

Moteurs Brushless EMJ - EMG

Series Servo Motor ESTUN

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Model Comparison Table

Servo Motors				EDC/EDB series Servo Drives			
Series		Capacity	Model	Single phase 190~245Vac	Three phase 190~245Vac		
Medium Inertia	Small Capacity	EMJ 3000r/min	200w	EMJ-02APA	EDC-02APE		
			400w	EMJ-04APA	EDC-04APE		
			750w	EMJ-08APA	EDC-08APE EDB-08A□A	EDB-08 A□A	
			1000W	EMJ-10APA	EDB-10A□A	EDB-10A□A	
	Medium Capacity	EMG 2000r/min	1.0kW	EMG-10A□	EDB-10A□A	EDB-10A□A	
			1.5kW	EMG-15A□	EDB-15A□A	EDB-15A□A	
			2.0kW	EMG-20A□		EDB-20A□A	
			3.0kW	EMG-30A□		EDB-30A□A	
			5.0kW	EMG-50A□		EDB-50A□A	
			EML 1000r/min	1.0kW	EML-10A□		EDB-10A□A
				2.0kW	EML-20A□		EDB-20A□A
				3.0kW	EML-30A□		EDB-30A□A
				4.0kW	EML-40A□		EDB-50A□A

Servo Drive	Servo Motor	Power Cable Model	Encoder Cable Model	Communication Cable Model	Palm Operator
EDC-02APE	EMJ-02APA	CDM-JB18	CMP-JB26	CSC-CC24A	OP-01A
EDC-04APE	EMJ-04APA				
EDC-08APE	EMJ-08APA				
EDB-08A□□	EMJ-08APA	BDM-JB18	BMP-JB24	BSC-CC24A	
EDB-10A□□	EMJ-10APA				
EDB-10A□□	EMG-10APA	BDM-GA16	BMP-GA24		
EDB-15A□□	EMG-15APA				
EDB-20A□□	EMG-20APA	BDM-GA14			
EDB-30A□□	EMG-30APA	BDM-GD12			
EDB-50A□□	EMG-50APA	BDM-GA16			
EDB-10A□□	EML-10APA				
EDB-20A□□	EML-20APA				
EDB-30A□□	EML-30APA				
EDB-50A□□	EML-40APA	BDM-GD12			



Technical Specification of Servo Drives



Servo Drive Model		EDB Series	EDC Series	
Basic Data	Power Supply	Single/Three Phase AC220V+10-15%,50/60HZ	single Phase AC220V+10-15%,50/60HZ	
	Control Mode	SVPWM	SVPWM	
	Feedback	8 Cores(Wire saving) Incremental Encoder(2500P/R)	8 Cores(Wire saving) Incremental Encoder(2500P/R)	
	Working Condition	Operating/Storage Temperature	0 to +55°C/-20 to +85°C	0 to +55°C/-20 to +85°C
		Operating/Storage Humidity	90% RH or less(no condensation)	90% RH or less(no condensation)
		Shock/Vibration Resistance	4.9m/s ² / 19.6m/s ²	4.9m/s ² / 19.6m/s ²
	Structure	Base-mounted	Base-mounted	
Speed Control Range	1: 5000	1: 5000		
Speed Control Mode	Speed Regulation	Load Regulation	0 to 100% load:±0.01% max	—
		Voltage Regulation	Rated voltage±10%: 0%(at rated speed)	—
		Temperature Regulation	25±25°C:±0.1% max. (at rated speed)	—
	Frequency Characteristics with workload		300HZ(JL≤JM)	300HZ(JL≤JM)
	Software Startup Time setting		0-10s(Set Acceleration and Deceleration Individually)	—
	Speed Ref.Input	Reference Voltage	±10V DC	—
		Input Resistance	40kΩ	—
		Loop Time Constant	47μs	—
	Torque Ref.Input	Reference Voltage	±10V DC	—
		Input Resistance	40kΩ	—
		Loop Time Constant	47μs	—
Node Speed Reference	Reverse Rotation Direction Selection	Use P-CON Signal	—	
	Speed Selection	Use FWD/REV current limit signal (select speed 1-3),when both not OFF, select Stop or other control mode	—	
Position Control Mode	Reference Pulse	Type	SIGN+PULSE Train, Sin. Pulse Phase A and Phase B, CCW+CW Pulse Train	SIGN+PULSE Train, Sin. Pulse Phase A and Phase B, CCW+CW Pulse Train
		Pulse Buffer	Line Driving(+5V Level).Open Collector	Line Driving(+5V Level).Open Collector
		Pulse Frequency	Maxi.500Kpps(Difference) /200Kpps(Collector)	Maxi.500Kpps(Difference) /200Kpps(Collector)

