



# EMC REPORT

**Product Type:** Circulation Pump

**Model No.:**

DSP 15-7.5,KP 15-7.5,DP 15-7.5,XR-ECO 15-60-130,XR-PRO 15-50-130,  
XR-ECO 15-70-130,XR-PRO 25-60-130,XR-ECO 25-40-130,  
XR-PRO 25-70-130,XR-ECO 25-60-130,XR-PRO 25-80-180,  
XR-ECO 25-60-180,XR-PRO 32-80-180,XR-ECO 25-70-130,  
XR-ECO 25-70-180,XR-ECO 25-80-180,XR-ECO 32-60-180,  
XR-ECO 32-80-180,XR BOOS 15-90-160

**Trademark:**

**DUCA**<sup>®</sup>

**Applicant:**

Worimex İklimlendirme Sistemleri Sanayi ve Ticaret A.s.  
Zafer Mahallesi 146.sokak No: 13A Esenyurt/istanbul

**Manufacturer:**

Worimex İklimlendirme Sistemleri Sanayi ve Ticaret A.s.  
Zafer Mahallesi 146.sokak No: 13A Esenyurt/istanbul

**Factory:**

Worimex İklimlendirme Sistemleri Sanayi ve Ticaret A.s.  
Zafer Mahallesi 146.sokak No: 13A Esenyurt/istanbul

**Report Number:**

OViS202405009E-R1

**Testing Standard:**

EN IEC 55014-1:2021, EN IEC 55014-2:2021,  
EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021,  
BS EN IEC 55014-1:2021, BS EN IEC 55014-2:2021,  
BS EN IEC 61000-3-2:2019+A1:2021,  
BS EN 61000-3-3:2013+A1:2019+A2:2021

**Date of Test:**

Apr. 26,2024 to May 16,2024

**Date of Report:**

May 17,2024

**Test Result:**



Positive



Negative





Revision Record			
Version	Description	Date	Remark
Ver.0.0	Original	May 17,2024	OVIS202405009E
Ver.1.0	1.The manufacturer and factory information was modified. 2.The trademark was added.	Jun. 11,2024	OVIS202405009E-R1

**Authorized for issue by:**

Prepared by : Caroline Chen  
(Caroline Chen)

Reviewer by : Sam Jin  
(Sam Jin)

Approved by : Lily LI \*  
(Lily LI)



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## 2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Harmonics On Ac Mains	EN IEC 61000-3-2:2019+A1:2021	EN IEC 61000-3-2	Class A	Pass
Voltage Changes, Voltage Fluctuations And Flicker On Ac Mains	EN 61000-3-3:2013 +A1:2019+A2:2021	EN 61000-3-3:2013 + A1:2019+A2:2021	Clause 5	Pass
Conducted Emissions at Mains Terminals (150kHz-30MHz)	EN IEC 55014-1:2021	CISPR 16-2-1	Table 5	Pass
Disturbance Power		CISPR 16-2-2	Table 7 & 8	Pass
Radiated Emissions (30MHz-1GHz)	EN IEC 61000-6-2:2019	CISPR 16-2-3	N/A	N/A*

Immunity Part				
Item	Standard	Method	Requirement	Result
Immunity	EN IEC 55014-2:2021	N/A	N/A	N/A*

N/A: Not applicable

N/A\*: Please refer to Section 7 of this report for details.

There is no EMS test requirement, since the EUT belongs to Category I of EN IEC 55014-2:2021.

### Declaration of EUT Family Grouping:

Note: There are series models mentioned in this report, and they are the similar in electrical and electronic characters. Only the model XR-PRO 32-80-180 was tested since their differences were the model number and appearance.

### Remark:

For detail, see relevant information on General product information  
BS standards are identical with EN standards







### 3 Contents

	<b>Page</b>
<b>1 COVER PAGE</b>	<b>1</b>
<b>2 TEST SUMMARY</b>	<b>2</b>
<b>3 CONTENTS</b>	<b>3</b>
<b>4 GENERAL INFORMATION</b>	<b>4</b>
4.1 DETAILS OF E.U.T	4
4.2 DESCRIPTION OF SUPPORT UNITS	4
4.3 MEASUREMENT UNCERTAINTY	4
4.4 TEST LOCATION	4
4.5 DEVIATION FROM STANDARDS	4
4.6 ABNORMALITIES FROM STANDARD CONDITIONS	4
4.7 MONITORING OF EUT FOR ALL IMMUNITY TEST	4
<b>5 EQUIPMENT LIST</b>	<b>5</b>
<b>6 EMISSION TEST RESULTS</b>	<b>7</b>
6.1 HARMONICS ON AC MAINS	7
6.2 VOLTAGE CHANGES, VOLTAGE FLUCTUATIONS AND FLICKER ON AC MAINS	11
6.3 CONDUCTED EMISSIONS AT MAINS TERMINALS (150KHZ-30MHZ)	12
6.4 DISTURBANCE POWER	15
6.5 RADIATED EMISSIONS (30MHZ-1GHZ)	17
<b>7 ELECTROMAGNETIC SUSCEPTIBILITY TEST RESULTS</b>	<b>18</b>
<b>8 PHOTOGRAPHS</b>	<b>19</b>
8.1 HARMONICS EMISSIONS AND VOLTAGE CHANGES, VOLTAGE FLUCTUATIONS AND FLICKER TEST SETUP	19
8.2 CONDUCTED EMISSIONS AT MAINS TERMINALS (150KHZ-30MHZ) TEST SETUP	19
8.3 DISTURBANCE POWER	20
8.4 EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)	20





