# IPT Series

Pure sine wave inverter

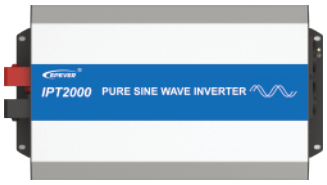
## Overview

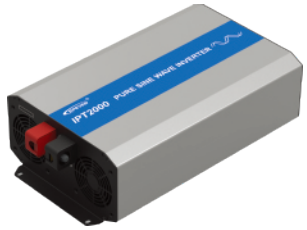
The IPT series, a high-frequency sine wave inverter, adopts a fully digital intelligent design and voltage-current dual closed-loop control algorithm. Featured with fast response, high conversion efficiency, low Total Harmonic Distortion(THD), and high reliability running, the IPT series can be widely used in the DC-AC off-grid systems (such as vehicle systems, security monitoring systems, emergency lighting systems, household power systems, field power systems, and other systems requiring higher power quality).

## Features

- Pure sine wave output
- Input to output electrical isolation
- Output power factor up to 1
- Input Protection: Low-voltage, Over-voltage
- Output Protection: Overload, Short circuit, Overheating
- RS485 com. port to realize remote monitoring①
- External switch design, matched with EPEVER products, to expand inverter control function and reduce power consumption
- Diversified AC output sockets
- EN/IEC62109-1/2, EN61000-6-2/4, and FCC approved

- ①For inverters with 12V/24V input voltage, the RS485/RJ11 port has NO communication isolation design. This function (communication isolation design) is just for inverters with 48V input voltage.

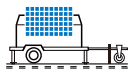


Solar Car

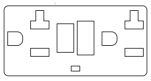
Solar Home

Solar Boat



Solar Power Generator

# Technical Specifications

| Parameter | IPT350-11 | IPT350-21 | IPT500-11 | IPT500-21 | IPT1000-11 | IPT1000-21 | IPT1000-41 |
|---|---|---|---|---|---|---|---|
| Continuous output power | 350W@35℃@Rated input voltage | | 500W@35℃@Rated input voltage | | 1000W@35℃@Rated input voltage | | |
| Surge power | 700W@5S | | 1000W@5S | | 2000W@5S | | |
| Surge current when power on① | < 30A | | < 50A | | < 100A | | < 35A |
| Output voltage | 100VAC/110VAC (±3%); 120VAC (-7%~+3%) | | | | 100VAC/110VAC (±3%); 120VAC (-7%~+3%) | | 100VAC/110VAC/ 120VAC(±3%) |
| Output frequency | 50/60Hz ± 0.2% | | | | 50/60Hz ± 0.2% | | |
| Output wave | Pure Sine Wave | | | | Pure Sine Wave | | |
| Output distortion THD | THD ⩽ 4% (Resistive load) | THD ⩽ 3% (Resistive load) | THD ⩽ 4% (Resistive load) | | THD ⩽ 4% (Resistive load) | THD ⩽ 3% (Resistive load) | THD ⩽ 3% (Resistive load) |
| Load power factor | 0.2 ~ 1 (Load power ⩽ Continuous output power) | | | | 0.2 ~ 1 (Load power ⩽ Continuous output power) | | |
| Rated input voltage | 12VDC | 24VDC | 12VDC | 24VDC | 12VDC | 24VDC | 48VDC |
| Input voltage range | 10.8 ~ 16.0VDC | 21.6 ~ 32VDC | 10.8 ~ 16.0VDC | 21.6 ~ 32VDC | 10.8 ~ 16.0VDC | 21.6 ~ 32.0VDC | 43.2 ~ 64.0VDC |
| Rated output efficiency② | > 87.0% | > 90.0% | > 87.5% | > 90.0% | > 87.0% | > 90.0% | > 91.0% |
| Max. output efficiency③ | > 89.0% (70% loads) | > 90.5% (70% loads) | > 90.0% (40% loads) | > 91.0% (40% loads) | > 92.0% (40% loads) | > 92.5% (30% loads) | > 92.5% (40% loads) |
| Idle current | < 0.15A | < 0.10A | < 0.15A | < 0.10A | < 0.2A | < 0.15A | < 0.1A |
| No-load current | < 0.8A | < 0.4A | < 0.8A | < 0.5A | < 0.8A | < 0.6A | < 0.5A |
| RS485 com. port | 5VDC/200mA | | | | 5VDC/200mA | | |
| **Mechanical parameters** | | | | | | | |
| Input terminal | M6 | | | | | | |
| Dimension (L x W x H) | 229 × 160 × 73mm | | 286 × 160 × 73mm | | 371 × 228 × 118mm | | 332×228×118mm |
| Mounting size (L x W) | 205 × 75mm | | 262 × 75mm | | 345 × 145mm | | 306×145mm |
| Mounting hole size | Φ5mm | | Φ5mm | | Φ6mm | | Φ6mm |
| Net Weight | 1.5kg | | 2.3kg | | 4.8kg | | 4.5kg |
| AC output Interface* |   NEMA  North America (GFCI) *For specific product sockets,please refer to the product manual | | | | | | |

