



Solar Inverters

Solar Inverters and Monitoring Residential Installations:

Transformerless (TL): 3.0 kW, 3.8 kW, 5.2 kW, 6.6 kW, 7.6 kW

Features:

- Wide Operating Voltage Range: 120V ~ 550V
- Wide Operating Temperature Range: -13 ~ 158°F (-25 ~ 70°C)
- High CEC Efficiency: 97.5%
- Integrated AFCI (Arc Fault Circuit Interruption)
- NEMA 4X plus Salt Mist Corrosion Protection
- Natural Convection Cooling
- Dual MPPT (5.2kW / 6.6kW / 7.6kW)
- Compact and Lightweight
- UL 1741 / IEEE 1547 / IEEE 1547.1 / CEC Listed /
UL 1699B(Type 1) / NEC 690 2014



About Delta

To provide innovative, clean, and energy-efficient solutions for a better tomorrow.

Delta Group, founded by Mr. Bruce C.H. Cheng in 1971, is the global leader in power and thermal management solutions. Our mission statement, “To provide innovative, clean and energy-efficient solutions for a better tomorrow,” focuses our role in addressing key environmental issues such as global climate change. With our concern for the environment, we continue to develop innovative energy efficient products and solutions. We realize the more energy efficient Delta’s products become, the greater our impact on reducing global warming.

In recent years Delta has transformed from a product provider toward a solution provider and our businesses now encompass power electronics, energy management, and smart green life. Delta’s brand promise “Smarter. Greener. Together.” encourages the development and broad application of smart, energy-efficient solutions. At Delta we believe that technology and collaboration can lead to a cleaner, greener tomorrow.



Smarter. Greener. Together.

With our long-term commitment to environmental protection and technology innovation, Delta is developing highly efficient power products including switching power supplies at over 90% efficiency, telecom power at over 97% efficiency, and PV inverters of up to 98.5% efficiency.

This significant achievement marks Delta’s leadership in the global power supplies industry, and our dedication to developing energy efficient solutions and alternative energy sources. We believe an environmental business approach is not only good for our planet, but also great for business.

From 2010 to 2015, Delta’s products and solutions helped customers save approximately 17.3B kWh in electricity and reduce carbon emissions by 9.2M tons. Among its many energy-saving products, Delta has developed the world’s first server power supply to achieve 80 Plus Titanium energy efficiency, which is greater than 96% efficiency.

With our vision for greener, cleaner, more energy-efficient solutions, Delta is making a unique contribution to industry and to a better world.

Technical Data for TL Solar Inverters

INPUT (DC)	3.0 TL	3.8 TL	5.2 TL	6.6 TL	7.6 TL
Max. System Voltage	600 V				
Nominal Voltage	380 V				
Operating Voltage Range	120 V ~ 550 V				
Full Power MPPT Range	200 V ~ 500 V				
Max. Usable Current	18.0 A	20.0 A	15.0 A per MPP tracker	18.0 A per MPP tracker	20.0 A per MPP tracker
Max. Short Circuit Current @ STC	24.0 A		24.0 A per MPP tracker		
Max. Allowable Imbalance Power ⁽¹⁾	-		1700 W / 3800 W	2100 W / 4800 W	2400 W / 5600 W
DC Disconnect	Internal				
MPP Tracker	1		2		
Total Input Strings Available	2		4		

OUTPUT (AC)	3.0 TL	3.8 TL	5.2 TL	6.6 TL	7.6 TL
Nominal Power	3000 W	3800 W	5200 W	6600 W	7600 W
Max. Continuous Power ⁽²⁾	3000 W @ 208 V / 3000 W @ 240 V	3300 W @ 208 V / 3800 W @ 240 V	5200 W @ 208 V / 5200 W @ 240 V	6600 W @ 208 V / 6600 W @ 240 V	6600 W @ 208 V / 7600 W @ 240 V
Voltage Range	183 ~ 228 V @ 208 V / 211 ~ 264 V @ 240 V				
Nominal Current	14.4 A @ 208 V / 12.5 A @ 240 V	15.8 A @ 208 V / 15.8 A @ 240 V	25.0 A @ 208 V / 21.6 A @ 240 V	31.7 A @ 208 V / 27.5 A @ 240 V	31.7 A @ 208 V / 31.7 A @ 240 V
Nominal Frequency	60 Hz				
Frequency Range	59.3 ~ 60.5 Hz				
Night Consumption	< 1W				
Total Harmonic Distortion @ Nominal Power	< 3%				
Power Factor @ Nominal Power	> 0.99				

