

THREE PHASE STRING INVERTER 80 KW



CSI-80K-T400

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 98.7% conversion efficiency, a wide operating range of $180\text{-}1000\,\mathrm{V}_{\mathrm{DC}}$, and ten MPPTs for maximum energy harvest.



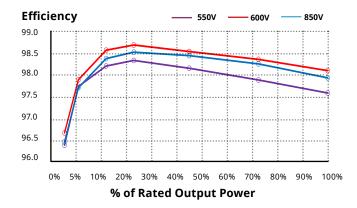
standard warranty, extension up to 20 years

KEY FEATURES

- Maximum efficiency of 98.7%,
 Maximum EU efficiency of 98.3%
- Nine MPPTs to achieve higher system efficiency
- · 13A input for each PV string
- Integrated DC Switches, AC switch optional
- Smart string intelligent monitoring and IV curve diagnosis

EFFICIENCY CURVE

CSI-80K-T400GL02-E



For detailed information, please refer to the Installation Manual.

HIGH RELIABILITY

- Intelligent redundant fan-cooling
- SPD type II on both DC and AC sides
- · Leakage current repression technology
- Fuse free design
- DC reverse polarity protection

BROAD ADAPTIBILITY

- IP66 rated for outdoor application
- Utility interactive controls: Active power derating, reactive power control and over frequency derating
- · Integrated DC load rated disconnects
- Wide MPPT range for flexible string sizing
- High switching frequency and ultra fast MPPT for maximum efficiency over a wide load range

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 40 GW deployed around the world since 2001.

CANADIAN SOLAR INC.

