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**PA-14P**  

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**User Manual**

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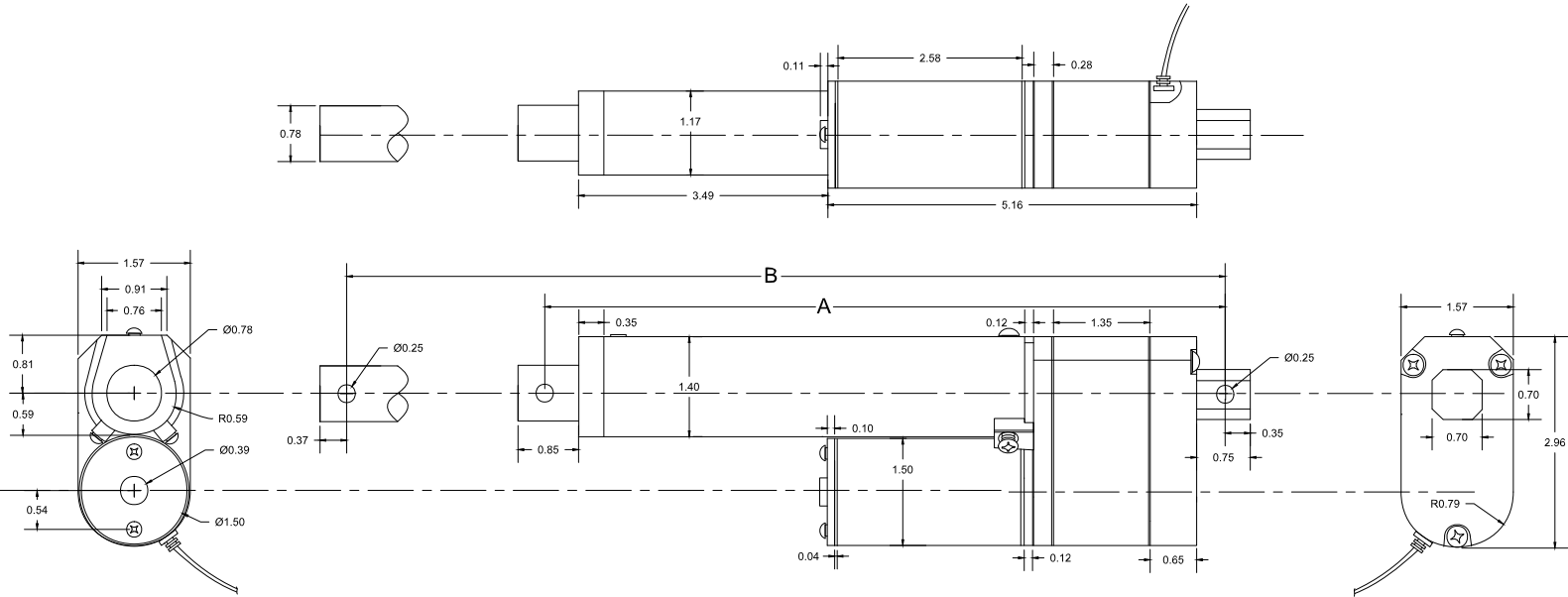
[progressiveautomations.com](http://progressiveautomations.com)

# Specifications

Load (LBS)		No Load Current (A)				Full Load Current (A)				Speed (inch/sec)	
Dynamic	Static	12VDC	24VDC	36VDC	48VDC	12VDC	24VDC	36VDC	48VDC	No Load	Full Load
35	35	1.0	0.5	0.3	0.3	5.0	2.5	1.7	1.3	2.00	1.38
50	50	1.0	0.5	0.3	0.3	5.0	2.5	1.7	1.3	1.14	0.83
75	75	1.0	0.5	0.3	0.3	5.0	2.5	1.7	1.3	0.95	0.70
110	110	1.0	0.5	0.3	0.3	5.0	2.5	1.7	1.3	0.79	0.59
150	150	1.0	0.5	0.3	0.3	5.0	2.5	1.7	1.3	0.37	0.28

