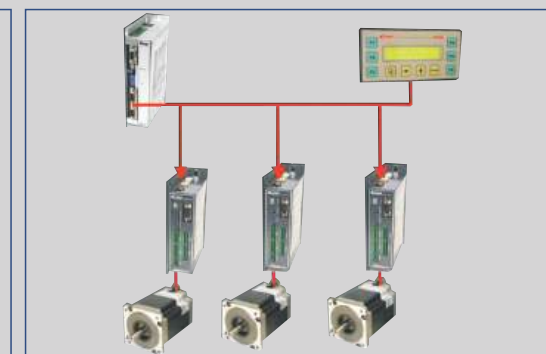


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- Smart Programmable Driver
- Integrated Stepper Servo
- Integrated Brushless DC motor
- Stepper Servo
- Brushless DC Servo
- AC Servo
- Stepper Motor Driver
- Stepper Motor
- Brushless Motor Driver
- DC Brushless MOTOR
- Accessories



电机
Motor

驱动+控制
Driver+Control

方案
Solution

常州汉姆电机有限公司

ChangZhou High Efficiency Motors CO.,LTD

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常州汉姆电机有限公司

ChangZhou High Efficiency Motors CO.,LTD

■ Company Profile

Changzhou High Efficient Motors Co., Ltd is a professional manufacturer integrated with design and R&D, mainly providing stepper motors, DC Brushless motors, drivers and all motor solutions for global customers.

We possess deep strength in design and solutions. As our core, we have a professional engineering team comprising industry experts with talent and advanced technology, in the best effort to supply the most suitable hard and soft resolution of motors, drivers and controlling combination. Our Products are widely used in packaging, labelling, textile machinery, medical machinery, ceramic machining, printing machinery, OA, video monitoring, processing engine, robots and so on.

By focusing on quality and process, we are entirely trusted to supply high qualified, high performed and innovative products to our customers, keep our customers leading in the market.

Our mission is to provide more efficient, more performed products to customers by continuous technological innovation.

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Brushless DC Motors Naming Rule:

HEM - 23 BR 100 - 24 - 01 PG
 ① ② ③ ④ ⑤ ⑥ ⑦

①	②	③	④	⑤	⑥	⑦
HEM	Nema Flange	Body Description	Power	Rated Voltage	Custome Model	Opition and customeration code
	11 28mm 17 42mm 23 57mm 24 60mm 32 80mm 34 86mm	BS Square type BR Round type		24:DC24V 48:DC48V A1:AC110 A2:AC220		IP: IP65 PG: Planetary gearbox BK: Brake ED: Encoder

Brushless DC motor parameter list

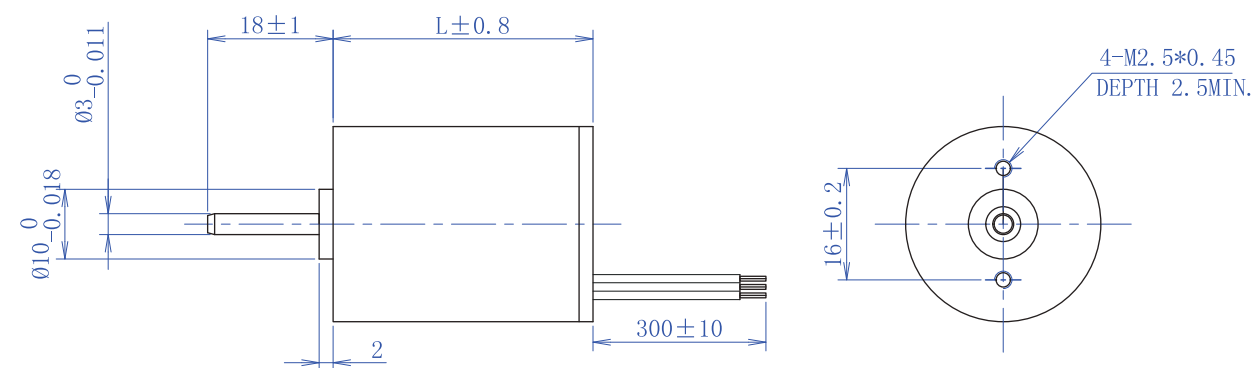
Series	Model	Voltage (VDC)	Power (w)	Rated speed (RPM)	Rated torque (N.m)	Length (mm)
Φ28 series	HEM-11BR6-15	15	6	8000	0.0072	26
	HEM-11BR15-24	24	15	3300	0.0435	75
□42 series	HEM-17BS30-24	24	30	4000	0.0715	45
	HEM-17BS30-48	48			0.0715	
	HEM-17BS60-24	24	60		0.143	70
	HEM-17BS60-48	48			0.143	
	HEM-17BS90-24	24	90		0.214	100
	HEM-17BS90-48	48			0.213	
Φ57 series	HEM-23BR50-24	24	50	4000	0.12	55
	HEM-23BR50-48	48			0.12	
	HEM-23BR100-24	24	100		0.24	75
	HEM-23BR100-48	48			0.24	
	HEM-23BR180-24	24	180		0.44	115
	HEM-23BR180-48	48			0.43	
□57 series	HEM-23BS50-24	24	50	4000	0.12	55
	HEM-23BS50-48	48			0.12	
	HEM-23BS100-24	24	100		0.24	75
	HEM-23BS100-48	48			0.24	
	HEM-23BS180-24	24	180		0.44	115
	HEM-23BS180-48	48			0.425	
□60 series	HEM-24BS60-24	24	60	3000	0.19	55
	HEM-24BS60-48	48			0.19	
	HEM-24BS120-24	24	120		0.38	75
	HEM-24BS120-48	48			0.38	
	HEM-24BS180-24	24	180		0.57	115
	HEM-24BS180-48	48			0.57	
□80 series	HEM-32BS100-24	24	100	4000	0.24	53
	HEM-32BS100-48	48			0.24	
	HEM-32BS200-24	24	200		0.48	73
	HEM-32BS200-48	48			0.48	
	HEM-32BS300-24	24	300		0.715	93
	HEM-32BS300-48	48			0.711	
□86 series	HEM-34BS200-48	48	200	3000	0.63	87
	HEM-34BS400-48	48	400		1.27	114

* We can provide customized products, welcome to inquire

Φ28 Electrical Data

Item (Unit)	Three-phase brushless DC motor mode	
	HEM-11BR6-15	HEM-11BR15-24
Power voltage (VDC)	15	24
output power (W)	6	15
Length (mm)	26	75
poles	4	4
Rated torque(mN.m)	7.2	43.5
Rated current(A)	0.63	0.98
Rated speed(rpm)	8000	3300
Rotation speed (open loop rpm±10%)	10000	4500
Line to line resistance(Ω)	3.94	6.1
Line to line inductance (mH)	0.59	1.52
Back EMF constant (V.s/rad)	0.013	0.0475
Rotor inertia (g.cm ²)	2.8	13.6
Weight (kg)	0.05	0.2
Senor	HALL	
Insulation class	E	
Degree of protection	IP40	
Operating temperature	0-----+50° C	
Storage temperature	-25-----+70° C	
Operating humidity	≤85%RH(Non_condensing)	

