

SINGLE PHASE STRING INVERTER 7-10 KW

**CSI-7KTL1P-GI-FL | CSI-8KTL1P-GI-FL
CSI-9KTL1P-GI-FL | CSI-10KTL1P-GI-FL**

Canadian Solar's grid-tied, transformer-less string inverters help to accelerate the use of single-phase string architecture for commercial rooftop and small ground-mount applications. An NRTL approved, cost-effective alternative to MLPE, these inverters are modular design building blocks that provide high yield and enable significant BoS cost savings. They provide up to 98.1% conversion efficiency, a wide operating range of 100-500 V_{DC}, and three MPPTs for maximum energy harvest.



Standard warranty, extension up to 20 years

KEY FEATURES

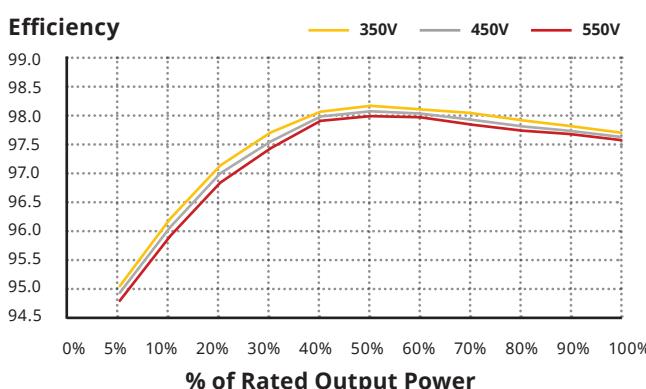
- Maximum efficiency up to 98.1%, Maximum EU efficiency up to 97.6%
- 3 MPPTs to achieve higher system efficiency
- Transformerless design
- High switching frequency and ultra fast MPPT for maximum efficiency over a wide load range

HIGH RELIABILITY

- Advanced thermal design and convection cooling
- Built in over-voltage and over-current protection
- DC reverse polarity and AC short circuit protection

EFFICIENCY CURVE

CSI-9KTL1P-GI-FL @ 230 V_{AC}



*For detailed information, please refer to the Installation Manual.

BROAD ADAPTABILITY

- IP65 rated for outdoor application
- Utility interactive controls: Active power derating, reactive power control and over frequency derating
- Integrated DC load rated disconnects
- Supports up to 3 DC string inputs (1 per MPPT)
- Wide MPPT range for flexible string sizing

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 33 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

CANADIAN SOLAR INC.

545 Speedvale Avenue, West Guelph, Ontario N1K 1E6, Canada | www.canadiansolar.com

SYSTEM/TECHNICAL DATA

MODEL NAME	CSI-7KTL1P-GI-FL	CSI-8KTL1P-GI-FL	CSI-9KTL1P-GI-FL	CSI-10KTL1P-GI-FL
DC INPUT				
Max. PV Power	8.0 kW	9.2 kW	10.8 kW	11.5 kW
Max. DC Input Voltage		600 V _{DC}		
Start-up DC Input Voltage/Power		120 V _{DC}		
Number of MPP Trackers		3		
MPPT Voltage Range		100 - 500 V _{DC}		
Max. Input Current (Imp)		30 A (10 A per MPPT)		
Max. Short Circuit Current (Isc)		46.8 A (15.6 A per MPPT)		
Number of DC Inputs		3 (1 per MPPT)		
DC Disconnection Type		Load rated DC switch		
AC OUTPUT				
Rated AC Output Power	7 kW	8 kW	9 kW	10 kW
Max. AC Output Power	7.7 kW	8.8 kW	9.9 kW	10 kW
Rated Output Voltage		230 V _{AC}		
Output Voltage Range*		160 - 285 V _{AC}		
Grid Connection Type		1 Φ / PE		
Rated Grid Output Current	30.4 A	34.8 A	39.1 A	43.5 A
Max Output Current	33.7 A	36.6 A	41.3 A	45.9 A
Rated Output Frequency		50 / 60 Hz		
Output Frequency Range*		47 - 52 / 57 - 62 Hz		
Power Factor		1 default (± 0.8 adjustable)		
Current THD		< 1.5 %		
DC Injection Current		< 0.5 % of Rated Grid Output Current		
AC Disconnect Type		Not Available		
SYSTEM				
Topology		Transformerless		
Max. Efficiency		98.1 %		
CEC Efficiency		97.6 %		
Night Consumption		< 1 W		
ENVIRONMENT				
Protection Degree		IP65		
Cooling		Natural Convection Cooling		
Operating Temperature Range		-25 °C to +60 °C		
Storage Temperature Range		-40 °C to +70 °C		
Operating Humidity		0 - 100 % condensing		
Operating Altitude		4000 m		
Audible Noise		<30 dBA @ 1 m		
DISPLAY AND COMMUNICATION				
Display		LCD + LED		
Communication		Standard: RS485 (Modbus)		
MECHANICAL DATA				
Dimensions (W / H / D)		333 x 573 x 249 mm		
Weight		18 kg		
Installation Angle		90 degrees from horizontal		
DC Inputs		MC4 compatible		
SAFETY				
Safety and EMC Standard		IEC62109-1-2, NB/T 32004, EN61000-6-1, EN61000-6-3		
Grid Standard		EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727, VDE N4105, NBR-16149/NBR-16150		
Smart-Grid Features		Voltage-Ride Thru, Frequency-Ride Thru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt		

*The "Output Voltage Range" and "Output Frequency Range" may differ according to specific grid standard.

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV equipment requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the product.