

# Electrak® 10

12, 24 and 36 Vdc - load up to 6800 N



## Standard Features and Benefits

- Robust, strong and reliable
- Withstands very harsh environments
- Stainless steel extension tube
- Acme or ball screw models
- Overload clutch for mid and end of stroke protection
- Motor with thermal switch
- Maintenance free

## General Specifications

Parameter	Electrak 10
Screw type	acme or ball
Internally restrained	no
Manual override	no, optional
Dynamic braking	no
Holding brake acme screw models ball screw models	no, self-locking yes
End of stroke protection	overload clutch
Mid stroke protection	overload clutch
Motor protection	auto reset thermal switch
Motor connection	flying leads and connector
Motor connector	AMP connector with housing p/n 180908-5 with male terminals p/n 42098-2
Certificates	CE
Options	• potentiometer • manual override

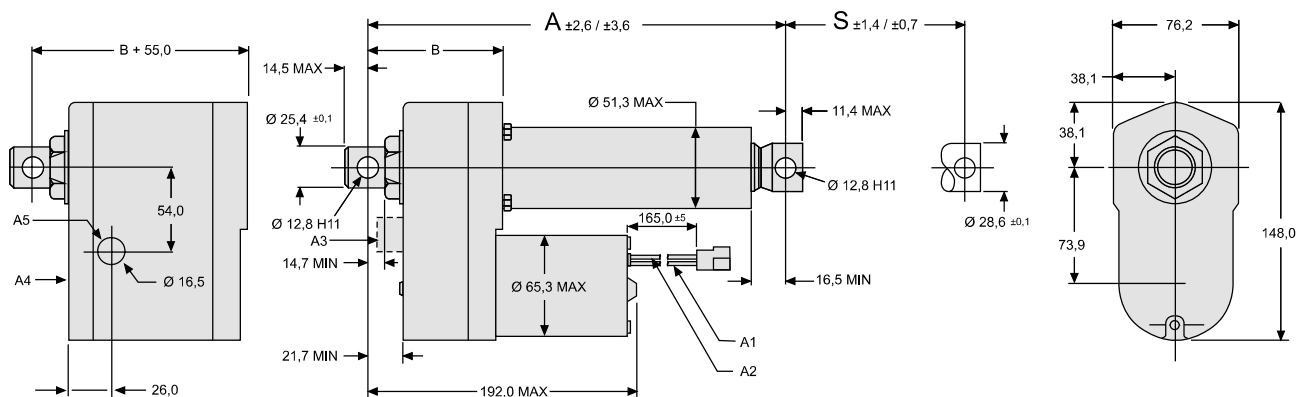
## Performance Specifications

Parameter		Electrak 10
Maximum load, dynamic / static	[N]	
D •• -05A5 (acme screw)		1100 / 11350
D •• -10A5 (acme screw)		2250 / 11350
D •• -20A5 (acme screw)		2250 / 11350
D •• -05B5 (ball screw)		2250 / 18000
D •• -10B5 (ball screw)		4500 / 18000
D •• -20B5 (ball screw)		4500 / 18000
D •• -21B5 (ball screw)		6800 / 18000
Speed, at no load / at maximum load	[mm/s]	
D •• -05A5 (acme screw)		54 / 32
D •• -10A5 (acme screw)		30 / 18
D •• -20A5 (acme screw)		15 / 12
D •• -05B5 (ball screw)		61 / 37
D •• -10B5 (ball screw)		30 / 19
D •• -20B5 (ball screw)		15 / 12
D •• -21B5 (ball screw)		15 / 11
Available input voltages	[Vdc]	12, 24, 36 *
Standard stroke lengths	[inch]	4, 6, 8, 10, 12, 14, 16, 18, 20, 24
Operating temperature limits	[°C]	-25 – +65
Full load duty cycle @ 25 °C	[%]	25
End play, maximum	[mm]	1,0
Restraining torque	[Nm]	11,3
Lead cross section	[mm <sup>2</sup> ]	2
Lead length	[mm]	165
Protection class		IP65

\* Other input voltages available on request, contact customer support.

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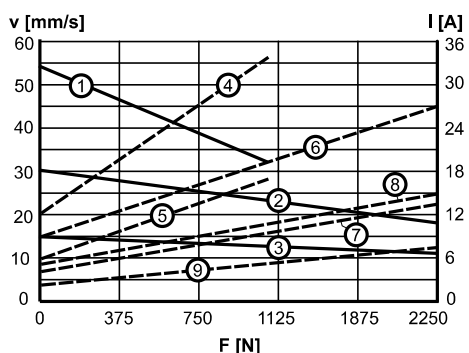
S: stroke, tolerance acme / ball screw  
 A: retracted length, tolerance acme / ball screw  
 A1: black lead  
 A2: red lead  
 A3: manual override input (optional)  
 A4: housing dimensions for potentiometer option  
 A5: potentiometer cable output, cable length = min. 500 mm  
 B: 86,1 mm

Stroke (S)	[inch (mm)]	4 (101,6)	6 (152,4)	8 (203,2)	10 (254,0)	12 (304,8)	14 (355,6)	16 (406,4)	18 (457,2)	20 (508,0)	24 (609,6)
Retracted length, acme screw models (A)	[mm]	262,3	313,1	363,9	414,7	465,5	567,1	617,9	668,7	719,5	821,1
Retracted length, ball screw models (A)	[mm]	302,3	353,1	403,9	454,7	505,5	607,1	657,9	708,7	759,5	861,1
Add on length for potentiometer*	[mm]	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0
Weight, acme screw models	[kg]	4,5	4,7	4,9	5,0	5,2	5,4	5,5	5,7	5,8	6,2
Weight, ball screw models	[kg]	5,1	5,3	5,5	5,6	5,8	5,9	6,1	6,3	6,4	6,8
Add on weight for potentiometer*	[kg]	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3
Potentiometer resistance change*	[ohm/mm]	39	39	39	39	20	20	20	20	20	10

