



Electrak® PPA – Technical Features



Standard Features

- Strong and versatile heavy-duty actuator
- High duty cycle
- 12, 24, 36 or 90 Vdc as standard input voltages
- Highly efficient ball screw drive system
- Static load up to 13350 N (3000 lbf)
- Dynamic load up to 6670 N (1500 lbf)
- Stroke up to 36 inches
- Overload clutch for mid and end of stroke protection
- Motor with thermal switch
- Maintenance free

General Specifications

Screw type	ball
Nut type	ball nut
Manual override	no
Anti-rotation	no
Static load holding brake	yes
Safety features	overload clutch motor auto reset thermal switch
Electrical connections	flying leads
Compliances standard	–
optional	CE ^(1, 2)

(1) Actuators used in the EU must be in compliance with CE
(2) 90 Vdc model not CE compliant

Optional Mechanical Features

Protective bellows

Optional Electrical Features

Potentiometer feedback

Encoder feedback

End of stroke limit switches

Accessories

Rear clevis mounting kit

Tube mounting kits

Compatible Controls

Contact customer support at www.thomsonlinear.com/cs

Electrak[®] PPA – Technical Specifications

Mechanical Specifications		
Max. static load ⁽¹⁾	[N (lbf)]	13350 (3000)
Max. dynamic load (Fx)	[N (lbf)]	
PPAxx-18B65		3330 (750)
PPAxx-58B65		6670 (1500)
Speed @ no load/max. load	[mm/s (in/s)]	
PPAxx-18B65		32/28 (1.26/1.10)
PPAxx-58B65		12/9 (0.49/0.37)
Min. ordering stroke (S) length	[in]	4
Max. ordering stroke (S) length ⁽²⁾	[in]	36
Standard stroke lengths	[in]	4, 8, 12, 18, 24, 36
Operating temperature limits	[°C (F)]	-25 – 65 (-15 – 150)
Full load duty cycle @ 25 °C (77 °F)	[%]	30
End play, maximum	[mm (in)]	1.0 (0.04)
Restraining torque	[Nm (lbf-in)]	
PPAxx-18B65		11 (100)
PPAxx-58B65		22 (200)
Protection class - static		IP54

(1) Max. static load at fully retracted stroke

Electrical Specifications		
Available input voltages ⁽¹⁾	[Vdc]	12, 24, 36, 90
Input voltage tolerance	[%]	± 10
Current draw @ no load/max. load ⁽²⁾	[A]	
PPA12-18B65		7.5/22.0
PPA12-58B65		7.5/13.5
PPA24-18B65		3.0/12.0
PPA24-58B65		3.0/12.0
PPA36-18B65		4.5/8.0
PPA36-58B65		3.0/6.0
Motor leads length	[mm (in)]	420 (16.5)
Motor leads cross section	[mm ² (AWG)]	2 (14)
Connection of electrical options ⁽³⁾		terminals

