



Datasheet of 2 Phase Easy Servo Motor

LC-H2 Series



2 Phase Closed Loop Stepper Motors / 2~12Nm

Descriptions

Lichuan's LC-H2 series easy servo motors, are also called 2 phase closed loop stepper motors. They are designed to match with Lichuan's 2 phase easy servo drivers including the LCDA257S, LCDA86H and LCDA808H. They are available from NEMA23 to NEMA34 (57, 60mm and 86mm) with holding torque from 2Nm to 12Nm. 1000-line optical incremental encoders are used on those easy servo motors to improve the machine accuracy. They all have good function characteristics such as encoder feedback, high speed, high precision and so on.

Naming Rules

LC
-


57: 57mm
60: 60mm
86: 86mm



H2: 2 phase

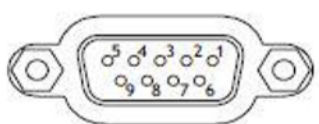


76: motor length
86: motor length
80: motor length

Encoder Specifications

Parameter	Min	Typical	Max	Unit
Supply voltage	4.5	5	5.5	VDC
Output Current per Channel	-1	-	5	mA
Low Level Output Voltage	-	-	0.4	VDC
High Level Output Voltage	2.4	-	-	VDC

Encoder Cable Connector

Pin	Name	Wire color	Description	Connector
1	EA+	black	Channel A+ output	
2	EA-	blue	Channel A- output	
4	EB+	white	Channel B+ output	
5	EB-	red	Channel B- output	
7	GND	yellow	+5V power input	
8	VCC	green	Ground	

Cable Specifications

Models	Power Cable	Power Extension Cable	Encoder Cable	Encoder Extension Cable
LC57H276	450±15mm	3m / CABLEP-LC3 5m / CABLEP-LC5 6m / CABLEP-LC6 8m / CABLEP-LC8 10m / CABLEP-LC10 12m / CABLEP-LC12	330±15mm	3m / CABLEBM-LC3 5m / CABLEBM-LC5 6m / CABLEBM-LC6 8m / CABLEBM-LC8 10m / CABLEBM-LC10 12m / CABLEBM-LC12
LC57H2100				
LC60H269				
LC60H286				
LC60H2102				
LC60H2112				
LC60H2127				
LC86H280				
LC86H298				
LC86H2120				
LC86H2128				
LC86H2160				

Encoder Extension Cable

Models	Length	Matched Motor
CABLEBM-LC3	3m	LC57H276 / LC57H2100 LC60H269 / LC60H286 LC60H2102 / LC60H2112 LC60H2127 / LC86H280 LC86H298 / LC86H2120 LC86H2128 / LC86H2160
CABLEBM-LC5	5m	
CABLEBM-LC6	6m	
CABLEBM-LC8	8m	
CABLEBM-LC10	10m	
CABLEBM-LC12	12m	

Power Extension Cable

Models	Length	Matched Motor
CABLEP-LC3	3m	LC57H276 / LC57H2100 LC60H269 / LC60H286 LC60H2102 / LC60H2112 LC60H2127 / LC86H280 LC86H298 / LC86H2120 LC86H2128 / LC86H2160
CABLEP-LC5	5m	
CABLEP-LC6	6m	
CABLEP-LC8	8m	
CABLEP-LC10	10m	
CABLEP-LC12	12m	

