FIMER

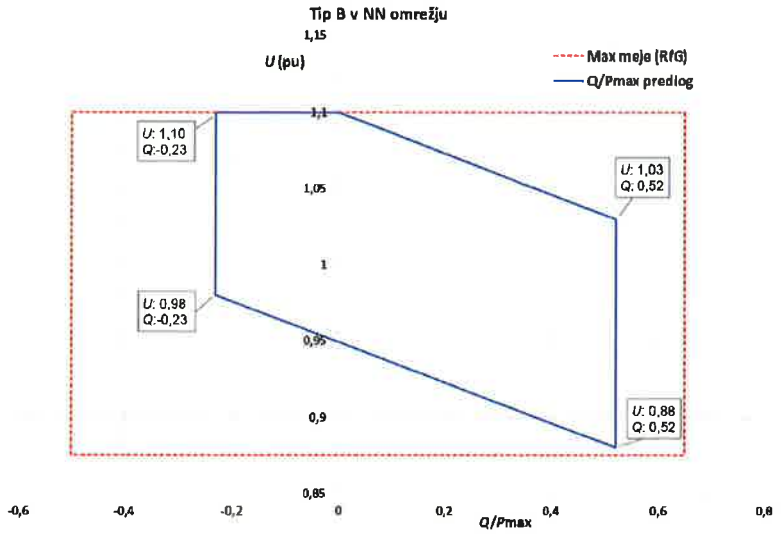
DECLARATION ABOUT COMPLIANCE OF PHOTOVOLTAIC INVERTERS TO GRID-CODE FOR SLOVENIA ACCORDING "TABELE ANNEX C - SIST EN 50549-1" FOR LOW VOLTAGE CONNECTIONS

we hereby declare

the inverters listed in Table 1, configured according to the settings listed in Table 2, fulfill the requirements of :

-) "tabele annex C – SIST EN 50549-1" as per grid-code of Slovenia

-) P-Q capability (document: "SONDSEE 2020 Priloga 5_Pripombe po javni obravnavi_objavljeno"; p. 61) as per below picture.



Slika XI.1 - Karakteristika zagotavljanja jalove moči (profil U-Q/P_{max}) za vse vrste PN (SPEM in PPM) tip B, priključene na NN nivo.

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INVERTERS LIST

Inverter model	Firmware (no less than)	Type of network connection	Rated power (kW)	Grid-code to select
PVS-10/12.5/15-TL (*)	2110D	Three-phase	10/12.5/15	EN 50549-1
PVS-20/30/33-TL (*)	2116E	Three-phase	20/30/33	EN 50549-1
TRIO-20/27.6-TL (*)	2000D	Three-phase	20/27.6	EN 50549-1
PVS-50-TL (*)	1919B	Three-phase	50	EN 50549-1
PVS-100-TL (*)	2040B	Three-phase	100	EN 50549-1
(*) Every available product variant.				

Table 1: List of FIMER photovoltaic Inverters this document refers to.

INVERTERS PARAMETERS SETTINGS TO MEET SLOVENIA REQUIREMENTS

Refer to inverters' manuals to see how to set manually internal parameters.

EN50549-1 Clause / Parameter	Generating plant type $0.8\ kW \leq$ Type A $< 150 kW$ $150\ kW \leq$ Type B $< 5\ MW$	Value
Grid code to select	A, B	EN 50549-1
4.7.2.3.3 / Voltage related control Mode Q(U)	B	Enable
4.7.2.3.3 / Voltage related control Mode Q(U) First order filter time constant	B	3τ = 15 s (time costant = 5 s)
4.7.2.3.3 / Voltage related control Mode Q(U) Lock-in power	B	10%
4.7.2.3.3 / Voltage related control Mode Q(U) Lock-out power	B	10%
4.9.2 / Undervoltage stage1 (U <) Operate time	B	2,0 s
4.9.2 / Undervoltage stage 2 (U <<)	B	Enable
4.9.2 / Undervoltage stage 2 (U <<) Threshold	B	0.7 Un
4.9.2 / Undervoltage stage 2 (U <<) Operate time	B	0.2 s

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4.9.2 / Overvoltage stage 1 (U >)	B	Enable
4.9.2 / Overvoltage stage 1 (U >) Threshold	B	1.11 Un
4.9.2 / Overvoltage stage 1 (U >) Operate time	B	2 s
4.9.2 / Underfrequency stage 1 (F<) Threshold	B	47 Hz
4.9.2 / Underfrequency stage 1 (F<) Operate time	B	0.2 s
4.9.2 / Overfrequency stage 1 (F>) Operate time	B	0.2 s
4.10.2 / Automatic reconnection after tripping Lower frequency	A, B	49.9 Hz
4.10.2 / Automatic reconnection after tripping Lower voltage	A, B	90% Un

Table 2: parameters settings to apply manually to meet requirements.

Terranuova Bracciolini (Arezzo) - Italy
Date: Sept. 29th, 2021

Paolo Casini

Chief Technical Officer

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