



Scan for more information

PA-HD1

User Manual

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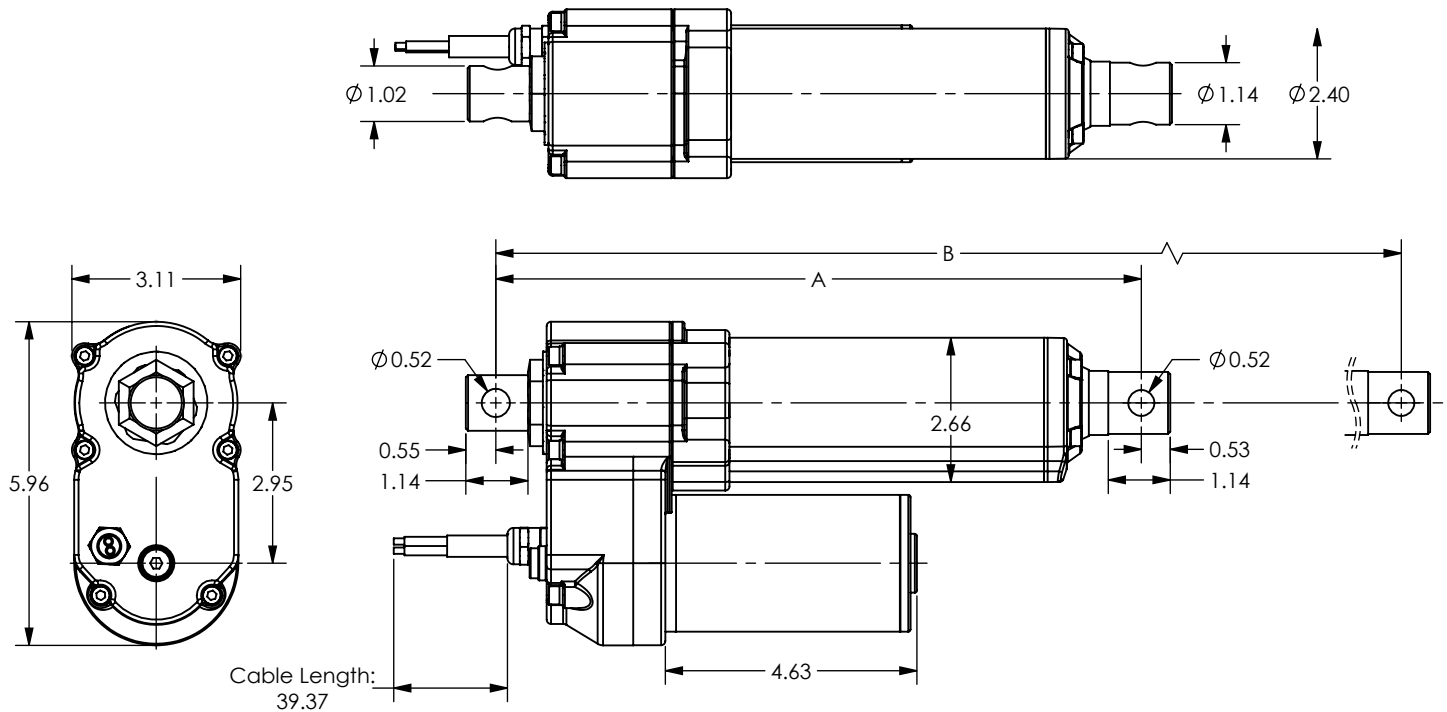
Specifications

Load(LBS)		No Load Current (A)		Full Load Current (A)		Speed (inch/sec)	
Dynamic	Static	12VDC	24VDC	12VDC	24VDC	No Load	Full Load
450	899	3.5	1.8	20.0	10.0	1.37	1.11
899	1574	3.5	1.8	20.0	10.0	0.66	0.55
1574	2248	3.5	1.8	20.0	10.0	0.33	0.27

