



Engineering recommendation G83/1

APPENDIX 4 – Type verification test sheet


SSEG details

SSEG Type reference PVS300-TL-XX00W-2		
Maximum continuous rating ¹⁾ 3.3 - 8.0 kW		
Manufacturer ABB Oy	Tel +35810-2211	Address Hiomotie 13 FI-00380 Helsinki Finland
	Fax +35810-22 43419	
Technical file reference No. 3AXD10000020184		

Test house details

Name of test house	BUREAU VERITAS CONSUMER PRODUCTS SERVICES GERMANY GMBH
Address of test house	BUSINESSPARK A96, 86842 TÜRKHEIM, GERMANY

Test Details

Date of test	2011-08-25... 2011-09-07
Name of tester	URS SEIFERT
Test location if different from above	
Approval	HANNU HAAPANIEMI
Signature of approval	

¹⁾ The full load electrical output of the unit minus the appliance's own consumption.



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Power quality

Harmonic current emission												
	Maximum permissible harmonic current as per EN 61000-3-2 Class A											
Harmonic	2nd	3rd	5th	7th	9th	11th	13th	15th ≤ n ≤ 39th				
Limit	1.08	2.3	1.14	0.77	0.4	0.33	0.21	0.15 x (15/n)				
Test value	0.0097	0.018	0.066	0.083	0.050	0.113	0.089	Max. 0.0360				
	Maximum permissible harmonic current as per EN 61000-3-12											
Harmonic	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
Limit [%] single phase	8.00	21.60	4.00	10.70	2.67	7.20	2.00	3.80	1.60	3.10	1.33	2.00
Test value	0.063	0.133	0.035	0.065	0.012	0.413	0.007	0.141	0.005	0.147	0.004	0.195

Voltage fluctuations and flicker				
	Maximum permissible voltage fluctuation (expressed as a percentage of nominal voltage at 100 % power) and flicker as per EN 61000-3-3			
	Starting	Stopping	Running	
Limit	3.3 %	3.3 %	Pst = 1.0	Plt = 0.65
Test value	3.3 %	3.3 %	0.36	0.36

	DC injection			Power factor		
G83/1-1 limit	20mA, tested at three power levels			+ 0.95 - 0.95 at three voltage levels		
Test level	10%	55%	100%	212 V(Un-8%)	230 V	248 V(Un+12.7%)
Test value	<20 mA	<20 mA	<20 mA	0.998	0.999	0.998



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Under / Over frequency tests

Parameter	Under frequency		Over frequency	
	Frequency	Time	Frequency	Time
G83/1-1 Limit	47 Hz	0.5 s	50.5 Hz	0.5 s
Actual setting (as applied to interface protection)	47.08 Hz	0.5 s	50.40 Hz	0.5 s
Trip value (test result)	47.5Hz to 46.5Hz	456...482 ms	50.00Hz to 51.00Hz	470...494 ms

Under / Over voltage tests

Parameter	Under voltage		Over voltage	
	Voltage	Time	Voltage	Time
G83/1-1 Limit	207 V	1.5 s	264V	1.5 s
Actual setting (as applied to interface protection)	-10% (207.0V)	1.5 s	+14% (264.0V)	1.5 s
Trip value (test result)	217V to 207V	1.47...1.49s	254V to 264V	1.47...1.49s

Loss of Mains test

Method used	Resonance circuit test		
Output power level a)	10%	55%	100%
Actual setting	2s	2s	2s
Trip value	412...500 ms	779...1384 ms	780...1072 ms

a) Indicative values are shown for minimum, medium and maximum power levels.