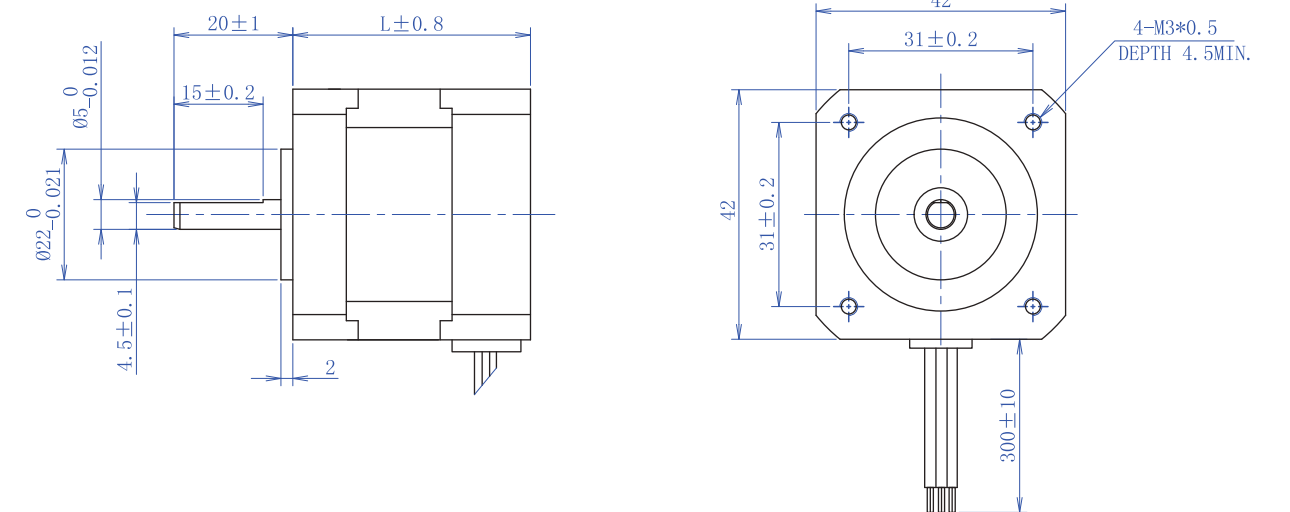
Dimensions(unit:mm)	
Model	Length(L)
HEM-11BR6-15	26
HEM-11BR15-24	75



□42 Electrical Data

Item (Unit)	Three-phase brushless DC motor model					
	HEM-17BS30-24	HEM-17BS30-48	HEM-17BS60-24	HEM-17BS60-48	HEM-17BS90-24	HEM-17BS90-48
Power voltage (VDC)	24	48	24	48	24	48
Output power (W)	30		60		90	
Length (mm)	45		70		100	
Poles	8					
Rated torque(mN.m)	71.5	71.5	143	143	214	213
Rated current(A)	1.62	0.79	3.13	1.51	4.58	2.24
Rated speed(rpm)	4000					
Rotation speed (open loop rpm±10%)	4900	4900	5000	5000	4900	4900
Line to line resistance(Ω)	1.4	6.01	0.66	2.53	0.38	1.65
Line to line inductance (mH)	1.18	4.91	0.67	2.84	0.23	1.89
Back EMF constant (V.s/rad)	0.0441	0.09	0.044	0.091	0.045	0.091
Rotor inertia (g.cm ²)	0.047		0.077		0.114	
Weight (kg)	0.32		0.52		0.77	
Senor	HALL					
Insulation class	E					
Degree of protection	IP40					
Operating temperature	0-----+50° C					
Storage temperature	-25-----+70° C					
Operating humidity	≤85%RH (Non_condensing)					

Dimensions(unit:mm)	
Model	Length(L)
HEM-17BS30series	45
HEM-17BS60series	70
HEM-17BS90series	100

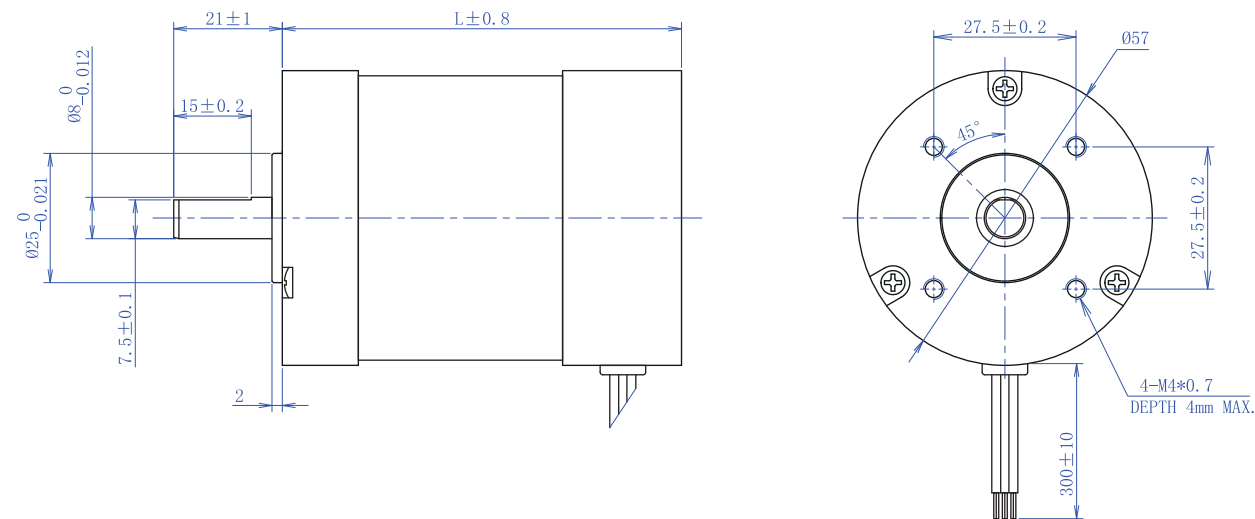


More product information www.hemotors.com

Φ57 Electrical Data

Item (Unit)	Three-phase brushless DC motor model					
	HEM-23BR50-24	HEM-23BR50-48	HEM-23BR100-24	HEM-23BR100-48	HEM-23BR180-24	HEM-23BR180-48
Power voltage (VDC)	24	48	24	48	24	48
Length (mm)	55		75		115	
Output power (W)	50		100		180	
Poles	4					
Rated torque(mN.m)	0.12	0.12	0.24	0.24	0.44	0.43
Rated current(A)	2.65	1.32	5.1	2.49	8.95	4.24
Rated speed(rpm)	4000					
Rotation speed (open loop rpm±10%)	4800	4900	4700	4700	4500	4500
Line to line resistance(Ω)	0.82	3.84	0.34	1.48	0.14	0.54
Line to line inductance (mH)	1.24	4.98	0.64	2.66	0.34	1.44
Back EMF constant (V.s/rad)	0.046	0.0911	0.046	0.095	0.049	0.1
Rotor inertia (g.cm ²)	0.171		0.342		0.384	
Weight (kg)	0.51		0.85		1.25	
Senor	HALL					
Insulation class	E					
Degree of protection	IP40					
Operating temperature	0-----+50° C					
Storage temperature	-25-----+70° C					
Operating humidity	≤85%RH(Non_condensing)					

