


Results :JPS117F rev 1

<b>Procedure</b> JPS0057P	<b>Seaward Supernova Plus</b>	<b>Sheet 1 of 5</b>
<b>Serial Number</b>	<b>Customer Reference Number</b>	<b>Certificate Number</b>
<b>Customer</b>	<b>Calibrated By</b>	<b>Date</b>
<b>Ambient Temp</b> 21 +/- 1C	<b>R.H.</b> 42 +/- 10%	
<b>Reference Equipment Used</b> JPS0217A JPS0218A JPS0005A		

<b>Floating Earth Detect</b>	<b>Result</b>
<b>Reverse Live/Neutral Detect</b>	<b>PASS</b>
	<b>PASS</b>


**0.1A Earth Bond**

Applied Resistance (Ω)	UUT Measured Resistance (Ω)	Specification			Result
		Tolerance +/-5%+2D	Min Lim (Ω)	Max Lim (Ω)	
0.0387	0.04	<0.04	n/a	n/a	PASS
0.1000	0.09	0.025	0.075	0.125	PASS
0.1511	0.14	0.028	0.124	0.179	PASS
0.2727	0.27	0.034	0.239	0.306	PASS
0.3793	0.38	0.039	0.340	0.418	PASS
0.5479	0.56	0.047	0.501	0.595	PASS
1.0442	1.07	0.072	0.972	1.116	PASS
5.1350	5.19	0.277	4.858	5.412	PASS
10.0429	9.89	0.522	9.521	10.565	PASS
99.725	19.99	>19.99	n/a	n/a	PASS
<b>Measured Earth Bond Current (A)</b>					0.098

**4A Earth Bond**

Applied Resistance (Ω)	UUT Measured Resistance (Ω)	Specification			Result
		Tolerance +/-5%+2D	Min Lim (Ω)	Max Lim (Ω)	
0.0387	0.04	<0.04	n/a	n/a	PASS
0.1000	0.09	0.025	0.075	0.125	PASS
0.1511	0.14	0.028	0.124	0.179	PASS
0.2727	0.28	0.034	0.239	0.306	PASS
0.3793	0.39	0.039	0.340	0.418	PASS
0.5479	0.58	0.047	0.501	0.595	PASS
1.0442	1.08	0.072	0.972	1.116	PASS
5.1350	5.18	0.277	4.858	5.412	PASS
10.0429	9.99	0.522	9.521	10.565	PASS
99.725	19.99	>19.99	n/a	n/a	PASS
<b>Measured Earth Bond Current (A)</b>					4.12

Results :JPS117F rev 1

<b>Procedure</b> JPS0057P	<b>Seaward Supernova Plus</b>	<b>Sheet 2 of 5</b>
<b>Serial Number</b> 0	<b>Customer Reference Number</b> 0	<b>Certificate Number</b> 0
<b>Customer</b> 0	<b>Calibrated By</b> 0	<b>Date</b> 0-Jan-00
<b>Ambient Temp</b> 21 +/- 1C	<b>R.H.</b> 42 +/- 10%	
<b>Reference Equipment Used</b> JPS0217A JPS0218A JPS0005A		


**10A Earth Bond**

Applied Resistance ( $\Omega$ )	UUT Measured Resistance ( $\Omega$ )	Specification Tolerance +/-5%+2D	Specification		Result
			Min Lim ( $\Omega$ )	Max Lim ( $\Omega$ )	
0.0387	0.04	<0.04	n/a	n/a	PASS
0.1000	0.09	0.025	0.075	0.125	PASS
0.1511	0.15	0.028	0.124	0.179	PASS
0.2727	0.26	0.034	0.239	0.306	PASS
0.3793	0.37	0.039	0.340	0.418	PASS
0.5479	0.55	0.047	0.501	0.595	PASS
1.0442	1.07	0.072	0.972	1.116	PASS
5.1350	5.21	0.277	4.858	5.412	PASS
10.0429	9.99	0.522	9.521	10.565	PASS
99.725	19.99	>19.99	n/a	n/a	PASS
<b>Measured Earth Bond Current (A)</b>			11.24		

**25A Earth Bond**

Applied Resistance ( $\Omega$ )	UUT Measured Resistance ( $\Omega$ )	Specification Tolerance +/-5%+2D	Specification		Result
			Min Lim ( $\Omega$ )	Max Lim ( $\Omega$ )	
0.0387	0.04	<0.04	n/a	n/a	PASS
0.1000	0.09	0.025	0.075	0.125	PASS
0.1511	0.15	0.028	0.124	0.179	PASS
0.2727	0.27	0.034	0.239	0.306	PASS
0.3793	0.39	0.039	0.340	0.418	PASS
0.5479	0.55	0.047	0.501	0.595	PASS
1.0442	1.08	0.072	0.972	1.116	PASS
5.1350	5.22	0.277	4.858	5.412	PASS
10.0429	9.99	0.522	9.521	10.565	PASS
99.725	19.99	>19.99	n/a	n/a	PASS
<b>Measured Earth Bond Current (A)</b>			23.44		

