



# Electrak® 050 – Technical Features



## Standard Features

- Designed for office or medical applications
- Small, quiet and lightweight
- Short retracted length
- Low cost
- Durable and corrosion free plastic housing
- Color molded into the plastic, no painting required
- Maintenance free
- Internally restrained extension tube
- Estimated life is minimum 40000 cycles

## General Specifications

|                           |   |
|---------------------------|---|
| Screw type                | worm  |
| Nut type                  | lead  |
| Manual override           | no  |
| Anti-rotation             | yes   |
| Static load holding brake | no (self-locking)   |
| Safety features           | internal limit switches<br>overload clutch<br>auto reset thermal switch |
| Electrical connections    | cable with flying leads or connector                                    |
| Compliances               | CE, UKCA  |

## Optional Mechanical Features

Cross hole orientation

## Optional Electrical Features

End of stroke limit switches with dynamic braking

Potentiometer feedback

# Electrak 050 – Technical Specifications

| Mechanical Specifications            |               |                      |
|--------------------------------------|---------------|----------------------|
| Max. static load <sup>(1)</sup>      | [N (lbf)]     |                      |
| DExx17W41                            |               | 1020 (224)           |
| DExx17W42                            |               | 550 (120)            |
| DExx17W44                            |               | 280 (60)             |
| Max. dynamic load (Fx)               | [N (lbf)]     |                      |
| DExx17W41                            |               | 510 (112)            |
| DExx17W42                            |               | 275 (60)             |
| DExx17W44                            |               | 140 (30)             |
| Speed @ no load/max. load            | [mm/s (in/s)] |                      |
|                                      |               | 12/9 (0.5 /0.35)     |
|                                      |               | 24/18 (0.9/0.7)      |
|                                      |               | 48/37 (1.9/1.5)      |
| Min. ordering stroke (S) length      | [mm]          | 25                   |
| Max. ordering stroke (S) length      | [mm]          | 200                  |
| Ordering stroke length increments    | [in]          | 25                   |
| Operating temperature limits         | [°C (F)]      | -30 – 80 (-22 – 176) |
| Full load duty cycle @ 20 °C (70 °F) | [%]           | 25                   |
| End play, maximum                    | [mm (in)]     | 1.5 (0.06)           |
| Restraining torque                   | [Nm (lbf-in)] | 0                    |
| Protection class - static            |               | IP56                 |
| Salt spray resistance                | [h]           | 96                   |

| Electrical Specifications                       |                         |            |
|---|-------------------------|------------|
| Available input voltages                        | [Vdc]                   | 12, 24, 36 |
| Input voltage tolerance                         | [%]                     | ± 10       |
| Current draw @ no load/max. load <sup>(1)</sup> | [A]                     |            |
| DE12-17W41                                      |                         | 1.4/3.8    |
| DE12-17W42                                      |                         | 0.7/1.9    |
| DE12-17W44                                      |                         | 1.2/3.8    |
| DE24-17W41                                      |                         | 0.6/1.8    |
| DE24-17W42                                      |                         | 1.4/3.8    |
| DE24-17W44                                      |                         | 0.7/1.9    |
| Cable lengths, standard <sup>(2)</sup>          | [mm (in)]               | 150 (6.0)  |
| Cable diameter                                  | [mm (in)]               | 13 (0.5)   |
| Cable leads cross section                       | [mm <sup>2</sup> (AWG)] | 1 (18)     |

