# EN 61000-6-3:2007+A1:2011+AC:2012

# EMC MEASUREMENT AND TEST REPORT

FOR

Applicant: ZHEJIANG LEFOO CONTROLS CO., LTD.

Address : NO.220,WEISHIWU ROAD,ECNOMIC DEVELOPMENT ZONE, YUEQING, ZHEJIANG PROVINCE, CHINA

MODEL: T2000, T2000E

May 8, 2017

| This Report Concerns: ☒ Original Report | Equipment Type: PRESSURE SENSOR |
|---|---|
| Test Engineer: | Hu yaohuang |
| Test Date: | Apr. 28, 2017 to May.8, 2017 |
| Reviewed By: | Huang Jian |
| Approved By: | He Ping |
| Prepared By: | CHINA CEPREI (SICHUAN) LABORATORY<br>No.45 Wen Ming Dong Road Longquanyi<br>Chengdu 610100 P. R. China |

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# GENERAL INFORMATION

## Product Description for Equipment Under Test (EUT)

The product that is produced by ZHEJIANG LEFOO CONTROLS CO,. LTD. The Application Model are T2000, T2000E or the "EUT" as referred to in this report is a PRESSURE SENSOR. The test model: T2000 (0...10bar, Output:4...20mA, Input: 10...30V d.c., Pressure port: G1/4)

## Objective

In order to meet the EMC requirements approved by CENELEC, the following standards will be cited:

1. EN61000-6-1:2007, Electromagnetic compatibility-Generic standards-immunity for residential, commercial and light-industrial environments.

2. EN61000-6-3: 2007+A1:2011+AC:2012, Electromagnetic compatibility-Generic standards- Emission standard for residential, commercial and light-industrial environments

Note: The test data is only valid for the test sample. There is possible deviation from the original test data for other products

## Equipment Modifications

No modification to the EUT was made by China Ceprei (Sichuan) Laboratory to make sure the EUT comply with applicable limits.

# 1 – EN61000-6-3:2007+A1:2011+AC:2012

## 1.1 Continuous Disturbance Voltage at Mains Terminal.

### 1.1.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Albatross Projects GmbH | Shield Room | Site 1 | --- | 2012.10 | 2 Year |
| R&S | EMI Test Receiver | ESU40 | 1302 | 2013.11 | 1 Year |
| R&S | Artificial Mains | ENV4200 | 1107 | 2014.2 | 2 Year |
| R&S | EMI Test System Cabinet | --- | --- | N/A | N/A |
| R&S | EMI Test Software | EMC32 | --- | N/A | N/A |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 1.1.2 Description of Measurement Conditions

Temperature: 21ć
Humidity: 58%
Pressure: 1033mbar
Electromagnetic environment: normal

### 1.1.3 Limits of Continuous Disturbance Voltage at Mains Terminal.

| Equipment type | Frequency range MHz | Limit values dBΠV | |
|---|---|---|---|
| | | Quasi-peak | Average |
| PR ESSURE SENSOR | 0.15 to 0.5 | 66-56[a] | 56- 46[a] |
| | 0.5 to 5 | 56 | 46 |
| | 5 to 30 | 60 | 50 |
| [a] Decreasing linearly with logarithm of the frequency. | | | |

Note: If the limit for the measurement with the average detector is met when using a receiver with a quasi-peak detector, the equipment under test shall be deemed to meet both limits and the measurement using the receiver with an average detector need not be carried out.

Test model: T2000

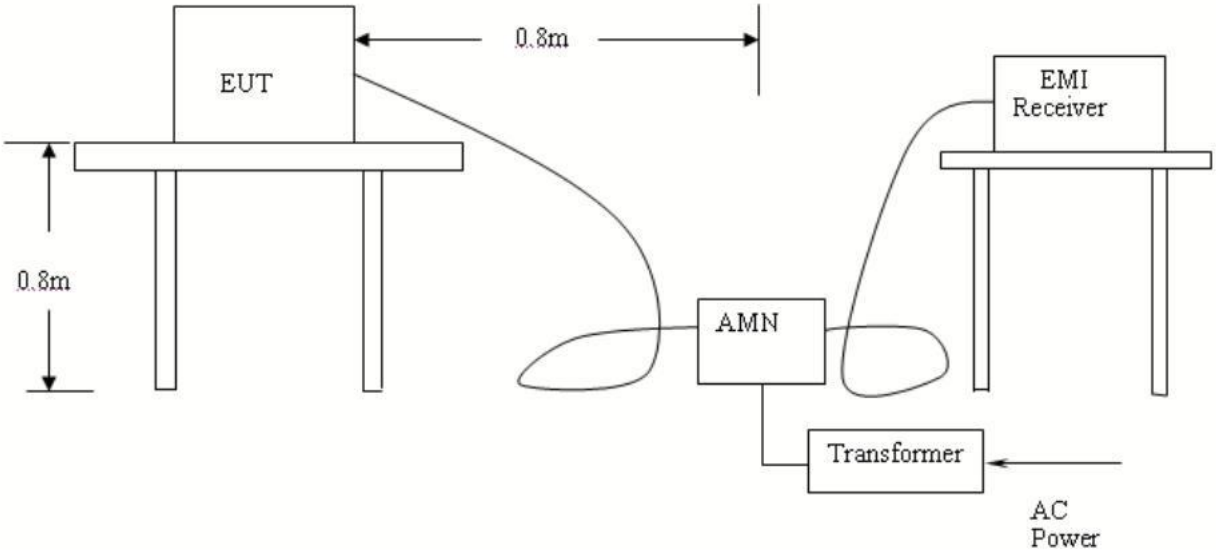
## 1.1.4 Test procedure and the test set-up

Procedure

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the
measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under limit -20dB of the prescribed limits could not be reported.

