | | |
| 4 | | 37.1400 | -7.13 | 26.30 | 19.17 | 35.26 | -16.09 | AVG | | |
| 5 | | 57.7800 | 0.30 | 24.22 | 24.52 | 46.06 | -21.54 | QP | | |
| 6 | | 57.7800 | -9.88 | 24.22 | 14.34 | 36.03 | -21.69 | AVG | | |
| 7 | | 107.1000 | 1.42 | 24.34 | 25.76 | 47.95 | -22.19 | QP | | |
| 8 | | 107.1000 | -10.22 | 24.34 | 14.12 | 37.86 | -23.74 | AVG | | |
| 9 | | 128.5200 | 1.72 | 24.06 | 25.78 | 48.77 | -22.99 | QP | | |
| 10 | | 128.5200 | -10.50 | 24.06 | 13.56 | 38.65 | -25.09 | AVG | | |
| 11 | | 150.0600 | -2.78 | 23.70 | 20.92 | 49.59 | -28.67 | QP | | |
| 12 | | 150.0600 | -12.90 | 23.70 | 10.80 | 39.45 | -28.65 | AVG | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.

*File :1\Data :#24* *Page: 1* Engineer Signature:



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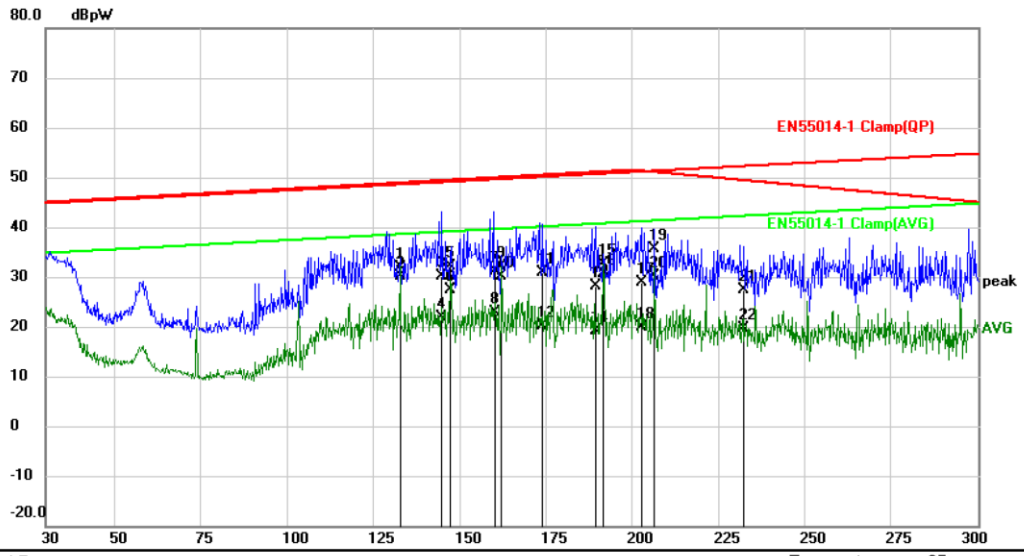
**Disturbance Power Measurement**

File :1 Data :#10 Date: 2025/12/16 Time: 22:55:27




Site LAB
Limit: EN55014-1 Clamp(QP) ENERGY
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: max power
Note: control line near controller

Power: AC230V/50Hz

Temperature: 25
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | Position | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 1 | | 132.7200 | 7.85 | 23.95 | 31.80 | 48.93 | -17.13 | QP | | |
| 2 | * | 132.7200 | 6.24 | 23.95 | 30.19 | 38.80 | -8.61 | AVG | | |
| 3 | | 144.4647 | 6.31 | 23.81 | 30.12 | 49.38 | -19.26 | QP | | |
| 4 | | 144.4647 | -1.93 | 23.81 | 21.88 | 39.24 | -17.36 | AVG | | |
| 5 | | 147.4200 | 8.33 | 23.75 | 32.08 | 49.49 | -17.41 | QP | | |
| 6 | | 147.4200 | 3.70 | 23.75 | 27.45 | 39.35 | -11.90 | AVG | | |
| 7 | | 160.2534 | 7.14 | 23.90 | 31.04 | 49.98 | -18.94 | QP | | |
| 8 | | 160.2534 | -1.03 | 23.90 | 22.87 | 39.82 | -16.95 | AVG | | |
| 9 | | 162.1741 | 8.29 | 23.94 | 32.23 | 50.05 | -17.82 | QP | | |
| 10 | | 162.1741 | 6.26 | 23.94 | 30.20 | 39.90 | -9.70 | AVG | | |
| 11 | | 173.4603 | 7.17 | 23.67 | 30.84 | 50.49 | -19.65 | QP | | |
| 12 | | 173.4603 | -3.45 | 23.67 | 20.22 | 40.31 | -20.09 | AVG | | |
| 13 | | 189.5469 | 4.62 | 23.61 | 28.23 | 51.10 | -22.87 | QP | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.

*File :1\Data :#10* *Page: 1* Engineer Signature:



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Site LAB
Limit: EN55014-1 Clamp(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: max power
Note: control line near controller

Power: AC230V/50Hz

Temperature: 25
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Position | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 14 | | 189.5469 | -4.38 | 23.61 | 19.23 | 40.91 | -21.68 | AVG | | |
| 15 | | 191.6148 | 9.05 | 23.63 | 32.68 | 51.18 | -18.50 | QP | | |
| 16 | | 191.6148 | 6.89 | 23.63 | 30.52 | 40.99 | -10.47 | AVG | | |
| 17 | | 202.4559 | 5.14 | 23.65 | 28.79 | 51.34 | -22.55 | QP | | |
| 18 | | 202.4559 | -3.80 | 23.65 | 19.85 | 41.39 | -21.54 | AVG | | |
| 19 | | 206.3892 | 12.09 | 23.53 | 35.62 | 51.08 | -15.46 | QP | | |
| 20 | | 206.3892 | 6.56 | 23.53 | 30.09 | 41.53 | -11.44 | AVG | | |
| 21 | | 231.8487 | 2.95 | 24.38 | 27.33 | 49.43 | -22.10 | QP | | |
| 22 | | 231.8487 | -4.78 | 24.38 | 19.60 | 42.48 | -22.88 | AVG | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.
*File :1\Data :#10* *Page: 2* Engineer Signature:



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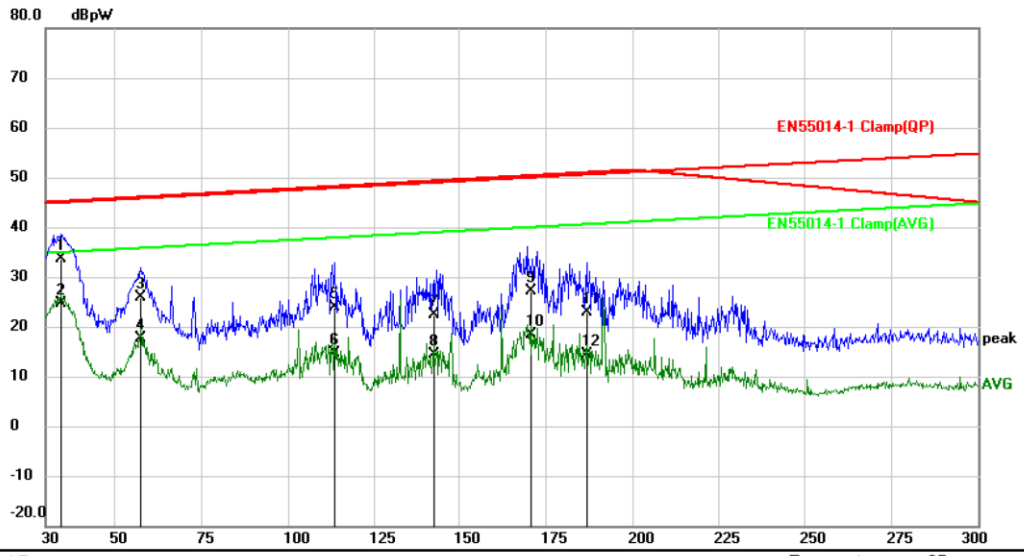
**Disturbance Power Measurement**

File :1 Data :#7 Date: 2025/12/16 Time: 22:48:00




Site LAB
Limit: EN55014-1 Clamp(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10190I
Mode: max power
Note: control line near ENERGY RECOVERY VENTILATOR

Power: AC230V/50Hz

Temperature: 25
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | Position | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 1 | | 34.3200 | 6.61 | 26.95 | 33.56 | 45.17 | -11.61 | QP | | |
| 2 | * | 34.3200 | -2.37 | 26.95 | 24.58 | 35.16 | -10.58 | AVG | | |
| 3 | | 57.6000 | 1.63 | 24.24 | 25.87 | 46.06 | -20.19 | QP | | |
| 4 | | 57.6000 | -6.61 | 24.24 | 17.63 | 36.02 | -18.39 | AVG | | |
| 5 | | 113.9400 | -0.53 | 24.48 | 23.95 | 48.21 | -24.26 | QP | | |
| 6 | | 113.9400 | -9.76 | 24.48 | 14.72 | 38.11 | -23.39 | AVG | | |
| 7 | | 142.3200 | -1.41 | 23.85 | 22.44 | 49.29 | -26.85 | QP | | |
| 8 | | 142.3200 | -9.56 | 23.85 | 14.29 | 39.16 | -24.87 | AVG | | |
| 9 | | 170.4600 | 3.50 | 23.61 | 27.11 | 50.37 | -23.26 | QP | | |
| 10 | | 170.4600 | -5.18 | 23.61 | 18.43 | 40.20 | -21.77 | AVG | | |
| 11 | | 186.6000 | -0.71 | 23.67 | 22.96 | 50.99 | -28.03 | QP | | |
| 12 | | 186.6000 | -9.18 | 23.67 | 14.49 | 40.80 | -26.31 | AVG | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.

*File :1\Data :#7* *Page: 1* Engineer Signature:



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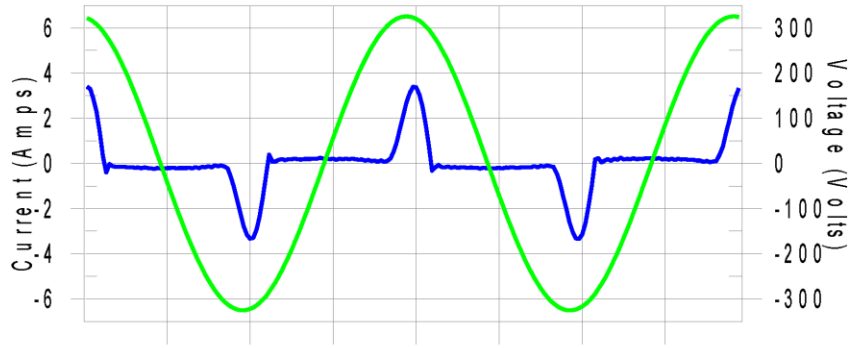
California Instruments
San Diego, California

## Harmonics – Class-A per IEC 61000-3-2:2018+A1:2020+A2:2024(Replay)

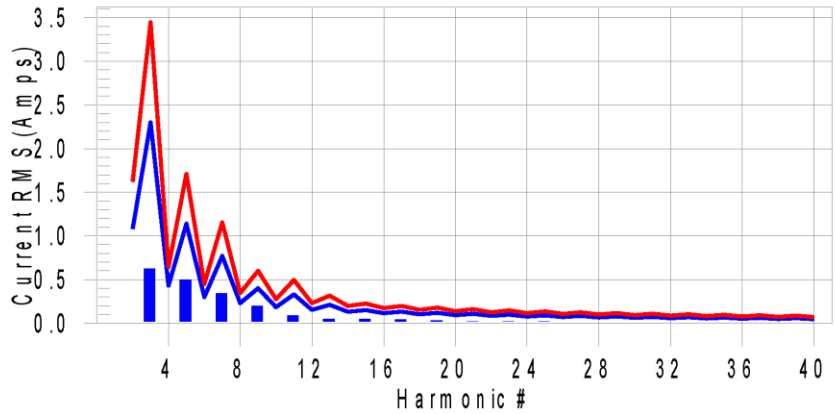
**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: Class-A (European limits)** **Test Margin: 100**
**Test date: 2025/11/19** **Start time: 17:06:46** **End time: 17:09:27**
**Test duration (min): 2.5** **Data file name: H-001237.cts_data**
**Comment: ZX10250I**
**Customer: Max power**