**4 General Information**

**4.1 Details of E.U.T.**

Power supply: 245W

Test voltage: 220-240V,50Hz

**4.2 Description of Support Units**

The EUT has been tested as an independent unit

**4.3 Measurement Uncertainty**

No.	Item	Measurement Uncertainty
1	Conducted Emission at mains port using AMN	2.6dB (9kHz to 150kHz)
		2.4dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	1.8 dB (9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	4.2 dB (150kHz to 30MHz)
4	Radiated Power	2.3dB
5	Radiated Emission	4.5dB (30MHz-1GHz)
		5.1dB (1GHz-3.6GHz)
6	Radiated Disturbance (disturbance current in a LLAS)	2.4dB (9kHz to 30MHz)

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

**4.4 Test Location**

All tests were performed at:  
OVIS Testing Technology (Zhejiang) Co., Ltd.  
Building 31, Feiyue Park, Xiachen Street, Jiaojiang District, Taizhou City, Zhejiang Province, China  
Tel: 400-8008-959

**4.5 Deviation from Standards**

None

**4.6 Abnormalities from Standard Conditions**

None

**4.7 Monitoring of EUT for All Immunity Test**

Visual: Monitor the work status



## 5 Equipment List

Harmonics on AC Mains,Voltage changes, voltage fluctuations and flicker on AC mains					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
Harmonics and Flicker Analyzer	APS	ECT32-3450F-M18012	OVIS-YQ124	2023-10-08	2024-10-07

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
EMI test receiver	Rohde&Schwarz	ESR3	OVIS-YQ125	2023-10-08	2024-10-07
Artificial mains network	AFJ	LT32C	OVIS-YQ126	2023-10-08	2024-10-07
Shielding Room	Everfine	SR-500	OVIS-YQ127	2023-10-08	2024-10-07

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
EMI test receiver	Rohde&Schwarz	ESR3	OVIS-YQ125	2023-10-08	2024-10-07
CONTROLLER	Noyetec	XTJC	OVIS-YQ128	2023-10-08	2024-10-07
ANTENNA MAST	SCHWARZBECK	VULB9163	OVIS-YQ129	2023-10-08	2024-10-07
Semi/Fully Anechoic	Noyetec	SR-500	OVIS-YQ130	2023-10-08	2024-10-07
Pre-Amplifier	Noyetec	NYPAA0930	OVIS-YQ131	2023-10-08	2024-10-07

Electrostatic Discharge Test Setup					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
ESD generator	Everfine	EMS61000-2A	OVIS-YQ132	2023-10-08	2024-10-07

Electrical Fast Transients/Burst at Power Port					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
Burst generator	Everfine	EMS61000-4A	OVIS-YQ133	2023-10-08	2024-10-07
Coupling clamp	Everfine	EFTC-2	OVIS-YQ134	2023-10-08	2024-10-07

Surge at Power Port					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
Lightning surge generator	Everfine	EMS61000-5A	OVIS-YQ135	2023-10-08	2024-10-07

Conducted Immunity at Power Port (150kHz-80MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date

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Signal generator	Rigol	DSG821	OVIS-YQ136	2023-10-08	2024-10-07
Power Amplifier	Noyetec	NYP A0123-100	OVIS-YQ137	2023-10-08	2024-10-07
6dB Attenuator	Noyetec	ATT01	OVIS-YQ138	2023-10-08	2024-10-07
Coupling and Decoupling Network (CDN)	SCHWARZBECK	CDN M2/M3	OVIS-YQ139	2023-10-08	2024-10-07
RF Generator	Noyetec	SR100-6W	OVIS-YQ140	2023-10-08	2024-10-07
Shielding Room	Everfine	SR-500	OVIS-YQ127	2023-10-08	2024-10-07
Coupling and Decoupling Network (CDN)	SCHWARZBECK	CDN M4PE	OVIS-YQ141	2023-10-08	2024-10-07

**Voltage Dips and Interruptions**

Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
Three-phase cycle drop generator	Everfine	EMS61000-11 CA	OVIS-YQ142	2023-10-08	2024-10-07
Coupling and Decoupling Network (CDN)	Everfine	CDNI-3A	OVIS-YQ143	2023-10-08	2024-10-07
Manual step transformer	Everfine	SG-15KVA	OVIS-YQ144	2023-10-08	2024-10-07

