

# M-Track 1

## DC Motor Acme Screw

Up to 165 lb. (75kg) Rated Load

Up to 1.75 in. (44.45mm)/sec. Travel Speed



M-Track 1 compact units are completely self-contained and sealed to allow use in small spaces without sacrificing power or capability. The load and length capabilities provide solutions for a diverse range of intermittent duty applications.

Functionally, M-Track 1 actuators are easily interchanged with comparable size hydraulic or pneumatic cylinders on intermittent duty applications. The actuator provides consistent, repeatable performance even for applications with operating conditions including temperature extremes, high humidity, or significant dust.

## Features

- An Acme Screw drive delivers up to 165 pounds (75 kilograms) of force at a minimum extension rate of 0.25 inches (6.35 millimeters) per second
- The aluminum zinc alloy housing resists corrosion and provides protection from dirt, dust and humidity
- The M-Track 1 has a temperature operating range of  $-15^{\circ}$  to  $+150^{\circ}$  F ( $-26^{\circ}$  to  $+65^{\circ}$ C)
- Standard stroke lengths of 2, 4, 6, 8, 10, 12 inches (50, 100, 150, 200, 254, 300 millimeters) are available
- Internal limit switches automatically shut off the unit at end of stroke
- Optional potentiometer can provide positional location feedback
- IP65 capable on request
- Rod is non rotating during operation, can be rotated for mounting purposes

## Typical Applications

Light load and short distance applications such as:

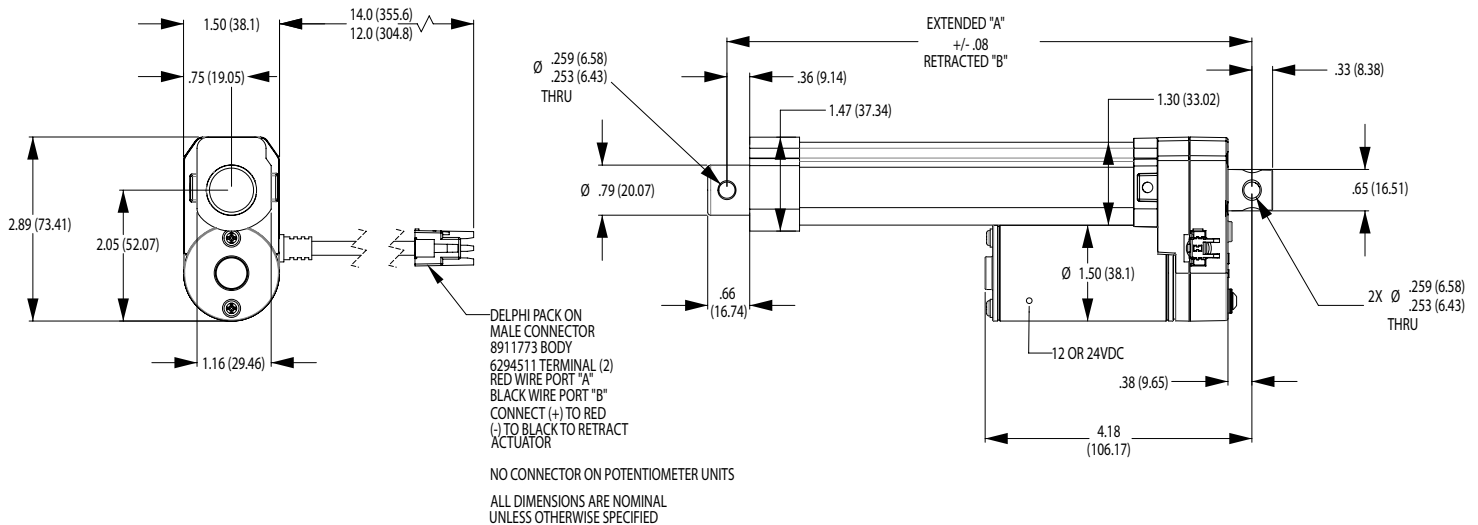
- Valve and vent adjustments
- Light weight tilt or lift positioning
- Vise and clamp operations

