

Servo Motor Specification

EMJ Model

Features

- Medium inertia
- Peak torque up to 300% of rated torque
- Various models (0.05kW~1.0kW, with brake, etc.)
- Speed up to 4500r/min
- Mounted with 17/20bits incremental/absolute encoder, wire-saving incremental encoder (2500P/R) is optional

Application

- SMM (surface mounting machine)
- PCB punch machine
- Robot arm
- Handling machinery
- Textile machinery



Specification Description

EMJ - 08 A P B 1 1 -WR

EMJ Model
Servo Motor

Rated Output
Power

Power
Voltage

Encoder

Designing
Sequence

Shaft End

Option Parts

Connector

| Sign | Spec. | Sign | Spec. | Sign | Spec. | Sign | Spec. | Sign | Spec. | Sign | Spec. | |
|------|--------|------|--------|------|---------------------------------------|-------------------|----------|------|------------------------------------|------|-----------------------------------|--|
| A5 | 0.05kW | A | 200VAC | D | Incremental Encoder: 131072P/R | A, B, Designing H | Sequence | 1 | Flat, Without Keys | 1 | None | Standard Connector |
| 01 | 0.1kW | B | 100VAC | F | Incremental : Encoder 1048576P/R | | | | | 2 | With Oil Seal | |
| 02 | 0.2kW | | | S | Absolute Encoder: 131072P/R | | | 2 | Flat, With Keys, With Screw Thread | 3 | With Brake (DC24V) | WR Water proof Connector Incremental (Wire-saving) Type: 2500P/R |
| 04 | 0.4kW | | | P | Incremental Wire-saving Type: 2500P/R | | | | | 4 | With Oil Seal, With Brake (DC24V) | |
| 08 | 0.75kW | | | | | | | | | | | |
| 10 | 1.0kW | | | | | | | | | | | |

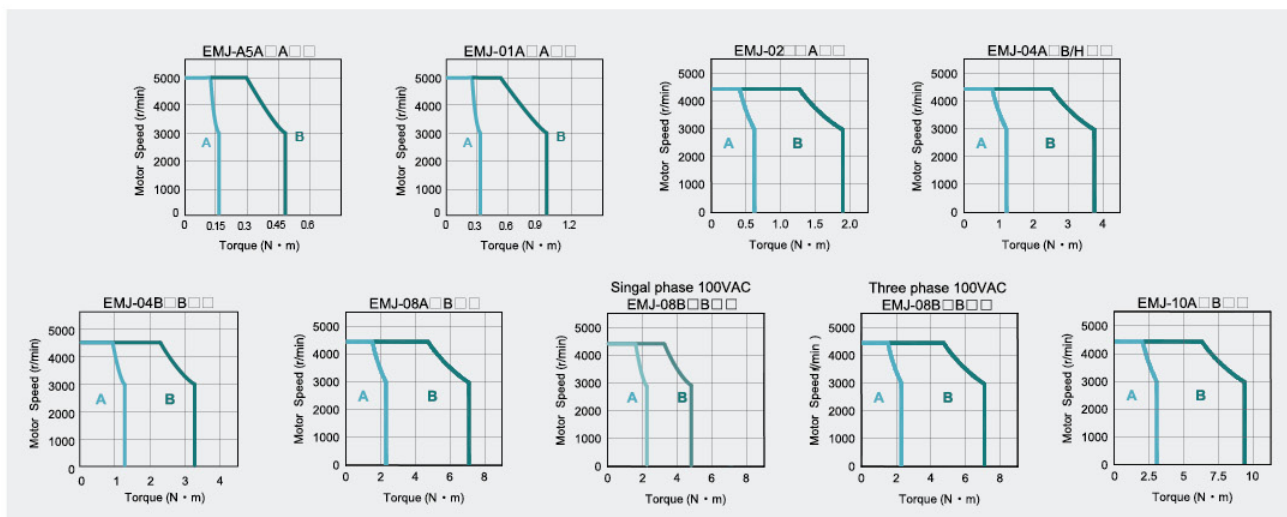
Notes: ①EMJ-A5/01□□□□□ and EMJ-□□□□D/F/S□□ support water proof connector default.
②EMJ-04/08/10A□□□□□-UL have completed UL1004-6. File NO. is E365853.