**Test Result: Pass** **Source qualification: Normal**

**Current & voltage waveforms**




**Harmonics and Class A limit line** **European Limits**




**Test result: Pass Worst harmonics H9-33.8% of 150% limit, H9-49.9% of 100% limit**

AMETEK Programmable Power CTS 4 V4.33.0 Page 1 of 3



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California Instruments
San Diego, California

## Current Test Result Summary (Replay)

**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: Class-A (European limits)** **Test Margin: 100**
**Test date: 2025/11/19** **Start time: 17:06:46** **End time: 17:09:27**
**Test duration (min): 2.5** **Data file name: H-001237.cts_data**
**Comment: ZX10250I**
**Customer: Max power**

**Test Result: Pass** **Source qualification: Normal**
**THC(A): 0.904** **I-THD(%): 128.4** **POHC(A): 0.054** **POHC Limit(A): 0.251**

**Highest parameter values during test:**

| | | | |
|---|---|---|---|
| V_RMS (Volts): | 230.46 | Frequency(Hz): | 50.00 |
| I_Peak (Amps): | 3.461 | I_RMS (Amps): | 1.156 |
| I_Fund (Amps): | 0.704 | Crest Factor: | 3.009 |
| Power (Watts): | 162.0 | Power Factor: | 0.610 |

| Harm# | Harms(avg) | 100%Limit | %of Limit | Harms(max) | 150%Limit | %of Limit | Status |
|---|---|---|---|---|---|---|---|
| 2 | 0.003 | 1.080 | N/A | 0.005 | 1.620 | N/A | Pass |
| 3 | 0.626 | 2.300 | 27.2 | 0.634 | 3.450 | 18.4 | Pass |
| 4 | 0.002 | 0.430 | N/A | 0.003 | 0.645 | N/A | Pass |
| 5 | 0.498 | 1.140 | 43.7 | 0.504 | 1.710 | 29.5 | Pass |
| 6 | 0.001 | 0.300 | N/A | 0.002 | 0.450 | N/A | Pass |
| 7 | 0.345 | 0.770 | 44.8 | 0.350 | 1.155 | 30.3 | Pass |
| 8 | 0.001 | 0.230 | N/A | 0.001 | 0.345 | N/A | Pass |
| 9 | 0.199 | 0.400 | 49.9 | 0.203 | 0.600 | 33.8 | Pass |
| 10 | 0.001 | 0.184 | N/A | 0.001 | 0.276 | N/A | Pass |
| 11 | 0.091 | 0.330 | 27.7 | 0.094 | 0.495 | 18.9 | Pass |
| 12 | 0.001 | 0.153 | N/A | 0.001 | 0.230 | N/A | Pass |
| 13 | 0.047 | 0.210 | 22.3 | 0.048 | 0.315 | 15.3 | Pass |
| 14 | 0.001 | 0.131 | N/A | 0.001 | 0.197 | N/A | Pass |
| 15 | 0.048 | 0.150 | 31.9 | 0.049 | 0.225 | 21.6 | Pass |
| 16 | 0.000 | 0.115 | N/A | 0.001 | 0.173 | N/A | Pass |
| 17 | 0.041 | 0.132 | 31.0 | 0.042 | 0.198 | 21.1 | Pass |
| 18 | 0.000 | 0.102 | N/A | 0.001 | 0.153 | N/A | Pass |
| 19 | 0.028 | 0.118 | 23.5 | 0.029 | 0.178 | 16.1 | Pass |
| 20 | 0.000 | 0.092 | N/A | 0.001 | 0.138 | N/A | Pass |
| 21 | 0.023 | 0.107 | 21.2 | 0.023 | 0.161 | 14.4 | Pass |
| 22 | 0.000 | 0.084 | N/A | 0.001 | 0.125 | N/A | Pass |
| 23 | 0.023 | 0.098 | 23.4 | 0.023 | 0.147 | 15.9 | Pass |
| 24 | 0.000 | 0.077 | N/A | 0.001 | 0.115 | N/A | Pass |
| 25 | 0.021 | 0.090 | 22.9 | 0.021 | 0.135 | 15.6 | Pass |
| 26 | 0.001 | 0.071 | N/A | 0.002 | 0.107 | N/A | Pass |
| 27 | 0.018 | 0.083 | 21.3 | 0.018 | 0.125 | 14.8 | Pass |
| 28 | 0.004 | 0.066 | N/A | 0.004 | 0.099 | N/A | Pass |
| 29 | 0.017 | 0.078 | 21.8 | 0.017 | 0.116 | 15.0 | Pass |
| 30 | 0.002 | 0.061 | N/A | 0.002 | 0.092 | N/A | Pass |
| 31 | 0.016 | 0.073 | 21.4 | 0.016 | 0.109 | 14.7 | Pass |
| 32 | 0.004 | 0.058 | N/A | 0.004 | 0.086 | N/A | Pass |
| 33 | 0.014 | 0.068 | 19.9 | 0.014 | 0.102 | 13.8 | Pass |
| 34 | 0.001 | 0.054 | N/A | 0.001 | 0.081 | N/A | Pass |
| 35 | 0.013 | 0.064 | 19.4 | 0.013 | 0.096 | 13.3 | Pass |
| 36 | 0.000 | 0.051 | N/A | 0.001 | 0.077 | N/A | Pass |
| 37 | 0.011 | 0.061 | 18.6 | 0.012 | 0.091 | 12.8 | Pass |
| 38 | 0.000 | 0.048 | N/A | 0.001 | 0.073 | N/A | Pass |
| 39 | 0.009 | 0.058 | 15.9 | 0.009 | 0.087 | 10.9 | Pass |
| 40 | 0.001 | 0.046 | N/A | 0.001 | 0.069 | N/A | Pass |



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California Instruments
San Diego, California

## Voltage Source Verification Data (Replay)

**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: Class-A (European limits)** **Test Margin: 100**
**Test date: 2025/11/19** **Start time: 17:06:46** **End time: 17:09:27**
**Test duration (min): 2.5** **Data file name: H-001237.cts_data**
**Comment: ZX10250I**
**Customer: Max power**

**Test Result: Pass** **Source qualification: Normal**

**Highest parameter values during test:**

| | | | |
|---|---|---|---|
| Voltage (Vrms): | 230.46 | Frequency(Hz): | 50.00 |
| I_Peak (Amps): | 3.461 | I_RMS (Amps): | 1.156 |
| I_Fund (Amps): | 0.704 | Crest Factor: | 3.009 |
| Power (Watts): | 162.0 | Power Factor: | 0.610 |

| Harm# | Harmonics V-rms | Limit V-rms | % of Limit | Status |
|---|---|---|---|---|
| 2 | 0.061 | 0.461 | 13.33 | OK |
| 3 | 0.548 | 2.074 | 26.41 | OK |
| 4 | 0.069 | 0.461 | 15.07 | OK |
| 5 | 0.107 | 0.922 | 11.63 | OK |
| 6 | 0.034 | 0.461 | 7.48 | OK |
| 7 | 0.143 | 0.691 | 20.71 | OK |
| 8 | 0.013 | 0.461 | 2.87 | OK |
| 9 | 0.075 | 0.461 | 16.23 | OK |
| 10 | 0.014 | 0.461 | 3.04 | OK |
| 11 | 0.047 | 0.230 | 20.30 | OK |
| 12 | 0.015 | 0.230 | 6.37 | OK |
| 13 | 0.031 | 0.230 | 13.41 | OK |
| 14 | 0.009 | 0.230 | 4.08 | OK |
| 15 | 0.028 | 0.230 | 12.00 | OK |
| 16 | 0.007 | 0.230 | 3.15 | OK |
| 17 | 0.032 | 0.230 | 14.10 | OK |
| 18 | 0.007 | 0.230 | 3.16 | OK |
| 19 | 0.030 | 0.230 | 13.01 | OK |
| 20 | 0.035 | 0.230 | 15.07 | OK |
| 21 | 0.023 | 0.230 | 9.83 | OK |
| 22 | 0.005 | 0.230 | 2.38 | OK |
| 23 | 0.022 | 0.230 | 9.71 | OK |
| 24 | 0.003 | 0.230 | 1.11 | OK |
| 25 | 0.024 | 0.230 | 10.30 | OK |
| 26 | 0.003 | 0.230 | 1.34 | OK |
| 27 | 0.018 | 0.230 | 7.97 | OK |
| 28 | 0.003 | 0.230 | 1.41 | OK |
| 29 | 0.025 | 0.230 | 10.68 | OK |
| 30 | 0.003 | 0.230 | 1.29 | OK |
| 31 | 0.021 | 0.230 | 9.12 | OK |
| 32 | 0.002 | 0.230 | 1.00 | OK |
| 33 | 0.018 | 0.230 | 7.70 | OK |
| 34 | 0.003 | 0.230 | 1.14 | OK |
| 35 | 0.017 | 0.230 | 7.52 | OK |
| 36 | 0.003 | 0.230 | 1.24 | OK |
| 37 | 0.019 | 0.230 | 8.36 | OK |
| 38 | 0.003 | 0.230 | 1.43 | OK |
| 39 | 0.019 | 0.230 | 8.25 | OK |
| 40 | 0.020 | 0.230 | 8.67 | OK |

AMETEK Programmable Power CTS 4 V4.33.0 Page 3 of 3



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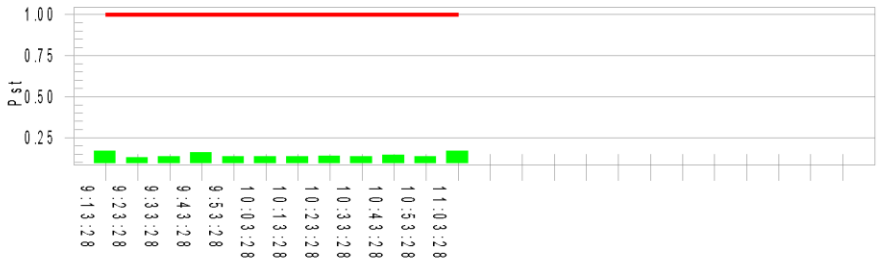
California Instruments
San Diego, California

## Flicker Test Summary per IEC61000-3-3:2013+A1:2017+A2:2021 (Run time)

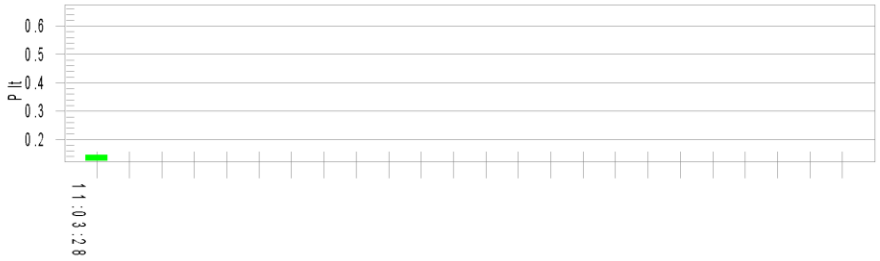
**EUT: ENERGY RECOVERY VENTILATOR** **Tested by: George Wu**
**Test category: All parameters (European limits)** **Test Margin: 100**
**Test date: 2025/11/18** **Start time: 9:03:07** **End time: 11:04:41**
**Test duration (min): 120** **Data file name: F-001158.cts_data**
**Comment: ZX10250I**
**Customer: Auto mode**

**Test Result: Pass** **Status: Test Completed**

**$Pst_i$ and limit line** **European Limits**




**Plt and limit line**




**Parameter values recorded during the test:**

| | | | | |
|---|---|---|---|---|
| **Vrms at the end of test (Volt):** | **230.38** | | | |
| **T-max (mS):** | **0** | **Test limit (mS):** | **500.0** | **Pass** |
| **Highest dc (%):** | **0.00** | **Test limit (%):** | **3.30** | **Pass** |
| **Highest dmax (%):** | **0.00** | **Test limit (%):** | **4.00** | **Pass** |
| **Highest Pst (10 min. period):** | **0.170** | **Test limit:** | **1.000** | **Pass** |
| **Highest Plt (2 hr. period):** | **0.146** | **Test limit:** | **0.650** | **Pass** |