(1) For other input voltages - contact customer support

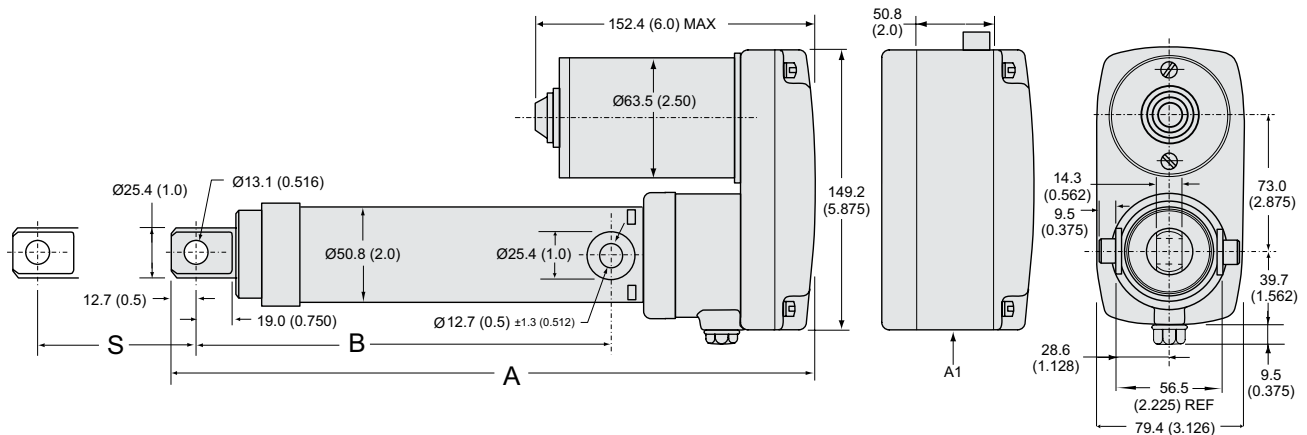
(2) For current draw for 90 Vdc input voltage models - contact customer support

(3) Potentiometer or end of stroke limit switches



Electrak® PPA – Dimensions

Dimensions	Projection
mm [inch]	



S: stroke
A: retracted length

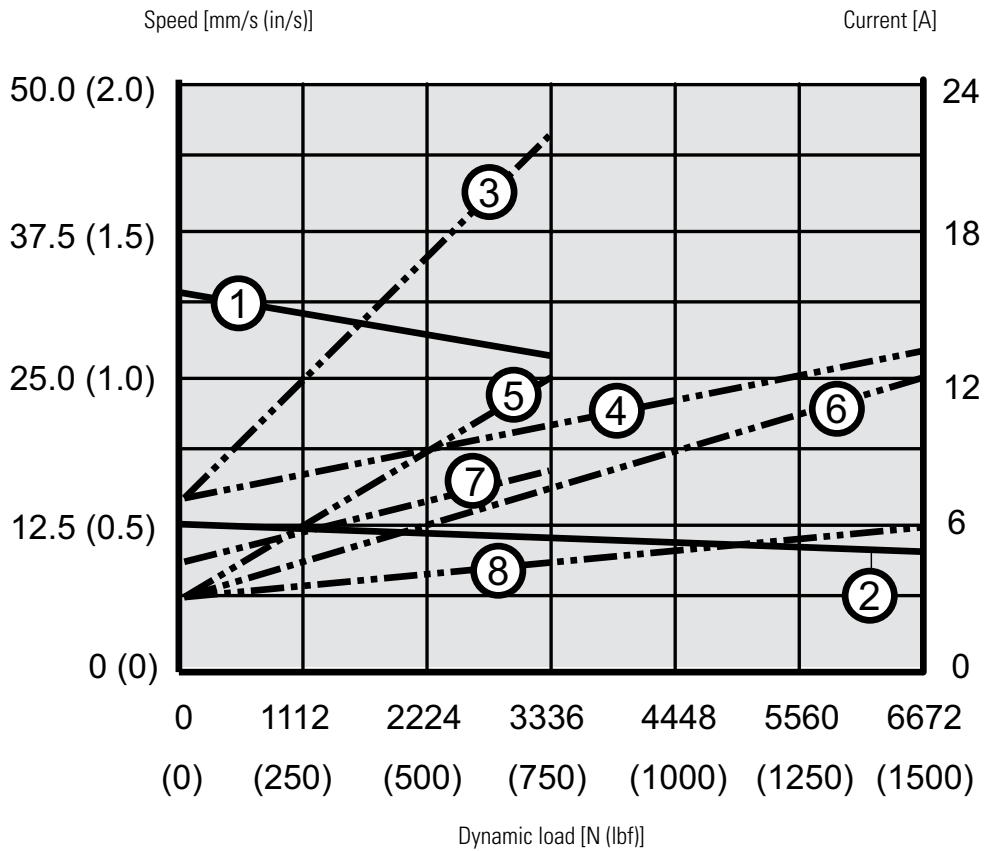
B: retracted length to trunnions
A1: housing dimensions for limit switch, encoder or potentiometer options

