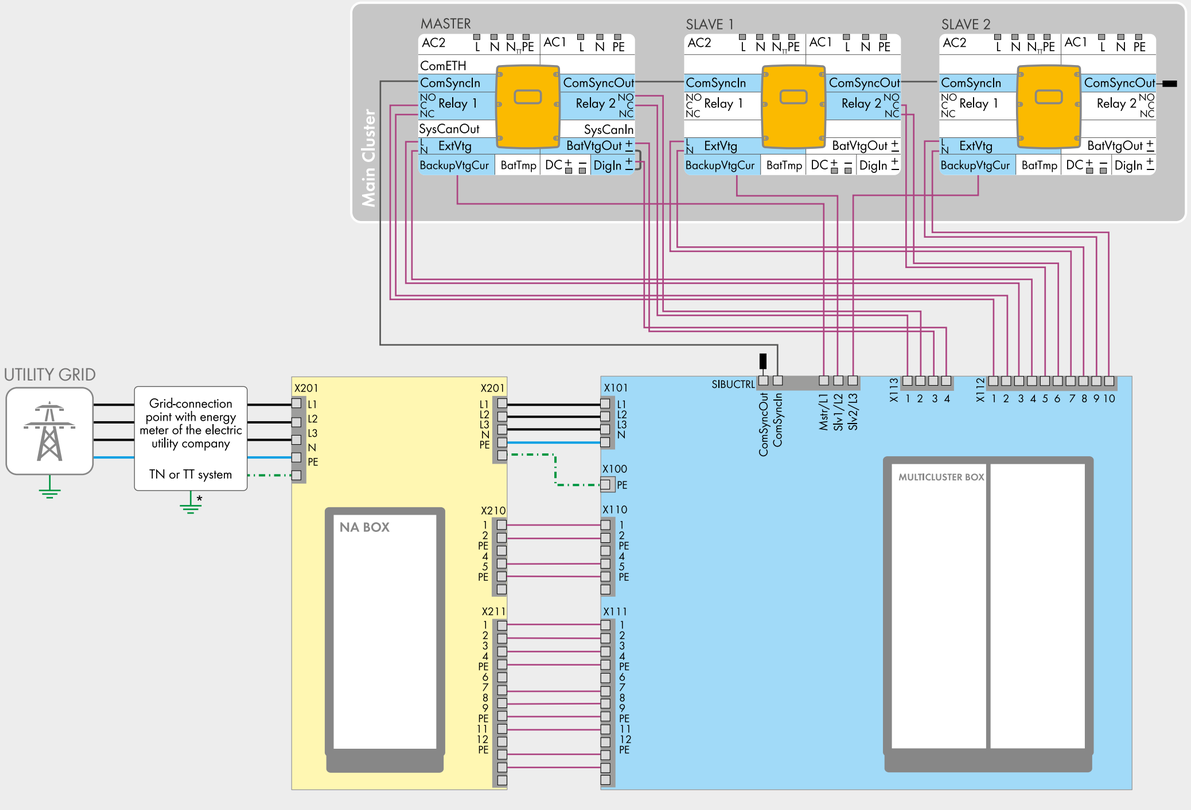
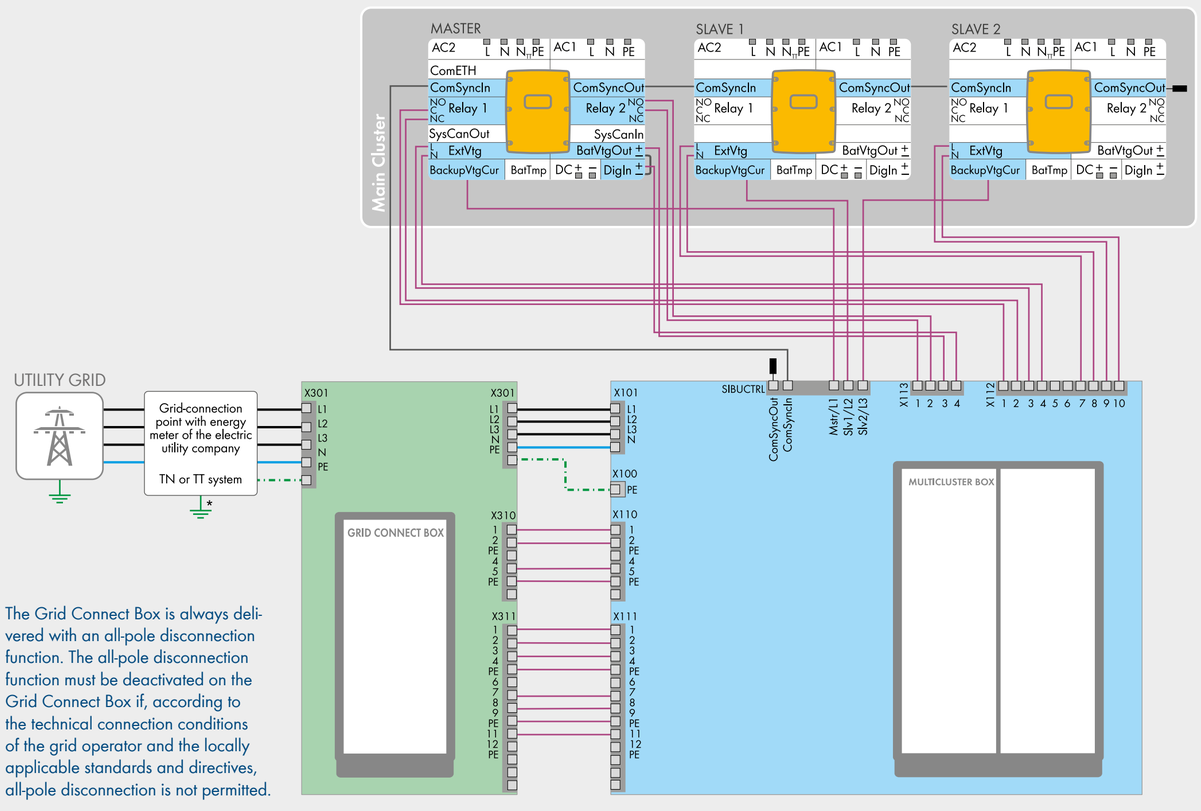
CIRCUITRY OF NA-BOX WITH MULTICLUSTER-BOX AND MAIN CLUSTER

