

# HYBRID STEPPER MOTOR ES-MH342120 WITH ENCODER



## 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 SPECIFICATIONS:

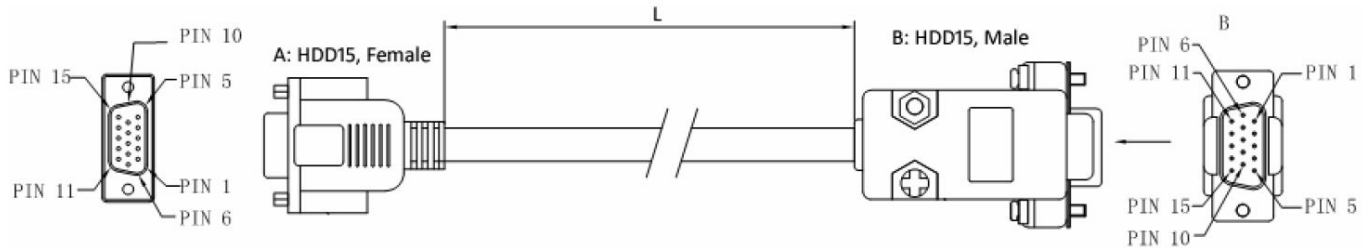
	ES-MH342120	
Step Angle (Degree)	1.2	
Holding Torque (Nm)	12.0	
Phase Current (A)	4.2	
Phase Resistance (Ohm)	1.2	
Phase Inductance (mH)	13	
Inertia (kg.cm <sup>2</sup> )	11	
Weight (kg)	8.6	
Encoder (lines / Rev.)	1000	

## Encoder Specifications:

Parameter	Min	Typical	Max	Unit
Operating Temperature	-40	-	100	°C
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
Count Frequency	-	-	100	KHz

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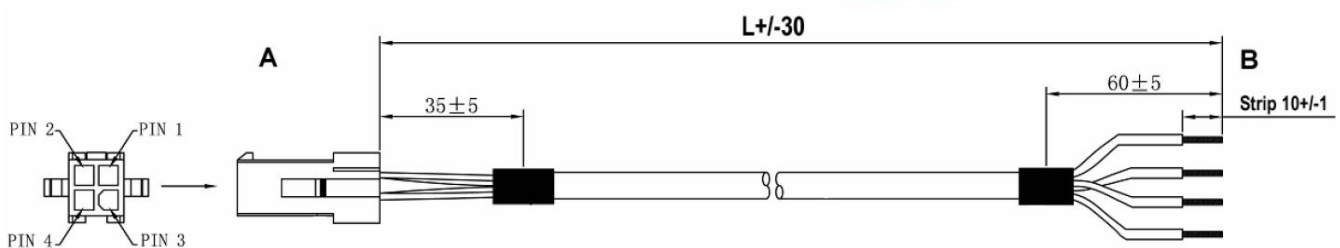
## Encoder Extension Cable:



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.

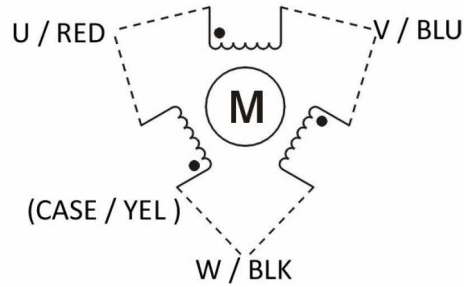
## Motor Extension Cable:



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:

