

FIMER

FIMER & Tigo solution

Rapid Shut Down compatibility

Scope

FIMER UNO-DM-TL-PLUS string inverters, combined with Tigo RSS Transmitter and TS4-F devices, offer a flexible and scalable solution to provide all of the required safety features to shut down a PV array at the module-level, the safest way to de-energize a PV system.

This system integration provides the following advantages:

- Meets NEC 2017 and NEC 2020 (690.12) requirements
- Module-level deactivation with Tigo TS4-F products
- Cost effective solution
- UL certified for Photovoltaic Rapid Shutdown System (PVRSS) compliance

This document describes the steps required for the installation of the RSS Transmitter and its power supply within the wiring box of UNO-DM-PLUS inverters. Please refer to the Tigo and FIMER manuals for the complete system installation.

Application

This system compatibility refers to:

- **UNO-DM-3.3-3.8-4.6-5.0-6.0-TL-PLUS-US-Q** FIMER's inverter models (all versions)
- Tigo model:
 - TS4-A-2F
 - TS4-A-F
- RSS Transmitter:
 - 490-00000-10 (RSS Transmitter Din Rail, Single RSS Core)
 - Power supply 983-01512-00 DIN Rail Power Supply, 12VDC, 1.25A

The Tigo RSS Transmitter is part of a module-level rapid shutdown solution when paired with Tigo TS4-F products. While powered on, the RSS Transmitter sends a power line communication (PLC) signal to the TS4-F units to keep their PV modules connected and supplying energy. TS4-F units automatically enter rapid shutdown mode when the RSS Transmitter is switched off and resume energy production when power is restored to the RSS Transmitter.

FIMER's UNO-DM-PLUS product families (both IEC and UL versions) can be operated in combination with Tigo's TS4-O/S/M and TS4-A-O/S/M products. For more details please contact FIMER Technical Support.

Before starting

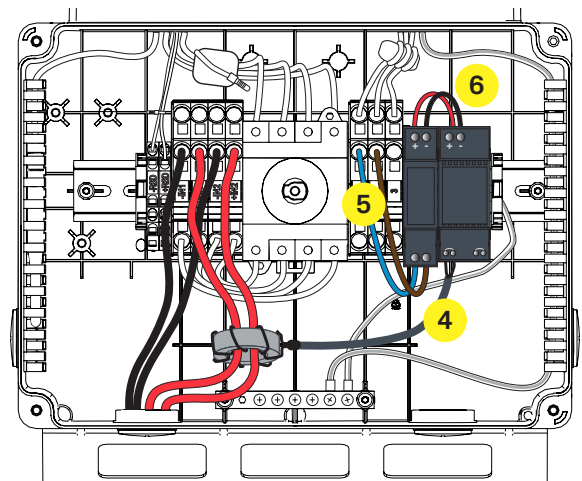
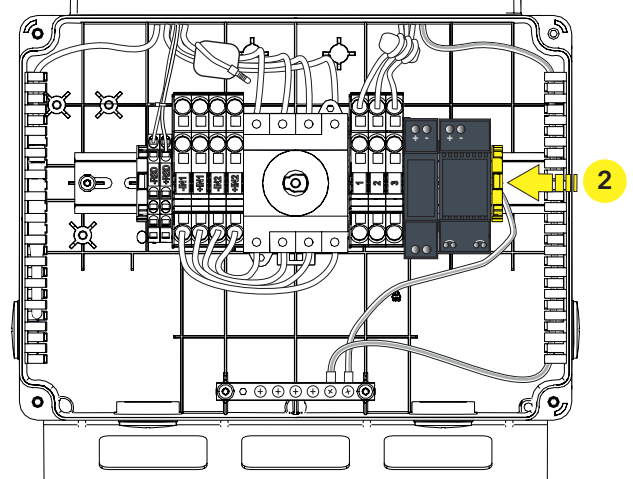
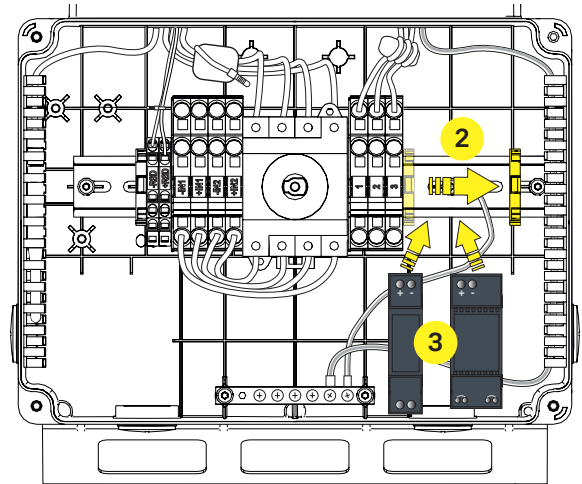
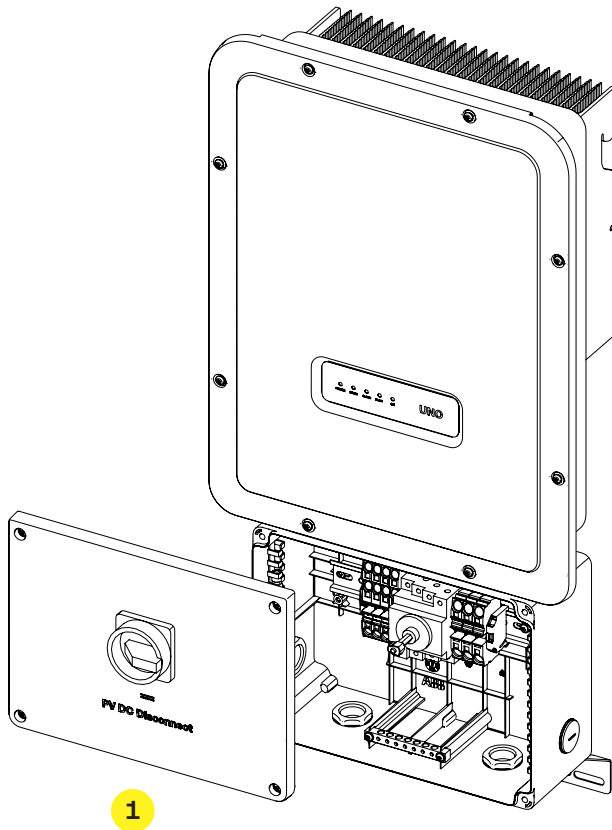
The purpose of this document is to support the qualified technician, who has received training and/or has demonstrated skills and knowledge regarding installation, operation, and maintenance of UNO-DM-PLUS inverters.

