Form C: Type Test Verification Report

All Micro-generators connected to the **DNO Distribution Network** shall be **Fully Type Tested**. This form is the **Manufacturer**'s declaration of compliance with the requirements of EREC G98.

This form should be used when making a Type Test submission to the Energy Networks Association (ENA) Type Test Register.

If the **Micro-generator** is **Fully Type Tested** and already registered with the ENA Type Test Register, the **Installation Document** should include the **Manufacturer**'s Reference Number (the system reference), and this form does not need to be submitted.

Manufacturer's reference number			
Micro-generator technology		Battery Electric Energy Storage System with Photovoltaic hybrid inverter (inverter model: Inverter vision three 1.0 (10.0 kW); Inverter vision three 1.0 (8.0 kW); Inverter vision three 1.0 (6.0 kW); Inverter vision three 1.0 (5.0 kW))	
Manufacturer name		SOLARWATT GmbH	
Address		Maria-Reiche-Straße 2a, 01109 Dresden, Germany	
Tel	+49-351-4676-1000	Fax	
E-mail	peter.bachmann@solarwatt.com	Web site	www.solarwatt.de

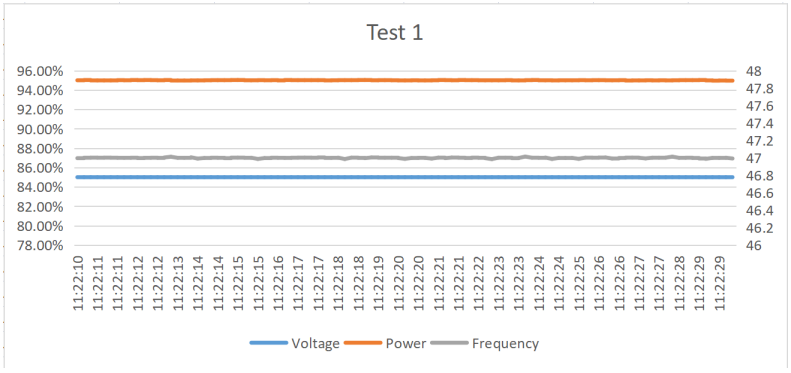
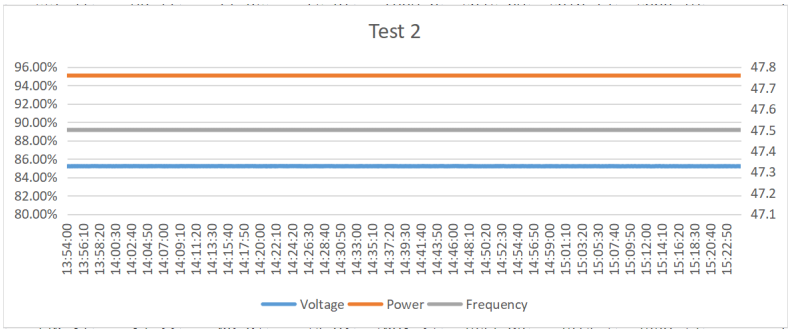
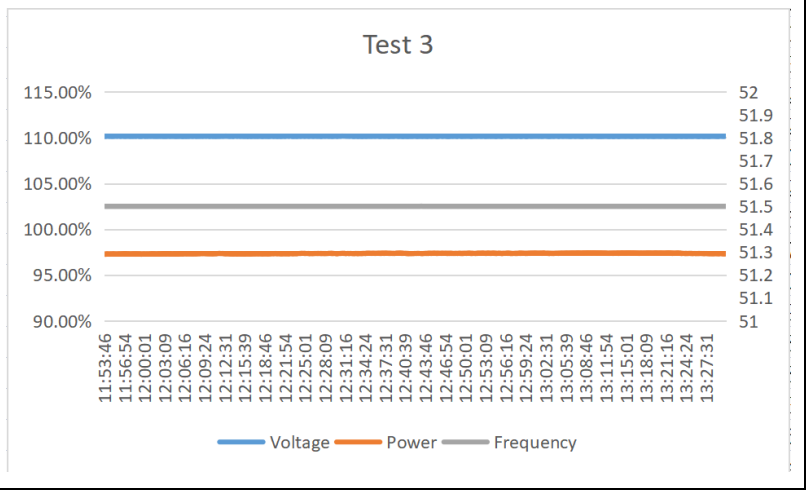
Registered Capacity, use separate sheet if more than one connection option.	Connection Option	
	10.0	kW three phase
	8.0	kW three phase
	6.0	kW three phase
	5.0	kW three phase
Energy storage capacity for **Electricity Storage** devices	4.8 - 42	kWh