Technical Specification of Servo Drives

Servo Drive Model		EDB Series	EDC Series	
Position Control Mode	Control Signal	clear	Clear	
	Offset Setting	0-300r/min(Set Resolution as 1r/min)	—	
	Feed Forward Compensation	0-100%(Set Resolution as 1%)	—	
	In position Error Setting	0-500 Reference Unit(Set resolution as 1 reference unit)	—	
I/O Signals	Position Output	Output Signal	Phase A, Phase B and Phase C; Line Driving Output	
		Dividing Ratio	(1-2500)/2500	
	Sequence Control Input		Servo ON, Proportional Control or Control Mode Switch, Forward Run Prohibited, Reverse Run Prohibited, Alarm Reset, FWD Torque External Limit, REV Torque External Limit, Zero Clamp Signal	Servo On, Alarm Reset, Error Counter, Clear Signal, Zero Clamp Signal
	Sequence Control Output		Servo Alarm, Servo Ready, Positioning Complete(Speed Coincidence),Brake Release, Limiting Torque, Motor Run Detection	Servo Alarm, Positioning Complete(Speed Coincidence),Brake Release, Limiting Torque
Built-in Function	COM Function		With RS485 interface for communication. With host controller's special software, parameter setting, run operation and status display can be done in Windows mode. Compatible with Modbus com protocol and CANopen protocol.	With RS485 interface for communication. With host controller's special software, parameter setting, run operation and status display can be done in Windows mode. Compatible with Modbus com protocol and CANopen protocol.
	LED Display		Charge, Power, Five 7-segment LEDs and 4 Pushbuttons(Digital Operation Panel)	Charge, Power & ALM Indicator, Five 7 Segment Tube(On Handheld Operator)
	Braking		Dynamic Brake, Overtravel Protection	Dynamic Brake
	Protection		Overcurrent, Overload, Overspeed, Under Voltage, Overvoltage, Encoder Error, Parameter Error, etc.	IPM Power Module Error, Overload, Overspeed, Voltage Error, Position Error, Counter Overflow, Encoder Disconnected, Parameter Damaged, etc.
	Regeneration Treatment Function		Built in Regenerative Resistance	—
	Other		Zero Clamp, 16 internal Position Nodes.	—

EMJ

Series Servo Motor

Features

- Medium inertia
- Peak torque up to 300% of rated torque
- Various models (200w~1000w, with brake, etc..)
- Run at speed of up to 4500r/min
- Equipped with wire-saving encoder(2500P/R)

Applications

- SMM(surface mounting machine)
- PCB puncher machine
- Robot arm
- Handing machine
- Foodstuff processing machine
- Textile machine