Stroke, Retracted Length and Weight Relationships

Ordering stroke (S)	[in (mm)]	4 (101.5)	8 (203.2)	12 (304.8)	18 (457.2)	24 (609.6)	36 (914.4)
Retracted length without option (A)	[mm]	348.0	449.6	551.2	754.4	906.8	1211.6
	[in]	13.7	17.7	21.7	29.7	35.7	47.7
Retracted length with potentiometer, encoder or limit switch option (A)	[mm]	398.8	500.4	602.0	805.2	957.6	1262.4
	[in]	15.7	19.7	23.7	31.7	37.7	49.7
Retracted length to trunnions (B)	[mm]	223.5	352.1	426.7	629.9	782.3	1087.1
	[in]	8.8	12.8	16.8	24.8	30.8	42.8
Weight	[kg]	4.5	5.3	6.0	7.2	8.4	10.8
	[lbf]	10.0	11.6	13.3	15.9	18.5	23.8
Add on weight for potentiometer, encoder or limit switch options	[kg]	0.5					
	[lbf]	1.1					

Electrak® PPA – Performance Diagrams

Speed and Current vs. Load



Speed

- 1: PPAxx-18B65 (3330 N (750 lbf))
- 2: PPAxx-58B65 (6670 N (1500 lbf))

Current

- 3: PPA12-18B65 (12 Vdc, 3330 N (750 lbf))
- 4: PPA12-58B65 (12 Vdc, 6670 N (1500 lbf))
- 5: PPA24-18B65 (24 Vdc, 3330 N (750 lbf))
- 6: PPA24-58B65 (24 Vdc, 6670 N (1500 lbf))
- 7: PPA36-18B65 (36 Vdc, 3330 N (750 lbf))
- 8: PPA36-58B65 (36 Vdc, 6670 N (1500 lbf))



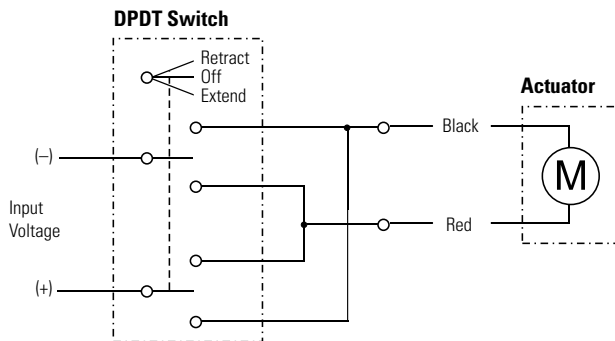
Electrak® PPA – Ordering Key

Ordering Key					
1	2	3	4	5	6
PPA12-	58B65-	08	N	LS	X
1. Model and input voltage PPA12 - = Electrak PPA DC, 12 Vdc PPA24 - = Electrak PPA DC, 24 Vdc PPA36 - = Electrak PPA DC, 36 Vdc PPA90 - = Electrak PPA DC, 90 Vdc ⁽¹⁾			4. Brake option N = no brake option		
2. Dynamic load capacity 18B65 - = 3330 N (750 lbf) 58B65 - = 6670 N (1500 lbf)			5. Feedback option XX = no feedback option LS = end of stroke limit switches PO = potentiometer ⁽²⁾		
3. Ordering stroke length 04 = 4 inch (101.6 mm) 08 = 8 inch (203.2 mm) 12 = 12 inch (304.8 mm) 18 = 18 inch (457.2 mm) 24 = 24 inch (609.6 mm) 36 = 36 inch (914.4 mm)			6. Bellows option X = no bellows C = bellows		
			<small>(1) Not CE compliant. (2) Potentiometer + end of stroke limit switches not possible.</small>		