Motor Specifications

» 2 Phase 57 (NEMA23) Easy Servo Motor Series

General Specifications---

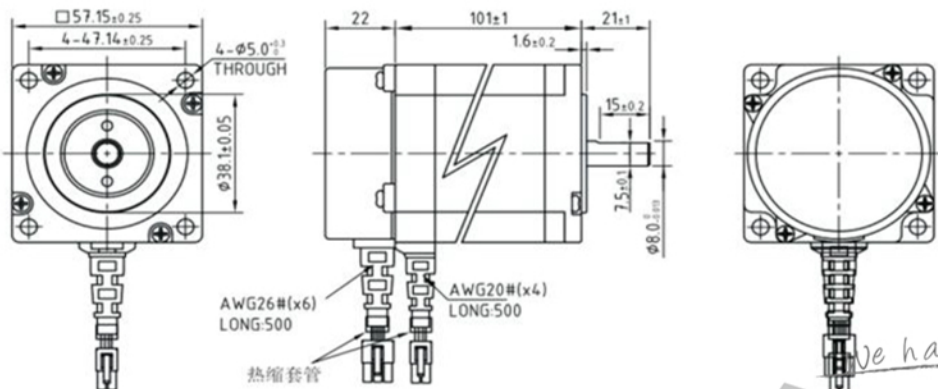
Item	Specifications
Step Angle Accuracy	±5%
Resistance Accuracy	±10% (20°)
Inductance Accuracy	±20% (1KHZ)
Temperature Rise	80°Cmax
Ambient Temperature	-20°~+50°
Insulation Resistance	100MΩ Min 500VDC
Dielectric Strength	500V AC 1minute
Allowable Radial Load	0.02mm Max .(450g load)
Allowable Thrust Load	0.08mm Max. (450g load)
Maximum Radial load	75N (From the flange surface 20mm)
Maximum Axial load	15N

Technical Data---

Models	Step Angle (°)	Motor Length (mm)	Holding Torque (N.M)	Phase Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Rotor Inertia (g.cm2)	Leads	Motor Weight (Kg)
LC57H276	1.8	76+2	2	3.0	1.2	5.4	480	4	1.2
LC57H2100	1.8	100+2	3	4.0	0.9	3.2	720	4	1.7

Dimension---

 DIMENSIONS unit=mm

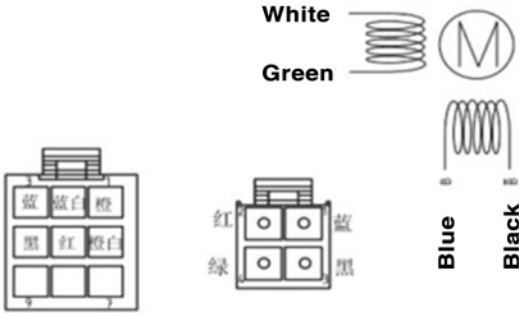


Motor Wiring Diagram---

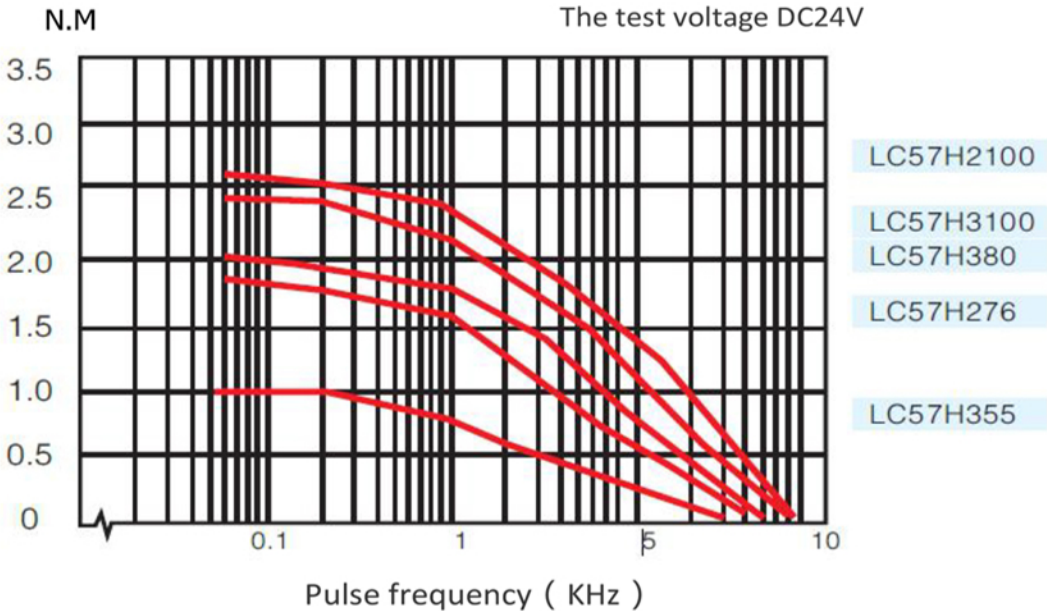
MOTOR CONNECTIONS

Encode Cotrol

1	Yellow	EB+
2	Green	EB-
3	Black	EA+
4	Blue	EA-
5	Red	+5VCC
6	White	EGND



Torque-speed Curve---



Matters Need Attention:

1. Not to be wrong when connect the motor to the driver.
2. Due to the difference of driving conditions, the motor may have obvious fever. Motor surface temperature allowing more than 85 °C during the operation.
3. Position the motor with the installing seam on the front end cover when installing, and pay attention to the tolerance matching, strictly the concentricity of the motor shaft and load.

» 2 Phase 60 (NEMA24) Easy Servo Motor Series

General Specifications---

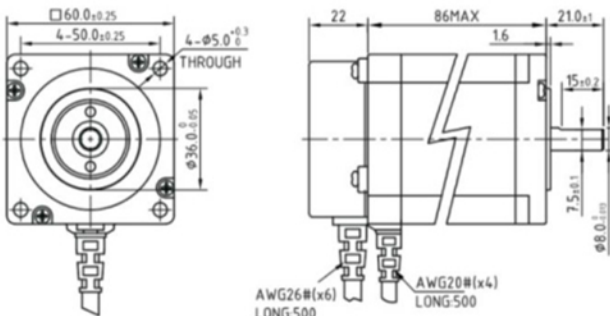
Item	Specifications
Step Angle Accuracy	±5%
Resistance Accuracy	±10% (20°)
Inductance Accuracy	±20% (1KHZ)
Temperature Rise	80°Cmax
Ambient Temperature	-20°~+50°
Insulation Resistance	100MΩ Min 500VDC
Dielectric Strength	500V AC 1minute
Allowable Radial Load	0.02mm Max .(450g load)
Allowable Thrust Load	0.08mm Max. (450g load)
Maximum Radial load	75N (From the flange surface 20mm)
Maximum Axial load	15N

Technical Data---

Models	Step Angle (°)	Motor Length (mm)	Holding Torque (N.M)	Phase Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Rotor Inertia (g.cm2)	Leads	Motor Weight (Kg)
LC60H269	1.8	69+22	2	4.0	0.53	1.2	570	4	1.10
LC60H286	1.8	86+22	3	4.5	0.5	1.3	620	4	1.45
LC60H2102	1.8	102+22	4.5	5.0	0.75	2.4	1000	4	1.87
LC60H2112	1.8	112+22	4.8	5.8	0.69	2.11	1200	4	2.10
LC60H2127	1.8	127+22	5.5	5.8	1.5	6.9	1370	4	2.45

Dimension---

 DIMENSIONS unit=mm



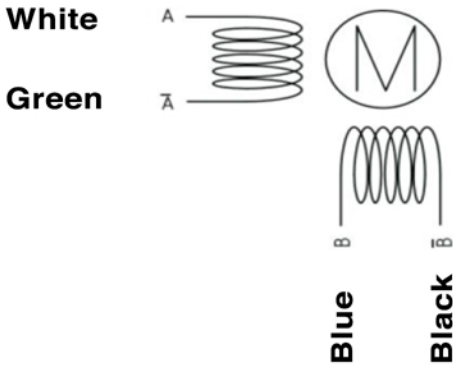
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Motor Wiring Diagram---

