

Electronic Solar Switch



The first integrated DC load disconnecting switch for PV systems



Safe DC disconnection

No additional installation steps

Easy and intuitive to operate

No efficiency or energy yield loss

For use with Sunny Boy and Sunny Mini Central inverters

Maintenance-free

Complies with:
EN 60947-3
(load disconnecting switches)

The SMA ESS is the first load disconnecting switch integrated into an inverter that meets these requirements.

Thanks to the integrated design, no additional wiring is required during setup to connect a DC load disconnecting switch. The ESS does not cause yield loss in operation.

Two-step disconnection



Step 1:
Remove the ESS handle



Step 2:
Remove the PV plug



Finished:
The inverter is isolated on the DC side.

Technical data

Electrical specifications

Max. switching current
Max. switching voltage
Max. PV power
Operating points (examples)
Reaction time

30 A
800 V
approx. 10 kWp
800 V / 15 A; 600 V / 20 A; 300 V / 30 A
max. 2 ms

Operation cycles

Number of operation cycles under full load
Usage category

at least 50
DC-21B (in compliance with EN 60947-3)

Protection type

complies with DIN EN 60529
(when plugged in)

IP65

Ambient conditions

Temperature range
Humidity

-25 °C to +60 °C
0 - 100%, class 3K6

Standards

Conformity

EN 60947-3

Components of the disconnecting switch

DC plug connector
Quick-lock switch device (ESS handle)
Electronic switch

as isolator
as load switch
to prevent arcing at the quick-lock switch device

The ESS is available for the following
Sunny Boy and Sunny Mini Central
inverters

SB 1100, SB 1700, SB 2100TL, SB 2500, SB 3000
SB 3300TL HC, SB 3300, SB 3800,
SB 4200TL HC Multi-String, SB 5000TL HC Multi-String
SMC 5000A, SMC 6000A,
SMC 6000TL, SMC 7000TL, SMC 8000TL