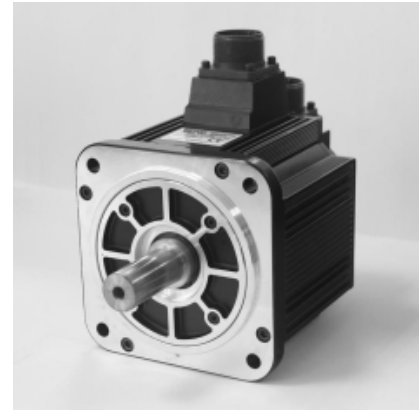


# EML 180mm Series Servo Motor



## FEATURES

- **Rated Torque from 2,700 to 5,438 oz.-in.**
- **Medium Inertia to Maximize Torque**
- **Peak Torque up to 300% of Rated Torque**
- **Peak Current up to 300% of Rated Current**
- **Speed of up to 1,500 RPM**
- **2,500 PPR Incremental Encoder Attached**
- **Enclosed and Self-Cooled**
- **Power Ratings up to 2.0 to 4.0 kWatts**
- **Oil Seal and Optional Brake**
- **Long Life and Highly Reliable**
- **Neodymium-Iron-Boron Magnets (NdFeB)**
- **CE Certified**



## DESCRIPTION

Anaheim Automation's Digital AC Servo motors offers a simple solution for servo applications. The EML Series AC Servo motors are equipped with a 2,500 counts-per-revolution encoder. Available in three stack lengths provides the user with many options, with rated torque from 2,700 to 5,438 oz.-in. Anaheim Automation's EML Series AC Servo motors enable industrial motion control applications with medium inertia characteristics to attain a great combination of speed and positioning capability.

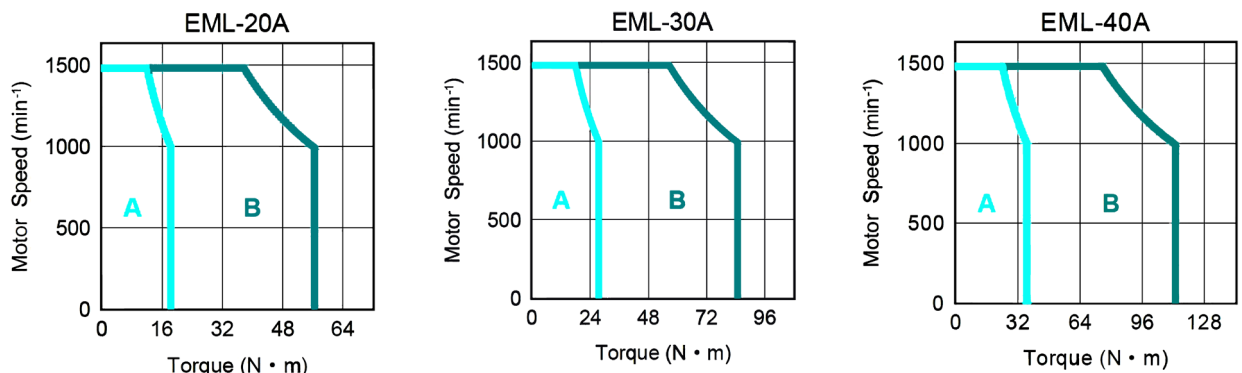
Anaheim Automation offers a low-cost, high-quality, easy-to-use AC Servo motor and driver combination. The company pride itself with great customer service and professional application assistance. The EML Series AC Servo motors offer a cost-effective solution to many velocity and position controlled applications.

