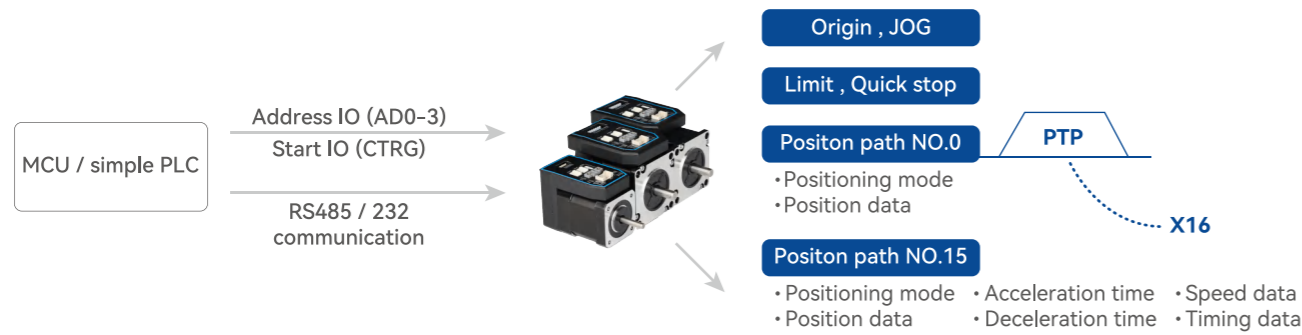


Built-in uni-axial control instruction



| Models | Type & Frame | Operating Voltage (VDC) | Control Mode | Holding Torque (N.m) | Logical Voltage (VDC) | Motor Length (mm) |
|------------|-----------------------|-------------------------|---------------------|----------------------|-----------------------|-------------------|
| iEM-1703 | Open Loop NEMA17 | 20-36 | Pulse&Dir | 0.3 | 5 | 64 |
| iEM-1706 | | 20-36 | | 0.6 | 5 | 72 |
| iEM-1708 | | 20-36 | | 0.8 | 5 | 85 |
| iEM-RS1706 | | 20-36 | RS485 | 0.6 | 12-24 | 73 |
| iEM-RS1708 | | 20-36 | Modbus | 0.8 | 12-24 | 86 |
| iEM-2313 | Open Loop NEMA23 | 20-50 | Pulse&Dir CW&CCW | 1.3 | 5 | 75 |
| iEM-2323 | | 20-50 | | 2.3 | 5 | 96 |
| iEM-2321-L | | 20-50 | | 2.1 | 5 | 89 |
| iEM-2331-L | | 20-50 | 3.1 | 5 | 109 | |
| iEM-RS2313 | | 20-50 | RS485 | 1.3 | 12-24 | 78 |
| iEM-RS2323 | 20-50 | Modbus | 2.3 | 12-24 | 99 | |
| iEM-2430 | Open Loop NEMA24 | 20-50 | Pulse&Dir CW&CCW | 3.0 | 5 | 109 |
| iEM-2435 | | 20-50 | | 3.5 | 5 | 122 |
| iCS-1703 | Closed Loop NEMA17 | 20-36 | Pulse&Dir | 0.3 | 5 | 64 |
| iCS-1706 | | 20-36 | | 0.6 | 5 | 72 |
| iCS-1708 | | 20-36 | | 0.8 | 5 | 85 |
| iCS-RS1706 | | 20-36 | RS485 | 0.6 | 12-24 | 73 |
| iCS-RS1708 | | 20-36 | Modbus | 0.8 | 12-24 | 86 |
| iCS-2313 | Closed Loop NEMA23 | 20-50 | Pulse&Dir CW&CCW | 1.3 | 5 | 75 |
| iCS-2323 | | 20-50 | | 2.3 | 5 | 96 |
| iCS-2321-L | | 20-50 | | 2.1 | 5 | 89 |
| iCS-2331-L | | 20-50 | 3.1 | 5 | 109 | |
| iCS-RS2313 | | 20-50 | RS485 | 1.3 | 12-24 | 78 |
| iCS-RS2323 | 20-50 | Modbus | 2.3 | 12-24 | 99 | |
| iCS-2430 | Closed Loop NEMA24 | 20-50 | Pulse&Dir CW&CCW | 3.0 | 5 | 109 |
| iCS-2435 | | 20-50 | | 3.5 | 5 | 122 |



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IEM/ICS Series Integrated Stepper Motor

Introduction

IEM/ICS Series

iEM series is integrated open-loop stepper motor with Leadshine's latest digital stepper technology.

iCS series is integrated closed-loop stepper motor with 14-bit single-turn absolute encoder for smooth and jitter-free motor start-up.

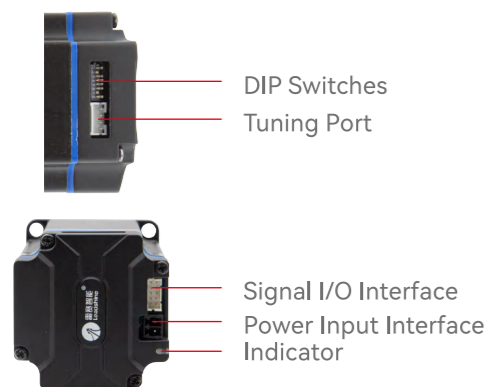
iEM and iCS series motors output torque can up to 3.5Nm and supports Modbus RS485 communication with Indexer control function. And with a more compact design, it is especially suitable for applications with strict mounting space requirements, and it is easy to use, which can further reduce customers' procurement and labor costs.