**Radiated Immunity (80MHz-3.6GHz)**

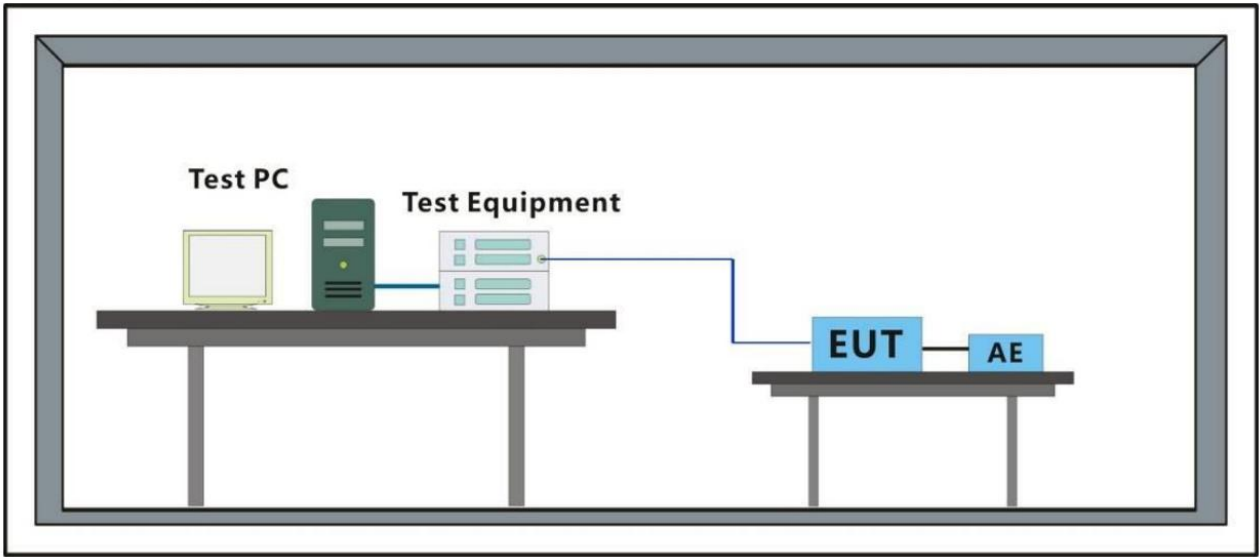
Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
Signal generator	Rigol	DSG836	OVIS-YQ145	2023-10-08	2024-10-07
Antenna	SCHWARZBECK	VUSLP9111E	OVIS-YQ146	2023-10-08	2024-10-07
Amplifier	Noyetec	NYP A0810-200	OVIS-YQ147	2023-10-08	2024-10-07
Power meter sensor	PMM	EP601	OVIS-YQ148	2023-10-08	2024-10-07
ElectroMagnetic Field Probe	Ceyear	87230	OVIS-YQ149	2023-10-08	2024-10-07
Shielding Room	Everfine	SR-500	OVIS-YQ127	2023-10-08	2024-10-07

**General used equipment**

Equipment	Manufacturer	Model No	Inventory No	Cal Date Cal	Due Date
Digital pressure meter	YIOU	DPH-103	OVIS-YQ073	2023-10-08	2024-10-07
Temperature&humidity recorder	Dongguan Jinghe Electronic Technology Co., Ltd	MC501	OVIS-YQ095	2023-10-08	2024-10-07
Digital Multimeter	Fluke	319	OVIS-YQ012	2023-10-08	2024-10-07

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<b>6</b>	<b>Emission Test Results</b>
6.1	Harmonics on AC Mains
	Test Requirement: EN IEC 61000-3-2:2019+A1:2021
	Test duration:2.5min
	Harmonic order:2-40th
	Frequency Range: 0-2 kHz
	Equipment category:Class A
6.1.1	E.U.T. Operation
	Operating Environment:
	Temperature: 22℃ Humidity: 51 % RH Atmospheric Pressure: 1020 mbar
	Test mode :Normal Working_keep EUT running continual .
6.1.2	Harmonic currents measurement result
6.1.3	Test Setup Diagram
	
6.1.4	Measurement Procedure and Data
	Frequency Range: 100Hz to 2kHz



**Current Harmonics (values at the end of test)**

H <sub>n</sub> (n)	Harms (avg) (A)	Harm. Limit (100%) (A)	% Of Limits	Harms (max) (A)	Harm. Limit (150%) (A)	% Of Limits	Result
2	0.0012	1.0800	N/A	0.0017	1.6200	N/A	Pass
3	0.0031	2.3000	1.48	0.0033	3.4500	1.00	Pass
4	0.0005	0.4300	N/A	0.0006	0.6450	N/A	Pass
5	0.0500	1.1400	4.39	0.0508	1.7100	2.97	Pass
6	0.0003	0.3000	N/A	0.0005	0.4500	N/A	Pass
7	0.0022	0.7700	1.40	0.0025	1.1550	0.98	Pass
8	0.0002	0.2300	N/A	0.0003	0.3450	N/A	Pass
9	0.0014	0.4000	N/A	0.0015	0.6000	N/A	Pass
10	0.0002	0.1840	N/A	0.0003	0.2760	N/A	Pass
11	0.0016	0.3300	N/A	0.0018	0.4950	N/A	Pass
12	0.0002	0.1533	N/A	0.0002	0.2300	N/A	Pass
13	0.0011	0.2100	N/A	0.0012	0.3150	N/A	Pass
14	0.0002	0.1314	N/A	0.0002	0.1971	N/A	Pass
15	0.0009	0.1500	N/A	0.0010	0.2250	N/A	Pass
16	0.0008	0.1150	N/A	0.0008	0.1725	N/A	Pass
17	0.0042	0.1324	N/A	0.0043	0.1985	N/A	Pass
18	0.0005	0.1022	N/A	0.0005	0.1533	N/A	Pass
19	0.0064	0.1184	7.60	0.0065	0.1776	5.12	Pass
20	0.0009	0.0920	N/A	0.0009	0.1380	N/A	Pass
21	0.0006	0.1071	N/A	0.0007	0.1607	N/A	Pass
22	0.0004	0.0836	N/A	0.0004	0.1255	N/A	Pass
23	0.0007	0.0978	N/A	0.0009	0.1467	N/A	Pass
24	0.0003	0.0767	N/A	0.0004	0.1150	N/A	Pass
25	0.0012	0.0900	N/A	0.0014	0.1350	N/A	Pass
26	0.0001	0.0708	N/A	0.0002	0.1062	N/A	Pass
27	0.0002	0.0833	N/A	0.0002	0.1250	N/A	Pass
28	0.0001	0.0657	N/A	0.0001	0.0986	N/A	Pass
29	0.0003	0.0776	N/A	0.0003	0.1164	N/A	Pass
30	0.0001	0.0613	N/A	0.0001	0.0920	N/A	Pass
31	0.0003	0.0726	N/A	0.0003	0.1089	N/A	Pass
32	0.0001	0.0575	N/A	0.0001	0.0863	N/A	Pass
33	0.0001	0.0682	N/A	0.0001	0.1023	N/A	Pass
34	0.0001	0.0541	N/A	0.0001	0.0812	N/A	Pass
35	0.0002	0.0643	N/A	0.0002	0.0964	N/A	Pass
36	0.0001	0.0511	N/A	0.0001	0.0767	N/A	Pass
37	0.0002	0.0608	N/A	0.0003	0.0912	N/A	Pass
38	0.0001	0.0484	N/A	0.0001	0.0726	N/A	Pass
39	0.0001	0.0577	N/A	0.0001	0.0865	N/A	Pass
40	0.0001	0.0460	N/A	0.0001	0.0690	N/A	Pass