Results :JPS117F rev 1

<b>Procedure</b> JPS0057P	<b>Seaward Supernova Plus</b>	<b>Sheet 3 of 5</b>
<b>Serial Number</b> 0	<b>Customer Reference Number</b> 0	<b>Certificate Number</b> 0
<b>Customer</b> 0	<b>Calibrated By</b> 0	<b>Date</b> 0-Jan-00
<b>Ambient Temp</b> 21 +/- 1C	<b>R.H.</b> 42 +/- 10%	
<b>Reference Equipment Used</b> JPS0217A JPS0218A JPS0005A		

**250V Insulation Resistance**

Applied Resistance (MΩ)	UUT Measured Resistance (MΩ)	Specification Tolerance +/-5%+2D	Specification		Result
			Min Lim (MΩ)	Max Lim (MΩ)	
0.5	0.53	0.045	0.455	0.545	PASS
1.0	1.05	0.070	0.930	1.070	PASS
2.0	2.06	0.120	1.880	2.120	PASS
10.0	10.12	0.520	9.480	10.520	PASS
20.0	20.31	1.020	18.980	21.020	PASS

**500V Insulation Resistance**

Applied Resistance (MΩ)	UUT Measured Resistance (MΩ)	Specification Tolerance +/-5%+2D	Specification		Result
			Min Lim (MΩ)	Max Lim (MΩ)	
0.5	0.5	0.045	0.455	0.545	PASS
1.0	1.05	0.070	0.930	1.070	PASS
2.0	2.06	0.120	1.880	2.120	PASS
10.0	10.19	0.520	9.480	10.520	PASS
20.0	20.42	1.020	18.980	21.020	PASS


**Leakage Test (mA)**

Applied Current (mA)	UUT Measured Current (mA)	Specification Tolerance +/-5%+2D	Specification		Result
			Min Lim (mA)	Max Lim (mA)	
1.0	1.02	0.070	0.930	1.070	PASS
5.0	5.13	0.270	4.730	5.270	PASS

**Substitute Leakage Test (mA)**

Applied Current (mA)	UUT Measured Current (mA)	Specification Tolerance +/-10%+2D	Specification		Result
			Min Lim (mA)	Max Lim (mA)	
1.0	0.96	0.120	0.880	1.120	PASS
5.0	4.93	0.520	4.480	5.520	PASS

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<b>Procedure</b> JPS0057P	<b>Seaward Supernova Plus</b>	<b>Sheet 4 of 5</b>
<b>Serial Number</b> 0	<b>Customer Reference Number</b> 0	<b>Certificate Number</b> 0
<b>Customer</b> 0	<b>Calibrated By</b> 0	<b>Date</b> 0-Jan-00
<b>Ambient Temp</b> 21 +/- 1C	<b>R.H.</b> 42 +/- 10%	
<b>Reference Equipment Used</b> JPS0217A JPS0218A JPS0005A		

**Touch Leakage Test (mA)**

Applied Current (mA)	UUT Measured Current (mA)	Specification Tolerance +/-10%+2D	Min Lim	Max Lim	Result
			(mA)	(mA)	
0.5	0.52	0.070	0.430	0.570	PASS
1.0	1.02	0.120	0.880	1.120	PASS

**Load Test (mA)**

Applied Load (kVA)	Measured Load (kVA)
0.13	0.12


**Flash Class 1 Test**

Applied Current (mA)	UUT Measured Current (mA)	Specification Tolerance +/-5%+2D	Min Lim	Max Lim	Result
			(mA)	(mA)	
1.0	1.03	0.070	0.930	1.070	PASS
Measured Voltage (V)			1475		

**Flash Class 2 Test**

Applied Current (mA)	UUT Measured Current (mA)	Specification Tolerance +/-5%+2D	Min Lim	Max Lim	Result
			(mA)	(mA)	
1.0	1.04	0.070	0.930	1.070	PASS
Measured Voltage (V)			2981		

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<b>Procedure</b> JPS0057P	<b>Seaward Supernova Plus</b>	<b>Sheet 5 of 5</b>
<b>Serial Number</b> 0	<b>Customer Reference Number</b> 0	<b>Certificate Number</b> 0
<b>Customer</b> 0	<b>Calibrated By</b> 0	<b>Date</b> 0-Jan-00
<b>Ambient Temp</b> 21 +/- 1C	<b>R.H.</b> 42 +/- 10%	
<b>Reference Equipment Used</b> JPS0217A JPS0218A JPS0005A		

### Polarity Test

<b>NORMAL</b>	<b>PASS</b>
<b>SHORT</b>	<b>PASS</b>
<b>OPEN</b>	<b>PASS</b>
<b>REVERSED</b>	<b>PASS</b>

#### Comments:

Specifications: As detailed Seaward Supernova Instruction Manual Issue 3 Ref JPSSL0097

Ref	Description	Cal Due	UKAS Trace
JPS0217A	Transmille 3200 Electrical Calibrator	6-Jul-07	09856
JPS0218A	Transmille FLASH Adaptor	6-Jul-07	09905
JPS0005A	Agilent 34401a 6.5 digit DMM	13-Jun-07	01031

#### Uncertainties:

#### Test Leads:

Earth Bond	0.10%	Cal 20
Insulation Resistance	0.50%	Cal 21
Flash	0.50%	Cal 22
Load	1.00%	Cal 23
Leakage	0.50%	

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2 providing a level of confidence of approximately 95%