

# X3

10T~36T

## THREE PHASE INVERTERS



X3



X3

## X3 THREE PHASE INVERTER

SolaX have developed a range of three phase inverters unrivalled in the industry for their quality, reliability and efficiency.

The SolaX three-phase inverters boast a wide MPPT voltage range to allow for more energy harvesting and have a maximum input voltage of 1000V. In addition, all SolaX three-phase inverters are IP65 rated, have an integrated DC switch, WIFI as standard and an OptiCool temperature controlled fan.

### Get in touch now:

Global: +86 571-56260008

AU: +61 1300 476529

Website: [www.solaxpower.com](http://www.solaxpower.com)

DE: +49 7231 4180999

UK: +44 2476 586998

Email: [info@solaxpower.com](mailto:info@solaxpower.com)





# X3 THREE PHASE

ZDNY-TL10000 ZDNY-TL12000 ZDNY-TL15000 ZDNY-TL17000 ZDNY-TL20000

# X3 THREE PHASE

X3-30T

X3-36T

| INPUT (DC)                                    | ZDNY-TL10000 ZDNY-TL12000 ZDNY-TL15000 ZDNY-TL17000 ZDNY-TL20000                |           |           |           |           | X3-30T  | X3-36T  |
|---|---|-----------|-----------|-----------|-----------|---|---------|
| Max. recommended DC power [W]                 | 10260   | 12300     | 15370     | 17420     | 20500     | 36000   | 43200   |
| Max. input DC voltage [V]                     | 1000  |           |           |           |           | 1000  |         |
| Max. input current [A]                        | A:22/B:11   | A:22/B:11 | A:22/B:22 | A:22/B:22 | A:22/B:22 | A:34/B:34   |         |
| MPPT voltage range [V]                        | 320-800   | 380-800   | 350-800   | 400-800   | 400-800   | 480-850   | 580-850 |
| Start input/output voltage [V]                | 220/400   |           |           |           |           | 300   |         |
| Number of MPP tracker/strings per MPP tracker | 2/A:3 B:1   | 2/A:3 B:1 | 2/A:3 B:3 | 2/A:3 B:3 | 2/A:3 B:3 | 2/A:4 B:4   |         |
| OUTPUT (AC)                                   |   |           |           |           |           |   |         |
| AC nominal power [VA]                         | 10000   | 12000     | 15000     | 17000     | 20000     | 30000   | 36000   |
| Max. AC power [VA]                            | 10000   | 12000     | 15000     | 17000     | 20000     | 33000   | 40000   |
| Normal AC voltage; range [V]                  | 50; 44-55 / 60;55-65  |           |           |           |           | 3/PE 380, 400; +/--10%; 3/N/PE 380, 400; +/--10%; 3/PE 480; +/--10%; 3/N/PE 480; +/--10%; |         |
| AC grid frequency; range [Hz]                 | 3/N/PE 230/400; 160-280   |           |           |           |           | 50;45-55 / 60;55-65   |         |
| Max. AC current [A]                           | 16  | 20        | 24        | 25        | 29        | 48*3  | 48*3    |
| Power factor (full load)                      | 0.9 leading ~ 0.9lagging  |           |           |           |           | 0.8 leading ~ 0.8 lagging   |         |
| Total harmonic distortion(THD) [%]            | <3  |           |           |           |           | <2  |         |
| POWER CONSUMPTION                             |   |           |           |           |           |   |         |
| Standby power [W]                             | <10   |           |           |           |           | <7  |         |
| EFFICIENCY                                    |   |           |           |           |           |   |         |
| MPPT efficiency [%]                           | 99.9  |           |           |           |           | 99.9  |         |
| Euro efficiency [%]                           | 97.6  |           |           |           |           | 98.3  |         |
| Max. efficiency [%]                           | 98.2  |           |           |           |           | 98.6  |         |
| SAFETY & PROTECTION                           |   |           |           |           |           |   |         |
| Over voltage protection                       | YES   |           |           |           |           | YES   |         |
| Over current protection                       | YES   |           |           |           |           | YES   |         |
| DC isolation impedance monitoring             | YES(optional)   |           |           |           |           | YES   |         |
