



ZHEJIANG WEIHAO ELECTRONICS CO.,LTD

CE ERP REPORT

Prepared For:	ZHEJIANG WEIHAO ELECTRONICS CO.,LTD 231#, WeiLiu Road,YueQing, Economic, Development, Zone,ZheJiang,China
Product Name:	WATERPROOF POWER SUPPLY
Model:	LPV-100,LPV-15,LPV-20,LPV-30,LPV-50,LPV-60,LPV-80,LPV-120,LPV-150, LPV-200,LPV-250
Prepared By:	Shenzhen BST Technology Co., Ltd. Building No.23-24, Zhiheng industrial park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China.
Test Date:	Aug. 27, 2016
Date of Report:	Aug. 30, 2016
Report No.:	BST16087938A0001Y-1SR-2

**TEST REPORT****COMMISSION REGULATION (EU) No 278/2009****of 6 April 2009****implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies**

Testing laboratory	Shenzhen BST Technology Co., Ltd.
Address:	Building No.23-24, Zhiheng industrial park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China.
Testing location:	Shenzhen BST Technology Co., Ltd.
Applicant	ZHEJIANG WEIHAO ELECTRONICS CO.,LTD
Address	231#,WeiLiu Road,YueQing Economic Development Zone,ZheJiang,China
Test Result	Commission Regulation (EU) 278/2009
Test Procedure	The European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies.
Non-standard test method	N.A.
Type of test object.	WATERPROOF POWER SUPPLY
Trademark	N.A.
Model/type reference	LPV-100
Rating	Input: 180-264V~, 50/60Hz, Output: 12VDC, 8.5A
Manufacturer	ZHEJIANG WEIHAO ELECTRONICS CO.,LTD
Address	231#,WeiLiu Road,YueQing Economic Development Zone,ZheJiang,China



Name and address of the testing laboratory : Shenzhen BST Technology Co.,Ltd.

Building No.23-24, Zhiheng industrial park,
Guankouer Road, Nantou, Nanshan District,
Shenzhen, Guangdong, China.

Prepared by :

Engineer

Reviewer :

Supervisor

Approved & Authorized Signer :

Christina / Manager

Possible test case verdicts :

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

Test object does meet the requirement : P(ass)

Test object does not meet the requirement : F(ail)

General remarks:

Throughout this report a point is used as the decimal separator. The test results presented in this report relate only to the object tested.



<p>General remarks:</p> <p>"(see remark #)" refers to a remark appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p>	<p>Attached with:</p> <p>A. Photo documentation</p>
<p>Summary of testing:</p> <ol style="list-style-type: none">1. All submitted models were tested according to Implementation measure EU 278/2009.2. The product meets the stage 2 requirement of the implementation measure.	



Clasue	Requirement-Test	Result-Remark	Verdict
0.	ECODESIGN REQUIREMENTS		
1.	No-load power consumption and average active efficiency		P
1.1.	One year after this Regulation has come into force:		N
1.1.1	The no-load condition power consumption shall not exceed 0,50 W.		N
1.1.2	The average active efficiency shall be not less than: 0,500 * P _O , for P _O < 1,0 W; 0,090 * ln(P _O) + 0,500, for 1,0 W ≤ P _O ≤ 51,0 W; 0,850, for P _O > 51,0 W		N
1.2.	Two years after this Regulation has come into force:		P
1.2.1.	The no-load condition power consumption shall not exceed the following limits:		P
1.2.1.1.	AC-AC external power supplies, except low voltage external power supplies: P _O ≤ 51,0 W: 0,50 W; P _O > 51,0 W: 0,50 W.		N
1.2.1.2.	AC-DC external power supplies except low voltage external power supplies: P _O ≤ 51,0 W: 0,30 W; P _O > 51,0 W: 0,50 W.	0.42W, P _O =102W	P
1.2.1.3.	Low voltage external power supplies: P _O ≤ 51,0 W: 0,30 W; P _O > 51,0 W: N.A..		N
1.2.2.	The average active efficiency shall be not less than the following limits:		P
1.2.2.1.	AC-AC and AC-DC external power supplies, except low voltage external power supplies: P _O ≤ 1,0 W: 0,480 · P _O + 0,140; 1,0 W < P _O ≤ 51,0 W: 0,063 · ln(P _O) + 0,622; P _O > 51,0 W: 0,870	87.6%>87% P _O =102W	P



Clasue	Requirement-Test	Result-Remark	Verdict
1.2.2.2.	Low voltage external power supplies: $P_o \leq 1,0 \text{ W}$: $0,497 \cdot P_o + 0,067$; $1,0 \text{ W} < P_o \leq 51,0 \text{ W}$: $0,075 \cdot \ln(P_o) + 0,561$; $P_o > 51,0 \text{ W}$: $0,860$		N
2.	MEASUREMENTS		P
2.1.	The no-load condition power consumption and the average active efficiency referred to in point 1 shall be established by a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art.		P
2.2.	Measurements of power of 0,50 W or greater shall be made with an uncertainty of less than or equal to 2 % at the 95 % confidence level. Measurements of power of less than 0,50 W shall be made with an uncertainty of less than or equal to 0,01 W at the 95 % confidence level.		P
3.	Information to be provided by manufacturers		P
3.1.	For the purposes of conformity assessment pursuant to Article 4, the technical documentation shall contain the following elements:		P
3.1.1	Measured at load conditions 1-4:		
3.1.1.1.	Root mean square (Rms) output current (mA)		P
3.1.1.2.	Rms output voltage (V)		P
3.1.1.3.	Active output power (W)		P
3.1.2	Measured at load conditions 1-5:		
3.1.2.1.	Rms input voltage (V)		P
3.1.2.2.	Rms input power (W)		P
3.1.2.3.	Total harmonic distortion (THD)		P
3.1.2.4.	True power factor		
3.1.3	Calculated at load condition 1-4, measured at load condition 5:		
3.1.3.1	Power consumed (W)		P
3.1.4	Calculated at load conditions 1-4		



