

# THREE PHASE STRING INVERTER 20-30 KW

**CSI-20KTL-GI-FL | CSI-25KTL-GI-FL  
CSI-30KTL-GI-FL**

Canadian Solar's grid-tied, transformer-less string inverters help to accelerate the use of three-phase string architecture for commercial rooftop and small ground-mount applications. An NRTL approved, cost-effective alternative to central inverters, these inverters are modular design building blocks that provide high yield and enable significant BoS cost savings. They provide up to 98.6% conversion efficiency, a wide operating range of 200-800 Vdc, and four MPPTs for maximum energy harvest.



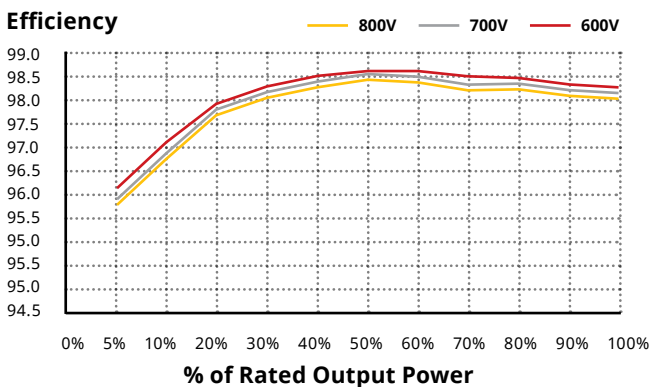
**Standard warranty, extension up to 20 years**

## KEY FEATURES

- Maximum efficiency up to 98.6%, Maximum CEC efficiency up to 98.3%
- 4 MPPTs to achieve higher system efficiency
- Transformerless design
- High switching frequency and ultra fast MPPT (<5 sec.) for maximum efficiency over a wide load range

## EFFICIENCY CURVE

CSI-30KTL-GI-FL@380 Vac



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

## HIGH RELIABILITY

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

## BROAD ADAPTIBILITY

- IP65 rated for outdoor application
- Utility interactive controls: Active power derating, reactive power control and over frequency derating
- Integrated DC load rated disconnect
- Wide MPPT range for flexible string sizing
- 90 degree installation angle
- Supports up to 8 DC string inputs (2 per MPPT)

**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. is one of the most bankable solar companies worldwide.

## CANADIAN SOLAR INC.

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<b>SYSTEM/TECHNICAL DATA</b>			
<b>MODEL NAME</b>	<b>CSI-20KTL-GI-FL</b>	<b>CSI-25KTL-GI-FL</b>	<b>CSI-30KTL-GI-FL</b>
<b>DC INPUT</b>			
Max. PV Power	23 kW (13.5 kW/MPPT)	28 kW (13.5 kW/MPPT)	34 kW (13.5 kW/MPPT)
Max. DC Input Voltage		1000 V <sub>DC</sub>	
Operating DC Input Voltage Range		200-800 V <sub>DC</sub>	
Start-up DC Input Voltage/Power		350 V	
Number of MPP Trackers		4	
MPPT Full Power Voltage Range	278-800 V <sub>DC</sub>	347-800 V <sub>DC</sub>	417-800 V <sub>DC</sub>
Operating Current (Imp)		72 A (18 A per MPPT)	
Max. Input Current (Isc)		93.6 A (23.4 A per MPPT)	
Number of DC Inputs		8 (2 per MPPT)	
DC Disconnection Type		Load rated DC switch	
<b>AC OUTPUT</b>			
Rated AC Output Power	20 kW	25 kW	30 kW
Max. AC Output Power	22 kW	27.5 kW	33 kW
Rated Output Voltage		380/400 V <sub>AC</sub>	
Output Voltage Range*		304-460 V <sub>AC</sub>	
Grid Connection Type		3 $\Phi$ /PE	
Nominal AC Output Current @480 Vac	30.3/28.7 A	37.9/36.1 A	45.5/43.3 A
Rated Output Frequency		50/60 Hz	
Output Frequency Range*		47-52/57-62 Hz	
Power Factor		1 default ( $\pm$ 0.8 adjustable)	
Current THD		< 3 %	
<b>SYSTEM</b>			
Topology		Transformerless	
Max. Efficiency		98.6 %	
CEC Efficiency		98.3 %	
Night Consumption		< 1 W	
<b>ENVIRONMENT</b>			
Protection Degree		IP65	
Cooling		Natural Convection Cooling	
Operating Temperature Range		-25 ° C to +60 ° C	
Storage Temperature Range		-40 F to + 158 ° F / -40 ° C to +70 ° C	
Operating Humidity		0 - 100 %	
Operating Altitude		4000 m	
Audible Noise		<30 dBA @ 1 m	
<b>DISPLAY AND COMMUNICATION</b>			
Display		LCD + LED	
Communication		Standard: RS485 (Modbus)	
<b>MECHANICAL DATA</b>			
Dimensions (W / H / D)		530 x 700 x 356.5 mm	
Weight		58.2 kg	
Installation Angle		90 degrees from horizontal	
DC Inputs		MC4	
<b>SAFETY</b>			
Safety		IEC62109-1/-2	
Grid Standard		AS4777, NRS097	
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 specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice.

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.