

D

## B900 SERIES

torque control  
variable speed  
drive (Yaskawa  
G5 series)

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### 产品概述 (Product brief)

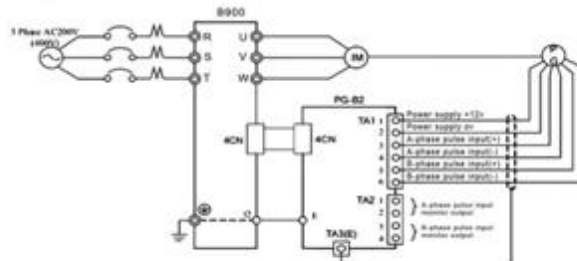
B900 series apply high performance current vector control and industry leading module design and control mechanism operated with high efficiency and high precision. With 4 user selectable control modes including open-loop and closed-loop flux vector control, Open-loop and closed-loop V/f control, B900 series realized speed control range 1:1000 and kinds of advanced functions such as slip compensation, torque compensation, speed control, silence PWM and self study function etc. 7 language including Chinese, English, German, French, Russian and Spanish menu display and flexible operation. B900 series should meet user's needs to the greatest extent.



### 产品主要特点: Main Features:

- 4 control mode selectable: open-loop and close loop flux vector control, open-loop and closed loop V/f control
- Speed control precision  $\pm 0.02\%$  with PG and  $\pm 0.2\%$  without PG, frequency control precision  $\pm 0.01\%$
- 7 language on LCD keypad (English, Chinese, German, French, Japanese, Russian and Spanish)
- Starting torque: 150% rated torque at 0Hz
- Motor parameters auto-tuning
- Function of DC braking in all range, Zero servo and speed trace.
- Output frequency 0.1- 400Hz
- Acceleration/deceleration pause (DWELL) and droop control function
- Operator data copy to simplify multi-inverter trial
- Energy save operation to reduce mechanical vibration
- Torque control for smooth rolling operation
- Strong and completed monitor function
- Application for simple servo, High precision speed control, torque control and big inertia load
- Abundant protection functions such as input/output phase loss protection, motor protection, over torque protection, torque limitation and other fault protection.

### PG Speed Control Card



PG-B2( For Vector Control with PG Mode Only)

- Shielded twisted-pair wires must be used for signal lines
- Do not use the pulse generator's power supply for anything other than the pulse generator(encoder). Using it for another purpose can cause malfunctions due to noise!
- The length of the pulse generator's wiring must not be more than 100 meters.
- The direction of the rotation of the PG can be set in user constant F1-05. The factory present it for forward rotation, A-phase advancement.

### 适用行业Applications:

Paper process, Rolling machine, lift equipment, scrolling equipment elevator, Crane and convey machine, Metal machine tools, food process, big inertia loading machine and other applications. **It's available for all kinds of machines.**

### 功率范围Power Range:

Three phase 400V      2HP-1500HP (1.5KW-1200KW)  
 Medium Voltage 660V    25HP-1500HP(18.5KW-1200KW)  
 Medium Voltage 1140V   25HP-1500HP(18.5KW-1200KW)





技术规范 Specification:

B900 Series Max. Applicable motor output (kw)		22	37	55	93	132	185	220	280	355	
Rated output current (A)		18.5	30	45	75	110	160	200	245	315	400
Output Characteristics	Rated output current (A)	45	75	110	180	260	350	420	530	660	
	Max. output voltage (V)	Medium voltage 660V/1140V (Proportional to input voltage)									
Max. output Frequency (HZ)		upto 400HZ available by programming									
Power Supply	Rated Input Voltage and fre.	medium voltage 660V/690V/1140V									
	Allowable voltage flu.	+10%,-15%									
	Allowable frequency flu.	±5%									
Control characteristics	control method	Sine wave PWM									
	Starting Torque	150%/1Hz(150%/or/min with PG)									
	Speed Control Range	1:100(1:1000 with PG)									
	Speed control Accuracy	±0.2%(0.02% with PG)									
	Speed Response	5Hz(30Hz with PG)									
	Torque Limit	Available(Parameter setting,4steps can be changed)									
	Torque Accuracy	±5%									
	Torque Response	20Hz(40Hz with PG)									
	Frequency Control Range	0.1 to 400Hz									
	Frequency Accuracy	Digital command:0.01%(-10℃ to +40℃) Analog command: 0.1%(25℃ ± 10℃)									
	Frequency Resolution	Digital operator reference: ±0.01Hz Analog reference:0.03Hz/60Hz (11 bit +code)									
	Output Frequency Res.	0.01Hz									
	Overload Capacity	150% of rated output current for minute ,180% of rated output current for 2 seconds, 200% of rated output current for 0.5 second									
	Fre.Setting Signal	-10V to 10V,0 to10V,4 to 20 mA									
	Accel/Decel Time	0.01 to 6000.0 sec(Accel/decad time setting independently,4 steps available)									
Braking Torque	Approx.20%										
Protection Functions	Motor Overload Protection	Protected by electronic thermal overload relay									
	Instantaneous Overcurrent	Motor coasts to a stop at stop at approx.200% of inverter rated current.									
	Blown Fuse Protection	Motor coasts to a stop at stop by blown-fuse.									
	Overload	Motor coasts to a stop after 1 minute at150 of rated output current.(2minutes at 150% is customized)									
	Momentary Power Loss	Immediately stop by 15 ms and above momentary power loss.(Fractory setting) Continuous operation during power loss less than 2sec is equipped as standard.									
	Heatsink Overheat	Protected by thermistor									
	Stall Prevention	Stall prevention during accel/decad and constant speed operation									
	Ground Fault	Protected by electronic circuit(Overcurrent level)									
Environment	Power Charge Indication	Charge LED stays ON until busvoltage drops below 50V									
	Ambient Temperature	-10℃ to 40℃ (Enclosed wall-mounted type); -10℃ to 45℃ (Open chassis type)									
	Humidity	90%RH or less									
	Storage Temperature	-20℃ to +60℃									
	Location	Indoor (Protected from corrosive gases and dust)									
	Elevation	1000m or less									
	Vibration	9.81m/s <sup>2</sup> (1G)less than 20Hz ,up to 1.96m/s <sup>2</sup> (0.2G) at 20 to 5 Hz									