① The "Surge current when power on" parameter is for the customized products with an anti-surge function (whose product model has "S"). For other products, the actual surge current prevails.

② It means the rated output efficiency when the load power equals the "continuous output power" under the rated DC input voltage.

③ It means the max. output efficiency when the inverter is connected with different loads under the rated DC input voltage.

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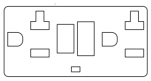
# Technical Specifications

| Parameter | IPT1500-11 | IPT1500-21 | IPT1500-41 | IPT2000-11 | IPT2000-21 | IPT2000-41 |
|---|---|---|---|---|---|---|
| Continuous output power | 1500W@35℃@Rated input voltage | | | 2000W@35℃@Rated input voltage | | |
| Surge power | 3000W@5S | | | 4000W@5S | | |
| Surge current when power on① | < 100A | < 100A | < 50A | < 100A | < 100A | < 50A |
| Output voltage | 100VAC/110VAC (±3%); 120VAC (-7%~+3%) | | | 100VAC/110VAC (±3%); 120VAC (-7%~+3%) | | |
| Output frequency | 50/60Hz ± 0.2% | | | 50/60Hz ± 0.2% | | |
| Output wave | Pure Sine Wave | | | Pure Sine Wave | | |
| Output distortion THD | THD ⩽ 4% (Resistive load) | | | THD ⩽ 5% (Resistive load) | THD ⩽ 4% (Resistive load) | |
| Load power factor | 0.2 ~ 1 (Load power ⩽ Continuous output power) | | | 0.2 ~ 1 (Load power ⩽ Continuous output power) | | |
| Rated input voltage | 12VDC | 24VDC | 48VDC | 12VDC | 24VDC | 48VDC |
| Input voltage range | 10.8 ~ 16.0VDC | 21.6 ~ 32.0VDC | 43.2 ~ 64.0VDC | 10.8 ~ 16.0VDC | 21.6 ~ 32.0VDC | 43.2 ~ 64.0VDC |
| Rated output efficiency② | > 86.0% | > 88.0% | > 90.0% | > 85.0% | > 88.0% | > 88.0% |
| Max. output efficiency③ | > 93.0% (30% loads) | > 92.5% (30% loads) | > 92.0% (30% loads) | > 92.0% (30% loads) | > 92.0% (30% loads) | > 93.0% (30% loads) |
| Idle current | < 0.2A | < 0.15A | < 0.1A | < 0.2A | < 0.15A | < 0.1A |
| No-load current | < 1.0A | < 0.9A | < 0.5A | < 1.2A | < 0.9A | < 0.5A |
| RS485 com. port | 5VDC/200mA | | | 5VDC/200mA | | |
| **Mechanical parameters** | | | | | | |
| Input terminal | M6 | | | M10 | M6 | |
| Dimension (L x W x H) | 387 × 228 × 118mm | | | 420 × 228 × 118mm | 421 × 228 × 118mm | |
| Mounting size (L x W) | 361 × 145mm | | | 395 × 145mm | 395 × 145mm | |
| Mounting hole size | Φ6mm | | | Φ6mm | Φ6mm | |
| Net Weight | 5.6kg | | | 7.5kg | 6.0kg | |
| AC output Interface* |   NEMA  North America (GFCI) *For specific product sockets,please refer to the product manual | | | | | |

① The "Surge current when power on" parameter is for the customized products with an anti-surge function (whose product model has "S"). For other products, the actual surge current prevails.

