

AE I2TL, AE I6TL, AE 20TL and AE 24TL Summary Specifications*

Mechanical	AE I2TL	AE I6TL	AE 20TL	AE 24TL
Dimensions	21"(W) x 35"(H) x 11"(D) (535 x 895 x 280 [mm])	21"(W) x 35"(H) x 11"(D) (535 x 895 x 280 [mm])	21"(W) x 35"(H) x 11"(D) (535 x 895 x 280 [mm])	21"(W) x 35"(H) x 11"(D) (535 x 895 x 280 [mm])
Weight	108 (49 kg)	108 (49 kg)	108 (49 kg)	108 (49 kg)
Environmental Rating	NEMA 4/Connection Box NEMA 3R	NEMA 4/Connection Box NEMA 3R	NEMA 4/Connection Box NEMA 3R	NEMA 4/Connection Box NEMA 3R
DC Input Power Connectors	Terminal Block 8-12 AWG	Terminal Block 8-12 AWG	Terminal Block 8-12 AWG	Terminal Block 8-12 AWG
AC Output Power Connectors	Terminal Block 6-10 AWG	Terminal Block 6-10 AWG	Terminal Block 6-10 AWG	Terminal Block 6-10 AWG
User Interface	LCD	LCD	LCD	LCD
Electrical				
DC Inputs				
Maximum DC Power	15.6 kW	20.8 kW	26 kW	30.6 kW
Recommended DC Power	14.4 kW	19.2 kW	24 kW	27.8 kW
Maximum Input Voltage	500 V	500 V	500 V	500 V
Array Configuration	Ungrounded, Dual Array	Ungrounded, Dual Array	Ungrounded, Dual Array	Ungrounded, Dual Array
Maximum Operating Input Current	2 x 27.5 A	2 x 33 A	2 x 37.5 A	2 x 40 A
MPPT Voltage Range	125 V to 450 V	125 V to 450 V	125 V to 450 V	125 V to 450 V
Open-Circuit Turn-On Voltage	200 V	200 V	200 V	200 V
Number of Strings	12	12	12	12
AC Output				
Continuous Output Power	12 kW	16 kW	20 kW	23.2 kW
Operating Voltage Range	423-528 V	423-528 V	423-528 V	423-528 V
Rated Apparent Power	12 kVA	16 kVA	20 kVA	23.2 kVA
Electrical Service Compatibility	3 AC 480 V Wye +N	3 AC 480 V Wye +N	3 AC 480 V Wye +N	3 AC 480 V Wye +N
Maximum Continuous Current	14.5 A	19.3 A	24.1 A	27.9 A
Short Circuit Fault Current	21 A; duration < 10 msec	21 A; duration < 10 msec	29 A; duration < 10 msec	29 A; duration < 10 msec
Nominal Frequency	60 Hz	60 Hz	60 Hz	60 Hz
Total Harmonic Distortion	< 3%	< 3%	< 3%	< 3%
Efficiency				
Peak Efficiency	98.2%	98.2%	98.2%	98.2%
Weighted Efficiency (CEC Method)	97.5%	97.5%	97.5%	98%
Standby Losses	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W
Inverter Controls and Monitoring				
Anti-Islanding	In accordance with IEEE 1547 and UL 1741	In accordance with IEEE 1547 and UL 1741	In accordance with IEEE 1547 and UL 1741	In accordance with IEEE 1547 and UL 1741
Reactive Power and Power Factor**	Nominal value: 1 (0.95i to 1 to 0.95c)	Nominal value: 1 (0.95i to 1 to 0.95c)	Nominal value: 1 (0.95i to 1 to 0.95c)	Nominal value: 1 (0.95i to 1 to 0.95c)
Inverter Monitoring				
Communication Interfaces and Protocols	Ethernet and RS485	Ethernet and RS485	Ethernet and RS485	Ethernet and RS485
Environmental				
Operating Ambient Temp. Range***	-13 °F to +131 °F (-25 °C to +55 °C)	-13 °F to +131 °F (-25 °C to +55 °C)	-13 °F to +131 °F (-25 °C to +55 °C)	-13 °F to +131 °F (-25 °C to +55 °C)
Standby/Storage Ambient Temp. Range	-13 °F to +158 °F (-25 °C to +70 °C)	-13 °F to +158 °F (-25 °C to +70 °C)	-13 °F to +158 °F (-25 °C to +70 °C)	-13 °F to +158 °F (-25 °C to +70 °C)
Cooling	Natural convection	Natural convection	Natural convection	Natural convection
Relative Humidity	95% before derating	95% before derating	95% before derating	95% before derating
Elevation	6562 ft before derating	6562 ft before derating	6562 ft before derating	6562 ft before derating
Regulatory				
Agency Approvals / Regulatory Compliance	Certified to UL 1741, UL 1699B and UL 1998 Standard (for US and Canada) by Underwriters Laboratories	Certified to UL 1741, UL 1699B and UL 1998 Standard (for US and Canada) by Underwriters Laboratories	Certified to UL 1741, UL 1699B and UL 1998 Standard (for US and Canada) by Underwriters Laboratories	Certified to UL 1741, UL 1998 Standard (for US and Canada) by Underwriters Laboratories
Inverter Warranty	5 year	5 year	5 year	5 year

