

# NPU Guidance for SolShare Installations

Version A.4

## DISCLAIMER

This document is intended to provide guidance on how to design a safe and effective shared solar system requiring network protection units (NPUs) with the SolShare. This document does not override the local electrical safety standards and wiring rules. It is the responsibility of the installer to ensure the shared solar installation meets the relevant electrical safety and wiring standards in the installation locality.

## NPU GUIDANCE FOR SOLSHARE INSTALLATIONS

As with other solar installations more generally, NPUs may be required in installations involving a SolShare, based on rules set out by the relevant DNSP, Australian Standards or other regulations. Below is some guidance surrounding the design of a system with SolShares and NPUs to complement what is provided in standards and other official guidance.

An NPU is typically required when the total system size behind a single grid connection point exceeds 30kVA (an exception exists in South Australia - please see the SAPN section of this document for more information). Each site typically has a single connection point to the grid, even if it is unmetred. A connection point does not correspond to an NMI. Therefore, if there are multiple systems that sum to greater than 30kVA, even if their generation is spread across multiple NMIs, an NPU is typically required.

### A. AUSTRALIA (NOT INCLUDING SAPN)

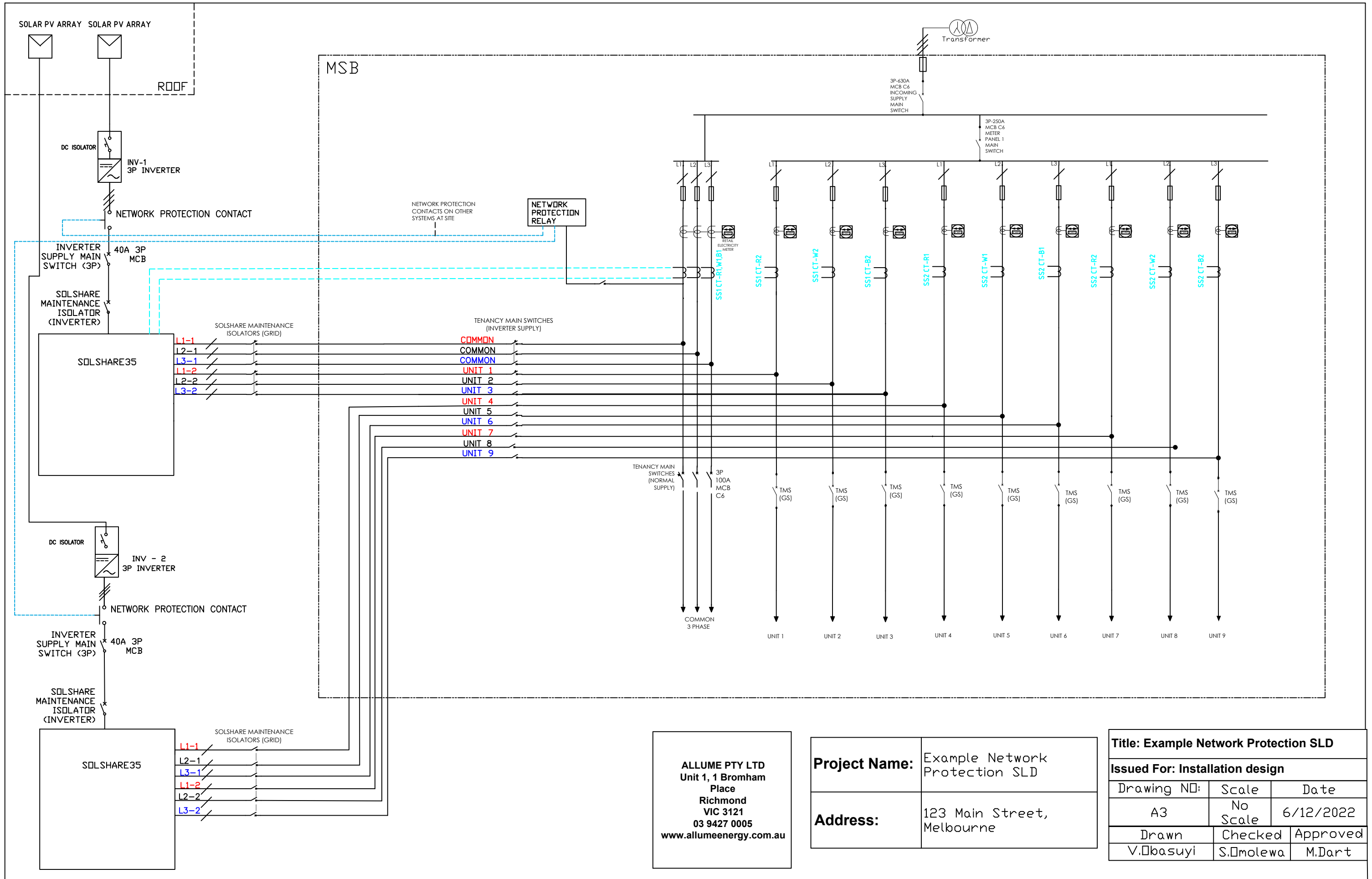
When installing an NPU with 1 or more SolShares, a network protection contactor should be placed between the inverter and the SolShare for each SolShare unit. A network protection relay is included to monitor the incoming supply and control the network protection contactor(s). To save cost, it is recommended that a single network protection relay is used to control multiple contactors, forming a multichannel NPU. Multichannel NPUs can be used in installations with more than 1 SolShare. With the exception of South Australia, the contactor and network protection relay do not have to be co-located.

This configuration is shown in the snippet below of an example site – please note that some of the aspects of this drawing will be different to your projects.

## B. SAPN

The Office of the Technical Regulator (OTR) has recently provided an exemption to Network Protection Unit (NPU) requirements in certain conditions, namely, for multi-tenant buildings with multiple NMIs where the total inverter nameplate does not exceed 200kVA and each NMI is associated with at most 30kVA of inverter capacity. More information is available at: <https://www.sapowernetworks.com.au/data/314589/central-protection-exemption/>.

For installations where network protection is required in South Australia, the requirement by SAPN to use certified NPUs (as opposed to the certification being required on the network protection relay only) applies. This typically makes it more challenging to install a distributed multi-channel NPU like the one described in the section above. Allume recommends reaching out to an NPU manufacturer (such as CleanTech Controls or Greenwood) for information on certified multi-channel NPUs suitable for use in South Australia.



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**Project Name:** Example Network Protection SLD  
**Address:** 123 Main Street, Melbourne

<b>Title: Example Network Protection SLD</b>		
<b>Issued For: Installation design</b>		
Drawing NO:	Scale	Date
A3	No Scale	6/12/2022
Drawn	Checked	Approved
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