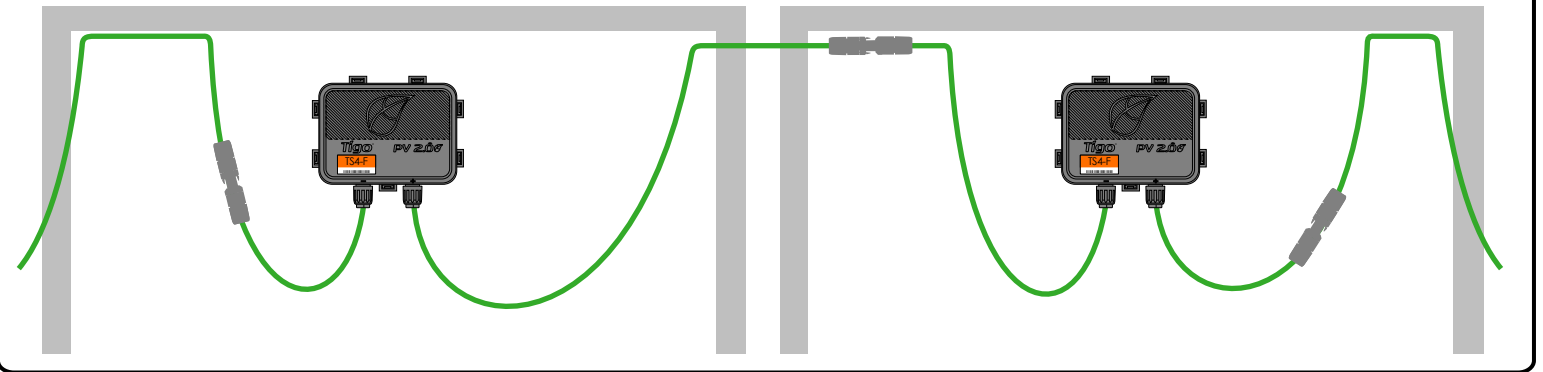
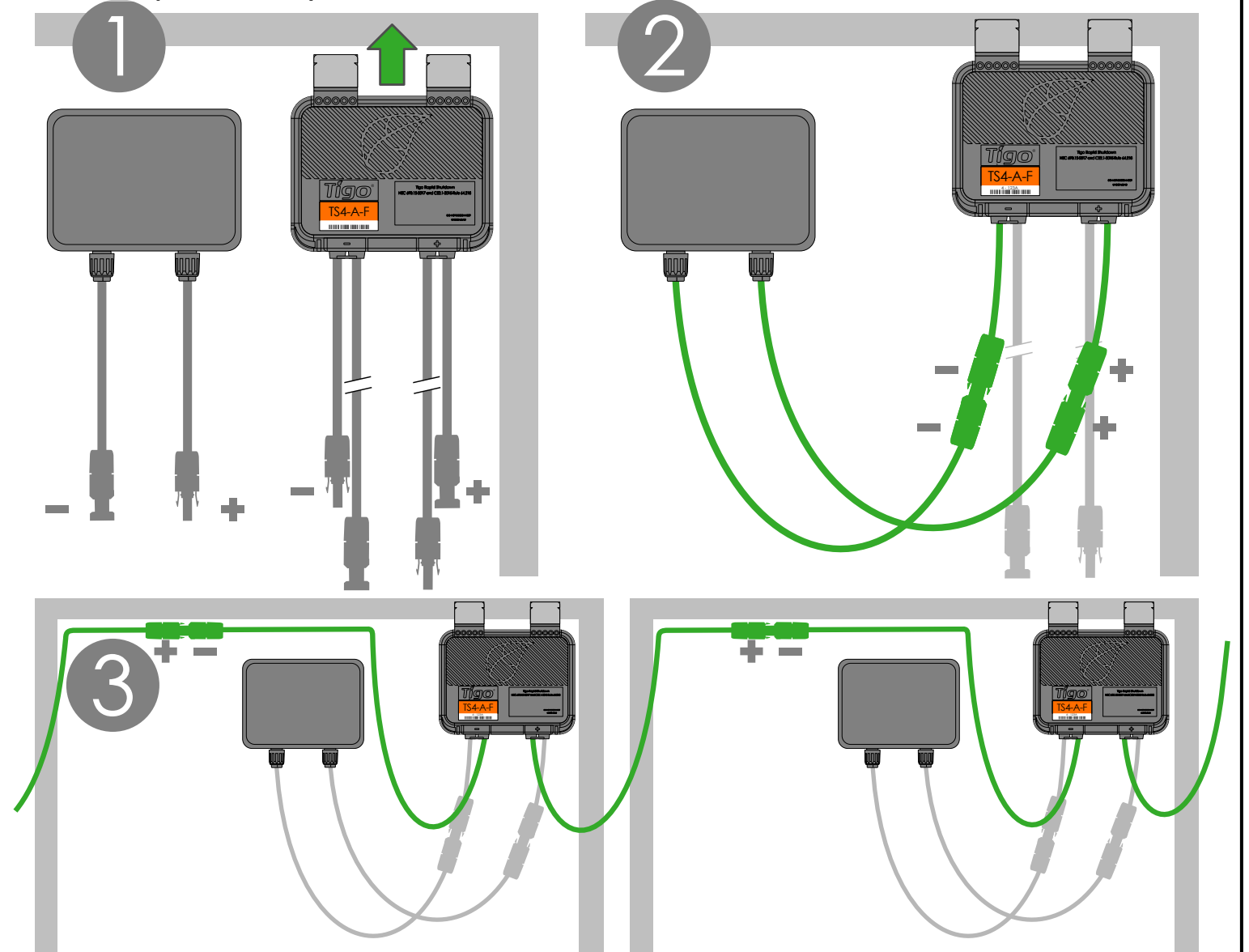


TS4-F (Integrated)



TS4-A-F (Add-on)



Note: When installing TS4-A-F, connect the input cables to the PV module before connecting the TS4-A-F output cables in series.