Model Specification Description

EMJ-08 A P A 1 1

EMJ Model Servo Motor

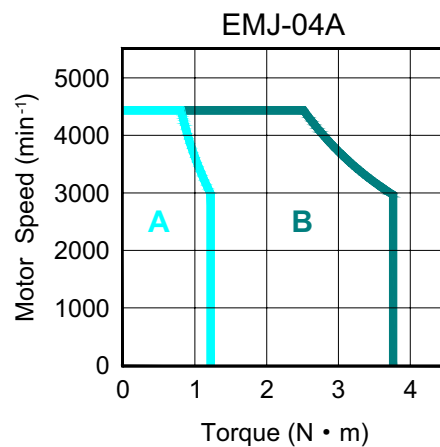
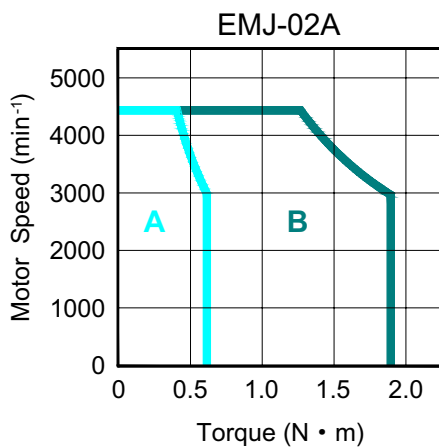
Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
2	200W	A	200Vac	P	2500P/R	A	Design Sequence	1	Flat, without keys	1	None
4	400W							2	Flat, with keys, with screw thread	2	With Oil Seal
8	750W									3	With brake (DC24V)
10	1000W									4	With oil seal, with brake (DC24V)

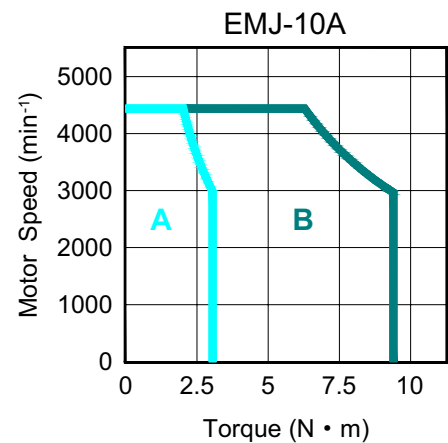
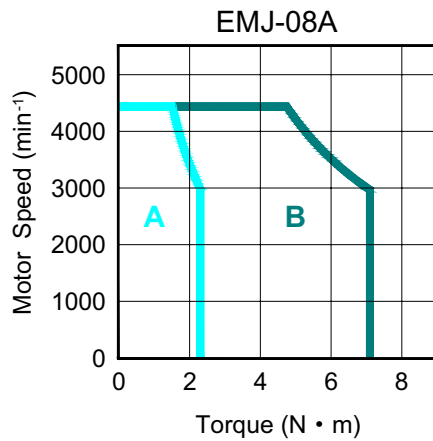
Rated Value and Specification

Voltage		200VAC			
Servo motor type	EMJ-	02A	04A	08A	10A
Rated output power	W	200	400	750	1000
Rated torque	N.m	0.64	1.27	2.40	3.18
Instantaneous peak torque	N.m	1.92	3.82	7.16	9.55
Rated current	Arms	1.3	2.7	4.0	5.3
Instantaneous peak current	Arms	3.9	8.1	12.0	15.9
Rated rotated speed	min ⁻¹	3000			
The highest rotated speed	min ⁻¹	4500			
Rotator rotated inertia	x10 ⁻⁴ kg/m ²	0.19(0.23)	0.31(0.35)	1.35(1.47)	1.74(1.87)
Encoder	Standard	Incremental wire-saving type: 2500P/R			
Heat endurance level		F			
Environment temperature		0 to +40°C (Non-iced)			
Environment humidity		20 to 80% RH (No dew)			
Protection method		All-closed, self-cool, IP65 (Except output shaft and connector)			
Anti-vibration performance		49m/s ²			

(Note): The values in parentheses are for servo motors with holding brakes.