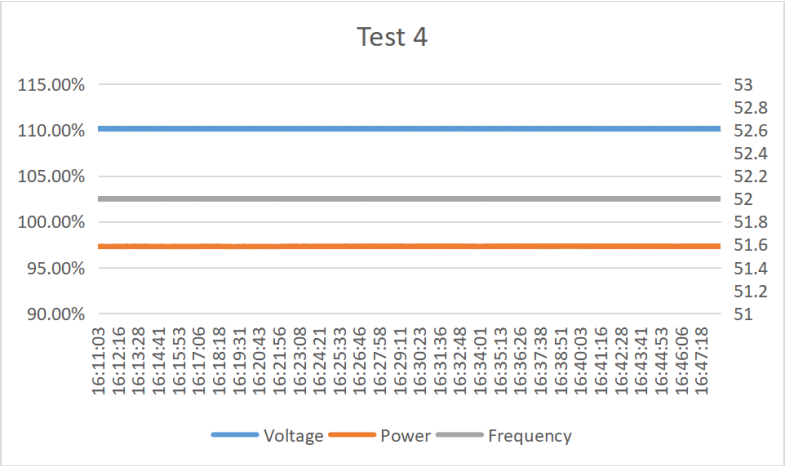
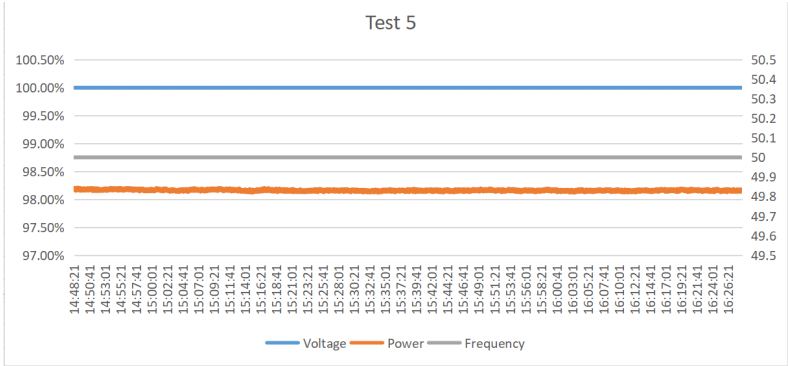
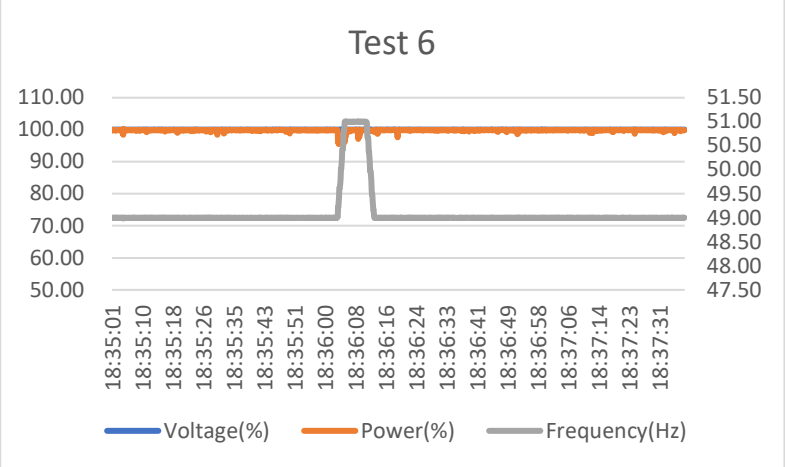
Manufacturer Type Test declaration. - I certify that all products supplied by the company with the above **Fully Type Tested** reference number will be manufactured and tested to ensure that they perform as stated in this document, prior to shipment to site and that no site modifications are required to ensure that the product meets all the requirements of EREC G98.

Signed		On behalf of	SOLARWATT GmbH

Note that testing can be done by the **Manufacturer** of an individual component or by an external test house.

