

## HOT-SWAP MODULAR PARALLEL INVERTERS

The BWT1500 series designed with complete isolation of input and output, and allows hot plugging and parallel connection redundancy. Small size and convenient parallel connection, specially designed for users with high requirements for power supply reliability and maintainability

# 9.5 INCH RACK MOUNT INVERTER INPUT 220VDC POWER 1600W/2000VA OUTPUT 220VAC



#### **Description**

BWT1500 serial 220Vdc &220Vdc modular parallel connection inverter is an inversion device that converts 220V dc/220Vdc power supplied by communication DC power supply into 220V/50Hz sinusoidal AC power. Through conversion on the input DC power, the Pure Sine wave inverter offers users stable and Non-distorted AC power. In case of a power failure in business places, it offers key devices the power of flexible output voltage and frequency.

#### **Feature**

- ✓ Digital control: It adopts 32-bit DSP full digital and high-frequency SPWM technology, featuring strong anti-interference ability, fast calculation speed, high intelligence, accurate control precision and pure output waveform.
- N+1 parallel redundant design: It can form an N+1 parallel redundant power supply system. The modules are backup each other, with high reliability and flexible configuration.Large 128\*64 digital LCD display data information,4 led display working;
- No master-slave parallel technology: The operation and parallel connection of each module are independently controlled by the built-in DSP, no single point of failure, independent flow between modules.
- With hot plugging: no need to do any parameter setting and operation, plug and play, the module automatically enters the normal working state, maintenance and replacement is simple and fast.
- ✓ Module built-in bypass: Users can choose inverter priority or bypass priority.
- ✓ Monitoring management: indicator panel, fault sound and light alarm, RS485 communication interface and fault dry contact.
- Protection function: It has the functions of input over-voltage, output over-voltage, over-temperature, short-circuit and so on.
- ✓ High power density: 1/2 19 " width design, the volume is only half the width of the conventional inverter, saving space and convenient parallel.

### **Technical Data**

INPUT DC Input Voltage DC Input Current DC Input Voltage Range 190-270V Backfill Noise Current \$10%  AC BY-PASS INPUT Input Voltage Range 264V-176V(±10Vac) Rated Input Current 9.1A Transfer Time <12ms  OUTPUT Output Capacity 1600W Rated Output Capacity 1600W Rated Output Voltage 220VAC Rated Output Voltage 220VAC Rated Output Voltage 230Vac(Tolerance ±1.5%) Output Efficiency 285% Output Efficiency 50Hz Frequency Range 43°67Hz Output Wave Pure sine wave THD \$3% (Line Load) Switch Time (By pass to Inverter 50±0.1% or 60±0.1% Dynamic Response Time 5%(load 0→→100%) PF 0.8 Output Over Current Protection Over Load Capacity Continue working 1min @ 125% <load<125% -2%="" 100m,="" 125%<load<125%="" 1min="" 2000m.derating="" 5000m="" 8="" @="" altitude="" ambient="" arabariel="" capacity="" circuit="" connection="" continue="" environment="" full="" high="" load="" max="" mode="" operation="" over="" parallel="" performance="" power="" protection="" quantities="" reverse="" short="" storage="" temp.="" temperature="" test="" th="" to="" units<="" up="" working="" yes=""><th>Model</th><th>BWT220/220-2KVAS</th></load<125%>	Model	BWT220/220-2KVAS
DC Input Current DC Input Voltage Range Backfill Noise Current  AC 8Y-PASS INPUT Input Voltage Range Rated Input Current  9.1A  Transfer Time  OUTPUT  Output Capacity Rated Output Capacity Rated Output Corent  7.3A  Output Voltage Range 230VaC(Tolerance ±1.5%)  Output Frequency Range A3°G7Hz  Output Wave Pure sine wave  THD  S3% (Line Load)  Switch Time (By pass to Inverter Output Frequency Range Dynamic Response Time  Output Over Current  Over Load Capacity Continue working 10min @105%-cload<125% Over Load Capacity Continue working 1min @125%-cload<150% Over Temp. Protection Pes Short circuit Protection Reverse connection protection Fingle Hemperature operation Low temperature storage Battitude S000m  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	INPUT	