Mar. NP Power 10.6 KW Mar. NP Power 10.6 KW Mar. De Cinquit Voltager 100 Vg Subress De Cinquit Voltager Power 155 Vg MAPT Voltager Range 100 1000 Vg MAR. Input Current Limpt 224 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Current Limpt 329 A (26 Aper MPPT) Mar. Input Voltage* 320 A (26 Aper MPPT) Mar. Input Voltage* 320 A (26 Aper MPPT) Mar. Output Voltage* 320 A (26 Aper MPPT) Mar. Output Voltage* 320 A (26 Aper MPPT) Mar. Output Current Limpt 329 A (26 Aper MPPT) Mar. Output Current Limpt 329 A (26 Aper MPPT) Mar. Output Current Limpt 329 A (26 Aper MPPT) Mar. Output Current Limpt 329 A (26 Aper MPPT) Mar. Output Fequency 329 A (26 Aper MPPT) Mar. O	SYSTEM/TECHNICAL DATA		
Max. PU Penery Max. Disput Voltage Max. Disput Voltage Power 1160 ⋅	MODEL NAME	CSI-80K-T400GL02-E	
March DC Criptor Voltage 100 V m 155 V m 156 V m 155 V m 156 V m	DC INPUT		
Start-up DC Input Voltage/Power	Max. PV Power	126 KW	
Number of Off MPP Trackers	Max. DC Input Voltage	1100 V _{DC}	
Mary Two	Start-up DC Input Voltage/Power	195 V _{DC}	
Max. Short Circuit Current (Isp) Max. Short Circuit Current (Isp) Max. Short Circuit Current (Isp) DE Dixonnection Type COUTPUT REAR AC CUUTPUT REAR AC	Number of MPP Trackers	9	
Max. Short Circuit Current (Isc) 18 Der MPPT) Number Of Cinquits 18 Der MPPT) Number Of Cinquits 18 Der MPPT) AC OUTPUT Cod present (Isc) Rated AC OUTPUT Power 88 KW Rated Output Power 88 KW Rated Output Vibrage* 2203880 v.c Grild Connection Type 3W IN IPE Rated Grid Output Current 132.6 A Max Output Frequency 50.760 Hz Output Frequency 50.760 Hz Output Frequency 50.950 Hz Output Frequency Range* 47.52 / 37.52 Hz Power Factor > 0.99 (Is leading) Dil tagging) OL Injection Current 4.3 % DC Injection Current 4.3 % DC Injection Current 98.3 % SUSTEM 98.3 % SUBLIFICATION STATE REGISTANCE 98.3 % DC Injection Current 98.3 % SUBLIFICATION STATE REGISTANCE 98.3 % DC Injection Current 2 W Ansil: ETD Module Optional ENVISOR 1900 ENVISOR	MPPT Voltage Range	180 - 1000 V _{DC}	
Number of DC Inputs DC Disconnection Type AC OUTPUT Rated AC OUTPUT Rated AC OUTPUT Power Rated AC OUTPUT Power Rated AC OUTPUT Power Rated Coutput Power Rated Output Volupet Output	Max. Input Current (Imp)	234 A (26 A per MPPT)	
De Disconnection Type AC OUTPUT ARRIED AC OUTPUT Mas: AC Output Power Mas: AC Output Power Mas: AC Output Vottage* Gold Connection Type Rated Output Vottage* Rated Output Current Rated Output Frequency Gold Connection Type Rated Output Frequency Gold Connection Type Rated Output Frequency Gold Connection Type May	Max. Short Circuit Current (Isc)	360 A (40 A per MPPT)	
AC CUTPUT Rated AC Output Power Rated Output Voltage* Rated Grid Connection Type Rated Grid Connection Rated R	Number of DC Inputs	18 (2 per MPPT)	
Rated AC Cutput Power 88 kW Max. AC Untput Power 88 kW Max. AC Untput Voltage* 2207/80 V _m Grid Connection Type 3W N FE Rated Gutput Current 121.6 A Max Output Current 133.7 A Rated Output Frequency 50.60 Hz Output Frequency Range* 47.527.57.62 Hz Power Factor >99.09 (Bleading = 0.8 lagging) Current THD \$ 3 % DC Injection Current \$ 50.50 f Rated Grid Output Current SYSTEM SWITCH STATES Will Act and a state of the sta	DC Disconnection Type	Load rated DC switch	
Max. AC Output Power 88 KW Rated Output Voltage* 220/380 V _{ac} Grid Connection Type 3W / N / PE Rated Grid Output Current 121.6 A Mox Output Current 133.7 A Rated Output Frequency 50.60 Hz Output Frequency Range* 47-52 / 57-52 Hz Power Factor > 0.99 (0.8 leading 0.8 logging) Current THD \$ 3 % De Injection Current < 0.5 % of Rated Grid Output Current	AC OUTPUT		
Rated Output Voltage* 220/380 V _{AC} Grid Connection Type 3W/M / PE Asked Grid Output Current 121.6 A Max Output Current 133.7 A Rated Output Frequency 50 / 60 Hz Output Frequency Range* 3	Rated AC Output Power	80 KW	
Grid Connection Type 3W / N / PE Rated Grid Output Current 121.6 A Max Output Current 133.7 A Rated Output Frequency 50 / 60 Hz Output Frequency Range* 47 - 52 / 57 - 62 Hz Power Factor > 0.99 (0.8 leading 0.8 lagging) Current THD 3 % DC Injection Current < 0.5 % of Rated Grid Output Current	Max. AC Output Power	88 KW	
Rated Grid Output Current 121.6 A Max Output Frequency 50 / 60 Hz Output Frequency Range* 47-52 / 57-62 Hz Power Factor > 0.99 (0.8 leading 0.8 lagging) Current THD < 3 %	Rated Output Voltage*	220/380 V _{AC}	
Max Output Current 133.7 A Rated Output Frequency 50 / 50 Hz Output Frequency Range® 47 - 52 / 57 - 62 Hz Power Factor > 0.90 (0.8 leading 0.8 lagging) Current THD < 3 %	Grid Connection Type	3W / N / PE	
Rated Output Frequency 50 / 60 Hz Output Frequency Range* 47 - 52 / 57 - 62 Hz Power Factor > 0.99 (0.8 leading 0.8 lagging) Current THD < 3 %	Rated Grid Output Current	121.6 A	
Output Frequency Range* 47 - 52 / 57 - 62 Hz Power Factor > 0.99 (0.8 leading 0.8 lagging) Current THD < 3 %	Max Output Current	133.7 A	