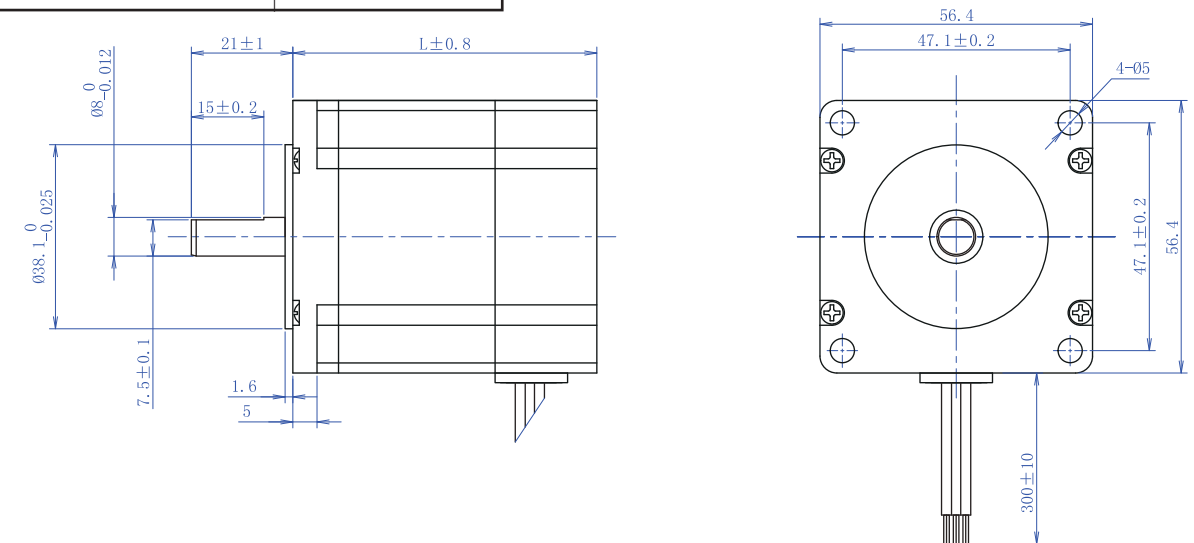
Dimensions(unit:mm)	
Model	Length(L)
HEM-23BR50 series	55
HEM-23BR100 series	75
HEM-23BR180 series	115



□57 Electrical Data

Item (Unit)	Three-phase brushless DC motor model					
	HEM-23BS50-24	HEM-23BS50-48	HEM-23BS100-24	HEM-23BS100-48	HEM-23BS180-24	HEM-23BS180-48
Power voltage (VDC)	24	48	24	48	24	48
Length (mm)	55		75		115	
Output power (W)	50		100		180	
Poles	8					
Rated torque(mN.m)	0.12	0.12	0.24	0.24	0.44	0.425
Rated current(A)	2.65	1.29	5.13	2.5	9.14	4.44
Rated speed(rpm)	4000					
Rotation speed (open loop rpm±10%)	4600	4700	4600	4600	4400	4500
Line to line resistance(Ω)	0.68	2.86	0.28	1.18	0.14	0.53
Line to line inductance (mH)	0.49	0.196	0.24	1.01	0.13	0.52
Back EMF constant (V.s/rad)	0.048	0.096	0.0475	0.097	0.05	0.099
Rotor inertia (g.cm ²)	0.171		0.342		0.384	
Weight (kg)	0.6		0.94		1.34	
Senor	HALL					
Insulation class	E					
Degree of protection	IP40					
Operating temperature	0-----+50° C					
Storage temperature	-25-----+70° C					
Operating humidity	≤85%RH(Non_condensing)					

Dimensions(unit:mm)	
Model	Length(L)
HEM-23BS50 series	55
HEM-23BS100 series	75
HEM-23BS180 series	115

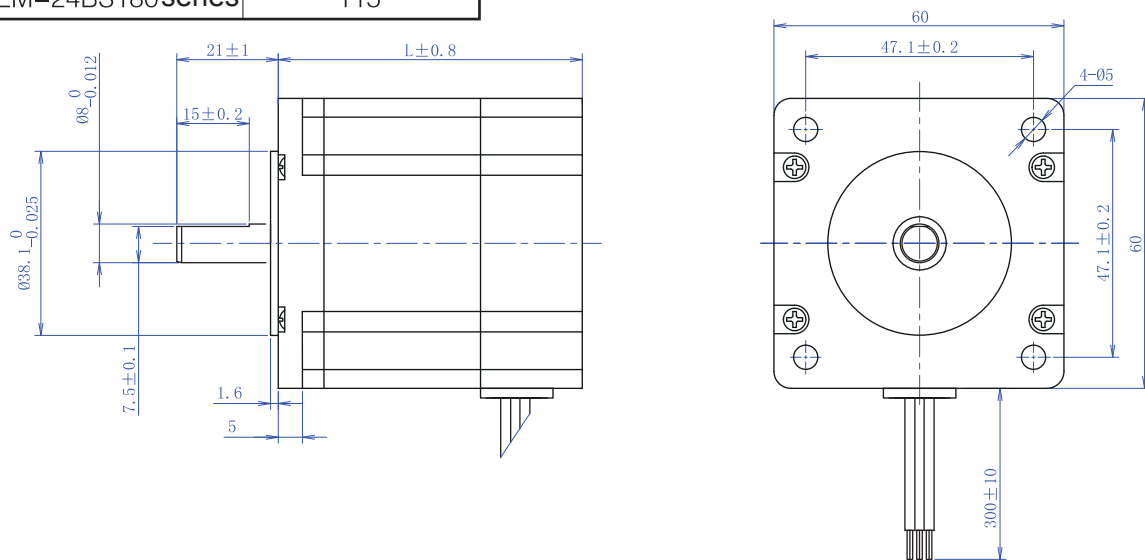


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60 Electrical Data

Item (Unit)	Three-phase brushless DC motor model					
	HEM-24BS60-24	HEM-24BS60-48	HEM-24BS120-24	HEM-24BS120-48	HEM-24BS180-24	HEM-24BS180-48
Power voltage (VDC)	24	48	24	48	24	48
Length (mm)	55		75		115	
Output power (W)	60		120		180	
Poles	6					
Rated torque(mN.m)	0.19	0.19	0.38	0.38	0.57	0.57
Rated current(A)	3.15	1.55	6.13	3	9.11	4.44
Rated speed(rpm)	3000					
Rotation speed (open loop rpm±10%)	3400	3500	3400	3500	3400	3400
Line to line resistance(Ω)	0.52	2.4	0.25	1.06	0.16	0.66
Line to line inductance (mH)	0.55	2.28	0.32	1.31	0.22	0.92
Back EMF constant (V.s/rad)	0.064	0.13	0.066	0.131	0.064	0.131
Rotor inertia (g.cm ²)	0.115		0.207		0.3	
Weight (kg)	0.43		0.73		1.04	
Senor	HALL					
Insulation class	E					
Degree of protection	IP40					
Operating temperature	0-----+50° C					
Storage temperature	-25-----+70° C					
Operating humidity	≤85%RH (Non_condensing)					

