



THREE PHASE STRING INVERTER 40 KW

CSI-40KTL-GS

Canadian Solar's grid-tied, transformer-less string inverters help 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 V_{DC}, and four MPPTs for maximum energy harvest.



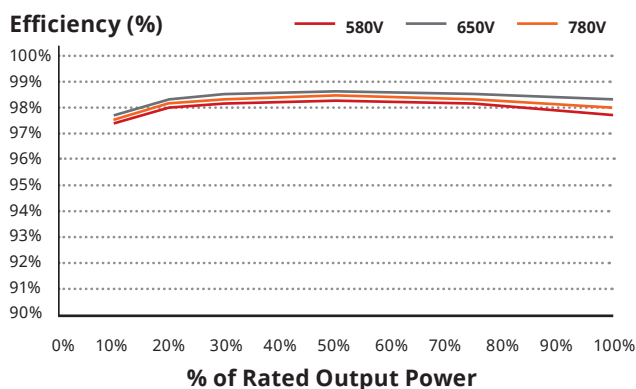
Standard warranty, extension up to 20 years

KEY FEATURES

- Maximum efficiency of 98.6%, CEC efficiency of 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-40KTL-GS@480 V



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

HIGH RELIABILITY

- Advanced thermal design with fan assisted cooling
- Ground-fault detection and interruption circuit
- AFCI Integrated (per UL1699B, factory enabled option)

BROAD ADAPTIBILITY

- NEMA 4X (IP65), outdoor application
- Utility interactive controls: active power derating, reactive power control and over frequency derating
- Integrated wiring box design
- Integrated DC and AC load rated disconnects
- Wide MPPT range for flexible string sizing
- 15-90 degree installation angle
- AC terminals compatible with copper and aluminum conductors (Al with bimetallic terminal)
- Supports up to 8 DC string inputs (2 per MPPT)

CANADIAN SOLAR (USA), 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 25 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

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SYSTEM/TECHNICAL DATA	
MODEL NAME	CSI-40KTL-GS
DC INPUT	
Max. PV Power	54 kW (13.5 kW/MPPT)
Max. DC Input Voltage	1000 V _{DC}
Operating DC Input Voltage Range	200-800 V _{DC}
Start-up DC Input Voltage/Power	350 V
Number of MPP Trackers	4
MPPT Voltage Range	556-800 V _{DC}
Operating Current (Imp)	72 A (18 A per MPPT)
Max. Input Current (Isc)	112.4 A (28.1 A per MPPT)
Number of DC Inputs	8 (2 per MPPT)
DC Disconnection Type	Load rated DC switch
AC OUTPUT	
Rated AC Output Power	40 kW
Max. AC Output Power	44 kW
Rated Output Voltage	480 V _{AC}
Output Voltage Range*	422.4 - 528 V _{AC}
Grid Connection Type	3 Φ/PE
Nominal AC Output Current @480 Vac	48.1 A
Rated Output Frequency	60 Hz
Output Frequency Range*	59.5 - 60.5 Hz
Power Factor	1 default (±0.8 adjustable)
Current THD	< 3 %
AC Disconnection Type	Load rated AC switch
SYSTEM	
Topology	Transformerless
Max. Efficiency	98.6 %
CEC Efficiency	98.3 %
Night Consumption	< 1 W
ENVIRONMENT	
Protection Degree	NEMA 4X
Cooling	Intelligent Redundant Cooling
Operating Temperature Range	-13 ° F to + 140 ° F / -25 ° C to +60 ° C
Storage Temperature Range	-40 ° F to + 158 ° F / -40 ° C to +70 ° C
Operating Humidity	0 - 100 % condensing
Operating Altitude	13,123.4 ft / 4000 m
Audible Noise	<30 dBA @ 1 m
DISPLAY AND COMMUNICATION	
Display	LCD + LED
Communication	Standard: RS485 (Modbus)
MECHANICAL DATA	
Dimensions (W / H / D)	23.4 x 37.2 x 14.4 in / 595 x 945 x 356.5 mm
Weight	147.7 lb / 67 kg
Installation Angle	15-90 degrees from horizontal
DC Inputs	15 A standard
SAFETY	
Safety and EMC Standard	UL1741-SA, UL1699B, CSA-C22.2 No. 107.1-01, IEEE1547; FCC PART 15
Grid Standard	IEEE1547, Rule 21
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.