| Ground fault current monitoring               | YES   |           |           |           |           | YES   |         |
| DC injection monitoring                       | YES   |           |           |           |           | YES   |         |
| RCD protection                                | YES   |           |           |           |           | YES   |         |
| Safety  | IEC62109-1/IEC62109-2/AS3100  |           |           |           |           | IEC62109-1/IEC62109-2/AS3100  |         |
| EMC   | EN 61000-3-2/EN 61000-3-3/EN 61000-3-11/EN 61000-3-12/EN 61000-6-2/EN 61000-6-3 |           |           |           |           | EN 61000-3-2/EN 61000-3-3/EN 61000-3-11/EN 61000-3-12/EN 61000-6-2/EN 61000-6-3           |         |
| Certification                                 | G83;G59;VDE0126;VDE4105;CQC;IEC62172;IEC62116;IEC61683;IEC60068                 |           |           |           |           | NB/T 32004-2013/ZVRT/VDE4105/G59/3/AS4777   |         |
| ENVIRONMENTAL PARAMETERS                      |   |           |           |           |           |   |         |
| Protection class                              | IP55  |           |           |           |           | IP65  |         |
| Operating temperature [°C]                    | -25~+60 (derating at 45)  |           |           |           |           | -20~ +60(derating at 45)  |         |
| Humidity [%]                                  | 0~95 (non-condensing)   |           |           |           |           | 0~95  |         |
| Attitude [m]                                  | 2000  |           |           |           |           | 2000  |         |
| Storage temperature [°C]                      | -20~60  |           |           |           |           | -25~60  |         |
| Noise emission [dB]                           | <50   |           |           |           |           | <50   |         |
| DIMENSIONS & WEIGHT                           |   |           |           |           |           |   |         |
| Dimensions (W*H*D) [mm]                       | 513 x 651.5 x 207   |           |           |           |           | 660*610*260   |         |
| Weight [Kg]                                   | 48  | 48        | 50.5      | 50.5      | 51        | 60  |         |
| GENERAL DATA                                  |   |           |           |           |           |   |         |
| Topology                                      | Transformerless   |           |           |           |           | Transformerless   |         |
| Communication interface                       | RS485 / RS232 / WIFI (optional) / DRM   |           |           |           |           | RS485 / WIFI (optional) / Ethernet / DRM  |         |
| Display                                       | Backlight 128*64 point LCD  |           |           |           |           | 4 LED   |         |
| Standard warranty(years)                      | 5-10 (Dependent On Territory)   |           |           |           |           | 5-10  |         |
| Cooling type                                  | Forced-cooling  |           |           |           |           | Forced-cooling  |         |



# BYD P6F-30 Series-3BB

245W 250W 255W 260W



17.8%

Average cell efficiency up to 17.8%  
Excellent optical performance

0~5w

Positive tolerance 0~5W  
Reliability for output performance

12 Years

12 years for product  
25 years linear Warranty

Grid

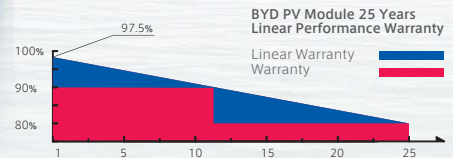
Residential roof top systems  
On/Off-grid commercial systems  
On/Off-grid utility systems

3<sup>rd</sup>

TUV Salt corrosion resistance test  
TUV Ammonia corrosion resistance test  
5400Pa for Snow Load Test  
5400Pa for Wind Load Test

Certification

IEC 61215 (Edition 2005), IEC 61730,  
ISO9001:2008, ISO14001:2004



## Production Process



Wafer Production



Cell Production



Module Production



Module

## About BYD

**BYD (HK:1211)**, one of the world's top PV manufacturers, produces from wafer to module, committing to high quality sustainable products and continuous improvement. Integrating with Electrical Vehicles and Battery Energy Storage technology makes BYD the world-leading solution provider from energy generating to consumption and storage.