<b>Stroke</b>	1" to 40"
<b>Limit Switch</b>	Internal - Non-Adjustable
<b>Limit Switch Feedback</b>	Customizable
<b>Screw Type</b>	ACME Screw
<b>Motor Type</b>	Brushed or Brushless DC Motor
<b>Connector Type</b>	See Page 6
<b>Wire Length</b>	40" (customizable)
<b>Housing Material</b>	6062 Aluminum Alloy
<b>Rod Material</b>	Aluminum Alloy/Stainless Steel (customizable)
<b>Gear Material</b>	Polyformaldehyde (35 lbs only)/Powder Metallurgy Steel Alloy
<b>Color (Shaft)</b>	Silver
<b>Color (Motor End)</b>	Silver
<b>Noise</b>	<45dB
<b>Duty Cycle</b>	25% (5 minutes on, 15 minutes off)
<b>Operational Temperature</b>	-5°C to 65°C (23°F to 149°F) (Standard), -25°C to 65°C (-13°F to 149°F) (Customizable)
<b>Protection Class</b>	IP54 (IP65 customizable)
<b>Feedback Options</b>	Potentiometer (see page 6)
<b>Certifications</b>	CE/RoHS
<b>Mounting Brackets</b>	See Page 7
<b>Mounting Ends</b>	Customizable

# Dimensions



## Hole to Hole

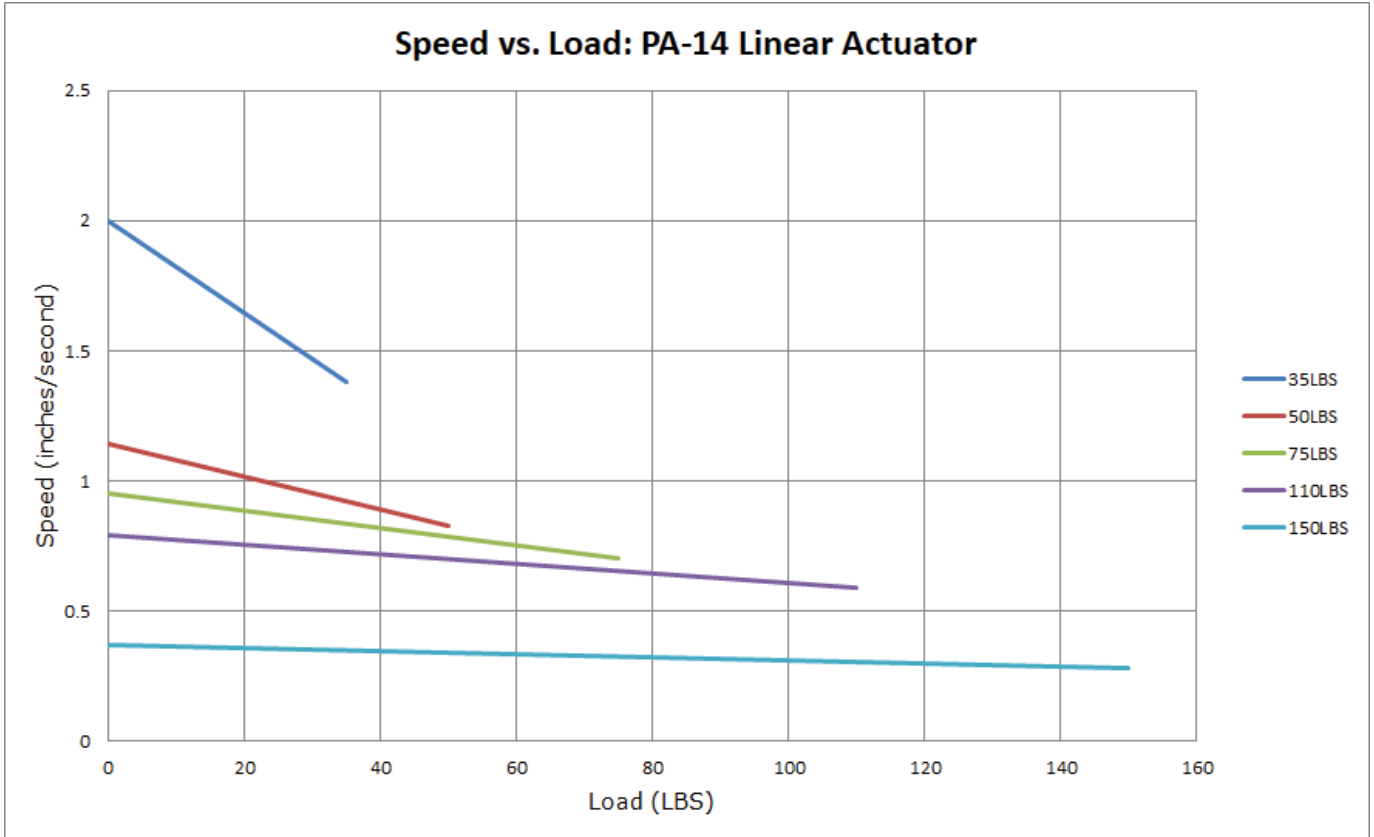
Stroke	1	2	3	4	6	8	9	10	12	14	16	18	20	22	24	30	40
<b>PA-14P</b>																	
A	6.51	7.51	8.51	9.51	11.51	13.51	14.51	15.51	17.51	19.51	21.51	23.51	25.51	27.51	29.51	35.51	45.51
B	7.51	9.51	11.51	13.51	17.51	21.51	23.51	25.51	29.51	33.51	37.51	41.51	45.51	49.51	53.51	66.61	85.51