WARNING! ELECTRIC SHOCK HAZARD! Some inverter parts may be subject to voltages that could be hazardous for the operator. Before performing any work on the inverter, refer to "Inverter total de-energization and safe access" chapter in the Installation Manual of the UNO-DM-PLUS inverter to know all the necessary steps to safely work on the inverter.

Installation of the RSD power supply and Transmitter

- Remove the front cover of the wiring box (1)
- Remove din rail end clamp (2) next to AC terminal block
- Install on the DIN rail the 12V Power Supply and the Tigo RSS Transmitter next to AC terminal block (3) and fix the din rail end clamp (2). (Transmitter-PLC power supply must be on same AC branch circuit as inverter to meet rapid shutdown requirements)
- Connect the Core (4) to the Transmitter-PLC
- Connect the Power Supply (85-264 VAC Input) to the AC terminal block (5) and (12 VDC Output) to the RSS Transmitter-PLC (6). (It is recommended wiring L1 and N for a 120 Vac connection: in case of grid voltage increase, the power supply still works safely).

- Pass either all of the positive or negative homerun wires coming from PV array through Core. Do not mix positive and negative wires passing through the core. (Max 10 strings per core)
- Complete the installation of the AC output wires and replace the wiring box cover per the instructions in the Quick Installation Guide or Installation Manual.
- Once the TS4-Fs have been installed at the array, the inverter must be connected to the grid in order for the RSS transmitter to receive power and signal the TS4-Fs to pass energy from the array to the inverter.



- 1 - Remove the wiring box front cover
- 2 - Remove clip next to AC terminal block
- 3 - Mount the Power Supply and the Transmitter-PLC on the DIN rail next to the AC terminal block and put the clip back on the end of DIN rail
- 4 - Insert the RSS Cores wires
- 5 - Connect AC wires from the AC terminal block to the Power Supply
- 6 - Connect DC wires from the Power Supply to the terminal PLC
- 7 - Complete installation and mount again the cover according to manual