# LINEAR ACTUATORS MPB & MPD Series

| CAPACITY:             | 250 - 500 lbs (1112 - 2224 N)           |  |  |  |
|-----------------------|---|--|--|--|
| SPEED:                | 0.6 - 2.0 in/s                          |  |  |  |
| VOLTAGE:              | 12, 24 VDC<br>115, 220 Single-phase VAC |  |  |  |
| TEMPERATURE RANGE:    | 25°F to 120°F (-4°C to 50°C)            |  |  |  |
| ENVIRONMENTAL RATING: | IP50 protection (IP52 Optional)         |  |  |  |

Low temperature grease available please consult the factory

# **FEATURES & BENEFITS**

- Wide range of capacities and voltages for integration into a variety of applications
- Heavy duty design for long life in tough environments
- Corrosion resistant housing
- Precise and repeatable positioning with internal, adjustable limit switches
- Automatic reset thermal overload motor protection
- Mechanical braking system to reduce back driving and stopping distance
- Custom solutions available with experienced Application Engineering Team

## **OPTIONS**

- Stainless steel construction
- Potentiometer for precise position feedback
- Standard double clevis mounting with options for trunnion, and threaded ends
- Weather resistant sealant for IP52 rating
- Bellows boot protection
- Load limiting friction disc clutch





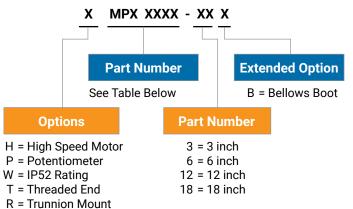
MPD w/clutch







## **CATALOG NUMBER CONFIGURATION KEY**



|        | Available Options   |               |             |              |  |  |
|--------|---------------------|---------------|-------------|--------------|--|--|
| Series | High Speed<br>Motor | Potentiometer | IP52 Rating | Threaded End |  |  |
| MPB    | -                   | Optional      | Optional    | Optional     |  |  |
| MPD    | Optional            | _             | Optional    | Optional     |  |  |

Potentiometer not available on clutch models

**Example:** HMPB 3905-12B = Hi-speed, MPD series, # from table below, 12 inch stroke, Bellows boot

## PART NUMBERS and PRODUCT SPECIFICATIONS

| Part<br>Number | Series | Voltage            | Dynamic<br>Rated<br>Load | Max<br>Stroke<br>Length | Speed<br>at Rated<br>Load | Current<br>Draw at<br>Rated<br>Load | Temperature<br>Range    | Restraining<br>Torque | Duty Cycle<br>at Rated<br>Load | Screw<br>Type | Capacitor                              | Clutch   | Limit<br>Switches |
|----------------|--------|--------------------|--------------------------|-------------------------|---------------------------|-------------------------------------|-------------------------|-----------------------|--------------------------------|---------------|--|----------|-------------------|
| #              | Prefix | V<br>(Hz)          | lbs<br>(N)               | in<br>(mm)              | in/s (mm/s)               | A                                   | °F<br>(°C)              | in-lbs<br>(Nm)        | %                              |               | Part No.*<br>(Required<br>Capacitance) |          |                   |
| MPB 3905       |        | 115 VAC<br>(60 Hz) | 250<br>(1112)            | 18<br>(457)             | 0.7<br>(18)               | 2                                   | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 23                             | ACME          | SK6405-7-1<br>(28-33 MFD)              | -        | Included          |
| HMPB 3905      |        | 115 VAC<br>(60 Hz) | 250<br>(1112)            | 18<br>(457)             | 1.4<br>(35)               | 5                                   | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 11                             | ACME          | SK6405-7-3<br>(64-72 MFD)              | _        | Included          |
| MPB 6905       | МРВ    | 115 VAC<br>(60 Hz) | 500<br>(2224)            | 18<br>(457)             | 0.6<br>(15)               | 2.3                                 | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 19                             | ACME          | SK6405-7-1<br>(28-33 MFD)              | _        | Included          |
| HMPB 6905      |        | 115 VAC<br>(60 Hz) | 500<br>(2224)            | 18<br>(457)             | 1.3<br>(33)               | 5.5                                 | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 11                             | ACME          | SK6405-7-3<br>(64-72 MFD)              | _        | Included          |
| MPB 4905       |        | 220 VAC<br>(50 Hz) | 250<br>(1112)            | 18<br>(457)             | 0.6<br>(15)               | 1                                   | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 21                             | ACME          | SK6405-7-10<br>(10 MFD)                | _        | Included          |
| MPB 7905       |        | 220 VAC<br>(50 Hz) | 500<br>(2224)            | 18<br>(457)             | 0.6<br>(15)               | 1                                   | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 22                             | ACME          | SK6405-7-10<br>(10 MFD)                | -        | Included          |
| MPD 3405       |        | 12 VDC             | 250<br>(1112)            | 18<br>(457)             | 1<br>(25)                 | 14                                  | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 21                             | ACME          | -                                      | Included | -                 |
| HMPD 3405      |        | 12 VDC             | 250<br>(1112)            | 18<br>(457)             | 2<br>(50)                 | 28                                  | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 12                             | ACME          | -                                      | Included | _                 |
| MPD 3905       |        | 12 VDC             | 250<br>(1112)            | 18<br>(457)             | 1<br>(25)                 | 14                                  | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 35                             | ACME          | _                                      | _        | Included          |
| HMPD 3905      |        | 12 VDC             | 250<br>(1112)            | 18<br>(457)             | 2<br>(50)                 | 28                                  | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 15                             | ACME          | _                                      | _        | Included          |
| MPD 6405       | MPD    | 12 VDC             | 500<br>(2224)            | 18<br>(457)             | 0.7<br>(18)               | 22                                  | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 18                             | ACME          | -                                      | Included | _                 |
| MPD 6905       | MPD    | 12 VDC             | 500<br>(2224)            | 18<br>(457)             | 0.75<br>(19)              | 23                                  | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 19                             | ACME          | -                                      | -        | Included          |
| MPD 3404       |        | 24 VDC             | 250<br>(1112)            | 18<br>(457)             | 1<br>(25)                 | 5                                   | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 32                             | ACME          | _                                      | Included | _                 |
| MPD 3904       |        | 24 VDC             | 250<br>(1112)            | 18<br>(457)             | 1.2<br>(30)               | 6                                   | 25 to 120<br>(-4 to 50) | 30<br>(3.4)           | 26                             | ACME          | -                                      | _        | Included          |
| MPD 6904       |        | 24 VDC             | 500<br>(2224)            | 18<br>(457)             | 0.85<br>(22)              | 12                                  | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 17                             | ACME          | -                                      | _        | Included          |
| MPD 6404       |        | 24 VDC             | 500<br>(2224)            | 18<br>(457)             | 0.8<br>(20.3)             | 11                                  | 25 to 120<br>(-4 to 50) | 60<br>(6.7)           | 17                             | ACME          | -                                      | Included | _                 |