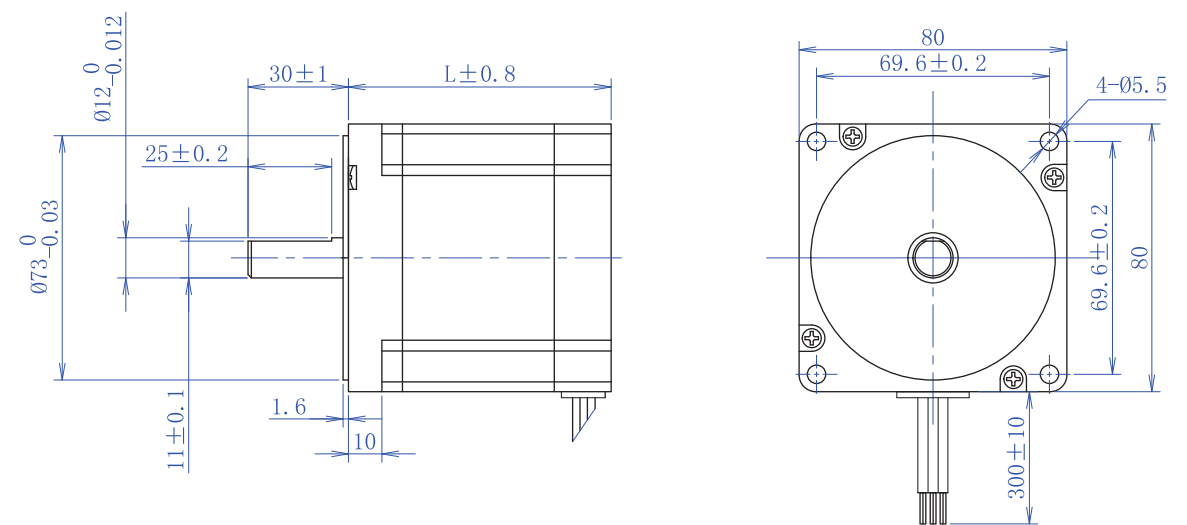
Dimensions(unit:mm)	
Model	Length(L)
HEM-24BS60series	55
HEM-24BS120series	75
HEM-24BS180series	115



80 Electrical Data

Item (Unit)	Three-phase brushless DC motor model					
	HEM-32BS100-24	HEM-32BS100-48	HEM-32BS200-24	HEM-32BS200-48	HEM-32BS300-24	HEM-32BS300-48
Power voltage (VDC)	24	48	24	48	24	48
Length (mm)	53		73		93	
Output power (W)	100		200		300	
Poles	8					
Rated torque(mN.m)	0.24	0.24	0.48	0.48	0.715	0.711
Rated current(A)	4.93	2.46	9.58	4.82	14.8	7.21
Rated speed(rpm)	4000					
Rotation speed (open loop rpm±10%)	4600	4500	4500	4500	4500	4500
Line to line resistance(Ω)	0.2	0.8	0.072	0.3	0.046	0.18
Line to line inductance (mH)	0.324	1.31	0.154	0.66	0.1	0.434
Back EMF constant (V.s/rad)	0.049	0.1	0.049	0.101	0.049	0.1
Rotor inertia (g.cm ²)	0.512		0.924		1.336	
Weight (kg)	0.81		1.4		2.02	
Senor	HALL					
Insulation class	E					
Degree of protection	IP40					
Operating temperature	0-----+50° C					
Storage temperature	-25-----+70° C					
Operating humidity	≤85%RH (Non_condensing)					

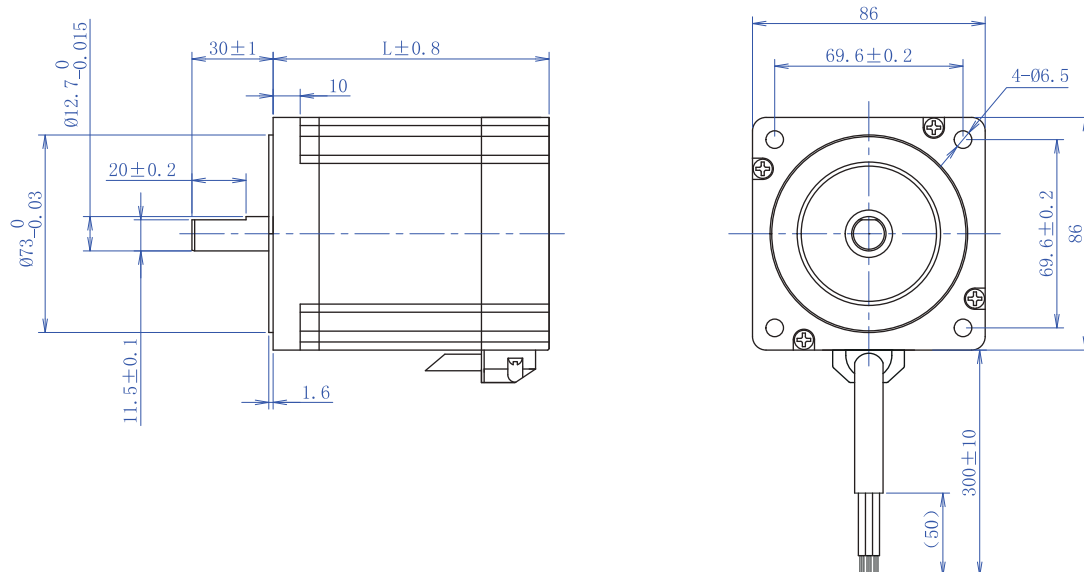
Dimensions(unit:mm)	
Model	Length(L)
HEM-32BS100series	53
HEM-32BS200series	73
HEM-32BS300series	93