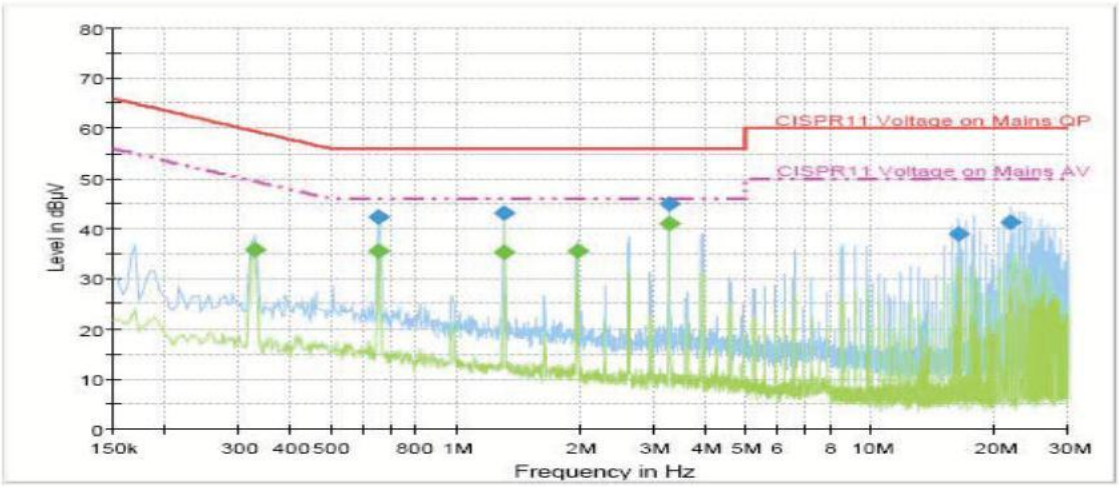
Set-up

The configuration is in accordance with the requirement in EN61000-6-3, the sketch map as follow:




## 1.1.5 Test Data and Records

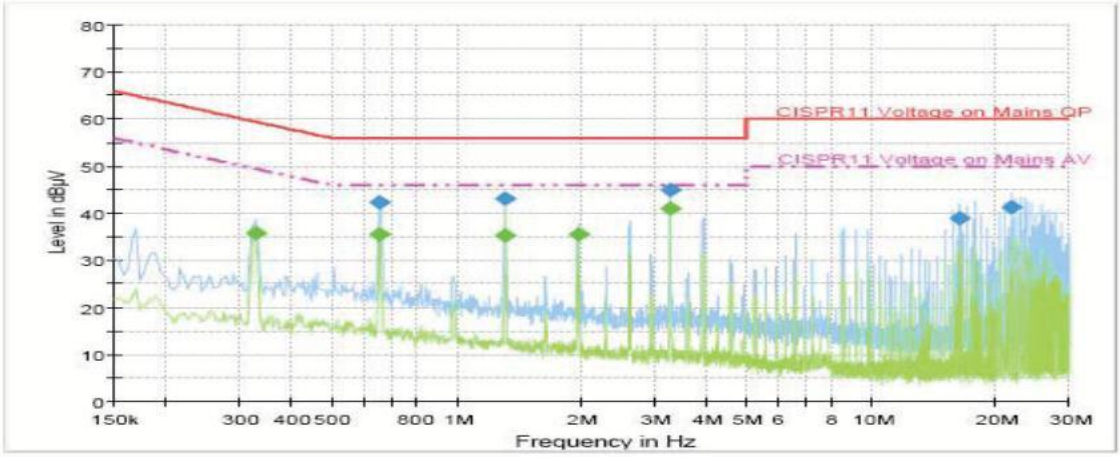
Passed
L1



Test model: T2000

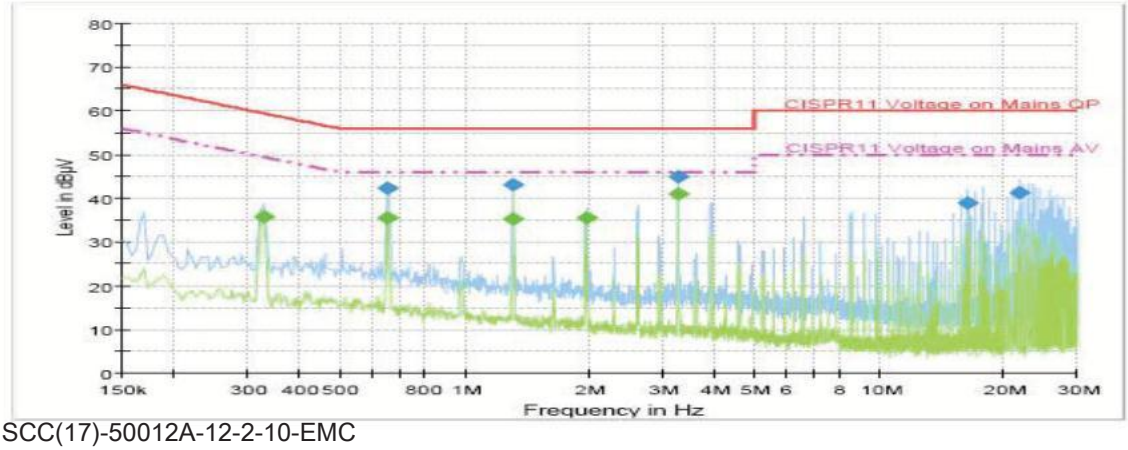
| Conducted disturbance at the Mains Terminals | | | EN61000-6-3 |
|---|---|---|---|
| Frequency | Amplitude | Detector | Limit |
| MHz | dBΠV | QP/Ave/Peak | dBΠV |
| 0.15 to 0.5 | * | QP | 66 to 56 |
| 0.5 to 5 | * | QP | 56 |
| 5 to 30 | * | QP | 60 |
| * Means the continuous disturbance voltage level 6 dB lower than limits. | | | |

L2




| Conducted disturbance at the Mains Terminals | | | EN61000-6-3 |
|---|---|---|---|
| Frequency | Amplitude | Detector | Limit |
| MHz | dBΠV | QP/Ave/Peak | dBΠV |
| 0.15 to 0.5 | * | QP | 66 to 56 |
| 0.5 to 5 | * | QP | 56 |
| 5 to 30 | * | QP | 60 |
| * Means the continuous disturbance voltage level 6 dB lower than limits. | | | |

L3



Test model: T2000

| Conducted disturbance at the Mains Terminals | | | EN61000-6-3 |
|---|---|---|---|
| Frequency | Amplitude | Detector | Limit |
| MHz | dBΠV | QP/Ave/Peak | dBΠV |
| 0.15 to 0.5 | * | QP | 66 to 56 |
| 0.5 to 5 | * | QP | 56 |
| 5 to 30 | * | QP | 60 |
| * Means the continuous disturbance voltage level 6 dB lower than limits. | | | |

### 1.1.6 Verdict

The EUT met the requirement.