Where parts of the testing are carried out by persons or organisations other than the **Manufacturer** then that person or organisation shall keep copies of all test records and results supplied to them to verify that the testing has been carried out by people with sufficient technical competency to carry out the tests.

Operating Range: This test should be carried out as specified in A.1.2.10. Pass or failure of the test should be indicated in the fields below (right hand side), for example with the statement “Pass”, “No disconnection occurs”, etc. Graphical evidence is preferred.	
Test 1 Voltage = 85% of nominal (195.5 V) Frequency = 47.0 Hz Power factor = 1 Period of test 20 seconds	
Test 2 Voltage = 85% of nominal (195.5 V) Frequency = 47.5 Hz Power factor = 1 Period of test 90 minutes	
Test 3 Voltage = 110% of nominal (253 V). Frequency = 51.5 Hz Power factor = 1 Period of test 90 minutes	

Test 4 Voltage = 110% of nominal (253 V). Frequency = 52.0 Hz Power factor = 1 Period of test 15 minutes	
Test 5 Voltage = 100% of nominal (230 V). Frequency = 50.0 Hz Power factor = 1 Period of test 90 minutes	
Test 6 RoCoF withstand Confirm that the **Micro-Generating Plant** is capable of staying connected to the **Distribution Network** and operate at rates of change of frequency up to 1 Hzs^{-8} as measured over a period of 500 ms.	

Power Quality – Harmonics: These tests should be carried out as specified in BS EN 61000-3-2. The chosen test should be undertaken with a fixed source of energy at two power levels a) between 45 and 55% and b) at 100% of **Registered Capacity**. The test requirements are specified in Annex A1 A.1.3.1 (**Inverter** connected) or Annex A2 A.2.3.1 (Synchronous).			
Micro-generator tested to BS EN 61000-3-2			
Micro-generator rating per phase (rpp)	3.33	kW	Model: Inverter vision three 1.0(10.0 kW)
For 3-phase **Micro-generator**s, tick this box if harmonic measurements are identical for all three phases. If the harmonics are			

not identical for each phase, please replicate this section with the results for each phase.		

Harmonic	At 45-55% of Registered Capacity1			Limit in BS EN 61000-3-2 in Amps	Higher limit for odd harmonics 21 and above
	Measured Value MV in Amps				
	L1	L2	L3		
2	0.011	0.028	0.017	1.080	
3	0.037	0.035	0.046	2.300	
4	0.020	0.026	0.028	0.430	
5	0.098	0.105	0.097	1.140	
6	0.007	0.015	0.007	0.300	
7	0.113	0.112	0.113	0.770	
8	0.014	0.011	0.009	0.230	
9	0.064	0.063	0.062	0.400	
10	0.014	0.013	0.013	0.184	
11	0.095	0.095	0.094	0.330	
12	0.005	0.003	0.003	0.153	
13	0.058	0.058	0.061	0.210	
14	0.006	0.002	0.004	0.131	
15	0.051	0.049	0.048	0.150	
16	0.008	0.007	0.004	0.115	
17	0.015	0.019	0.015	0.132	
18	0.009	0.004	0.002	0.102	
19	0.038	0.040	0.039	0.118	
20	0.005	0.005	0.005	0.092	
21	0.016	0.016	0.017	0.107	0.160
22	0.011	0.008	0.007	0.084	
23	0.016	0.017	0.016	0.098	0.147

[1] See the note in A.2.3.1 if 45-55% of **Registered Capacity** is below the minimum stable operating level. If an alternative loading level is chosen, the level should be indicated on the test form and the reason for not testing at 45-55% of **Registered Capacity** should be stated. The additional comments box at the end of the harmonics test sheet can be used for this.