86 Electrical Data

Item (Unit)	Three-phase brushless DC motor model	
	HEM-34BS200-48	HEM-34BS400-48
Power voltage (VDC)	48	48
Length (mm)	87	114
Output power (W)	200	400
Poles	8	
Rated torque(mN.m)	0.63	1.27
Rated current(A)	4.79	9.45
Rated speed(rpm)	3000	
Rotation speed (open loop rpm±10%)	3500	3500
Line to line resistance(Ω)	0.44	0.2
Line to line inductance (mH)	0.76	0.41
Back EMF constant (V.s/rad)	0.131	0.132
Rotor inertia (g.cm ²)	1.21	2.3
Weight (kg)	1.8	2.8
Senor	HALL	
Insulation class	E	
Degree of protection	IP40	
Operating temperature	0-----+50° C	
Storage temperature	-25-----+70° C	
Operating humidity	≤85%RH (Non_condensing)	

Dimensions(unit:mm)	
Model	Length(L)
HEM-34BS200series	87
HEM-34BS400series	114



$\frac{H}{①}$ $\frac{TSM}{②}$ $\frac{23}{③}$ $\frac{W60}{④}$ - $\frac{24}{⑤}$ - $\frac{01}{⑥}$ $\frac{PG}{⑦}$

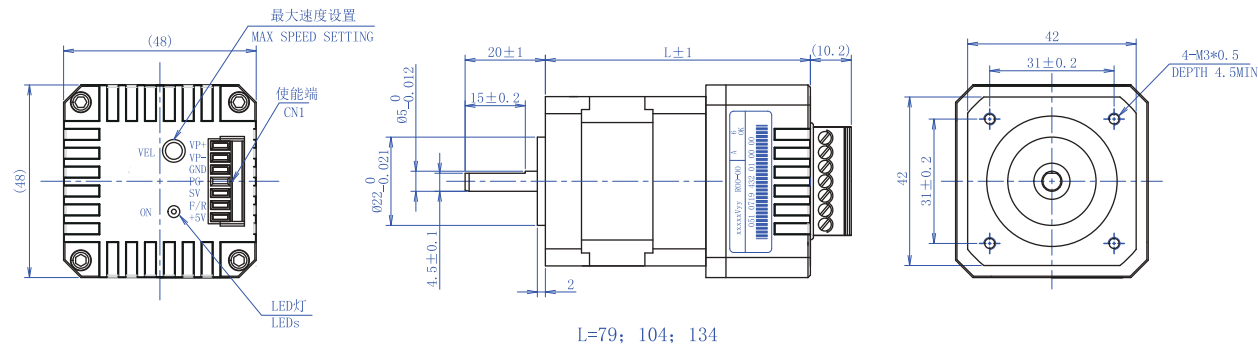
①	②	③	④	⑤	⑥	⑦
HEM	Motor Type	Nema Flange	Power	Rated Voltage	Custome Model	Option and customization code
	TSM: Integrated Brushless DC	11 28mm 17 42mm 23 57mm 32 80mm		24:DC24V 48:DC48V A1:AC110 A2:AC220		IP: IP65 PG: Planetary gearbox BK: Brake

Integrated brushless DC motor:

Item (Unit)	Three-phase brushless DC motor model		
	HTSM17W60-24	HTSM23W50-24	HTSM32W100-24
Power voltage (VDC)	24	24	24
Length (mm)	42	57	80
Output power (W)	70	70	58
Poles	60	50	100
Rated torque(mN.m)	8		
Rated current(A)	0.14	0.12	0.24
Rated speed(rpm)	3.13	2.65	4.93
Rotation speed (open loop rpm±10%)	4000		
Line to line resistance(Ω)	5000	4800	4600
Line to line inductance (mH)	0.66	0.82	0.2
Back EMF constant (V.s/rad)	0.67	1.24	0.324
Rotor inertia (g.cm ²)	0.044	0.046	0.049
Weight (kg)	0.077	0.171	0.512
Senor	HALL	NO	HALL
Insulation class	E		
Degree of protection	IP40		
Operating temperature	0-----+50° C		
Storage temperature	-25-----+70° C		
Operating humidity	≤85%RH (Non_condensing)		

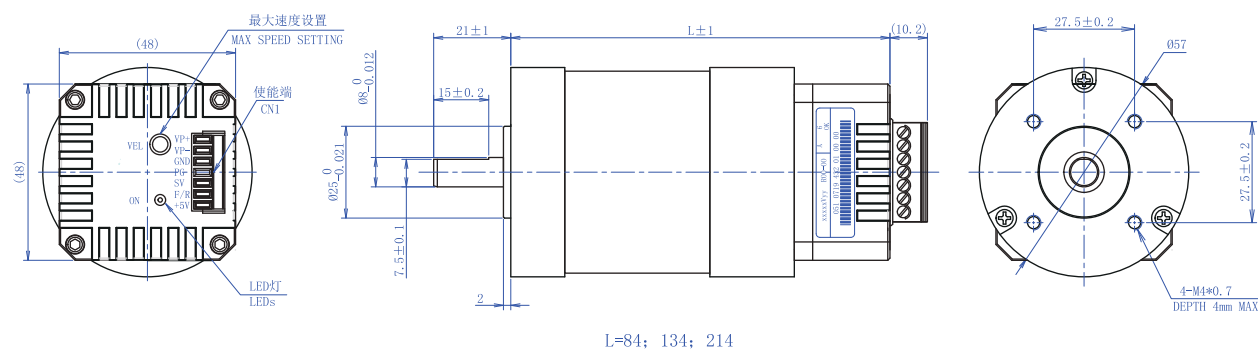
Electrical Data

Motor model	HTSM17W60-24
Voltage	24VDC
Velocity control	Analog input(0V~5V)
Tacho output	One cycle corresponds to one pulse
Driver mode	Integrated brushless motor with built-in drive circuit
Modulation Mode	Square wave
Protect function	Over Voltage、Over current、Locked-rotor、Anti-reverse connection
Summarize	The integrated brushless dc motor adopts the closed-loop circuit design, which has the characteristics of quick speed regulation response and strong anti-interference. With positive and negative rotation, manual speed regulation, speed feedback and other functions



