



HiQ Solar TrueString 480V Inverter TS480-8k Specifications



Features

- Rugged 3-phase 480V plug & play system
- Small and light (hand holdable, 24 lb.)
- Non-isolated inverter for use with ungrounded DC systems
- Peak 98.6% efficiency, CEC efficiency of 98%
- 200-850V MPP voltage range for 600V and 1,000V systems
- 8 kW_{AC} full power MPP voltage range 425-850V
- Two DC string inputs with independent monitoring and MPPT management.
- Waterproof NEMA6, silent convection cooling
- Designed for high reliability, uses no electrolytic capacitors
- Wide temperature range, -40 to +65 °C
- Utility-Interactive; Listed to UL1741
- Compliant with NEC 690.11 arc detection

Applications

- Rooftop commercial, usable where other solutions just won't work - for example coastal, desert, high altitude locations
- Car ports, parking and shade structures; units may be mounted at any orientation, under modules, on racking without extra strengthening, clear of risk of liability from vandalism



DC Input (2 identical inputs)	
Maximum open circuit voltage per String, V_{OC}	1,000 V_{DC}
Full power MPPT range, per string	425-850 V_{DC}
PV start voltage	200 V_{DC}
DC allowable stacking ratio (total, 2 inputs combined)	Must not exceed 6.375 under any circumstances ¹
DC maximum input current, per DC input	10 A
DC maximum input short circuit current	30 A
DC maximum input source back feed current to input source	0 A
DC disconnect means	The DC connector has been evaluated and approved for use as the load-break disconnect required by the NEC ²
AC Output	
AC maximum continuous total output power to +45 °C	8 kW _{AC} max
AC de-rate with temperature, +45 to +65 °C	-150 W/°C
AC nominal output current, per phase	9.6 A
AC maximum continuous output current, per phase	9.6 A
AC maximum output fault current	10.0 A
AC maximum output fault duration	<0.5 ms
AC maximum output over current protection	40 A
AC 3-phase system compatibility	480V Wye, 3 phases, neutral and ground
AC voltage range, phase to phase (min / nominal / max)	422 / 480 / 528 V (Limits adjustable, see below)
AC voltage range, phase to neutral (min / nominal / max)	244 / 277 / 305 V (Limits adjustable, see below)
AC output frequency range (min / nominal / max)	59.3 / 60 / 60.5 Hz (Limits adjustable, see below)
Power Factor	≥0.98



Note 1: Stacking: On the DC side of the inverter, each input limits at 5 kW and/or 10A, and the combined total AC output is limited to 8 kW. Higher DC STC string powers may be applied, the inverter will limit as described above. Total stacking for inverter must not exceed 6.375 under any circumstances

Note 2: NEC section 690.17, allowed by the exception of meeting requirements specified in 690.33

AC Output, continued			
AC lower frequency trip limit	Default	59.3 Hz	+/- 0.1 Hz
	Adjustment	57-59.3 Hz in 0.1 Hz increments	
	Clearing time default	0.16 s	+/- 2 cycles
	Clearing time adjustment	0.16-300	
AC upper frequency trip limit	Default	60.5 Hz	+/- 0.1 Hz
	Adjustment	60.5-62.0 Hz in 0.1 Hz increments	
	Clearing time default	0.16 s	+/- 2 cycles
	Clearing time adjustment	0.16-300 s	
AC lower voltage trip limit (Phase to Neutral)	Default	245 V	+/- 2 %
	Adjustment	220-245 V	
	Clearing time default	2 s	+/- 2 cycles
	Clearing time adjustment	1-20 s	
AC upper voltage trip limit (Phase to Neutral)	Default	305 V	+/- 2 %
	Adjustment	305-315 V	
	Clearing time default	1 s	+/- 2 cycles
	Clearing time adjustment	1-20 s	
AC reconnect delay	Default	5 minutes	+/- 1 s
	Adjustment	1 s -10 minutes	
AC synchronization in-rush current		0 A	
Maximum output fault current and duration		20 A, 100 μs	
AC minimum wire gauge for grid connection		14 AWG	
AC disconnect means		The AC connector has been evaluated and approved for use as the load-break disconnect required by the NEC²	
Other Specifications			
Peak efficiency		98.6 %	
CEC efficiency		98.0 %	
Dimensions		475 x 334 x 76 mm (18 ¾ x 13 ⅛ x 3")	
Weight		11 kg (24 lb.)	
Operating temperature range		-40 to +65 °C (-40 to 150 °F)	
Power consumption standby/ night		<4.5 W / <4.5W	
Cooling		Natural convection, no fan	
Communication		Powerline	
Environmental rating		Outdoor / rooftop, NEMA 6, IP67	
Certification		Listed to UL 1741 / IEEE 1547 (Utility Interactive) CSA C22.2 NO. 107.1, FCC Part 15, meets the requirements of NEC 690.11	
Included warranty		10 Years, optionally extendable	



Ordering Guide

Item	Part Number	Description
TrueString System	TS480-8k	TrueString 480V Inverter, 8kW, 3-phase. Inverter with MC4-compatible connectors. MPPT per string, monitoring per string. Includes 10 year limited warranty. <i>Does not include Gateway. Does not include AC cable, must be ordered separately.</i>
	TS480-8k Option A	Option - Add RS485 communication and Aux connector. Must be ordered at time of system purchase, not retrofittable.
	TS480-8k Option W25	Option - TrueString System Warranty Extension to 25 years for 1 TrueString 480V. Must be ordered at time of system purchase. Includes system Gateway(s).
TrueString AC Cables	CBL-480A-05	TrueString 480V AC Cable, 5ft. Includes TrueString 480V AC mating connector, other end unterminated.
	CBL-480A-15	TrueString 480V AC Cable, 15ft. Includes TrueString 480V AC mating connector, other end unterminated.
	CBL-480A-30	TrueString 480V AC Cable, 30ft. Includes TrueString 480V AC mating connector, other end unterminated.
	CBL-480A-50	TrueString 480V AC Cable, 50ft. Includes TrueString 480V AC mating connector, other end unterminated.