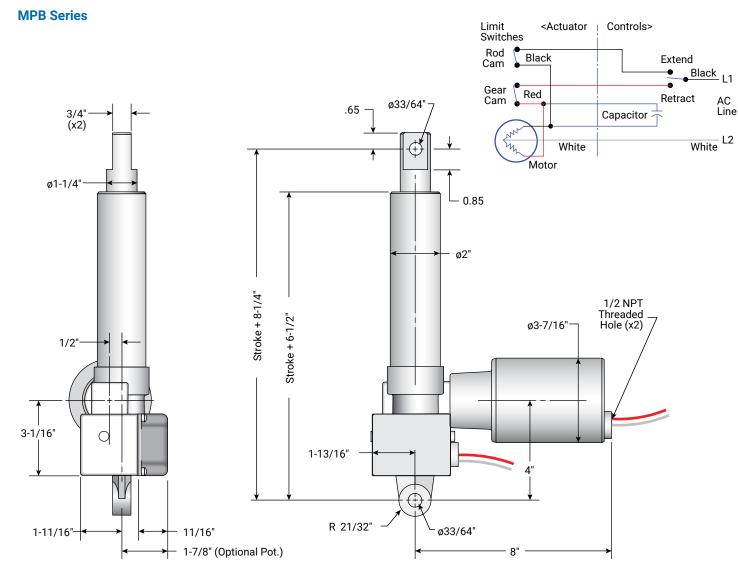
\* A capacitor is required for all AC motors. Capacitor sold separately.







#### **DIMENSIONAL DRAWINGS and WIRING DIAGRAMS**



| MPB Models | Capacity |
|------------|----------|
| 3905       | 250 lbs  |
| 4905       | 250 lbs  |
| 6905       | 500 lbs  |
| 7905       | 500 lbs  |

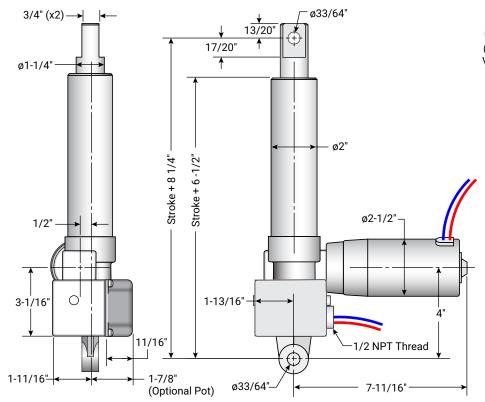
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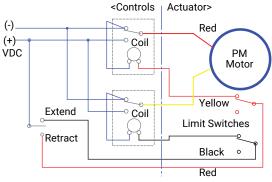




#### **DIMENSIONAL DRAWINGS and WIRING DIAGRAMS**

#### **MPD Series with Limit Switch**

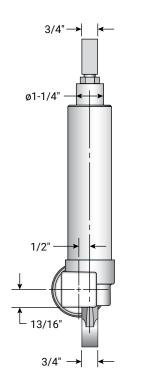


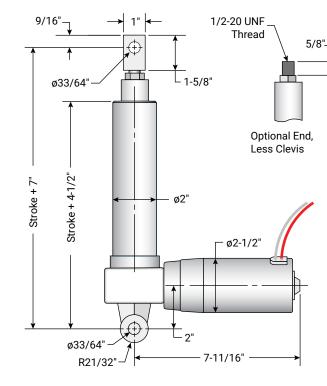


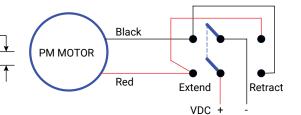
Two (2) relays are required for DC limit switch models

| MPD Models | Capacity |
|------------|----------|
| 3905       | 250 lbs  |
| 3904       | 250 lbs  |
| 6904       | 500 lbs  |
| 6905       | 500 lbs  |

#### **MPD Series with Clutch**







| MPD Models | Capacity |
|------------|----------|
| 3405       | 250 lbs  |
| 3404       | 250 lbs  |
| 6405       | 500 lbs  |
| 6404       | 500 lbs  |