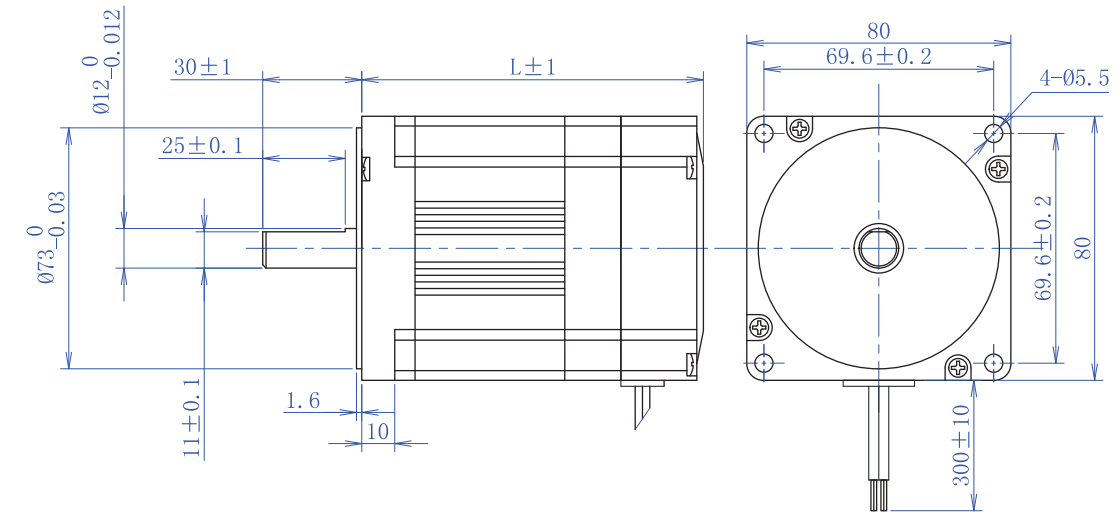
Electrical Data

Motor model	HTSM23W50-24
Voltage	24VDC
Velocity control	Analog input(0V~5V)
Tacho output	One cycle corresponds to one pulse
Driver mode	Integrated brushless motor with built-in drive circuit
Modulation Mode	Square wave
Protect function	Over Voltage、Over current、Locked-rotor、Anti-reverse connection
Summarize	The integrated brushless dc motor adopts the closed-loop circuit design, which has the characteristics of quick speed regulation response and strong anti-interference. With positive and negative rotation, manual speed regulation, speed feedback and other functions



Electrical Data

Motor model	HTSM32W100-24
Voltage	24VDC
Velocity control	Analog input(0V~5V)
Tacho output	One cycle corresponds to one pulse
Driver mode	Integrated brushless motor with built-in drive circuit
Modulation Mode	Square wave
Protect function	Over Voltage、Over current、Locked-rotor、Anti-reverse connection
Summarize	The integrated brushless dc motor adopts the closed-loop circuit design, which has the characteristics of quick speed regulation response and strong anti-interference. With positive and negative rotation, manual speed regulation, speed feedback and other functions



Brushless DC motor Drive Naming Rule:

H DBD 70W 8A - R4
① ② ③ ④ ⑤

①	②	③	④	⑤
HEM	Drive type	Maximum power	Rated current	Communication Ports
	DBD: Brushless DC motor	70W:70W 120W:120W 300W:300W 1500W:1500W	3A:3A 8A:8A 15A:15A 75A:75A	无: Brushless DC motor R4: RS485 R2: RS232

Brushless DC motor Drive HDBD70W-3A

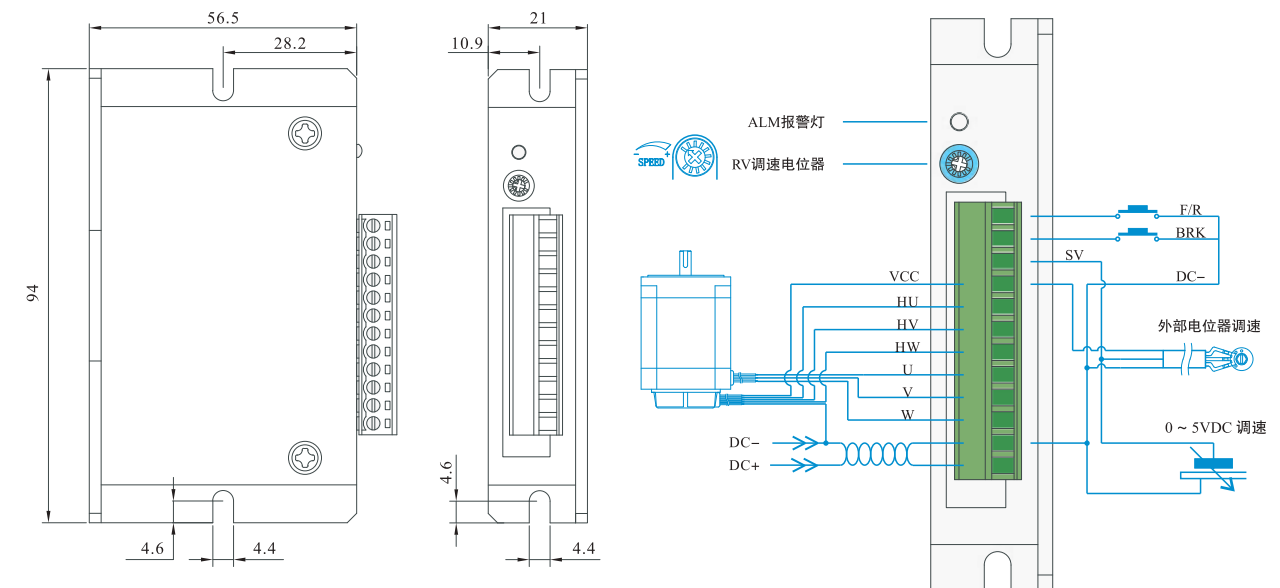
- Features:
 - Can drive less than 70W brushless motor
 - Functions: braking, positive and negative rotation and switching
 - Functions: Over temperature, Over current, Hall error
 - This Onboard potentiometer can be used for adjusting speed.
 - External digital and analog signal setting speed.
 - Small size, easy to install.



Electrical Data

Parameter	Min	Type	Max	Unit
Power supply	12	24	30	VDC
Output Current	-	-	3	A
overvoltage protection	-	30	-	VDC
undervoltage protection	-	12	-	VDC
External potentiometer		10K		Ω
Input analog signal voltage	-	-	5	VDC
Speed range	-	-	20000	r/min

Dimensions(unit:mm)



Brushless DC motor Drive HDBD120W-8A

Features:

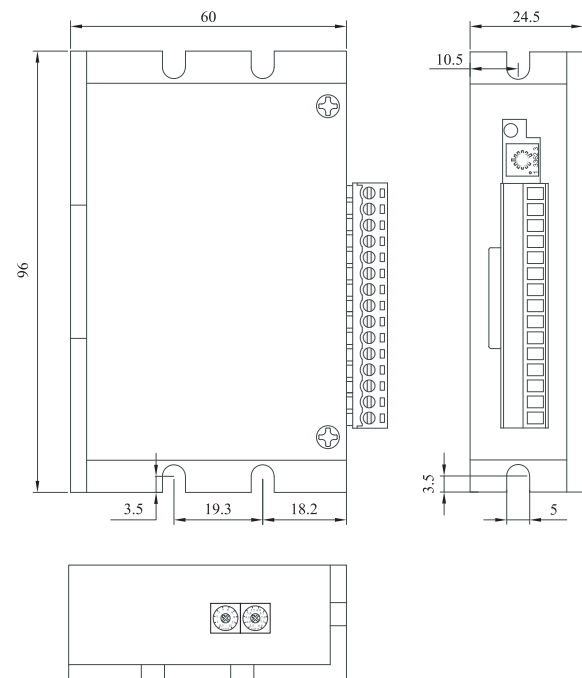
- Can drive less than 120W brushless motor
- Setting the acceleration and deceleration
- The power protection function(Maximum current setting)
- This Onboard potentiometer can be used for adjusting speed.
- External digital and analog signal setting speed.
- PWM speed adjusting
- Motor pole number setting、 Open loop and closed loop control、 Various alarm prompts