Power Factor > 0.99 (0.8 leading 0.8 lagging) Current THD < 3 %	Rated Output Frequency	50 / 60 Hz	
Current THD < 3 %	Output Frequency Range*	47 - 52 / 57 - 62 Hz	
DC Injection Current	Power Factor	> 0.99 (0.8 leading 0.8 lagging)	
### STREM Max. Efficiency	Current THD	< 3 %	
Max. Efficiency 98.7 % EU Efficiency 98.3 % Night Consumption < 2 W	DC Injection Current	< 0.5 % of Rated Grid Output Current	
EU Efficiency 98.3 % Night Consumption < 2 W	SYSTEM		
Night Consumption < 2 W	Max. Efficiency	98.7 %	
Anti-PID Module Optional ENVIRONMENT Protection Degree IP66 Cooling Intelligent Redundant 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 65 dBA @ 1 m DISPLAY AND COMMUNICATION Display LCD, 2 × 20 Z Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 × 567 x 314.5 mm Weight 82 kg Installation Angle 0 -15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	EU Efficiency	98.3 %	
ENVIRONMENT Protection Degree IP66 Cooling Intelligent Redundant 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 <65 dBA @ 1 m DISPLAY AND COMMUNICATION Display LCD, 2 × 20 Z Communication R5485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 x 567 x 314.5 mm Weight 82 kg Installation Angle 0 -15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Night Consumption	<2 W	
Protection Degree IP66 Cooling Intelligent Redundant 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 < 65 dBA @ 1 m	Anti-PID Module	Optional	
Cooling Intelligent Redundant 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 <65 dBA @ 1 m DISPLAY AND COMMUNICATION Display LCD, 2 × 20 Z Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 × 567 × 314.5 mm Weight 82 kg Installation Angle 0 -15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	ENVIRONMENT		
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Storage Temperature Range Operating Humidity Operating Humidity Operating Altitude Audible Noise DISPLAY AND COMMUNICATION Display Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) Weight Display Confident Meight Display Displa	Cooling	Intelligent Redundant Cooling	
Operating Humidity Operating Altitude Audible Noise Audible Noise DISPLAY AND COMMUNICATION Display Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) Weight Distallation Angle DC Inputs SAFETY Safety and EMC Standard 0 - 100 % condensing A00 0 - 100 MCA A000 0	Operating Temperature Range	-25 °C to +60 °C	
Operating Altitude Audible Noise Audible Noise CISPLAY AND COMMUNICATION Display Communication Com	Storage Temperature Range	-40 °C to +70 °C	
Audible Noise < 65 dBA @ 1 m DISPLAY AND COMMUNICATION Display LCD, 2 × 20 Z Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 x 567 x 314.5 mm Weight 82 kg Installation Angle 0-15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Operating Humidity	0 - 100 % condensing	
DISPLAY AND COMMUNICATION Display LCD, 2 × 20 Z Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 x 567 x 314.5 mm Weight 82 kg Installation Angle DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Operating Altitude	4000 m	
Display LCD, 2×20 Z Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 x 567 x 314.5 mm Weight 82 kg Installation Angle 0-15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Audible Noise	< 65 dBA @ 1 m	
Communication RS485 / WiFi Optional MECHANICAL DATA Dimensions (W / H / D) 1050 x 567 x 314.5 mm Weight 82 kg Installation Angle 0-15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	DISPLAY AND COMMUNICATION		
MECHANICAL DATA Dimensions (W / H / D) 1050 x 567 x 314.5 mm Weight 82 kg Installation Angle 0~15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Display	LCD, 2 × 20 Z	
Dimensions (W / H / D) Weight 82 kg Installation Angle DC Inputs MC4 SAFETY Safety and EMC Standard 1050 x 567 x 314.5 mm 1050 x 567 x 314.5 mm 1050 x 567 x 314.5 mm MC4 S2 kg MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Communication	RS485 / WiFi Optional	
Weight 82 kg Installation Angle 0-15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	MECHANICAL DATA		
Installation Angle 0-15 Degrees from Vertical DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Dimensions (W / H / D)	1050 x 567 x 314.5 mm	
DC Inputs MC4 SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Weight	82 kg	
SAFETY Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	Installation Angle	0~15 Degrees from Vertical	
Safety and EMC Standard IEC 62109-1/2, IEC 61000-6-1/2/3/4	DC Inputs	MC4	
	SAFETY		
Grid Standard IEC 62116, IEC 61727	Safety and EMC Standard	IEC 62109-1/2, IEC 61000-6-1/2/3/4	
	Grid Standard	IEC 62116, IEC 61727	

 $^{{\}rm *The~``Rated~Output~Voltage~Range''~and~``Output~Frequency~Range''~may~differ~according~to~specific~grid~standard.}$

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 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.

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