

# Electrak® LA24

230 and 400 Vac - load up to 6800 N



## Standard Features and Benefits

- Robust, strong and reliable
- Corrosion free aluminium cover tube
- Stainless steel extension tube
- Acme or ball screw models
- Rugged and robust
- Withstands very harsh environments
- Trunnion mounting possible
- Overload clutch for mid and end of stroke protection
- T-slot grooves in the cover tube for magnetic sensors
- Heavy duty motor with thermal switch
- Anti-coast brake for repeatable positioning on all ball screw models. Optional on acme screw models.
- Maintenance free

## General Specifications

Parameter	Electrak LA24
Screw type	acme or ball
Internally restrained	yes
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	cable
Motor connector	no
Certificates	UL, CSA, CE
Options	• potentiometer • manual override

» Ordering Key - see page 79

» Glossary - see page 85

» Electric Wiring Diagram - see page 58

## Performance Specifications

Parameter	Electrak LA24
Maximum load, dynamic / static AA •• -05A65M (acme screw)* AA •• -10A65M (acme screw) AA •• -20A65M (acme screw) AA •• -05B65M (ball screw) AA •• -10B65M (ball screw) AA •• -20B65M (ball screw) AA •• -21B65M (ball screw)	[N] 1100 / 11350 2250 / 11350 2250 / 11350 2250 / 18000 4500 / 18000 4500 / 18000 6800 / 18000
Speed, at no load / at maximum load AA •• -05A65M (acme screw)* AA •• -10A65M (acme screw) AA •• -20A65M (acme screw) AA •• -05B65M (ball screw) AA •• -10B65M (ball screw) AA •• -20B65M (ball screw) AA •• -21B65M (ball screw)	[mm/s] 48 / 38 30 / 18 15 / 12 61 / 37 30 / 19 15 / 12 15 / 11
Available input voltages Single phase Three phase	[Vac] 230** 400
Input frequency 1 × 230 Vac model 3 × 400 Vac model	[Hz] 50/60 50
Standard stroke lengths	[inch] 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600
Operating temperature limits	[°C] -25 – +65
Full load duty cycle @ 25 °C	[%] 25
Maximum on time	[s] 45
End play, maximum	[mm] 1,0
Restraining torque	[Nm] 0
Lead cross section	[mm <sup>2</sup> ] 1,5
Cable length	[mm] 600
Protection class	IP45

\* Not possible with 400 Vac input voltage.

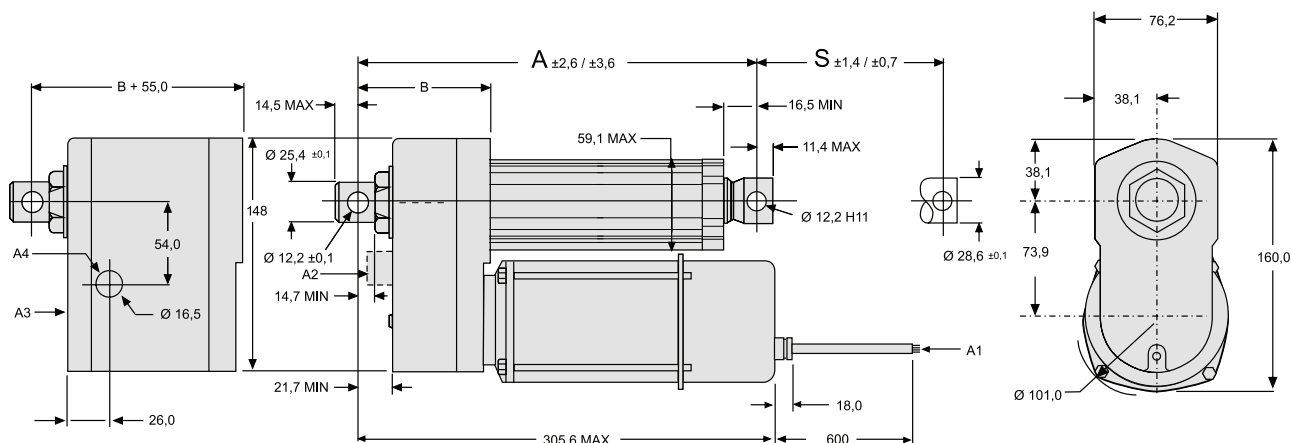
\*\* 10 µF capacitor required to run the actuator, p/n 9200-448-003

## Compatible Controls

Control model	See page
DPDT switch	61

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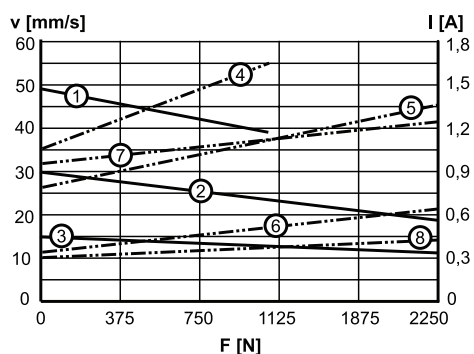
S: stroke, tolerance acme / ball screw  
 A: retracted length, tolerance acme / ball screw  
 A1: cable  
 A2: manual override input (optional)  
 A3: housing dimensions for potentiometer option  
 A4: potentiometer cable output, cable length = min. 500 mm  
 B: 86,1 mm

