

## Application Note - Troubleshooting Undetected RS485 Slave Devices

### Version History

- Version 1.1 (Dec. 2017) - new feature: Long Slave Detect
- Version 1.0 (June 2015) - Initial release

When multiple SolarEdge devices are connected in a master-slave configuration using the RS485 communication option, a list of the slave devices is displayed in the LCD of the master device upon slave-detect completion.

If the master does not show the correct number of slaves, you can use the following methods to identify missing slaves and troubleshoot connectivity problems:

1. Analyze the Slave List to check for missing slaves
2. Perform Long Slave Detect to have the master device scan for a longer period of time and try to detect more slaves

This document describes:

- how to show the slave list in a SolarEdge device that has been configured as the *master* on the device chain (bus) - inverter, Control and Communication Gateway (CCG), or Safety and Monitoring Interface (SMI)
- how to perform Long Slave Detect

### ► To show the slave list on the master device:

1. After slave detection, if slaves were detected, an additional menu item is displayed in the RS485-X Conf. menu: **Slave List**.

If the number of detected slaves does not match the number of slaves connected to the master, use the slave list to check for missing slaves, and check their connection.

```
Device Type <SE>
Protocol <M>
Device ID <1>
Slave Detect <#>
Long Slave Detect <#>
Slave List <#>
```

2. Select **Slave List**. A list showing serial numbers of the detected slaves is displayed. For example:

```
5000FE01-4F
5000FE02-50
.
.
```

3. To view the details of a detected slave device, select its serial number entry. The following information is displayed:

```
ID: 5000FE01-4F
Last Communication
17/02/2015
14:24:01
```

- **ID**: the device serial number
- **Last Communication**: the date and time (dd:mm:yy 24h) the device last communicated with the master device. If this device is detected for the first time after the master wakeup, **N/A** appears for this information.

### ► To perform Long Slave Detect:

If the number of detected slaves does not match the number of slaves connected to the master, the long slave detection may detect more slave devices.

From the main menu select **Communication** → **RS485 Conf menu** → **Long Slave Detect**. The master tries to detect slaves for 60 minutes or until aborted by pressing any internal user button or by pressing the LCD light button.

```
Detecting Slave
<xx> slaves detected
Any Button to Abort
```