Electrak® PPA – Electrical Connections

Without Option

Actuator supply voltage	[Vdc]	
PPA12		12
PPA24		24
PPA36		36
PPA90		90



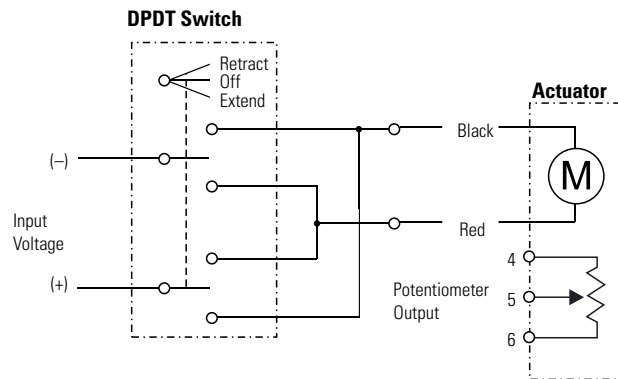
Connect the black lead to positive and red to negative to extend the actuator. Change polarity to retract the actuator.

With Option Potentiometer

Actuator supply voltage	[Vdc]	
PPA12		12
PPA24		24
PPA36		36
PPA90		90

Potentiometer type		wire-wound
Potentiometer max. voltage	[Vdc]	32
Potentiometer max. power	[W]	2
Potentiometer linearity	[%]	± 5

Potentiometer output resolution	[ohm/mm]	
4 inch stroke		98
8 inch stroke		49
12 inch stroke		33
18 inch stroke		22
24 inch stroke		16
36 inch stroke		11

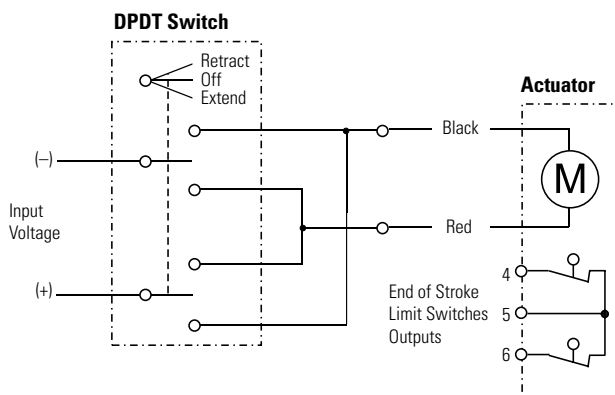


Connect the black lead to positive and red to negative to extend the actuator. Change polarity to retract the actuator. The potentiometer output has 0 ohm between terminal 4 and 5 when the actuator is fully retracted.

With Option End of Stroke Limit Switches

Actuator supply voltage	[Vdc]	
PPA12		12
PPA24		24
PPA36		36
PPA90		90

Limit switches max. voltage	[V]	250
Limit switches max. current	[A]	15.1



Connect the black lead to positive and red to negative to extend the actuator. Change polarity to retract the actuator. Limit switch outputs are on terminals 4 and 6, and they have a common voltage input on terminal 5.



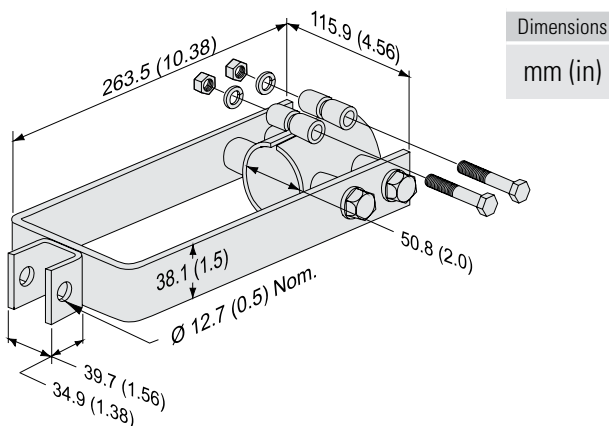
Electrak® PPA – Accessories

PPA Rear Clevis Mounting Kits

Designation	Compatible Actuators	Part Number
PPA rear clevis mounting kit type 1	Electrak PPA	7827320
PPA rear clevis mounting kit type 2	Electrak PPA	7824295