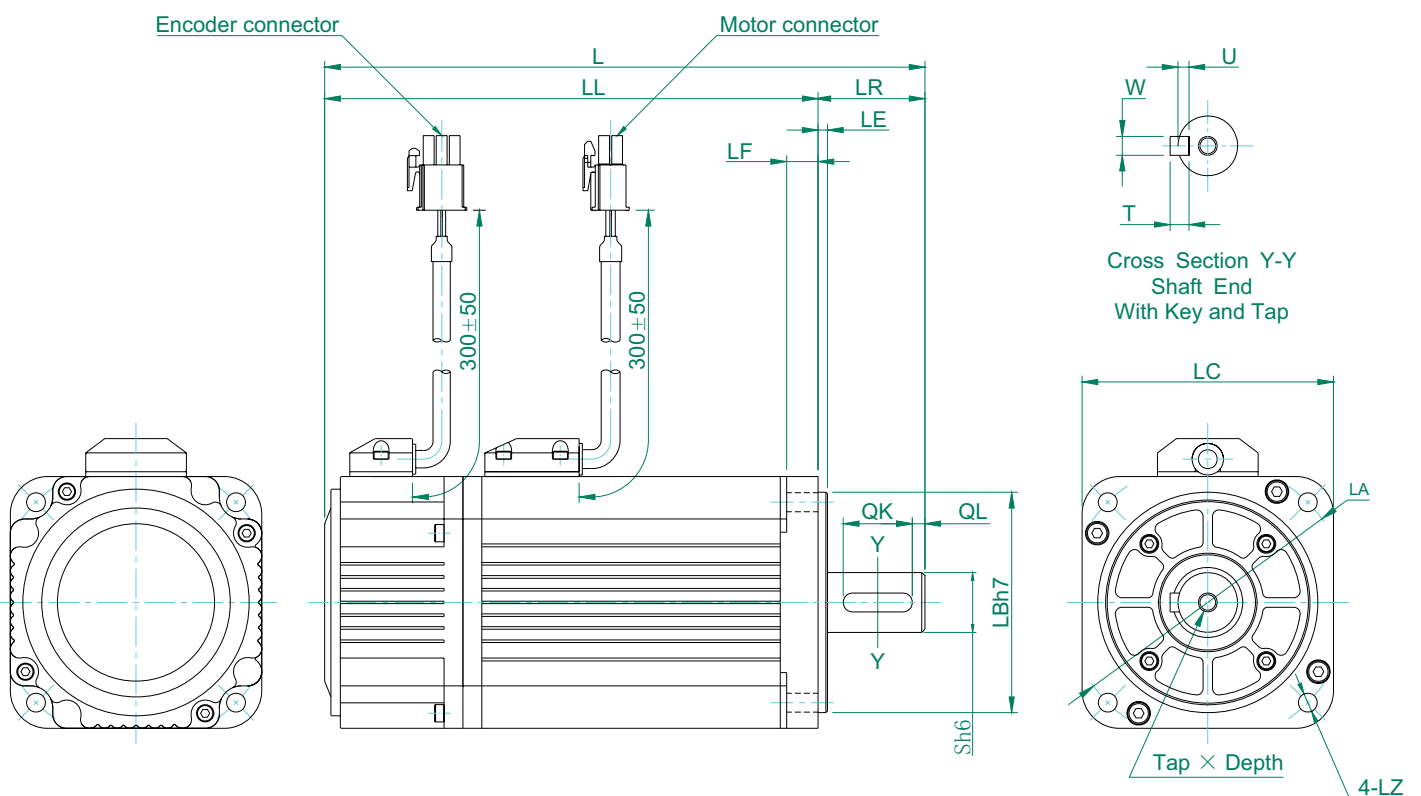
Torque-Speed Feature





A: Continuous Working Area B: Repeatable Working Area

Dimension



Model EMJ-	L	LL	Flange face							S	Tap×Depth	Key				
			LR	LE	LF	LC	LA	LB	LZ			QK	QL	W	T	U
02A	153(193)	123(163)	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
04A	173(223)	143(193)	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
08A	191(234)	156(199)	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10A	211(254)	176(219)	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5

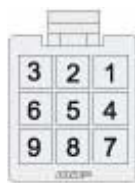
Note: The dimension in parentheses is for servo motors with holding brake.