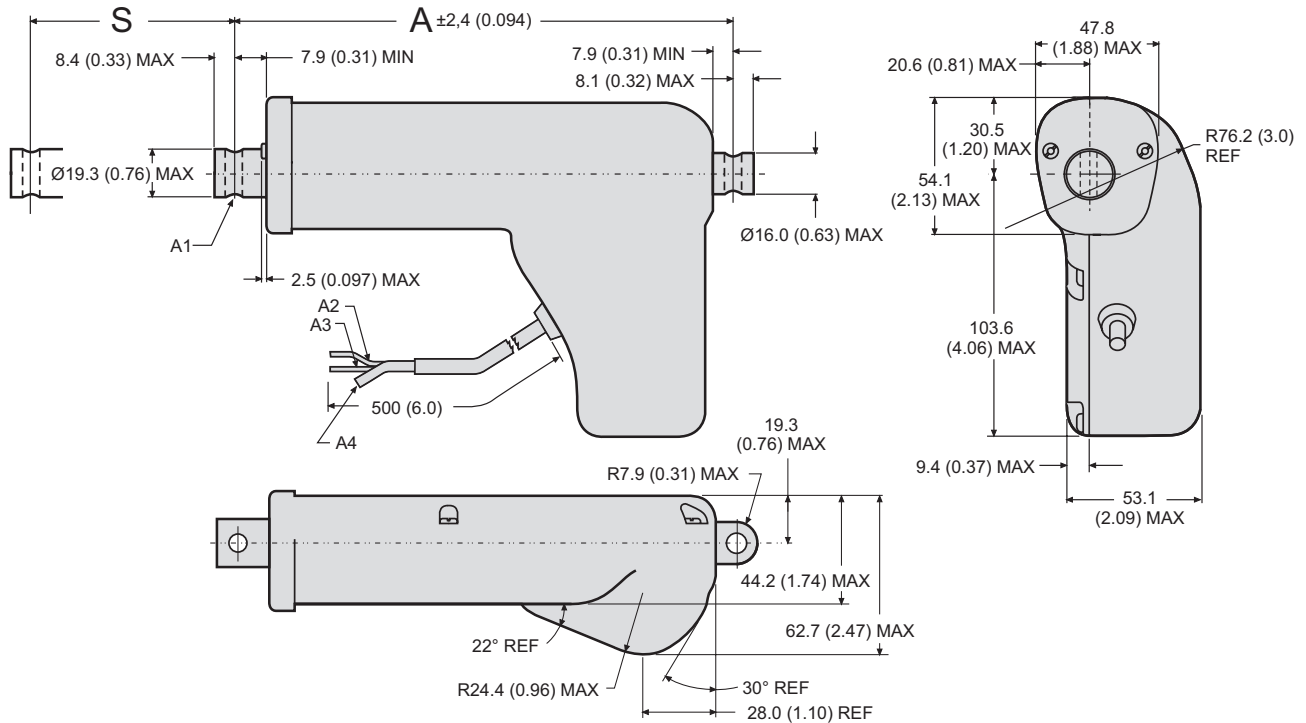
(1) For current draw for 36 Vdc input voltage models - contact customer support.

(2) The same cable is used both for the input voltage and the feedback signals.



# Electrak® 050 – Dimensions

| Dimensions | Projection |
|------------|------------|
| mm [inch]  |            |



Note: see 3D models for all available adapter options

S: stroke (tolerances: 17W41 = ± 3.23 mm (0.127 in), 17W42 = ± 4.25 mm (0.167 in), 17W44 = ± 5.26 mm (0.207 in))

A: retracted length

A1: Shown are Ø 6 mm +0.15/-0 (0.236 in +0.006/-0) mounting cross holes (2 x) in standard position.

A2: red lead

A3: yellow lead

A4: vent tube Ø 3 mm (0.188 in)