Input Voltage	12VDC or 24VDC
Stroke	4" to 40"
Feedback	None or Hall Effect Sensor
Duty Cycle	10% (2 minutes on, 18 minutes off)
Weather Protection	IP65
Overload Protection	Mechanical Slip Clutch
Operational Temperature	-25°C to 65°C
Operating Noise	65 dB
Limit Switch	Built In (Non-Adjustable)
Cable Length	40"
Connector	Molex Mini-Fit Jr 2-Pin (standard), Molex Mini-Fit Jr 6-Pin (Hall Effect)
Front Mounting Hole Size	0.52"
Rear Mounting Hole Size	0.52"
Actuator Type	Industrial
Motor Type	Brushed DC Motor
Screw Type	ACME
Stroke Rod Material	Stainless Steel (SUS304)
Housing Material	Aluminum Alloy
Gear Material	Powder Metallurgy/Die-Casting
Certifications	CE, RoHs
Compatible Mounting Brackets	BRK-17
Warranty	18 Months

Dimensions

(Dimensions in inches)



Hole to Hole

Stroke	4	6	8	10	12	16	18	24	30	40
PA-HD1										
A	11.87	13.87	15.87	17.87	21.84	25.84	27.84	35.81	41.81	51.81
B	15.87	19.87	23.87	27.87	33.84	41.84	45.84	59.81	71.81	91.81

For Stroke Length less than 3.0"

$$A = 10.24"$$

$$B = \text{Stroke Length} + 10.24"$$

For Stroke Length 12.0" to 23.0"

$$A = \text{Stroke Length} + 9.84"$$

$$B = 2 * \text{Stroke Length} + 9.84"$$

For Stroke Length 3.0" to 11.0"

$$A = \text{Stroke Length} + 7.87"$$

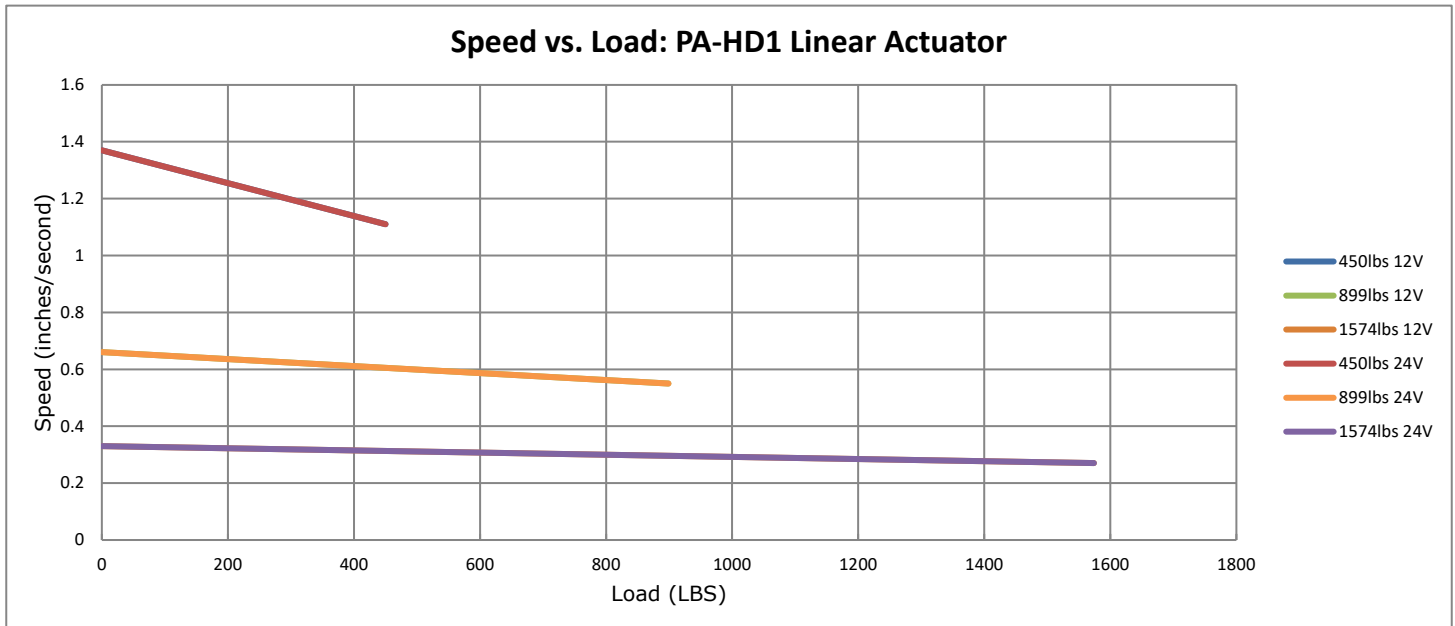
$$B = 2 * \text{Stroke Length} + 7.87"$$