## New Technology

### NES

A high technology that is widely used in BYD photovoltaic products, increasing the average cell efficiency up to 17.8%

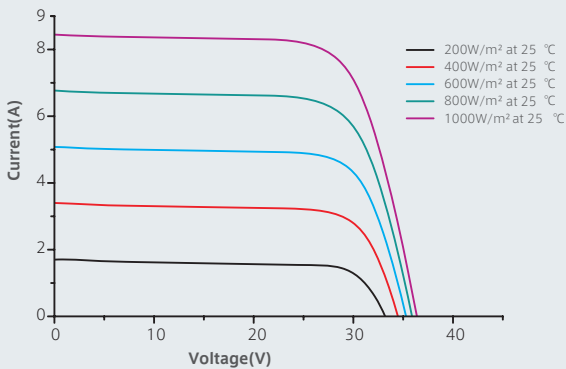
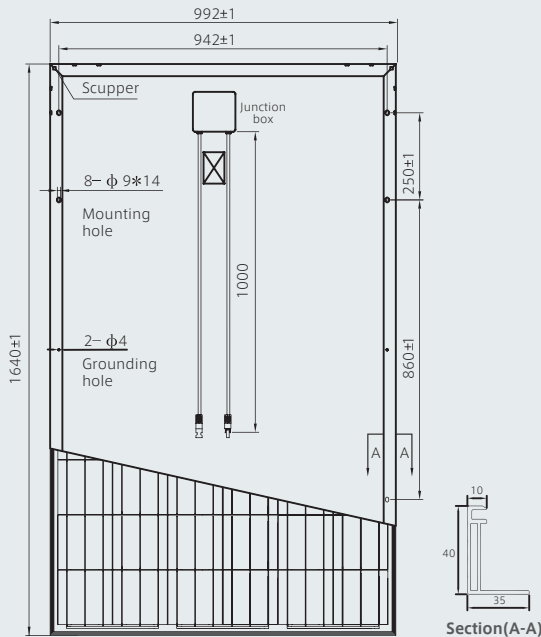
### BYD COMPANY LIMITED Headquarter

Add: No.3009, BYD Road, Pingshan, Shenzhen, 518118, P.R. China  
Tel: +86-755-8988 8888  
Fax: +86-755-8420 2222  
Email: bydpv@byd.com  
Http://www.byd.com

# BYD P6F-30 Series-3BB

Build Your Dreams

245W 250W 255W 260W



## Mechanical Specifications

|                     |  |
|---------------------|--|
| Cell                | Polycrystalline Silicon solar cells<br>156mm * 156 mm / 6 inch |
| No. of Cells        | 60 (6 * 10) pcses  |
| Dimension of Module | 1640 mm * 992 mm * 40 mm<br>/ 64.6 inch * 39.1 inch * 1.6 inch |
| Weight              | 18.9kg / 41.67 lbs   |
| Front Glass         | 3.2 mm tempered glass with AR Coating                          |
| Frame               | Anodized aluminum alloy  |
| Junction Box        | IP65   |
| Plug Connector      | IP67   |
| Bypass-Diodes       | 6 pcses / 3 pcses  |
| Type of Connector   | MC4 or MC4-compatible  |
| Cable Section Area  | 4 mm <sup>2</sup> / 0.0062 Sq in                               |
| Cable Length        | 2 * 1000 mm / 2 * 39.4 inch                                    |

## Temperature Coefficients

|   |            |
|---|------------|
| Nominal Operating Cell Temperature (NOCT)     | 45°C ± 2°C |
| Short-Circuit Current Temperature Coefficient | 0.059%/°C  |
| Open-Circuit Voltage Temperature Coefficient  | -0.32%/°C  |
| Peak Power Temperature Coefficient            | -0.43%/°C  |