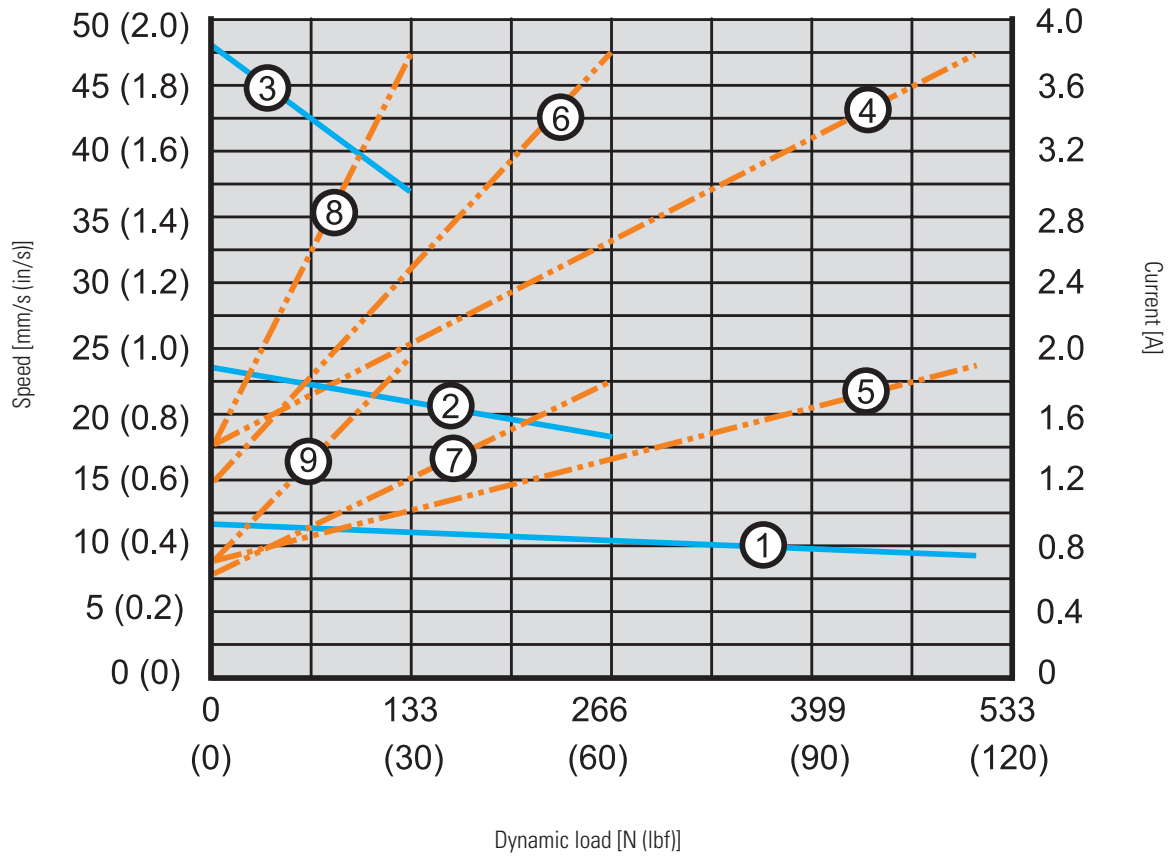
## Stroke, Retracted Length and Weight Relationships

| Ordering stroke (S)                                      | [in]  | 1     | 2     | 3     | 4     | 5     | 6     | 7      | 8      |
|--|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Retracted length (A)                                     | [mm]  | 114.2 | 139.2 | 164.2 | 189.2 | 214.2 | 239.2 | 264.2  | 289.2  |
|  | [in]  | 4.496 | 5.480 | 6.465 | 7.449 | 8.433 | 9.417 | 10.402 | 11.386 |
| Add on length for option<br>0.25 inch fork front adapter | [mm]  | 16.3  |       |       |       |       |       |        |        |
|  | [in]  | 0.64  |       |       |       |       |       |        |        |
| Add on length for<br>option potentiometer                | [mm]  | 31.5  |       |       |       |       |       |        |        |
|  | [in]  | 1.24  |       |       |       |       |       |        |        |
| Weight   | [kg]  | 0.59  | 0.64  | 0.69  | 0.73  | 0.78  | 0.82  | 0.87   | 0.91   |
|  | [lbs] | 1.30  | 1.41  | 1.52  | 1.61  | 1.72  | 1.81  | 1.92   | 2.01   |
| Add on weight for<br>option potentiometer                | [kg]  | 0.10  |       |       |       |       |       |        |        |
|  | [lbs] | 0.22  |       |       |       |       |       |        |        |

\* 8 inch stroke not possible with potentiometer (PO, MP, PF options)

# Electrak 050 – Performance Diagrams

Speed and Current vs. Load



**Speed**

- 1: DExx-17W41 (510 N (112 lbf))
- 2: DExx-17W42 (275 N (60 lbf))
- 3: DExx-17W44 (140 N (30 lbf))

**Current**

- 4: DE12-17W41 (12 Vdc, 510 N (112 lbf))
- 5: DE24-17W41 (24 Vdc, 510 N (112 lbf))
- 6: DE12-17W42 (12 Vdc, 275 N (60 lbf))
- 7: DE24-17W42 (24 Vdc, 275 N (60 lbf))
- 8: DE12-17W44 (12 Vdc, 140 N (30 lbf))
- 9: DE24-17W44 (24 Vdc, 140 N (30 lbf))