For Stroke Length 24" to 40"

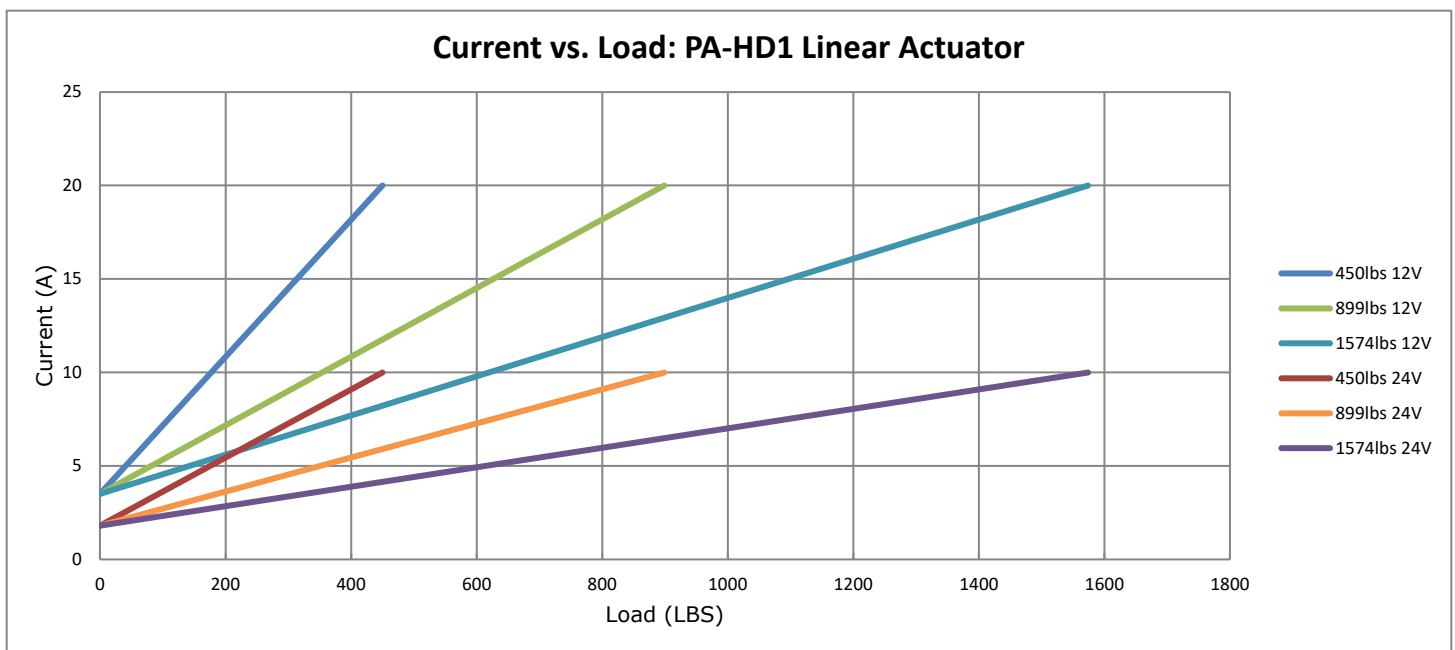
$$A = \text{Stroke Length} + 11.81"$$

$$B = 2 * \text{Stroke Length} + 11.81"$$

Speed vs Load

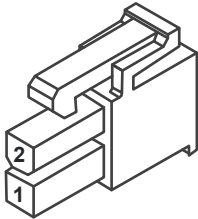


Current vs Load



Connectors & Feedback

2-Pin Connector (Standard)

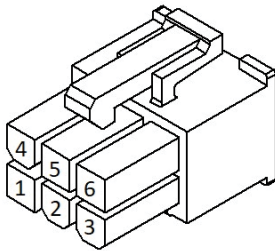


Motor	
2	1
M+ (Extend, Red)	M- (Retract, Black)