specifications

| | | | |
|--|--|--------------|--------------|
| Encoder Type | Single-turn absolute magnetic encoder | | |
| Encoder Resolution | 14-bit | | |
| Angle Calibration | Be sure to calibrate after encoder installation | | |
| Step Angle | 1.8° | | |
| Position Accuracy | ±0.09° | | |
| Max Temperature | 95° C | | |
| Operation Environment | Temperature: -10° C ~ 50° C; Humidity: 85%RH Max | | |
| IP Rate | IP20 | | |
| Radial Load (N) (Distance to the flange 10mm) | NEMA17 30 | NEMA23 75 | NEMA24 90 |
| Axial Load (N) | Less than motor weight | | |

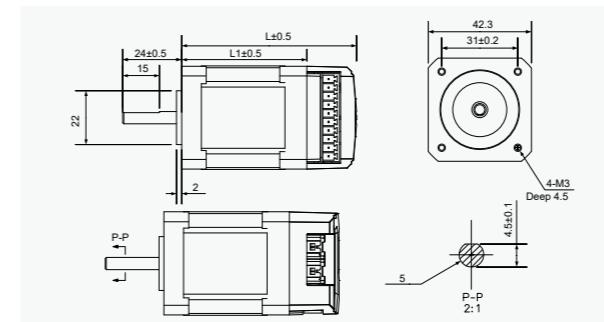
iEM & iCS Interface



| Port | Description |
|--------------|---|
| DIP Switches | SW1-SW4: Microstep SW5: Motor Direction SW6: PUL&DIR and CW&CCW selection SW7: Smoothing filtering time SW8: Activated pulse edge for iEM series Open/closed loop control selection for iCS series |
| I/O Port | PUL+/-, DIR+/-, ENA+/-, ALM+/- |

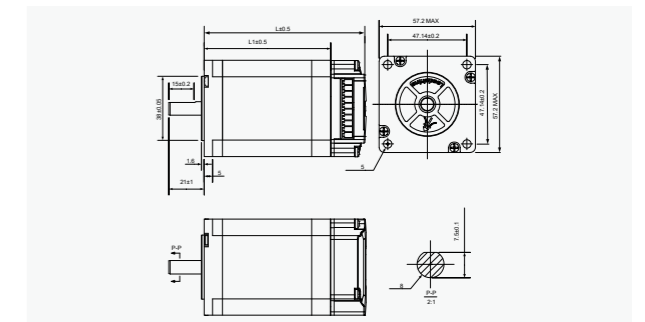
Dimensions

Unit: mm 1inch=25.4mm



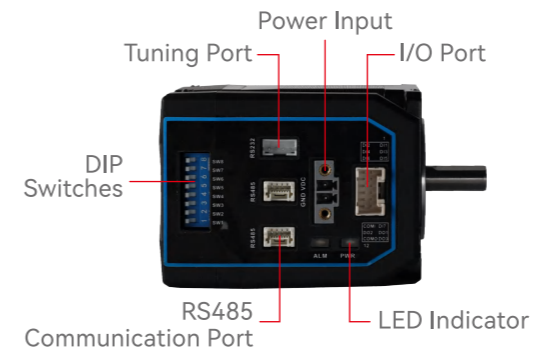
| Model | L1 length | L length |
|----------|-----------|----------|
| iCS-1703 | 43 | 64 |
| iCS-1706 | 51 | 72 |
| iCS-1708 | 64 | 85 |

Unit: mm 1inch=25.4mm



| Model | L1 length | L length |
|------------|-----------|----------|
| iCS-2113 | 43 | 64 |
| iCS-2323 | 51 | 72 |
| iCS-2321-L | 64 | 85 |
| iCS-2331-L | 88 | 109 |
| iCS-2430 | 88 | 109 |
| iCS-2435 | 101 | 122 |

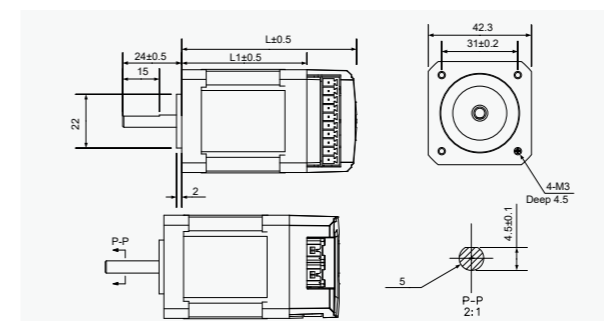
iEM-RS & iCS-RS Interface



| Port | Description |
|--------------|---|
| DIP Switches | SW1-SW5: Node ID SW6-SW7: Baud Rate SW8: 120Ω Terminal Resistance |
| I/O Port | 7 digital inputs, 3 digital outputs |

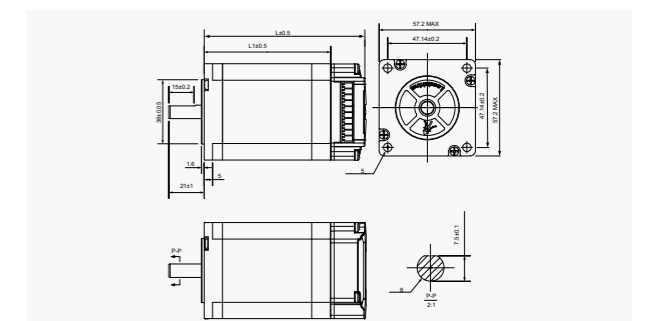
Dimensions

Unit: mm 1inch=25.4mm



| Model | L1 length |
|------------|-----------|
| iCS-RS1706 | 73mm |
| iCS-RS1708 | 86mm |

Unit: mm 1inch=25.4mm



| Model | L1 length |
|------------|-----------|
| iCS-RS2313 | 78mm |
| iCS-RS2323 | 99mm |