If disconnecting TS4-A-F, disconnect the TS4-A-F output cables from the string before disconnecting the input cables from the PV module.

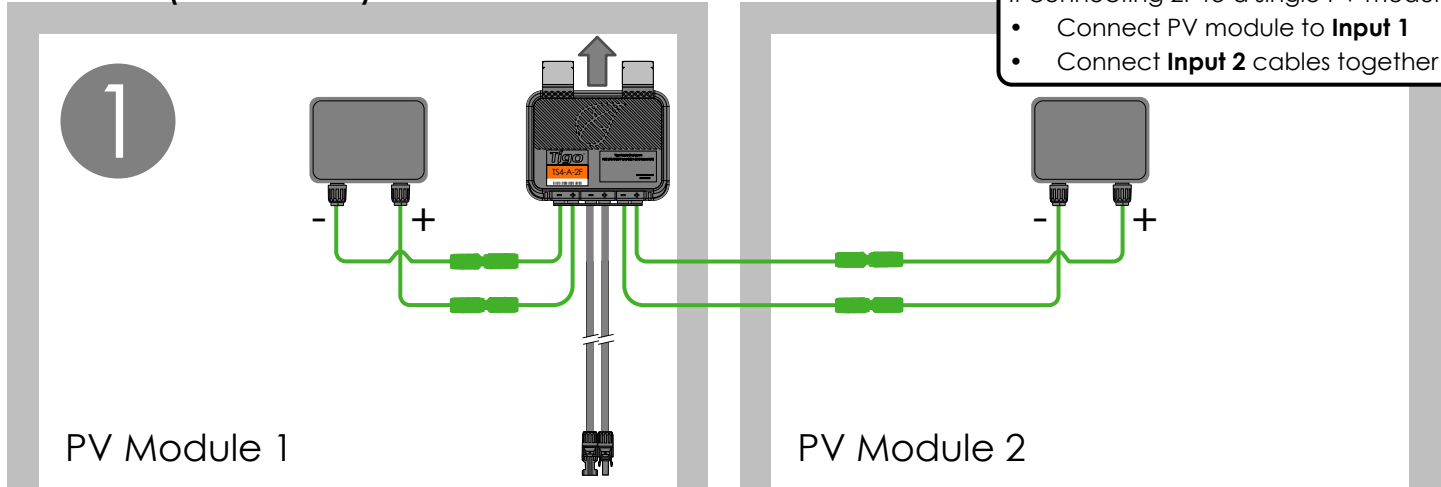
RSS Transmitter must be powered off during TS4-A-F installation.

TS4-A-2F (Add-on)

If connecting 2F to a single PV module:

- Connect PV module to **Input 1**
- Connect **Input 2** cables together

1

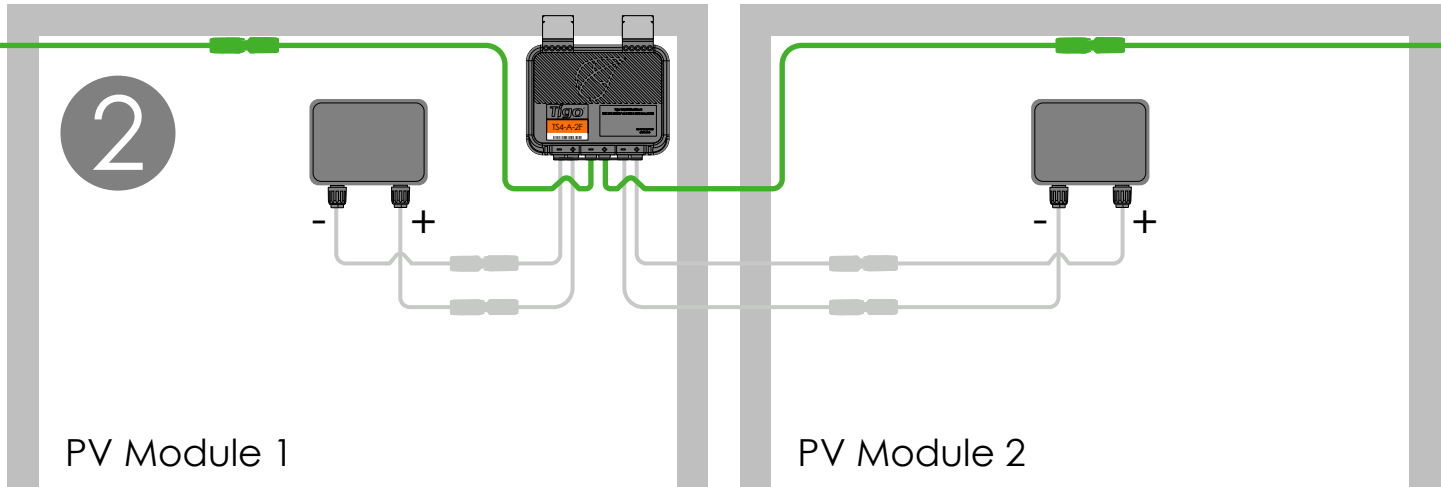


PV Module 1

PV Module 2

1. Connect PV modules to TS4-A-2F inputs

2



PV Module 1

PV Module 2

2. Connect TS4-A-2F outputs in series

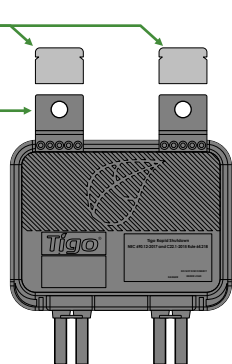
Note: When installing TS4-A-2F, always connect the input cables to the PV modules before connecting the TS4-A output cables in series.

If disconnecting TS4-A-2F, always disconnect the TS4-A-2F output cables from the string before disconnecting the input cables from the PV modules.

RSS Transmitter must be powered OFF during TS4-A-2F installation.