Component	Part Name	Part Number	Mating Part Number
Housing	Molex Mini Fit Jr 2-Pin Receptacle	39-01-2020	39-01-2023
Terminal	Molex Mini-Fit Jr. Female Terminal	39-00-0077	39-00-0081

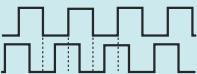
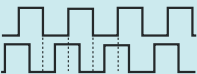
6-Pin Hall Effect Connector

*For Stroke Length up to 40"



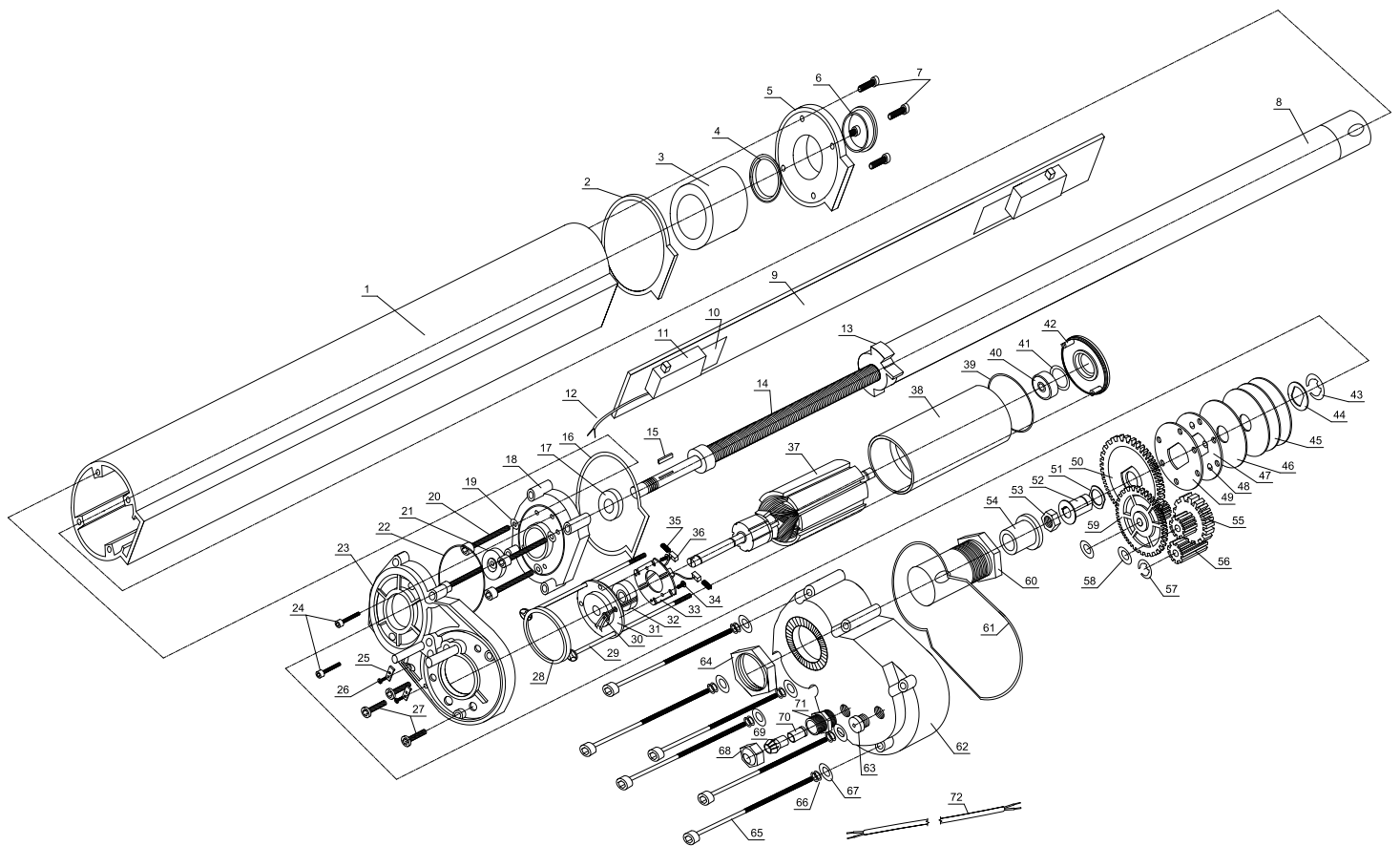
Motor		Hall Sensor			
4	5	2	3	1	6
M- (Retract)	M+ (Extend)	GND	+5VDC	Signal 2 Leads when Extending	Signal 1 Leads when Retracting