DC Input Voltage Range Backfill Noise Current  AC BY-PASS INPUT Input Voltage Range Rated Input Current  9.1A Transfer Time  OUTPUT  Output Capacity Rated Output Capacity Rated Output Voltage Rated Output Current  7.3A  Output Fficiency  2.85%  Output Fficiency  2.85%  Output Fficiency  5.0Hz Frequency Range  43° 67Hz  Output Wave  Pure sine wave  THD  5.3% (Line Load)  Switch Time (By pass to Inverter  5.04.1% or 60±0.1%  Dynamic Response Time  5.%(load 0 → 100%)  PF  0.8  Output Over Current Protection  Over Load Capacity  Continue working 10min  @ 105% cload <125%  Over Load Capacity  Continue working 1min  @ 125% cload <150%  Over Load Capacity  Continue working 1min  @ 125% cload <150%  Over Load Capacity  Continue working 1min  @ 125% cload <150%  Over Load Capacity  Continue working 1min  @ 125% cload <150%  Over Load Capacity  Continue working 1min  @ 125% cload <150%  Over Load Capacity  Continue working 1min  @ 125% cload <150%  Over Temp. Protection  Yes  Short circuit Protection  Yes (Don't test under AC Connect)  Reverse connection protection  Yes  ENVIRONMENT TEST PERFORMANCE  Ambient Temp.  +20° +50°C  High temperature operation  100±2°C (rated load 24H)  High temperature operation  100±000 Merating -2% / 100m, max  altitude Full power up to 2000m. derating -2% / 100m, max  altitude Full power up to 2000m. derating -2% / 100m, max  altitude Full power up to 2000m. derating -2% / 100m, max  altitude Full power up to 2000m. derating -2% / 100m, max  altitude Full power up to 2000m. derating -2% / 100m, max  altitude Full power up to 2000m. derating -2% / 100m, max	DC Input Voltage	220Vdc
DC Input Voltage Range 190-270V Backfill Noise Current ≤10%  AC 8Y-PASS INPUT Input Voltage Range 264V-176V(±10Vac) Rated Input Current 9.1A  Transfer Time <12ms  OUTPUT  Output Capacity 2000VA Rated Output Capacity 1600W Rated Output Voltage 220VAC Rated Output Voltage 230Vac(Tolerance ±1.5%)  Output Fficiency 285%  Output Efficiency 50Hz  Frequency Range 43~67Hz  Output Have Pure sine wave THD 53% (Line Load)  Switch Time (By pass to Inverter 512ms (With Load)  Output Frequency Range 50±0.1% or 60±0.1%  Dynamic Response Time 5% (load 0 → 100%) PF 0.8  Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (don't="" (rated="" -2%="" -20±2°c="" -40±2°c,="" 0°90%,="" 100m,="" 1min="" 2000m.="" 24h="" 24h)="" 5000m="" 50±2°c="" @125%<load<150%="" ac="" altitude="" capacity="" condensation="" connect)="" connection="" continue="" derating="" full="" high="" humidity="" load="" low="" max="" mode<="" moisture="" no="" operation="" over="" parallel="" power="" protection="" reverse="" storage="" td="" temp.="" temperature="" test="" to="" under="" up="" working="" yes=""><td></td><td>9.1AMax</td></load<125%>		9.1AMax
Backfill Noise Current ≤10%  AC BY-PASS INPUT Input Voltage Range 264V-176V(±10Vac) Rated Input Current 9.1A Transfer Time <12ms  OUTPUT Output Capacity 2000VA Rated Output Capacity 1600W Rated Output Coltage 220VAC Rated Output Voltage Range 230Vac(Tolerance ±1.5%) Output Efficiency 285% Output Frequency 50Hz Frequency Range 43°67Hz Output Wave Pure sine wave THD ≤3% (Line Load) Switch Time (By pass to Inverter 512ms (With Load) Output Frequency Range 50.0.1% or 60±0.1% Dynamic Response Time 5%(load 0 ← →100%) PF 0.8  Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (don't="" 100°20°20°20°40°40°40°40°40°40°40°40°40°40°40°40°40<="" ac="" circuit="" connect)="" connection="" high="" operation="" over="" protection="" reverse="" short="" td="" temp.="" temperature="" test="" under="" yes=""><td></td><td></td></load<125%>		
