

Application Note - Connecting External Shutdown Switch to SolarEdge Home Hub Inverter - Three Phase

Introduction

The External Shutdown (ESD) switch is an external switch that remotely turns off the AC of the SolarEdge Home Hub Inverter - Three Phase and reduces the DC Voltage from the PV strings to a safe level.

IMPORTANT! SolarEdge recommends adding an ESD switch to new and existing inverters supported by a backup battery.

The following application note describes the installation and operation of the ESD switch to a SolarEdge Home Hub Inverter - Three Phase providing home backup power during grid outages.

General Description

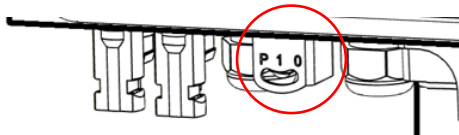
The inverter starts supplying backup power a few seconds after a grid outage or when turning off the main AC circuit breaker.

Turning off the main AC circuit breaker for maintenance operations introduces a safety risk since although the main AC is turned off, the inverter continues providing backup power.

To prevent the inverter from providing backup power during maintenance operations, the inverter must be turned off.

To turn the Inverter off, you can do one of the following:

- Turn the ON/OFF/P switch of the inverter to the OFF position.



- Use the ESD switch as described in the Operation section on page 2.

ESD Switch Requirements

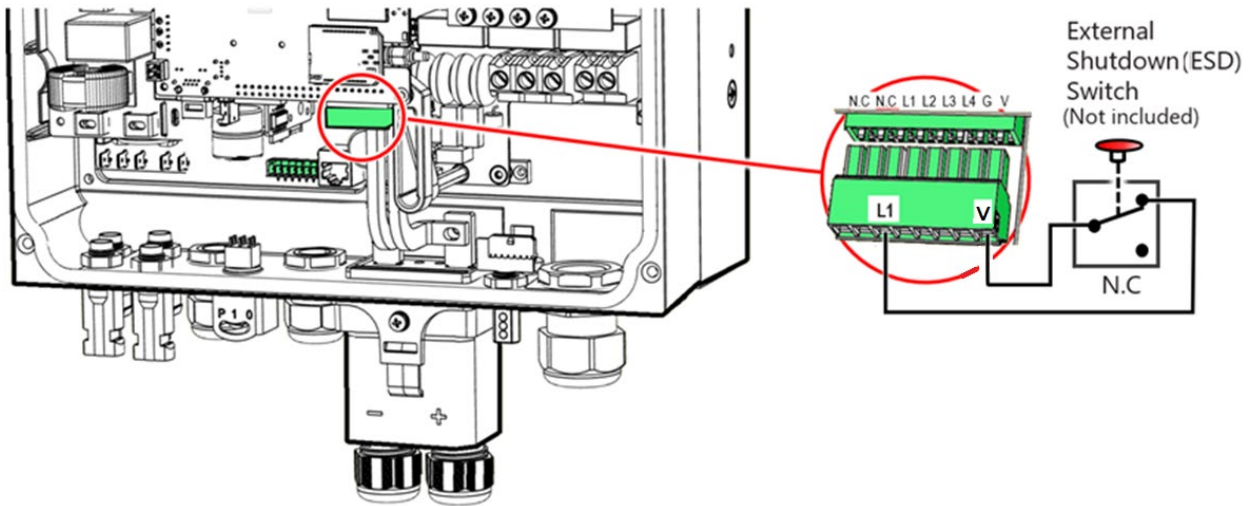
- Use a Normally Closed (N.C) switch that latches in an open position when pressed, and when pressed again, returns to the closed position.

⚠ CAUTION! DO NOT use a toggle switch instead of an ESD switch. Using a toggle switch may cause the remote shutdown and the Inverter operation to malfunction.

- Locate the ESD switch as close as possible to the main circuit breaker panel and at a visible location to anyone who switches off the main AC circuit breaker.
- The maximum distance between ESD and the inverter is 50 meters.
- Clearly label the ESD switch as a "Backup Inverter External Shutdown".
- Attach the "Dual Supply" sticker, provided with the backup interface, at a visible location to anyone who may switch off the main circuit breaker.

Connection Diagram

The following figure shows how to connect the ESD switch to the inverter.



For more information on connecting the ESD switch to the SolarEdge Home Hub Inverter - Three Phase, refer to <https://www.solaredge.com/sites/se/default/files/se-home-hub-inverter-three-phase-quick-installation-guide.pdf>

Operation

To turn off the inverter:

Press the ESD switch once - the AC power of the inverter immediately turns off, and the DC Voltage of the PV strings drops to a safe level after a few minutes (Safe DC).

To turn the inverter back into operation:

When it is safe, press the ESD switch once - the Inverter resumes production (if the grid power is available), and the DC Voltage of the PV strings returns to a normal operation level.