Test model: T2000

## 1.2 Radiated disturbances

### 1.2.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Albatross Projects GmbH | Anechoic Chamber | --- | 9290832 | 2018.10 | 2 Year |
| R&S | Ultra-broadband Antennas | HL562 | --- | 2018.1 | 2 Year |
| Inn-co GmbH | Antenna Towers | --- | --- | N/A | N/A |
| R&S | EMI Test Receiver | ESU40 | 1302 | 2017.11 | 1 Year |
| Inn-co GmbH | Turntable | DS2000S-1t | | N/A | N/A |
| Inn-co GmbH | Controller | CO 2000 | 10806L | N/A | N/A |
| R&S | EMI Test Software | EMC32 | --- | N/A | N/A |
| R&S | EMI Test System Cabinet | --- | --- | N/A | N/A |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 1.2.2 Description of Measurement Conditions

Temperature: 20ć
Humidity: 60%
Pressure: 1033mbar
Electromagnetic environment: normal

### 1.2.3 Limits of radiated disturbances of class B ITE at a measuring distance of 3m.

| Frequency range MHz | Quasi-peak limits(3m) dB(ϥV/m) |
|---|---|
| 30 to 230 | 40 |
| 230 to 1000 | 47 |
| NOTE: The lower limit shall apply at the transition frequency.<br>NOTE: Additional provisions may be required for cases where interference occurs. | |

Test model: T2000

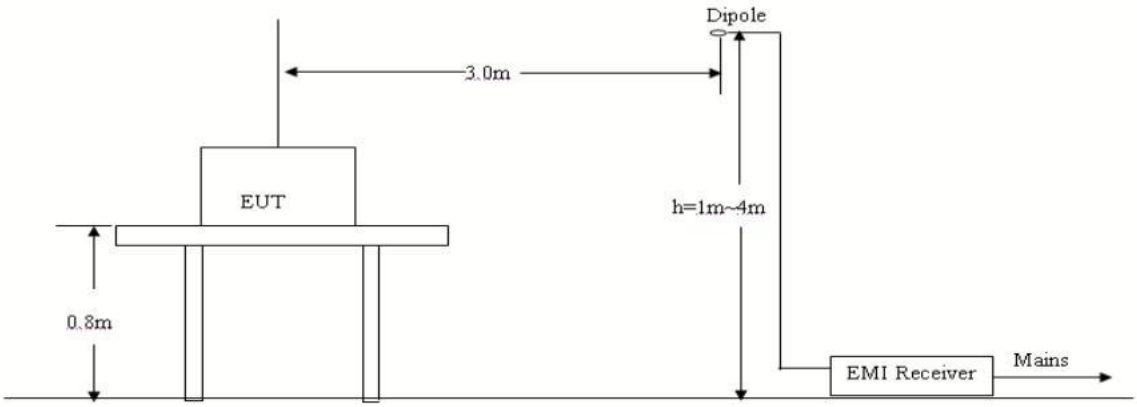
## 1.2.4 Test procedure and the test set-up

Procedure

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m semi/full-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be retested one by one using the quasi- peak method or average method as specified and then reported In Data sheet peak mode and QP mode.

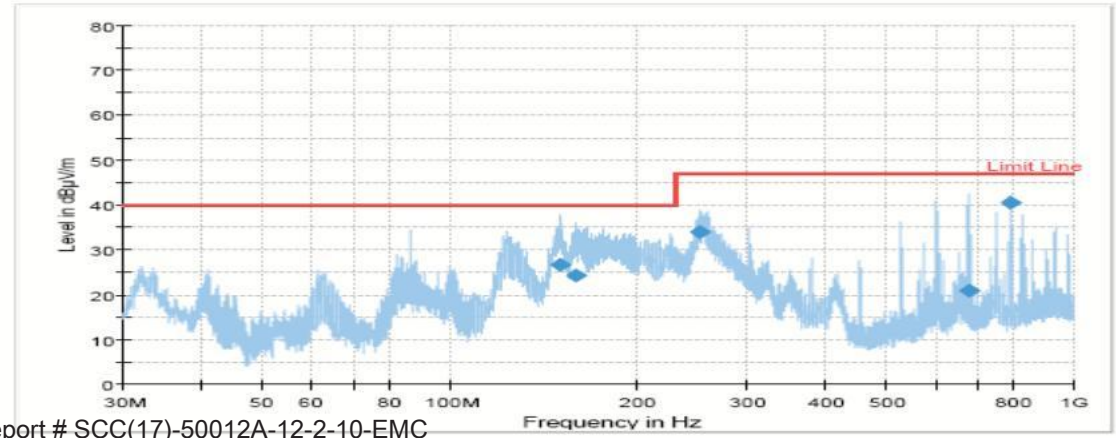
Set-up

The configuration is in accordance with the requirement in EN61000-6-3, the sketch map as follow:




## 1.2.5 Test Data and Records

Passed



Test model: T2000

## Final Result 1

| Frequency (MHz) | Quasi Peak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|---|---|---|---|---|---|---|---|---|---|
| 150.862000 | 26.6 | 1000.0 | 120.000 | 150.0 | V | 81.0 | -34.4 | 13.4 | 40.0 |
| 159.897500 | 24.3 | 1000.0 | 120.000 | 150.0 | V | 254.0 | -34.6 | 15.7 | 40.0 |
| 251.716500 | 34.1 | 1000.0 | 120.000 | 100.0 | H | 245.0 | -31.6 | 12.9 | 47.0 |
| 678.690000 | 21.0 | 1000.0 | 120.000 | 100.0 | V | 277.0 | -21.0 | 26.0 | 47.0 |
| 791.264500 | 40.6 | 1000.0 | 120.000 | 100.0 | H | 239.0 | -19.1 | 6.4 | 47.0 |

1.2.6 Verdict

The EUT met the requirement.