Removable clips

Mounting holes (M8)



For installation with frameless modules, remove metal clips and bolt TS4-A to rail.



support.tigoenergy.com



Manuals



support@tigoenergy.com

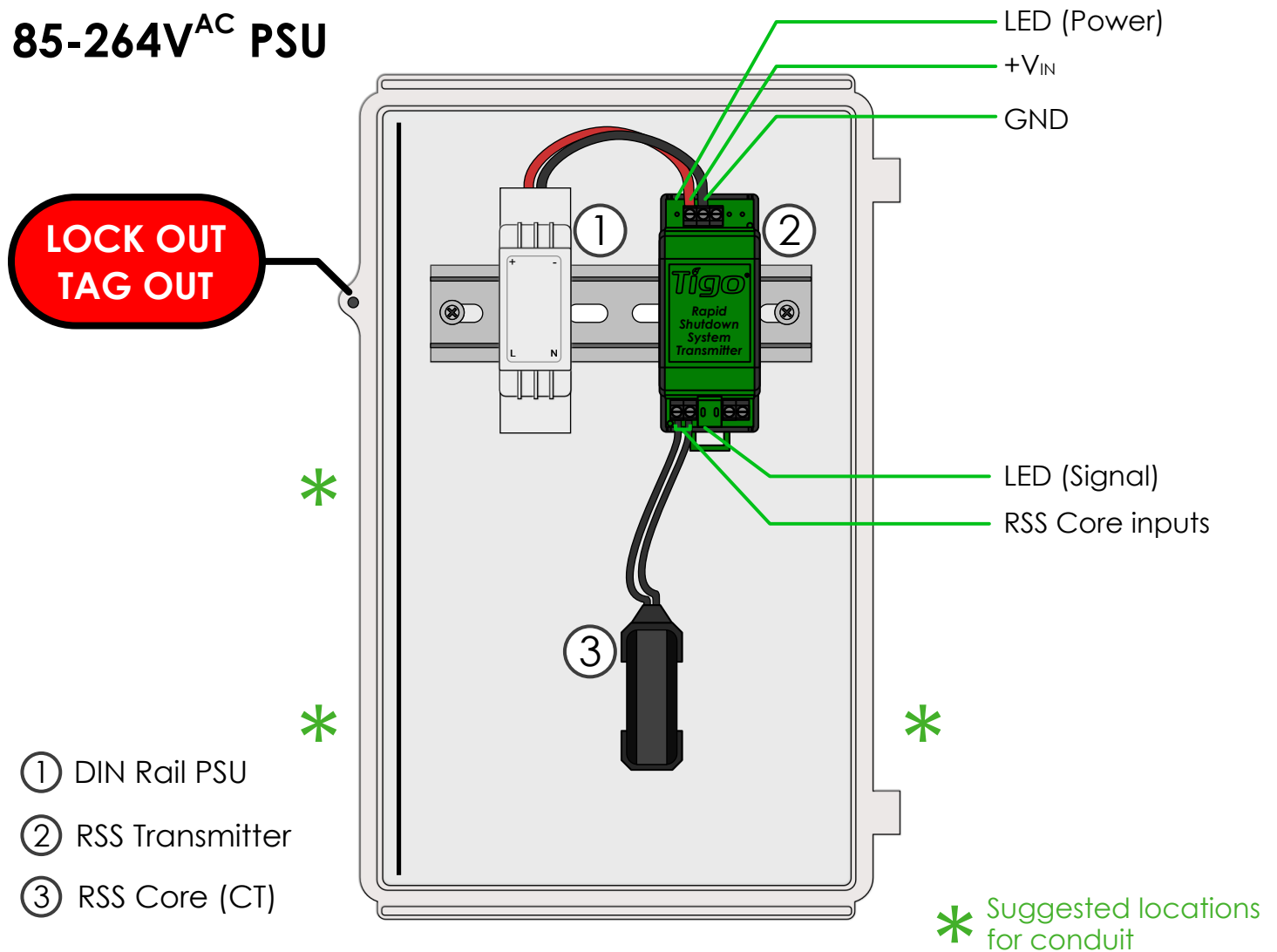


International: 00800.2255.8446

Americas: +1.408.402.0802

RSS TRANSMITTER INSTALLATION – SINGLE RSS CORE

85-264V^{AC} PSU



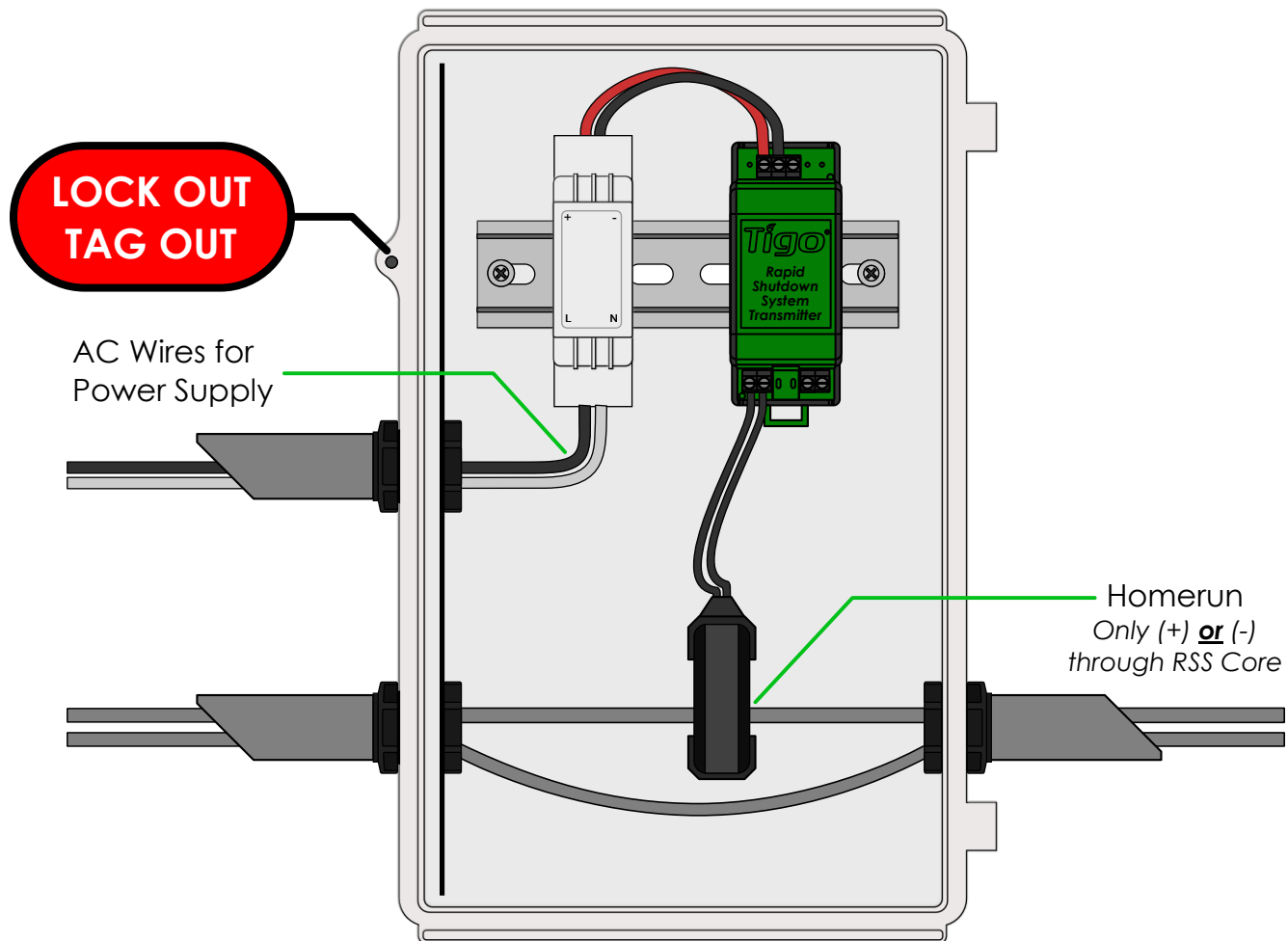
Transmitter power supply must be on same AC branch circuit as inverter to meet rapid shutdown requirements.

Note: Install TS4-F before powering on RSS Transmitter