Subject to change without notice. Refer to user manual for detailed specification.

*Note: Not all performance window specifications can be achieved simultaneously. Performance varies per site.

Consult your AE sales or service representatives for specific PV system design questions at sales.support@aei.com.

**Reactive Power control modes pending inclusion in UL 1741-2010 certification.

***Derating at temperatures > 122 °F (50 °C) for the I2TL and I6TL; > 113 °F (45 °C) for 20TL; > 104 °F (40 °C) for 24TL

Options

- 5, 10 and 15 year warranty extension
- Premium monitoring solutions



AE 3TL Three-Phase Transformerless String Inverters

Advanced Energy is proud to announce the addition of its first ever three-phase transformerless string inverter. With versatile monitoring options and a CEC-rated efficiency of 98%, the AE 3TL inverter is the choice for project developers, site designers, and installers.

The AE 3TL is designed with many different applications in mind. These high quality inverters can be used for commercial rooftop and carport installations to solar power plants. With a power range of 12 to 23.2 kilowatts, the AE 3TL is situated to serve installations large and small. The AE 3TL optimizes space in the site design, allowing for placement within the array, saving site owners highly valued space.

Highly precise MPP tracking combined with AE Solar Energy's advanced monitoring solutions gives solar stakeholders the vital data needed to operate and maintain a highly efficient site, providing maximum return for investors in solar energy.

AE Solar Energy listens carefully to customer demands. The AE 3TL is light weight and easy to install. Weighing just over 100 pounds, the easily installed inverter is very well suited for rooftop or space-constrained installations, and decreases initial systems costs for projects below 400 kW. Additional savings are recognized with lowered shipping costs and there is no need for the heavy machinery associated with installing larger, heavier inverters. Arrays designed with the AE 3TL string inverters have best-in-class uptime, system yields and problem resolution.

Versatility

- Wide range of output power allows for integration on a variety of site designs, with an emphasis on design flexibility and project yield.
- Superior efficiency, low shipping costs and distributed design offer solar stakeholders increased return on investment and reduced upfront costs.
- Maximizes space for energy production

Reliability

- Industry leading efficiency
- Low maintenance
- Improved system uptime

Superior installability

- Light weight, easy to install
- Less space needed on site
- Lowered balance of system costs
- Inverters closer to array



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AE Solar Energy is a US based company.

Light weight design supports ease of installation

Maximizes project space and energy production

Highly reliable and efficient. Saves money on maintenance costs and improves energy harvest.

Lower initial system costs for projects under 400 kW

Wide range of output power allows for integration on a variety of site designs