## Specifications

<b>Load Capacity</b>	50 lbs. (22kg)	100 lbs. (44kg)	165 lbs. (75kg)
<b>Speed at Full Load</b>	0.85 in. (21mm)/sec	0.45 in. (11mm)/sec	0.25 in. (6mm)/sec
<b>Input Voltage</b>	12 or 24 volt DC for all models		
<b>Static Load Capacity</b>	300 lbs. (135kg) for all models		
<b>Stroke Length</b>	2, 4, 6, 8, 10 and 12 in. (50, 100, 150, 200, 254, 300mm) for all models		
<b>Clevis Ends</b>	.25 in. (6.4mm) diameter		
<b>Duty Cycle</b>	25% for all models		
<b>Operation Temperature Range</b>	$-15^{\circ}$ F to $+150^{\circ}$ F ( $-26^{\circ}$ to $+65^{\circ}$ C) for all models		
<b>Limit Switch</b>	Fixed end of stroke limit switches standard for all units		
<b>Potentiometer</b>	Linear membrane potentiometer optional on all units		

## Dimensions

Stroke Length	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
	2	50	4	100	6	150	8	200	10	254	12	300
Retracted Length (without POT sensor)	6.22	158	8.23	209	10.24	260	12.24	311	14.25	362	16.26	413
Retracted Length (with POT sensor)	7.55	192	9.57	243	11.57	294	13.58	345	N/A	N/A	N/A	N/A



- Stroke and its tolerance are based on a unit with no attached load operating at rated voltage +/- .5VDC, 70°F controlled temperature environment. Note normal wear, temperature changes and load variations all affect the stroke tolerance. If stroke tolerance is critical it is advisable that the selected unit be evaluated for performance in the specific application.
- The retract pin to pin dimension and its tolerance are based on a unit with no attached load operating at rated voltage +/- .5VDC, 70°F controlled temperature environment. Note normal unit wear, temperature changes and load variations all affect the stroke tolerance. If the retract pin to pin dimension is critical it is advisable that the selected unit be evaluated for performance in the specific application.
- Rotation of the extension tube is allowed up to one full turn to aid mounting. Rotate rod clockwise until it is fully seated in the unit. Rotate counterclockwise no more than one full turn to align clevis pins.

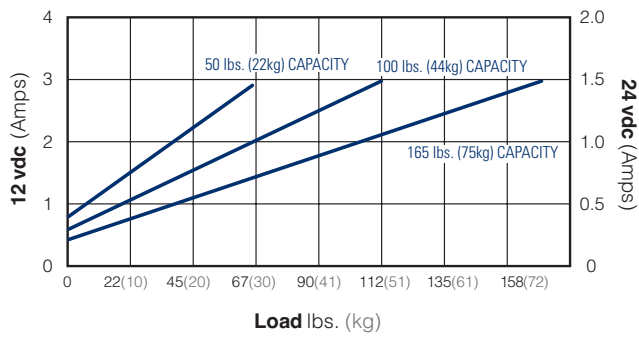
Mounting points in the application must allow the actuator to reach full-extend and full-retract to ensure the internal limit switches are activated. If this is not possible another method for shutting off the actuator must be employed.

- If the actuator encounters an obstruction at mid-stroke and is not allowed to reach the internal limit switches the actuator will stall. An internal thermal circuit breaker designed to protect the motor from damage during stalling and/or overheating due to exceeding duty cycle. If tripped it will self reset after a short period of time. The thermal is rated to protect the motor in the event of a stall condition. It is not designed to protect any other device in the circuit.
- Warner Linear recommends an externally mounted fuse of 6 AMP's max for 12VDC and 3 AMP's max for 24VDC circuit protection. Anything connected to the actuator must be sized to withstand the actuator's power consumption or independently isolated from the circuit.