### For Stroke Length

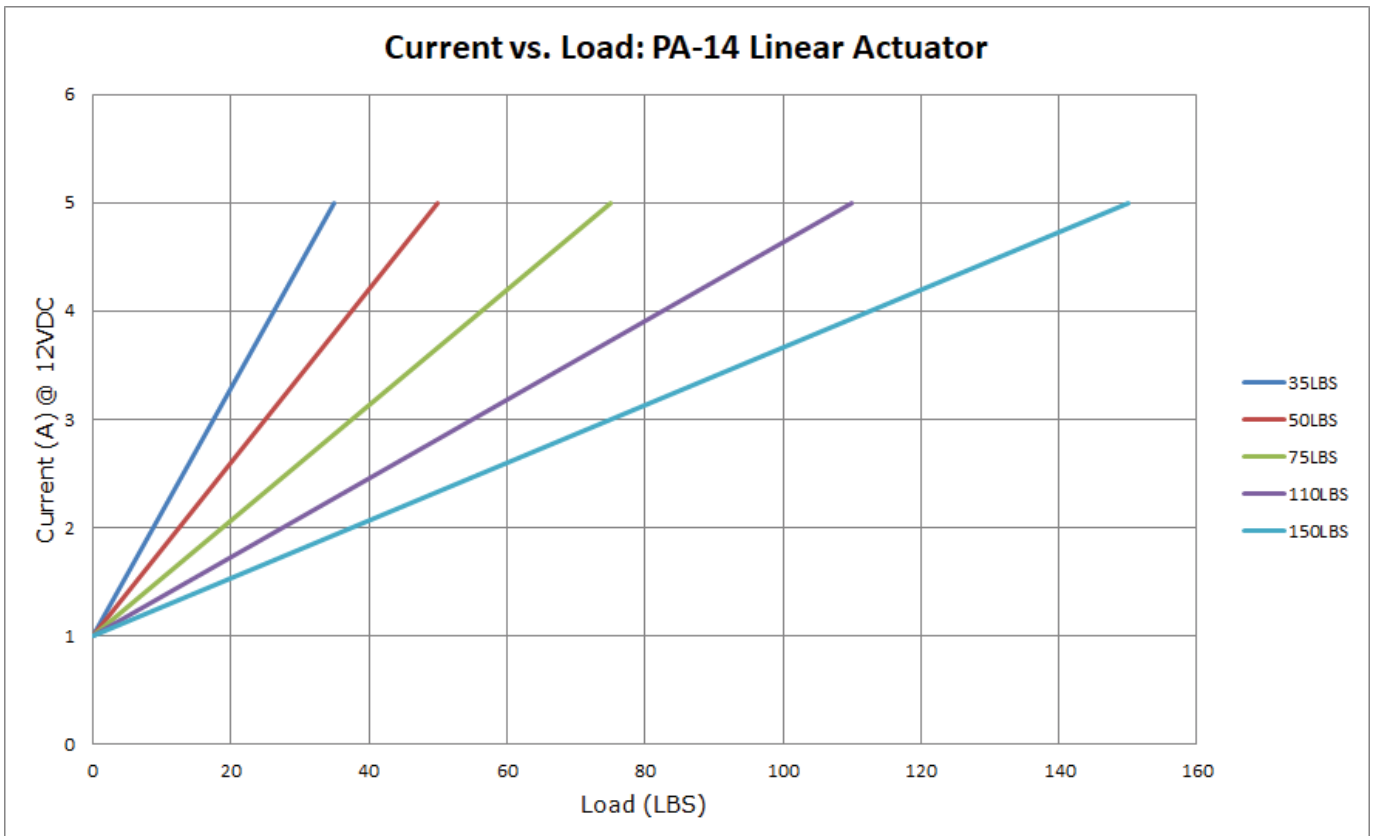
$A = \text{Stroke Length} + 5.51''$

$B = \text{Stroke Length} \times 2 + 5.51''$

# Speed vs Load



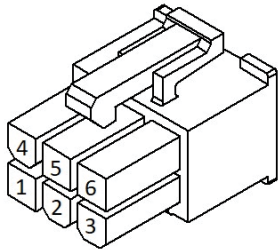
# Current vs Load



# Connectors & Feedback

## Potentiometer Connector Specifications

\*For Stroke Length up to 40"

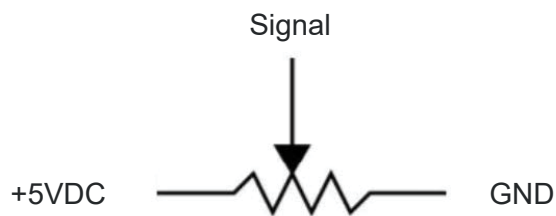


Potentiometer				Motor	
1	2	3	4	5	6
Potentiometer 5VDC (Yellow)	Potentiometer GND (White)	Unused	Potentiometer Wiper (Blue)	Motor + (Black)	Motor - (Red)

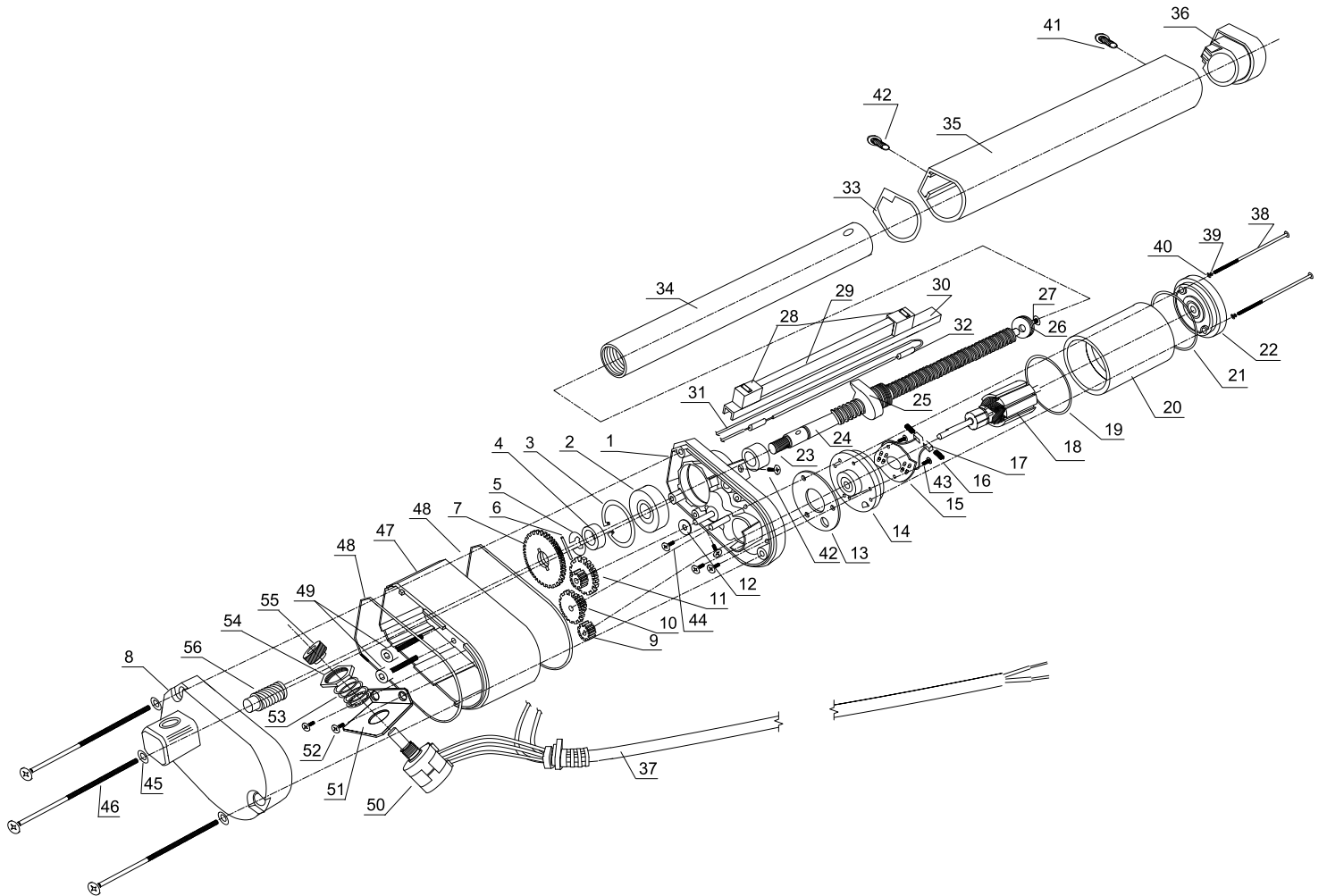
Component	Part Name	Part Number	Mating Part Number
Housing	Molex Mini Fit Jr 6-Pin Receptacle	39012060	39013063
Terminal	Molex Mini-Fit Jr. Female Terminal	39000038	39000040