Rated Value and Specification

| Voltage | | 100VAC/200VAC | | | | | | | | | | |
|---------------------------|---|---|------------------|-------------|----------|----------------|------------|----------------|-------------|----------|----------------|--|
| Servo Motor Model | EMJ- | A5A□□□□ | 01A□□□□□ | 02A□A□□□ | 02B□A□□□ | 04A□B□□□ | 04A□H□□□ | 04B□B□□□ | 08A□B□□□ | 08B□B□□□ | 10A□B□□□ | |
| Rated Output Power | kW | 0.05 | 0.1 | 0.2 | | 0.4 | | | 0.75 | | 1.0 | |
| Rated Torque | N·m | 0.16 | 0.32 | 0.64 | | 1.27 | | | 2.39 | | 3.18 | |
| Instantaneous Peak Torque | N·m | 0.48 | 0.96 | 1.91 | | 3.82 | 3.82 | 3.26 | 7.16 | 7.16 | 9.55 | |
| Rated Current | Arms | 0.95 | 1.05 | 1.4 | 2.7 | 2.8 | 2.8 | 5.8 | 4.0 | 8.2 | 5.3 | |
| Instantaneous Max Current | Arms | 3.0 | 3.2 | 4.2 | 8.1 | 8.4 | 8.4 | 15.1 | 12.0 | 24.6 | 15.9 | |
| Rated Speed | r/min | 3000 | | | | | | | | | | |
| Max. Speed | r/min | 5000 | | | | 4500 | | | | | | |
| Rotor Moment of Inertia | $\times 10^{-4} \text{kg}\cdot\text{m}^2$ | 0.051 (0.052) | 0.073 (0.074) | 0.19 (0.23) | | 0.31 (0.35) | 0.7 (0.74) | 0.31 (0.35) | 1.35 (1.47) | | 1.74 (1.87) | |
| Brake Rated Voltage | | DC24V \pm 10% | | | | | | | | | | |
| Brake Rated Power | W | 6.096 | | | | 7.2 | | | 11.5 | | | |
| Brake Holding Torque | N·m | 0.3 | | | | 1.3 | | | 3.2 | | | |
| Encoder | Standard | Incremental Encoder: 131072P/R 1048576P/R | | | | | | | | | | |
| | Options | Absolute Encoder: 131072P/R Wire-saving Incremental Encoder (2500P/R) | | | | | | | | | | |
| Insulation Class | | F | | | | | | | | | | |
| Ambient Temperature | | 0 to +40°C (no freezing) | | | | | | | | | | |
| Ambient Humidity | | 20% to 80% RH (non-condensing) | | | | | | | | | | |
| Vibration | | 49m/s ² | | | | | | | | | | |
| Enclosure | | Totally Enclosed, Self-cooled, IP65 (Except for shaft opening, when not equipped with oil seal; Except for connectors, when not equipped with waterproof connectors.) | | | | | | | | | | |

Note : ① The values in parentheses are for servo motors with holding brakes.
 ② when power supply is single-phase, the instantaneous peak torque of EMJ-08B□B□□ is 4.78.

