YASKAWA
SOLECTRIA SOLAR

APPLICATION NOTE: YASKAWA SOLECTRIA SOLAR (YSS) APPROVED MODULE-LEVEL RAPID SHUTDOWN SOLUTIONS

January 16, 2024, rev 5

Yaskawa Solectria Solar (YSS) makes compliance with NEC 690.12 easy for installers by listing its inverters with ***APsmart, NEP*** *and* ***Tigo*** PV Rapid Shutdown Systems (PVRSS) devices.

Customers can choose to purchase wire boxes with APsmart transmitters already embedded inside the wire box.

When choosing to use NEP or Tigo rapid shutdown devices, customers need to purchase the corresponding transmitters from a third-party vendor and install the transmitter *external* to the inverter's wire box.

Both the YSS standard wire boxes and the APsmart-equipped wire boxes can be used with any external RSD transmitter. YSS recommends disconnecting the power to the transmitter in the APsmart-equipped wire box before use of an external rapid shutdown transmitter. Instructions to disconnect the power in the APsmart-equipped wire box can be found on the following pages.

The table below outlines the rapid shutdown solutions that are PVRSS Certified, internally tested and approved for use with YSS's transformerless inverters. If an MLPE device is not listed below, it is not approved to be used with YSS inverters as it has not been internally tested. Please contact YSS for additional information.

	UL Listing Status	Integrated Wire Box Model* or External Third Party Equipment
PVI 25TL-480-R		
APsmart RSD-S-PLC & RSD-D	PVRSS Certified	**PVI-25TL-480-APS20 (Inverter + Wire Box)**
NEP PVG-2	PVRSS Certified	Not tested and not approved for use
Tigo TS4-A-F (ver 6.7+) & TS4-A-2F	PVRSS Certified	Tigo RSS Transmitter**
PVI 25TL-208		
APsmart RSD-S-PLC & RSD-D	PVRSS Certified	**PVI-25TL-208WB-APS (Wire Box)**
NEP PVG-2	PVRSS Certified	NEP External Transmitter**
Tigo TS4-A-F (ver 6.7+) & TS4-A-2F	PVRSS Certified	Tigo RSS Transmitter**
PVI 36TL-480-V2		
APsmart RSD-S-PLC & RSD-D	PVRSS Certified	**PVI-50-60TL-WB-APS (Wire Box)**
NEP PVG-2	PVRSS Certified	NEP External Transmitter**
Tigo TS4-A-F (ver 6.7+) & TS4-A-2F	PVRSS Certified	Tigo RSS Transmitter**
PVI 50/60TL-480		
APsmart RSD-S-PLC & RSD-D	PVRSS Certified	**PVI-36-50-60-WB-AP (Wire Box)**
NEP PVG-2	PVRSS Certified	NEP External Transmitter**
Tigo TS4-A-F (ver 6.7+) & TS4-A-2F	PVRSS Certified	Tigo RSS Transmitter**

* Bold model numbers indicate available equipment from Yaskawa Solectria Solar (YSS). Consult YSS for details.

** Please contact NEP or Tigo supplier for additional details in regard to their external rapid shutdown transmitter solutions.

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INSTRUCTIONS FOR DISCONNECTING POWER TO RSD TRANSMITTERS INSIDE YSS INVERTER WIRE BOXES

The following instructions describe how to disconnect RSD transmitters (e.g. APsmart) in PVI TL inverter wire boxes, so that the signal from the RSD transmitter is not transmitted onto the DC conductors connected to the inverter. This is recommended when using either Tigo or NEP transmitters external to the PVI TL inverter wire box. This is also recommended when using APsmart-enabled wire boxes in installations where rapid shutdown is not required, such as ground-mounted systems and certain carport canopy installations.

1. Ensure that the PVI TL inverter's DC and AC disconnect switches are in the "OFF" position and confirm that the inverter is not operating.

2. For PVI-36TL-480-V2, PVI 50/60TL and PVI 25-208 RSD wire boxes, use a screwdriver to disconnect the positive (+) and negative (-) wires between the RSD transmitter and the power supply (see image below).