AC BY-PASS INPUT   Input Voltage Range		
Rated Input Current Transfer Time  OUTPUT  Output Capacity Rated Output Capacity Rated Output Voltage Rated Output Urrent  Output Voltage Rated Output Current  7.3A  Output Frequency Soltz Frequency Soltz Frequency Frequency THD  S3% (Line Load) Switch Time (By pass to Inverter Soltz Output Frequency Fange Dynamic Response Time S%(load 0 → 100%) PF  0.8  Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (m)="" 1min="" @125%<load<150%="" altitude="" ambient="" capacity="" circuit="" connection="" continue="" environment="" high="" humidity="" load="" low="" mode<="" operating="" operation="" over="" parallel="" performance="" pes="" protection="" reverse="" short="" storage="" td="" temp.="" temperature="" test="" working="" yes=""><td>AC BY-PASS INPUT</td><td></td></load<125%>	AC BY-PASS INPUT	
Rated Input Current  Transfer Time  <12ms  OUTPUT  Output Capacity  Rated Output Capacity  Rated Output Voltage  Rated Output Voltage  Rated Output Current  7.3A  Output Efficiency  285%  Output Frequency  50Hz  Frequency SoHz  Frequency Aange  Output Wave  Pure sine wave  THD  ≤3% (Line Load)  Switch Time (By pass to Inverter  50±0.1% or 60±0.1%  Dynamic Response Time  5%(load 0 → 100%)  PF  0.8  Output Over Current Protection  Over Load Capacity  Continue working 10min @105% <load<125% +20~+50°c="" -2%="" 0°90%,="" 100m,="" 1min="" 2000m.derating="" 24h="" 5000m="" 80±2°c,="" @125%<load<150%="" altitude="" ambient="" capacity="" circuit="" condensation="" connection="" continue="" environment="" full="" high="" humidity="" load="" low="" max="" mode<="" moisture="" no="" operation="" over="" parallel="" performance="" power="" protection="" reverse="" short="" storage="" td="" temp.="" temperature="" test="" to="" up="" working="" yes=""><td>Input Voltage Range</td><td>264V-176V(±10Vac)</td></load<125%>	Input Voltage Range	264V-176V(±10Vac)
Output Capacity 2000VA  Rated Output Capacity 1600W  Rated Output Voltage 220VAC  Rated Output Voltage 220VAC  Rated Output Voltage Range 230Vac(Tolerance ±1.5%)  Output Efficiency ≥85%  Output Frequency 50Hz  Frequency Range 43~67Hz  Output Wave Pure sine wave  THD ≤3% (Line Load)  Switch Time (By pass to Inverter 212ms (With Load)  Output Frequency Range 50±0.1% or 60±0.1%  Dynamic Response Time 5%(load 0 ← → 100%)  PF 0.8  Output Over Current Protection  Over Load Capacity Continue working 10min @105% <load<125% (don't="" (m)="" (rated="" +50="" -2%="" -20±2="" -40±2="" 100m,="" 2000m.derating="" 24h="" 24h)="" 5000m="" 50±2="" 80±2="" ac="" altitude="" ambient="" circuit="" connect)="" connection="" environment="" full="" high="" load="" low="" max="" mode<="" operation="" over="" parallel="" performance="" power="" protection="" reverse="" short="" storage="" td="" temp.="" temp20~="" temperature="" test="" to="" under="" up="" yes="" °c="" °c.=""><td>Rated Input Current</td><td>9.1A</td></load<125%>	Rated Input Current	9.1A
Output Capacity       2000VA         Rated Output Cupacity       1600W         Rated Output Current       7.3A         Output Voltage Range       230Vac(Tolerance ±1.5%)         Output Efficiency       ≥85%         Output Frequency       50Hz         Frequency Range       43~67Hz         Output Wave       Pure sine wave         THD       ≤3% (Line Load)         Switch Time (By pass to Inverter       ≤12ms (With Load)         Output Frequency Range       50±0.1% or 60±0.1%         Dynamic Response Time       5%(load 0→→100%)         PF       0.8         Output Over Current Protection       Continue working 10min @105% <load<125%< td="">         Over Load Capacity       Continue working 1min @125%<load<150%< td="">         Over Load Capacity       Continue working 1min @125%<load<150%< td="">         Over Temp. Protection       Yes         short circuit Protection       Yes (Don't test under AC Connect)         Reverse connection protection       Yes         Environment TEST PERFORMANCE         Ambient Temp.       -20~ +50 °C         High temperature operation       50±2 °C (rated load 24H)         Low temperature storage       80±2 °C, 24H         Low temperature storage       -40±2 °C, 24H</load<150%<></load<150%<></load<125%<>	Transfer Time	<12ms
