



#### **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 monitoring
- 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



















# **Technical Specifications**

| Parameter                       | IPT350-11   | IPT350-21                    | IPT500-11                      | IPT500-21                                      | IPT1000-11                   | IPT1000-21                    | IPT1000-41                   |
|---------------------------------|---|------------------------------|--------------------------------|--|------------------------------|-------------------------------|------------------------------|
| Continuous<br>output power      | 350W@35°C@Rated input voltage 500W@35°C@Rated input voltage   |                              | 1000W@35°C@Rated input voltage |  |                              |                               |                              |
| Surge power                     | 700W@5S 1000W@5S  |                              |                                | V@5S   | 2000W@5S                     |                               |                              |
| Surge current<br>when power on① | < 30A   |                              | < 50A                          |  | < 100A                       |                               | < 35A                        |
| Output voltage                  | 100VAC/110VAC (±3%); 120VAC (-7%~+3%)   |                              |                                | 100VAC/110VAC (±3%);<br>120VAC (-7%~+3%)       |                              | 100VAC/110VAC/<br>120VAC(±3%) |                              |
| Output frequency                | 50/60Hz ± 0.2%  |                              |                                | 50/60Hz ± 0.2%                                 |                              |                               |                              |
| Output wave                     | Pure Sine Wave  |                              |                                | Pure Sine Wave                                 |                              |                               |                              |
| Output<br>distortion THD        | THD ≤ 4%<br>(Resistive load)  | THD ≤ 3%<br>(Resistive load) | THD ≤ 4% (Resistive load)      |  | THD ≤ 4%<br>(Resistive load) | THD ≤ 3%<br>(Resistive load)  | THD ≤ 3%<br>(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 efficiency@        | > 87.0%   | > 90.0%                      | > 87.5%                        | > 90.0%  | > 87.0%                      | > 90.0%                       | > 91.0%                      |
| Max.<br>output efficiency®      | > 89.0%<br>(70% loads)  | > 90.5%<br>(70% loads)       | > 90.0%<br>(40% loads)         | > 91.0%<br>(40% loads)                         | > 92.0%<br>(40% loads)       | > 92.5%<br>(30% loads)        | > 92.5%<br>(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<br>(L x W x H)        | 229 × 160 × 73mm 286 ×  |                              | 286 × 160                      | ) × 73mm                                       | 371 × 228 × 118mm            |                               | 332×228×118mm                |
| Mounting size<br>(L x W)        | 205 × 75mm 262 × 75i  |                              | 75mm                           | 345 × 145mm                                    |                              | 306×145mm                     |                              |
| Mounting hole size              | Φ5mm  |                              | Φ5mm                           |  | Ф6тт                         |                               | Ф6mm                         |
| Net Weight                      | 1.5kg   |                              | 2.3                            | 2.3kg  |                              | 4.8kg                         |                              |
| AC output Interface*            | T-Terminal  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.

# **Technical Specifications**

| Parameter                       | IPT1500-11                     | IPT1500-21                | IPT1500-41          | IPT2000-11  | IPT2000-21                | IPT2000-41          |  |
|---------------------------------|--------------------------------|---------------------------|---------------------|---|---------------------------|---------------------|--|
| Continuous<br>output power      | 1500W@35°C@Rated input voltage |                           |                     | 2000W@35°C@Rated input voltage  |                           |                     |  |
| Surge power                     |                                | 3000W@5S                  |                     | 4000W@5S  |                           |                     |  |
| Surge current<br>when power on① | < 100A                         | < 100A                    | < 50A               | < 100A  | < 100A                    | < 50A               |  |
| Output voltage                  | 100VAC                         | /110VAC (±3%); 120VAC (-7 |                     | 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<br>distortion THD        |                                | THD ≤ 4% (Resistive load) | )                   | THD ≤ 5%<br>(Resistive load)  | THD ≤ 4% (Resistive load) |                     |  |
| Load power factor               | 0.2 ~ 1 (Loa                   | d power ≤ Continuous ou   | tput 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 efficiency@        | > 86.0%                        | > 88.0%                   | > 90.0%             | > 85.0%   | > 88.0%                   | > 88.0%             |  |
| Max.<br>output efficiency®      | > 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<br>(L x W x H)        | 387 × 228 × 118mm              |                           |                     | 420 × 228 × 118mm   | 421 × 228 × 118mm         |                     |  |
| Mounting size<br>(L x W)        |                                | 361 × 145mm               |                     | 395 × 145mm   | 395 × 145mm               |                     |  |
| Mounting hole size              | Φ6mm                           |                           |                     | Ф6тт  | Ф6тт                      |                     |  |
| Net Weight                      | 5.6kg                          |                           |                     | 7.5kg   | 7.5kg 6.0kg               |                     |  |
| AC output Interface*            | T-Terminal 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.