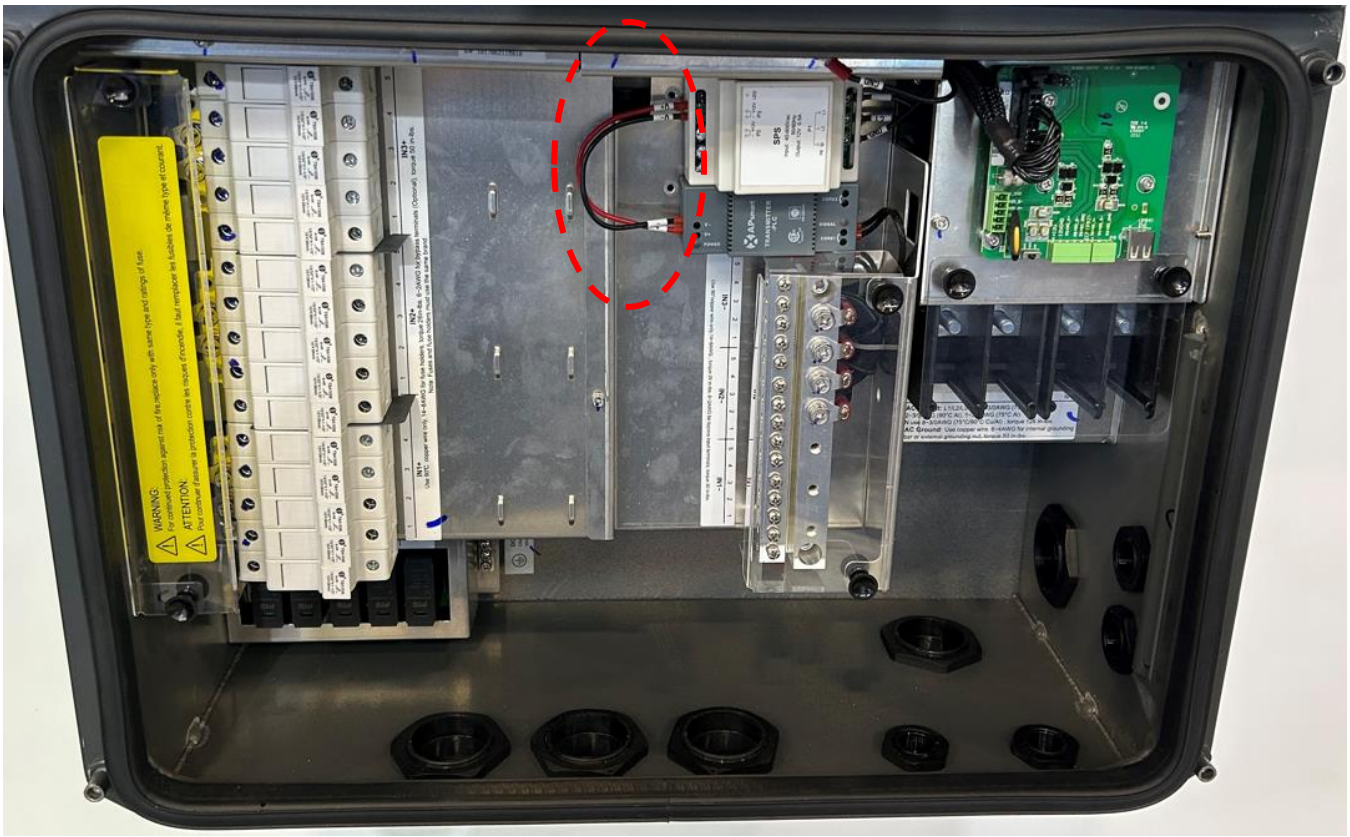

Figure-1 PVI-36TL-480-V2 and PVI 50/60TL-480 RSD Wire Box

3. For PVI 25TL-480 wire boxes, use a screwdriver to disconnect the two wires of the Core from the RSD Transmitter (see image below).