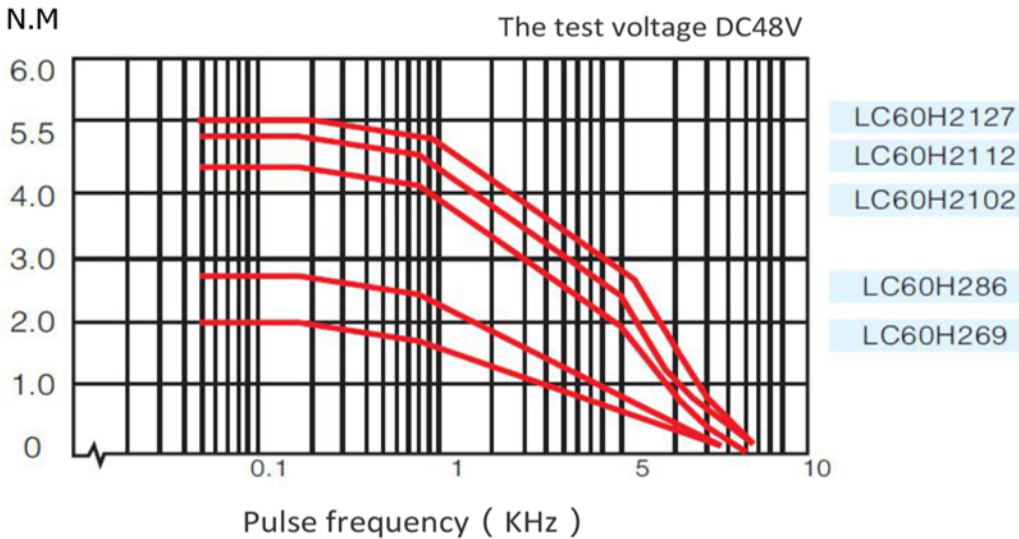
MOTOR CONNECTIONS



Encoder Control

1	Yellow	EB+
2	Green	EB-
3	Black	EA+
4	Blue	EA-
5	Red	+5VCC
6	White	EGND

Torque-speed Curve---



Matters Need Attention:

1. Not to be wrong when connect the motor to the driver.
2. Due to the difference of driving conditions, the motor may have obvious fever. Motor surface temperature allowing more than 85 °C during the operation.
3. Position the motor with the installing seam on the front end cover when installing, and pay attention to the tolerance matching, strictly the concentricity of the motor shaft and load.

» 2 Phase 86 (NEMA34) Easy Servo Motor Series

General Specifications---

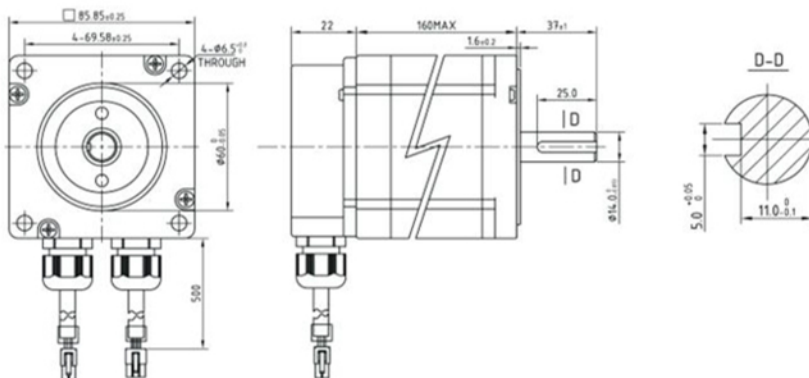
Item	Specifications
Step Angle Accuracy	±5%
Resistance Accuracy	±10% (20°)
Inductance Accuracy	±20% (1KHZ)
Temperature Rise	80°Cmax
Ambient Temperature	-20°~+50°
Insulation Resistance	100MΩ Min 500VDC
Dielectric Strength	500V AC 1minute
Allowable Radial Load	0.02mm Max .(450g load)
Allowable Thrust Load	0.08mm Max. (450g load)
Maximum Radial load	130N (From the flange surface 20mm)
Maximum Axial load	30N

Technical Data---

Models	Step Angle (°)	Motor Length (mm)	Holding Torque (N.M)	Phase Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Rotor Inertia (g.cm2)	Leads	Motor Weight (Kg)
LC86H268	1.8	68+22	3.5	6	0.3	2.2	1400	4	2.2
LC86H280	1.8	80+22	4.5	6	0.3	3.4	1800	4	2.5
LC86H298	1.8	98+22	6.5	6	0.5	4.3	2800	4	3.3
LC86H2120	1.8	120+22	8.2	6	0.5	6.5	3600	4	4.0
LC86H2128	1.8	128+22	10	7.5	0.4	4.6	4200	4	4.5
LC86H2160	1.8	160+22	12	7.5	0.5	6.3	5400	4	5.4