Rated Output Capacity 1600W Rated output Voltage 220VAC Rated Output Current 7.3A Output Voltage Range 230Vac(Tolerance ±1.5%) Output Efficiency ≥85% Output Frequency 50Hz Frequency Range 43°-67Hz Output Wave Pure sine wave THD ≤3% (Line Load) Switch Time (By pass to Inverter ≤12ms (With Load) Output Frequency Range 50 ± 0.1% or 60 ± 0.1% Dynamic Response Time 5%(load 0 → 100%) PF 0.8 Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (don't="" (m)="" (rated="" +50°c="" 14titude="" 1min="" 24h="" 24h)="" 50±2°c="" 80±2°c,="" @125%<load<150%="" ac="" ambient="" capacity="" circuit="" connect)="" connection="" continue="" environment="" high="" load="" low="" mode<="" operation="" over="" parallel="" performance="" protection="" reverse="" short="" storage="" td="" temp.="" temp20~="" temperature="" test="" under="" working="" yes=""><td>OUTPUT</td><td></td></load<125%>	OUTPUT	
Rated output Voltage Rated Output Current 7.3A Output Voltage Range 230Vac(Tolerance ±1.5%) Output Efficiency ≥85% Output Frequency 50Hz Frequency Range 43°67Hz Output Wave Pure sine wave THD ≤3% (Line Load) Switch Time (By pass to Inverter Output Frequency Range 50±0.1% or 60±0.1% Dynamic Response Time FF Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% +50°c="" -2%="" 1-20°="" 100m,="" 1min="" 2000m.derating="" 24h="" 5000m="" 80±2°c,="" @125%<load<150%="" altitude="" ambient="" capacity="" circuit="" continue="" environment="" full="" high="" load="" low="" max="" mode<="" operation="" over="" parallel="" performance="" power="" protection="" short="" storage="" td="" temp.="" temperature="" test="" to="" up="" working="" yes=""><td>Output Capacity</td><td>2000VA</td></load<125%>	Output Capacity	2000VA
Rated Output Current       7.3A         Output Voltage Range       230Vac(Tolerance ±1.5%)         Output Efficiency       ≥85%         Output Frequency       50Hz         Frequency Range       43~67Hz         Output Wave       Pure sine wave         THD       ≤3% (Line Load)         Switch Time (By pass to Inverter       ≤12ms (With Load)         Output Frequency Range       50±0.1% or 60±0.1%         Dynamic Response Time       5%(load 0 → →100%)         PF       0.8         Output Over Current Protection       0.8         Over Load Capacity       Continue working 10min @105% <load<125%< td="">         Over Load Capacity       Continue working 1min @125%<load<150%< td="">         Over Temp. Protection       Yes         Short circuit Protection       Yes (Don't test under AC Connect)         Reverse connection protection       Yes         ENVIRONMENT TEST PERFORMANCE       Ambient Temp.         Ambient Temp.       -20~ +50 °C         High temperature operation       50±2 °C (rated load 24H)         Low temperature storage       80±2 °C, 24H         Low temperature storage       40±2 °C, 24H         Low temperature storage       -40±2 °C, 24H         Low temperature storage       -40±2 °C, 24H</load<150%<></load<125%<>	Rated Output Capacity	1600W