AMETEK Programmable Power CTS 4 V4.33.0 Page 1 of 1



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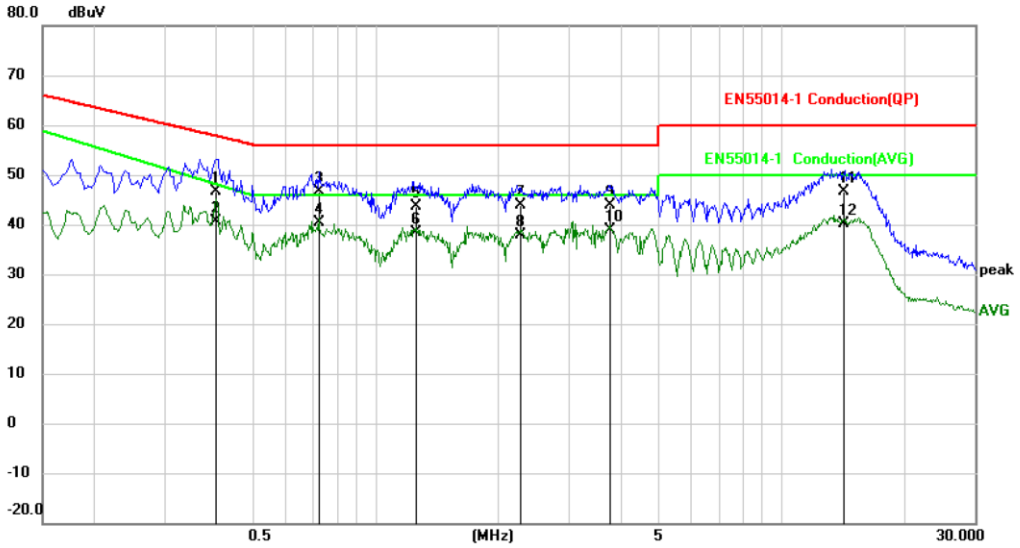
**Conducted Emission Measurement**

File :1 Data :#19 Date: 2025/11/17 Time: 2:02:15




Site LAB
Limit: EN55014-1 Conduction(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10250I
Mode: max power
Note:

Phase: *N*
Power: AC230V/50Hz

Temperature: 23.6
Humidity: 42 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.4009 | 26.44 | 20.07 | 46.51 | 57.83 | -11.32 | QP | |
| 2 | | 0.4009 | 20.51 | 20.07 | 40.58 | 48.39 | -7.81 | AVG | |
| 3 | | 0.7214 | 26.80 | 19.76 | 46.56 | 56.00 | -9.44 | QP | |
| 4 | * | 0.7214 | 20.51 | 19.76 | 40.27 | 46.00 | -5.73 | AVG | |
| 5 | | 1.2524 | 24.39 | 19.32 | 43.71 | 56.00 | -12.29 | QP | |
| 6 | | 1.2524 | 19.17 | 19.32 | 38.49 | 46.00 | -7.51 | AVG | |
| 7 | | 2.2829 | 24.65 | 19.30 | 43.95 | 56.00 | -12.05 | QP | |
| 8 | | 2.2829 | 18.64 | 19.30 | 37.94 | 46.00 | -8.06 | AVG | |
| 9 | | 3.7770 | 24.52 | 19.35 | 43.87 | 56.00 | -12.13 | QP | |
| 10 | | 3.7770 | 19.53 | 19.35 | 38.88 | 46.00 | -7.12 | AVG | |
| 11 | | 14.2305 | 26.98 | 19.60 | 46.58 | 60.00 | -13.42 | QP | |
| 12 | | 14.2305 | 20.54 | 19.60 | 40.14 | 50.00 | -9.86 | AVG | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

*File :1\Data :#19* *Page: 1* Engineer Signature:

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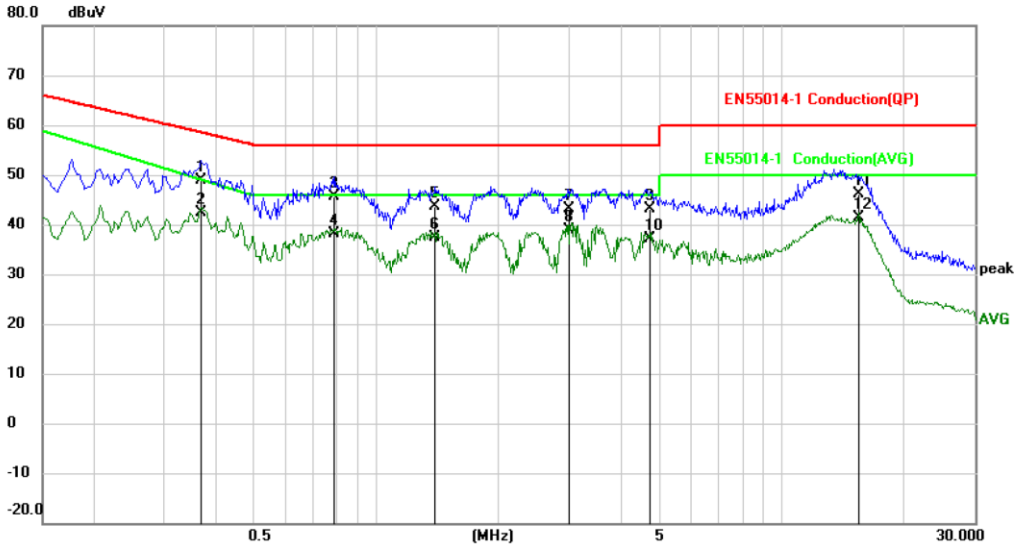
**Conducted Emission Measurement**

File :1 Data :#20 Date: 2025/11/17 Time: 2:04:45




Site LAB
Limit: EN55014-1 Conduction(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10250I
Mode: max power
Note:

Phase: *L1*
Power: AC230V/50Hz

Temperature: 23.6
Humidity: 42 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.3704 | 28.73 | 20.05 | 48.78 | 58.49 | -9.71 | QP | |
| 2 | * | 0.3704 | 22.33 | 20.05 | 42.38 | 49.24 | -6.86 | AVG | |
| 3 | | 0.7844 | 26.01 | 19.66 | 45.67 | 56.00 | -10.33 | QP | |
| 4 | | 0.7844 | 18.53 | 19.66 | 38.19 | 46.00 | -7.81 | AVG | |
| 5 | | 1.3964 | 24.25 | 19.28 | 43.53 | 56.00 | -12.47 | QP | |
| 6 | | 1.3964 | 18.02 | 19.28 | 37.30 | 46.00 | -8.70 | AVG | |
| 7 | | 2.9985 | 23.67 | 19.37 | 43.04 | 56.00 | -12.96 | QP | |
| 8 | | 2.9985 | 19.56 | 19.37 | 38.93 | 46.00 | -7.07 | AVG | |
| 9 | | 4.7310 | 23.78 | 19.39 | 43.17 | 56.00 | -12.83 | QP | |
| 10 | | 4.7310 | 17.84 | 19.39 | 37.23 | 46.00 | -8.77 | AVG | |
| 11 | | 15.5040 | 26.49 | 19.66 | 46.15 | 60.00 | -13.85 | QP | |
| 12 | | 15.5040 | 21.68 | 19.66 | 41.34 | 50.00 | -8.66 | AVG | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

*File :1\Data :#20* *Page: 1* Engineer Signature:



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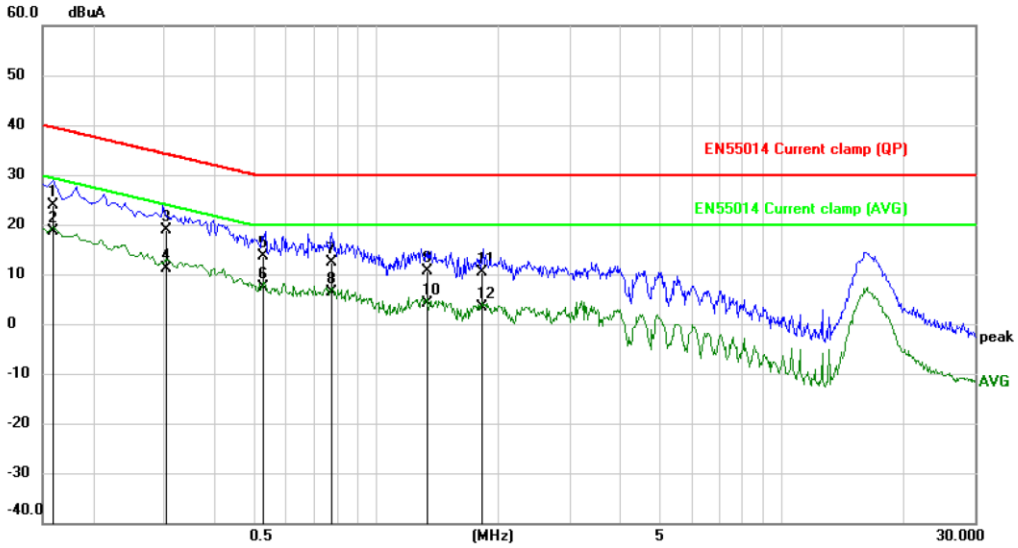
**Conducted Emission Measurement**

File :1 Data :#5 Date: 2025/10/18 Time: 4:54:08




Site LAB
Limit: EN55014 Current clamp (QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10250I
Mode: max power
Note:

Phase:
Power: AC230V/50Hz

Temperature: 24
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuA | dBuA | dB | Detector | Comment |
| 1 | | 0.1590 | 19.78 | 4.18 | 23.96 | 39.52 | -15.56 | QP | |
| 2 | * | 0.1590 | 14.45 | 4.18 | 18.63 | 29.52 | -10.89 | AVG | |
| 3 | | 0.3030 | 20.34 | -1.46 | 18.88 | 34.16 | -15.28 | QP | |
| 4 | | 0.3030 | 12.47 | -1.46 | 11.01 | 24.16 | -13.15 | AVG | |
| 5 | | 0.5279 | 18.79 | -5.15 | 13.64 | 30.00 | -16.36 | QP | |
| 6 | | 0.5279 | 12.65 | -5.15 | 7.50 | 20.00 | -12.50 | AVG | |
| 7 | | 0.7755 | 19.34 | -7.05 | 12.29 | 30.00 | -17.71 | QP | |
| 8 | | 0.7755 | 13.33 | -7.05 | 6.28 | 20.00 | -13.72 | AVG | |
| 9 | | 1.3334 | 19.19 | -8.50 | 10.69 | 30.00 | -19.31 | QP | |
| 10 | | 1.3334 | 12.62 | -8.50 | 4.12 | 20.00 | -15.88 | AVG | |
| 11 | | 1.8239 | 19.59 | -9.09 | 10.50 | 30.00 | -19.50 | QP | |
| 12 | | 1.8239 | 12.52 | -9.09 | 3.43 | 20.00 | -16.57 | AVG | |

*:Maximum data x:Over limit !:over margin 〈Reference Only

*File :1\Data :#5* *Page: 1* Engineer Signature:



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FUTURE TEST SERVICES

## Click test data

**Project No: FTS26AP-00442**
**EUT: ENERGY RECOVERY VENTILATOR**
**Model: ZX10250I**
**Test Voltage/Freq.: AC 230V/50Hz**
**Operation mode: Auto mode**
**Observation time (min.): 120 min**

**Standard: EN IEC 55014-1:2021**
**Temperature : 24 ℃**
**Humidity : 52 %;**
**Atmosphere : 101 kPa**

| | 150 kHz | 500 kHz | 1.4 MHz | 30 MHz |
|---|---|---|---|---|
| **First Run** | | | | |
| Short | 0 | 0 | 0 | 0 |
| Long | 0 | 0 | 0 | 0 |
| Long (10< t ≤20 ms) | 0 | 0 | 0 | 0 |
| Tot. Clicks Corr | 0 | 0 | 0 | 0 |
| Events | 0 | 0 | 0 | 0 |
| Time(s) | 0.00 | 0.00 | 0.00 | 0.00 |
| Sw.Op. | 0 | 0 | 0 | 0 |
| Limit dBuV | 66 | 56 | 56 | 60 |
| N | 0.00 | 0.00 | 0.00 | 0.00 |
| NewLimit [dBuV] | --- | --- | --- | --- |
| Allowed Clicks | ---- | ---- | ---- | ---- |
| **Second round (☐YES,☒NO)** | | | | |
| Short | --- | --- | --- | --- |
| Long | ---- | ---- | ---- | ---- |
| Tot. Clicks Corr | --- | --- | --- | --- |
| Events | ---- | ---- | ---- | ---- |
| Time(s) | --- | --- | --- | --- |
| 4.2.3.4 events | ---- | ---- | ---- | ---- |
| Complies with the limit (Pass/Fail) | **PASS** | **PASS** | **PASS** | **PASS** |

The appliance was deemed to comply with the limits if fulfilling the three conditions below:
– the click rate is not more than 5.
– none of the caused clicks has a duration longer than 20 ms.
– 90 % of the caused clicks have a duration less than 10 ms.