Torque-Speed Feature

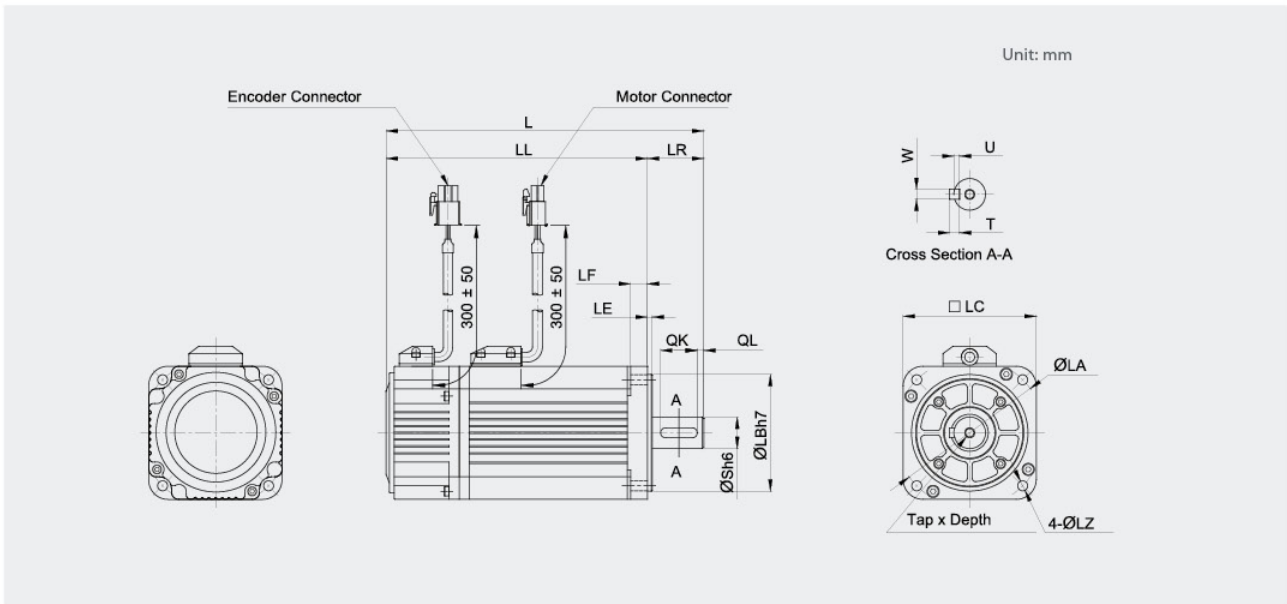


A: Continuous Working Area B: Repeatedly Working Area

Dimension

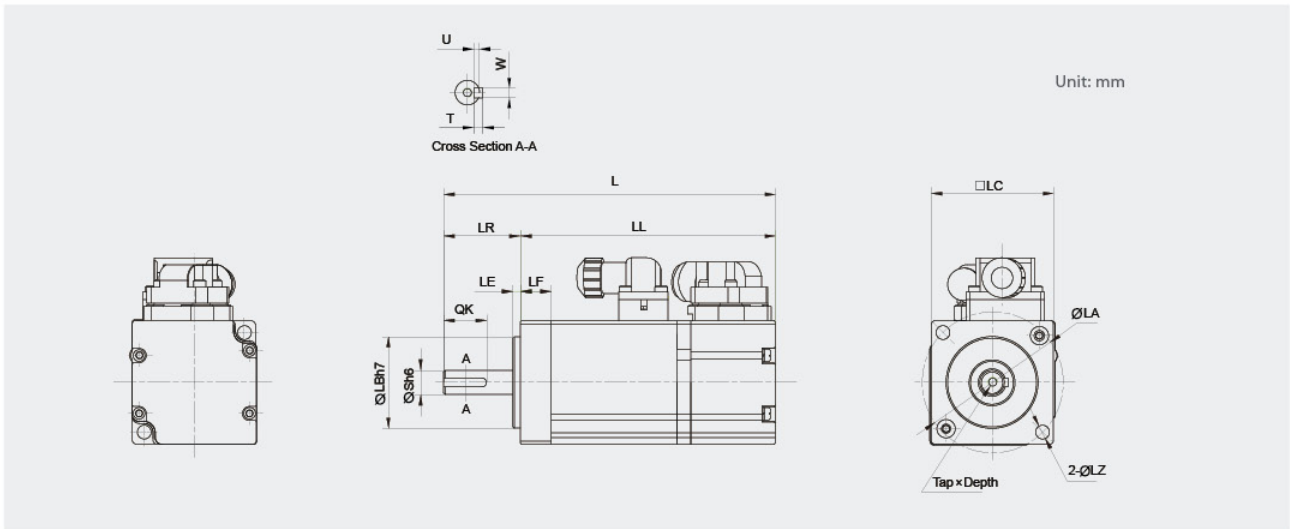
Servo Drive

EMJ Dimension



| Model EMJ- | L | LL | Dimension | | | | | | | S | Tap×Depth | Key | | | | |
|------------|----------|----------|-----------|----|----|----|----|----|-----|----|-----------|-----|----|---|-----|---|
| | | | LR | LE | LF | LC | LA | LB | LZ | | | QK | QL | W | T | U |
| 02□P | 141(181) | 111(151) | 30 | | 6 | 60 | 70 | 50 | 5.5 | 14 | M5×10L | 16 | | 5 | 5 | 3 |
| 02□D | 141 | 111 | | | | | | | | | | | | | | |
| 02□S | 154(194) | 124(164) | | | | | | | | | | | | | | |
| 04□P/FA/B | 161(201) | 131(171) | | | | | | | | | | | | | | |
| 04□D | 161 | 131 | | | | | | | | | | | | | | |
| 04□S | 174(214) | 144(184) | 35 | 3 | 9 | 80 | 90 | 70 | 7 | 19 | M6×15L | 22 | 6 | 6 | 3.5 | |
| 08□P/F | 173(216) | 138(181) | | | | | | | | | | | | | | |
| 08□D | 173 | 138 | | | | | | | | | | | | | | |
| 08□S | 186(229) | 151(194) | | | | | | | | | | | | | | |
| 10□P/F | 191(234) | 156(199) | | | | | | | | | | | | | | |
| 10□D | 191 | 156 | 30 | | 6 | 60 | 70 | 50 | 5.5 | 14 | M5×10L | 16 | 5 | 5 | 3 | |
| 10□S | 204(247) | 169(212) | | | | | | | | | | | | | | |
| 04□P/FH | 172(212) | 142(182) | | | | | | | | | | | | | | |
| 04□SH | 182(222) | 152(192) | | | | | | | | | | | | | | |