\* Potentiometer is optional

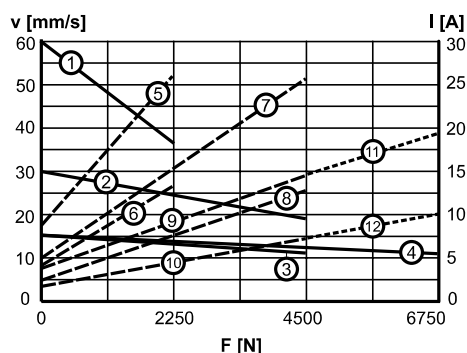
## Performance Diagrams

Acme Screw Models  
Speed and Current vs. Load



V: speed  
 I: current  
 F: load  
 1: speed D ••-05A5  
 2: speed D ••-10A5  
 3: speed D ••-20A5  
 4: current 12 Vdc, D12-05A5  
 5: current 24 Vdc, D24-05A5  
 6: current 12 Vdc, D12-10A5  
 7: current 24 Vdc, D24-10A5  
 8: current 12 Vdc, D12-20A5  
 9: current 24 Vdc, D24-20A5

Ball Screw Models  
Speed and Current vs. Load



V: speed  
 I: current  
 F: load  
 1: speed D ••-05B5  
 2: speed D ••-10B5  
 3: speed D ••-20B5  
 4: speed D ••-21B5  
 5: current 12 Vdc, D12-05B5  
 6: current 24 Vdc, D24-05B5  
 7: current 12 Vdc, D12-10B5  
 8: current 24 Vdc, D24-10B5  
 9: current 12 Vdc, D12-20B5  
 10: current 24 Vdc, D24-20B5  
 11: current 12 Vdc, D12-21B5  
 12: current 24 Vdc, D24-21B5

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## Ordering Key

1	2	3	4	5
D12 -	20B5 -	04	M0	N

### 1. Input voltage

D12 - = 12 Vdc

D24 - = 24 Vdc

D36 - = 36 Vdc

### 2. Dynamic load capacity, screw type and maximum speed

05A5 - = 1100 N, acme, 54 mm/s

10A5 - = 2250 N, acme, 30 mm/s

20A5 - = 2250 N, acme, 15 mm/s

05B5 - = 2250 N, ball, 61 mm/s

10B5 - = 4500 N, ball, 30 mm/s

20B5 - = 4500 N, ball, 15 mm/s

21B5 - = 6800 N, ball, 15 mm/s

### 3. Stroke

04 = 4 inch (101,6 mm)

06 = 6 inch (152,4 mm)

08 = 8 inch (203,2 mm)

10 = 10 inch (254,0 mm)

12 = 12 inch (304,8 mm)

14 = 14 inch (355,6 mm)

16 = 16 inch (406,4 mm)

18 = 18 inch (457,2 mm)

20 = 20 inch (508,0 mm)

24 = 24 inch (609,6 mm)

### 4. Rear adapter hole position<sup>1</sup>

M0 = adaptor at 0° (standard position)

M1 = adaptor at 30°

M2 = adaptor at 60°

M3 = adaptor at 90°

M4 = adaptor at 120°

M5 = adaptor at 150°

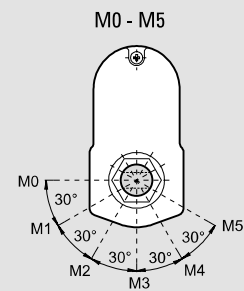
### 5. Options

N = no option

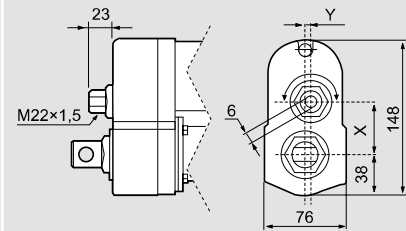
NPO = potentiometer

NHW = manual override<sup>2</sup>

### <sup>1</sup> Definition of rear adapter hole positions.



### <sup>2</sup> Dimensions for manual override option.

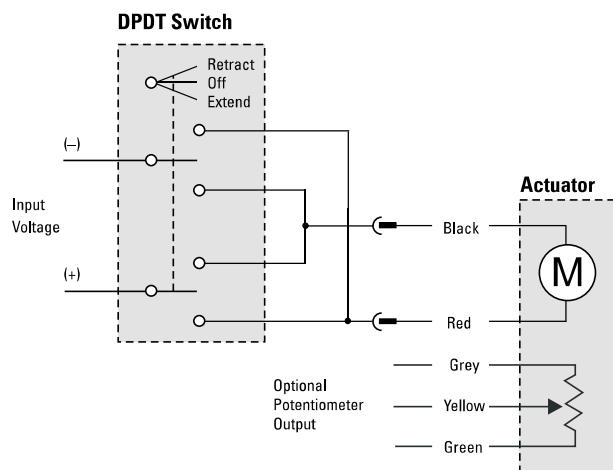


Model	X	Y
05A(B)5 -	49,6	0,0
10A(B)5 -	43,3	5,2
20(21)A(B)5 -	38,9	0,0

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## Wiring Diagram



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.