GENERAL SPECIFICATION

Max. Efficiency	98.0%
CEC Efficiency	97.5% @ 208V / 97.5% @ 240V
Operating Temperature Range	-13 ~ 158°F (-25~70°C) no derating below 122°F (50°C)
Storage Temperature Range	-40 ~ 185°F (-40 ~ 85°C)
Humidity	0 ~ 100%
Max. Operating Altitude	2000m above sea level

MECHANICAL

Size L x W x D inches (L x W x D mm)	17.5 x 15.8 x 8.5 in (445 x 401 x 216 mm)	26.8 x 15.8 x 8.5 in (680 x 401 x 216 mm)
Weight	43.0 lbs (19.5 kg)	65.0 lbs (29.5 kg)
Cooling	Natural Convection	
AC Connectors	Screw Terminals in Connection Box	
DC Connectors	2 pairs of screw terminals in connection box	4 pairs of screw terminals in connection box
Communication Interface	RS485	
Display	3 LEDs, 4-Line LCD	
Enclosure Material	Diecast Aluminum	

STANDARDS / DIRECTIVES

Enclosure Protection Rating	NEMA 4X plus Salt Mist Corrosion Protection
Safety	UL 1741-2, CSA 22.2 No. 107-01
SW Approval	UL 1998
Isolation Monitor Interrupt (IMI)	NEC 690.35, UL 1741 CRD
Anti-islanding Protection	IEEE 1547, IEEE 1547.1
EMC	FCC part 15 Class B, ICES-003
AFCI	UL 1699B (Type 1), NEC 690 2014

WARRANTY

Standard Warranty	10 years
Extended Warranty	Additional 5 years (15 years total) or Additional 10 years (20 years total)

Preliminary product specifications subject to change without notice.

¹⁾ Un-balance PV input allowed, maximum input power for each MPP tracker is limited with 70% rating power and total input is limited with 100% rating power.
²⁾ The maximum AC power value indicates the power an inverter might be able to deliver, but such a maximum AC power may not necessarily be achieved.

Key features:

- Industrial-grade components with full power output up to 122°F (50°C)
- Wide DC voltage window allows compatibility with a broad range of photovoltaic installation types
- A low start up voltage and wide MPP tracking to get the most energy harvest from your solar installation
- No fans—for long life and low maintenance
- Extremely rugged die-cast aluminum enclosure
- Watertight and dust-proof NEMA 4X protection rating for secure outdoor installation

Installer friendly

TL inverters offer exciting and innovative features that make installation easier. Not only are the inverters light-weight and compact, they also come with built-in handles and a convenient mounting plate that allows for simple one-person installation. The wiring box is cleanly laid out and all terminals are easy to find and well spaced.

Maximum energy yield

Compared to transformer-based inverters from competitors, TL inverters deliver the maximum efficiency over a much wider power range. The TL inverters have an intelligent MPP tracking that extracts maximum performance from solar panels under all operating conditions. Full power up to 122°F / 50°C ensures maximum yield in warmer climates.

SOLIVIA Monitor



The SOLIVIA Monitor is perfect for monitoring residential PV solar systems. Its user-friendly interface provides a quick overview of key values, yield data and system status.

Easy to understand charts and reports can be displayed at the touch of a button, and displays of the user's site photos, local weather and site data are also provided. You can monitor your PV system continuously from anywhere you have internet access with the SOLIVIA M1 G2 Gateway (optional) via the SOLIVIA Monitor web portal on your PC/ Mac or with the new SOLIVIA Live App designed specifically for use on tablets and smart phones. (Apple iOS and Android)

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