

Grid-Tied PV Inverter Overview

	PVI 14TL	PVI 23TL	PVI 28TL	PVI 36TL	PVI 50TL	PVI 60TL	XGI 1000-50/60	XGI 1000-60/60	XGI 1000-60/65	XGI 1000-65/65	SGI 500XTM	SGI 750XTM	XGI 1500-125/125	XGI 1500-125/150	XGI 1500-150/166	XGI 1500-166/166	
																	
DC Input																	
Absolute Maximum Input Voltage	600 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1500 VDC	1500 VDC	1500 VDC	1500 VDC	
Operating Input Voltage Range, MPPT	180-580 VDC	240-950 VDC	240-950 VDC	240-950 VDC	200-950 VDC	200-950 VDC	350-950 VDC	350-950 VDC	350-950 VDC	350-950 VDC	545-1000 VDC	545-1000 VDC	860-1450 VDC	860-1450 VDC	860-1450 VDC	860-1450 VDC	
Full Power Input Voltage Range, MPPT	300-540 VDC	480-800 VDC	500-800 VDC	540-800 VDC	480-850 VDC	540-850 VDC	580-850 VDC	580-850 VDC	600-850 VDC	600-850 VDC	545-820 VDC	545-820 VDC	860-1250 VDC	860-1250 VDC	860-1250 VDC	860-1250 VDC	
Maximum Operating Input Current	25 A per MPPT (50 A)	25 A per MPPT (50 A)	29 A per MPPT (58 A)	35 A per MPPT (70 A)	36 A per MPPT (108 A)	38 A per MPPT (114 A)	22 A per MPPT (88 A)	26.4 A per MPPT (105.6 A)	26.4 A per MPPT (105.6 A)	27.65 A per MPPT (110.6 A)	965 A	1445 A	148.3 A	148.3 A	178 A	197.7 A	
Maximum PV Power	19 kW (9.5 kW per MPPT)	31 kW (15.5 kW per MPPT)	38 kW (19 kW per MPPT)	54 kW (27 kW per MPPT)	75 kW (30 kW per MPPT)	90 kW (33 kW per MPPT)	75 kW (18.75 kW per MPPT)	90 kW (22.5 kW per MPPT)	90 kW (22.5 kW per MPPT)	97.6 kW (24.4 kW per MPPT)	700 kW	1050 kW	188 kW	188 kW	225 kW	250 kW	
AC Output																	
Nominal Output Voltage	208 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	480 VAC, 3ø+/PE/N	380 VAC, 3ø+/PE	380 VAC, 3ø+/PE	600 VAC, 3ø+/PE	600 VAC, 3ø+/PE	600 VAC, 3ø+/PE	600 VAC, 3ø+/PE	
Continuous Output Power	14 kW	23 kW	28 kW	36 kW	50 kW	60 kW	50 kW	60 kW	60 kW	65 kW	500 kW	750 kW	125 kW	125 kW	150 kW	166 kW	
Continuous Output Current	39 A	27.7 A	33.7 A	43.5 A	60.2 A*	72.3 A*	72.2 A	72.2 A	78.2 A	78.2 A	760 A	1140 A	120 A	144 A	160 A	160 A	
Power Factor	Unity, >0.99 (±0.8 adjustable)	Unity, >0.99 (±0.8 adjustable)	Unity, >0.99 (±0.8 adjustable)	Unity, >0.99 (±0.8 adjustable)	Unity, >0.99 (± 0.8 adjustable)	Unity, >0.99 (± 0.8 adjustable)	Unity, >0.99 (±0.85 adjustable)	Unity, >0.99 (±0.85 adjustable)	Unity, >0.99 (±0.85 adjustable)	Unity, >0.99 (±0.85 adjustable)	±0.8 adjustable		±0.85 adjustable	±0.85 adjustable	±0.85 adjustable	±0.85 adjustable	
Performance																	
Peak Efficiency	96.7%	98.6%	98.6%	98.5%	99.0%	99.0%	98.2%	98.2%	98.2%	98.2%	98.3%	98.3%	98.8%	98.8%	98.8%	98.7%	
CEC Efficiency	98.0%	98.0%	98.0%	98.0%	98.5%	98.5%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.5%	98.5%	98.5%	98.5%	
Tare Loss	4 W	2 W	2 W	2 W	< 2 W	< 2 W	< 1 W	< 1 W	< 1 W	< 1 W	89 W	123 W	< 1 W	< 1 W	< 1 W	< 1 W	
Ambient Temperature Range	-13°F to +140°F (-25°C to +60°C)	-22°F to +140°F (-30°C to +60°C)			-22°F to +140°F (-30°C to +60°C)			-40°F to +140°F (-40°C to +60°C)			-40°F to +122°F (-40°C to +50°C)		-40°F to +140°F (-40°C to +60°C)		-40°F to +140°F (-40°C to +60°C)		
De-Rating Temperature	+50°C	+45°C			+122°F (+50°C)			+122°F (50°C)			+113°F (45°C)		-		+113°F (+45°C)		
Storage Temperature Range	-22°F to +158°F (-30°C to +70°C)	No low temp minimum to +158°F (+70°C)			No low temp minimum to +158°F (+70°C)			-40°F to +167°F (-40°C to +75°C)			-40°F to +122°F (-40°C to +50°C)		-40°F to +167°F (-40°C to +75°C)		-40°F to +167°F (-40°C to +75°C)		
Acoustic Noise Rating	< 50 dBA @ 3 m	< 50 dBA @ 3 m			< 60 dBA @ 1 m at room temperature			55 dBA @ 3 m			< 67 dBA @ 10 m		55 dBA @ 1 m				
Safety Listings & Certifications	UL 1741/IEEE 1547, CSA C22.2#107.1, FCC part 15B	UL 1741/IEEE 1547, CSA C22.2#107.1, FCC part 15B			UL 1741SA-2016, UL1699B, CSA-C22.2 #107.1, IEEE1547a-2014			UL 1741 / IEEE 1547, UL 1699B, UL 1998; FCC Part 15, Class A			UL 1741/IEEE 1547, CSA C22.2#107.1		UL 1741, IEEE 1547, UL 1998; FCC Part 15, Class A				
