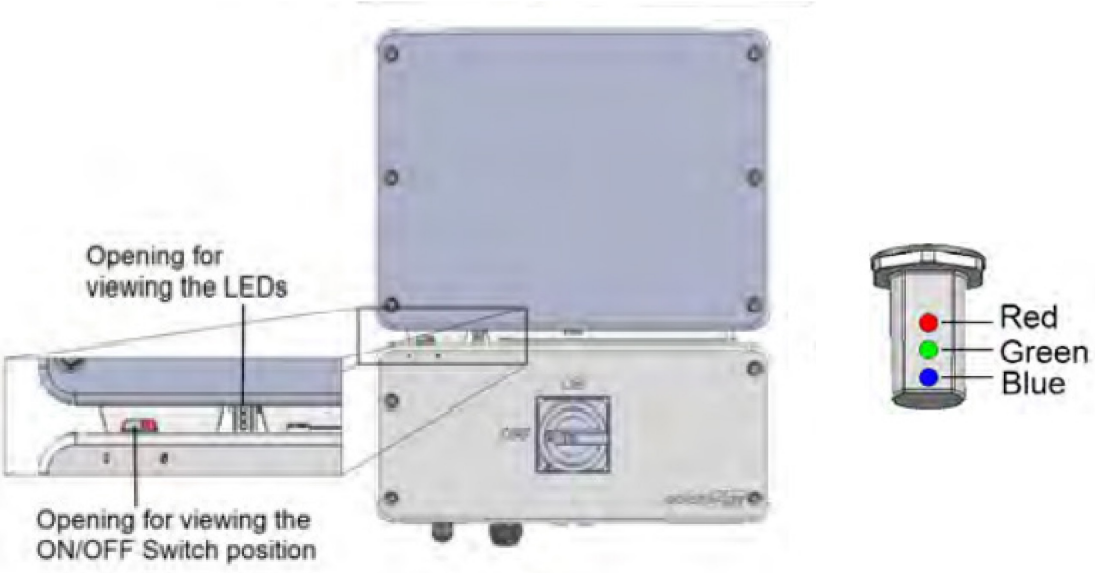
Automatic Rapid Shutdown Witness Test
Procedure

This test verifies that the integrated SolarEdge PV Rapid Shutdown System (PVRSS) is working properly. This procedure can be used to show compliance to inspectors or others interested parties. The test does not require opening the inverter enclosure or exposure to live terminals, or the need for a handheld voltmeter, and may be performed by anyone familiar with the equipment.

The SolarEdge PVRSS is listed to the safety standard UL 1741 to operate as a complete system that includes the inverter, DC safety switch, and optimizers. The system performs an automatic self-test on start-up and every day during normal system operation in accordance with the requirements of UL 1741. During commissioning and normal wakeup each day, the inverter initiates an automatic rapid shutdown test and sends a communication signal to the optimizers. The optimizers then cease to energize the output conductors. The inverter monitors the state of the conductors and confirms that the system behaves as expected. If the self-test fails, the inverter will turn off and present a red LED indicator located on the exterior of the enclosure and the inverter will not go into operation until the issue is resolved.

PVRSS Field Test procedure:

1. Verify that the equipment is installed and commissioned per the installation manual.
2. Verify all enclosures, conduits, and equipment doors are closed, and latched, or fastened properly so no live parts, conductors, terminals, or other energized areas are exposed to personnel performing the test.
3. Turn on the system and allow the inverter to go through its normal wake-up procedure. It will automatically perform the rapid shutdown test at this time.
4. If the test passes a flashing or solid green LED will be displayed on the LED indicator located on the bottom of the enclosure as shown below. After the test has completed and passed successfully, the inverter will automatically start the countdown timer (enter service delay) then go into production.



5. If the test fails a solid red LED will be displayed on the indicator and the inverter will not go into production.

Troubleshooting for Installers:

If a solid red LED is displayed after this procedure a qualified installer will need to diagnose the inverter in order to identify and resolve the problem. Information on troubleshooting can be found in the installation guides located at SolarEdge US | A World Leader in Smart Energy Solutions

Information on the status and performance indications can be found below:

Inverter Status and System Performance Indications | SolarEdge

Error Codes associated with the Rapid Shutdown automatic self-test:

3x9B	0x300009B		155	Portia	SYS_LOCK_INV_RSD_TEST	The inverter locked because it failed its rapid shutdown self-test

2xC5	0x020000C5	197	197	Venus	Rapid shutdown test failed