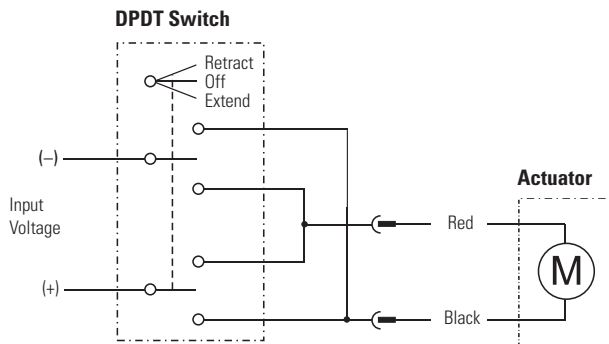
# Electrak® 050 – Ordering Key

| Ordering Key   |               |           |           |  |           |          |          |
|--|---------------|-----------|-----------|--|-----------|----------|----------|
| 1  | 2             | 3         | 4         | 5  | 6         | 7        | 8        |
| <b>DE12-</b>   | <b>17W41-</b> | <b>02</b> | <b>NN</b> | <b>HH</b>  | <b>N-</b> | <b>C</b> | <b>A</b> |
| <p><b>1. Model and input voltage</b><br/>           DE12- = Electrak 050, 12 Vdc<br/>           DE24- = Electrak 050, 24 Vdc<br/>           DE36- = Electrak 050, 36 Vdc</p> <p><b>2. Dynamic load capacity</b><br/>           17W41 - = 510 N (112 lbf)<br/>           17W42 - = 275 N (60 lbf)<br/>           17W44 - = 140 N (30 lbf)</p> <p><b>3. Ordering stroke length</b><br/>           01 = 1 inch (25.4 mm)<br/>           02 = 2 inch (50.8 mm)<br/>           03 = 3 inch (76.2 mm)<br/>           04 = 4 inch (101.6 mm)<br/>           05 = 5 inch (127.0 mm)<br/>           06 = 6 inch (152.4 mm)<br/>           07 = 7 inch (177.8 mm)<br/>           08 = 8 inch (203.2 mm)</p> <p><b>4. Options</b><br/>           NN = no option<br/>           FN = end-off-stroke limits switches<br/>           NP = potentiometer<br/>           FP = end-off-stroke limits switches + potentiometer</p> |               |           |           | <p><b>5. Cross-hole orientation</b><br/>           HH = standard cross-hole orientation in both ends<br/>           MH = cross-hole rotated 90° in both ends</p> <p><b>6. Color of housing</b><br/>           N- = black</p> <p><b>7. Type of connector</b><br/>           C = Packard Electric Pack-Con<br/>           D = no connector (flying leads)</p> <p><b>8. Front adapter</b><br/>           A = cross-hole 0.25 inch<br/>           B = fork 0.25 inch</p> |           |          |          |

# Electrak 050 – Electrical Connections

## Without Option

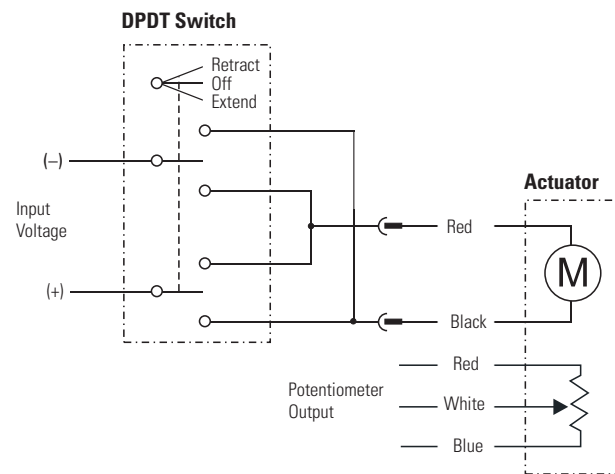
| Actuator supply voltage | [Vdc] |    |
|-------------------------|-------|----|
| DE12                    |       | 12 |
| DE24                    |       | 24 |
| DE36                    |       | 36 |



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

## Option Potentiometer

| Actuator supply voltage          | [Vdc]    |            |
|----------------------------------|----------|------------|
| DE12                             |          | 12         |
| DE24                             |          | 24         |
| DE36                             |          | 36         |
| Potentiometer type               |          | wire-wound |
| Potentiometer max. input voltage | [Vdc]    | 32         |
| Potentiometer max. power         | [W]      | 2          |
| Potentiometer linearity          | [%]      | ± 0.25     |
| Potentiometer output resolution  | [ohm/mm] |            |
| DExx-17W41                       |          | 22.0       |
| DExx-17W42                       |          | 21.9       |
| DExx-17W44                       |          | 21.2       |



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 blue when the actuator is fully retracted.