Tested By/ Date: Charles 2025/11/17 Reviewer/Date: George Wu 2025/11/17



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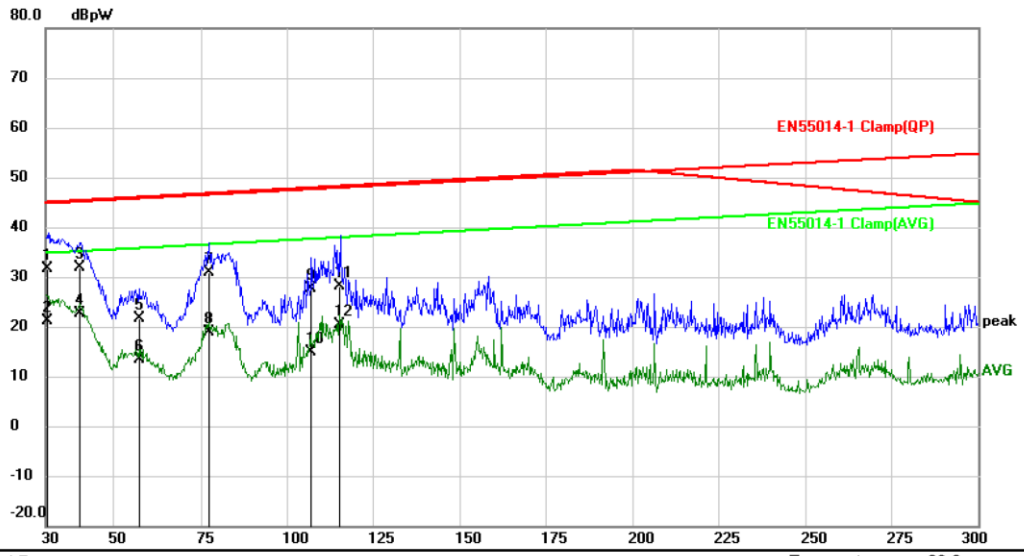
**Disturbance Power Measurement**

File :1 Data :#21 Date: 2025/11/17 Time: 2:14:43




Site LAB
Limit: EN55014-1 Clamp(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10250I
Mode: max power
Note: AC port

Power: AC230V/50Hz

Temperature: 23.6
Humidity: 42 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Position | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 1 | | 30.6909 | 4.29 | 27.24 | 31.53 | 45.03 | -13.50 | QP | | |
| 2 | | 30.6909 | -6.08 | 27.24 | 21.16 | 35.03 | -13.87 | AVG | | |
| 3 | | 40.2000 | 6.36 | 25.46 | 31.82 | 45.39 | -13.57 | QP | | |
| 4 | * | 40.2000 | -2.93 | 25.46 | 22.53 | 35.38 | -12.85 | AVG | | |
| 5 | | 57.1200 | -2.72 | 24.29 | 21.57 | 46.04 | -24.47 | QP | | |
| 6 | | 57.1200 | -10.91 | 24.29 | 13.38 | 36.00 | -22.62 | AVG | | |
| 7 | | 77.4600 | 7.21 | 23.65 | 30.86 | 46.81 | -15.95 | QP | | |
| 8 | | 77.4600 | -4.71 | 23.65 | 18.94 | 36.76 | -17.82 | AVG | | |
| 9 | | 107.1000 | 3.23 | 24.34 | 27.57 | 47.95 | -20.38 | QP | | |
| 10 | | 107.1000 | -9.46 | 24.34 | 14.88 | 37.86 | -22.98 | AVG | | |
| 11 | | 115.0800 | 3.75 | 24.50 | 28.25 | 48.25 | -20.00 | QP | | |
| 12 | | 115.0800 | -4.16 | 24.50 | 20.34 | 38.15 | -17.81 | AVG | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.

*File :1\Data :#21* *Page: 1* Engineer Signature:



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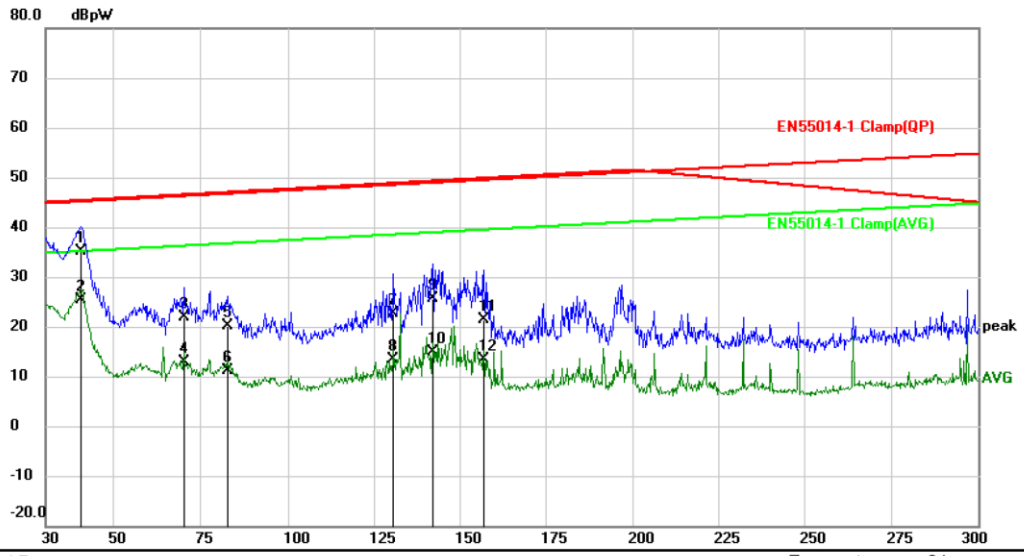
**Disturbance Power Measurement**

File :1 Data :#18 Date: 2025/11/16 Time: 1:01:27




Site LAB
Limit: EN55014-1 Clamp(QP)
EUT: ENERGY RECOVERY VENTILATOR Power: AC230V/50Hz
M/N: ZX10250I
Mode: max power
Note: control line near ENERGY RECOVERY VENTILATOR

Temperature: 24
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | Position | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 1 | | 40.3800 | 9.73 | 25.42 | 35.15 | 45.40 | -10.25 | QP | | |
| 2 | * | 40.3800 | -0.04 | 25.42 | 25.38 | 35.38 | -10.00 | AVG | | |
| 3 | | 70.0199 | -1.94 | 23.90 | 21.96 | 46.53 | -24.57 | QP | | |
| 4 | | 70.0199 | -11.03 | 23.90 | 12.87 | 36.48 | -23.61 | AVG | | |
| 5 | | 82.7400 | -3.92 | 24.14 | 20.22 | 47.02 | -26.80 | QP | | |
| 6 | | 82.7400 | -12.95 | 24.14 | 11.19 | 36.95 | -25.76 | AVG | | |
| 7 | | 130.7400 | -1.40 | 23.99 | 22.59 | 48.85 | -26.26 | QP | | |
| 8 | | 130.7400 | -10.55 | 23.99 | 13.44 | 38.73 | -25.29 | AVG | | |
| 9 | | 142.2000 | 1.67 | 23.86 | 25.53 | 49.29 | -23.76 | QP | | |
| 10 | | 142.2000 | -9.04 | 23.86 | 14.82 | 39.16 | -24.34 | AVG | | |
| 11 | | 156.9000 | -2.52 | 23.84 | 21.32 | 49.85 | -28.53 | QP | | |
| 12 | | 156.9000 | -10.42 | 23.84 | 13.42 | 39.70 | -26.28 | AVG | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.

*File :1\Data :#18* *Page: 1* Engineer Signature:



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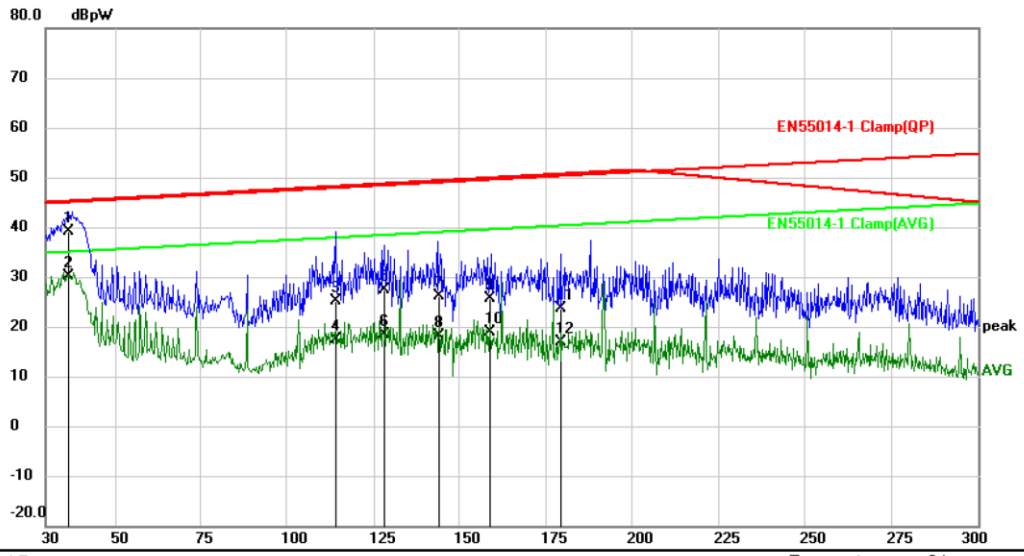
**Disturbance Power Measurement**

File :1 Data :#15 Date: 2025/11/16 Time: 0:58:17




Site LAB
Limit: EN55014-1 Clamp(QP)
EUT: ENERGY RECOVERY VENTILATOR
M/N: ZX10250I
Mode: max power
Note: control line near controller

Power: AC230V/50Hz

Temperature: 24
Humidity: 52 %
Atmosphere Pressure: 101.1KPa

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | Position | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBpW | dB | dBpW | dBpW | dB | Detector | cm | Comment |
| 1 | | 36.8400 | 12.82 | 26.38 | 39.20 | 45.26 | -6.06 | QP | | |
| 2 | * | 36.8400 | 3.64 | 26.38 | 30.02 | 35.25 | -5.23 | AVG | | |
| 3 | | 114.1200 | 0.75 | 24.48 | 25.23 | 48.22 | -22.99 | QP | | |
| 4 | | 114.1200 | -7.00 | 24.48 | 17.48 | 38.12 | -20.64 | AVG | | |
| 5 | | 128.2200 | 3.33 | 24.07 | 27.40 | 48.76 | -21.36 | QP | | |
| 6 | | 128.2200 | -5.70 | 24.07 | 18.37 | 38.64 | -20.27 | AVG | | |
| 7 | | 144.0600 | 2.33 | 23.82 | 26.15 | 49.36 | -23.21 | QP | | |
| 8 | | 144.0600 | -5.62 | 23.82 | 18.20 | 39.22 | -21.02 | AVG | | |
| 9 | | 158.7600 | 1.69 | 23.88 | 25.57 | 49.92 | -24.35 | QP | | |
| 10 | | 158.7600 | -4.96 | 23.88 | 18.92 | 39.77 | -20.85 | AVG | | |
| 11 | | 179.1600 | -0.04 | 23.62 | 23.58 | 50.70 | -27.12 | QP | | |
| 12 | | 179.1600 | -6.83 | 23.62 | 16.79 | 40.52 | -23.73 | AVG | | |

*:Maximum data x:Over limit !:over margin 〈Reference Only
Final Factor=probe factor+Cable loss.

