

# MS17HD Series: 1.8° - Size 17



- Phases 2
- Steps / Revolution 200
- Step Accuracy  $\pm 5\%$
- Shaft Load (20,000 Hours at 1000 RPM)
  - Axial 25 N (5.6 Lbs.) Push  
65 N (15 Lbs.) Pull
  - Radial 29 N (6.5 Lbs.) At Flat Center
- IP Rating 40
- Approvals UL Recognized File E465363, RoHS
- Operating Temp.  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- Insulation Class B,  $130^{\circ}\text{C}$
- Insulation Resistance 100 MegOhms

## MS17HD 4 P 4 040 -M

### Basic Motor Length (Max)

|   |                     |         |
|---|---------------------|---------|
| 5 | 25.3mm ( 1.0 in. )  |         |
| 4 | 39.8mm (1.35 in. )  |         |
| 2 | 39.8mm ( 1.57 in. ) | 1 Stack |
| 6 | 48.3mm ( 1.90 in. ) | 2 Stack |
| B | 62.8mm (2.47 in. )  | 3 Stack |

### Electrical Connection

P Plug-in Connector

### Number of Connections

|   |                             |
|---|-----------------------------|
| 4 | 4 Lead-Bipolar              |
| 6 | 6 Lead-Unipolar(or Bipolar) |

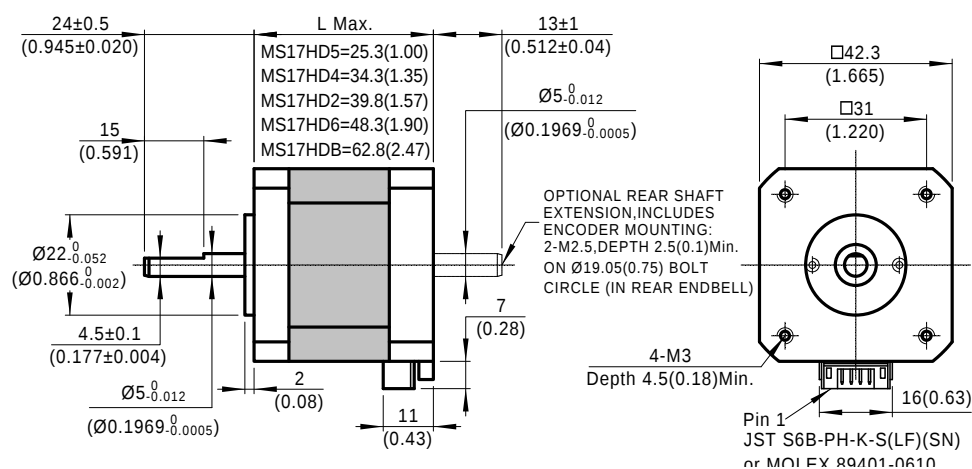
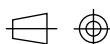
### Options

|      |                                                         |
|------|---------------------------------------------------------|
| Omit | No Options                                              |
| -M   | 5 mm Diameter Rear Shaft<br>With Encoder Mounting Holes |