## SPECS

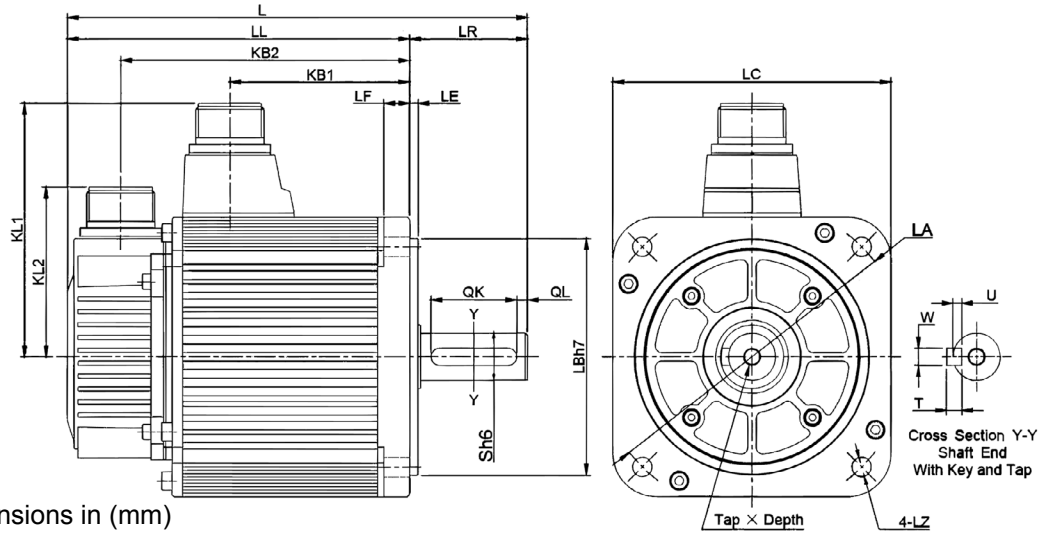
| Model #    | Rated Torque (oz-in) | Rated Power (Watts) | Max Speed (rpm) | Rated Speed (rpm) | Rated Current (A rms) | Inertia (oz-in-sec <sup>2</sup> ) | Electric Time Constant T <sub>E</sub> (ms) | Mechanical Time Constant T <sub>E</sub> (ms) | Back EMF Voltage K <sub>E</sub> (V/krpm) | Torque Constant K <sub>T</sub> (oz-in/A) | Resistance (ohms) |
|------------|----------------------|---------------------|-----------------|-------------------|-----------------------|-----------------------------------|--|--|--|--|-------------------|
| EML-20APAx | 2704                 | 2000                | 1500            | 1000              | 12.0                  | 0.7576                            | 15.36                                      | 1.72   | 109                                      | 236.9                                    | 0.56              |
| EML-30APAx | 4064                 | 3000                | 1500            | 1000              | 18.0                  | 1.1017                            | 18.87                                      | 1.21   | 116                                      | 270.0                                    | 0.3               |
| EML-40APAx | 5438                 | 4000                | 1500            | 1000              | 24.0                  | 1.4473                            |  |  | 118                                      | 264.5                                    |                   |

## TORQUE VS SPEED

A: Continuous Working Area B: Repeatedly Working Area



L010739



Note: All Dimensions in (mm)

| Model #    | L   | LL  | KB1 | KB2 | KL1 | KL2 | Flange Slide |     |    |     |     |       | S    | TapxDepth | Key     |    |    |    |   |   |
|------------|-----|-----|-----|-----|-----|-----|--------------|-----|----|-----|-----|-------|------|-----------|---------|----|----|----|---|---|
|            |     |     |     |     |     |     | LR           | LE  | LF | LC  | LA  | LB    |      |           | LZ      | QK | QL | W  | T | U |
| EML-20APAx | 332 | 253 | 168 | 228 | 140 | 79  | 79           | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35        | M6x20L  | 55 | 6  | 10 | 8 | 5 |
| EML-30APAx | 372 | 293 | 208 | 268 | 140 | 79  | 79           | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35        | M8x16L  | 55 | 6  | 10 | 8 | 5 |
| EML-40APAx | 412 | 333 | 243 | 308 | 140 | 79  | 79           | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35        | M8xx16L | 55 | 6  | 10 | 8 | 5 |

### Encoder Connector Specification

**Receptacle:**  
MS3102A20-29P

**Plug:**  
MS3108B20-29S

**Cable Clamp:**  
MS3057-12A



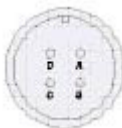
| Pin No. | Signal | Color        |
|---------|--------|--------------|
| A       | A+     | Blue         |
| B       | A-     | Blue/Black   |
| C       | B+     | Green/Black  |
| D       | B-     | Green        |
| E       | C+     | Yellow       |
| F       | C-     | Yellow/Black |
| G       | PGOV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

### Motor Connector Specification

**Receptacle:**  
MS3102A22-22P

**Plug:**  
MS3108B22-22S

**Cable Clamp:**  
MS3057-12A



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

### Brake Connector Specification

**Receptacle:**  
MS3102A10SL-3P

**Plug:**  
MS3106A10SL-3S

**Cable Clamp:**  
MS3057-4A



| Pin No. | Signal |
|---------|--------|
| A       | B1     |
| B       | B2     |
| C       | -      |

|                             |   |   |
|-----------------------------|---|---|
| Power Requirement 220VAC    | Vibration: 49m/s <sup>2</sup>                   | Running Air Pressure: 86-106 kPa                                |
| Insulation Class: F         | Ambient Humidity: 20 to 80% RH                  | Insulation Voltage Endurance: AC 1800V, 50Hz, 1min              |
| Ambient Temp: 0° to 40° C   | IP Rating: IP65                                 | Insulation Impedance: Not Less than 50M Under Normal Conditions |
| Running Temp: -25° to 40° C | Running Humidity: Not more than 90%, under 25°C |   |