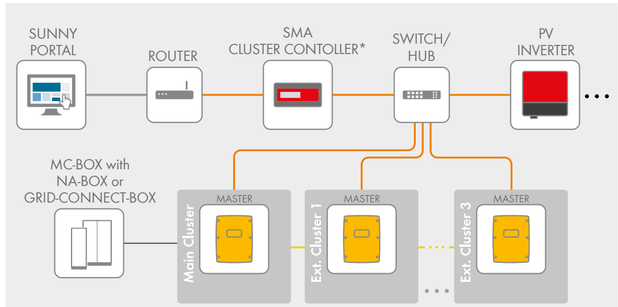


CIRCUITRY OF GRID-CONNECT-BOX WITH MULTICLUSTER-BOX AND MAIN CLUSTER



The Grid Connect Box is always delivered with an all-pole disconnection function. The all-pole disconnection function must be deactivated on the Grid Connect Box if, according to the technical connection conditions of the grid operator and the locally applicable standards and directives, all-pole disconnection is not permitted.

COMMUNICATION PRINCIPLE



*As an alternative to the SMA Cluster Controller, the Sunny WebBox can also be connected via a RS485 bus. To this end, the master of each cluster must be equipped with a SI-COMSMA-NR retrofit kit.

LEGEND

- Line conductor
- Neutral conductor
- Grounding conductor
- Control and measurement signal cable
- Data cable for internal communication of the clusters
- Data cable for multicluster communication
- WAN
- Speedwire
- Terminator
- Sunny Island

Comment:

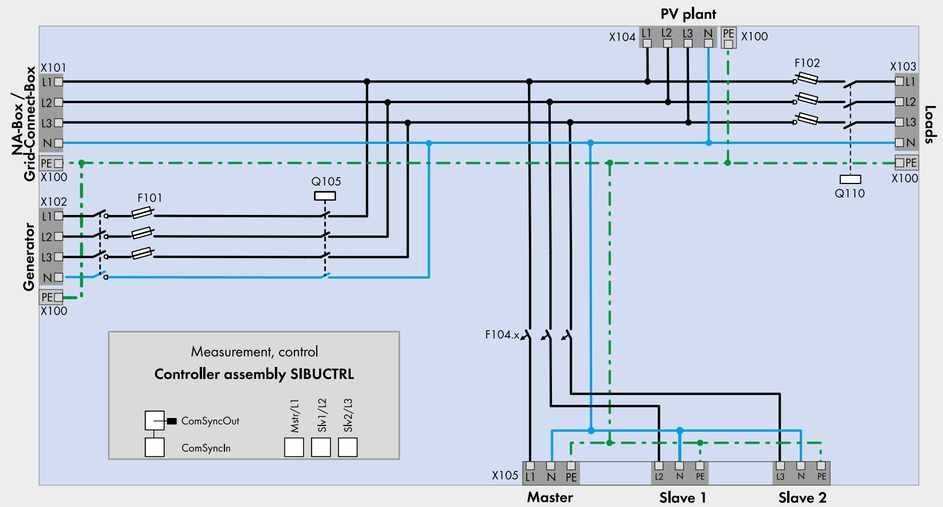
Extension cluster circuitry: see page 2

Bridge **DigIn-** and **BatVtg-** on the master of the main cluster.