*File :1\Data :#15* *Page: 1* Engineer Signature:



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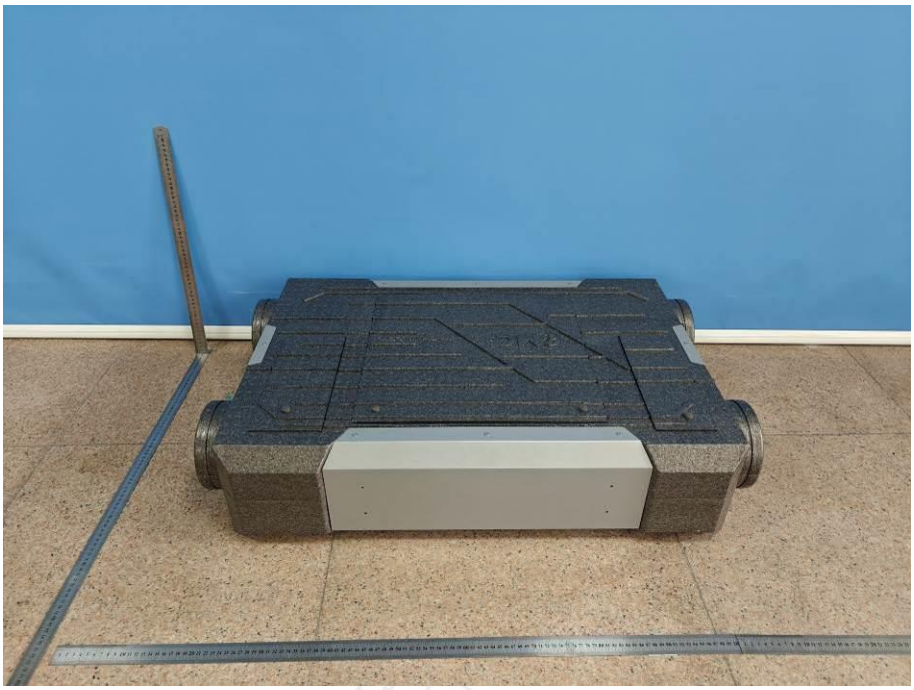
Model: ZX10190I



Picture 1

Picture 2



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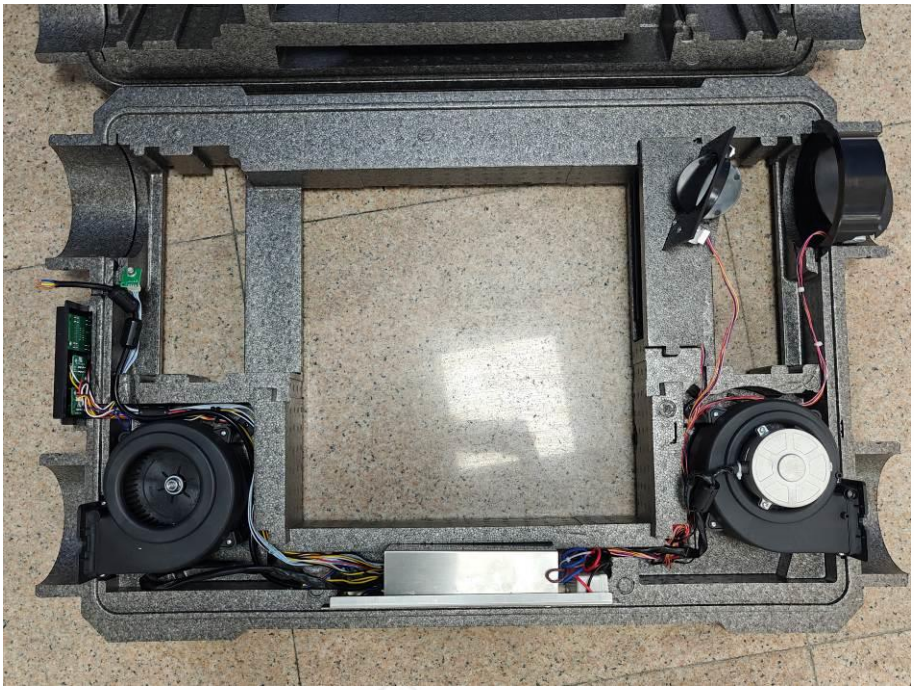

Picture 3

Picture 4



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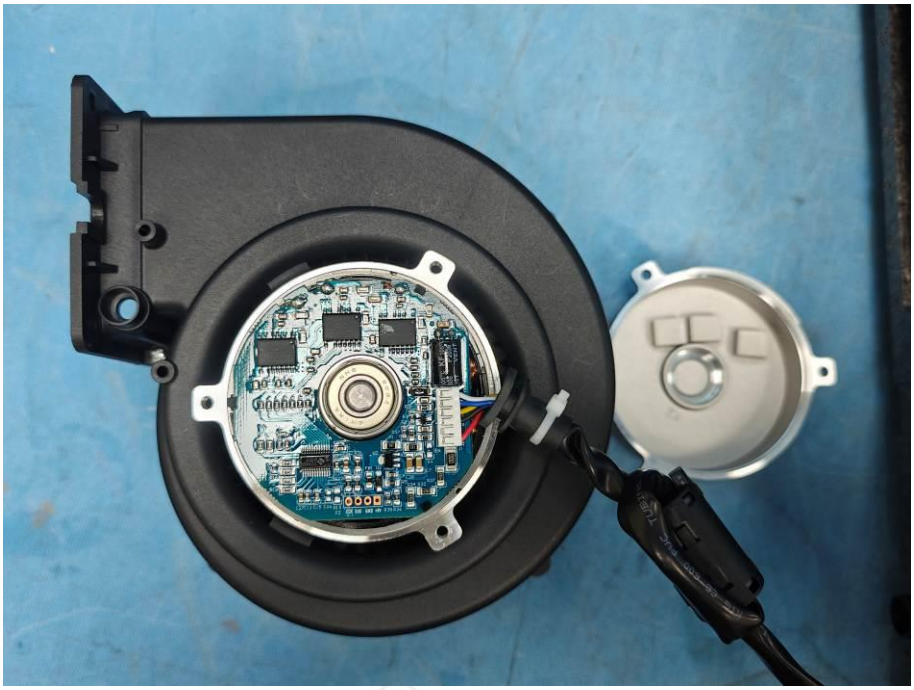
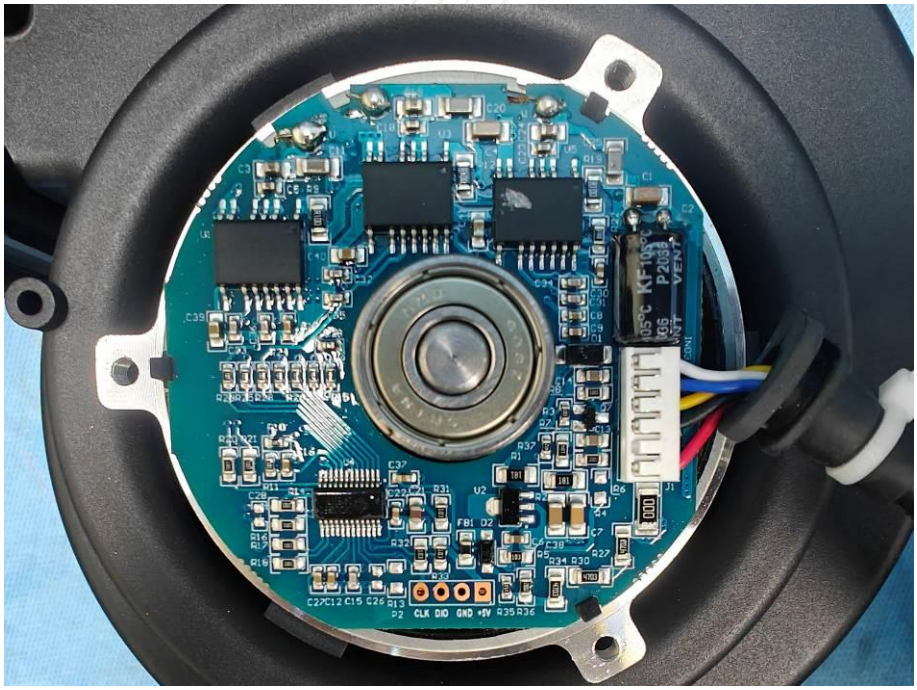


Picture 5



Picture 6



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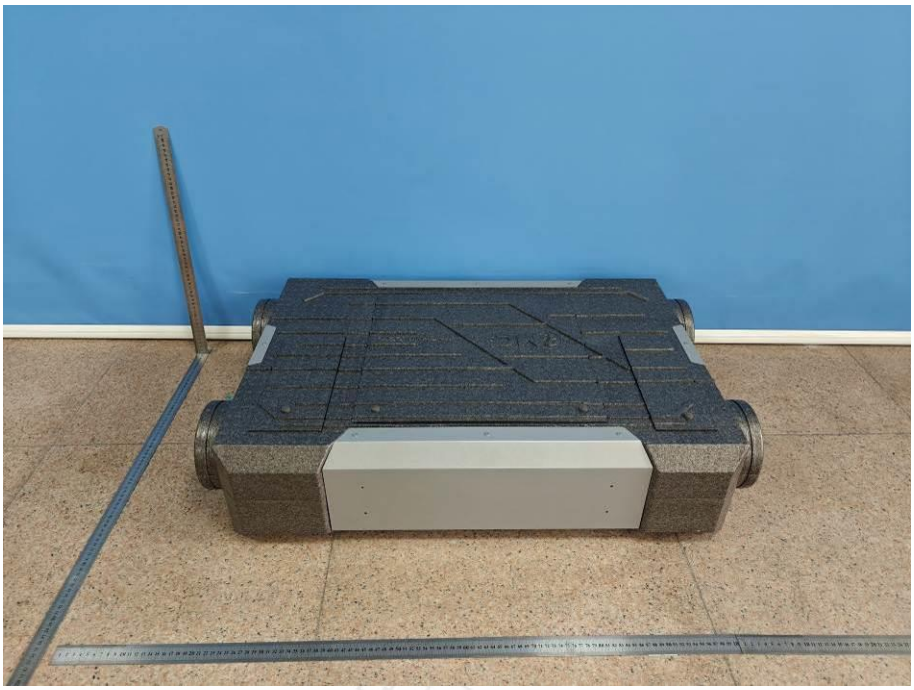
Model: ZX10250I



Picture 7

Picture 8



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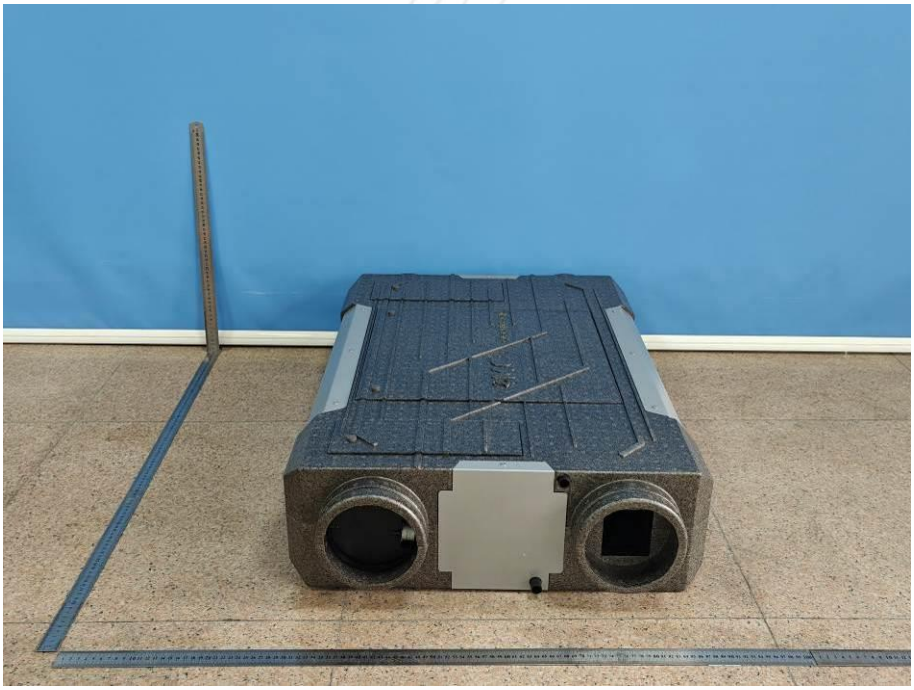
Picture 9