➤ **Motor connector specification**

- Plug: 172167-1 (AMP)
- Pin: 170360-1 (AMP)

Pin No.	Signal	Color
1	U phase	Red
2	V phase	Blue
3	W phase	White
4	FG	Green/yellow



➤ **Encoder connector specification**

- Plug: 172169-1 (AMP)
- Pin: 170359-3 (AMP)

Pin No.	Signal	Color
1	A+	Blue
2	B+	Green
3	C+	Yellow
4	A-	Blue/Black
5	B-	Green/Black
6	C-	Yellow/Black
7	PG5V	Red
8	PG0V	Black
9	FG	Shield



➤ **Brake Connector Specifications**

- Plug: 172165-1(AMP)
- Pin: 170360-1(AMP)

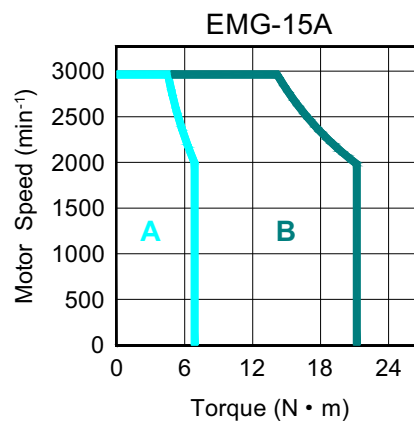
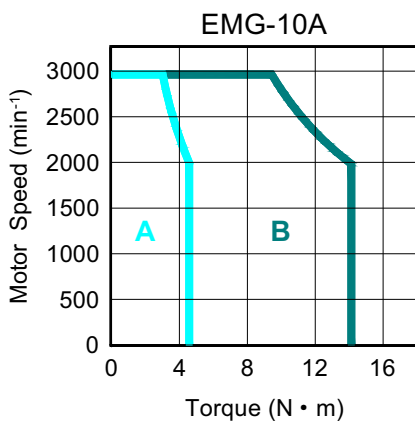
Pin No.	Signal	Color
1	B1	Blue
2	B2	White

Rated Value and Specification

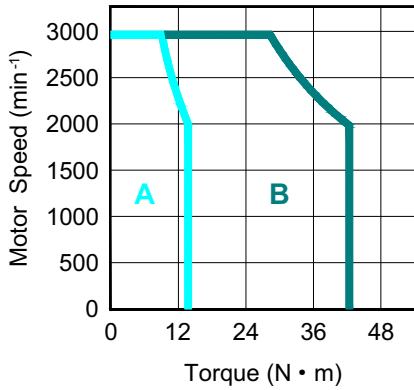
Voltage		200VAC				
Motor type	EMG-	10A	15A	20A	30A	50A
Rated output power	kW	1.0	1.5	2.0	3.0	5.0
Rated torque	N.m	4.78	7.16	9.55	14.3	23.9
Instantaneous peak torque	N.m	14.3	21.5	28.7	43	71.6
Rated current	Arms	6.0	9.0	12.0	18.0	28
Instantaneous peak current	Arms	18.0	27.0	36.0	54.0	84
Rated rotated speed	min ⁻¹	2000				
Peak rotated speed	min ⁻¹	3000				
Rotator rotated inertia	x10 ⁻⁴ kg/m ²	10(10.6)	14.5(15.1)	19.0(19.6)	41.3(44.5)	65.7(68.9)
Feedback unit	Standard	Incremental cable-saved type: 2500P/R				
Heat-endurance level		F				
Environment humidity temperature		0 to +40°C (Non-iced)				
Environment humidity		20 to 80% RH (No dew)				
Protection method		All-closed, Self-cooled, IP65 (Except output shaft and connector)				
Anti-vibration performance		24.5m/s ²				

(Note): The values in parentheses are for servo motors with holding brakes.

