

SSEG DETAILS

SSEG Type reference: Powador 3200 / 4200 / 4400 / 5300 / 5300 supreme / 5500 / 6600		
SSEG Technology (as per Annex): Photovoltaik (Annex C)		
Manufacturer: KACO new energy GmbH	Tel: +49 7132 3818-0 Fax: +49 7132 3818-703	Adress: 74172 Neckarsulm Carl-Zeiss-Straße 1
Technical file reference No: 08TH0280-G83-0		
Maximum export capability (SSEG rating less parasitic load) 2600 VA / 3450 VA / 3600 VA / 4400 VA / 4400 VA / 4600 VA / 5500 VA		

TEST HOUSE DETAILS

Name and adress of test house	Bureau Veritas Consumer Product Service GmbH Duismesspark A96, 86842 Türkheim, Germany
Telephone number	+49 40 74041-0
Facsimile number	+49 40 74041-2499
E-mail adress	cps-tuerkheim@de.bureauveritas.com

POWER QUALITY

Harmonic current emissions (A)								
Harmonic	2 nd	3 rd	5 th	7 th	9 th	11 th	13 th	15 th ≤ n ≤ 39 th
Limit *	1.08	2.3	1.14	0.77	0.4	0.33	0.21	BS EN 61000-3-12
Test value	0.0259	0.481	0.231	0.0956	0.0689	0.0372	0.0332	< Limit BS EN 61000-3-2

* Maximum permissible harmonic current As per BS EN 61000-3-2 Class A.

Voltage Fluctuations and Flicker			PASS	
	Starting	Stopping	Running	
Limit *	4 %	4 %	$P_{st} = 1.0$	$P_{lt} = 0.65$
Test value	*	*	*	*

* The stationary deviance of dc % is bigger than the dynamic deviance of dmax at starting and stopping.

	DC injection			Power factor		
G83/1-1 Limit	20 mA, tested at three power levels *			0.95 lag - 0.95 lead at three voltage levels		
Test level	10 %	55 %	100 %	212 V	230 V	248 V
Test value #	12.0 mA	8.77 mA	-2.16 mA	0.991	0.992	0.992

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

insert maximum value of dc injection and worst case pf value recorded during testing

UNDER / OVER FREQUENCY TESTS

	Under Frequency		Over Frequency	
Parameter	Frequency	Time	Frequency	Time
G83/1-1 Limit	47 Hz	0.5 sec *	50.5 Hz	0.5 sec *
Actual setting	47 Hz	0.5 sec	50.5 Hz	0.5 sec
Trip value	47.50 Hz to 46.50 Hz	0.33 sec	50.00 Hz to 51.00 Hz	0.499 sec

UNDER / OVER VOLTAGE TESTS

	Under Voltage		Under Voltage	
Parameter	Voltage	Time	Voltage	Time
G83/1-1 Limit	207 V	1.5 sec *	264 V	1.5 sec *
Actual setting	207 V	1.5 sec	264 V	1.5 sec
Trip value	207.1 V	1.496 sec	263.8 V	1.502 sec

Note: * For SSEG units that can withstand being re-energised from a source that is 180 degrees out of phase with the SSEG output, it is permissible to extend the operating time of the interface protection to 5.0 seconds, as described in 5.3.1. Table 1.

LOSS OF MAINS TEST

Method used	Frequency shift		
Output power level *	10 %	55 %	100 %
Trip setting	-	-	-
Trip value	266 ms	278 ms	294 ms

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

RECONNECTION TIMES

Reconnection Time	Under/Over voltage	Under/Over Frequency	Loss of mains
Minimum value	180 seconds	180 seconds	180 seconds
Actual Setting	180 seconds	180 seconds	180 seconds
Recorded value	194 seconds	193 seconds	193 seconds

SELF MONITORING - SOLID STATE SWITCHING

Test	Yes / No
It has been verified that in the event of the solid state switching device failing to disconnect the SSEG, the voltage on the output side of the switching device is reduced to a value below 50 volt within 0.5 sec.	

Comment: Units do not provide solid state switching relays.