

Step Motor with Encoder

ES2-MH342xxx



Features:

- 3-phase hybrid stepper motor
- 1000-lines/Rev. encoder
- Standard NEMA 42 dimensions
- High torque design

The ES-MH342120 three-phase stepper motor with encoder feedback is designed to work with the Leadshine Hybrid Servo Drives ES-DH-series to build a hybrid servo closed loop system (no loss of steps anymore).

General Specification:

	ES2-MH342120	ES2-MH342200	
Step Angle (Degree)	1.2	1.2	
Holding Torque (Nm)	12.0	20.0	
Max. Current per Phase (A)	4.2	5.2	
Resistance per Phase (Ohm)	1.2	1.9	
Inductance per Phase (mH)	13	18	
Inertia (kgcm ²)	10.8	17	
Weight (kg)	8.6	12.8	
Encoder (Lines per Revolution)	1000	1000	

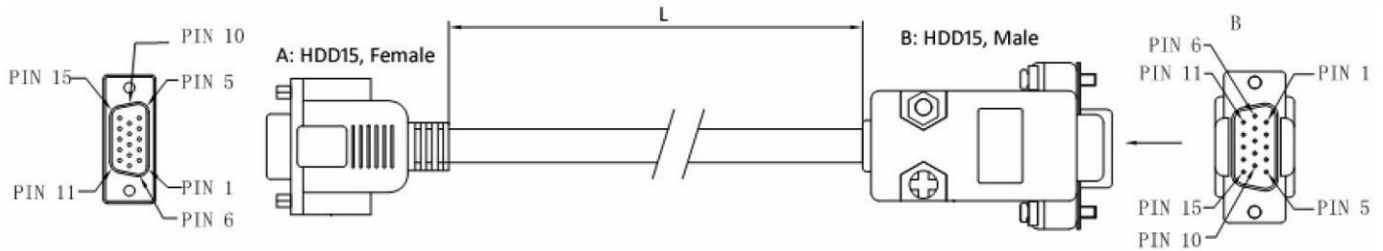
Encoder Specification:

Parameter	Min	Typical	Max	Unit
Operating Temperature	-40	-	100	°C
Voltage	4.5	5	5.5	V DC
Output Current per Channel	-1	-	5	mA
Low Level Output Voltage	-	-	0.4	V DC
High Level Output Voltage	2.4	-	-	V DC
Count Frequency	-	-	100	KHz

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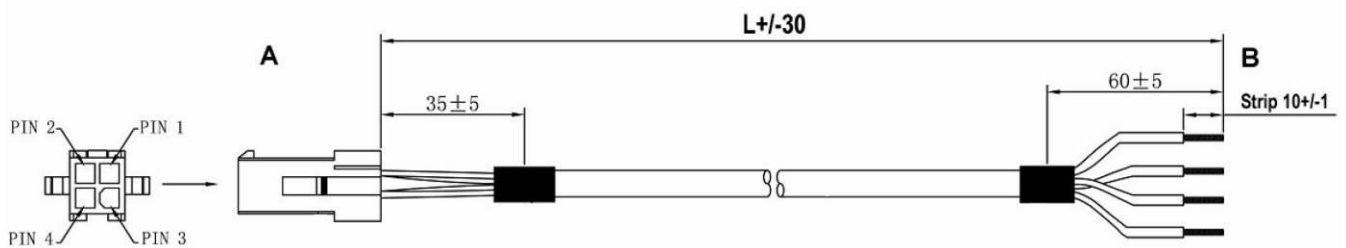
Encoder-Extension Cable:



Pin (female)	Name	Color	Pin (male)	Description
1	EA+	Black	1	Encoder Channel A+
2	VCC	Red	13	+5V power input
3	GND	White	3	Ground (for power input)
4	NC	-	-	Not Connected
5	NC	-	-	Not Connected
6	NC	-	-	Not Connected
7	NC	-	-	Not Connected
8	NC	-	-	Not Connected
9	NC	-	-	Not Connected
10	NC	-	-	Not Connected
11	EB+	Yellow	2	Encoder Channel B+
12	EB-	Green	12	Encoder Channel B-
13	EA-	Blue	11	Encoder Channel A-
14	NC	-	-	Not Connected
15	NC	-	-	Not Connected

Note: The encoder extension cable must be connected between ES-MH342120 motor and the ES-DHXXXX. You cannot connect the motors encoder cable to the ES-DHXXXX directly.

Motor-Extension Cable:

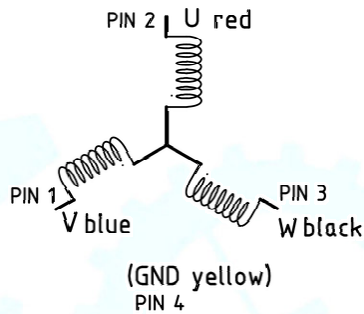


Pin	Name	Color	Description
1	V	Blue	Phase V
2	U	Red	Phase U
3	W	Black	Phase W
4	-	Yellow / Green	Not Connected

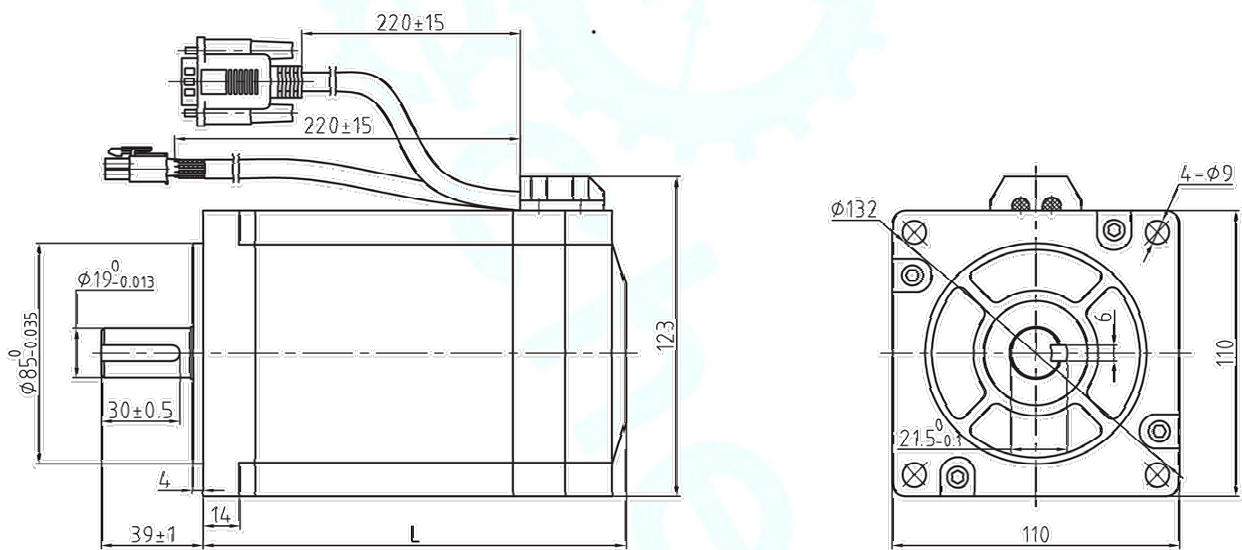
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Motor Wiring Diagram:



Mechanical Dimensions:



	ES2-MH342120	ES2-MH342200
Length L in mm	162	244

Torque Curve:

Input: 220VAC Drive: ES2-3DA2306