### Winding

### Current rating x 100

## Dimensions: mm (in)



**MS17HD - 4 Lead Bi-Polar**

| Length                           | Model Number | Connect           | Rated Current  | Holding Torque |            | Winding Ohms mH |      | Detent Torque |      | Rotor Inertia                        |      | Motor Weight |      |
|----------------------------------|--------------|-------------------|----------------|----------------|------------|-----------------|------|---------------|------|--------------------------------------|------|--------------|------|
|                                  | Single Shaft | P=Plug<br>L=Leads | Amps (mounted) | Nm Typ.        | oz-in TYP. | ±10%<br>@20 °C  | Typ. | mNm oz-in     |      | g cm <sup>2</sup> oz-in <sup>2</sup> |      | kg Lbs       |      |
| 25.3 mm<br>(1 in.)               | MS17HD5P4027 | P                 | 0.27           | 0.20           | 28         | 44              | 53   | 5             | 0.71 | 20                                   | 0.11 | 0.15         | 0.33 |
|                                  | MS17HD5P4070 | P                 | 0.7            | 0.21           | 30         | 6.5             | 8.8  |               |      |                                      |      |              |      |
|                                  | MS17HD5P4100 | P                 | 1              | 0.21           | 30         | 3.2             | 4.3  |               |      |                                      |      |              |      |
|                                  | MS17HD5P4150 | P                 | 1.5            | 0.20           | 28         | 1.31            | 1.66 |               |      |                                      |      |              |      |
| 34.3 mm<br>(1.35 in.)            | MS17HD4P4040 | P                 | 0.4            | 0.34           | 48         | 30              | 51   | 12            | 1.7  | 38                                   | 0.21 | 0.21         | 0.46 |
|                                  | MS17HD4P4065 | P                 | 0.65           | 0.32           | 45         | 8.7             | 15.4 |               |      |                                      |      |              |      |
|                                  | MS17HD4P4100 | P                 | 1              | 0.33           | 47         | 4.2             | 7.5  |               |      |                                      |      |              |      |
|                                  | MS17HD4P4150 | P                 | 1.5            | 0.32           | 45         | 1.7             | 2.9  |               |      |                                      |      |              |      |
| 39.8 mm<br>(1.57 in.)<br>1 Stack | MS17HD2P4040 | P                 | 0.4            | 0.48           | 68         | 24              | 56   | 15            | 2.1  | 57                                   | 0.31 | 0.28         | 0.62 |
|                                  | MS17HD2P4100 | P                 | 1              | 0.48           | 68         | 3.9             | 8.9  |               |      |                                      |      |              |      |
|                                  | MS17HD2P4150 | P                 | 1.5            | 0.50           | 71         | 1.98            | 4.3  |               |      |                                      |      |              |      |
|                                  | MS17HD2P4200 | P                 | 2              | 0.48           | 68         | 1.04            | 2.2  |               |      |                                      |      |              |      |
| 48.3 mm<br>(1.9 in.)<br>2 Stack  | MS17HD6P4050 | P                 | 0.5            | 0.67           | 95         | 24              | 53   | 25            | 3.5  | 82                                   | 0.45 | 0.36         | 0.79 |
|                                  | MS17HD6P4100 | P                 | 1              | 0.63           | 89         | 4.9             | 11.5 |               |      |                                      |      |              |      |
|                                  | MS17HD6P4150 | P                 | 1.5            | 0.62           | 88         | 2.2             | 4.9  |               |      |                                      |      |              |      |
|                                  | MS17HD6P4200 | P                 | 2              | 0.63           | 89         | 1.3             | 2.9  |               |      |                                      |      |              |      |
| 62.8 mm<br>(2.47 in.)<br>3 Stack | MS17HDBP4100 | P                 | 1              | 0.82           | 120        | 5.6             | 14.6 | 30            | 4.2  | 123                                  | 0.67 | 0.6          | 1.3  |
|                                  | MS17HDBP4150 | P                 | 1.5            | 0.88           | 120        | 3               | 7.7  |               |      |                                      |      |              |      |
|                                  | MS17HDBP4200 | P                 | 2              | 0.83           | 120        | 1.49            | 3.8  |               |      |                                      |      |              |      |