Description of Performance Criterion ( According with EN61000-6-1 Section 4 )

Performance Criterion A

The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacture, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Performance Criterion B

The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacture, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Performance Criterion C

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

Test model: T2000

## 2.1 SURGES

### 2.1.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Noise Laboratory CO., LTD | Surge Lite | LSS-6030 | 9099E00350 | 2018.11 | 2 Year |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 2.1.2 Description of Measurement Conditions

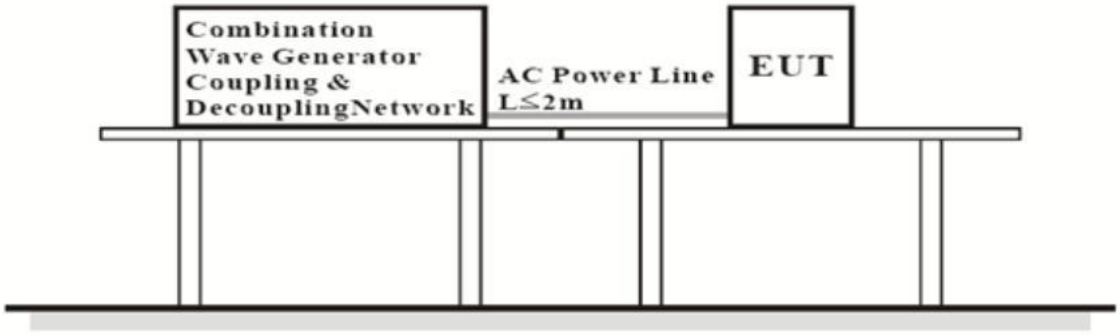
Temperature: 21ć
Humidity: 58%
Pressure: 1033mbar
Electromagnetic environment: normal

### 2.1.3 test procedure and the test set-up

Procedure

a. For EUT power supply:
The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave. The power cord between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).
b. For test applied to unshielded unsymmetrically operated interconnection lines of EUT:
The surge is applied to the lines via the capacitive coupling. The coupling / decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).
c. For test applied to unshielded symmetrically operated interconnection / telecommunication lines of EUT:
The surge is applied to the lines via gas arrestors coupling. Test levels below the ignition point of the coupling arrestor cannot be specified. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).
a. Both positive and negative polarity discharges were applied.

Set-up



### 2.1.4 Test Data and Records

| Terminal | Voltage KV | Path | Phase | Number Of Impulses | Pass | Fail |
|---|---|---|---|---|---|---|
| MAINS | f1 | L1- L2<br>L1- L3<br>L2- L3 | 0° | 5 | B | |
| MAINS | f1 | L1- L2<br>L1- L3<br>L2- L3 | 90° | 5 | B | |
| MAINS | f1 | L1- L2<br>L1- L3<br>L2- L3 | 180° | 5 | B | |
| MAINS | f1 | L1- L2<br>L1- L3<br>L2- L3 | 270° | 5 | B | |
| MAINS | f2 | L1- PE<br>L2-PE<br>L3-PE | 0° | 5 | B | |
| MAINS | f2 | L1- PE<br>L2-PE<br>L3-PE | 90° | 5 | B | |
| MAINS | f2 | L1- PE<br>L2-PE<br>L3-PE | 180° | 5 | B | |
| MAINS | f2 | L1- PE<br>L1- PE<br>L2-PE<br>L3-PE | 270° | 5 | B | |

### 2.1.5 Verdict

The EUT was working as normal,  so they met the requirement of performance  criteria B.

Test model: T2000

## 2.2 ESD

### 2.2.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Shanghai Sanki | Electrostatic Discharge tester | ESD-320 | 0329501C | 2018.6 | 2 Year |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 2.2.2 Description of Measurement Conditions

Temperature: 21ć
Humidity: 58%
Pressure: 1033mbar
Electromagnetic environment: normal

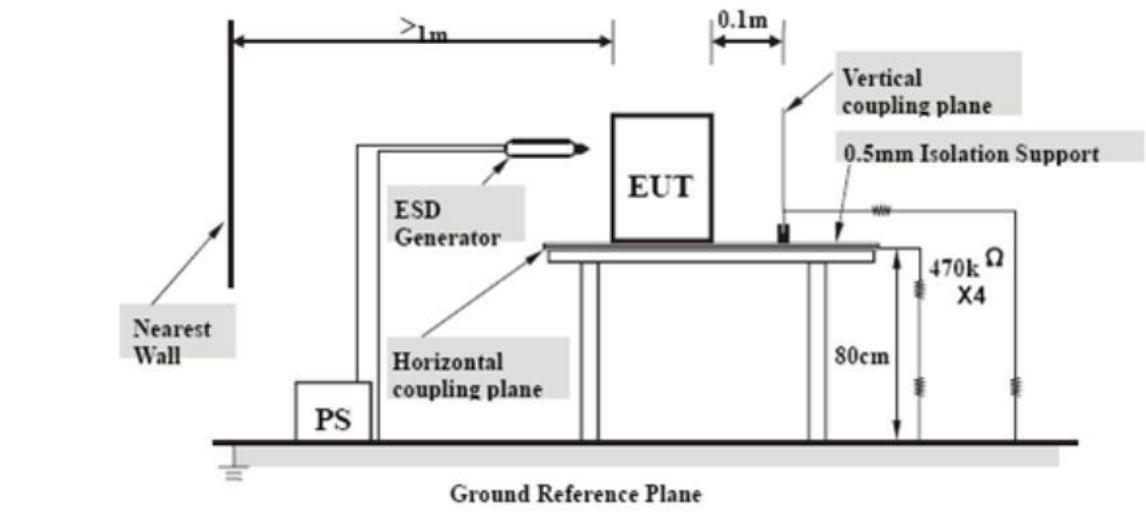
### 2.2.3 Test procedure and the test set-up

Procedure

a. Electrostatic discharges were applied only to those points and surfaces of the EUT that are accessible to users during normal operation.
b. The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.
c. The time interval between two successive single discharges was at least 1 second.
d. The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the EUT.
e. Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.
f. Air discharges were applied with the round discharge tip of the discharge electrode approaching the EUT as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator was removed from the EUT and re-triggered for a new single discharge. The test was repeated until all discharges were complete.
g. At least ten single discharges (in the most sensitive polarity) were applied at the front edge of each Horizontal Coupling Plane opposite the center point of each unit of the EUT and 0.1 meters from the front of the EUT. The long axis of the discharge electrode was in the plane of the HCP and perpendicular to its front edge during the discharge.
h. At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the EUT were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the EUT.