- Drill holes in enclosure for conduit (see drilling guide for placement)
- Mount RSS Transmitter and power supply on DIN rail
- Connect DC leads from power supply ① to transmitter ②
- Connect RSS Core ③ to transmitter

Place rapid shutdown system label no more than 1 m (3ft) from RSS Transmitter or AC disconnect if not at same location.

RSS TRANSMITTER WIRING – SINGLE RSS CORE



Note: Install TS4-F before powering on RSS Transmitter

- Pass either positive or negative homerun through RSS Core
- Connect wires to AC side of power supply

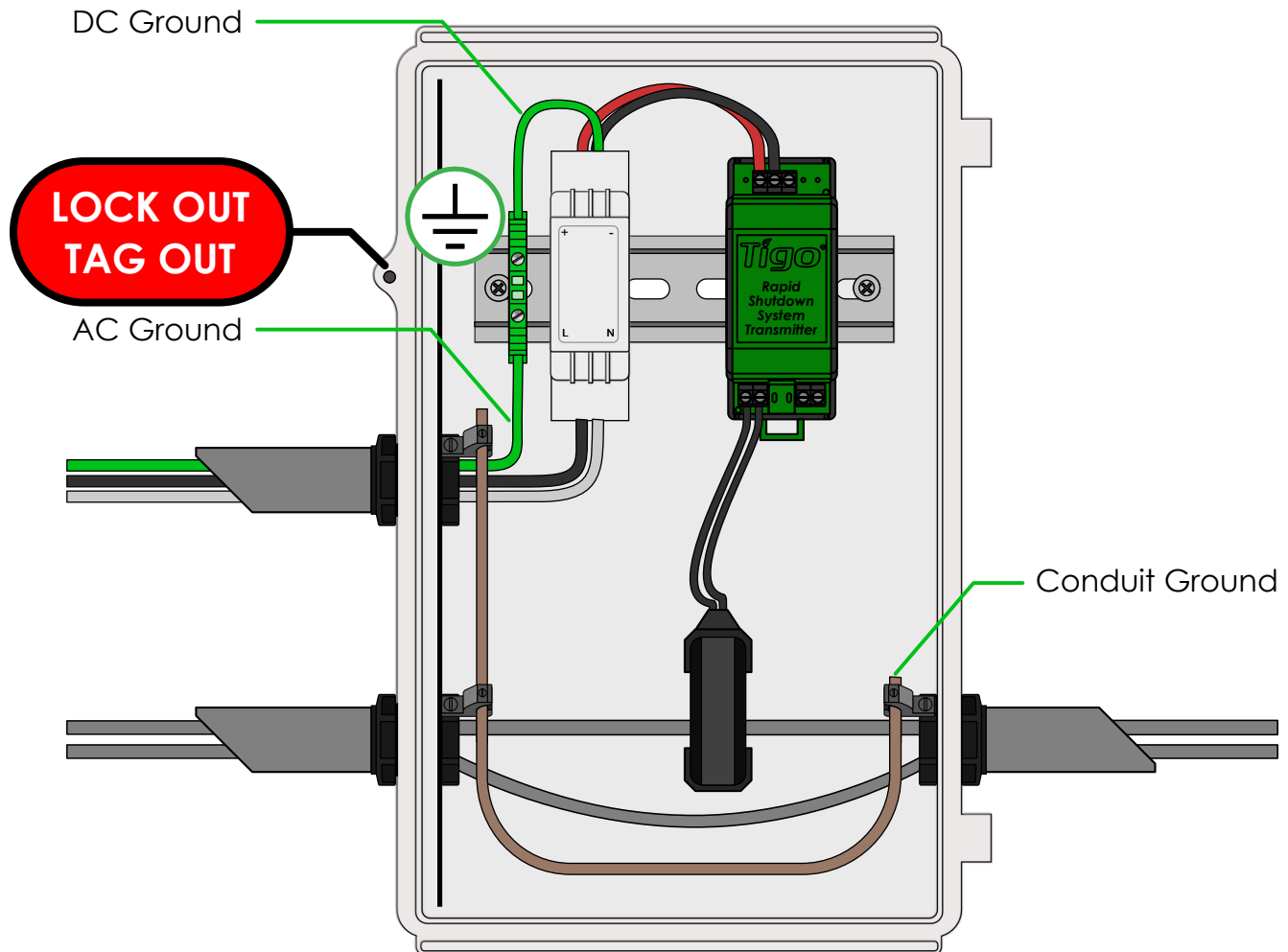
Max number of strings per RSS Core: **10**