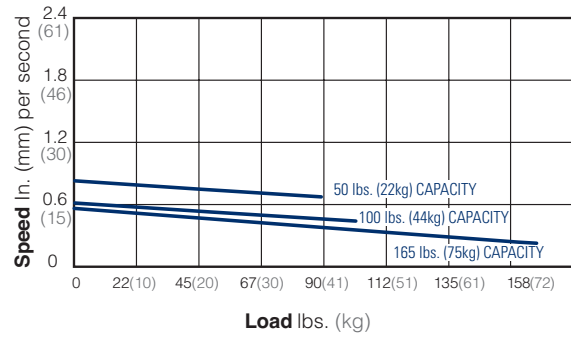
# M-Track 1

## Performance Curves Imperial

### Current vs Load

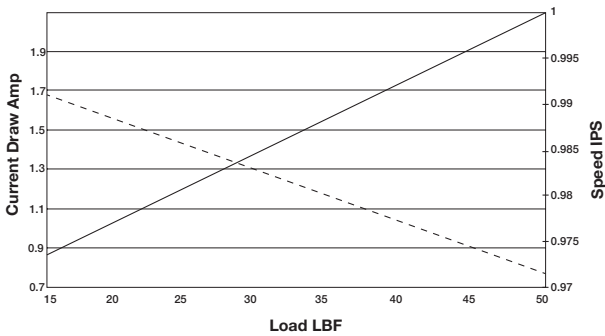


### Speed vs Load

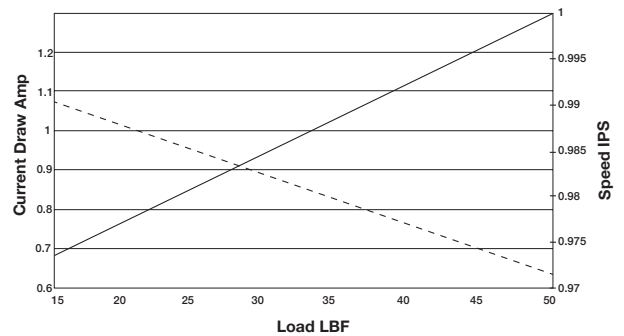


## Performance Graphs

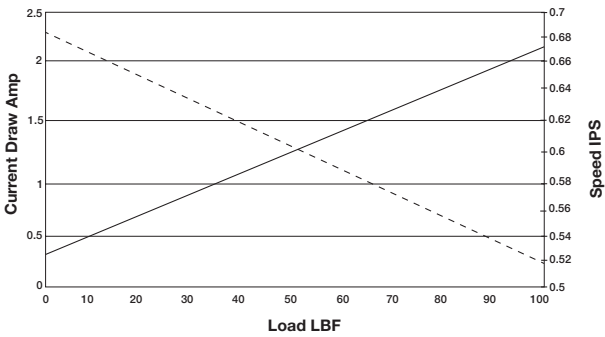
### M1-D012-0050



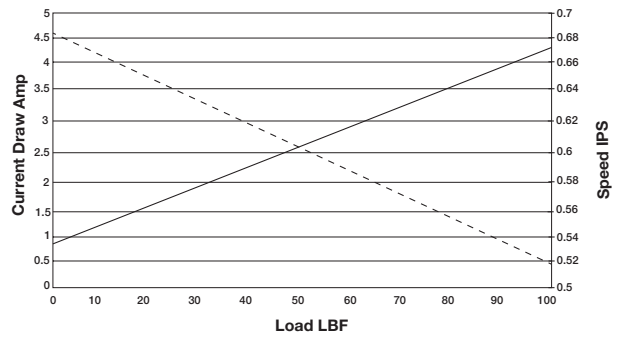
### M1-D024-0050



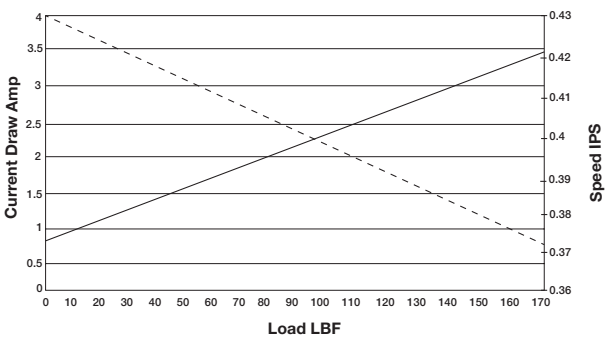
### M1-D012-0100



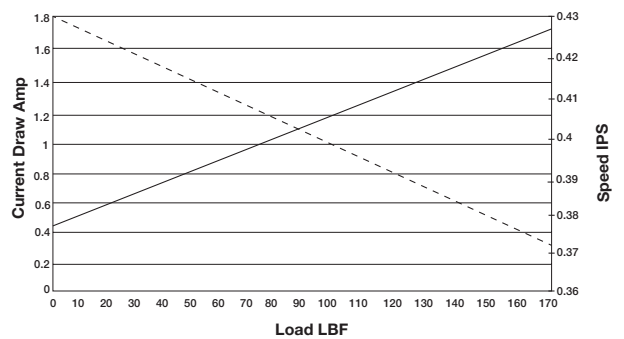
### M1-D024-0100



### M1-D012-0165



### M1-D024-0165



- - - Linear (Speed in/sec)  
 ——— Linear (Amps 12V DC)