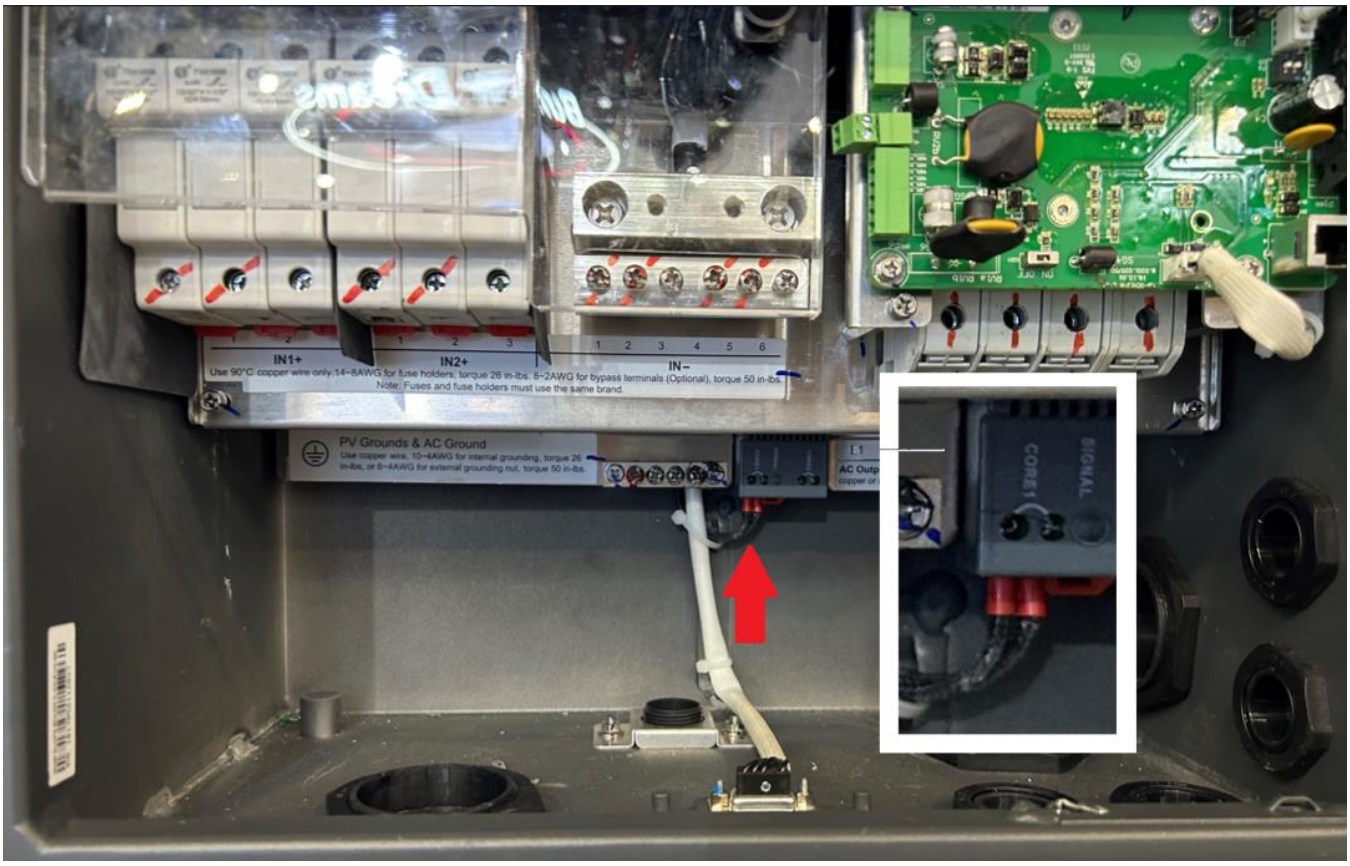

Figure-2 PVI 25TL-480 Wire Box

Document Revision History	
16 January 2024	Removal of Tigo and NEP integrated wire boxes. Removal of legacy PVI 36TL-480. Addition of transmitter power disconnection instructions.