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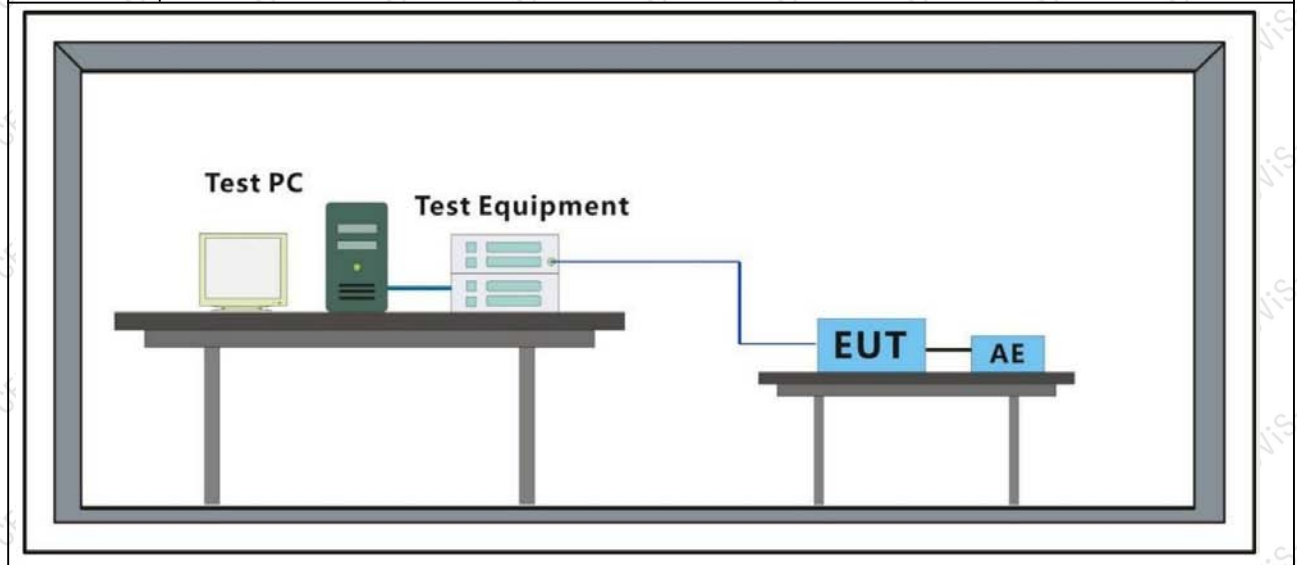
**Power Source Verification Data**

Harm No.	Harm. Value % Of Limits	Limits(%)	% Of Limits	Result
2	0.01%	0.20	5.76%	Pass
3	0.01%	0.90	1.37%	Pass
4	0.01%	0.20	4.73%	Pass
5	0.01%	0.40	1.56%	Pass
6	0.00%	0.20	1.85%	Pass
7	0.01%	0.30	1.73%	Pass
8	0.00%	0.20	2.28%	Pass
9	0.01%	0.20	4.27%	Pass
10	0.01%	0.20	3.03%	Pass
11	0.00%	0.10	4.02%	Pass
12	0.01%	0.10	5.97%	Pass
13	0.01%	0.10	7.53%	Pass
14	0.00%	0.10	3.35%	Pass
15	0.01%	0.10	7.89%	Pass
16	0.00%	0.10	2.31%	Pass
17	0.01%	0.10	7.82%	Pass
18	0.00%	0.10	1.76%	Pass
19	0.01%	0.10	10.15%	Pass
20	0.00%	0.10	1.68%	Pass
21	0.01%	0.10	12.38%	Pass
22	0.00%	0.10	1.60%	Pass
23	0.01%	0.10	12.00%	Pass
24	0.00%	0.10	1.69%	Pass
25	0.01%	0.10	11.01%	Pass
26	0.00%	0.10	1.73%	Pass
27	0.01%	0.10	10.57%	Pass
28	0.00%	0.10	1.76%	Pass
29	0.01%	0.10	10.06%	Pass
30	0.00%	0.10	1.84%	Pass
31	0.01%	0.10	9.12%	Pass
32	0.00%	0.10	1.87%	Pass
33	0.01%	0.10	9.45%	Pass
34	0.00%	0.10	1.92%	Pass
35	0.01%	0.10	9.84%	Pass
36	0.00%	0.10	2.08%	Pass
37	0.01%	0.10	10.76%	Pass
38	0.00%	0.10	2.14%	Pass
39	0.01%	0.10	11.84%	Pass
40	0.00%	0.10	2.18%	Pass