Max string length: **30 modules**

Max current per RSS Core: **100A**

Max cable length from inverter (+) to inverter (-): **1000ft (300m)**

RSS TRANSMITTER GROUNDING – SINGLE RSS CORE

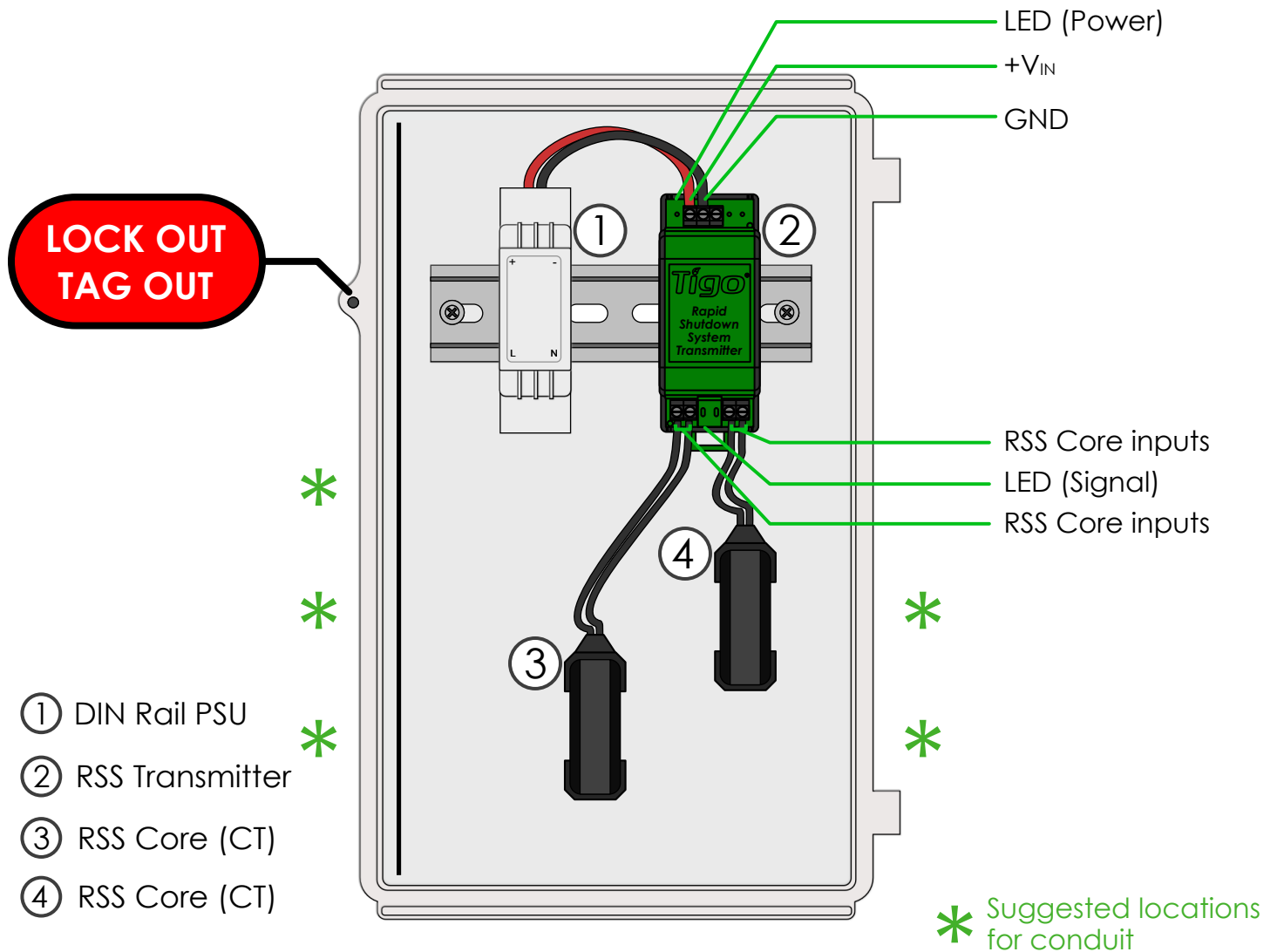


Note: Install TS4-F before powering on RSS Transmitter

- Connect AC and DC ground wires to DIN rail
- Ground all conduit connections
- Turn on AC power to Transmitter power supply to activate keep-alive signal and energize PV array

Warning: nonmetallic enclosure does not provide bonding between conduit connections. Use grounding type bushings and jumper wires.