Test model: T2000

Set-up




## 2.2.4 Test Data and Records

Air Discharge

| Test Levels | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EN61000-4-2 Test Points | -2 kV | +2 kV | -4 kV | +4 kV | -6 kV | +6 kV | -8 kV | +8 kV | -10 kV | +10 kV | -12.5 kV | +12.5 kV | -15 kV | +15 kV | -20 kV | +20 kV |
| EUT Front Side | B | B | B | B | B | B | B | B | | | | | | | | |
| EUT Top Side | B | B | B | B | B | B | B | B | | | | | | | | |
| EUT Back Side | B | B | B | B | B | B | B | B | | | | | | | | |
| EUT Left Side | B | B | B | B | B | B | B | B | | | | | | | | |
| EUT Right Side | B | B | B | B | B | B | B | B | | | | | | | | |

Direct Contact

| Test Levels | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EN61000-4-2 Test Points | -2 kV | +2 kV | -4 kV | +4 kV | -6 kV | +6 kV | -8 kV | +8 kV | -10 kV | +10 kV | -12.5 kV | +12.5 kV | -15 kV | +15 kV | -20 kV | +20 kV |
| EUT Front Side | B | B | B | B | | | | | | | | | | | | |
| EUT Top Side | B | B | B | B | | | | | | | | | | | | |
| EUT Back Side | B | B | B | B | | | | | | | | | | | | |
| EUT Left Side | B | B | B | B | | | | | | | | | | | | |
| EUT Right Side | B | B | B | B | | | | | | | | | | | | |

## 2.2.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

Test model: T2000
2.3 EFT/B

2.3.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Shanghai Sanki | E.F.TB Generator | 8014 | 069504E | 2017.6 | 2 Year |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

2.3.2 Description of Measurement Conditions

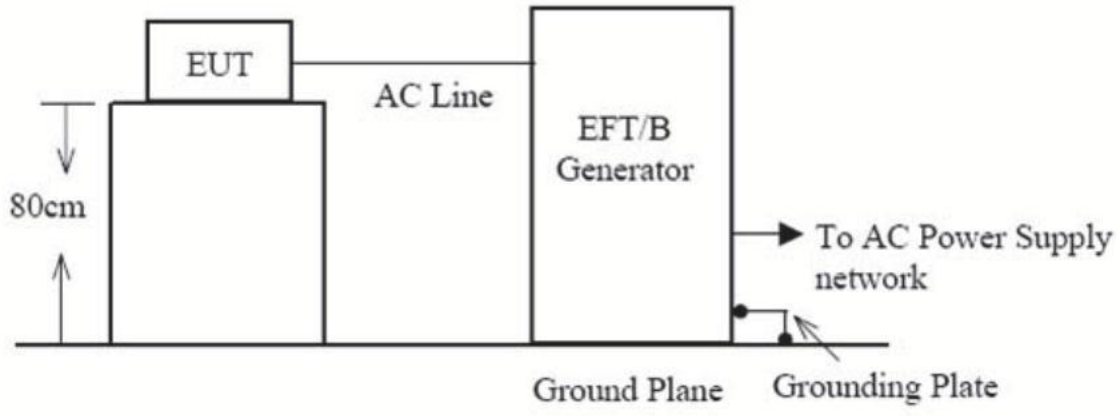
Temperature: 21ć
Humidity: 58%
Pressure: 1033mbar
Electromagnetic environment: normal

2.3.3 Test procedure and the test set-up

Procedure

a. Both positive and negative polarity discharges were applied.
b. The length of the "hot wire" from the coaxial output of the EFT generator to the terminals on the EUT should not exceed 1 meter.
c. The duration time of each test sequential was 1 minute.
d. The transient/burst waveform was in accordance with IEC 61000-4-4, 5/50ns.

Set-up



Test model: T2000

## 2.3.4 Test Data and Records

| Test Levels (kV) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| EN61000-4-4 Test Points | | +0.25 | -0.25 | +0.5 | -0.5 | +1.0 | -1.0 | +2.0 | -2.0 |
| Power Port of EUT | L 1 | A | A | A | A | A | A | | |
| | L2 | A | A | A | A | A | A | | |
| | L3 | A | A | A | A | A | A | | |
| | PE | A | A | A | A | A | A | | |
| | L1+ L2+L3+PE | A | A | A | A | A | A | A | A |

## 2.3.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria A.

Test model: T2000

## 2.4 INJECTED CURRENTS

### 2.4.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Giga-tronics | Synthesized RF Signal Generator | 6061A | 5130304 | 2016.2 | 2 Year |
| QF | Broadband Power Amplifier | QF3860 | --- | 2016.2 | 2 Year |
| QF | Millivoltmeter | QF2281 | 92028 | 2016.2 | 2 Year |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 2.4.2 Description of Measurement Conditions

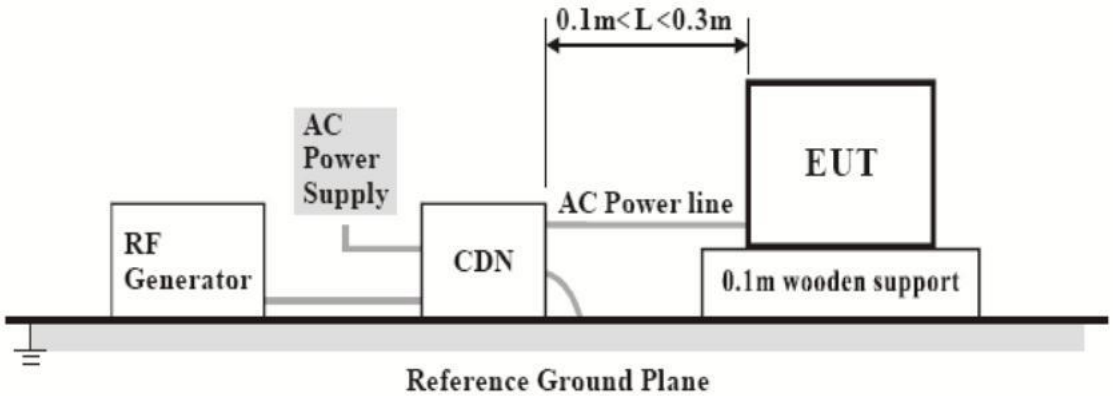
Temperature: 21ć
Humidity: 58%
Pressure: 1033mbar
Electromagnetic environment: normal

### 2.4.3 Test procedure and the test set-up

Procedure

a. The EUT shall be tested within its intended operating and climatic conditions.
b. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn, while the other non-excited RF input ports of the coupling devices are terminated by a 50-ohm load resistor.
c. The frequency range is swept from 150 kHz to 80 MHz, using the signal level established during the setting process and with a disturbance signal of 80 % amplitude. The signal is modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or the switch coupling devices as necessary. The sweep rate shall not exceed 1.5 x 10-3 decades/s. The step size shall not exceed 1 % of the start and thereafter 1 % of the preceding frequency value where the frequency is swept incrementally.
d. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies such as clock frequency(ies) and harmonics or frequencies of dominant interest, shall be analyzed separately.
e. Attempts should be made to fully exercise the EUT during testing, and to fully interrogate all exercise modes selected for susceptibility.