Picture 10



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Picture 11

Picture 12



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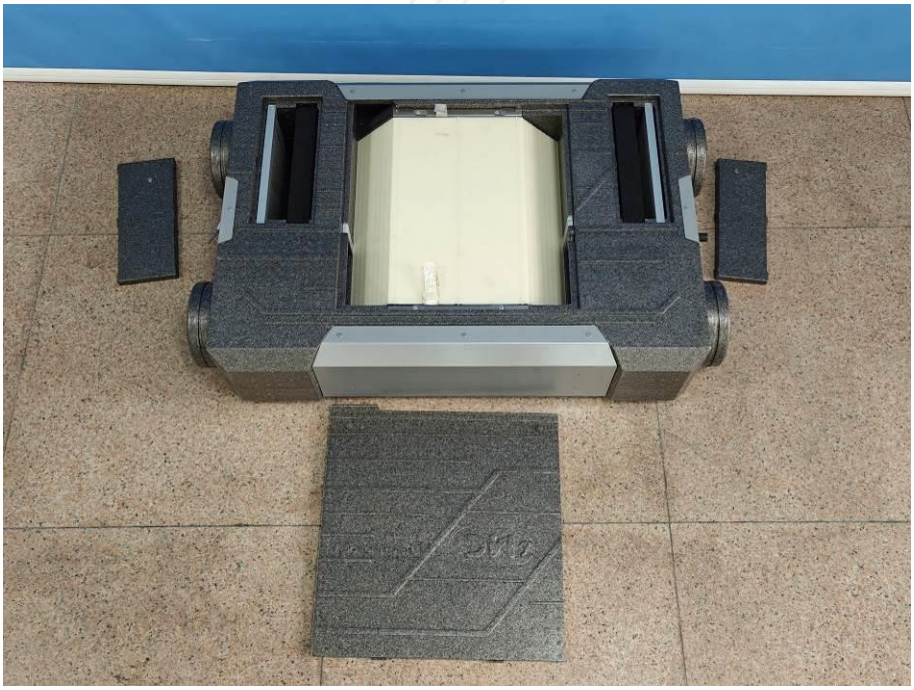
Picture 13



Picture 14



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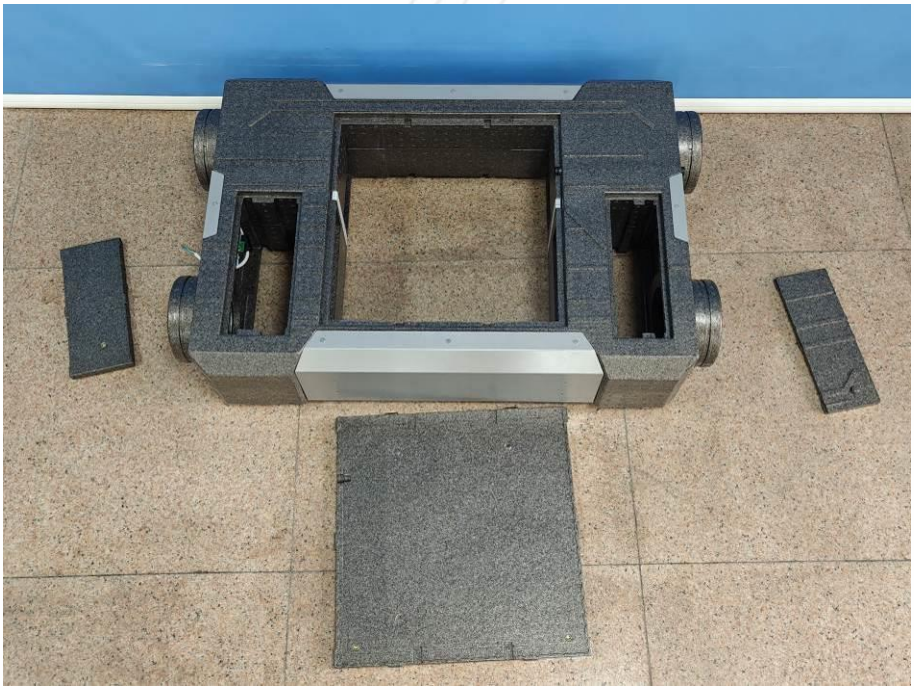
Picture 15



Picture 16



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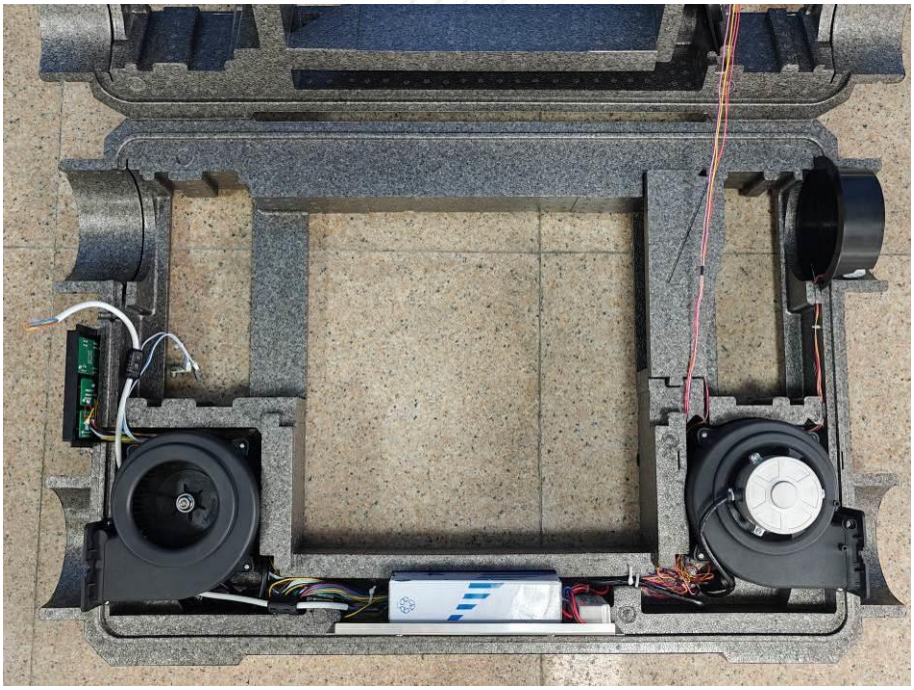
Picture 17



Picture 18



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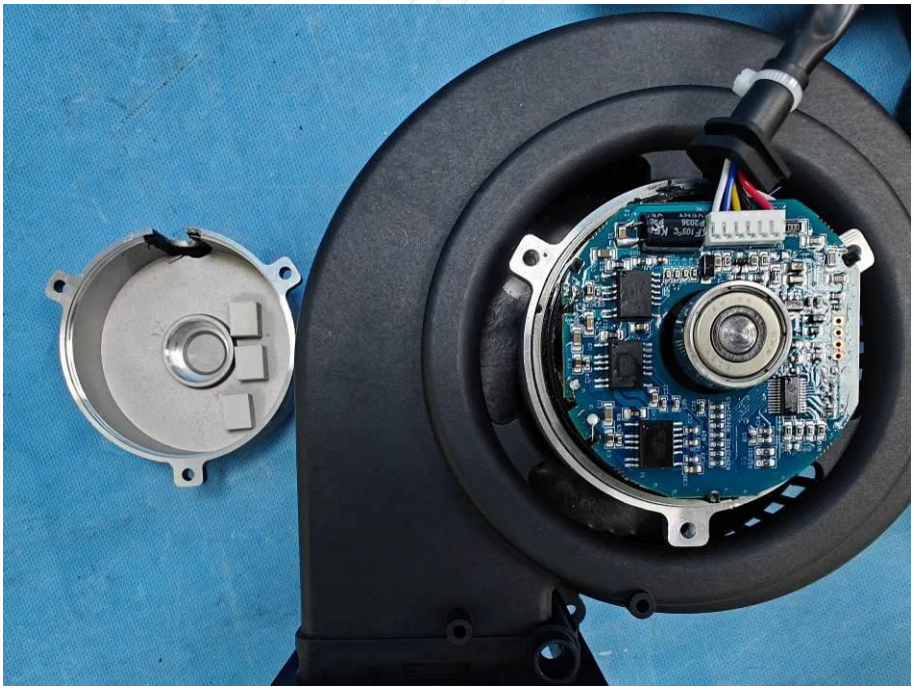
Picture 19



Picture 20



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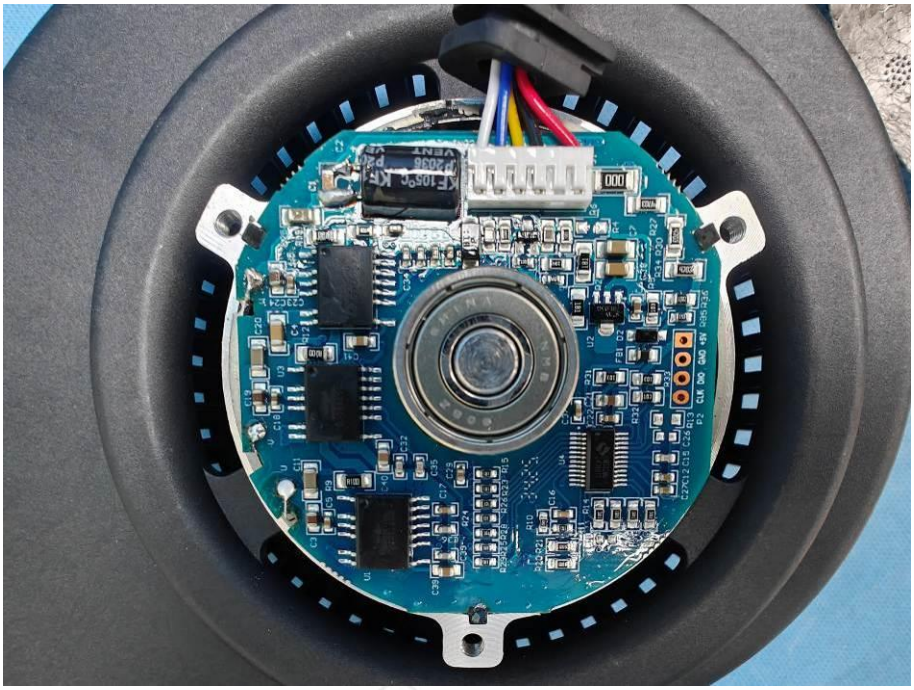
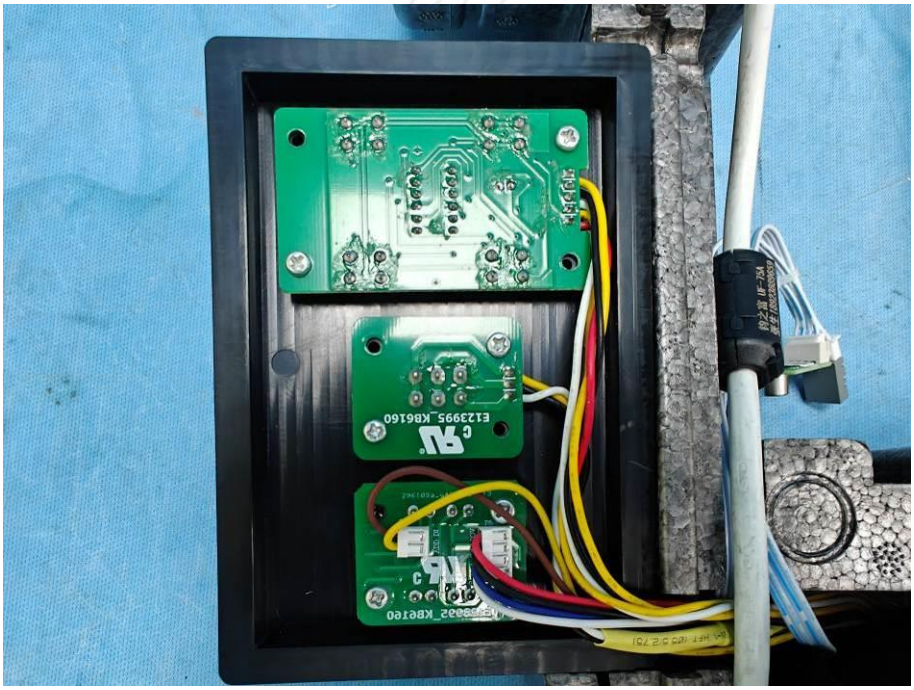


