



Safety

- Intelligent AI - DC Arc fault protection
- Supports 2 times overload in short-time
- IP65 protection degree



Flexible

- Compatible with diesel generators
- AC couple to retrofit existing solar system
- 100% three-phase unbalanced output, 50% maximum output of rated power/phase
- Max. 16 pcs parallel for on&off-grid operation, support multiple batteries parallel



Smart

- 4ms backup power switching
- Colored LCD touchscreen for intuitive setup & real-time monitoring
- Supports the setting of 6 time periods for battery charging/discharging



High Efficiency

- Supports 1.6 times DC overloading
- 240A charge and discharge current
- 97.6% maximum conversion efficiency & 93% maximum charging efficiency

Technical Data

Model	BRAVO X 12
Battery Input Data	
Battery Type	Lead-acid/Li-ion
Battery Voltage Range (V)	40-60
Max. Charging Current (A)	240
Max. Discharging Current (A)	240
Charging Strategy for Li-ion Battery	Self-adaption to BMS
Number of Battery Input	1
PV String Input Data	
Max. PV Input Power (W)	19200
Max. PV Input Voltage (V)	800
Start-up Voltage (V)	150
MPPT Voltage Range (V)	200-650
Max. Operating PV Input Current (A)	26+16
Max. Input Short-Circuit Current (A)	34+20
No. of MPP Trackers/No. of Strings MPP Tracker	2/2+1
AC Input/Output Data	
Rated AC Input/Output Active Power (W)	12000
Max. AC Input/Output Apparent Power (VA)	13200
Rated AC Input/Output Current (A)	18.2/17.4
Max. AC Input/Output Current (A)	20/19.1
Peak Power (off-grid) (W)	2 times of rated power
Power Factor Adjustment Range	0.8 leading to 0.8 lagging
Rated Input/Output Voltage/Range (V)	220/380, 230/400 0.85Un-1.1Un
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65
Grid Connection Form	3L+N+PE
Total Current Harmonic Distortion THDi	<2% (of nominal power)
DC Injection Current	0.5% In
Efficiency	
Max. Efficiency	97.57%
Euro Efficiency	96.85%
MPPT Efficiency	>99.99%
Equipment Protection	
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection leve
Surge Protection Level	TYPE II (DC), TYPE II (AC)
Interface	
Communication Interface	RS485/CAN
Monitor Mode	WIFI/Bluetooth
General Data	
Operating Temperature Range (°C)	-40 to +60
Permissible Ambient Humidity	0-100%
Permissible Altitude (m)	2000
Ingress Protection(IP) Rating	IP 65
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II (DC), OVC III (AC)
Cabinet Size (WxHxD mm)	450*677*255
Weight (kg)	36.2
Type of Cooling	Intelligent Air Cooling
Warranty	5 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy
Grid Regulation	Ordinance No.140 / Ordinance No.515
Safety / EMC Standard	IEC/EN 61000-6-1:2019, IEC/EN 61000-6-3:2021, IEC/EN 62109-1:2010, IEC/EN 62109-2:2011, IEC 63027:2023