② It means the rated output efficiency when the load power equals the "continuous output power" under the rated DC input voltage.

③ It means the max. output efficiency when the inverter is connected with different loads under the rated DC input voltage.

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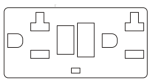
# Technical Specifications

| Parameter | IPT3000-11 | IPT3000-21 | IPT3000-41 | IPT4000-41 |
|---|---|---|---|---|
| Continuous output power | 3000W@35℃@Rated input voltage | | | 4000W@35℃@Rated input voltage |
| Surge power | 4800W@5S | 6000W@5S | 6000W@5S | 8000W@5S |
| Surge current when power on① | < 100A | < 100A | < 65A | < 65A |
| Output voltage | 100VAC/110VAC (±3%); 120VAC (-7%~+3%) | | | |
| Output frequency | 50/60Hz ± 0.2% | | | |
| Output wave | Pure Sine Wave | | | |
| Output distortion THD | THD ⩽ 4% (Resistive load) | THD ⩽ 5% (Resistive load) | THD ⩽ 4% (Resistive load) | THD ⩽ 4% (Resistive load) |
| Load power factor | 0.2 ~ 1 (Load power ⩽ Continuous output power) | | | |
| Rated input voltage | 12VDC | 24VDC | 48VDC | 48VDC |
| Input voltage range | 10.8 ~ 16.0VDC | 21.6 ~ 32.0VDC | 43.2 ~ 64.0VDC | 43.2 ~ 64.0VDC |
| Rated output efficiency② | > 85.0% | > 87.0% | > 89.5% | > 88.0% |
| Max. output efficiency③ | > 93.0% (30% loads) | > 91.5% (30% loads) | > 93.5% (30% loads) | > 93.0%(30% loads) |
| Idle current | < 0.2A | < 0.15A | < 0.1A | < 0.1A |
| No-load current | < 1.6A | < 1.0A | < 0.4A | < 0.6A |
| RS485 com. port | 5VDC/200mA | | | |
| **Mechanical parameters** | | | | |
| Input terminal | M10 | M6 | M6 | M6 |
| Dimension (L x W x H) | 550 × 270 × 143mm | 521 × 270 × 143mm | 516 x 228 x 118mm | 521 × 270 × 143mm |
| Mounting size (L x W) | 525 × 145mm | 495 × 145mm | 490 x 145mm | 495 × 145mm |
| Mounting hole size | Φ6mm | Φ6mm | Φ6mm | Φ6mm |
| Net Weight | 11.5kg | 8.8kg | 7.0kg | 10.5kg |
| AC output Interface* |   NEMA  North America (GFCI) *For specific product sockets,please refer to the product manual | | | |

① The "Surge current when power on" parameter is for the customized products with an anti-surge function (whose product model has "S"). For other products, the actual surge current prevails.
② It means the rated output efficiency when the load power equals the "continuous output power" under the rated DC input voltage.
③ It means the max. output efficiency when the inverter is connected with different loads under the rated DC input voltage.

| Environment parameters | | Certification | |
|---|---|---|---|
| Environment temperature | -20℃ ~ +60℃ (Refer to the Derating Curve) | Safety | EN/IEC62109-1, UL458 (Products with 12/24V input voltage support), CSA C22.2#107.1 |
| Storage temperature | -35℃ ~ +70℃ | EMC(Electromagnetic compatibility) | EN61000-6-2/EN61000-6-4,FCC 47 CFR Part 15, Subpart A |
| Relative humidity | ⩽ 95% (N.C.) | RoHS | IEC62321-3-1 |
| Enclosure | IP20 | – | |
| Altitude | < 5000m (If the altitude exceeds 1000 meters, the rated power will be reduced according to IEC62040.) | | |

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