RSS TRANSMITTER INSTALLATION – DUAL RSS CORE



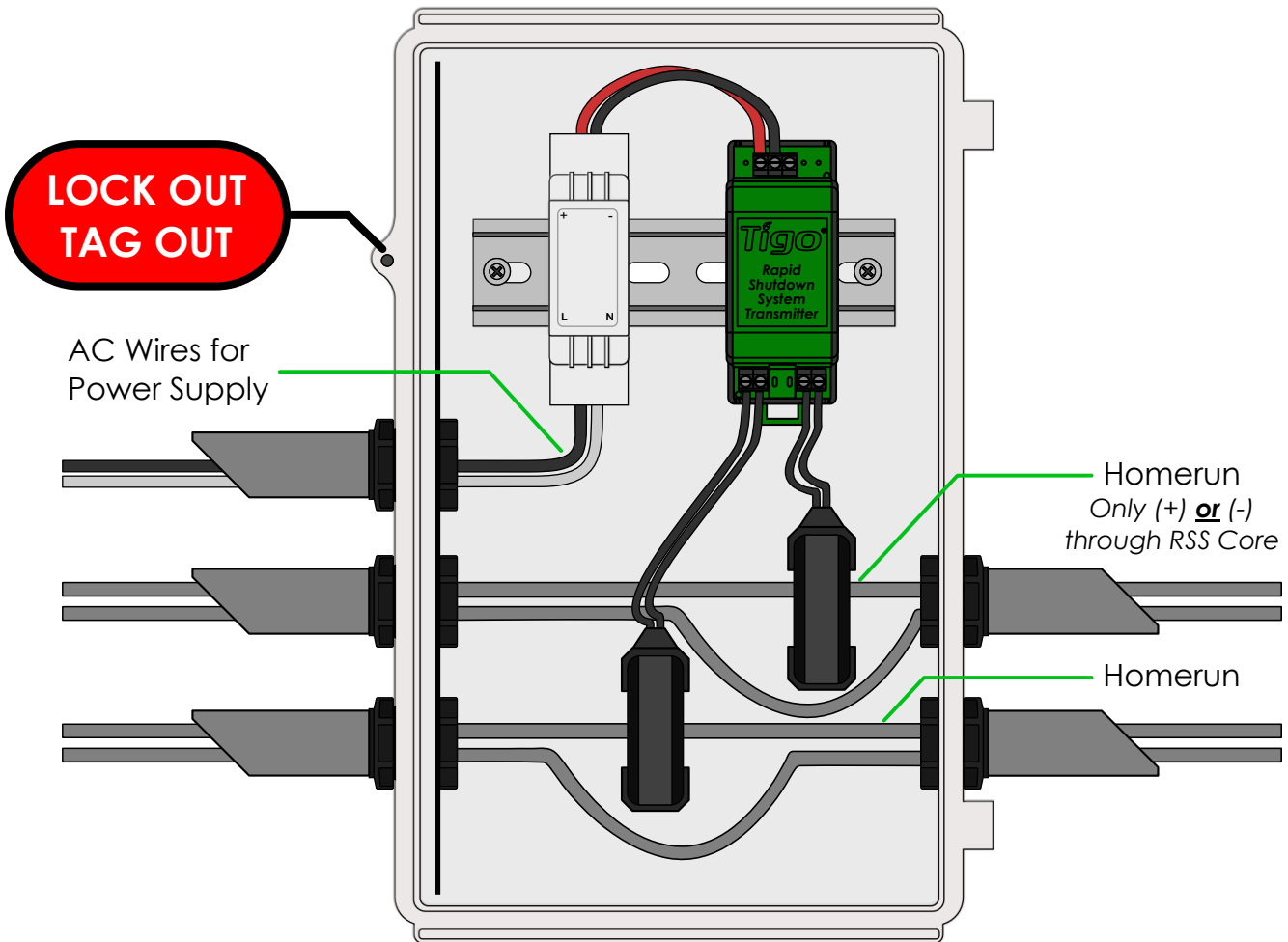
Transmitter power supply must be on same AC branch circuit as inverter to meet rapid shutdown requirements.

Note: Install TS4-F before powering on RSS Transmitter

- Drill holes in enclosure for conduit (see drilling guide for placement)
- Mount RSS Transmitter and power supply on DIN rail
- Connect DC leads from power supply ① to transmitter ②
- Connect RSS Core ③ and ④ to transmitter

Place rapid shutdown system label no more than 1 m (3ft) from RSS Transmitter or AC disconnect if not at same location.

RSS TRANSMITTER WIRING – DUAL RSS CORE



Keep same polarity for all homeruns and RSS Cores throughout the installation

Note: Install TS4-F before powering on RSS Transmitter

- Pass either positive or negative homerun through RSS Cores
- Connect wires to AC side of power supply

