PVI 50TL-480 / PVI 60TL-480

3-PHASE TRANSFORMERLESS COMMERCIAL STRING INVERTERS

FEATURES

- Wirebox models with built-in SunSpec compliant transmitters for Module-Level Rapid Shutdown for simple, safe NEC compliance
- UL Listed as PV Rapid Shutdown Systems with Tigo Energy, APsmart and Northern Electric Power (NEP)
- Selectable Max AC Apparent Power 50kW/(50kVA or 55kVA) and 60kW/(60kW or 66kVA); 55kVA and 66kVA ratings allow Max Rated Real Power at +/- 0.91 PF
- Integrated UL-listed Arc-Fault protection
- 15 - 90° mounting angle allows low-profile rooftop installations
- 3 MPPTs with 5 fused inputs each for PV array flexibility
- Industry-leading DC/AC ratios of 1.8 (50TL) and 1.5 (60TL)
- Integrated AC and DC disconnects
- Remote firmware upgrades and diagnostics
- NEMA 4X outdoor rated enclosure, with proven performance
- UL1741SA certified to CA Rule 21, including SA14 FW and SA 15 VW

OPTIONS

- Shade cover
- DC fuse bypass
- Web-based monitoring

Yaskawa Solectria Solar's PVI 50TL-480 and PVI 60TL-480 are transformerless 3-phase inverters, ideal for rooftops, carports and ground-mount PV systems

The PVI 50TL-480 and PVI 60TL-480 come standard with AC and DC disconnects, three MPPTs, and a wiring box with 15 fuse positions.

For rooftop PV systems, three models provide PV Rapid Shutdown System (PVRSS) certification and include a wirebox with a built-in SunSpec-compliant powerline transmitter.

One wirebox model is Tigo Enhanced for rapid shutdown; other wirebox models are compatible with the APsmart and Northern Electric Power (NEP) rapid shutdown devices.

Yaskawa Solectria Solar's family of PVI 50/60TL-480 inverters, including standard wireboxes and the rapid-shutdown ready wirebox models, provides flexibility and convenience unmatched in the industry.

Standard Wirebox

- 20A fuses; both polarities
- Not rapid shutdown equipped

Module-Level Rapid Shutdown Wireboxes

- 20A fuses; positive polarity only
- Built-in transmitter for rapid shutdown
- 3 models for compatibility with Tigo, APsmart and NEP shutdown devices

Tigo® Enhanced

APsmart ALTENERGY POWER

NEP NORTHERN ELECTRIC

YASKAWA SOLECTRIA SOLAR

Yaskawa Solectria Solar 1-978-683-9700 | Email: inverters@solectria.com | solectria.com
Document No. FL.PVI5060TL.01 | 04/12/2021 |

PVI 50TL-480 / PVI 60TL-480 TECHNICAL DATA

SPECIFICATIONS

Inverter Model		PVI 50TL-480	PVI 60TL-480
DC Input	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 Operating Input Current	108 A (36 A per MPPT)	114 A (38 A per MPPT)
	Number of MPP Trackers	3	3
	Maximum Available PV Current (Isc x 1.25)	204 A (68 A per MPPT)	204 A (68 A per MPPT)
	Maximum PV Power	90 kW (30 kW per MPPT)	90 kW (33 kW per MPPT)
	Start Voltage	330 V	330 V
AC Output	Nominal Output Voltage	480 VAC, 3-Ph/PE/N	480 VAC, 3-Ph/PE/N
	AC Voltage Range (Standard)	-12/+10%	-12/+10%
	PF=1.00 - Real/Apparent Power/Output Current	50 kW / 50 kVA / 60.2 A	60 kW / 60 kVA / 72.3 A
	PF=+/-0.91 - 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%
	Maximum OCPD Device	110 A	125 A
	AC Surge Protection	Type II MOV, 1240Vc, 15kA Itm (8/20µ)	
Efficiency	Peak Efficiency	98.8%	98.8%
	CEC Efficiency	98.5%	98.5%
	Tare Loss	< 1 W	< 1 W
Integrated String Combiner	Fused Inputs	15 Fused Positions (5 Positions per MPPT) 20 A Standard (25, 30 A accepted)*	
Temperature	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)	
Communications	Modbus Protocol	Proprietary / SunSpec	
	Data Logger Hardware	Standard, Internal	
	SolrenView Web-Based Monitoring Service	Optional	
	Revenue Grade Metering	Optional, External	
	Communication Interface	RS-485 Modbus RTU	
	Remote Firmware Upgrades	Ethernet Network Card required	
	Remote Diagnostics	Ethernet Network Card required	
Features and Protections	Arc-Fault	Standard	
	Smart Grid Features	L/HVRT, L/HFRT, Volt-VAR, Freq-Watt, Volt-Watt, Soft-Start, Soft-Step, Specified-PF	
Testing & Certifications	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	
Warranty	Standard Limited Warranty	10 Years	
Enclosure	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	

Wirebox Specifications			
Dimensions (H x W x D)	Wirebox	H: 16.7" (424 mm) x W: 23.6" (600 mm) x D: 10.24" (260 mm)	
	Power Head	H: 22.7" (576 mm) x W: 23.6" (600 mm) x D: 10.24" (260 mm)	
	Overall	H: 39.4" (1,000 mm) x W: 23.6" (600 mm) x D: 10.24" (260 mm)	
Wirebox Versions	**PVI-50-60TL-BX-S20:** Standard wirebox	20A fuses, both polarities	MLRSD Compatibility: Not equipped for rapid shutdown
	PVI-50-60TL-BX-R: Tigo RSS transmitter built-in	15A fuses, pos. polarity only	MLRSD Compatibility: Tigo TS4-F and TS4-A-F (ver 6.7+)
	PVI-50-60TL-WB-TGO: Tigo RSS transmitter built-in	20A fuses, both polarities	MLRSD Compatibility: Tigo TS4-F and TS4-A-F (ver 6.7+)
	PVI-50-60TL-WB-APS: APS transmitter built-in	20A fuses, both polarities	MLRSD Compatibility: RSD-S-PLC-A
	PVI-50-60TL-WB-NEP: NEP transmitter built-in	20A fuses, both polarities	MLRSD Compatibility: PVG-1/2/3/4

* Yaskawa Solectria Solar does not supply optional fuses sizes
** Shade cover accessory required for installation of 75° or less

IT'S PERSONAL

YASKAWA SOLECTRIA SOLAR

Yaskawa Solectria Solar 1-978-683-9700 | Email: inverters@solectria.com | solectria.com
Document No. FL.PVI5060TL.01 | 04/12/2021 |