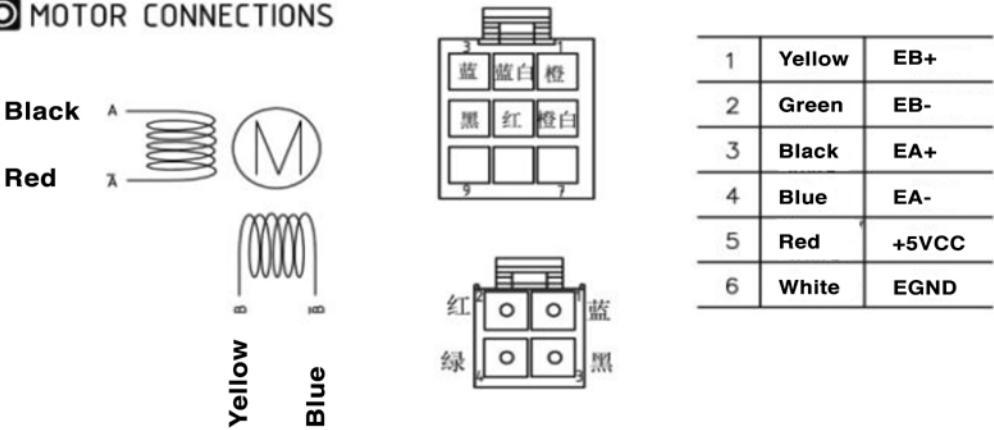
Dimension---

 DIMENSIONS unit:mm

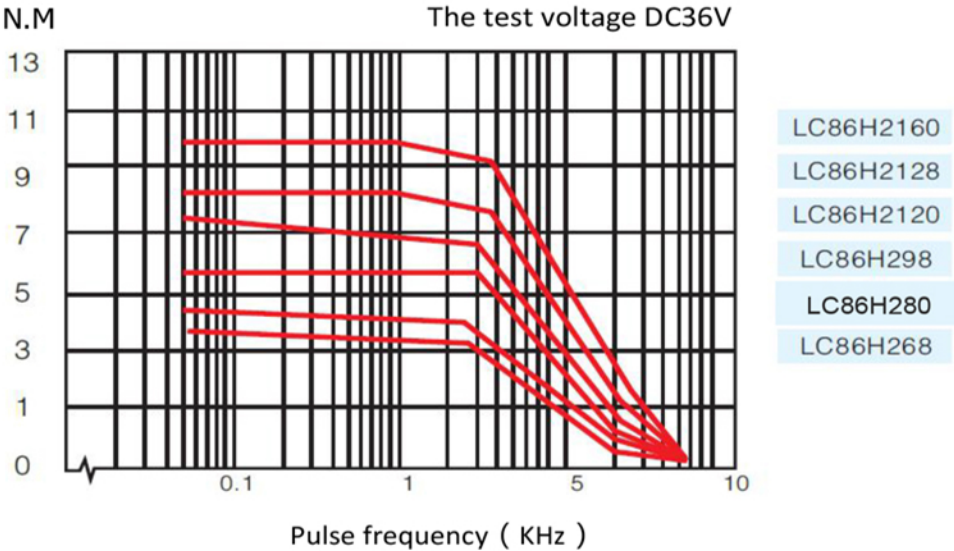


Motor Wiring Diagram---

 MOTOR CONNECTIONS



Torque-speed Curve---



Matters Need Attention:

1. Not to be wrong when connect the motor to the driver.
2. Due to the difference of driving conditions, the motor may have obvious fever. Motor surface temperature allowing more than 85 °C during the operation.
3. Position the motor with the installing seam on the front end cover when installing, and pay attention to the tolerance matching, strictly the concentricity of the motor shaft and load.