^ Preferred model

**MS17HD - 6 Lead Uni-Polar**

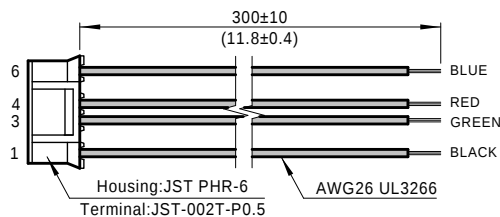
| Length                           | Model Number | Connect           | Rated Current  | Holding Torque |            | Winding Ohms mH |      | Detent Torque |      | Rotor Inertia                        |      | Motor Weight |      |
|----------------------------------|--------------|-------------------|----------------|----------------|------------|-----------------|------|---------------|------|--------------------------------------|------|--------------|------|
|                                  | Single Shaft | P=Plug<br>L=Leads | Amps (mounted) | Nm Typ.        | oz-in TYP. | ±10%<br>@20 °C  | Typ. | mNm oz-in     |      | g cm <sup>2</sup> oz-in <sup>2</sup> |      | kg Lbs       |      |
| 25.3 mm<br>(1 in.)               | MS17HD5P6030 | P                 | 0.3            | 0.16           | 23         | 40              | 25   | 5             | 0.71 | 20                                   | 0.11 | 0.15         | 0.33 |
|                                  | MS17HD5P6070 | P                 | 0.7            | 0.16           | 23         | 6.6             | 4.4  |               |      |                                      |      |              |      |
|                                  | MS17HD5P6100 | P                 | 1              | 0.16           | 23         | 3.3             | 2.2  |               |      |                                      |      |              |      |
| 34.3 mm<br>(1.35 in.)            | MS17HD4P6038 | P                 | 0.38           | 0.26           | 37         | 31              | 27   | 12            | 1.7  | 38                                   | 0.21 | 0.21         | 0.46 |
|                                  | MS17HD4P6085 | P                 | 0.85           | 0.24           | 34         | 5.1             | 4.5  |               |      |                                      |      |              |      |
|                                  | MS17HD4P6120 | P                 | 1.2            | 0.25           | 35         | 2.9             | 2.5  |               |      |                                      |      |              |      |
| 39.8 mm<br>(1.57 in.)<br>1 Stack | MS17HD2P6040 | P                 | 0.4            | 0.38           | 54         | 28              | 31   | 15            | 2.1  | 57                                   | 0.31 | 0.28         | 0.62 |
|                                  | MS17HD2P6085 | P                 | 0.85           | 0.38           | 54         | 6               | 6.7  |               |      |                                      |      |              |      |
|                                  | MS17HD2P6130 | P                 | 1.3            | 0.38           | 54         | 2.5             | 2.8  |               |      |                                      |      |              |      |
| 48.3 mm<br>(1.9 in.)<br>2 Stack  | MS17HD6P6040 | P                 | 0.4            | 0.48           | 68         | 29              | 33   | 25            | 3.5  | 82                                   | 0.45 | 0.36         | 0.79 |
|                                  | MS17HD6P6080 | P                 | 0.8            | 0.49           | 69         | 7.6             | 8.6  |               |      |                                      |      |              |      |
|                                  | MS17HD6P6130 | P                 | 1.3            | 0.51           | 72         | 3.2             | 3.6  |               |      |                                      |      |              |      |
|                                  | MS17HD6P6200 | P                 | 2              | 0.50           | 71         | 1.3             | 1.4  |               |      |                                      |      |              |      |

^ Preferred model

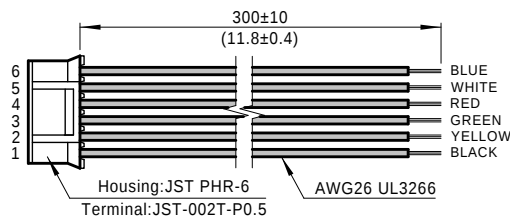
**Mating Connector With Leads (order separately)**

Dimensions: mm (in)