Output Voltage Range       230Vac(Tolerance ±1.5%)         Output Efficiency       ≥85%         Output Frequency       50Hz         Frequency Range       43°67Hz         Output Wave       Pure sine wave         THD       ≤3% (Line Load)         Switch Time (By pass to Inverter       ≤12ms (With Load)         Output Frequency Range       50±0.1% or 60±0.1%         Dynamic Response Time       5%(load 0→100%)         PF       0.8         Output Over Current Protection       0.8         Over Load Capacity       Continue working 10min @105% <load<125%< td="">         Over Load Capacity       Continue working 1min @125%<load<150%< td="">         Over Temp. Protection       Yes         short circuit Protection       Yes (Don't test under AC Connect)         Reverse connection protection       Yes         ENVIRONMENT TEST PERFORMANCE       Ambient Temp.         Ambient Temp.       -20~ +50°C         High temperature operation       50±2°C (rated load 24H)         Low temperature storage       80±2°C, 24H         Low temperature storage       40±2°C, 24H         Humidity       0~90%, No moisture condensation         Operating Altitude (m)       Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m</load<150%<></load<125%<>	Rated output Voltage	220VAC
Output Efficiency       ≥85%         Output Frequency       50Hz         Frequency Range       43~67Hz         Output Wave       Pure sine wave         THD       \$3% (Line Load)         Switch Time (By pass to Inverter       \$12ms (With Load)         Output Frequency Range       \$0±0.1% or 60±0.1%         Dynamic Response Time       \$5%(load 0 → → 100%)         PF       0.8         Output Over Current Protection       Over Load Capacity         Over Load Capacity       Continue working 10min @105% <load<125%< td="">         Over Load Capacity       Continue working 1min @ 125%         Over Temp. Protection       Yes         short circuit Protection       Yes (Don't test under AC Connect)         Reverse connection protection       Yes         ENVIRONMENT TEST PERFORMANCE       Ambient Temp.         Ambient Temp.       -20~+50 °C         High temperature operation       50±2 °C (rated load 24H)         Low temperature storage       80±2 °C, 24H         Low temperature storage       40±2 °C, 24H         Humidity       0~90%, No moisture condensation         Operating Altitude (m)       Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m</load<125%<>	Rated Output Current	7.3A
Output Frequency       50Hz         Frequency Range       43~67Hz         Output Wave       Pure sine wave         THD       ≤3% (Line Load)         Switch Time (By pass to Inverter       ≤12ms (With Load)         Output Frequency Range       50±0.1% or 60±0.1%         Dynamic Response Time       5%(load 0 → →100%)         PF       0.8         Output Over Current Protection       Continue working 10min @105% <load<125%< td="">         Over Load Capacity       Continue working 1min @125%<load<150%< td="">         Over Load Capacity       Continue working 1min @125%<load<150%< td="">         Over Temp. Protection       Yes         short circuit Protection       Yes (Don't test under AC Connect)         Reverse connection protection       Yes         ENVIRONMENT TEST PERFORMANCE       Ambient Temp.         Ambient Temp.       -20~ +50 °C         High temperature operation       50±2 °C (rated load 24H)         Low temperature storage       80±2 °C , 24H         Low temperature storage       40±2 °C , 24H         Humidity       0~90%, No moisture condensation         Operating Altitude (m)       Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m</load<150%<></load<150%<></load<125%<>	Output Voltage Range	230Vac(Tolerance ±1.5% )
Frequency Range 43~67Hz  Output Wave Pure sine wave  THD ≤3% (Line Load)  Switch Time (By pass to Inverter ≤12ms (With Load)  Output Frequency Range 50±0.1% or 60±0.1%  Dynamic Response Time 5%(load 0 → 100%)  PF 0.8  Output Over Current Protection  Over Load Capacity Continue working 10min @105% <load<125% (don't="" (m)="" (rated="" -20±2°c="" -40±2°c,="" 0~90%,="" 1min="" 24h="" 24h)="" 50±2°c="" 80±2°c,="" @125%<load<150%="" ac="" altitude="" ambient="" capacity="" circuit="" condensation="" connect)="" connection="" continue="" environment="" high="" humidity="" load="" low="" mode<="" moisture="" no="" operating="" operation="" over="" parallel="" performance="" protection="" reverse="" short="" storage="" td="" temp.="" temp20~+50°c="" temperature="" test="" under="" working="" yes=""><td>Output Efficiency</td><td>≥85%</td></load<125%>	Output Efficiency	≥85%