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6.2	<b>Voltage changes, voltage fluctuations and flicker on AC mains</b>
	Test Requirement:EN 61000-3-3:2013+A1:2019+A2:2021 Test Method:EN 61000-3-3: 2013+ A1:2019+A2:2021
6.2.1	<b>E.U.T. Operation</b>
	Operating Environment: Temperature: 22°C Humidity: 51 % RH Atmospheric Pressure: 1020 mbar Test mode :Normal Working_keep EUT running continual .
6.2.2	<b>Following are the measurement results obtained via an automatic testing system</b>
6.2.3	<b>Test Setup Diagram</b>



**6.2.4 Measurement Procedure and Data**  
**Maximum Flicker results**

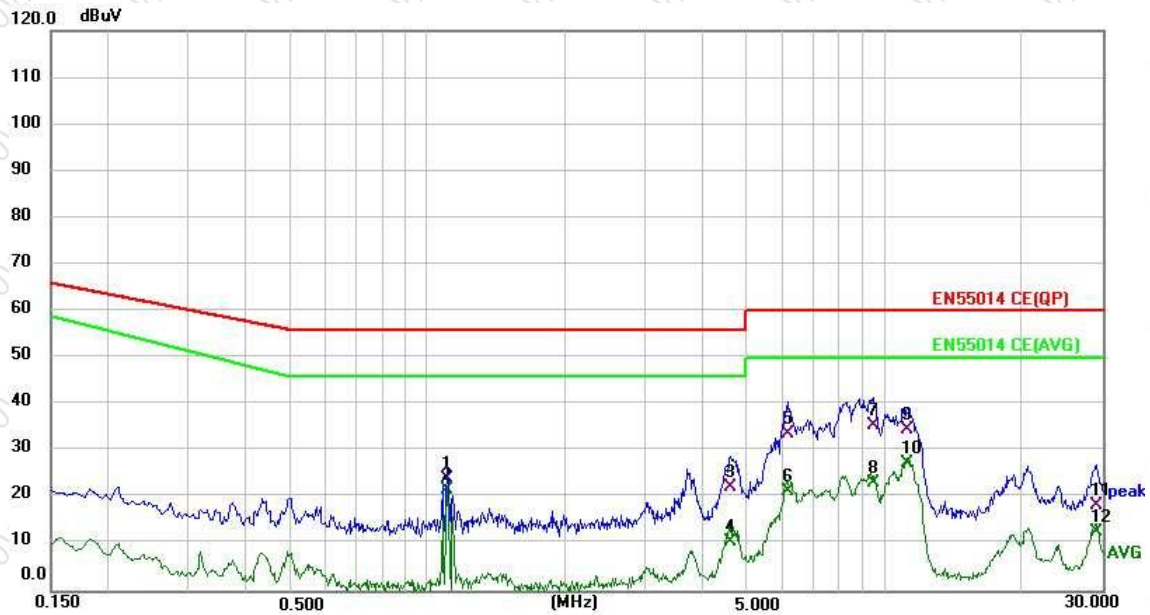
	<b>EUT values phase A</b>	<b>Limit</b>
<b>T-max [s]</b>	0.00	0.50
<b>dmax [%]</b>	0.00	4.00
<b>dc [%]</b>	0.00	3.30
<b>P<sub>st</sub></b>	0.026	1.0
<b>P<sub>It</sub></b>	0.020	0.65



6.3	Conducted Emissions at Mains Terminals (150kHz-30MHz)
	Test Requirement: EN IEC 55014-1:2021
	Test Method: CISPR 16-2-1
	Frequency Range: 150kHz to 30MHz
	Limit: 0.15M-0.5MHz      66dB(μV)-56dB(μV) quasi-peak, 59dB(μV)-46dB(μV) average 0.5M-5MHz         56dB(μV) quasi-peak, 46dB(μV) average 5M-30MHz           60dB(μV) quasi-peak, 50dB(μV) average  Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz
6.3.1	E.U.T. Operation
	Operating Environment:
	Temperature: 22°C      Humidity: 51 % RH Atmospheric Pressure: 1020 mbar
	Test mode :Normal Working_keep EUT running continual .
6.3.2	Test Setup Diagram
	<p>The diagram illustrates the test setup within a shielding room. An EUT (Equipment Under Test) and an AE (Antenna) are placed on a table. A LISN (Line Impedance Stabilization Network) is connected to the EUT. The EUT and AE are positioned 10cm apart. The LISN is connected to the EUT and the Ground Reference Plane. The Test Receiver is connected to the AE and the Ground Reference Plane. The LISN is connected to the Ground Reference Plane. The Ground Reference Plane is at a height of 80cm. The EUT is at a height of 80cm. The AE is at a height of 80cm. The Test Receiver is at a height of 80cm.</p>
6.3.3	Measurement Data
	An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected



Model: XR-PRO 32-80-180; Line:Live Line



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	1.1060	13.50	10.80	24.30	56.00	-31.70	QP	P
2	1.1060	11.03	10.80	21.83	46.00	-24.17	AVG	P
3	4.5980	11.44	10.98	22.42	56.00	-33.58	QP	P
4	4.5980	-0.19	10.98	10.79	46.00	-35.21	AVG	P
5	6.1460	22.63	10.98	33.61	60.00	-26.39	QP	P
6	6.1460	10.37	10.98	21.35	50.00	-28.65	AVG	P
7	9.4620	24.44	11.16	35.60	60.00	-24.40	QP	P
8	9.4620	11.95	11.16	23.11	50.00	-26.89	AVG	P
9	11.2460	23.34	11.25	34.59	60.00	-25.41	QP	P
10 *	11.2460	16.12	11.25	27.37	50.00	-22.63	AVG	P
11	29.1140	5.94	12.58	18.52	60.00	-41.48	QP	P
12	29.1140	0.10	12.58	12.68	50.00	-37.32	AVG	P

Notes:Measure-Ment=Reading Level+Factor

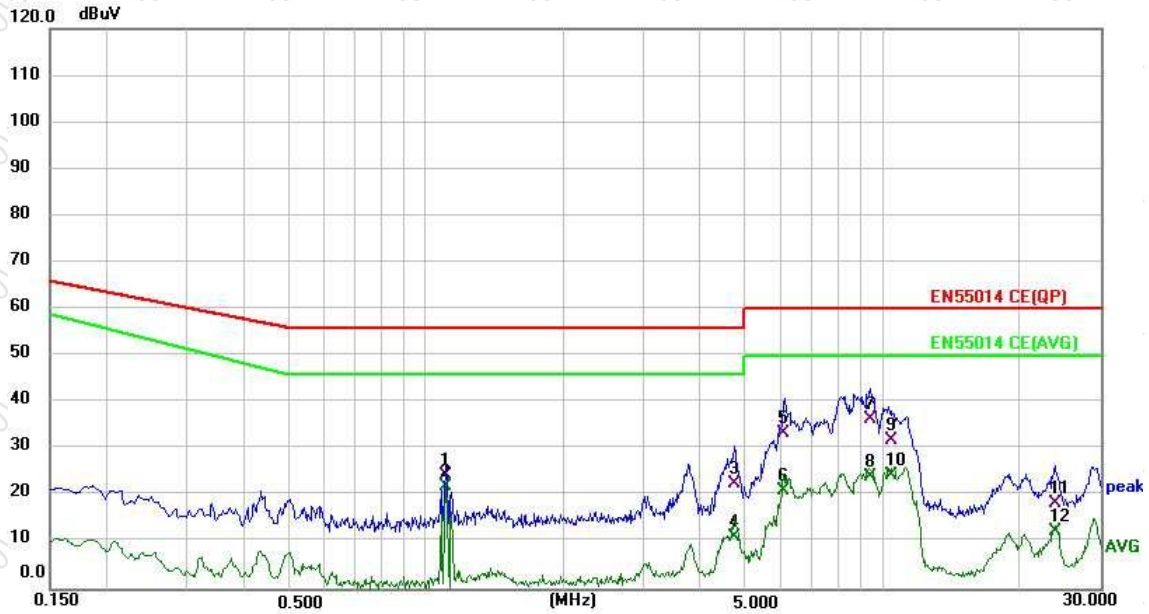
This Test Report is issued by the Company subject to its Conditions of issuance of Test Reports printed overleaf and is intended for your exclusive use. Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. This test report includes all of the tests requested by you and the results there of based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence. Provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.







