



Test Report

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Test date: 11/02/2022	UPS model: B9000fxs	Battery Capacity: Ah
Reference: ASD10	Rated power: 60 kVA	Output Nom. Current: 87 A
Serial Number: A11Y04005	Output voltage: 380/400/415	Power factor: 0,90
Controller: N. MUGNAI	Vdcn = 680 Vdc Vacn = 400 Vac	Output frequency: 50 Hz = fn

Dielectric tests:

Acceptance criteria:

Applied Voltage:

Leakage current: < 20 mA

2.5 kV x 1 min.

Passed: ☒

Visual check:

Acceptance criteria:

Test Procedure

Passed: ☒

Preliminary check:

Acceptance criteria:

Test Procedure

Passed: ☒

Firmware download and parameters configuration: Test Procedure

Firmware download:

Revision:

Booster:

2.67.0.0

Inverter:

2.87.0.0

Static switch:

2.159.0.0

EEProm programming:

Passed: ☒

Jumper's settings:

	Jp1	Jp2	Jp3	Jp4	Jp5
Open:					
Closed:					
	Jp6	Jp7	Jp8	Jp9	Jp10
Open:					
Closed:			✓		✓
	Jp11	Jp12	Jp13	Jp15	Jp16
Open:					
Closed:	✓	✓	✓		
	Jp17	Jp18	Jp19	Jp20	
Open:					
Closed:					

Passed: ☒

**Adjustments and waveform checks:**

According to:

Test Procedure

Zeros:	Passed:	☒
Auxiliary contacts:	Passed:	☒
IGBT's sequence:	Passed:	☒
Waveforms checks:	Passed:	☒

Rectifier Startup:

Dc capacitors Voltage Measure:

Vdc_pos:	340 Vdc	Accept. criteria:	0.5xVdcn +/- 2%
Vdc_neg:	340 Vdc	Accept. criteria:	0.5xVdcn +/- 2%
Vdc_tot:	680 Vdc	Accept. criteria:	Vdcn +/- 2%

Passed: ☒**Inverter and SSI Startup:**

Inverter Output Settings:

R =	S =	T =	
231,0 Vac	231,0 Vac	231,0 Vac	(L - N)
Accept. criteria:			Vacn +/- 2%

Passed: ☒**Static Bypass Startup:**

Bypass Settings:

R =	S =	T =	
227,0 Vac	227,0 Vac	229,0 Vac	(L - N)
Freq. Lower Limit:	48,00 Hz		
Freq. Upper Limit:	52,00 Hz	Ref. To:	fn

Automatic Startup:Passed: ☒**Checks, settings and Load tests:**

According to:

Test Procedure

Light load (25%) & Functional TestPassed: ☒**No Load Test**Passed: ☒**Full Load Test**Passed: ☒

Rectifier Floating Voltage:	680 Vdc	Accept. criteria:	Vn +/- 1%
Full load input current THD:	5,2 %	Accept. criteria:	< 6 %
UPS Output Voltage:	400,0 Vac	Accept. criteria:	Vn +/- 1%
Short circuit current:	141 Arms	Accept. criteria:	1,5 x In for 100 ms (+/- 5 %)
Full load transfer test (transfer to bypass):		Passed:	☒
Efficiency Test: Fully compliant with Technical UPS data sheet			

Battery recharging current:	10 Adc	Accept. criteria:	(0.10+0.15*C ₁₀) A +/-5%
			Battery Capacity (C ₁₀): Ah

Note: if the battery capacity is not defined the rech. current is set according to an internal reference table

Battery Test (AC input Failure): Passed: ☒AC input Return: Passed: ☒Parallel Test: Passed: ☒Modbus Test: Passed: ☒



Back Feed Protection Test

Passed: []

Not applicable: ☒

Burn in Test

Passed: ☒

UPS personalization and final tests:

According to:

Test Procedure

Passed: ☒

Instruments:

	Type:	Serial Number:	Calibration exp. date:
Oscilloscope:	Tektronix TDS	C052067	15/10/2022
Oscilloscope:			
Multimeter:	Fluke 87 V	43330180	26/10/2022
Multimeter:	Fluke 87 V	43330179	26/10/2022
Ammeter:	Chauvin A. F401	163127QLC	27/10/2022
Ammeter:	Fluke 376 FC	41762378WS	27/10/2022
Power Analyzer:	Fluke 43 B	DM9510030	04/06/2023
Power Analyzer:			

Compliances:

UPS safety standards:

EN 62040-1

UPS performance and test methods standards:

EN 62040-3

UPS test procedure

Notes:

11/02/2022