Certification Agency	ETL	CSA			ETL			ETL			ETL		ETL				
NEC 690.11 & 690.12 Arc-Fault & Rapid Shutdown Compliance	Optional, Commercial Rapid Shutdown Combiner (RSDCOM)	Optional, Commercial Rapid Shutdown Combiner (RSDCOM)			Optional, Commercial Rapid Shutdown Combiner (RSDCOM)			Optional, Commercial Rapid Shutdown Combiner (RSDCOM)			Optional, ARCCOM		UL 1699B (pending)				
Advanced Grid Support Functionality	-	-		Rule 21, UL 1741SA		Rule 21, UL 1741SA		Rule 21, UL 1741SA (pending)			Rule 21, UL 1741SA		Rule 21, UL 1741SA (pending)				
Mechanical																	
Subcombiner or Integrated String Combiner	Integrated string combiner: 4 strings per tracker (2 trackers), 15 A (fused by-pass available)	Integrated String Combiner: 4 strings per tracker (2 trackers), 15 A (fused by-pass available)		Integrated String Combiner: 5 strings per tracker (2 trackers), 15 or 30 A*		Integrated String Combiner: 5 strings per tracker (3 trackers), 15-30 A*		Integrated String Combiners: 4 strings per trackers (4 trackers)*			Subcombiner: Fuses, 4 to 16 positions, 100-400 A* Subcombiner: Breakers, 4 to 15 positions, 125-350 A*		Attachable String Combiner: Fuses, 16 to 26 positions, 15 or 20 A* Separate String Combiner: Fuses, 16 to 26 positions, 15 or 20 A*				
Transformer	Transformerless	Transformerless			Transformerless		Transformerless			Transformerless			Dedicated external transformer required, refer to external transformer specifications		Transformerless		
AC/DC Disconnect	Standard, Fully-Integrated	Standard, Fully-Integrated			Standard, Fully-Integrated		Standard, Fully-Integrated			Standard, Fully-Integrated			DC disconnect: standard, fully-integrated; AC disconnect/breaker: optional disconnect, breaker or breaker with shunt trip		Standard, Fully-Integrated		
Dimensions (H x W x D)	41.6 in. x 21.4 in. x 8.5 in. (1,057 mm x 544 mm x 216 mm)	39.4 in. x 23.6 in. x 9.1 in. (1,001 mm x 600 mm x 232 mm)			39.4 in. x 23.6 in. x 10.2 in. (1,000 mm x 600 mm x 260 mm)		45.8 in. x 28.3 in. x 11.6 in. (1,163 mm x 719 mm x 295 mm)			82 in. x 109 in. x 41 in. (2,083 mm x 2,769 mm x 1,042 mm)		29.5 in. x 38.4 in. x 15.1 in. (750 mm x 975 mm x 384 mm)					
Weight	141 lbs (64 kg)	Inverter: 104 lbs (47.2 kg); Wiring Box: 22 lbs (9.9 kg)		Inverter: 121 lbs (55 kg); Wiring Box: 22 lbs (9.9 kg)		Inverter: 123.5 lbs (56 kg); Wiring Box: 33 lbs (15 kg)		Inverter: 117 lbs (53.07 kg); Wiring Box: 49 lbs (22.22 kg)			3,080 lbs (1,398 kg)		3,570 lbs (1,620 kg)		230 lbs (104 kg)		
Enclosure Rating	Type 4	Type 4		Type 4X		Type 4X		Type 4			Type 3R		Type 4				
Enclosure Finish & Material	Polyester Powder-Coated Aluminum	Polyester Powder-Coated Aluminum			Polyester Powder-Coated Aluminum		Polyester Powder-Coated Aluminum			Polyester Powder-Coated Steel; Optional 316 Stainless Steel			Polyester Powder-Coated Aluminum				
Communications																	
Data Logger Hardware	Optional, External	Optional, External			Standard, Internal		Standard, Internal			Standard, Integrated		Standard, Internal					
SolrenView Monitoring Service	Optional	Optional			Optional		Optional			Optional		Optional					
Revenue Grade Meter/Monitoring	Optional, External	Optional, External			Optional, External		Optional, External			800 A		1600 A		Optional			
Communication Interface	RS-485 Modbus RTU	RS-485 Modbus RTU			RS-485 Modbus RTU		RJ-45 Ethernet			RS-485 SunSpec Modbus RTU		RJ-45 Ethernet or Optional Multi-Mode Fiber					
Warranty																	
Standard and Options	10 Years Standard	10 Years Standard			10 Years Standard		10 Years Standard			5 Years Standard; Option for 10 Years			5 Years Standard; Option for 10 Years				