Output Wave       Pure sine wave         THD       ≤3% (Line Load)         Switch Time (By pass to Inverter       ≤12ms (With Load)         Output Frequency Range       50±0.1% or 60±0.1%         Dynamic Response Time       5%(load 0 → → 100%)         PF       0.8         Output Over Current Protection       Continue working 10min @105% <load<125%< td="">         Over Load Capacity       Continue working 1min @ 125%<load<150%< td="">         Over Temp. Protection       Yes         short circuit Protection       Yes (Don't test under AC Connect)         Reverse connection protection       Yes         ENVIRONMENT TEST PERFORMANCE       Ambient Temp.         Ambient Temp.       -20~ +50 °C         High temperature operation       50±2 °C (rated load 24H)         Low temperature storage       80±2 °C , 24H         Low temperature storage       -40±2 °C , 24H         Low temperature storage       -40±2 °C , 24H         Humidity       0~90%, No moisture condensation         Operating Altitude (m)       Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m</load<150%<></load<125%<>	Output Frequency	50Hz
THD ≤3% (Line Load)  Switch Time (By pass to Inverter ≤12ms (With Load)  Output Frequency Range 50±0.1% or 60±0.1%  Dynamic Response Time 5%(load 0 ← → 100%)  PF 0.8  Output Over Current Protection  Over Load Capacity Continue working 10min @105% <load<125% (don't="" (rated="" +50="" ,="" -2%="" -40±2="" 0~90%,="" 100m,="" 1min="" 2000m.derating="" 24h="" 24h)="" 5000m="" 50±2="" 80±2="" @125%<load<150%="" ac="" altitude="" ambient="" capacity="" circuit="" condensation="" connect)="" connection="" continue="" environment="" full="" high="" humidity="" load="" low="" max="" mode<="" moisture="" no="" operation="" over="" parallel="" performance="" power="" protection="" reverse="" short="" storage="" td="" temp.="" temp20~="" temperature="" test="" to="" under="" up="" working="" yes="" °c=""><td>Frequency Range</td><td>43~67Hz</td></load<125%>	Frequency Range	43~67Hz
Switch Time (By pass to Inverter Output Frequency Range Dynamic Response Time  5%(load 0 ← → 100%)  PF 0.8  Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (m)="" +50°c="" 1min="" 24h="" @125%<load<150%="" altitude="" ambient="" b0±2°c,="" capacity="" circuit="" condensation="" connection="" continue="" environment="" high="" humidity="" load="" low="" mode<="" moisture="" no="" operating="" operation="" over="" o~90%,="" parallel="" performance="" protection="" reverse="" short="" storage="" td="" temp.="" temp20~="" temperature="" test="" working="" yes=""><td>Output Wave</td><td>Pure sine wave</td></load<125%>	Output Wave	Pure sine wave
Output Frequency Range  Dynamic Response Time  FF  Output Over Current Protection  Over Load Capacity  Over Load Capacity  Over Temp. Protection  Reverse connection protection  ENVIRONMENT TEST PERFORMANCE Ambient Temp.  Low temperature operation  Low temperature storage  High temperature storage  Bould To Substitute (m)  PARALLEL MODE  Single Dull Work of 60 ± 0.1%  Fix(load 0 ← → 100%)  Single Dull More Autous)  Single Dull More Autous  Single Dull More Autous)  Single Dull More Autous)  Single Dull More Autous  Single Dul	THD	≤3% (Line Load)
