

# PVI 50TL & PVI 60TL

## 3-Ph Transformerless Commercial String Inverters

### Features

- UL listed PVRSS with Tigo TS4-F/TS4-A-F, TS4-2F/TS4-A-2F and APSSmart
- UL1741SA listed to CA Rule 21 including SA14 FW and SA15 VW
- 3 MPPTs with 5 inputs each
- Integrated DC and AC disconnect switches
- Separable wire-box for installation convenience and easy field service
- AC terminals compatible with copper and aluminum conductors
- SunSpec Modbus compliant
- 15 - 90° installation orientation
- Generous DC/AC loading ratios: 1.8 (50TL) and 1.5 (60TL)
- Tested compatible with the TESLA PowerPack Microgrid System

### Options

- Shade cover (required when mounted at less than 75° angle, measured from horizontal)
- DC fuse bypass
- Ethernet Network Card for remote updates and remote monitoring
- 15° tilt roof-mounting kit



Yaskawa Solectria Solar's PVI 50TL and PVI 60TL are grid-tied, transformerless, three-phase inverters designed for ground mount, rooftop and carport arrays. Mounting can be at any angle between 15 - 90° (vertical). The inverters ship with either the Standard wirebox with fusing on both polarities, or the Rapid Shutdown wirebox, with fusing only on the positive polarity. The integrated PLC transmitter in the Rapid Shutdown wirebox is compatible with Tigo TS4-F/TS4-A-F (version 6.7+), TS4-2F/TS4-A-2F and APSSmart shutdown products.



STANDARD  
WIREBOX



RAPID  
SHUTDOWN  
WIREBOX

# PVI 50TL & PVI 60TL

## Specifications

	PVI 50TL	PVI 60TL
<b>DC Input</b>		
Absolute Maximum Input Voltage	1000 VDC	1000 VDC
Maximum Power Input Voltage Range (MPPT)	480-850 VDC	540-850 VDC
Operating Voltage Range (MPPT)	200-950 VDC	200-950 VDC
Maximum Available PV Current (Isc x 1.25)	204 A (68 A per MPPT)	204 A (68 A per MPPT)
Number of MPP Trackers	3	3
Maximum Operating Input Current (DC Clipping)	108 A (36 A per MPPT)	114 A (38 A per MPPT)
Maximum PV Power	90 kW (33 kW per MPPT)	90 kW (33 kW per MPPT)
Start Voltage	330 V	330 V
<b>AC Output</b>		
Nominal Output Voltage	480 VAC, 3-Ph/PE/N	480 VAC, 3-Ph/PE/N
AC Voltage Range (Standard)	-12/+10%	-12/+10%
Standard Setting Real/Apparent Power/Output Current	50 kW / 50 kVA / 60.2 A	60 kW / 60 kVA / 72.3 A
Overhead Selection* Real/Apparent Power/Output Current	50 kW / 55 kVA / 66.2 A	60 kW / 66 kVA / 79.4 A
Nominal Output Frequency	60 Hz	60 Hz
Output Frequency Range	57-63 Hz	57-63 Hz
Power Factor	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)
Fault Current Contribution (1 Cycle RMS)	64.1 A	64.1 A
Total Harmonic Distortion (THD) @ Rated Load	<3%	<3%
Recommended OCPD Device	90 A	100 A
AC Surge Protection	Type II MOV, 1240Vc, 15kA I <sub>tm</sub> (8/20μ)	
<b>Efficiency</b>		
Peak Efficiency	98.8%	98.8%
CEC Efficiency	98.5%	98.5%
Tare Loss	< 1 W	< 1 W
<b>Integrated String Combiner</b>		
Fused Inputs	15 Fused Positions (5 Positions per MPPT) 15 A Standard (20, 25, 30 A accepted)**	
<b>Temperature</b>		
Ambient Temperature Range	-22°F to +140°F (-30°C to +60°C); Derating occurs over +122°F (+50°C)	
Storage Temperature Range	No low temp minimum to +158°F (+70°C)	
Relative Humidity (non-condensing)	0-95%	
Operating Altitude	13,123 ft (4,000 m) Derating occurs from 9,842.5 ft (3,000 m)	
<b>Communications</b>		
Modbus Protocol	SunSpec (FW 11.0 +) / Proprietary	
SolrenView Web-Based Monitoring Service	Optional	
Revenue Grade Metering	Optional, External	
Communication Interface	RS-485 Modbus RTU and Ethernet TCP/IP	
Remote Firmware Upgrades	with Optional Ethernet Network Card	
Remote Diagnostics	with Optional Ethernet Network Card	
<b>Features &amp; Protections</b>		
Arc-Fault	Standard	
Smart Grid Features	L/HVRT, L/HFRT, Volt-Var, Frequency-Watt and Volt-Watt, Soft-Start, Soft-Stop	
<b>Testing &amp; Certifications</b>		
Safety Listings & Certifications	UL 1741SA-2016, UL1699B, CSA-C22.2 #107.1, IEEE1547a-2014	
Advanced Grid Support Functionality	Rule 21, UL 1741SA	
Testing Agency	CSA	
FCC Compliance	FCC Part 15, Class B	
<b>Warranty</b>		
Standard Limited Warranty	10 Years	
<b>Enclosure</b>		
Acoustic Noise Rating	< 60 dBA @ 1 m at room temperature	
AC/DC Disconnect	Standard, fully-integrated	
Mounting Angle***	15-90° from horizontal	
Dimensions (H x W x D)	39.4 in. x 23.6 in. x 10.2 in (1,000 mm x 600 mm x 260 mm)	
Weight	Inverter: 123.5 lbs (56 kg); Wiring Box: 33 lbs (15 kg)	
Enclosure Rating and Finish	Type 4X; Polyester Powder Coated Aluminum	

\* Full active power down to +/-0.91PF

\*\*Yaskawa Solectria Solar does not supply optional fuses sizes

\*\*\*Shade cover accessory required for installation of 75° or less (measured from horizontal)

**SOLECTRIA SOLAR**

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