Set-up



Test model: T2000

## 2.4.4 Test Data and Records

| EN61000-4-6 Test Points | Frequency range MHz | Levels | Voltage Level (e.m.f.)V | Pass | Fail |
|---|---|---|---|---|---|
| Power Line | 0.15-80MHz | 1 | 1 | | |
| | | 2 | 3 | A | |
| | | 3 | 10 | | |
| | | X | Special | | |

## 2.4.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria A.

Test model: T2000

## 2.5VOLTAGE DIPS AND INTERRUPTIONS

### 2.5.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| Noise Laboratory CO., LTD | Voltage Dip Simulator | VDS-220B | 2199D00098 | 2016.10 | 2 Year |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 2.5.2 Description of Measurement Conditions

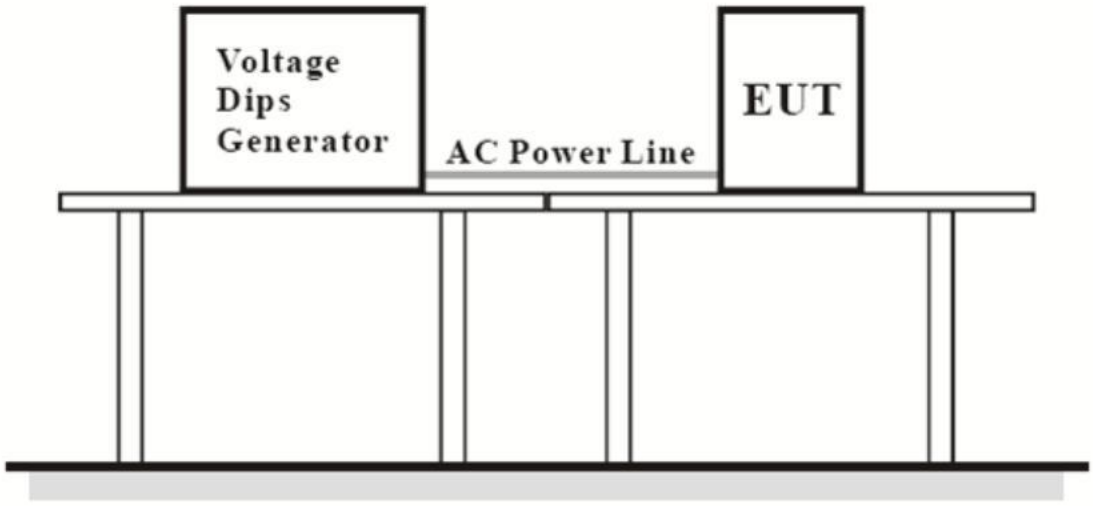
Temperature: 21ć
Humidity: 58%
Pressure: 1033mbar
Electromagnetic environment: normal

### 2.5.3 Test procedure and the test set-up

Procedure

The EUT shall be tested for each selected combination of test levels and duration with a sequence of tree dips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

Set-up



Test model: T2000

## 2.5.4 Test Data and Records

| Environmental phenomena | | Test level in % $U_T$ | Duration (in periods of the rated frequency) | Phase Angle | Pass | Fail |
|---|---|---|---|---|---|---|
| Interruptions | | !95 | 250T | 0/180 | B | |
| Voltage dips in % $U_T$ | 0 | 100 | 0,5T | 0/180 | B | |
| | 0 | 100 | 1T | 0/180 | B | |
| | 70 | 30 | 25 T | 0/180 | B | |

## 2.5.5 Verdict

The EUT was working as normal, so they met the requirement of performance criteria B.

Test model: T2000

## 2.6 Radio-frequency electromagnetic field

### 2.6.1 Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Period |
|---|---|---|---|---|---|
| R&S | Signal Generator | SMR-40 | 1104 | 2016.11 | 1 Year |
| R&S | Power combiner | BBA100 | --- | 20146.6 | 2 Year |
| R&S | Power meter | NRP2 | --- | 2016.4 | 2 Year |
| Albatross Projects GmbH | Anechoic Chamber | --- | 9290832 | 2016.10 | 2 Year |
| R&S | Antennas | HL046E | --- | 2016.6 | 2 Year |
| Inn-co GmbH | Antenna Towers | --- | --- | N/A | N/A |
| Inn-co GmbH | Turntable | DS2000S-1t | --- | N/A | N/A |
| Inn-co GmbH | Controller | CO 2000 | 10806L | N/A | N/A |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 2.6.2 Description of Measurement Conditions

Temperature: 20ć
Humidity: 60%
Pressure: 1033mbar
Electromagnetic environment: normal

### 2.6.3 Test procedure and the test set-up

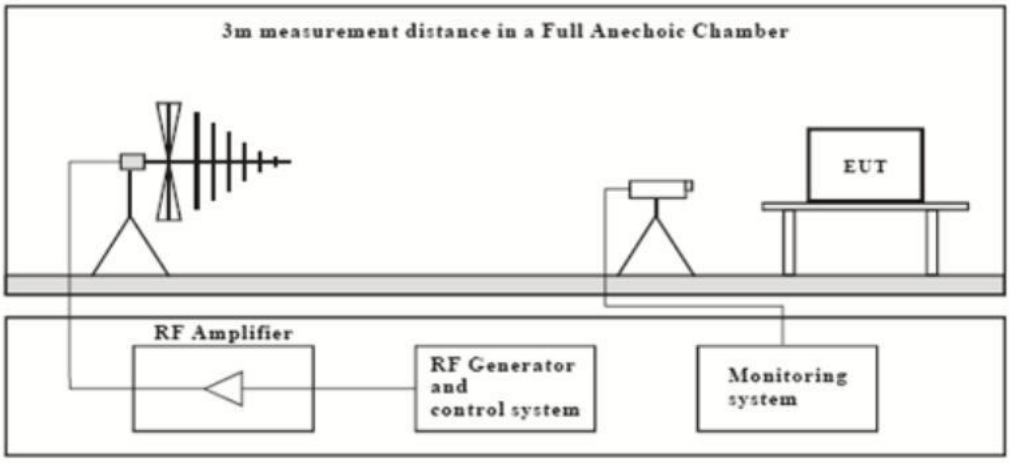
Procedure

The test procedure was in accordance with EN 61000-4-3

a. The testing was performed in a fully-anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.
b. The frequency range is swept from 80 MHz to 1000 MHz with the signal 80% amplitude modulated with a 1kHz sinewave. The rate of sweep did not exceed $1.5^{-3}$x 10 decade/s. Where the frequency range is swept incrementally, the step size was 1 % of preceding frequency value.
c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
d. The field strength level was 3V/m.
e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