## Package Information

|                    |        |
|--------------------|--------|
| Package            | 40' HC |
| Pcs / Pallet       | 25     |
| Pallet / Container | 28     |
| Pcs / Container    | 700    |

## BYD P6F-30 Series Electrical Specification

### STC

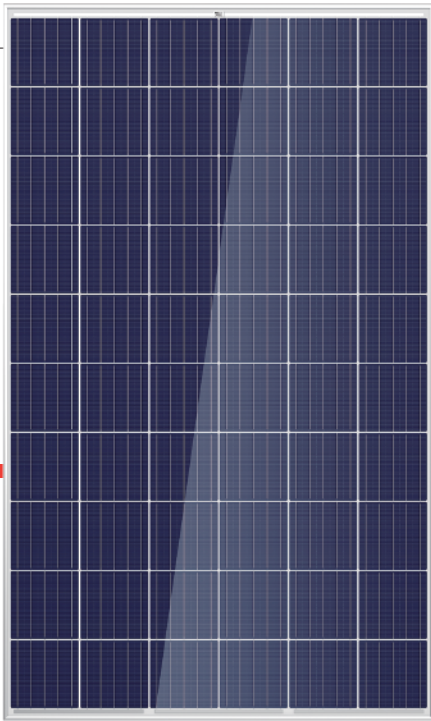
| Item                            | Module | BYD 245P6F-30                | BYD 250P6F-30 | BYD 255P6F-30 | BYD 260P6F-30 |
|---------------------------------|--------|------------------------------|---------------|---------------|---------------|
| Open Circuit Voltage (Voc)      |        | 37.45 V                      | 37.76V        | 38.07 V       | 38.38 V       |
| Maximum Operating Voltage (Vmp) |        | 29.85 V                      | 30.13 V       | 30.40 V       | 30.67 V       |
| Short Circuit Current (Isc)     |        | 8.73 A                       | 8.81A         | 8.89A         | 8.97 A        |
| Maximum Operating Current (Imp) |        | 8.21 A                       | 8.30 A        | 8.39A         | 8.48 A        |
| Maximum Power in STC (Pmax)     |        | 245 Wp                       | 250 Wp        | 255 Wp        | 260Wp         |
| Module Efficiency               |        | 15.06%                       | 15.37%        | 15.67%        | 15.98%        |
| Operating Temperature           |        | -40°C ~ 85°C                 |               |               |               |
| Max. Fuse Current Rating        |        | 15A                          |               |               |               |
| Maximum System Voltage          |        | 1000 VDC(IEC) / 600 VDC (UL) |               |               |               |
| Power Tolerance                 |        | 0~5W                         |               |               |               |
| Application Class               |        | Class A                      |               |               |               |
| Fire Safety Class               |        | Class C                      |               |               |               |

STC: IRRADIANCE 1000W/m<sup>2</sup>, Module Temperature 25°C, AM=1.5 Ave. efficiency reduction of 4.5% at 200W/m<sup>2</sup>

### NOCT

| Item                            | Module | BYD 245P6F-30 | BYD 250P6F-30 | BYD 255P6F-30 | BYD 260P6F-30 |
|---------------------------------|--------|---------------|---------------|---------------|---------------|
| Open Circuit Voltage (Voc)      |        | 34.45 V       | 34.74 V       | 34.99 V       | 35.00 V       |
| Maximum Operating Voltage (Vmp) |        | 27.27 V       | 27.57 V       | 27.86 V       | 28.30 V       |
| Short Circuit Current (Isc)     |        | 7.07 A        | 7.12 A        | 7.17 A        | 7.26 A        |
| Maximum Operating Current (Imp) |        | 6.53 A        | 6.58 A        | 6.62 A        | 6.65 A        |
| Maximum Power in NOCT (Pmax)    |        | 178.1 Wp      | 181.4 Wp      | 184.4 Wp      | 188.5 Wp      |

NOCT: open-circuit module operation temperature at 800W/m<sup>2</sup> irradiance, 20° C ambient temperature, 1m/s wind speed.



