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Subject: Application Note-RCD Application Suggestion of Inverter

Revision History

Version 1.0 June 2021 – Initial release

Applicable products and models

Listed in the table below.

Description

According to IEC 62109-2: 2011, a residual current monitoring unit (RCMU) is required for inverters without simple separation between the grid and the photovoltaic generator. The SUN2000 series inverters have such an integrated RCMU. Due to the inverters' circuit design, they can't feed in direct residual current into the grid.

If the standard take as a basis for the building of PV system or the grid company requests external RCD (Residual Current Device), a RCD type A can be used for all SUN2000 series inverters.

Regarding the internal RCMU protection limits according to IEC 62109-2: 2011 (300 mA RMS for inverters with rated continuous output power \leq 30 kVA, or 10 mA RMS per kVA of rated continuous output power for inverters with rated continuous output power rating > 30 kVA), the upper limits of Type A RCD rating for each model and recommended Type A RCD ratings for each model are listed below.

For 100mA RCD Requirement, Please upgrade the software version to newest version.

Inverter Type	SPC Version	SPC Launch Time	Situation
M3	SUN2000MA V100R001C20SPC141	2024-10-15	Published
M3	SUN2000MC V200R023C00SPC121	2024-10-15	Published
V5+	SUN2000ME V500R023C00SPC147	2024-10-11	Published
V6	SUN2000MG V600R023C10SPC104	2024-10-11	Published