Model:XR-PRO 32-80-180; Line:Neutral Line

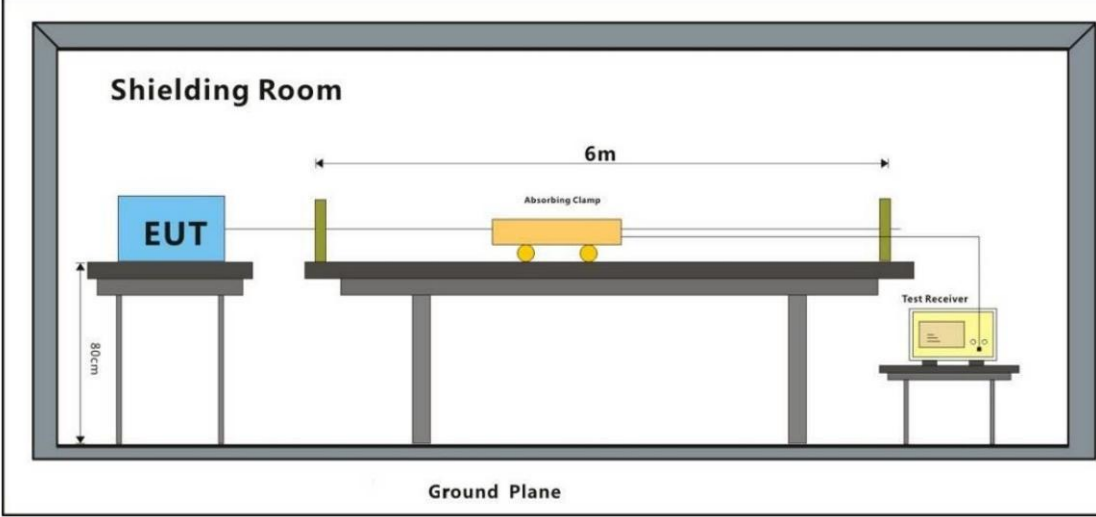


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	1.1060	13.51	10.89	24.40	56.00	-31.60	QP	P
2	1.1060	11.06	10.89	21.95	46.00	-24.05	AVG	P
3	4.7260	11.68	11.11	22.79	56.00	-33.21	QP	P
4	4.7260	0.23	11.11	11.34	46.00	-34.66	AVG	P
5	6.0939	22.32	11.11	33.43	60.00	-26.57	QP	P
6	6.0939	10.03	11.11	21.14	50.00	-28.86	AVG	P
7 *	9.4060	25.28	11.29	36.57	60.00	-23.43	QP	P
8	9.4060	12.75	11.29	24.04	50.00	-25.96	AVG	P
9	10.4740	20.58	11.35	31.93	60.00	-28.07	QP	P
10	10.4740	13.17	11.35	24.52	50.00	-25.48	AVG	P
11	23.8340	6.14	12.35	18.49	60.00	-41.51	QP	P
12	23.8340	-0.02	12.35	12.33	50.00	-37.67	AVG	P

Notes:Measure-Ment=Reading Level+Factor

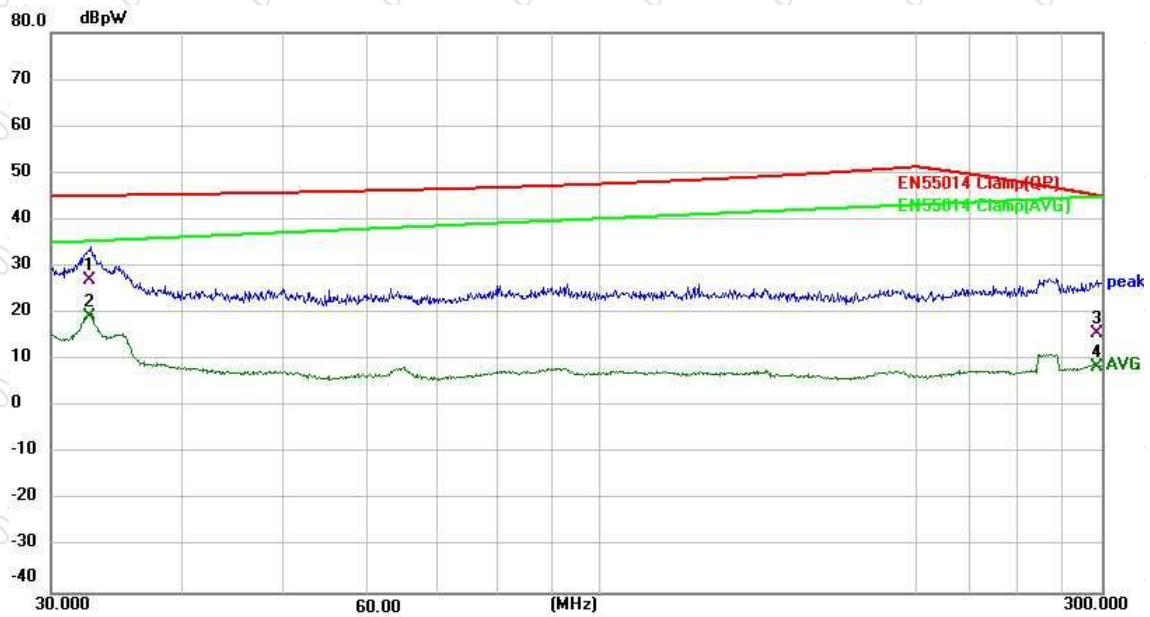




6.4	Disturbance Power
	Test Requirement: EN IEC 55014-1:2021
	Test Method: CISPR 16-2-2
	Frequency Range: 150kHz to 30MHz
	Limit: 30MHz - 300MHz      45dB(pW)-55dB(pW) quasi-peak, 35dB(pW)-45dB(pW) average 200MHz - 300MHz      0dB(pW)-10dB(pW) quasi-peak (reduction limit)  Detector: Peak for pre-scan (120kHz resolution bandwidth) 30MHz to 300MHz
6.4.1	E.U.T. Operation
	Operating Environment:
	Temperature: 22°C    Humidity: 51 % RH Atmospheric Pressure: 1020 mbar
	Test mode :Normal Working_keep EUT running continual .
6.4.2	Test Setup Diagram
	 <p>The diagram illustrates the test setup within a shielding room. On the left, an EUT (Equipment Under Test) is placed on a table that is 80cm high. To the right, an absorbing clamp is positioned on a table that is 6m away from the EUT. Further to the right, a test receiver is also on a table. The entire setup is situated on a ground plane.</p>
6.4.3	Measurement Data
	Frequency Range: 30MHz to 300MHz  An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected. The red line show in graphic is the limit in standard used in this section.  Measured Level = Read level + Cable Loss + Clamp Factor



Model: XR-PRO 32-80-180



No.	Frequency (MHz)	Reading (dBUV)	Factor (dB)	Level (dBpW)	Limit (dBpW)	Margin (dB)	Detector
1	32.7599	17.88	9.18	27.06	45.10	-18.04	QP
2 *	32.7599	10.11	9.18	19.29	35.10	-15.81	AVG
3	297.1600	7.68	7.96	15.64	45.18	-29.54	QP
4	297.1600	0.57	7.96	8.53	44.89	-36.36	AVG