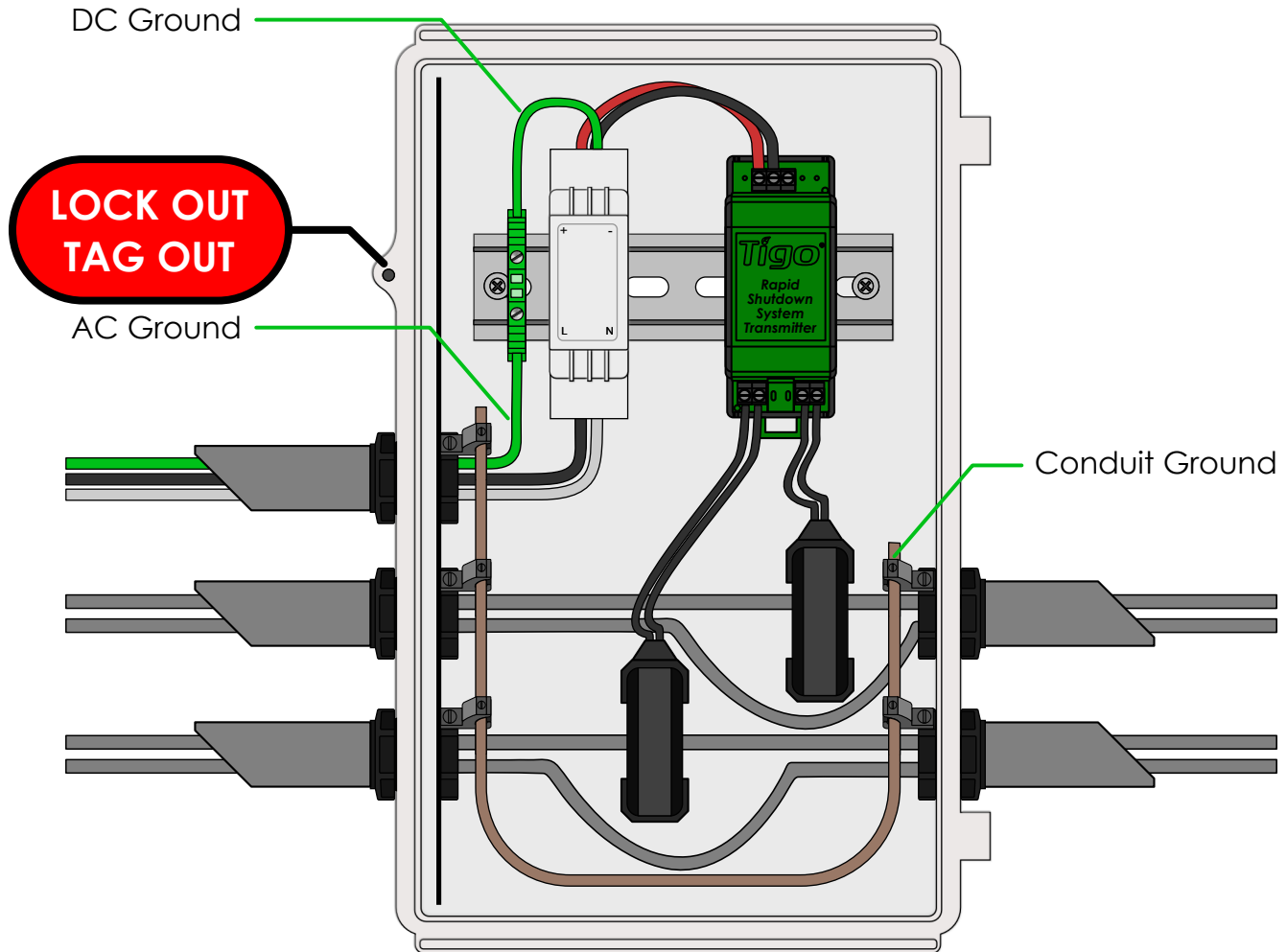
Max number of strings per RSS Core: **10**

Max string length: **30 modules**

Max current per RSS Core: **100A**

Max cable length from inverter (+) to inverter (-): **1000ft (300m)**

RSS TRANSMITTER GROUNDING – DUAL RSS CORE



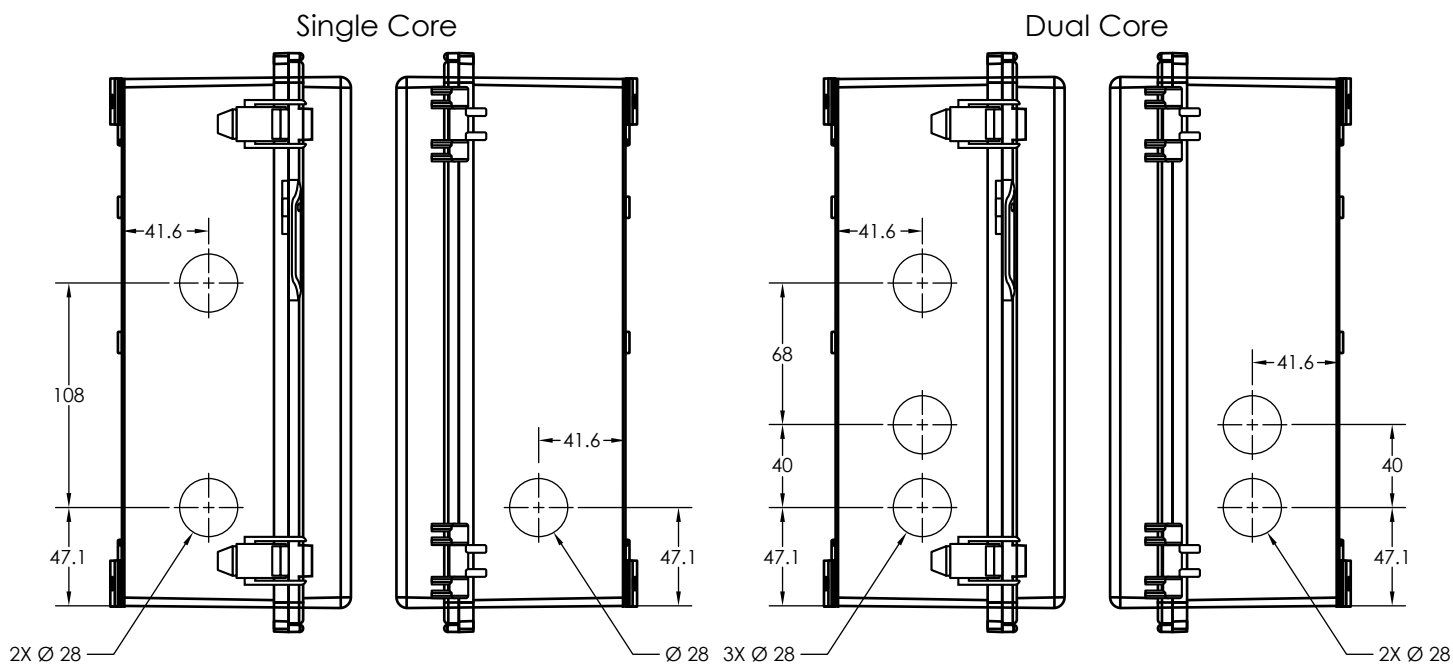
Note: Install TS4-F before powering on RSS Transmitter

