PROJECT NAME _____

LOCATION _____ NUMBER _____

CanadianSolar

INSTALLATION AND COMMISSIONING CHECKLIST

3 PHASE STRING INVERTERS (KTL SERIES)

Warning: This checklist is not a replacement for the user manual.
Please read the user manual prior to inverter site selection and installation.

Step	No.	Content	Details	Values / Notes	Conclusion
INSTALLATION	1	Installation environment	Ensure installation site meets environmental and physical constraints.		[ ] Good [ ] Poor
	2	Unpacking	Check inverter condition after unpacking.		[ ] Good [ ] Poor
	3	Mounting bracket installation	Install inverter mounting bracket according to installation instructions in user manual. For allowable tilt angle refer to the installation manual.		[ ] Completed *Record Tilt Angle in Notes*
	4	Inverter installation	Carefully install the inverter to the mounting bracket and ensure it is firmly attached. Ensure the inverter has proper clearances and are properly ventilated.		[ ] Completed
	5	Serial number	Record the product serial numbers located on the side label.		Serial Numbers; *attached list*
	6	Solar modules	Confirm PV module installation completion. Record the total power of the PV modules.		[ ] Completed *Record kWp in Notes*
	7	DC input and AC output connection	Switch off the DC and AC distribution unit, connect DC to PV terminals of inverter, and connect AC to AC terminals of inverter. Ensure proper polarity and cable size. Torque to specifications.		[ ] Completed *Record Torque in Notes*
	8	PV voltage	Measure and record DC voltage. Ensure voltage and polarities are correct. Confirm the voltages are within 5% tolerance to what was tested.		[ ] Completed *Record V_{DC} in Notes*
	9	AC grid	Measure and record AC voltage and frequency. Confirm the V_{AC} voltages are within 5% tolerance to what was tested.		[ ] Completed *Record V_{AC} in Notes*
	10	Grounding cable	Ensure ground cable is firmly attached to grounding lug.		[ ] Good [ ] Poor

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Step	No.	Content	Details	Values / Notes	Conclusion
COMMISSIONING	1	Communication cable (if function is used)	Connect the RS485 cable to the communication port.		[ ] Completed
	2	Supply DC / AC power	**CSI-xx-KTL-CT:** 1. Switch on the DC switch first. The LCD and "Power" LED indicator will be green lighted. The "Run" LED will be off. The "Grid" LED will be flashing. The "Fault" LED will be flashing and the inverter begins self-checking. Initially, "GridV.Outlimit" and "GridF.Outlimit" will be displayed, then the inverter will switch to "Standby" mode. 2. Switch on the AC switch. The Grid faults will clear automatically. In "Standby" mode, the "Power" LED is solid green, the "Run" LED is off, the "Grid" LED is solid green and the "Fault" LED is off.		[ ] Completed *Record LEDs status in Notes*
			CSI-xx-KTL-GS: 1. Switch the grid supply main Switch (AC) ON first. 2. Switch the DC switch ON. If the voltages of PV arrays are higher than start up voltage, the inverter will turn on. The red LED power will be continuously lit. 3. When both the DC and the AC sides supply to the inverter, it will be ready to generate power. Initially, the inverter will check both its internal parameters and the parameters of the AC grid, to ensure that they are within the acceptable limits. At the same time, the green LED will flash and the LCD displays the information of INITIALIZING.		[ ] Completed *Record LEDs status in Notes*

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Step	No.	Content	Details	Values / Notes	Conclusion
COMMISSIONING	3	Waiting time	**CSI-xx-KTL-CT:** A standard 5 minute delay is required before the inverter generates any power to the grid. In normal operation mode, the "Power", "Run", and "Grid" LEDs are solid green and the"Fault" LED is off.		[ ] Completed *Record LEDs status in Notes*
			CSI-xx-KTL-GS: After 30-180 seconds (depending on local requirement), the inverter will start to generate power. The green LED will be on continuously and the LCD displays the information of GENERATING.		[ ] Completed *Record LEDs status in Notes*
	4	Power generation	After grid connection, record power output of inverter.		[ ] Completed *Record power in Notes*
	5	Date & Time setting	Set the current date and time using the front panel interface.		[ ] Completed *Record current date/time in Notes*
	6	Communication setting (if avail.)	Set communication with a unique address for each inverter.		[ ] Completed *Record address in Notes*
	7	Machine version	For maintenance and reference, please record the firmware revisions if applicable.		[ ] Completed *Record with serial numbers*
	8	Operating parameter	Record operating parameters of the inverter. Verify IEEE1547 or UL1741 setting is selected. De-rate inverter and attach de-rate sticker as required.		[ ] Completed *Record operating parameters in Notes*
	9	Testing	Open and close the DC breaker to confirm whether the inverter reboots and shuts down automatically.		[ ] Reboot successful [ ] Not rebooting
	10	Completion	Installation and commissioning is complete if no abnormality.		[ ] Good [ ] Issues detected

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INSTALLATION AND COMMISSIONING CHECKLIST

3 PHASE STRING INVERTERS (KTL SERIES)

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System Owner: _____

Address / Location: _____

Note site typical arrangements and variances

Inverter model: _____

Inverter firmware revision: DSP: _____ LCD: _____

Number of inverters: _____ Inverter mounting tilt: _____

Output power*: _____ Input DC voltage: _____

Insulation limit (K): _____ PV start-up voltage: _____

Grid: V Max: _____ V Min: _____ Frequency Max: _____ Min: _____

Reactive compensation: _____ +/- PF

Configuration: MPPT Individual _____ MPPT Parallel _____

Monitoring: RS485: _____ Ethernet: _____

Monitoring equipment and supplier: _____

PV module manufacturer: _____ PV model: _____

DC cable size: _____ AC cable size: _____

Transformer ratings, supplier: _____

Number of series connected modules in PV strings: _____

Number of PV strings in parallel per MPPT: _____

Total System size (DC Watts): _____

*Specify de-rated power and add nameplate power in parenthesis

GENERAL COMMENTS / OBSERVATIONS:

_____ _____

_____ _____

_____ _____

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Inverter serial numbers:

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INSTALLER´S NAME _____ COMPANY _____

INSTALLER´S SIGNATURE _____ DATE _____