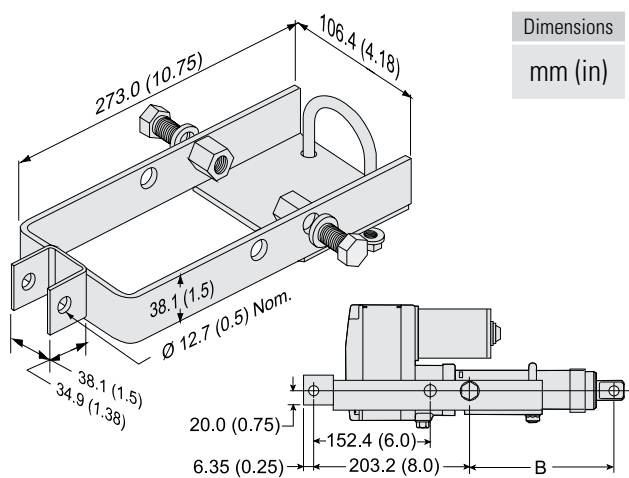
The rear clevis mounting kits are attached to the tube of an Electrak PPA actuator, allowing it to be mounted clevis to clevis style.

PPA Rear Clevis Mounting Kit - Type 1



Dimensions
mm (in)

PPA Rear Clevis Mounting Kit - Type 2



Dimensions
mm (in)

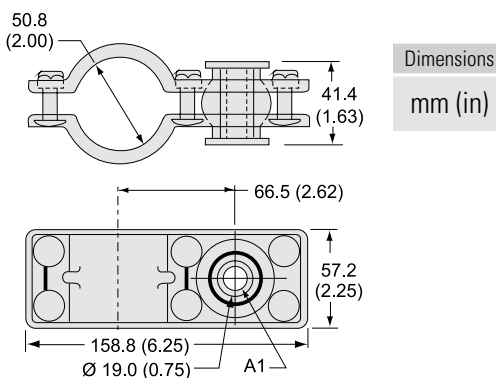
B: retracted length to trunnion, also see product pages.

PPA Tube Mounting Kits

Designation	Compatible Actuators	Part Number
Electrak PPA tube mount - light duty 3330 N	Electrak PPA	7822520
Electrak PPA tube mount - heavy-duty 6670 N	Electrak PPA	7821783

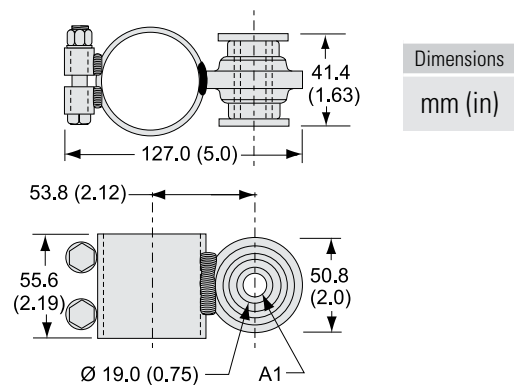
The tube mounting kits work as a clamp that is mounted at any desired position along the actuator tube. Trunnion pins for the tube mount clamp are supplied and mounted by the customer.

Electrak PPA Tube Mount - Light Duty 3330 N (750 lbf)



Dimensions
mm (in)

Electrak PPA Tube Mount - Heavy-duty 6670 N (1500 lbf)



Dimensions
mm (in)

A1: hole diameter 12.7 mm (0.5 in) with bushing.

A1: hole diameter 12.7 mm (0.5 in) with bushing.