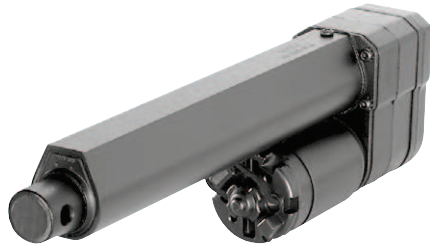


# Electrak® 1SP

12, 24 and 36 Vdc - load up to 340 N



» Ordering Key - see page 74

» Glossary - see page 85

» Electric Wiring Diagram - see page 56

## Standard Features and Benefits

- Very compact and lightweight
- Potentiometer feedback
- Corrosion resistant housing
- Self-locking acme screw drive system
- Maintenance free
- Internally restrained extension tube
- Ideal for replacement of comparable size pneumatic and hydraulic cylinders

## General Specifications

Parameter	Electrak 1SP
Screw type	acme
Internally restrained	yes
Manual override	no
Dynamic braking	no
Holding brake	no, self-locking
End of stroke protection	no
Mid stroke protection	no
Motor protection	auto reset thermal switch
Motor connection	flying leads and connector
Motor connector	Packard Electric Pack-Con male 8911773 with terminal 6294511. Mating connector: 8911772 with terminal 8911639 (p/n 9300-448-001)
Certificates	CE
Options	none

## Performance Specifications

Parameter		Electrak 1SP
Maximum load, dynamic / static	[N]	
SP •• -09A04		110 / 1300
SP •• -09A08		225 / 1300
SP •• -17A08		340 / 1300
SP •• -17A16		340 / 1300
Speed, at no load / at maximum load	[mm/s]	
SP •• -09A04		75 / 52
SP •• -09A08		45 / 33
SP •• -17A08		26 / 17
SP •• -17A16		14 / 7
Available input voltages	[Vdc]	12, 24, 36
Standard stroke lengths	[inch]	2, 4, 6*
Operating temperature limits	[°C]	-25 – +65
Full load duty cycle @ 25 °C	[%]	25
End play, maximum	[mm]	0,9
Restraining torque	[Nm]	0
Lead cross section	[mm <sup>2</sup> ]	1
Lead length	[mm]	110
Protection class		IP65
Potentiometer	[kOhm]	10**

\* Six inch stroke length not possible for SP •• -17A16.

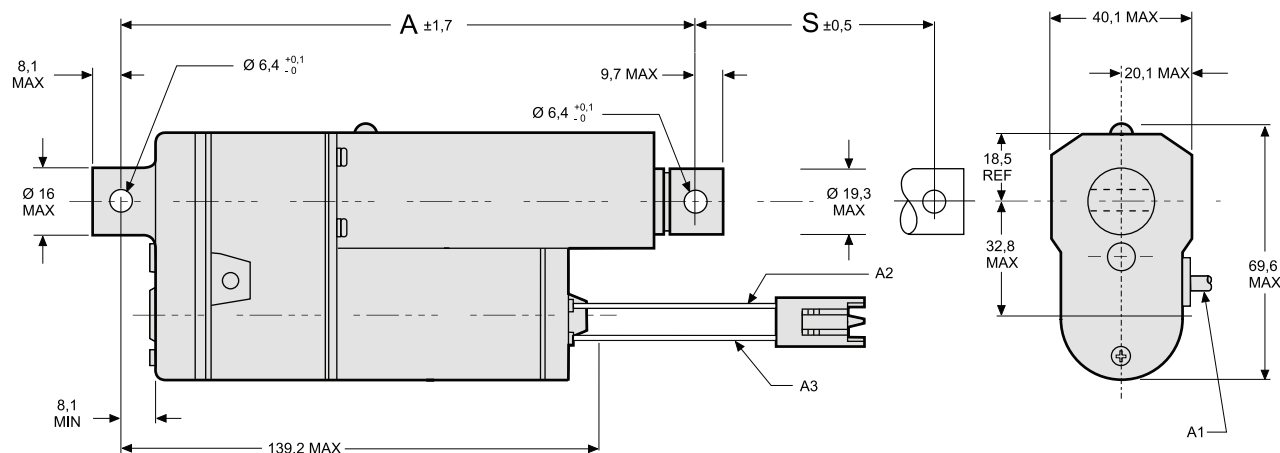
\*\* See table on page 19 for resistance change per mm.