24	0.006	0.002	0.003	0.077	
25	0.004	0.007	0.005	0.090	0.135
26	0.003	0.004	0.002	0.071	
27	0.024	0.024	0.023	0.083	0.124
28	0.009	0.003	0.003	0.066	
29	0.009	0.007	0.012	0.078	0.117
30	0.004	0.003	0.003	0.061	
31	0.014	0.015	0.015	0.073	0.109
32	0.003	0.002	0.002	0.058	
33	0.009	0.011	0.009	0.068	0.102
34	0.007	0.004	0.004	0.054	
35	0.014	0.013	0.013	0.064	0.096
36	0.004	0.002	0.002	0.051	
37	0.006	0.007	0.007	0.061	0.091
38	0.008	0.005	0.002	0.048	
39	0.008	0.007	0.009	0.058	0.087
40	0.006	0.001	0.006	0.046	
Harmonic	100% of **Registered Capacity**			Model: Inverter vision three 1.0(10.0 kW)	
	Measured Value MV in Amps			Limit in BS EN 61000-3-2 in Amps	Higher limit for odd harmonics 21 and above
	L1	L2	L3		
2	0.027	0.044	0.019	1.080	
3	0.045	0.061	0.055	2.300	
4	0.019	0.024	0.025	0.430	
5	0.028	0.032	0.035	1.140	
6	0.003	0.010	0.001	0.300	
7	0.079	0.075	0.079	0.770	
8	0.013	0.012	0.015	0.230	
9	0.052	0.056	0.058	0.400	

10	0.008	0.009	0.007	0.184	
11	0.077	0.080	0.080	0.330	
12	0.006	0.005	0.003	0.153	
13	0.054	0.053	0.061	0.210	
14	0.009	0.006	0.009	0.131	
15	0.020	0.023	0.022	0.150	
16	0.005	0.009	0.007	0.115	
17	0.078	0.078	0.078	0.132	
18	0.007	0.001	0.006	0.102	
19	0.040	0.041	0.045	0.118	
20	0.005	0.003	0.003	0.092	
21	0.023	0.024	0.026	0.107	0.160
22	0.007	0.007	0.008	0.084	
23	0.031	0.032	0.034	0.098	0.147
24	0.006	0.001	0.001	0.077	
25	0.008	0.010	0.011	0.090	0.135
26	0.002	0.002	0.001	0.071	
27	0.028	0.028	0.029	0.083	0.124
28	0.006	0.003	0.005	0.066	
29	0.027	0.026	0.028	0.078	0.117
30	0.003	0.002	0.001	0.061	
31	0.009	0.010	0.010	0.073	0.109
32	0.002	0.001	0.001	0.058	
33	0.015	0.015	0.017	0.068	0.102
34	0.004	0.003	0.003	0.054	
35	0.013	0.013	0.014	0.064	0.096
36	0.004	0.003	0.001	0.051	
37	0.008	0.009	0.009	0.061	0.091
38	0.004	0.004	0.002	0.048	

39	0.013	0.011	0.013	0.058	0.087
40	0.007	0.003	0.004	0.046	

Micro-generator rating per phase (rpp)	1.66	kW	Model：Inverter vision three 1.0(5.0 kW)
For 3-phase **Micro-generator**s, tick this box if harmonic measurements are identical for all three phases. If the harmonics are not identical for each phase, please replicate this section with the results for each phase.			

Harmonic	At 45-55% of Registered Capacity2			Limit in BS EN 61000-3-2 in Amps	Higher limit for odd harmonics 21 and above
	Measured Value MV in Amps				
	L1	L2	L3		
2	0.016	0.021	0.008	1.080	
3	0.036	0.017	0.027	2.300	
4	0.024	0.015	0.007	0.430	
5	0.068	0.059	0.069	1.140	
6	0.013	0.007	0.008	0.300	
7	0.053	0.050	0.057	0.770	
8	0.018	0.009	0.010	0.230	
9	0.049	0.042	0.058	0.400	
10	0.015	0.004	0.004	0.184	
11	0.030	0.035	0.040	0.330	
12	0.014	0.004	0.012	0.153	
13	0.029	0.034	0.039	0.210	
14	0.015	0.014	0.008	0.131	
15	0.016	0.021	0.023	0.150	
16	0.015	0.003	0.001	0.115	
17	0.026	0.010	0.037	0.132	
18	0.017	0.012	0.007	0.102	

[2] See the note in A.2.3.1 if 45-55% of **Registered Capacity** is below the minimum stable operating level. If an alternative loading level is chosen, the level should be indicated on the test form and the reason for not testing at 45-55% of **Registered Capacity** should be stated. The additional comments box at the end of the harmonics test sheet can be used for this.