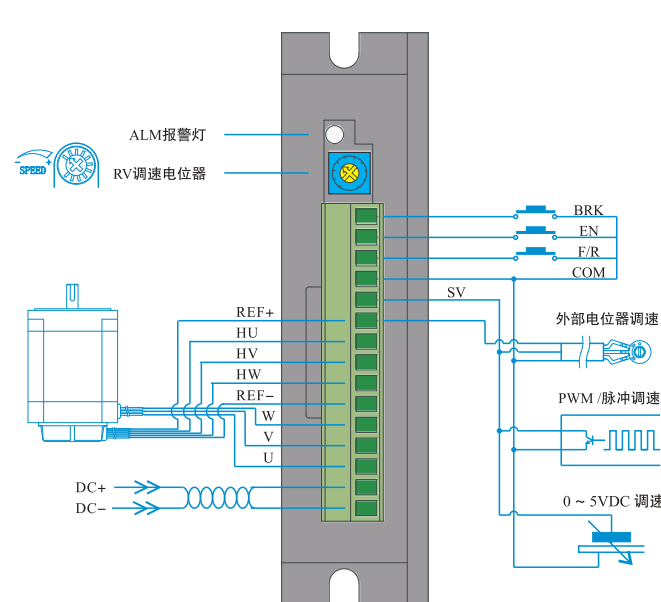
Electrical Data

Parameter	Min	Type	Max	Unit
Power supply	12	24	30	VDC
Output Current	-	-	8	A
overvoltage protection	-	-	5	V
undervoltage protection	-	20	-	mA
External potentiometer		10K		Ω
Input analog signal voltage	-	-	5	VDC
Speed range	-	-	20000	r/min

Dimensions(unit:mm)



Control signal interface:



Brushless DC motor Drive HDBD300W-15A

Features:

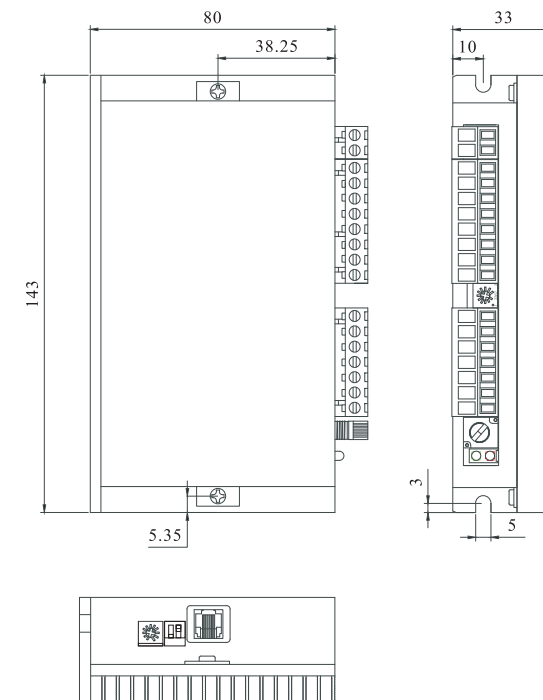
- Can drive less than 300W brushless motor
- Setting the acceleration and deceleration
- The power protection function(Maximum current setting)
- This Onboard potentiometer can be used for adjusting speed.
- External digital and analog signal setting speed.
- Small size, easy to install.



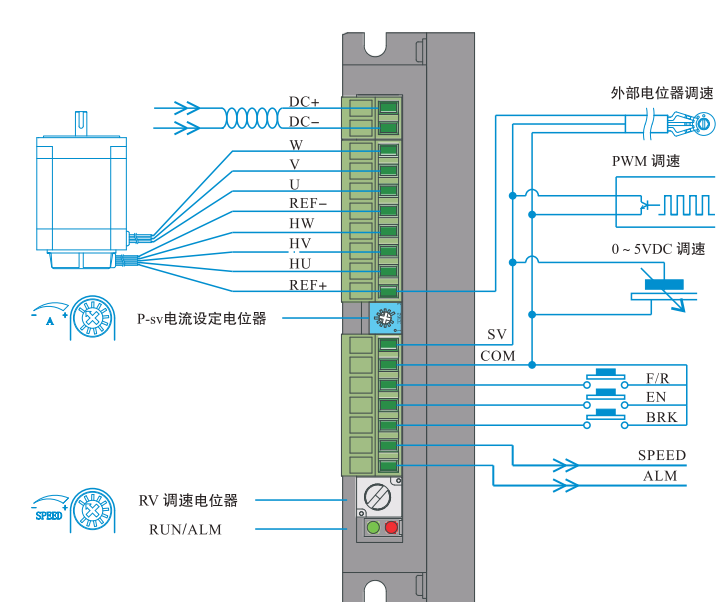
Electrical Data

Parameter	Min	Type	Max	Unit
Power supply	12	48	56	VDC
Output Current	-	-	15	A
Hall signal voltage	-	-	5	V
Hall drive current	12	-	-	mA
External potentiometer		10K		Ω
Speed range	-	-	20000	r/min

Dimensions(unit:mm)



Control signal interface:



Brushless DC motor Drive HDBD120W-8A-R4

Features:

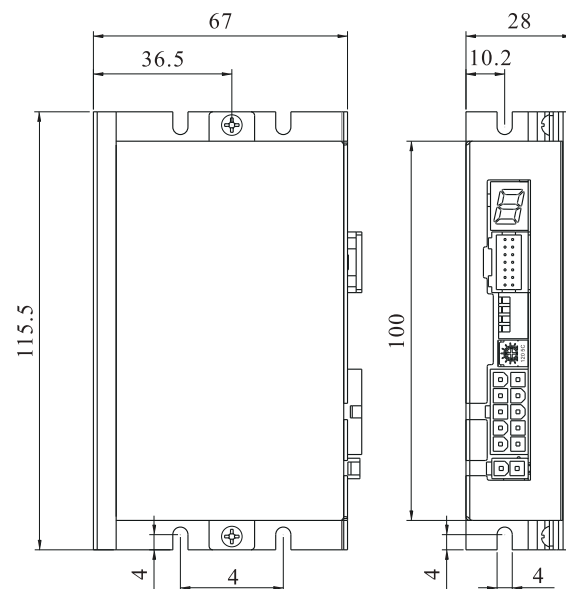
- Setting the acceleration and deceleration
- The power protection function(Maximum current setting)
- This Onboard potentiometer can be used for adjusting speed.
- External digital and analog signal setting speed.
- PWM speed adjusting
- RS485 communication multi-axis control、Open loop and closed loop control、Various alarm prompts