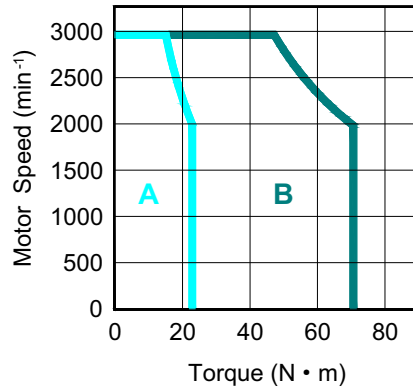
Torque-Speed Feature



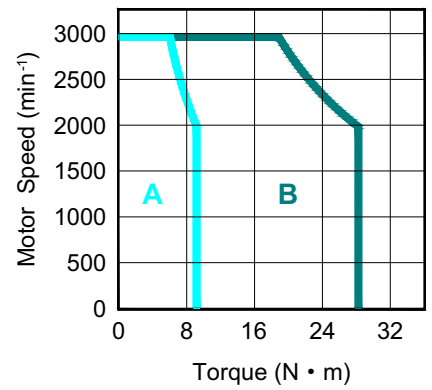
EMG-30A



EMG-50A

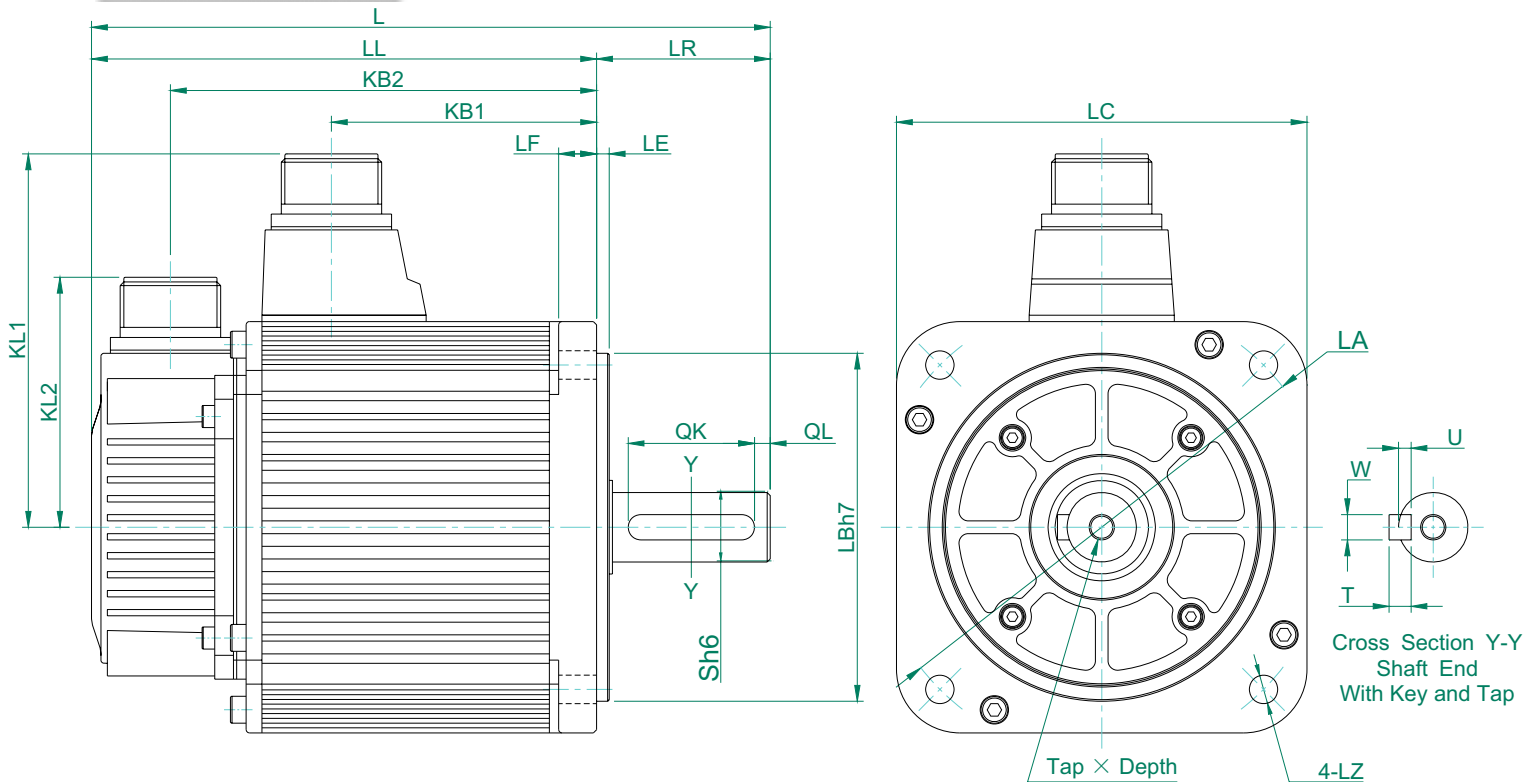


EMG-20A



A: Continuous Working Area B: Repeatable Working Area

Dimension



Model EMG-	L	LL	KB1	KB2	KL1	KL2	Flange face						S	Tap×Depth	Key					
							LR	LE	LF	LC	LA	LB			LZ	QK	QL	W	T	U
10A	215	160	84	135	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
15A	240	185	109	160	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
20A	265	210	134	185	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
30A	307	228	143	203	140	79	79	3.2	18	180	200	114.3	13.5	35	M8x16L	55	6	10	8	5
50A	347	268	183	243	140	79	79	3.2	18	180	200	114.3	13.5	35	M8x16L	55	6	10	8	5