19	0.010	0.009	0.015	0.118	
20	0.011	0.003	0.004	0.092	
21	0.006	0.022	0.013	0.107	0.160
22	0.017	0.005	0.003	0.084	
23	0.004	0.012	0.009	0.098	0.147
24	0.006	0.004	0.003	0.077	
25	0.003	0.010	0.004	0.090	0.135
26	0.011	0.001	0.004	0.071	
27	0.005	0.006	0.003	0.083	0.124
28	0.005	0.006	0.004	0.066	
29	0.002	0.005	0.010	0.078	0.117
30	0.006	0.002	0.003	0.061	
31	0.006	0.006	0.006	0.073	0.109
32	0.005	0.008	0.003	0.058	
33	0.003	0.004	0.006	0.068	0.102
34	0.007	0.005	0.002	0.054	
35	0.002	0.004	0.002	0.064	0.096
36	0.006	0.005	0.002	0.051	
37	0.001	0.004	0.006	0.061	0.091
38	0.005	0.002	0.007	0.048	
39	0.005	0.005	0.005	0.058	0.087
40	0.003	0.001	0.006	0.046	
Harmonic	100% of **Registered Capacity**			Model: Inverter vision three 1.0(5.0 kW)	
	Measured Value MV in Amps			Limit in BS EN 61000-3-2 in Amps	Higher limit for odd harmonics 21 and above
	L1	L2	L3		
2	0.021	0.046	0.025	1.080	
3	0.035	0.008	0.034	2.300	
4	0.027	0.020	0.028	0.430	

5	0.041	0.026	0.042	1.140	
6	0.024	0.015	0.020	0.300	
7	0.044	0.037	0.056	0.770	
8	0.016	0.016	0.019	0.230	
9	0.049	0.033	0.055	0.400	
10	0.020	0.010	0.017	0.184	
11	0.035	0.028	0.037	0.330	
12	0.021	0.014	0.020	0.153	
13	0.034	0.033	0.039	0.210	
14	0.011	0.017	0.016	0.131	
15	0.031	0.018	0.037	0.150	
16	0.007	0.005	0.018	0.115	
17	0.020	0.016	0.032	0.132	
18	0.012	0.008	0.014	0.102	
19	0.022	0.017	0.024	0.118	
20	0.012	0.011	0.016	0.092	
21	0.010	0.010	0.014	0.107	0.160
22	0.003	0.005	0.015	0.084	
23	0.012	0.020	0.009	0.098	0.147
24	0.012	0.009	0.002	0.077	
25	0.008	0.005	0.010	0.090	0.135
26	0.005	0.003	0.007	0.071	
27	0.004	0.009	0.005	0.083	0.124
28	0.004	0.002	0.004	0.066	
29	0.008	0.006	0.006	0.078	0.117
30	0.004	0.002	0.004	0.061	
31	0.001	0.010	0.004	0.073	0.109
32	0.006	0.001	0.005	0.058	
33	0.003	0.007	0.005	0.068	0.102

34	0.005	0.003	0.004	0.054	
35	0.003	0.007	0.002	0.064	0.096
36	0.005	0.003	0.008	0.051	
37	0.003	0.005	0.004	0.061	0.091
38	0.003	0.003	0.004	0.048	
39	0.001	0.005	0.003	0.058	0.087
40	0.007	0.001	0.004	0.046	

Power Quality – Voltage fluctuations and Flicker: These tests should be undertaken in accordance with EREC G98 Annex A1 A.1.3.3 (**Inverter** connected) or Annex A2 A.2.3.3 (Synchronous).

The standard test impedance is 0.4 Ω for a single phase **Micro-generating Plant** (and for a two phase unit in a three phase system) and 0.24 Ω for a three phase **Micro-generating Plant** (and for a two phase unit in a split phase system). Please ensure that both test and standard impedance are completed on this form. If the test impedance (or the measured impedance) is different to the standard impedance, it must be normalised to the standard impedance as follows (where the **Power Factor** of the generation output is 0.98 or above):

d max normalised value = (Standard impedance / Measured impedance) x Measured value.

Where the **Power Factor** of the output is under 0.98 then the X to R ratio of the test impedance should be close to that of the standard impedance.

The stopping test should be a trip from full load operation.

The duration of these tests needs to comply with the particular requirements set out in the testing notes for the technology under test.

The test date and location must be declared.