Picture 21



Picture 22



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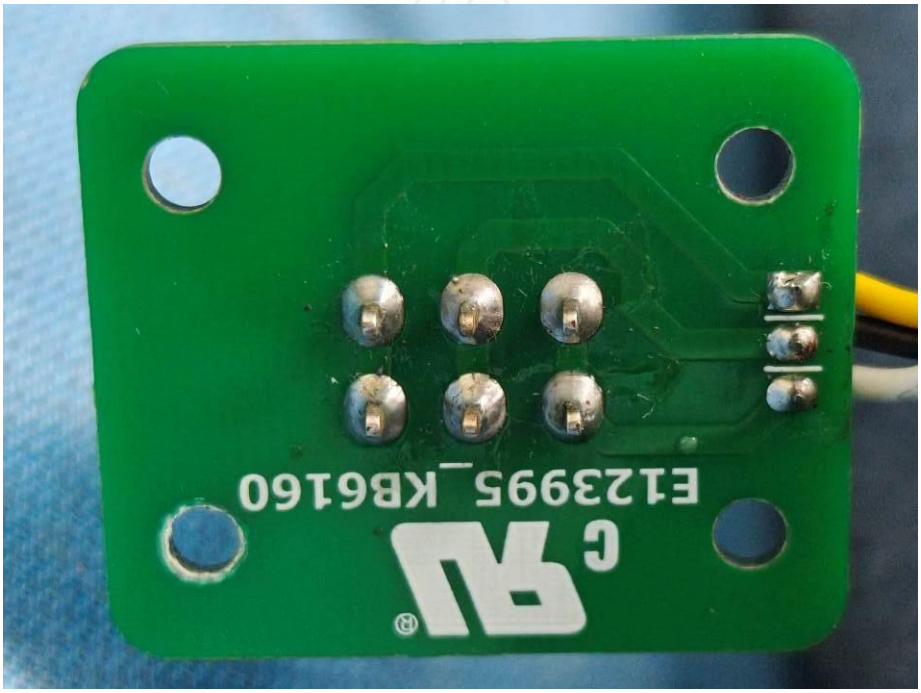
Picture 23




Picture 24



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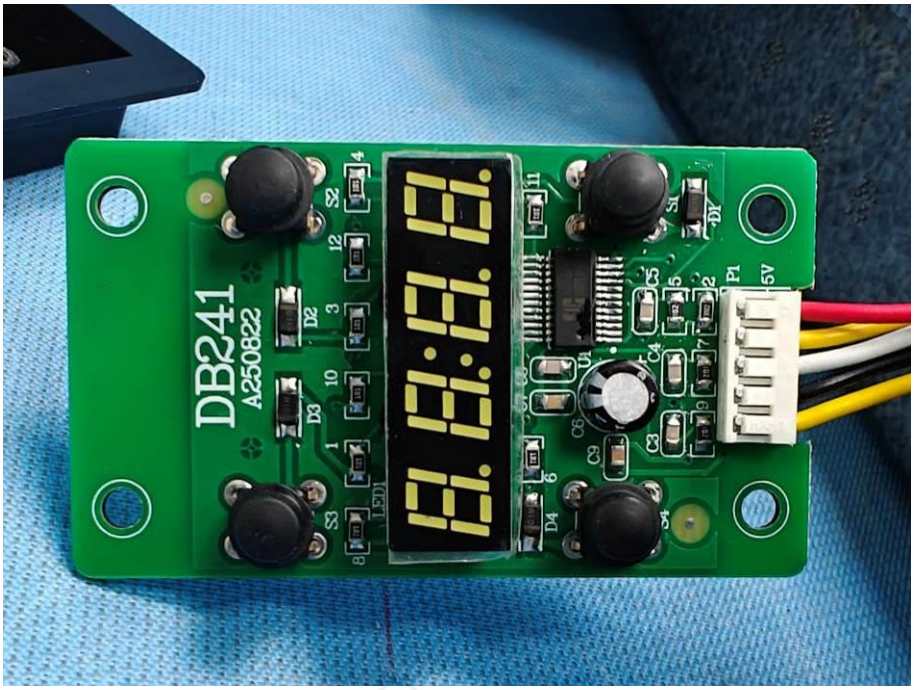
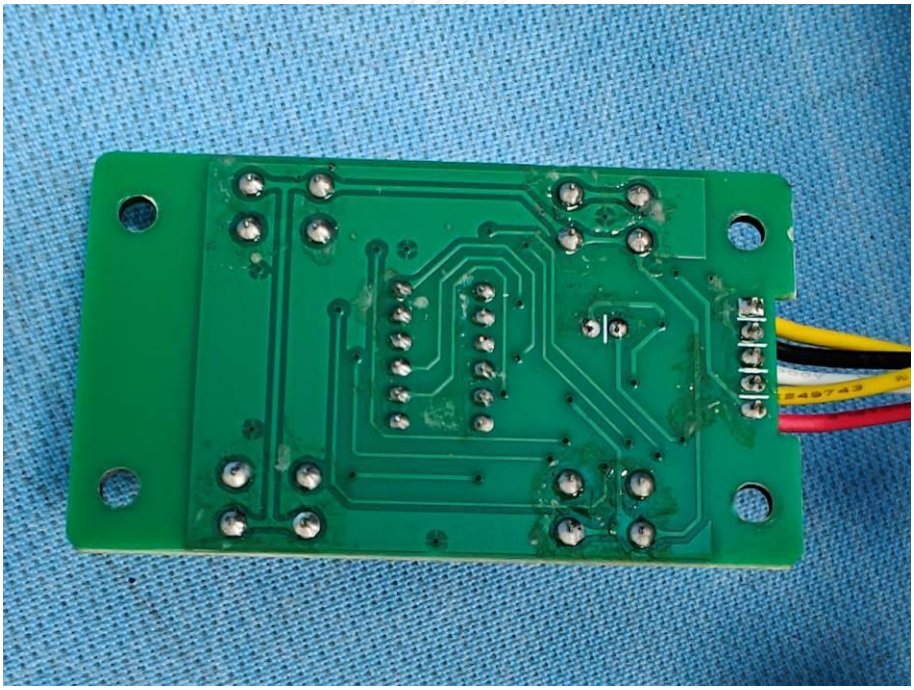



Picture 25



Picture 26



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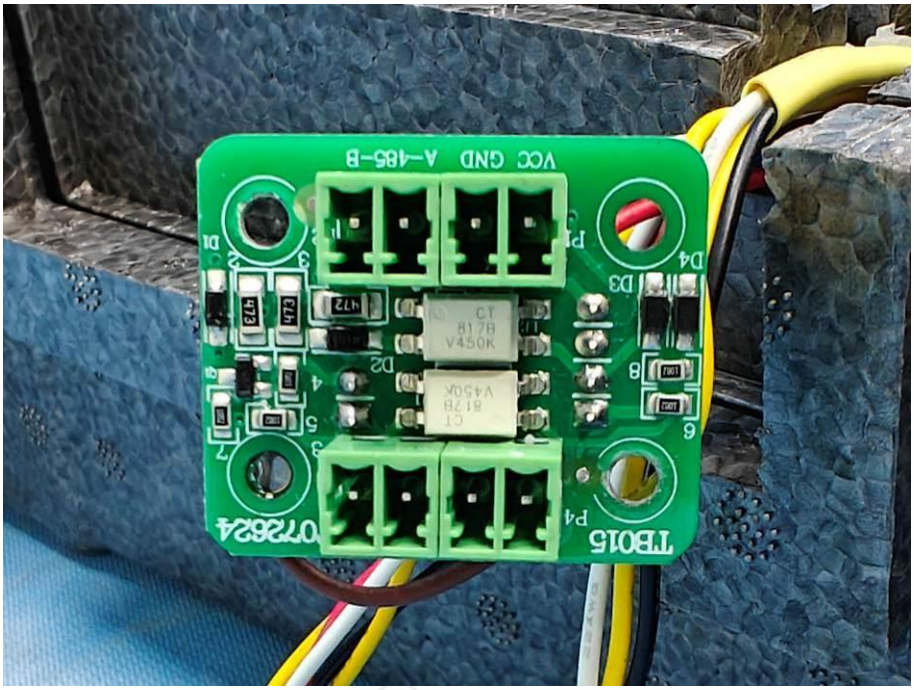
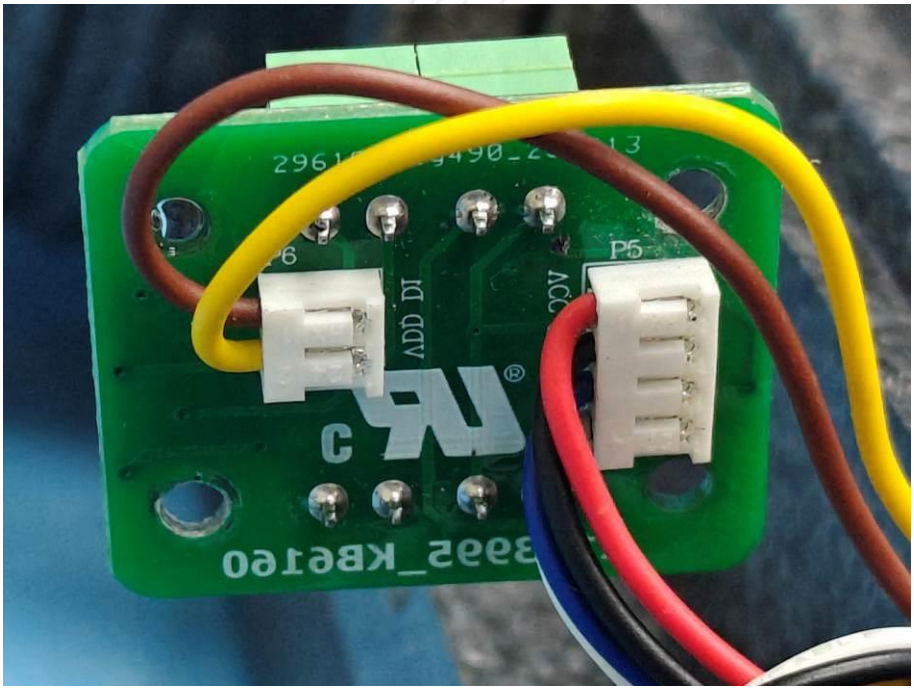



Picture 27




Picture 28



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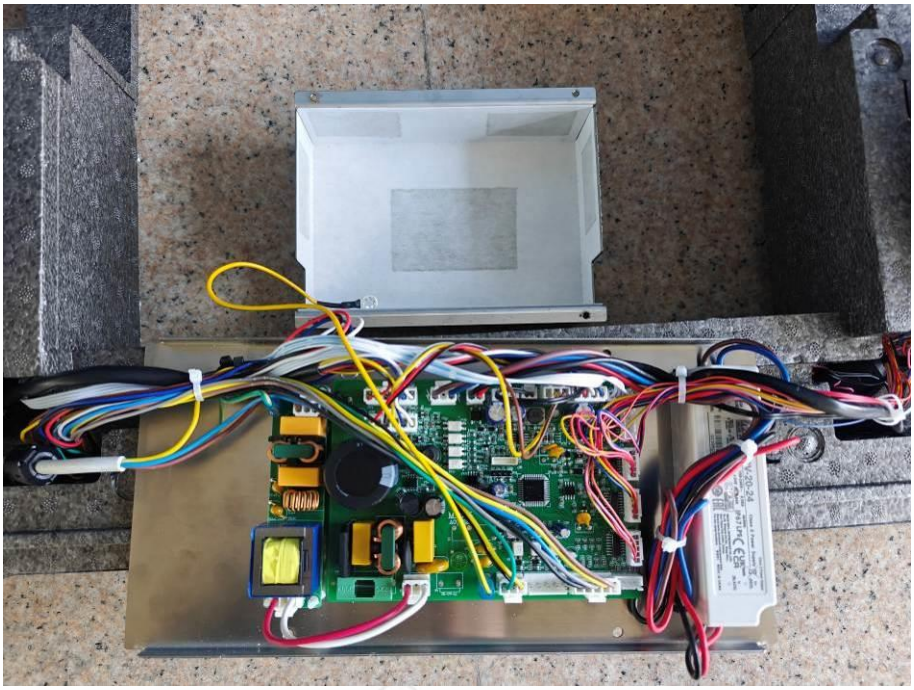
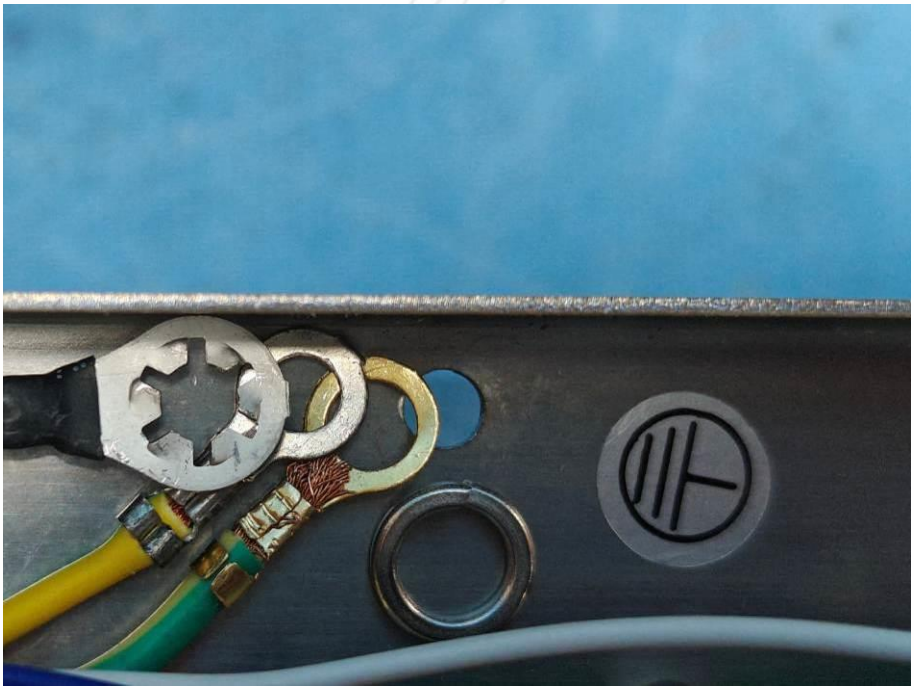