Test model: T2000

Set-up




## 2.6.4 Test Data and Records

The EUT was tested that it worked at the normal state.

| Frequency Range (MHz) | Front Side (3 V/m) | | Rear Side (3 V/m) | | Left Side (3 V/m) | | Right Side (3 V/m) | |
|---|---|---|---|---|---|---|---|---|
| 80-1000 | VERT | HORI | VERT | HORI | VERT | HORI | VERT | HORI |
| | A | A | A | A | A | A | A | A |

## 2.6.5 Verdict

The EUT was working as normal, so it met the requirement of performance criteria A.

Test model: T2000

## 2.7 Power-frequency magnetic field

### 2.7.1 Test Equipment List and Details

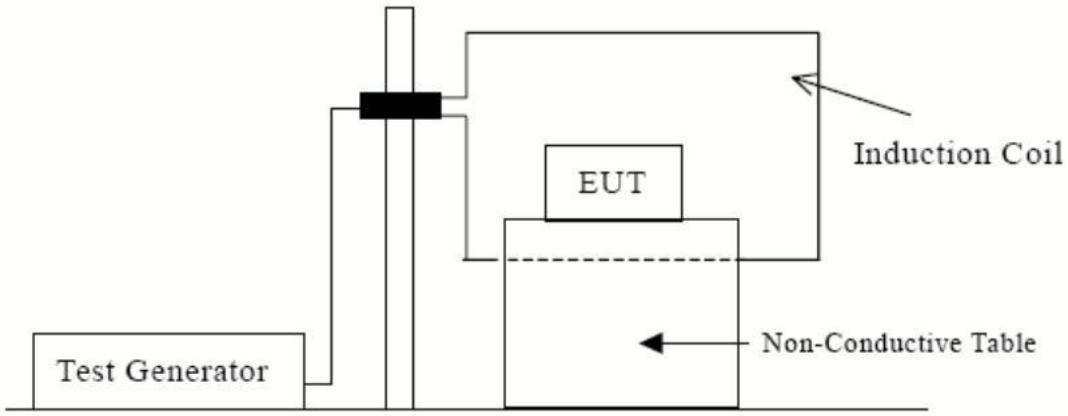
| Manufacturer | Description | Model | Serial Number | Last Cal. Date | Cal. Due Date |
|---|---|---|---|---|---|
| HAEFELY TEST AG | Magnetic field tester | MGA 100 | 152676 | 2016.10 | 2 Year |
| EMCO | Active loop | 6502 | 9003-2484 | 2016.10 | 2 Year |

*Statement of Traceability: China Ceprei (Sichuan) Laboratory certifies that all calibrations have been performed using suitable standards traceable to the CHINA SCEIENTIFIC MEASUREMENT INSTITUTE.

### 2.7.2 Description of Measurement Conditions

Temperature: 22ć
Humidity: 59%
Pressure: 1033mbar
Electromagnetic environment: normal

### 2.7.3 Configuration



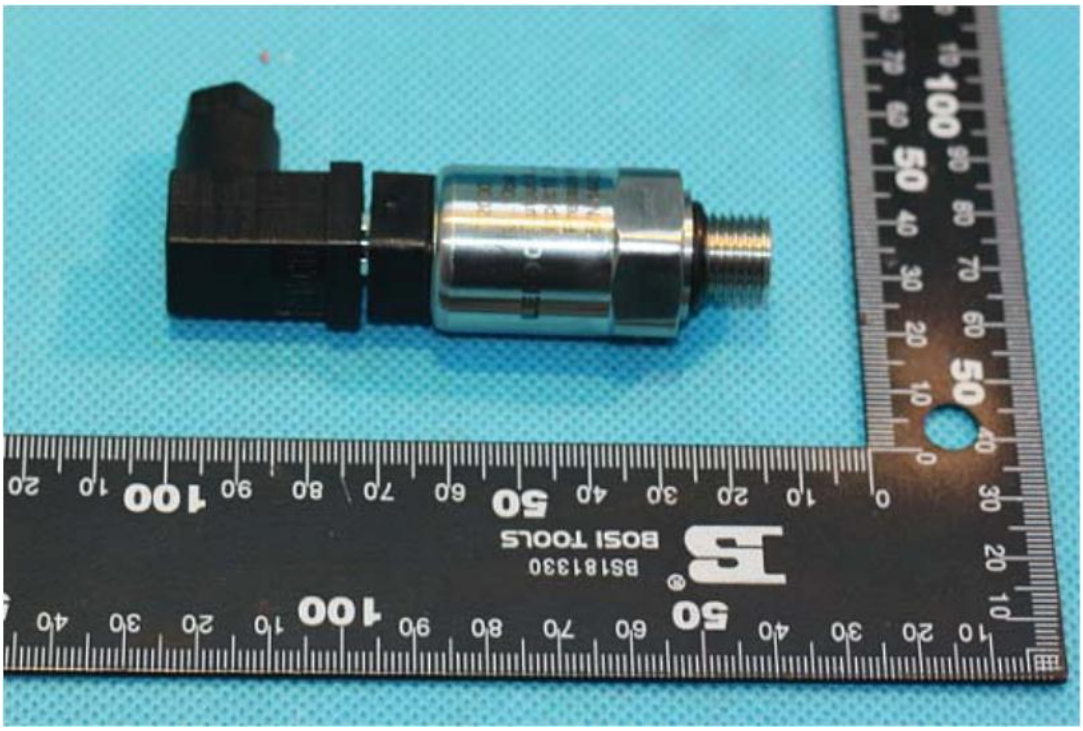

### 2.7.3 Test Data and Records

| Power Frequency Magnetic Field | Testing Duration | Coil Oritentation | Pass |
|---|---|---|---|
| 50Hz, 60 Hz 3 A/m | 1 Min | X-axis | A |
| 50Hz, 60 Hz 3 A/m | 1 Min | Y-axis | A |
| 50Hz, 60 Hz 3 A/m | 1 Min | Z-axis | A |

