

OFF-GRID SOLAR INVERTER

500 W - 3000 W
PF 1.0

Tb Plus[®]

FEATURES

- High reliability: adopt high-speed DSP control system, combine advanced SPWM technology and high-speed power MOS
- Operating mode selectable: energy storage priority or power supply priority
- No PID attenuation damage for solar panels to ensure their service life
- Flexible battery management system: auto switch three-stage charging mode shortens recharge time; wide charging current is selectable according to configured battery; flexible DOD (Depth of discharge) is settable to meet more applications
- AC input with effective online synchronous stabilizing technology
- Broad MPPT input voltage range
- No-load auto shutdown function (optional)
- Settable frequency (50 Hz / 60 Hz)
- Mobile APP monitoring
- Auto Power-On/Off function; real-time monitoring, test and intelligent startup / shutdown by RS232 or USB interface communicating with PC; remote monitoring by optional SNMP networks

Off-Grid Solar Inverter

SPECIFICATIONS

MODEL		500 W	1000 W	2000 W	2500 W	3000 W
PV INPUT						
Max. input voltage (Voc)		60 Vdc	100 Vdc	150 Vdc		
Optimum operating voltage (Vmp)		16 ~ 48 Vdc	33 ~ 80 Vdc	65 ~ 120 Vdc		
Max. charging current		50 A	50 A	50 A	65 A	65 A
Recommended PV configuration		700 W	1400 W	2800 W	3500 W	3500 W
AC INPUT						
AC input range (bypass mode)		0 ~ 132 Vac / 0 ~ 264 Vac (high-end limit)				
Rated input voltage		100 Vac / 110 Vac / 115 Vac / 120 Vac or 200 Vac / 220 Vac / 230 Vac / 240 Vac ± 25% (2500 W is only for 110 Vac; 3000 W is only for 220 Vac)				
Rated Input frequency		50 Hz / 60 Hz ± 5% / 10% / 15% (settable)				
Max. charging current		20 A			30 A	
INVERTER OUTPUT						
Output voltage		100 Vac / 110 Vac / 115 Vac / 120 Vac ± 2% or 200 Vac / 220 Vac / 230 Vac / 240 Vac ± 2% (settable) (2500 W is only for 110 Vac; 3000 W is only for 220 Vac)				
Rated output power		500 W	1000 W	2000 W	2500 W	3000 W
Power factor		1				
Rated output frequency		50 Hz / 60 Hz ± 1% (inverter mode)				
Waveform		Sinusoidal				
Max. efficiency (resistive load)		≥ 78%	≥ 82%	≥ 85%	≥ 85%	≥ 85%
Sleep mode		Settable (< 3% load) access in ≤ 2 min				
Output voltage harmonic		≤ 3% (linear load)				
BATTERIES						
Battery voltage		12 Vdc	24 Vdc	48 Vdc		
Battery type		VRLA battery (default), GEL / LFP battery (optional)				
Charging current		5 ~ 50 A (settable)		5 ~ 50 A (settable)	5 ~ 65 A (settable)	
DOD	Settable	10.5 ~ 13.2 Vdc	21 ~ 26.4 Vdc	42 ~ 52.8 Vdc		
	Default	12 Vdc	24 Vdc	48 Vdc		
EOD	Settable	9.6 ~ 12 Vdc	19.2 ~ 24 Vdc	38.4 ~ 48 Vdc		
	Default	10.5 Vdc (default)	21 Vdc	42 Vdc		
Equalizing charge voltage	Settable	13.8 ~ 15 Vdc	27.6 ~ 30 Vdc	55.2 ~ 60 Vdc		
	Default	14.1 Vdc	28.2 Vdc	56.4 Vdc		
Floating charge voltage	Settable	13.2 ~ 13.8 Vdc	26.4 ~ 27.6 Vdc	52.8 ~ 55.2 Vdc		
	Default	13.6 Vdc	27.2 Vdc	54.5 Vdc		
Restoration point of overvoltage		15.5 Vdc	31 Vdc	62 Vdc		
OTHERS						
Transfer time		3 ~ 6 ms (typical); ≤ 10 ms (max.)				
Overload (linear load)		110% for 2 min, 125% for 1 min, 150% for 10 s, 180% for 1 s				
ECO mode (optional)		Load < 3% (settable) , Yes / No settable				
No-load shutdown (optional)		Load < 3% ~ 50%, Yes / No settable				
Load adaptation		Inductive load: ≤ 30%; capacitive load: ≤ 50%; resistive load: ≤ 100%				
Protections		Output overload – short-circuit – overdischarge – overcharge – battery reverse polarity – PV reverse polarity				
Lightning protection		Class III				
Communications		RS232 / USB / RS485 ; SNMP / Wi-Fi / GPRS (optional)				
Standards		IEC62040, IEC / EN 61000				
IP rating		IP21				
Display		LCD & LED				
Operating temperature		0℃ ~ 40℃				
Relative humidity		≤ 93%				
Noise		< 50 dB				
Dimensions (W × D × H) (mm)		365.5 × 442 × 210				
Packaged dimensions (W × D × H) (mm)		455 × 520 × 283				
Net weight (kg)		16.6	19.5	30.4	32.8	38.5
Gross weight (kg)		18.1	21	31.9	34.3	40

● All specifications subject to change without notice.