Clasue	Requirement-Test	Result-Remark	Verdict
3.1.4.1	Efficiency		P
3.1.5.	Arithmetic average of efficiency at load conditions 1-4:		P
3.1.5.1.	Average efficiency		
3.2.	The relevant load conditions are as follows:		P
3.2.1.	Percentage of nameplate output current		
3.2.1.1.	Load condition 1: 100 % \pm 2 %		P
3.2.1.2.	Load condition 2: 75 % \pm 2 %		P
3.2.1.3	Load condition 3: 50 % \pm 2 %		P
3.2.1.4.	Load condition 4: 25 % \pm 2 %		P
3.2.1.5.	Load condition 4: 0 % (no-load condition)		P

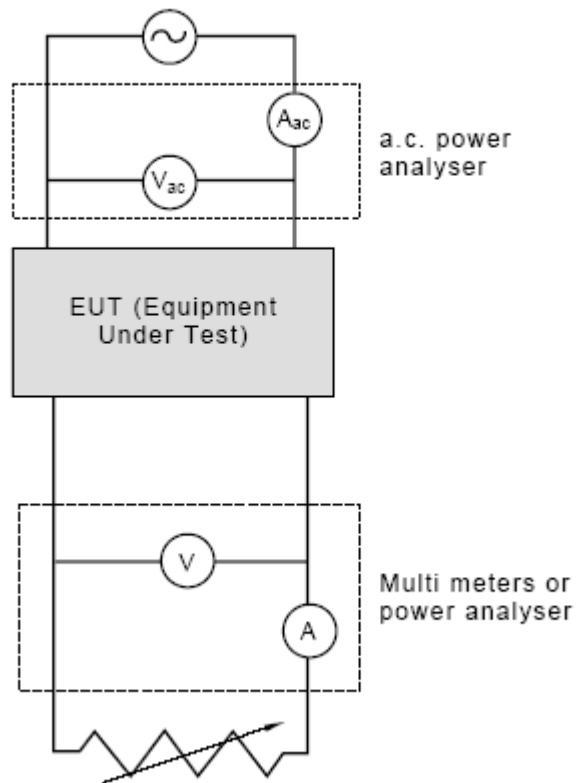


Test Equipment Used

Description	Model
Voltmeter	BN001
Ammeter	BN001
Power meter	BN001
Power supply	BN089
Electronic load	BT008



Test Circuit





ANNEX A:

Photo-documentation



Photo 1 General Appearance of the EUT

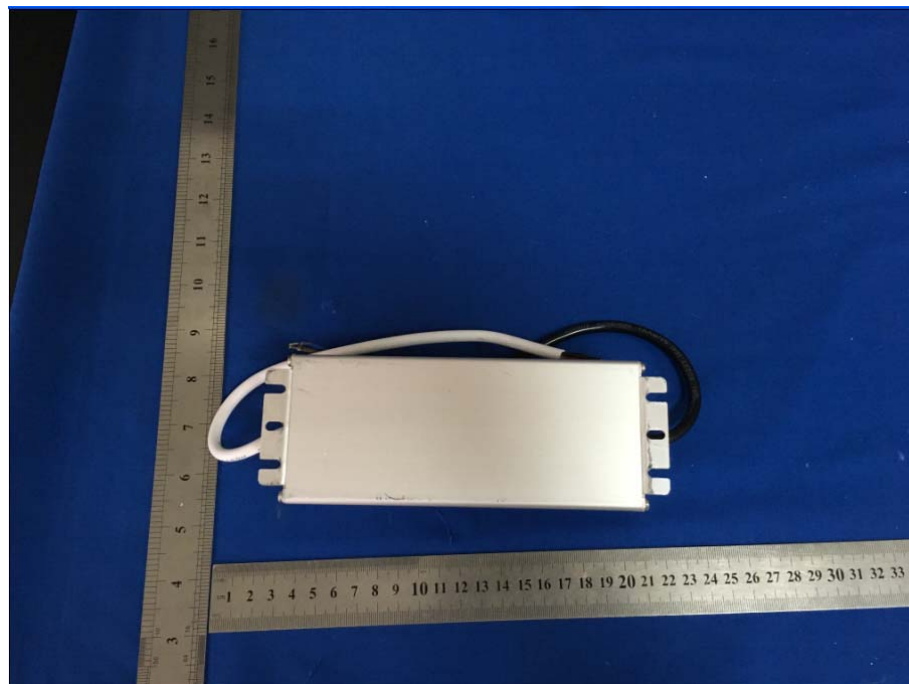


Photo 2 General Appearance of the EUT



Photo 3 General Appearance of the EUT