- Connect AC and DC ground wires to DIN rail
- Ground all conduit connections
- Turn on AC power to Transmitter power supply to activate keep-alive signal

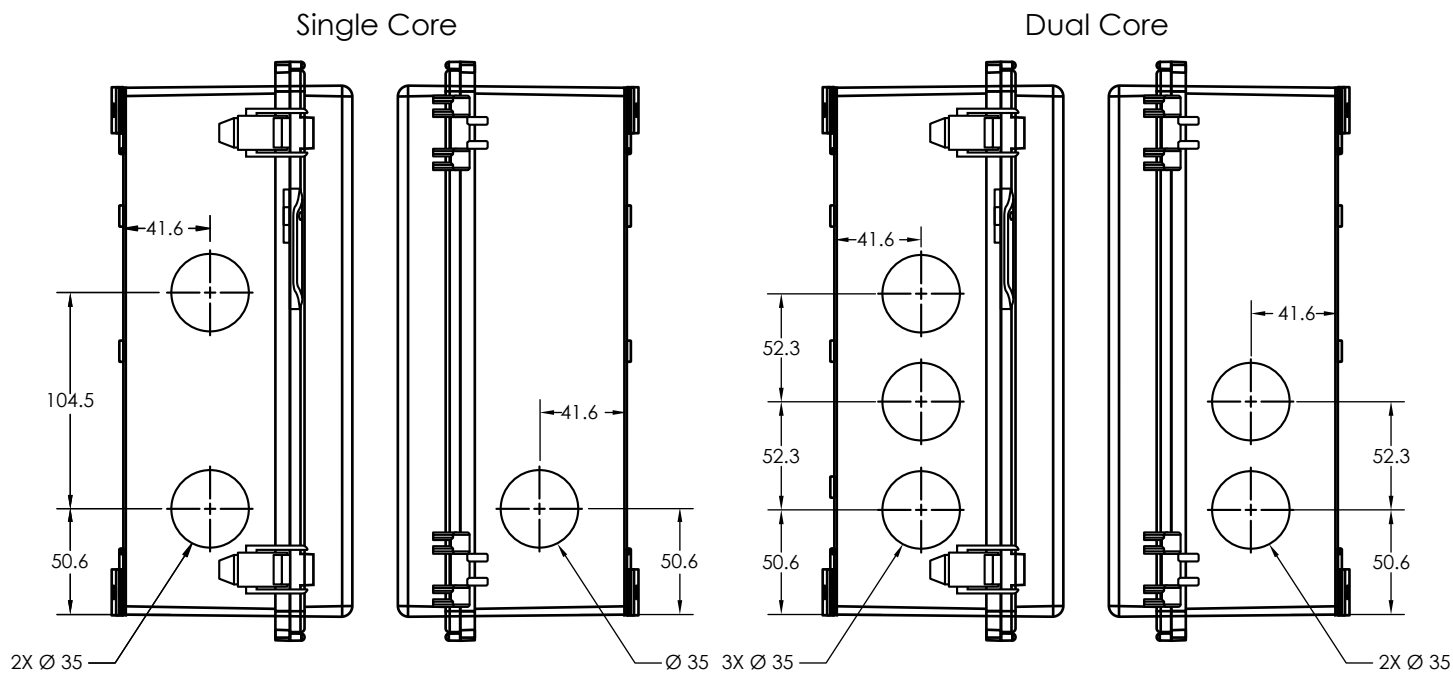
Warning: nonmetallic enclosure does not provide bonding between conduit connections. Use grounding type bushings and jumper wires.

CONDUIT DRILLING GUIDE

Enclosure Drilling Guide for .75" Conduit



Enclosure Drilling Guide for 1" Conduit



*all dimensions in mm

TESTING RAPID SHUTDOWN

TS4-F (or TS4-A-F, TS4-A-2F) and an RSS Transmitter are a solution to meet NEC 2017 & 2020 690.12 Rapid Shutdown requirements.

TS4-F, TS4-A-F, and TS4-A-2F 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.

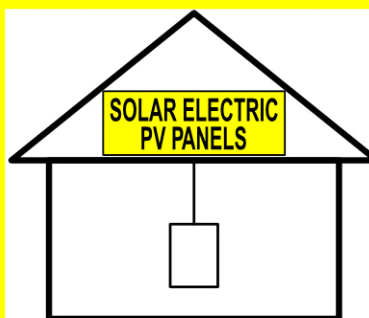
Wait 30 seconds after rapid shutdown activation before disconnecting DC cables or turning off DC disconnect.

Test your rapid shutdown system by switching off the AC power to the RSS Transmitter or inverter with built-in transmitter.

TS4-F, TS4-A-F, and TS4-A-2F units will reduce their output to 0.6V when the RSS Transmitter is powered off.

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUTDOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY



Place safety labels in proper location

The RSS Transmitter control power supply **MUST** be on the same AC branch circuit as the inverter to meet rapid shutdown requirements.

Troubleshooting TS4-F and RSS Transmitter

TS4-F/TS4-A-F/TS4-A-2F:

- Output voltage without active transmitter signal is **0.6V**
- Output voltage with active transmitter signal will be normal module V_{MP} or V_{OC}
- If output is 0V contact Tigo support

Check that the system conforms to the design rules for TS4-F:

- Up to 10 strings per RSS Core (CT)
- Up to 30 modules per string
- String length up to 1000ft (**total** cable length from + to -)
- Homeruns through RSS Core must be the same polarity
(all positive **or** all negative)

RSS Transmitter:

- Power LED should be lit and Signal LED should be blinking during operation
- Verify that RSS Core wiring is correct
- Power cycle RSS Transmitter if Signal LED is unlit
- While RSS Transmitter is powered off, string voltage should be
(0.6V * number of modules)
- While RSS Transmitter is powered on, full string voltage should be present

Test individual strings with active RSS Transmitter one at a time in case of unexpected voltage.