Note: The dimension in parentheses are for servo motors with holding brakes.



| Model EMJ- | L | LL | Dimension | | | | | | | S | Tap×Depth | Key | | | | |
|---------------|------------|------------|-----------|-----|----|----|----|----|-----|---|-----------|-----|----|---|---|-----|
| | | | LR | LE | LF | LC | LA | LB | LZ | | | QK | QL | W | T | U |
| 01□P | 125(159.5) | 100(134.5) | 25 | 2.5 | 10 | 40 | 46 | 30 | 4.5 | 8 | CM3x6L | 14 | - | 3 | 3 | 1.8 |
| A5□P | 108(142.5) | 83(117.5) | 25 | 2.5 | 10 | 40 | 46 | 30 | 4.5 | 8 | CM3x6L | 14 | - | 3 | 3 | 1.8 |

Note: The dimension in parentheses are for servo motors with holding brakes.

Motor Connector Specification for EMJ-A5/01□P

- Plug: SC-MC4S-A1(SUNCHU)
- Receptacle: SC-MC4P-A1(SUNCHU)

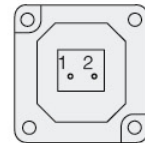


| Pin No. | Signal |
|---------|--------|
| 1 | V |
| 2 | W |
| 3 | U |
| 4 | PE |

Brake Connector Specification for EMJ-A5/01□P

- Plug: SC-MC2S-A1(SUNCHU)
- Receptacle: SC-MC2P-A1(SUNCHU)

| Pin No. | Signal |
|---------|--------|
| 1 | B1 |
| 2 | B2 |



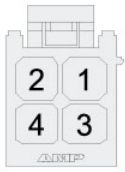
Encoder Connector Specification for EMJ-A5/01□P

- Plug: SC-MC9S-A1(SUNCHU)
- Receptacle: SC-MC9P-A1(SUNCHU)



| Pin No. | Signal |
|---------|--------|
| 1 | A+ |
| 2 | A- |
| 3 | B+ |
| 4 | B- |
| 5 | C+ |
| 6 | C- |
| 7 | PG5V |
| 8 | PG0V |
| 9 | FG |

Motor Connector Specification for EMJ-02/04/08/10□P



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

| Pin No. | Signal |
|---------|--------|
| 1 | U |
| 2 | V |
| 3 | W |
| 4 | FG |

Brake Connector Specification for EMJ-02/04/08/10□P

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

| Pin No. | Signal |
|---------|--------|
| 1 | B1 |
| 2 | B2 |



Encoder Connector Specification for EMJ-02/04/08/10□P



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

| Pin No. | Signal |
|---------|--------|
| 1 | A+ |
| 2 | B+ |
| 3 | C+ |
| 4 | A- |
| 5 | B- |
| 6 | C- |
| 7 | PG5V |
| 8 | PG0V |
| 9 | FG |

Encoder Connector Specification for EMJ-02/04/08/10□D/S

- Plug: CGRSD-7BFMA-SL8001
- Incremental / Absolute Encoder

| Pin No. | Signal |
|---------|--------|
| 1 | S+ |
| 2 | S- |
| 3 | BAT+ |
| 4 | BAT- |
| 5 | PG5V |
| 6 | PG0V |
| 7 | FG |



★ Note : There are no BAT+,BAT- signal in incremental encoder.

Motor Connector Specification for EMJ-02/04/08/10□P-Waterproof (option)

Motor Connector Specification for EMJ-02/04/08/10□D/S



- Plug: CGRSB-4BFMA-SL8001

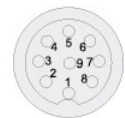
| Pin No. | Signal |
|---------|--------|
| 1 | U |
| 2 | V |
| 3 | W |
| 4 | FG |

Encoder Connector Specification for EMJ-02/04/08/10□P-Waterproof(option)

Incremental Encoder(Wire-saving)

- Plug: CGRSD-9BFMA-SL8001

| Pin No. | Signal |
|---------|--------|
| 1 | A+ |
| 2 | A- |
| 3 | B+ |
| 4 | B- |
| 5 | C+ |
| 6 | C- |
| 7 | PG5V |
| 8 | PG0V |
| 9 | FG |



Brake Connector Specification for EMJ-02/04/08/10□P-Waterproof(option)

Brake Connector Specification for EMJ-02/04/08/10□D/S



- Plug: CGRSB-2BFMA-SL8001

| Pin No. | Signal |
|---------|--------|
| 1 | B1 |
| 2 | B2 |