4 Lead Part Number 4634 1402 00723



6 Lead Part Number 4634 1402 00922

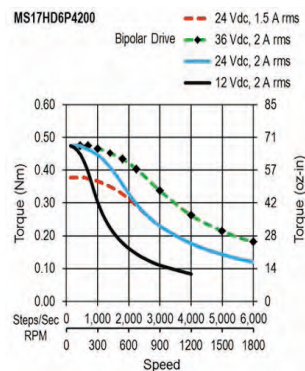
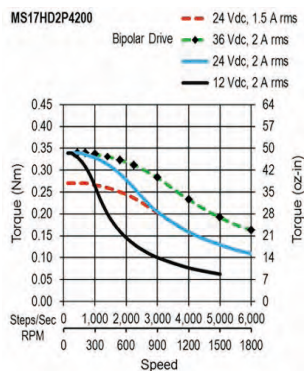
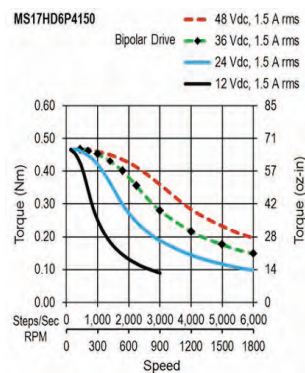
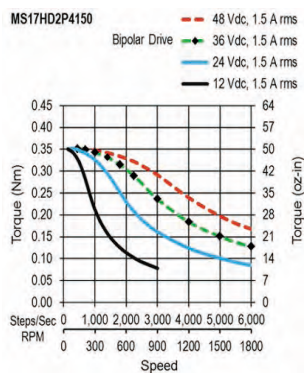
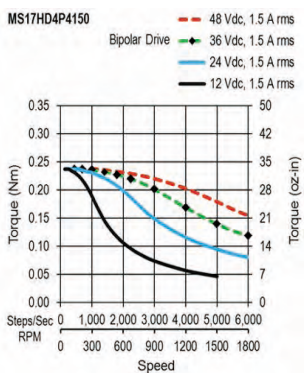
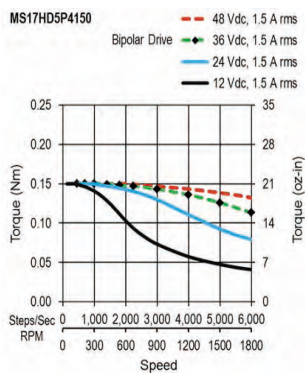
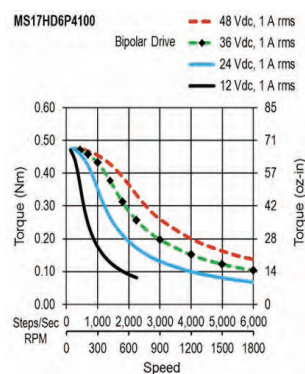
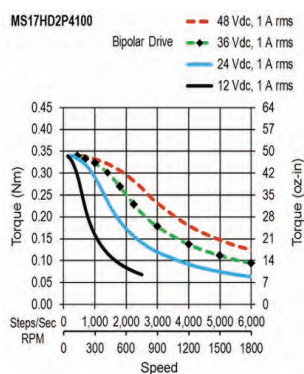
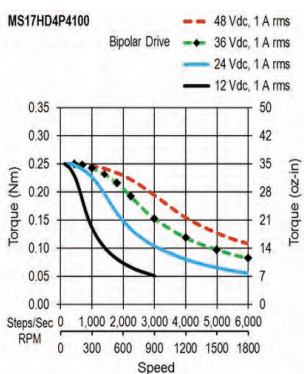
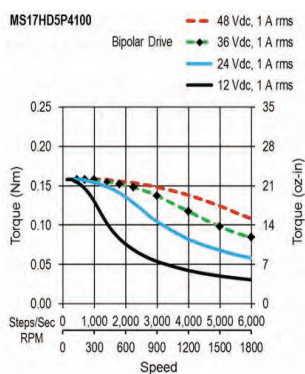
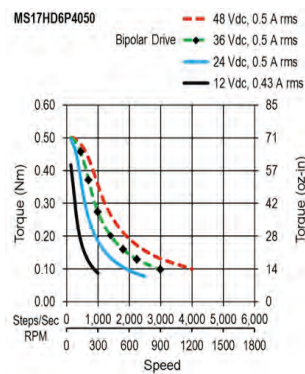
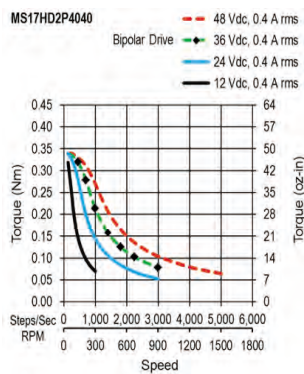
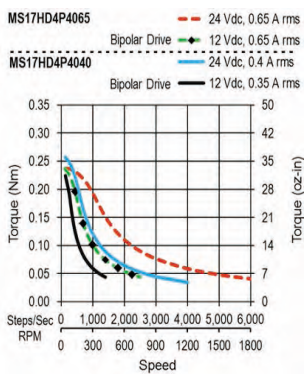
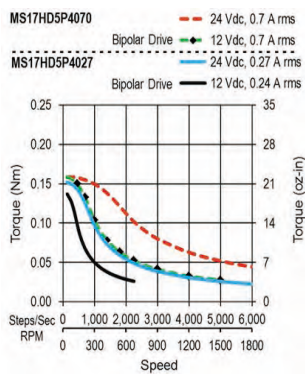