Resistance	Number of Turns	Tolerance
0-10kΩ	10	+/- 5%

\*Actual resistance value may vary within the 0-10kΩ range based on stroke length



# Internal Components



# Internal Descriptions

Item	Description	Qty
1	Actuator base	1
2	Shaft Bearing	1
3	Shaft Bearing Lock	1
4	Shaft Base Spacer	1
5	Shaft Base Spacer Lock	1
6	Shaft Gear Wheel Holder	1
7	Shaft Gear Wheel	1
8	Base Cover with Mounting Support	1
9	Electric Motor Gear Wheel	1
10	Small Intermediate Gear Wheel	1
11	Medium Intermediate Gear Wheel	1
12	Teflon Washer	1
13	Electric Motor Base Washer	1
14	Electric Motor Base	1
15	Brush Holder PCB	1
16	Electric Motor Brush	2
17	Electric Motor Brush Spring	2
18	Electric Motor Rotor	1
19	Motor Enclosure Bottom Washer	1
20	Electric Motor Encloser with Stator	1
21	Motor Enclosure Top Washer	1
22	Electric Motor Cap with Rotor Bearing	1
23	Shaft Spacer	1
24	Treaded Shaft Drive / Lead Screw	1
25	Shaft Base with Limit Switches Arm	1
26	Shaft Drive End Support	1
27	Shaft Drive End Support Screw	1
28	Limit Switch	2

Item	Description	Qty
29	Limit Switches Spacer	1
30	Limit Switches Base	1
31	Limit Switches Wiring	1
32	Diode	2
33	Shaft Encloser Bottom Washer	1
34	Shaft with Mounting Hole	1
35	Shaft Encloser	1
36	Shaft Enclosure Top Cap	1
37	Power Cable	1
38	Motor Enclosure Screw	2
39	Motor Screw Spring Washer	2
40	Motor Screw Washer	2
41	Shaft Enclosure Top Cap Screw	1
42	Shaft Enclosure Base Screw	3
43	Brush Holder PCB Screw	2
44	Motor Base Screw	3
45	Base Cover Washer	3
46	Base Cover Screw	3
47	Base Extension	1
48	Base Extension gasket	2
49	Base Extension Screw	2
50	Potentiometer	1
51	Potentiometer Bracket	1
52	Potentiometer Bracket Screw	2
53	Potentiometer Washer	3
54	Potentiometer Nut	1
55	Potentiometer Gear	1
56	Shaft Gear	1