质量造就市场  
QUALITY MAKE MARKET

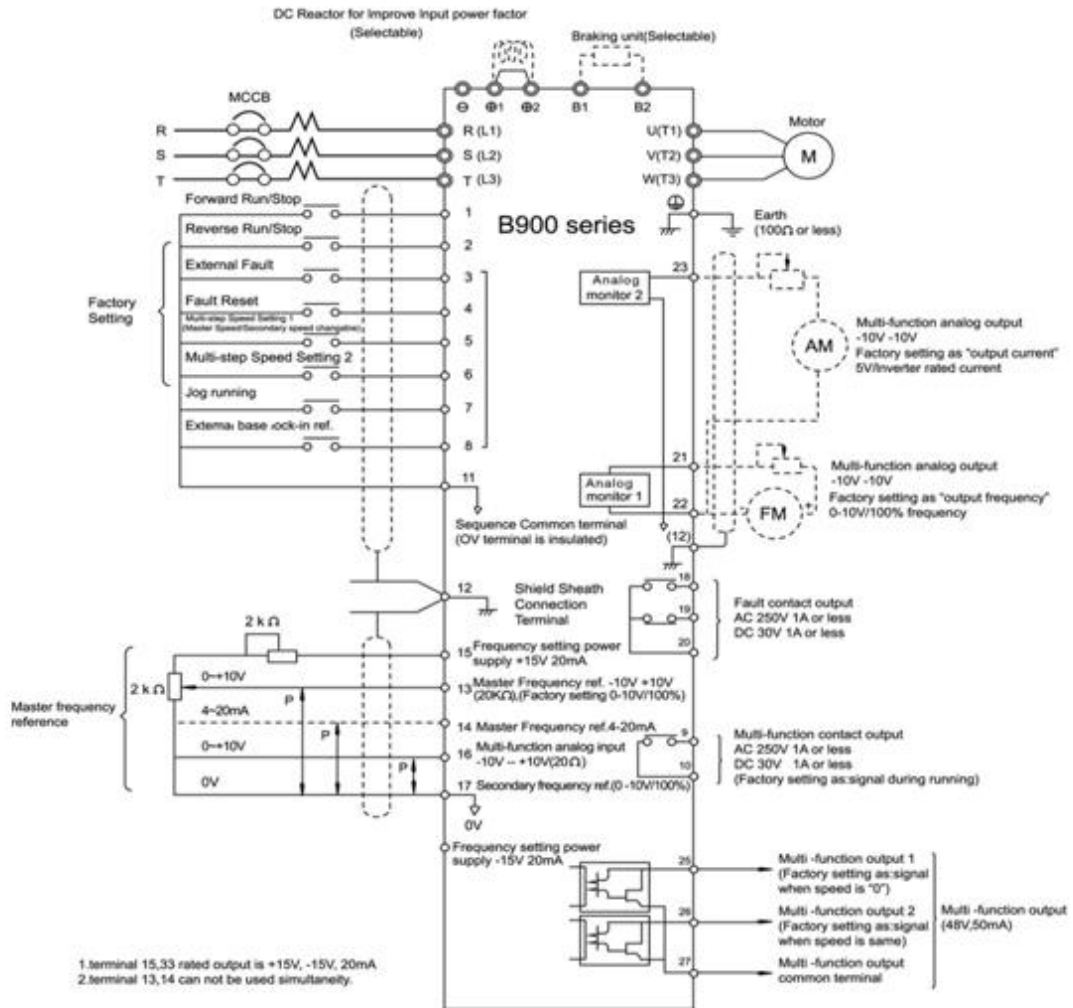
服务产生价值  
SERVICE CREATE VALUE

STAR POWER DRIVE ®

技术规范 Specification:

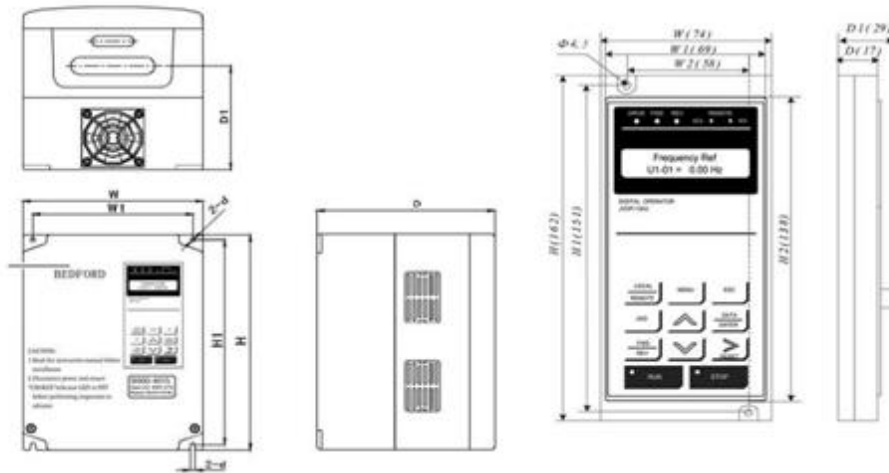
B900 Series Max. Applicable motor output (kw)	1.5	3.7	7.5	15	22	37	55	93	132	185	220	280	355	
	2.2	5.5	11	18.5	30	45	75	110	160	200	245	315	400	
Output Characteristics	Rated output current (A)	4.0	9.6	17	32	45	75	110	180	260	350	420	530	660
		6.0	13	25	38	60	90	150	215	310	380	470	600	750
Power Supply	Max. output voltage (V)	3phase 380V/400V/415V/440V/480V (Proportional to input voltage)												
	Max. output Frequency (HZ)	upto 400HZ available by programing												
	Rated Input Voltage and fre.	3-Phase_380V/400V/440V/480V 50/60Hz												
Control characteristics	Allowable voltage flu.	+10%,-15%												
	Allowable frequency flu.	±5%												
Control characteristics	control method	Sine wave PWM												
	Starting Torque	150%/1Hz(150%/oe/min with PG)												
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	Motor Overload Protection	Protected by electronic thermal overload relay												
	Instantaneous Overcurrent	Motor coasts to a stop at stop at approx.200% of inverter rated current.												
	Blown Fuse Protection	Motor coasts to a stop at stop by blown-fuse.												
	Overload	Motor coasts to a stop after 1 minute at150 of rated output current.(2minutes at 150% is customized)												
	Overvoltage	Motor coasts to a stop if coverter output voltage exceeds 820V												
	Undervoltage	Motor coasts to a stop if coverter output voltage drops to 380V or below.												
	Momentary Power Loss	Immediately stop by 15 ms and above momentary power loss.(Fractory setting) Continuous operation during power loss less than 2sec is equipped as standard.												
	Heatsink Overheat	Protected by thermistor												
	Stall Prevention	Stall prevention during accel/deccl and constant speed operation												
Environment	Ground Fault	Protected by electronic circuit(Overcurrent level)												
	Power Charge Indication	Charge LED stays ON until busvoltage drops below 50V												
	Ambient Temperature	-10℃ to 40℃ (Enclosed wall-mounted type); -10℃ to 45℃ (Open chassis type)												
	Humidity	90%RH or less												
	Storage Temperature	-20℃ to +60℃												
	Location	Indoor (Protected from corrosive gases and dust)												
	Elevation	1000m or less												
Vibration	9.81m/s <sup>2</sup> (1G)less than 20Hz ,up to 1.96m/s <sup>2</sup> (0.2G) at 20 to 5 Hz													

接线图 standard connection diagram:





**B900系列外形尺寸图B900 series exterior dimension:**



**产品尺寸 Dimension (mm):**

Model	W	W1	H	H1	D	D1	d
2HP-7HP	139	114	278	262	181	191	6
10HP-15HP	229	204	298	284	227	237	6
20HP-40HP	297	270	450	432	253	263	6
50HP-60HP	348	240	700	680	335	345	10
75HP-100HP	375	300	785	680	345	355	11
125HP-175HP	465	300	878	850	375	385	11
215HP-325HP	Cabinet (1016 * 465 * 375)						
375HP-475HP	Cabinet (1800 * 820 * 460)						