# THE Honey

FRAMED 60-CELL MODULE

**60 CELL**  
MULTICRYSTALLINE MODULE

**260-280W**  
POWER OUTPUT RANGE

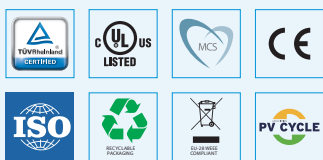
**17.1%**  
MAXIMUM EFFICIENCY

**0~+5W**  
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. We believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

## Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716  
ISO 9001: Quality Management System  
ISO 14001: Environmental Management System  
ISO14064: Greenhouse gases Emissions Verification  
OHSAS 18001: Occupation Health and Safety Management System



### Our most versatile product

- Compatible with all major BOS components and system designs
- 1000V UL/1000V IEC certified



### Maximize Limited Space

- 60-cell module power output up to 280W
- Up to 171 W/m<sup>2</sup> power density



### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant
- 100% EL double inspection

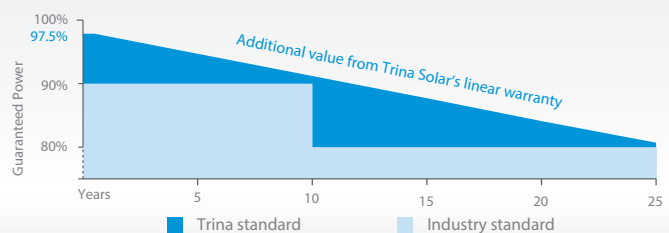


### Certified to withstand the most challenging environmental conditions

- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

## LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty · 25 Year Linear Power Warranty

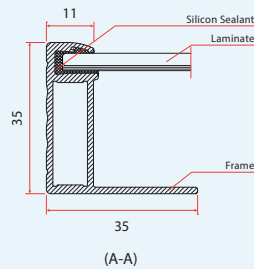
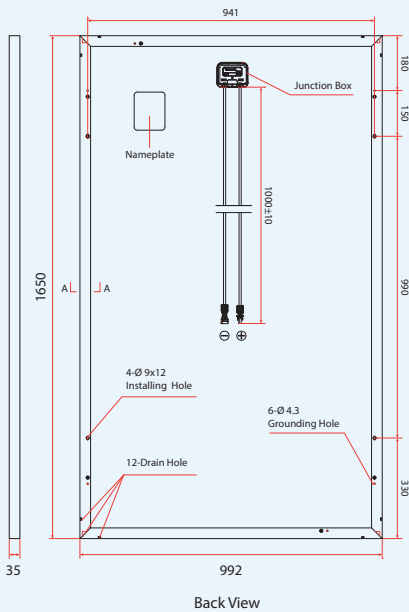
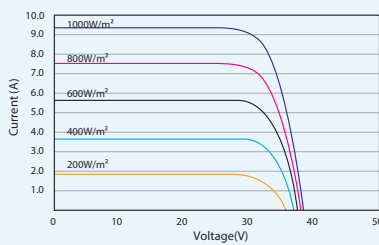
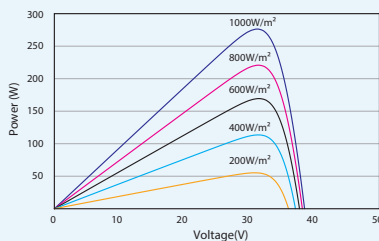