## Compatible Controls

Control model	See page
DPDT switch	61
AC-247 ELS	64
DCG-150	66

# Electrak® 1SP

12, 24 and 36 Vdc - load up to 340 N



S: stroke  
 A: retracted length  
 A1: cable for potentiometer feedback, length = 635 mm

A2: black lead for 12 Vdc units, white lead for 24 Vdc units, blue lead for 36 Vdc  
 A3: yellow lead

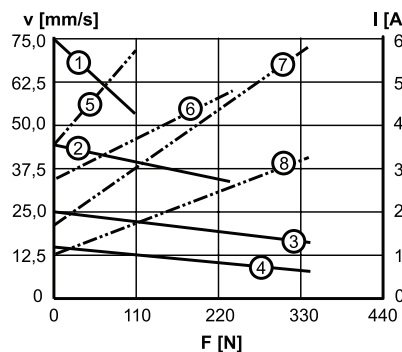
Ordering stroke	[inch]	2	4	6*
Actual stroke (S)	[mm (inch)]	58,7 (2,31)	115,1 (4,53)	171,5 (6,75)
Retracted length (A)	[mm]	197,9	254,3	310,7
Weight	[kg]	0,8	0,85	0,9
Potentiometer resistance change	[ohm/mm]	94	47 (63)**	31

\* Six inch stroke length not possible for SP ••-17A16. \*\* SP ••-17A16 with 4 inch stroke = 63 ohm/mm, all other stroke lengths has 47 ohm/mm.

## Performance Diagrams

Speed and Current vs. Load

12 Vdc

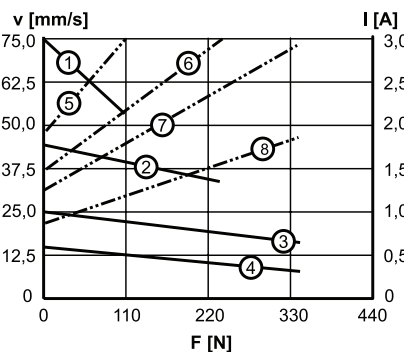


V: speed I: current F: load

- 1: speed SP12-09A04
- 2: speed SP12-09A08
- 3: speed SP12-17A08
- 4: speed SP12-17A16
- 5: current SP12-09A04
- 6: current SP12-09A08
- 7: current SP12-17A08
- 8: current SP12-17A16

Speed and Current vs. Load

24 Vdc

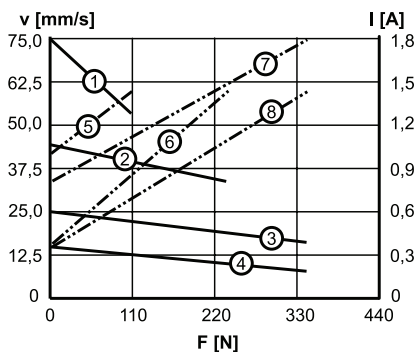


V: speed I: current F: load

- 1: speed SP24-09A04
- 2: speed SP24-09A08
- 3: speed SP24-17A08
- 4: speed SP24-17A16
- 5: current SP24-09A04
- 6: current SP24-09A08
- 7: current SP24-17A08
- 8: current SP24-17A16

Speed and Current vs. Load

36 Vdc



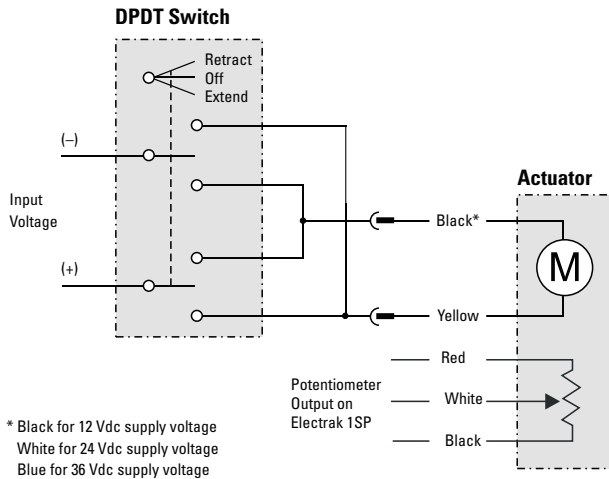
V: speed I: current F: load

- 1: speed SP36-09A04
- 2: speed SP36-09A08
- 3: speed SP36-17A08
- 4: speed SP36-17A16
- 5: current SP36-09A04
- 6: current SP36-09A08
- 7: current SP36-17A08
- 8: current SP36-17A16