Dynamic Response Time  5%(load 0 ← → 100%)  PF  0.8  Output Over Current Protection  Over Load Capacity  Continue working 10min @105% <load<125% (m)="" (rated="" +50°c="" ,="" -20~="" -40±2°c="" 0~90%,="" 125%<load<150%="" 1min="" 24h="" 24h)="" 80±2°c="" @="" altitude="" ambient="" capacity="" circuit="" condensation="" connection="" continue="" environment="" high="" humidity="" load="" low="" mode<="" moisture="" no="" operating="" operation="" over="" parallel="" performance="" protection="" reverse="" short="" storage="" td="" temp.="" temperature="" test="" working="" yes=""><td>Switch Time (By pass to Inverter</td><td>≤12ms (With Load)</td></load<125%>	Switch Time (By pass to Inverter	≤12ms (With Load)
Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (m)="" (rated="" +50℃="" 1min="" 24h)="" 80±2℃="" @125%<load<150%="" altitude="" ambient="" capacity="" circuit="" condensation="" connection="" continue="" environment="" high="" how="" humidity="" load="" low="" mode<="" moisture="" no="" operating="" operation="" over="" o∼90%,="" parallel="" performance="" protection="" reverse="" short="" storage="" td="" temp.="" temp20∼="" temperature="" test="" working="" yes=""><td>Output Frequency Range</td><td>50<math>\pm</math>0.1% or 60<math>\pm</math>0.1%</td></load<125%>	Output Frequency Range	50 $\pm$ 0.1% or 60 $\pm$ 0.1%
Output Over Current Protection Over Load Capacity Continue working 10min @105% <load<125% (m)="" (rated="" +50°c="" -20±2°c="" 125%<load<150%="" 1min="" 24h="" 24h)="" 80±2°c,="" @="" altitude="" ambient="" capacity="" circuit="" condensation="" connection="" continue="" environment="" high="" humidity="" load="" low="" mode<="" moisture="" no="" operating="" operation="" over="" o≈90%,="" parallel="" performance="" protection="" reverse="" short="" storage="" td="" temp.="" temp20~="" temperature="" test="" working="" yes=""><td>Dynamic Response Time</td><td>5%(load 0←→100%)</td></load<125%>	Dynamic Response Time	5%(load 0←→100%)
Over Load Capacity  Over Load Capacity  Continue working 10min @105% <load<125% (m)="" (rated="" +50°c="" -2%="" -20~="" -20±2°c="" 100m,="" 10min="" 2000m.derating="" 2150%="" 24h)="" 5000m="" @105%<load<125%="" altitude="" ambient="" capacity="" circuit="" connect)="" connection="" continue="" final="" full="" high="" humidity="" load="" low="" max="" mode<="" operating="" operation="" over="" parallel="" power="" protection="" reverse="" short="" storage="" td="" temp.="" temperature="" to="" up="" working="" yes=""><td>PF</td><td>0.8</td></load<125%>	PF	0.8
Over Load Capacity Over Temp. Protection Short circuit Protection Reverse connection protection Yes  ENVIRONMENT TEST PERFORMANCE Ambient Temp20~ +50°C High temperature operation Low temperature operation High temperature storage Low temperature storage Humidity Operating Altitude (m)  Over Load Capacity Continue working 1min 2 125% <load<150% (rated="" +50°c="" -2%="" -20±2°c="" 100m,="" 2000m.derating="" 24h="" 24h)="" 5000m="" 80±2°c,="" ac="" altitude="" ambient="" auditude="" connect)="" environment="" full="" high="" load="" low="" max="" mode<="" operation="" parallel="" performance="" power="" storage="" td="" temp20~="" temper="" temperature="" test="" to="" up="" yes=""><td><b>Output Over Current Protection</b></td><td></td></load<150%>	<b>Output Over Current Protection</b>	
Over Temp. Protection  short circuit Protection  Reverse connection protection  ENVIRONMENT TEST PERFORMANCE  Ambient Temp.  -20~ +50°C  High temperature operation  Low temperature operation  High temperature storage  ENterpolate to the storage and the storage are storage and the storage and the storage and the storage are storage are storage and the storage are storage and the storage are storage are storage are storage and the storage are stora	Over Load Capacity	Continue working 10min @105% <load<125%< td=""></load<125%<>