**PRODUCTS**

TSM-PD05  
TSM-PD05.08  
TSM-PD05.05

**POWER RANGE**

265-280W  
265-280W  
260-275W

**DIMENSIONS OF PV MODULE(mm)**

**I-V CURVES OF PV MODULE(280W)**

**P-V CURVES OF PV MODULE(280W)**

**ELECTRICAL DATA (STC)**

|                                       |        |      |      |      |      |
|---------------------------------------|--------|------|------|------|------|
| Peak Power Watts- $P_{MAX}$ (Wp)*     | 260    | 265  | 270  | 275  | 280  |
| Power Output Tolerance- $P_{MAX}$ (W) | 0 ~ +5 |      |      |      |      |
| Maximum Power Voltage- $V_{MPP}$ (V)  | 30.6   | 30.8 | 30.9 | 31.1 | 31.4 |
| Maximum Power Current- $I_{MPP}$ (A)  | 8.50   | 8.61 | 8.73 | 8.84 | 8.92 |
| Open Circuit Voltage- $V_{OC}$ (V)    | 38.2   | 38.3 | 38.4 | 38.5 | 38.7 |
| Short Circuit Current- $I_{SC}$ (A)   | 9.00   | 9.10 | 9.18 | 9.25 | 9.34 |
| Module Efficiency $\eta_p$ (%)        | 15.9   | 16.2 | 16.5 | 16.8 | 17.1 |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance: ±3%.

**ELECTRICAL DATA (NOCT)**

|                                      |      |      |      |      |      |
|--------------------------------------|------|------|------|------|------|
| Maximum Power- $P_{MAX}$ (Wp)        | 193  | 197  | 200  | 204  | 207  |
| Maximum Power Voltage- $V_{MPP}$ (V) | 28.4 | 28.6 | 28.7 | 29.0 | 29.2 |
| Maximum Power Current- $I_{MPP}$ (A) | 6.81 | 6.89 | 6.97 | 7.03 | 7.10 |
| Open Circuit Voltage- $V_{OC}$ (V)   | 35.4 | 35.5 | 35.5 | 35.6 | 35.8 |
| Short Circuit Current- $I_{SC}$ (A)  | 7.27 | 7.35 | 7.41 | 7.47 | 7.55 |

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

**MECHANICAL DATA**

|                   |   |
|-------------------|---|
| Solar Cells       | Multicrystalline 156.75 × 156.75 mm (6 inches)  |
| Cell Orientation  | 60 cells (6 × 10)   |
| Module Dimensions | 1650 × 992 × 35 mm (65.0 × 39.1 × 1.38 inches)  |
| Weight            | 18.6 kg (41.0 lb)   |
| Glass             | 3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass                                       |
| Backsheet         | White (PD05, PD05.08);<br>Black (PD05.05)   |
| Frame             | Silver Anodized Aluminium Alloy (PD05);<br>Black Anodized Aluminium Alloy (PD05.08, PD05.05)            |
| J-Box             | IP 67 or IP 68 rated  |
| Cables            | Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ),<br>1000 mm (39.4 inches) |
| Connector         | MC4   |

**TEMPERATURE RATINGS**

|   |             |
|---|-------------|
| NOCT (Nominal Operating Cell Temperature) | 44°C (±2°C) |
| Temperature Coefficient of $P_{MAX}$      | -0.41%/°C   |
| Temperature Coefficient of $V_{OC}$       | -0.32%/°C   |
| Temperature Coefficient of $I_{SC}$       | 0.05%/°C    |

**MAXIMUM RATINGS**

|                         |                                 |
|-------------------------|---------------------------------|
| Operational Temperature | -40~+85°C                       |
| Maximum System Voltage  | 1000V DC (IEC)<br>1000V DC (UL) |
| Max Series Fuse Rating  | 15A                             |

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

**WARRANTY**

|                                      |
|--------------------------------------|
| 10 year Product Workmanship Warranty |
| 25 year Linear Power Warranty        |

(Please refer to product warranty for details)

**PACKAGING CONFIGURATION**

|                                       |
|---------------------------------------|
| Modules per box: 30 pieces            |
| Modules per 40' container: 840 pieces |