Test start date	2025-04-11			Test end date		2025-04-12		
Test location	No.8, Xiqin Road, Xinwu District, Wuxi, Jiangsu, China							
	Starting			Stopping			Running	
	d(max)	d(c)	d(t)	d(max)	d(c)	d(t)	P_{st}	P_{lt} 2 hours
Measured Values at test impedance	0,525	0,028	0,00	0,508	0,036	0,00	0,048	0,054
Normalised to standard impedance	0,524	0,021	0,00	0,522	0,032	0,00	0,052	0,067
Normalised to required maximum impedance	NA	NA	NA	NA	NA	NA	NA	NA

Limits set under BS EN 61000-3-11	4%	3.3%	3.3%	4%	3.3%	3.3%	1.0	0.65

Test Impedance	R	0.24	Ω	X	0.15	Ω
Standard Impedance	R	0.24 * 0.4 ^	Ω	X	0.15 * 0.25 ^	Ω
Maximum Impedance	R		Ω	X		Ω

*Applies to three phase and split single phase **Micro-generators**. Delete as appropriate.

^ Applies to single phase **Micro-generators** and **Micro-generators** using two phases on a three phase system. Delete as appropriate.

Power quality – DC injection: This test should be carried out in accordance with A 1.3.4 as applicable.

The % **DC** injection ("as % of rated AC current" below) is calculated as follows:

% **DC** injection = Recorded **DC** value in Amps / base current

where the base current is the **Registered Capacity** (W) / 230 V. The % **DC** injection should not be greater than 0.25%.

Inverter vision three 1.0(10.0 kW)				
Test power level	20%	50%	75%	100%
Recorded **DC** value in Amps(L1)	0.011	0.011	0.012	0.013
as % of rated AC current(L1)	0.035%	0.062%	0.035%	0.062%
Recorded DC value in Amps(L2)	0.046	0.045	0.044	0.043
as % of rated AC current(L2)	0.110%	0.138%	0.138%	0.048%
Recorded DC value in Amps(L3)	0.011	0.011	0.011	0.012
as % of rated AC current(L3)	0.062%	0.055%	0.076%	0.097%
Limit	0.25%	0.25%	0.25%	0.25%
Inverter vision three 1.0(5.0 kW)				
Test power level	20%	50%	75%	100%
Recorded **DC** value in Amps(L1)	0.012	0.014	0.013	0.014
as % of rated AC current(L1)	0.17%	0.19%	0.18%	0.19%
Recorded DC value in Amps(L2)	0.012	0.013	0.013	0.011

as % of rated AC current(L2)	0.12%	0.18%	0.18%	0.15%
Recorded DC value in Amps(L3)	0.010	0.011	0.013	0.011
as % of rated AC current(L3)	0.14%	0.15%	0.18%	0.15%
Limit	0.25%	0.25%	0.25%	0.25%

Power Quality – Power factor: This test shall be carried out in accordance with A.1.3.2 and A.2.3.2 at three voltage levels and at **Registered Capacity** and the measured **Power Factor** must be greater than 0.95 to pass. Voltage to be maintained within ±1.5% of the stated level during the test.			
Inverter vision three 1.0(10.0 kW)			
	216.2 V	230 V	253 V
Measured value	0.9993	0.9995	0.9993
Power Factor Limit	>0.95	>0.95	>0.95
Inverter vision three 1.0(5.0 kW)			
	216.2 V	230 V	253 V
Measured value	0.9979	0.9968	0.9957
Power Factor Limit	>0.95	>0.95	>0.95

Protection – Frequency tests: These tests should be carried out in accordance with Annex A1 A.1.2.3 (**Inverter** connected) or Annex A2 A.2.2.3 (Synchronous). For trip tests, frequency and time delay should be stated. For “no trip tests”, “no trip” can be stated.

Function	Setting		Trip test		“No trip tests”	
	Frequency	Time delay	Frequency	Time delay	Frequency /time	Confirm no trip
U/F stage 1	47.5 Hz	20 s	47.49 Hz	20.072s	47.7 Hz 30 s	No trip
U/F stage 2	47 Hz	0.5 s	46.99 Hz	0.514s	47.2 Hz 19.5 s	No trip

					46.8 Hz 0.45 s	No trip
O/F stage 1	52 Hz	0.5 s	52.01Hz	0.506s	51.8 Hz 120.0 s	No trip
					52.2 Hz 0.45 s	No trip
Note. For frequency trip tests the frequency required to trip is the setting ± 0.1 Hz. In order to measure the time delay a larger deviation than the minimum required to operate the projection can be used. The "No trip tests" need to be carried out at the setting ± 0.2 Hz and for the relevant times as shown in the table above to ensure that the protection will not trip in error.						

