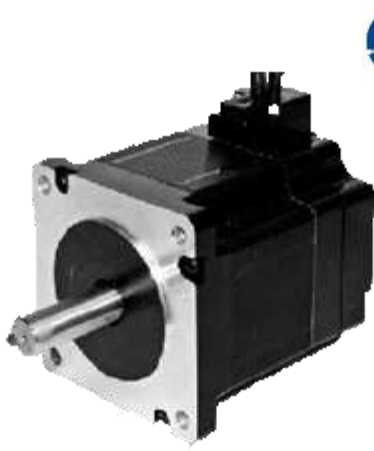


# HYBRID STEPPER MOTOR 86HS80-EC



## FEATURES:

- 2-phase hybrid stepper motor
- 1000-lines/Rev. encoder
- Standard NEMA 34 dimensions
- High torque design

The 86HS80-EC three-phase stepper motor with encoder feedback is designed to work with Leadshine hybrid servo drive HBS86 or HBS86H in the hybrid servo control system.

## GENERAL SPECIFICATIONS:

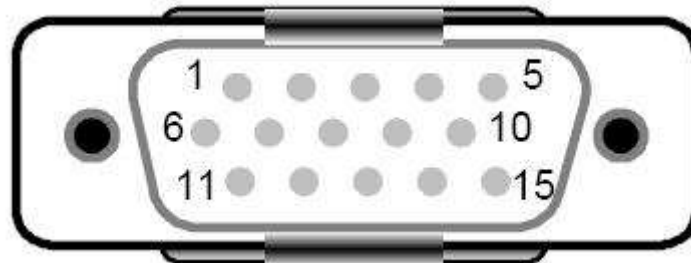
86HS80-EC-1000	
Step Angle (Degree)	1.8
Holding Torque (N.m)	8.0
Phase Current (A)	6.0
Phase Resistance (Ohm)	0.44
Phase Inductance (mH)	3.73
Inertia (g.cm <sup>2</sup> )	2580
Weight (Kg)	1.5
Encoder (lines / Rev.)	1000

## 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

# HYBRID STEPPER MOTOR 86HS80-EC

## Encoder Connector:



Pin	Name	Color	I/O	Description
1	EA+	Black	O	Encoder channel A+ output
2	VCC	Red	O	+5V power output
3	GND	White	GND	Ground
4	NC	-	-	Not Connected
5	NC	-	-	Not Connected
6	FG	-	-	Ground terminal for shielded
7	NC	-	-	Not Connected
8	NC	-	-	Not Connected
9	NC	-	-	Not Connected
10	NC	-	-	Not Connected
11	EB+	Yellow	O	Encoder channel B+ output
12	EB-	Green	O	Encoder channel B- output
13	EA-	Blue	O	Encoder channel A- output
14	NC	-	-	Not Connected
15	NC	-	-	Not Connected

## Cable:

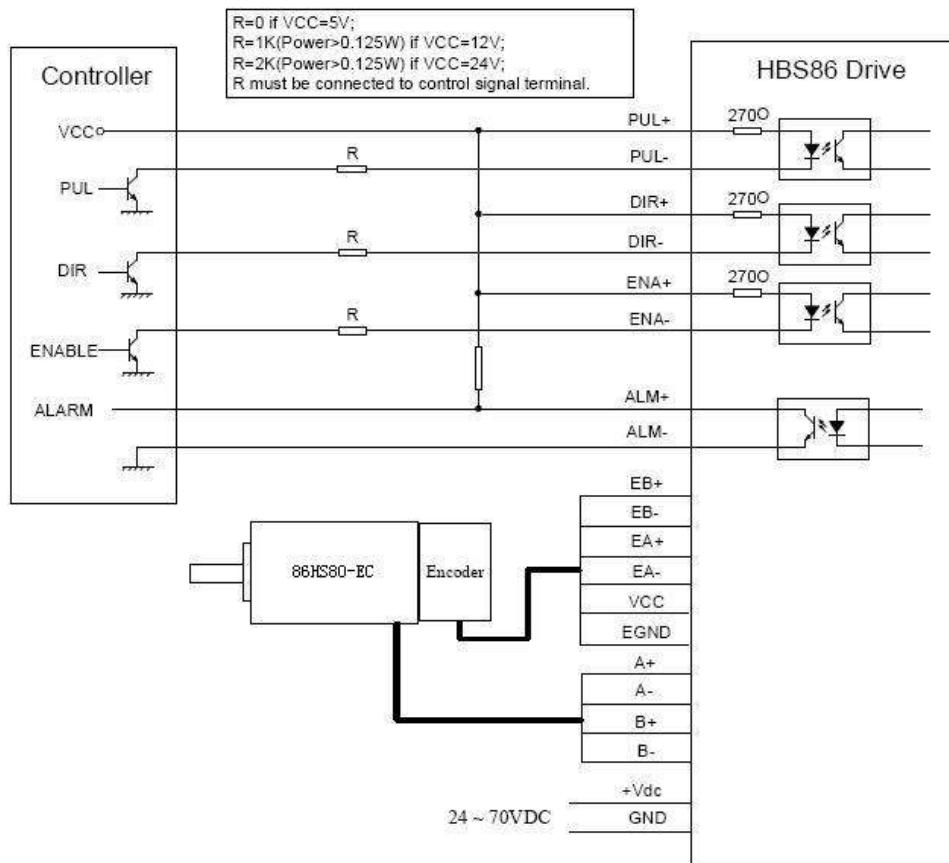
Model	Motor Cable			Encoder Cable		
	Standard*	Extension		Standard*	Extension	
	Length	Length	Part Number	Length	Length	Part Number
86HS80-EC-1000	0.80m	**	**	0.80m	3m	CABLE-BM3M0
					5m	CABLE-BM3M0