➤ **Motor connector specification**

- Plug: MS3108B20-4S(LC=130), MS3108B22-22S(LC=180)
- Receptacle: MS3102A20-4P(LC=130),MS3102A22-22P(LC=180)
- Cable Clamp: MS3057-12A

Pin No.	Signal
A	U phase
B	V phase
C	W phase
D	FG



➤ **Encoder connector specification**

- Plug: MS3108B20-29S
- Receptacle: MS3102A20-29P
- Cable Clamp: MS3057-12A

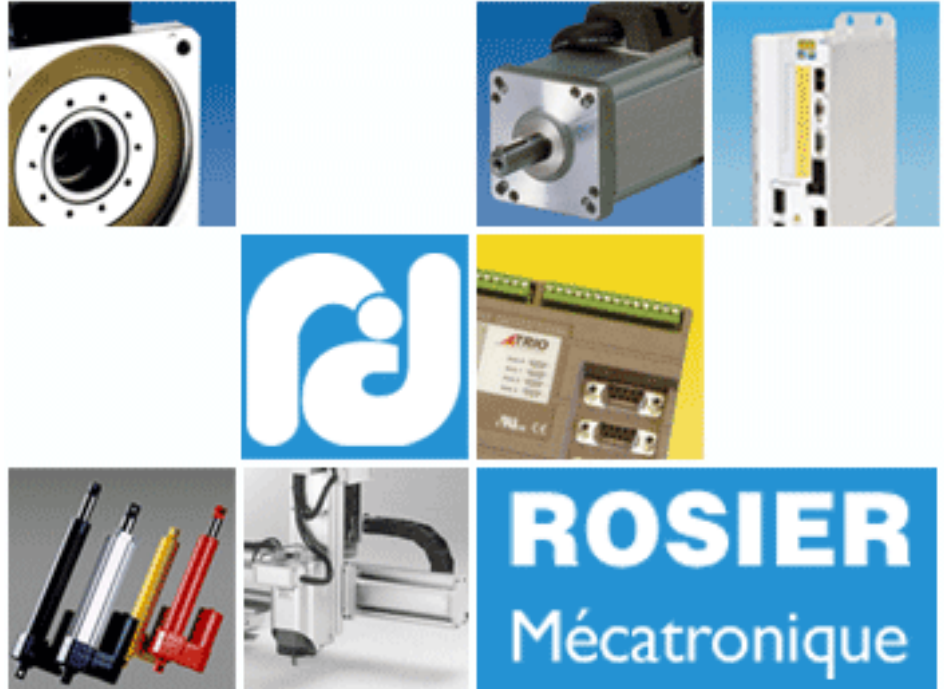
Pin No.	Signal	Color
A	A+	Blue
B	A -	Blue/Black
C	B+	Green/Black
D	B -	Green
E	C+	Yellow
F	C -	Yellow/Black
G	PG0V	Black
H	PG5V	Red
J	FG	Shield



➤ **Brake Connector Specifications**

- Plug: MS3106A10SL-3S
- Receptacle: MS3102A10SL-3P
- Cable Clamp: MS3057-4A

Pin No.	Signal
A	B1
B	B2
C	-



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