Notes: Measure-Ment=Reading Level+Factor




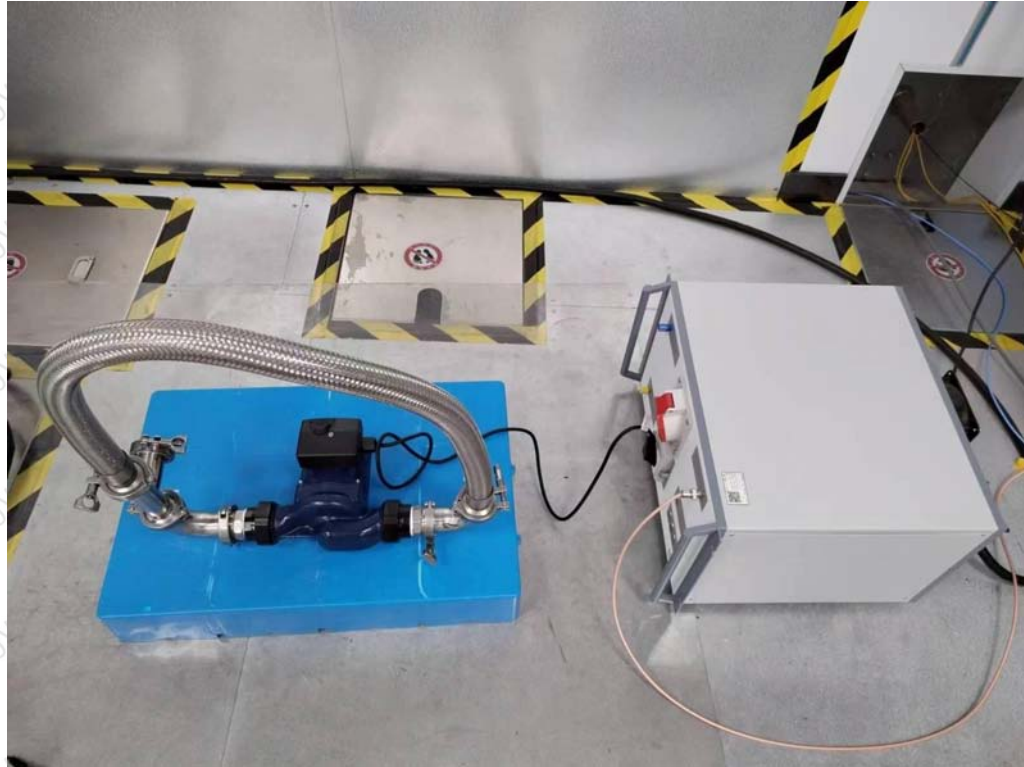
<b>6.5</b>	<b>Radiated Emissions (30MHZ-1GHZ)</b>
	Test Requirement: EN IEC 55014-1:2021
	Test Method: CISPR 16-2-3
	Frequency Range: 30MHz to 1GHz
	Limit: 30MHz - 230MHz      50 dB(μV/m)    quasi-peak 230MHz - 1GHz      57 dB(μV/m)    quasi-peak
	Detector: Peak for pre-scan (120kHz resolution bandwidth) 30MHz to 1000MHz
According to a ) of clause 4.3.4.2 of EN IEC 55014-1 : 2021	
"The EUT shall be also deemed to comply with the requirement of this document in the frequency range from 300 MHz to 1000 MHz without further testing if both conditions 1 )and 2 ) below are fulfilled :"	
1) :the disturbance power emission from the EUT is lower than the limits of Table 7reduced by the values of Table 8	
2) : the maximum clock frequency shall be less than 30MHz	
Because the EUT meets the two conditions mentioned above . the EUT is deemed to meet the radiated requirements without actual testing	







<b>7</b>	<b>Immunity Test Results</b>
<p>Test Requirement: EN IEC 55014-2:2021  Test Method: N/A</p> <p>Remark: There is no need for immunity tests to be performed on this product in accordance with clause 7.2.2 of EN IEC 55014-2 which states:  "Category I equipment is deemed to comply with the immunity requirements of this document without testing."  For further details, please refer to clause 4.2 of EN IEC 55014-2 which states:  "Category I: equipment containing no electronic control circuitry.  EXAMPLES Appliances, tools and toys that contain no electronic control circuits and only electromechanical components such as switches, thermostats, brush motors, induction motors, heating elements, lighting toys containing only batteries and LED.  Electrical circuits consisting of passive components (such as radio interference suppression capacitors or inductors, mains transformers, mains frequency rectifiers) are not considered to be electronic control circuitry."</p>	



8	<b>Photographs</b>
8.1	<b>Harmonics Emissions and Voltage Changes, Voltage Fluctuations And Flicker Test Setup</b>
	
8.2	<b>Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup</b>
	



8.3	Disturbance Power 
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8.4	EUT Constructional Details (EUT Photos) 
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## REMARKS

1. This report is invalid without the seal of special stamp for OViS test report and invalid if altered.
2. The copy of this report is invalid without a new seal of special stamp for OViS test report and invalid if altered.
3. This report is invalid without seals or signatures of Tester,Checker and Approval.
4. If there is no special announcement in this report,the information of producer and samples is not identified by OViS,the customer is responsible for truth of the samples.
5. Objections to the test report must be submitted to OViS within 15 days.
6. The test results shown in this report is only applicable for the samples supplied directly by the customer and accepted by the test organization,the customer shall not propagandize improperly without permission by OViS.
7. “P” means “pass”, “F” means “fail”, “N/A” or “—” means “not applicable” and “ / ” means “not test”.

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