## Encoder Extension Cable Pin Out

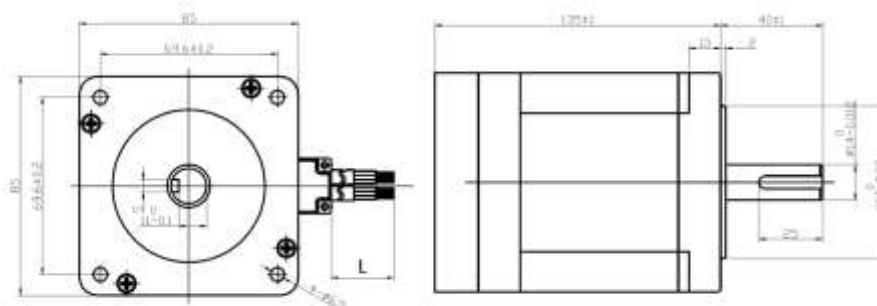
Pin	Color	Name	Description	Pin	Color	Name	Description
1	Red	VCC	+5V power input	4	Blue	A-	Encoder Channel A-
2	White	GND	+5V GND	5	Yellow	B+	Encoder Channel B+
3	Black	A+	Encoder Channel A+	6	Green	B-	Encoder Channel B-

# HYBRID STEPPER MOTOR 86HS80-EC

## Typical Connection:

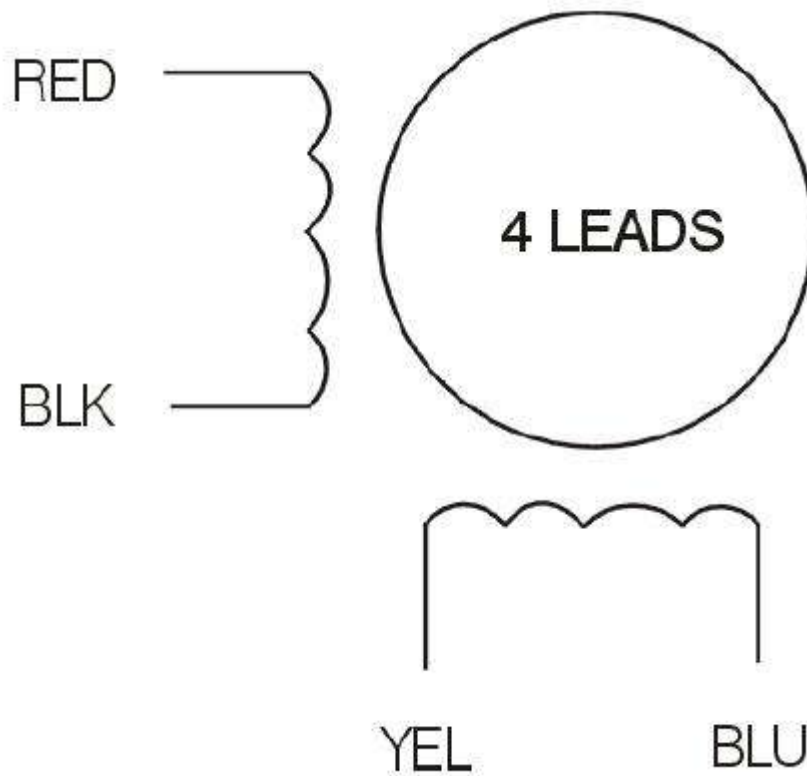


## Mechanical:



# HYBRID STEPPER MOTOR 86HS80-EC

## WIRING:



## SPEED TORQUE CURVE:

### 86HS80-EC