Protection – Voltage tests: These tests should be carried out in accordance with Annex A1 A.1.2.2 (**Inverter** connected) or Annex A2 A.2.2.2 (Synchronous). For trip tests, voltage and time delay should be stated. For "no trip tests", "no trip" can be stated.

Function	Setting		Trip test		"No trip tests"	
	Voltage	Time delay	Voltage	Time delay	Voltage /time	Confirm no trip
U/V	184 V	2.5 s	183.5V	2.520 s	188 V 5.0 s	No trip
					180 V 2.45 s	No trip
O/V stage 1	262.2 V	1.0 s	262.8V	1.019 s	258.2 V 5.0 s	No trip
O/V stage 2	273.7 V	0.5 s	274.1V	0.536 s	269.7 V 0.95 s	No trip
					277.7 V 0.45 s	No trip
Note for Voltage tests the Voltage required to trip is the setting ±3.45 V. The time delay can be measured at a larger deviation than the minimum required to operate the protection. The No trip tests need to be carried out at the setting ±4 V and for the relevant times as shown in the table above to ensure that the protection will not trip in error.						

Protection – Loss of Mains test: For PV **Inverter**s shall be tested in accordance with BS EN 62116. Other **Micro-generator**s should be tested in accordance with A.2.2.4 at 10%, 55% and 100% of rated power.

For **Inverter**s tested to BS EN 62116 the following sub set of tests should be recorded in the following table.

Test Power and imbalance	33% -5% Q Test 22	66% -5% Q Test 12	100% -5% P Test 5	33% +5% Q Test 31	66% +5% Q Test 21	100% +5% P Test 10

Trip time. Limit is 0.5 s[3]	0.081 s	0.104 s	0.154 s	0.164 s	0.107 s	0.106 s

Protection – Frequency change, Vector Shift Stability test: This test should be carried out in accordance with EREC G98 Annex A1 A.1.2.6 (**Inverter** connected) or Annex A2 A.2.2.6 (Synchronous). Confirmation is required that the **Micro-generating Plant** does not trip under positive / negative vector shift.			
	Start Frequency	Change	Confirm no trip
Positive Vector Shift	49.0 Hz	+50 degrees	No trip
Negative Vector Shift	50.0 Hz	- 50 degrees	No trip

Protection – Frequency change, RoCoF Stability test: The requirement is specified in section 11.3, test procedure in Annex A.1.2.6 (**Inverter** connected) or Annex A2 A.2.2.6 (Synchronous). Confirmation is required that the **Micro-generating Plant** does not trip for the duration of the ramp up and ramp down test.			
Ramp range	Test frequency ramp:	Test Duration	Confirm no trip
49.0 Hz to 51.0 Hz	+0.95 Hzs^{-1}	2.1 s	No trip
51.0 Hz to 49.0 Hz	-0.95 Hzs^{-1}	2.1 s	No trip

Limited Frequency Sensitive Mode – Overfrequency test: This test should be carried out in accordance with A.1.2.8. The test should be carried out using the specific threshold frequency of 50.4 Hz and **Droop** of 10%. The measurement tolerances are contained in A.1.2.8.				
Test sequence at **Registered Capacity** >80%	Measured **Active Power** Output	Frequency	Primary Power Source	**Active Power** Gradient
Step a) 50.00 Hz ±0.01 Hz	9955	50.00	DC SOURCE	NA
Step b) 50.45 Hz ±0.05 Hz	9845	50.45		9.29%
Step c) 50.70 Hz ±0.10 Hz	9336	50.70		9.82%
Step d) 51.15 Hz ±0.05 Hz	8443	51.15		10.08%
Step e) 50.70 Hz ±0.10 Hz	9343	50.70		10.00%
Step f) 50.45 Hz ±0.05 Hz	9831	50.45		12.25%
Step g) 50.00 Hz ±0.01 Hz	9949	50.00		NA

[3] If the device requires additional shut down time (beyond 0.5 s but less than 1 s) then this should be stated on this form.

Test sequence at **Registered Capacity** 40% - 60%	Measured **Active Power** Output	Frequency	Primary Power Source	**Active Power** Gradient
Step a) 50.00 Hz ±0.01 Hz	4988	50.00	DC SOURCE	NA
Step b) 50.45 Hz ±0.05 Hz	4880	50.45		9.26%
Step c) 50.70 Hz ±0.10 Hz	4355	50.70		9.52%
Step d) 51.15 Hz ±0.05 Hz	3448	51.15		9.92%
Step e) 50.70 Hz ±0.10 Hz	4355	50.70		9.92%
Step f) 50.45 Hz ±0.05 Hz	4849	50.45		10.12%
Step g) 50.00 Hz ±0.01 Hz	4989	50.00		NA

Power output with falling frequency test: This test should be carried out in accordance with A.1.2.7.			
Test sequence	Measured **Active Power** Output	Frequency	Primary power source
Test a) 50 Hz ± 0.01 Hz	7837 W	50.00 Hz	8056 W
Test b) Point between 49.5 Hz and 49.6 Hz	7835 W	49.55 Hz	8052 W
Test c) Point between 47.5 Hz and 47.6 Hz	7837 W	47.55 Hz	8053 W
NOTE: The operating point in Test (b) and (c) shall be maintained for at least 5 minutes			

Re-connection timer.		
Test should prove that the reconnection sequence starts after a minimum delay of 20 s for restoration of voltage and frequency to within the stage 1 settings of Table 2. Both the time delay setting and the measured delay should be provided in this form; both should be greater than 20 s to pass. Confirmation should be provided that the **Micro-generating Plant** does not reconnect at the voltage and frequency settings below; a statement of “no reconnection” can be made.		
Time delay setting	Measured delay	Checks on no reconnection when voltage or frequency is brought to just outside stage 1 limits of table 2.

60s	89 s	At 266.2 V	At 180.0 V	At 47.4 Hz	At 52.1 Hz
Confirmation that the **Micro-generator** does not re-connect.		No reconnection	No reconnection	No reconnection	No reconnection

Fault level contribution: These tests shall be carried out in accordance with EREC G98 Annex A1 A.1.3.5 (**Inverter** connected) and Annex A2 A.2.3.4 (Synchronous). Please complete each entry, even if the fault contribution is zero.

For machines with electro-magnetic output			For **Inverter** output		
Parameter	Symbol	Value	Time after fault	Volts	Amps
Peak Short Circuit current	i_p		20 ms	172V	11.5A
Initial Value of aperiodic current	A		100 ms	0	0
Initial symmetrical short-circuit current*	I_k		250 ms	0	0
Decaying (aperiodic) component of short circuit current*	i_{DC}		500 ms	0	0
Reactance/Resistance Ratio of source*	X/R		Time to trip	13.0ms	In seconds

For rotating machines and linear piston machines the test should produce a 0 s – 2 s plot of the short circuit current as seen at the **Micro-generator** terminals.

* Values for these parameters should be provided where the short circuit duration is sufficiently long to enable interpolation of the plot

Logic Interface (input port)	
Confirm that an input port is provided and can be used to reduce the **Active Power** output to zero	Yes
Provide high level description of logic interface, e.g. details in 9.4.3 such as AC or **DC** signal (the additional comments box below can be used)	Yes
Self-Monitoring solid state switching: No specified test requirements. Refer to EREC G98 Annex A1 A.1.3.6 (**Inverter** connected).	NA

It has been verified that in the event of the solid state switching device failing to disconnect the **Micro-generator**, the voltage on the output side of the switching device is reduced to a value below 50 V within 0.5 s.	NA
Cyber security	
Confirm that the **Manufacturer** or **Installer** of the **Micro-generator** has provided a statement describing how the **Micro-generator** has been designed to comply with cyber security requirements, as detailed in 9.7.	Yes
Additional comments	
Logic interface (input port)： By default the DNO logic interface will take the form of a simple binary output that can be operated by a simple switch or contactor. When the switch is closed the Micro generator can operate normally. When the switch is opened the Micro generator will reduce its Active Power to zero within 5 s. The signal from the Micro generator that is being switched is DC 3.3V. If the DNO wishes to make use of the facility to cease Active Power output the DNO will agree with the Generator how the communication path is to be achieved.	