Picture 29



Picture 30



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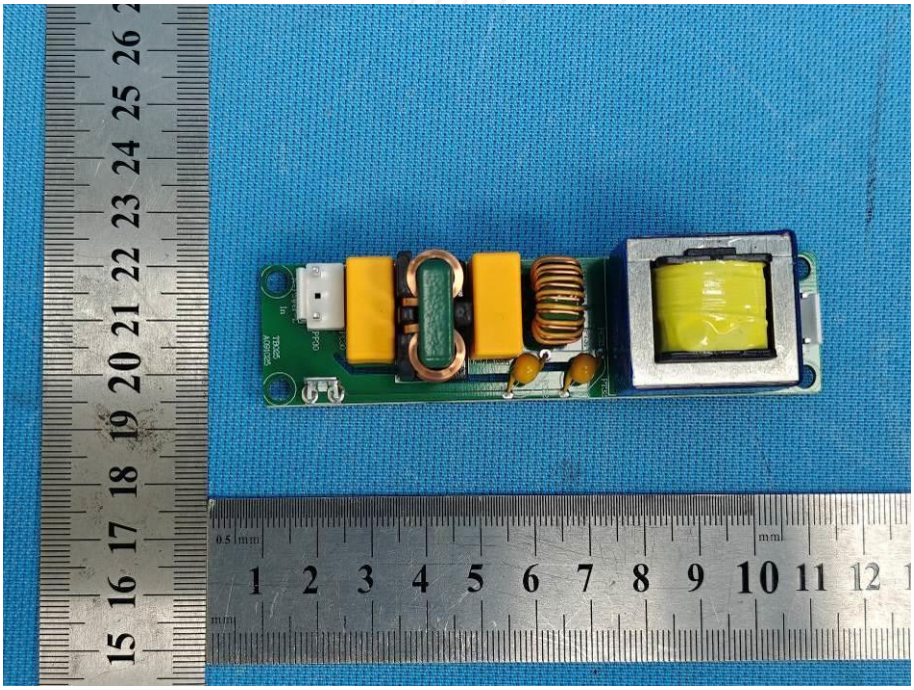
Picture 31



Picture 32



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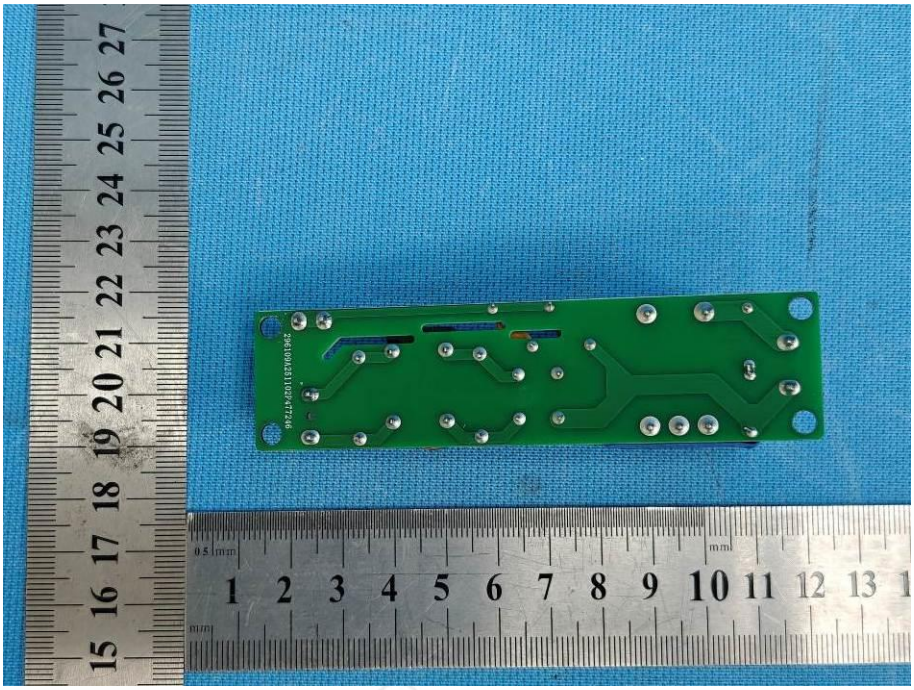
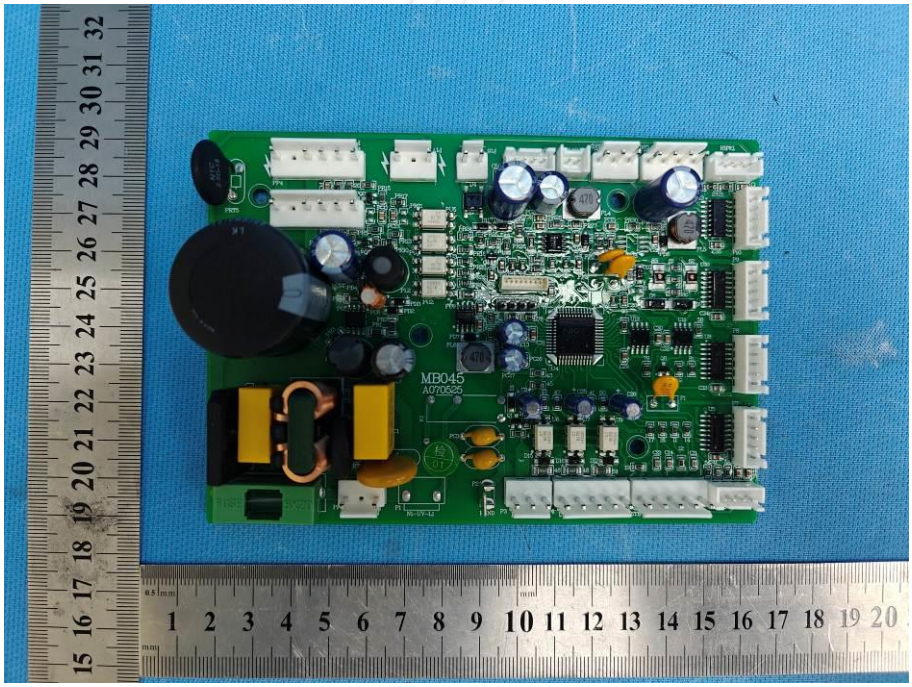


Picture 33




Picture 34



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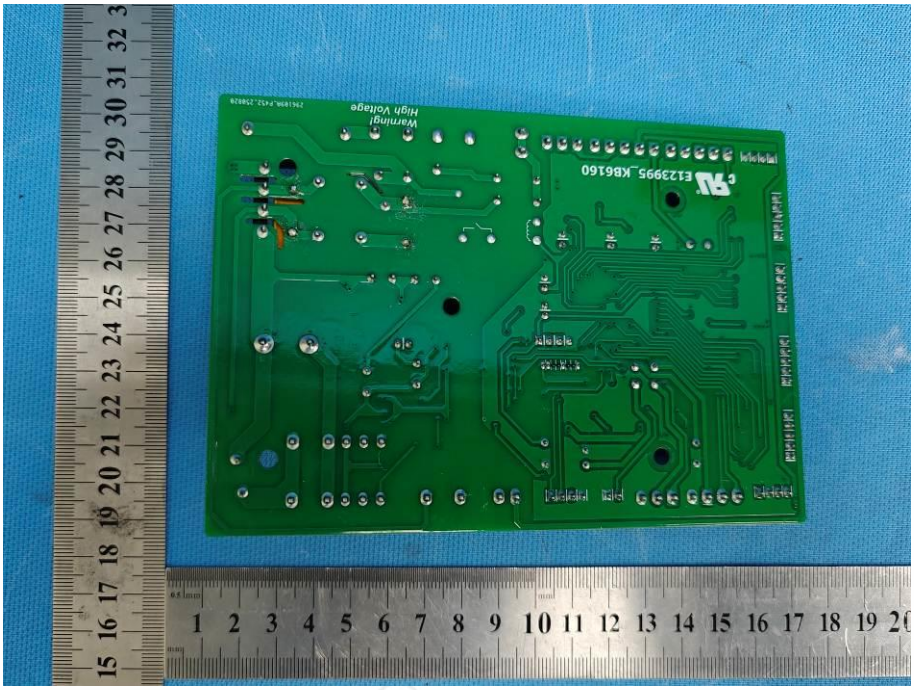


Picture 35



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| **Harmonics & Flicker** ☒ | | | | |
|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| Harmonic and Flicker Analyzer | CI | 100-CTS-230 | 1636A01855 | 25 Jul, 2026 |
| AC Power Source | CI | 5001IX-CTS-400-413-411 | 1638A03444 | 25 Jul, 2026 |
| **Disturbance Voltage** ☒ | | | | |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| EMI Test Receiver | R&S | ESCI3 | 1166.5950.03 | 25 Jul, 2026 |
| Shield Room | YiHeng Electronics | 13x4.1x3.1 | ZS-YF002 | 25 Jul, 2028 |
| Conducted Emission Software | FALA | EZ-EMC | N/A | N/A |
| Artificial Mains Network | R&S | ENV216 | 102609 | 25 Jul, 2026 |
| 10dB Attenuator | SCHWARZBECK | VTSD 9561 | 0357.8810.54-102774-NB | 25 Jul, 2026 |
| **Discontinuous Disturbance Voltage** ☒ | | | | |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| Click Analyzer | AFJ | CL55C | 55041220164 | 19 Feb, 2026 |
| Artificial Mains Network | SCHWARZBECK | NSLK8127 | 8127640 | 25 Jul, 2026 |
| **Disturbance Power** ☒ | | | | |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| EMI Test Receiver | R&S | ESCI3 | 1166.5950.03 | 25 Jul, 2026 |
| Absorbing Clamp | SCHWARZBECK | MDS-21 | 03001 | 20 Feb, 2026 |
| **Conducted Susceptibility(150 kHz-230 MHz)** ☒ | | | | |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| Conducted Immunity Test System | SCHLODER | CDG 6000-75 | 19901990-0101 | 19 Feb, 2026 |
| 6dB Attenuator | SCHLODER | CDG 6050-100 | 3101 | 19 Feb, 2026 |
| Coupling Decoupling Network | SCHLODER | CDN M2/M3 | 19901991-0201 | 19 Feb, 2026 |
| **Electrical Fast Transient(EFT)** ☒ | | | | |



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| Equipment | Manufacturer | Model No. | Serial No. | Cal Until |
|---|---|---|---|---|
| Transient comprehensive immunity test device | HTEC Test | HCOMPACT 52 | 190401 | 19 Feb, 2026 |
| Three-phase coupled decoupling network | HTEC Test | HCOUPLER 30E | 195201 | 19 Feb, 2026 |
| Single phase regulator | HTEC Test | HV1P16T | 190301 | 19 Feb, 2026 |
| **Surge** | | | | ☒ |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| Surge Generator | HTEC Test | HCWG 100 | 164201 | 25 Jul, 2026 |
| Three-phase coupled decoupling network | HTEC Test | HCOUPLER 30S | 164202 | 25 Jul, 2026 |
| **Voltage dips and Interruption** | | | | ☒ |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| Transient comprehensive immunity test device | HTEC Test | HCOMPACT 52 | 190401 | 19 Feb, 2026 |
| Three-phase coupled decoupling network | HTEC Test | HCOUPLER 30E | 195201 | 19 Feb, 2026 |
| Single phase regulator | HTEC Test | HV1P16T | 190301 | 19 Feb, 2026 |
| **Electrostatic Discharge** | | | | ☒ |
| **Equipment** | **Manufacturer** | **Model No.** | **Serial No.** | **Cal Until** |
| ESD Simulator | TESEQ | NSG 437 | 536 | 02 Aug, 2026 |

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



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