*See product datasheet on www.solectria.com/documentation for more information

	DISCOM	ARCCOM
		
Specifications		
Number of Fused Inputs	8, 12, 16, 20, 24, 30	8, 12, 16, 24
Input Wire Range	14-6 AWG	12-8 AWG
Output Wire Range*		
8	350 kcmil or (2) 300 kcmil	600 kcmil
12	350 kcmil or (2) 300 kcmil	600 kcmil
16	350 kcmil or (2) 300 kcmil	600 kcmil
20	350 kcmil or (2) 300 kcmil	-
24	(2) 600 kcmil	600 kcmil
30	(2) 600 kcmil	-
Maximum Voltage	1000 VDC	1000 VDC
Maximum Current	96, 144, 192, 240, 288, 360 A	96, 144, 192, 288 A
Fuse Range	15 A or 20 A	15 A or 20 A
Operating Temperature	-40°F to +122°F (-40°C to +50°C)	-40°F to +122°F (-40°C to +50°C)
Mounting Locations	Indoor, Outdoor, Wall, Array, Rooftop - Vertical, Horizontal or Angled	Indoor, Outdoor, Wall, Array, Rooftop - Vertical or Horizontal
Certifications		
Safety Listings & Certifications	UL 1741, CSA C22.2#107.1	UL 1741, CSA C22.2#107.1, UL 1699B
Certification Agency	ETL	ETL
Warranty		
Standard	5 Years	5 Years
Enclosure		
Dimensions (H x W x D)	8-12 / 16-20 / 24-30	8-12 / 16 / 24
Powder-Coated Steel	20/24/30 in. x 16/20/24 in. x 6/6/8 in. (508/610/762 mm x 406/508/610 mm x 152/152/203 mm)	24 in. x 20 in. x 7 in. (610 mm x 508 mm x 178 mm)
Fiberglass	20/24/30 in. x 16/20/24 in. x 8/8/8 in. (508/610/762 mm x 406/508/610 mm x 203/203/203 mm)	24 in. x 20 in. x 7 in. (610 mm x 508 mm x 178 mm)
Weight		
Powder-Coated Steel	29/36/75 lbs (13.2/16.3/34 kg)	42/43/44 lbs (19/19.5/20 kg)
Fiberglass	26/29.3/56 lbs (11.8/13.3/25.4 kg)	35.3/36.3/37.3 lbs (16/16.5/17 kg)
Enclosure Material & Rating		
	Polyester Powder-Coated Steel (Type 4) or Fiberglass (Type 4X)	Polyester Powder-Coated Steel (Type 4) or Fiberglass (Type 4X)