# Electrical Wiring Diagrams

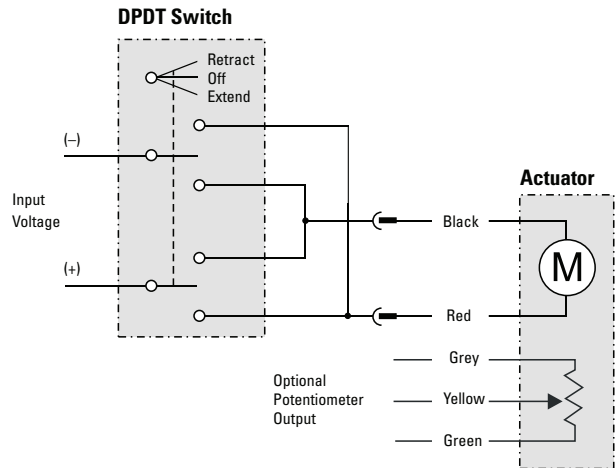
## DC-actuators

### Electrak 1 and 1SP



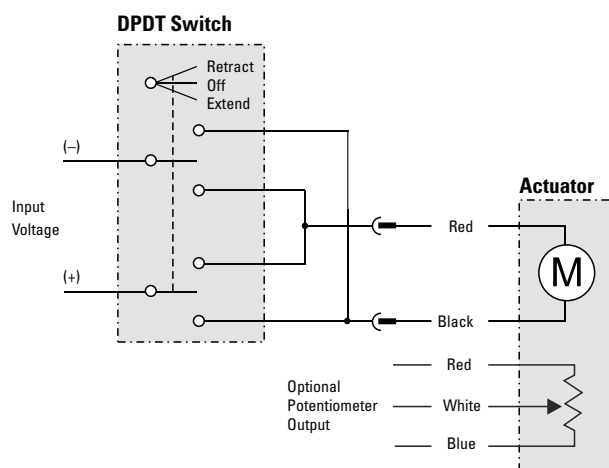
Connect the yellow lead to positive and black, white or blue\* to negative to extend the actuator. Change polarity to retract the actuator. The potentiometer output has 0 ohm between white and red when the actuator is fully retracted. The actuator should be protected from overload conditions by a customer provided fuse in the circuit (6 A for 12 Vdc, 3 A for 24 Vdc and 2 A for 36 Vdc).

### Electrak 10, LA14



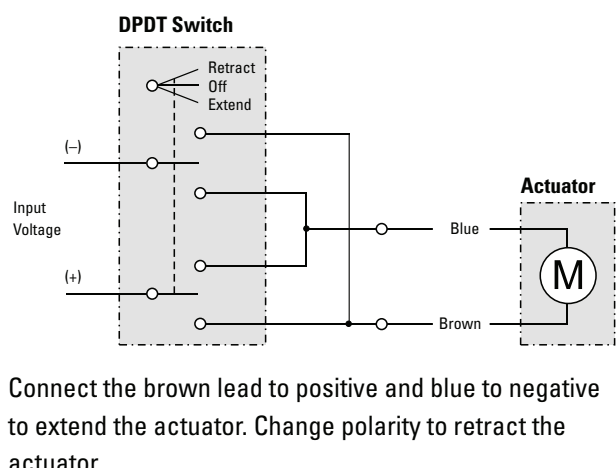
Connect the red lead to positive and black to negative to extend the actuator. Change polarity to retract the actuator. The potentiometer output has 0 ohm between grey and yellow when the actuator is fully extended.

### Electrak 050



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 white and red when the actuator is fully retracted.

### DMD



Connect the brown lead to positive and blue to negative to extend the actuator. Change polarity to retract the actuator.

# Ordering Keys

## Electrak DC-actuators

Electrak 1		
1	2	3
S24 -	09A04 -	06
<b>1. Model and input voltage</b> S12 - = Electrak 1, 12 Vdc S24 - = Electrak 1, 24 Vdc S36 - = Electrak 1, 36 Vdc	<b>2. Dynamic load capacity and max. speed</b> 09A04 = 110 N, 75 mm/s 09A08 = 225 N, 45 mm/s 17A08 = 340 N, 26 mm/s 17A16 = 340 N, 14 mm/s	<b>3. Electrical stroke (actual stroke in mm)</b> 01 = 1 inch (20,8 mm) 02 = 2 inch (46,2 mm) 03 = 3 inch (71,6 mm) 04 = 4 inch (97,0 mm) 05 = 5 inch (122,4 mm) 06 = 6 inch (147,8 mm)

Electrak 1SP		
1	2	3
SP24 -	09A04 -	06
<b>1. Model and input voltage</b> SP12 - = Electrak 1SP, 12 Vdc SP24 - = Electrak 1SP, 24 Vdc SP36 - = Electrak 1SP, 36 Vdc	<b>2. Dynamic load capacity and max. speed</b> 09A04 = 110 N, 75 mm/s 09A08 = 225 N, 45 mm/s 17A08 = 340 N, 26 mm/s 17A16 = 340 N, 16 mm/s <sup>1</sup>	<b>3. Ordering stroke (actual stroke in mm)</b> 02 = 2 inch (50,8 mm) 04 = 4 inch (101,6 mm) 06 = 6 inch (152,4 mm)  <sup>1</sup> Not possible in combination with 6 inch stroke.