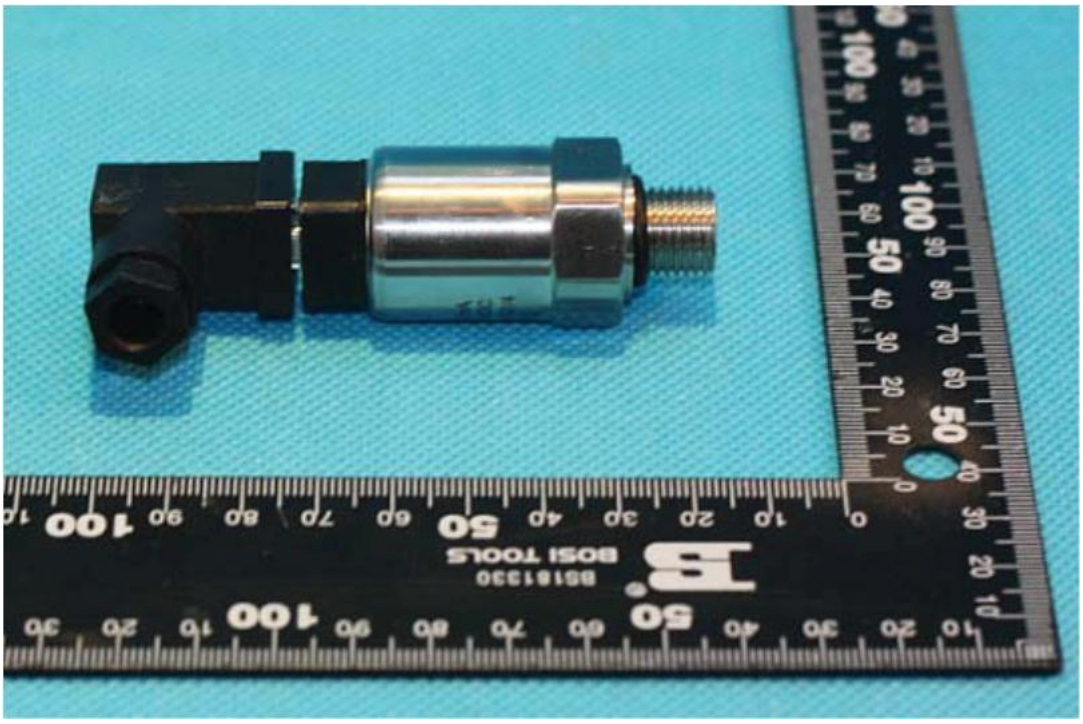
### 2.7.4 Verdict

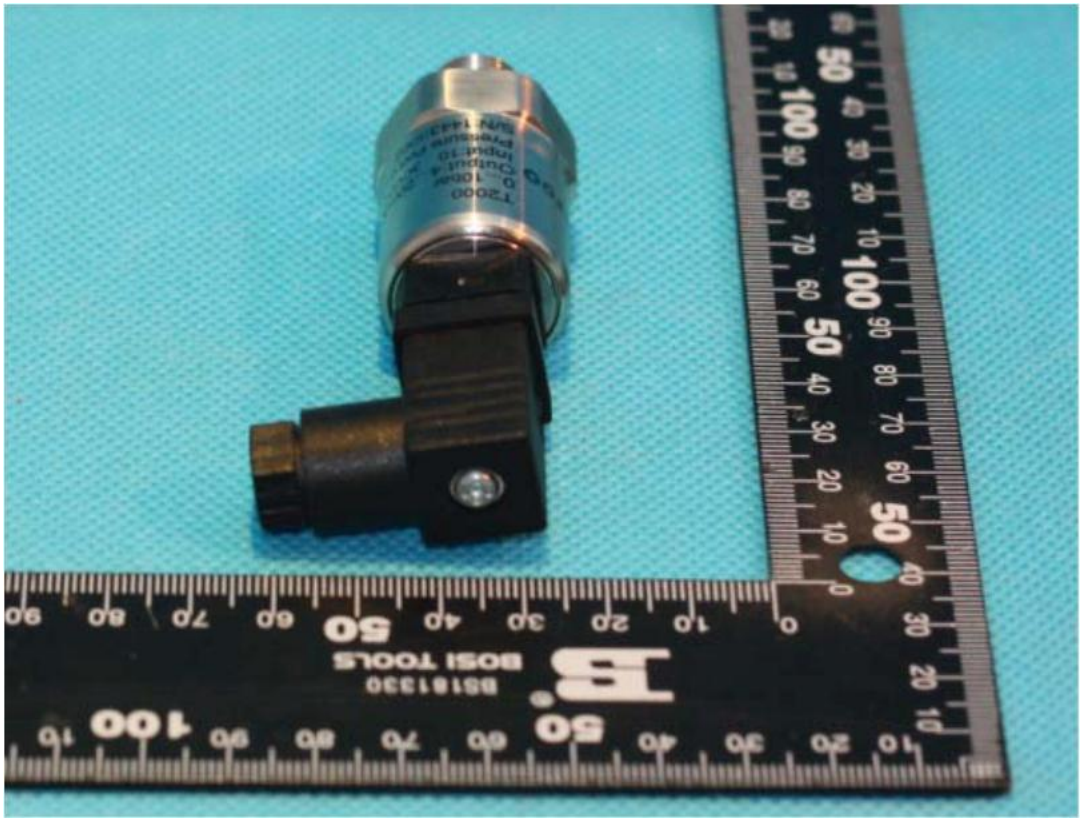
The EUT was working as normal, so it met the requirement of performance criteria A.

# APPENDIX PHOTOGRAPH

Test model: T2000



Test model: T2000

# Notice

1′ This test report shall be invalid without the cachet of the testing laboratory.

2′ This copied report shall be invalid without the sealed cachet of the testing laboratory.

3′ This report shall be invalid without tester signature, reviewer signature and approver signature.

4′ This report is invalid if altered.

5′ Client shall put forward demurrer within 15days after receipt of report. The testing laboratory shall refuse disposal if exceeded the time limit.

6′ The test results presented in this report relate only to the object tested.

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