Data cable length max. 30 m

* Ground the Multicluster system at the grid-connection point in accordance with the local standards and directives.

SCHEMATIC DIAGRAM FOR MULTICLUSTER BOX



Fuse	Fuse type	Application	Supply line from
F101	NH1 200 A	Generator	-
F102	NH1 200 A	Load	-
F104.x	Circuit breaker C40	Sunny Island	-

SMA Solar Technology AG
Niestetal
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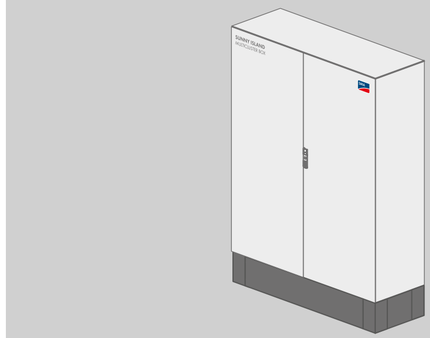
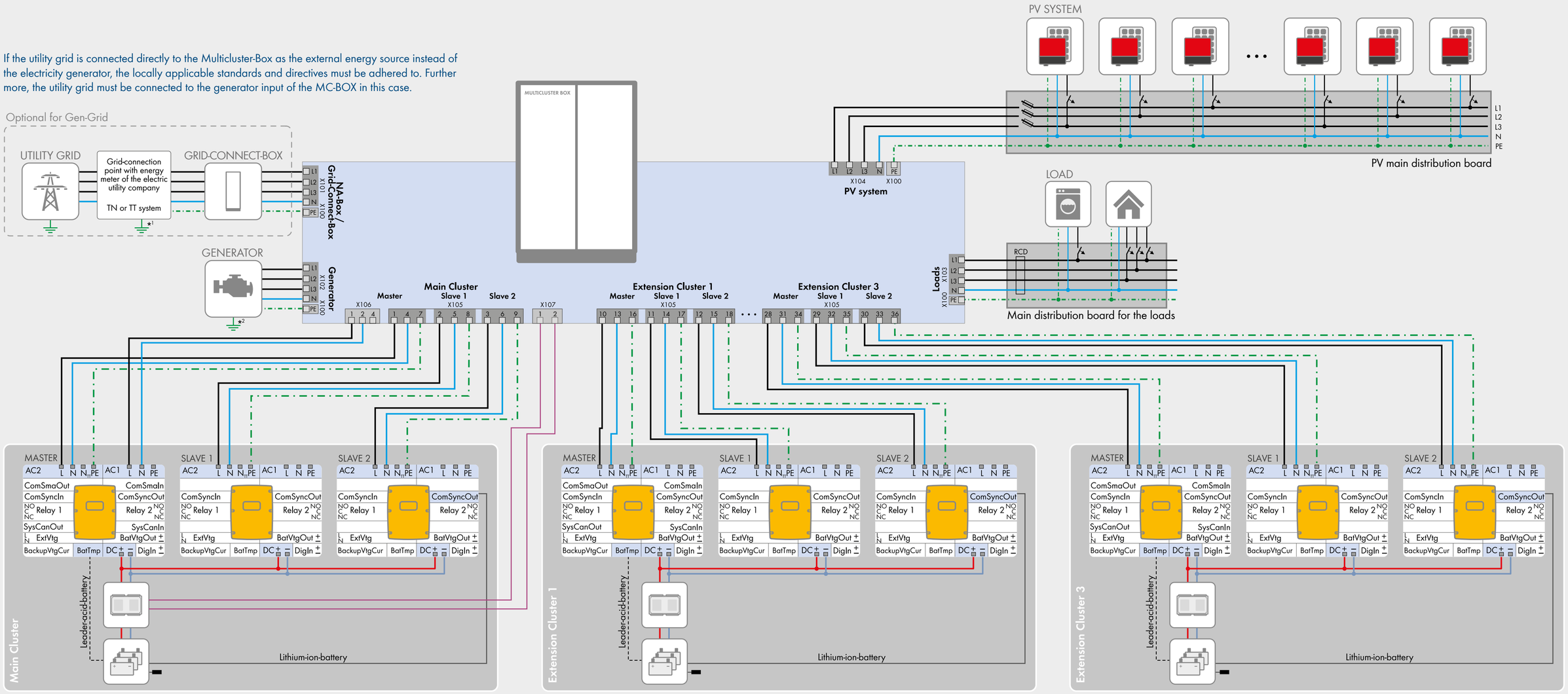
Installation – Circuitry Overview
MULTICLUSTER-BOX 12.3-20