short circuit Protection  Reverse connection protection  Yes  ENVIRONMENT TEST PERFORMANCE  Ambient Temp.  -20~ +50°C  High temperature operation  Low temperature operation  High temperature storage  Low temperature storage  Humidity  O~90%, No moisture condensation  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	Over Load Capacity	Continue working 1min @ 125% <load<150%< td=""></load<150%<>
Reverse connection protection  ENVIRONMENT TEST PERFORMANCE  Ambient Temp.  -20~ +50°C  High temperature operation  Low temperature operation  -20±2°C (rated load 24H)  High temperature storage  80±2°C, 24H  Low temperature storage  -40±2°C, 24H  Humidity  0~90%, No moisture condensation  Operating Altitude (m)  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	Over Temp. Protection	Yes
ENVIRONMENT TEST PERFORMANCEAmbient Temp. $-20^{\sim} +50^{\circ}\mathbb{C}$ High temperature operation $50\pm2^{\circ}\mathbb{C}$ (rated load 24H)Low temperature operation $-20\pm2^{\circ}\mathbb{C}$ (rated load 24H)High temperature storage $80\pm2^{\circ}\mathbb{C}$ , 24HLow temperature storage $-40\pm2^{\circ}\mathbb{C}$ , 24HHumidity $0^{\sim}90\%$ , No moisture condensationOperating Altitude (m)Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000mPARALLEL MODE	short circuit Protection	Yes (Don't test under AC Connect)
Ambient Temp. $-20^{\sim} +50^{\circ}\mathbb{C}$ High temperature operation $50\pm2^{\circ}\mathbb{C} \text{ (rated load 24H)}$ Low temperature storage $80\pm2^{\circ}\mathbb{C}, 24H$ Low temperature storage $-40\pm2^{\circ}\mathbb{C}, 24H$ Humidity $0^{\sim}90\%, \text{ No moisture condensation}$ Operating Altitude (m) $Altitude \text{ Full power up to 2000m.derating -2% / 100m, max altitude 5000m}$	Reverse connection protection	Yes
High temperature operation $50\pm2^{\circ}\mathbb{C}$ (rated load 24H)Low temperature operation $-20\pm2^{\circ}\mathbb{C}$ (rated load 24H)High temperature storage $80\pm2^{\circ}\mathbb{C}$ , 24HLow temperature storage $-40\pm2^{\circ}\mathbb{C}$ , 24HHumidity $0^{\sim}90\%$ , No moisture condensationOperating Altitude (m)Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000mPARALLEL MODE	ENVIRONMENT TEST PERFORMANCE	
Low temperature operation  -20±2°C (rated load 24H)  High temperature storage  80±2°C, 24H  Low temperature storage  -40±2°C, 24H  Humidity  0~90%, No moisture condensation  Operating Altitude (m)  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	Ambient Temp.	-20~ +50℃
High temperature storage  Low temperature storage  -40±2°C, 24H  Humidity  O~90%, No moisture condensation  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	High temperature operation	50±2 $^{\circ}$ C (rated load 24H)
Low temperature storage  -40±2℃, 24H  Humidity  O~90%, No moisture condensation  Operating Altitude (m)  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	Low temperature operation	-20±2℃ (rated load 24H)
Humidity 0~90%, No moisture condensation Operating Altitude (m) Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	High temperature storage	80±2 ℃,24H
Operating Altitude (m)  Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m  PARALLEL MODE	Low temperature storage	-40±2℃,24H
PARALLEL MODE	Humidity	
	Operating Altitude (m)	Altitude Full power up to 2000m.derating -2% / 100m, max altitude 5000m
Max Parallel quantities 8 units	PARALLEL MODE	
	Max Parallel quantities	8 units

MEASUREMENT	
Module Size W*D*H(mm)	216mm *426mm*88mm (2U)
Cabinet Size W*D*H(mm)	482mm*433mm*88mm
Module Weight(total)	4.5kg
Cabint Weight	3.5kg

#### Reminder

BWT220/220-2KVAs 2U module, the max parallel module is 8 unit(4 cabinet and 8 module) BWT220/220-3KVAs 2U module, the max parallel module is 8 unit(4 cabinet and 8 module) BWT48/220-1KVAs 1U module, the max parallel module is 2 unit(1 cabinet and 2 module) BWT48/220-2KVAs 2U module, the max parallel module is 8 unit(4 cabinet and 8 module) BWT48/220-3KVAs 2U module, the max parallel module is 8 unit(4 cabinet and 8 module)