Component	Part Name	Part Number	Quantity
Housing	Molex Mini-Fit Jr, Receptacle, Free Hanging, Dual Row, UL 94V-2, 6 Circuits	39-01-2060	1
Motor Terminal	Molex Mini-Fit PLUS High Current System, Female Terminal, Tin-Plated Copper Alloy, 16 AWG	45750-3111	2
Sensor Terminal	Molex Mini-Fit Junior, Female Terminal, Tin-Plated Brass, 22-24 AWG	39-00-0046	4

Output Signal Extending		Output Signal Retracting	
Hall Effect 1 Signal		Hall Effect 1 Signal	
Hall Effect 2 Signal		Hall Effect 2 Signal	

Force (lbs)	Resolution (pulses/inch)
1574	821
899	410
450	205

Internal Components



Internal Descriptions

Item	Description	Qty
1	Shaft Encloser	1
2	Shaft Enclosure Top Gasket	1
3	Shaft Top Guide	1
4	Shaft Enclosure Inside Gasket	1
5	Shaft Enclosure Top Cap	1
6	Shaft Enclosure Outside Gasket	1
7	Shaft Enclosure Top Cap Screw	4
8	Shaft with Mounting Hole	1
9	Limit Switches Base	1
10	Diode	2
11	Limit Switch	1
12	Limit Switches Wiring	1
13	Shaft Bottom Guide with Limit Switches Arm	1
14	Threaded Shaft Drive	1
15	Shaft Gear Lock	1
16	Shaft Enclosure Bottom Gasket	1
17	Shaft Bearing	1
18	Shaft Base	1
19	Shaft Mounting Screw Washer	4
20	Shaft Mounting Screw	4
21	Shaft Bottom Bearing	1
22	Shaft Base O-Ring	4
23	Actuator Base	1
24	Actuator Base Screw	2
25	Wire Strap	2
26	Wire Strap Screw	2
27	Electric Motor Base Screw	3
28	Electric Motor Base Gasket	1
29	Electric Motor Enclosure Screw	2
30	Electric Motor Wires	1
31	Electric Motor Base	1
32	Electric Motor Bottom Bearing	1
33	Brush Holder PCB	1
34	Brush Holder Screw	2
35	Electric Motor Brush Spring	2
36	Electric Motor Brush	2

Item	Description	Qty
37	Electric Motor Rotor	1
38	Electric Motor Enclosure with Stator	1
39	Electric Motor Case Top O-Ring	1
40	Electric Motor Top Bearing	1
41	Rotor Spring Washer	1
42	Electric Motor Top Cover	1
43	Clutch Snap Ring	1
44	Clutch Top Washer	1
45	Clutch Spring Disc	3
46	Clutch Flat Disc	1
47	Clutch Ball Top Plate	1
48	Clutch Ball	6
49	Clutch Ball Bottom Plate	1
50	Shaft Gear Wheel	1
51	Clutch Lock Washer	1
52	Clutch Lock Base	1
53	Clutch Assembly Nut	1
54	Shaft Bottom Bearing	1
55	Intermediate Gear	1
56	Electric Motor Gear	1
57	Electric Motor Gear Snap Ring	1
58	Gear Washer	2
59	Shaft Intermediate Gear	1
60	Actuator Bottom Mount	1
61	Actuator Base Gasket	1
62	Actuator Bottom Case	1
63	Actuator Case Plug	1
64	Actuator Bottom Mount Nut	1
65	Actuator Base Screw	6
66	Actuator Base Screw Washer	12
67	Actuator Base Screw Spring Washer	6
68	Power Cable Grommet Top	1
69	Power Cable Gripper	1
70	Power Cable Sleeve	1
71	Power Cable Grommet Base	1
72	Power Cable	1