*See product datasheet on www.solectria.com/documentation for full Output Wire Ranges

	RSDCOM
	
Specifications	
Absolute Maximum Input Voltage	1000 VDC
Number of MPPT Zones	1, 2, or 3
Number of DC Inputs	4 or 5 per Zone
Fuse Size Compatibility*	15 A, 20 A, or 30 A
Control Power Options	208, 240, 480 VAC (L-L) (0.6 A max) or 24 VDC
Operating Temperature	-40°F to +122°F (-40°C to +50°C)
Mounting Locations	Outdoor, Wall, Array, Rooftop - Vertical, Horizontal
Certifications	
Safety Listings & Certifications	UL 1741
Certification Agency	ETL
Warranty	
Standard	5 Years
Enclosure	
Dimensions (H x W x D)	
1 MPPT Zone	14 in. x 12 in. x 6 in. (356 mm x 309 mm x 152 mm)
2 MPPT Zones	20 in. x 16 in. x 8 in. (508 mm x 406 mm x 203 mm)
3 MPPT Zones	26 in. x 20 in. x 8 in. (660 mm x 508 mm x 203 mm)
Weight	
1 MPPT Zone	18 lbs (8.2 kg)
2 MPPT Zones	29 lbs (13.2 kg)
3 MPPT Zones	40 lbs (18.1 kg)
Enclosure Material & Rating	
1 MPPT Zone	Polycarbonate (Type 4X)
2 MPPT Zones	Fiberglass (Type 4X)
3 MPPT Zones	Polyester Powder Coated Steel (Type 4) or Fiberglass (Type 4X)
Compatibility	
Compatible Products	PVI 14-60TL & SOLECTRIA XGI 1000*

*See product datasheet on www.solectria.com/documentation for more information

Monitoring

SolrenView™ Web-Based PV Monitoring

Yaskawa Solectria Solar's web-based monitoring solution, SolrenView, provides PV system owners highly accurate and real time inverter data to maximize efficiency and profitability of their solar assets. It is available for use with commercial and utility-scale inverters.



SolrenView Inverter Direct Standard Monitoring Package

SolrenView Inverter Direct monitoring allows customers to see detailed operational inverter data (DC and AC) using a web enabled device.

SolrenView Kiosk View Standard Animated View

The Kiosk View (Animated View) provides customers with quick and easy access to a customer's PV system performance.

SolrenView GlobalView Available Upon Request

GlobalView provides users with the ability to view, sort and search all of their sites monitored by SolrenView in one place.

SolrenView Revenue Grade Energy Production Optional Monitoring Package

SolrenView Revenue Grade Energy Production Monitoring package option keeps track of lifetime energy production by a customer's PV system.

SolrenView SolZone DC Current Sub-Array Monitoring Optional

SolZone provides an extra level of granularity to see multiple sub-array DC currents.

SolrenView Agency Reporting Optional

SolrenView Agency Reporting is for customers requiring a revenue grade energy production report to be sent to an agency such as NEPOOL, WREGIS, MassCEC, or PG&E.

SolrenView Weather Station Optional

SolrenView Weather Station is a real-time weather package which allows customers to view accurate readings of crucial environmental information that may effect the performance of your PV system.

SolrenView AIR Optional

The SolrenView AIR option permits customers to take advantage of SolrenView web-based monitoring features via a fully-integrated 4G cellular modem when standard internet access is not available on site.

SolrenView XML Feed Optional

SolrenView XML feed option provides a reporting framework for customers with a need to display real-time monitoring information about their PV system within their application, website or using third-party monitoring.

For additional information on SolrenView monitoring products, visit our website - www.solectria.com/monitoring



Yaskawa Solectria Solar, a wholly-owned subsidiary of Yaskawa America, Inc., is the leading commercial PV inverter supplier in the USA. Solectria's products include inverters ranging from 14 kW to 750 kW, string combiners, and web-based monitoring for PV systems of all sizes. All Solectria three-phase XGI & SGI inverters are made in the USA with global components.

SOLECTRIA SOLAR

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Product Specifications