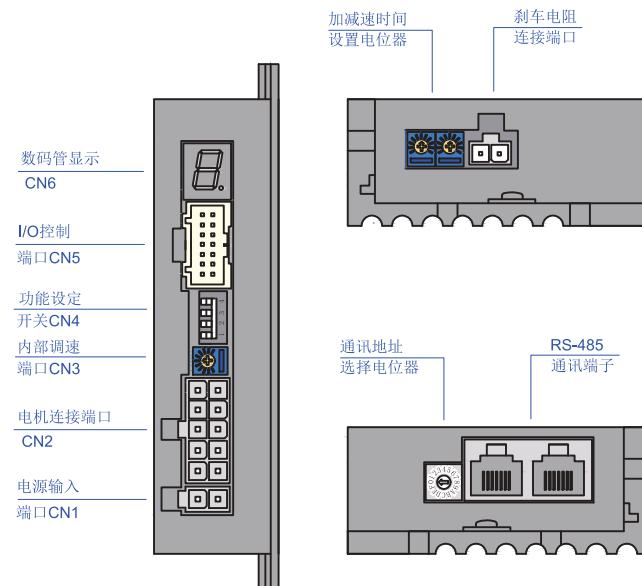
Electrical Data

Parameter	Min	Type	Max	Unit
Power supply	20	24	50	VDC
Output Current	-	-	8	A
Hall signal voltage	-	-	5	V
Hall drive current	12	-	-	mA
External potentiometer		10K		Ω
Speed range	-	-	20000	r/min

Dimensions(unit:mm)



Control signal interface:



Brushless DC motor Drive HDBD1500W-75A-R

Features:

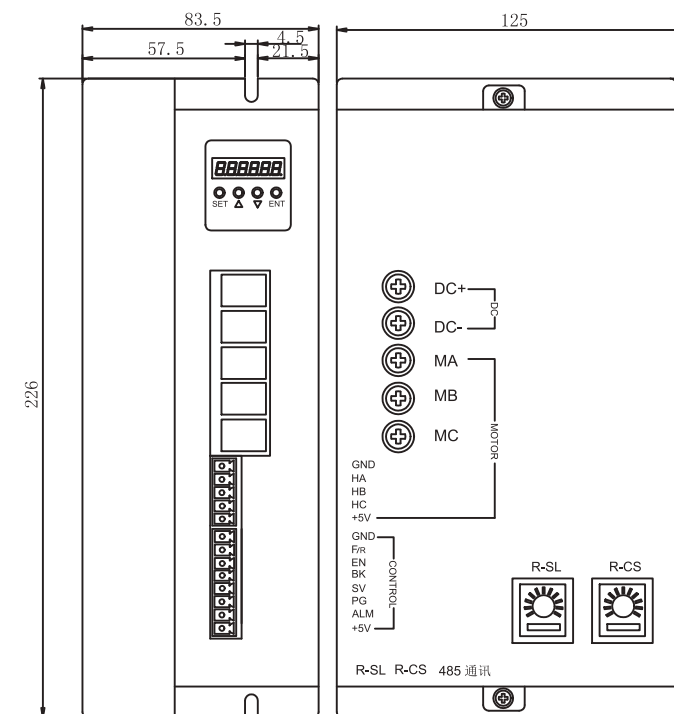
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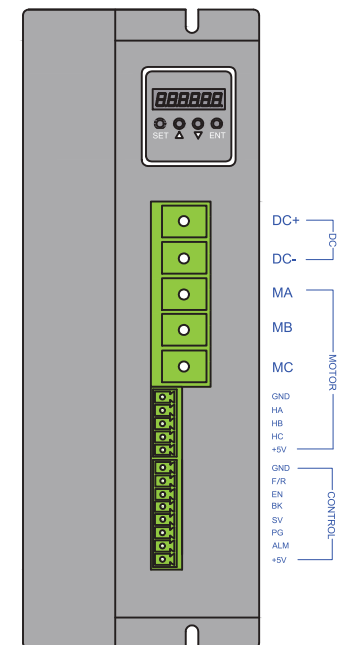
Electrical Data

Parameter	Min	Type	Max	Unit
Power supply	24	48	48	VDC
Output Current	-	-	75	A
Hall signal voltage	-	-	5	V
Hall drive current	12	-	-	mA
External potentiometer		10K		Ω
Speed range	-	-	20000	r/min

Dimensions(unit:mm)



Control signal interface:

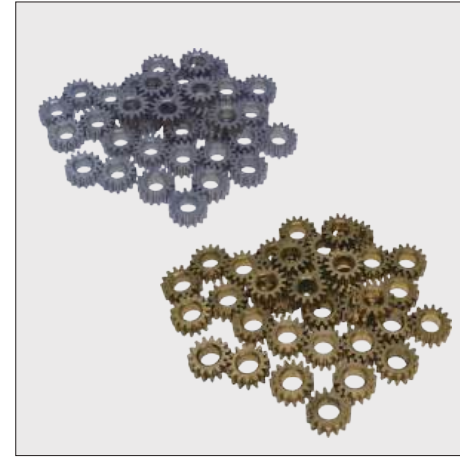
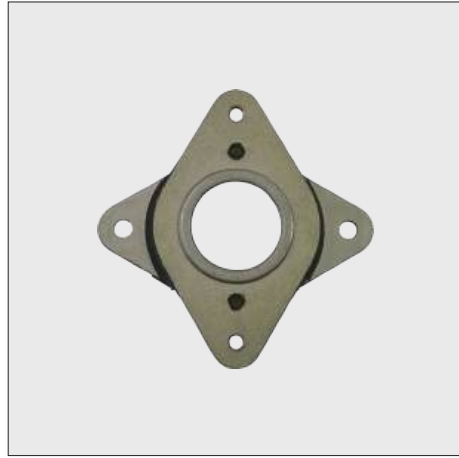


电机配件
Motor parts

电机配件
Motor parts

■ Damper | Gearbox

■ Pulley | Gear



Damper

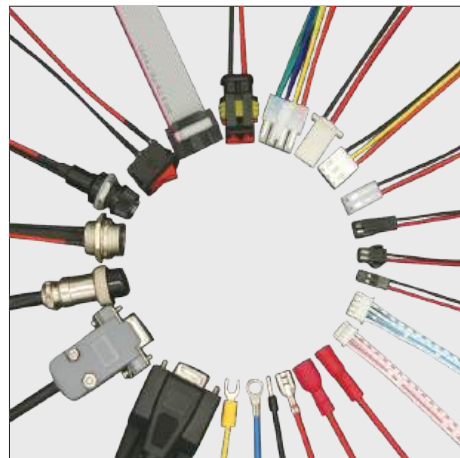
Gearbox

Pulley

Gear

■ Flexible coupling | Connection Cables

■ Encoder | Brake



Made in Japan

Flexible coupling

Connection Cables

Encoder

Brake

Damper

Damper

Gearbox

Gearbox

Flexible coupling

Flexible coupling

Connection Cables

Connection Cables

Pulley

Pulley

Gear

Gear

Encoder

Encoder

Brake

Brake