## MS17HD5 - Bipolar

## MS17HD4 - Bipolar

## MS17HD2 - Bipolar

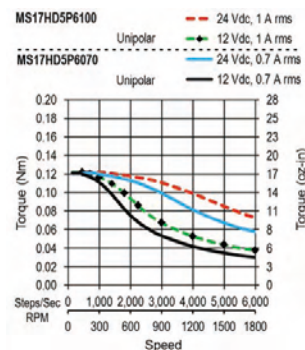
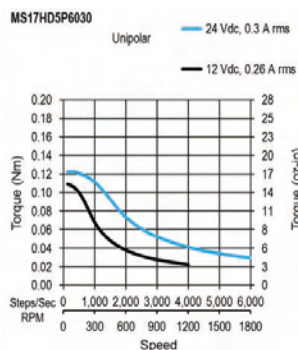
## MS17HD6 - Bipolar

MOONS  
Technology2 Phase  
Step Motors3 Phase  
Step Motors

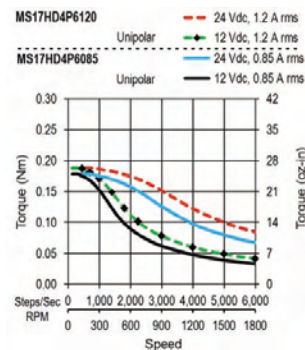
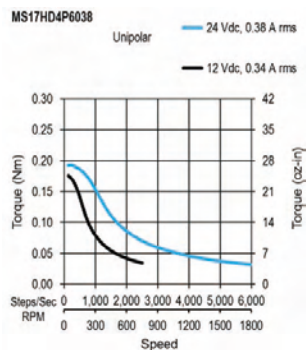
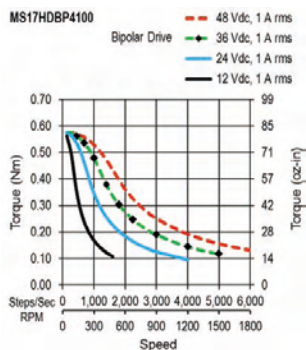
Technical

## MS17HDB - Bipolar

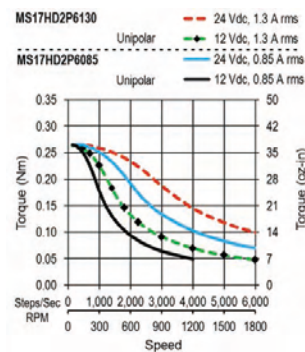
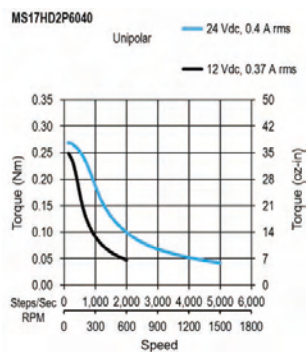
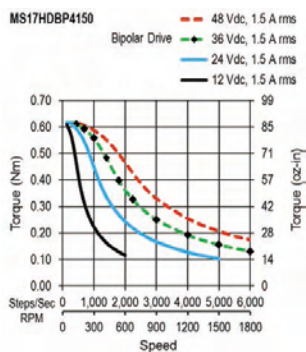
## MS17HD5 - Bipolar



## MS17HD4 - Bipolar



## MS17HD2 - Bipolar



## MS17HD6 - Bipolar