# **Technical Specifications**

| Parameter                        | IPT3000-11                | IPT3000-21                                     | IPT3000-41                                      | IPT4000-41                           |  |  |
|----------------------------------|---------------------------|--|---|--------------------------------------|--|--|
| Continuous output power          |                           | 3000W@35°C@Rated input voltage                 |   | 4000W@35°C@Rated input voltage       |  |  |
| Surge power                      | 4800W@5S                  | 6000W@5S                                       | 6000W@5S  | 8000W@5S                             |  |  |
| Surge current<br>when power on ① | < 100A                    | < 100A   | < 65A   | < 65A                                |  |  |
| Output voltage                   |                           |  |   |                                      |  |  |
| Output frequency                 | 50/60Hz ± 0.2%            |  |   |                                      |  |  |
| Output wave                      |                           | Pure Sir                                       | ne Wave   |                                      |  |  |
| Output<br>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.<br>output efficiency®       | > 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 param                 | neters                    |  |   |                                      |  |  |
| Input terminal                   | M10                       | M6   | M6  | M6                                   |  |  |
| Dimension<br>(L x W x H)         | 550 × 270 × 143mm         | 521 × 270 × 143mm                              | 516 x 228 x 118mm                               | 521 × 270 × 143mm                    |  |  |
| Mounting size<br>(L x W)         | 525 × 145mm               | 495 × 145mm                                    | 490 x 145mm                                     | 495 × 145mm                          |  |  |
| Mounting hole size               | Ф6mm                      | Ф6mm   | Ф6mm  | Ф6mm                                 |  |  |
| Net Weight                       | 11.5kg                    | 8.8kg  | 7.0kg   | 10.5kg                               |  |  |
| AC output Interface*             | T-Terminal                | NEMA   | North America (GFC *For specific product socket | s,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.

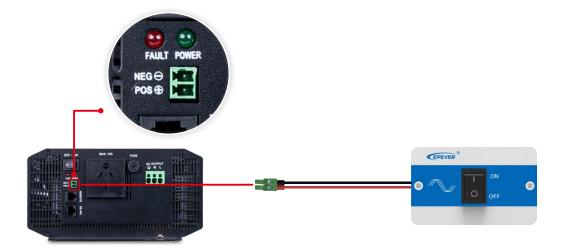
|                         | Environment parameters  | Certification                      |   |  |
|-------------------------|---|------------------------------------|---|--|
| Environment temperature | -20°C ~ +60°C (Refer to the Derating Curve)   | Safety                             | EN/IEC62109-1, UL458<br>(Products with 12/24V input voltage support), CSA C22.2#107.1 |  |
| Storage temperature     | -35°C ~ +70°C   | 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.) |                                    | -   |  |





#### Remote switch (optional accessory)

This remote switch enables you to remotely power the inverter on/off. It comes with a standard 6-meter switch cable and is compatible with IPT series products.



Connect the 3.81-2P green socket on the remote switch cable to the 3.81-2P green base on the product's side. Turn off the local toggle switch, and the remote switch will control the inverter's on/off.