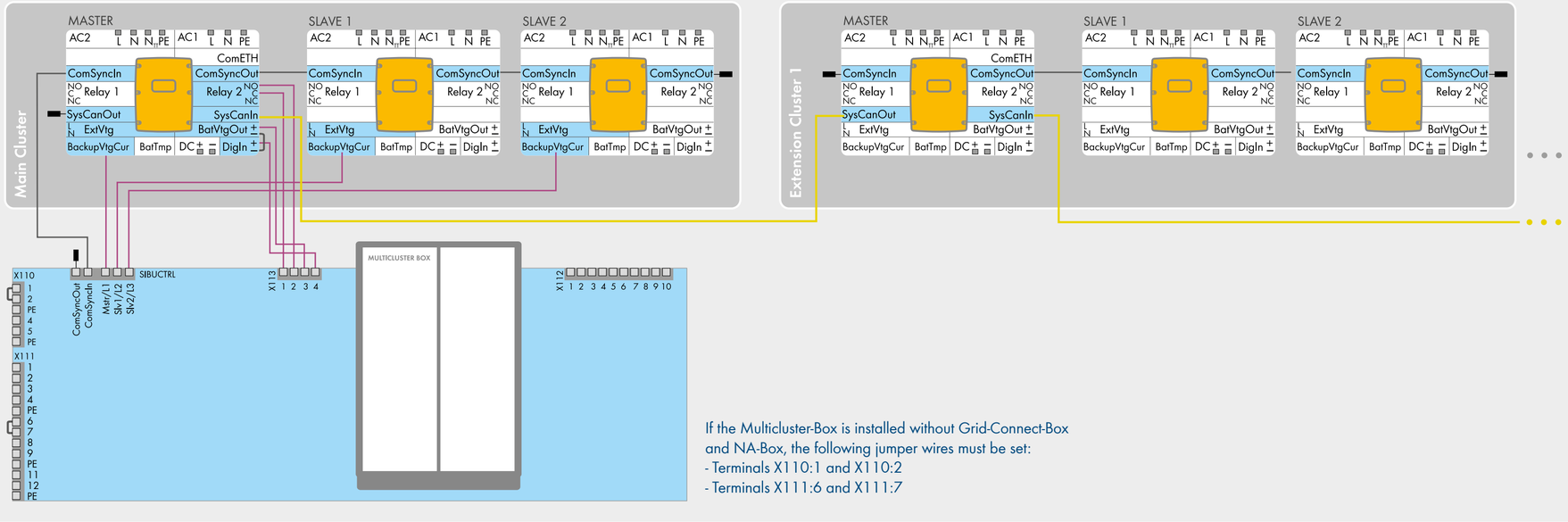


POWER CABLE CIRCUITRY FOR SYSTEMS WITH MULTICLUSTER-BOX

If the utility grid is connected directly to the Multicluster-Box as the external energy source instead of the electricity generator, the locally applicable standards and directives must be adhered to. Further more, the utility grid must be connected to the generator input of the MC-BOX in this case.



DATA AND CONTROL CABLE CIRCUITRY – for systems with electricity generator or utility grid connected directly to the Multicluster-Box



If the Multicluster-Box is installed without Grid-Connect-Box and NA-Box, the following jumper wires must be set:
- Terminals X110:1 and X110:2
- Terminals X111:6 and X111:7

LEGEND

- Line conductor
- Neutral conductor
- Grounding conductor
- DC+ cable
- DC− cable
- Battery temperature sensor
- Sunny Island
- PV inverter
- Control and measurement signal cable
- Data cable for internal communication of the clusters
- Data cable for multicluster communication
- WAN
- Speedwire
- Terminator
- BatFuse
- Battery

Comment: Bridge **DigIn-** and **BatVtg-** on the master of the main cluster.
Data cable length max. 30 m

*1 Ground the Multicluster system at the grid-connection point in accordance with the local standards and directives.

*2 If a generator is used, ground the multicluster system at the generator.