Stroke (S)	[mm]	50	100	150	200	250	300	350	400	450	500	550	600
Retracted length, acme screw models (A)	[mm]	216,7	266,7	316,7	366,7	416,7	466,7	566,7	616,7	666,7	716,7	766,7	816,7
Retracted length, ball screw models (A)	[mm]	269,6	319,6	369,6	419,6	469,6	519,6	619,6	669,6	719,6	769,6	819,6	869,6
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	55,0	55,0
Weight, acme screw models	[kg]	6,0	6,2	6,4	6,6	6,8	7,0	7,3	7,5	7,7	7,9	8,1	8,3
Weight, ball screw models	[kg]	6,8	7,0	7,2	7,4	7,6	7,8	8,1	8,3	8,5	8,7	8,9	9,1
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	1,3	1,3
Potentiometer resistance change*	[ohm/mm]	39	39	39	39	39	20	20	20	20	20	10	10

\* Potentiometer is optional (NPO, BPO option)

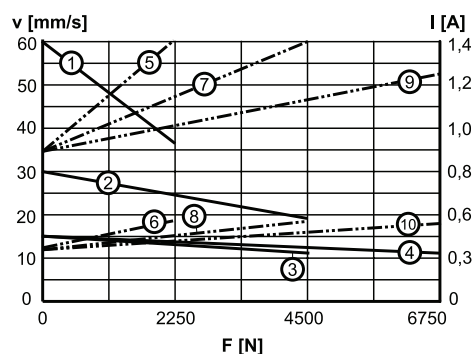
## Performance Diagrams

Acme Screw Models  
Speed and Current vs. Load



V: speed  
 I: current  
 F: load  
 1: speed AA22-05A65M  
 2: speed AA••-10A65M  
 3: speed AA••-20A65M  
 4: current 230 Vac, AA22-05A65M  
 5: current 230 Vac, AA22-10A65M  
 6: current 400 Vac, AA42-10A65M  
 7: current 230 Vac, AA22-20A65M  
 8: current 400 Vac, AA42-20A65M

Ball Screw Models  
Speed and Current vs. Load



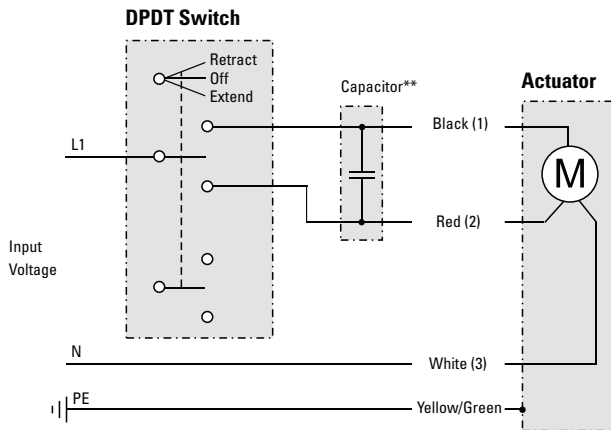
V: speed  
 I: current  
 F: load  
 1: speed AA22-05B65M, AA42-05B65M  
 2: speed AA22-10B65M, AA42-10B65M  
 3: speed AA22-20B65M, AA42-20B65M  
 4: speed AA22-21B65M, AA42-21B65M  
 5: current 230 Vac, AA22-05B65M  
 6: current 400 Vac, AA42-05B65M  
 7: current 230 Vac, AA22-10B65M, AA42-20B65M  
 8: current 400 Vac, AA42-10B65M, AA42-20B65M  
 9: current 230 Vac, AA22-21B65M  
 10: current 400 Vac, AA42-21B65M

# Electrical Wiring Diagrams

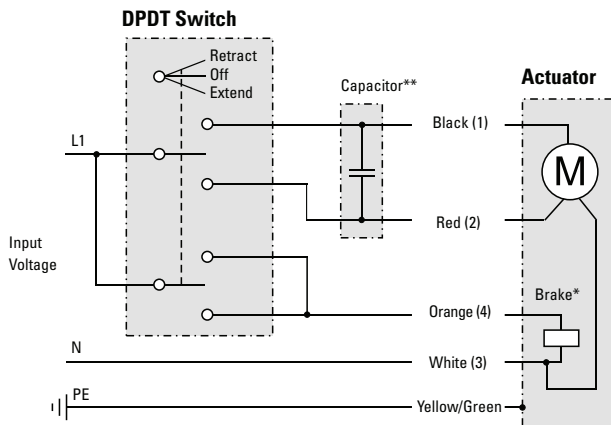
## AC-actuators

### Electrak 5, LA24 and DMA - 1 × 230 Vac

Without anti coast brake\*



With anti coast brake\*



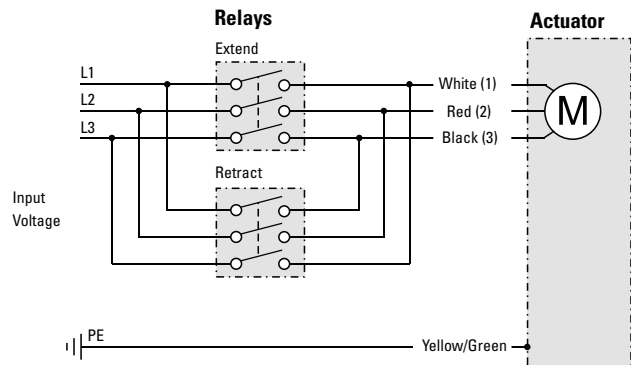
\* Anti coast brake is standard on Electrak 5 / LA24 for ball screw models and optional for acme screw models. On DMA there are no anti coast brake on acme models while ball screw models always are equipped with an anti coast brake.

\*\* 10 µF capacitor required to run the actuator, p/n 9200-448-003.

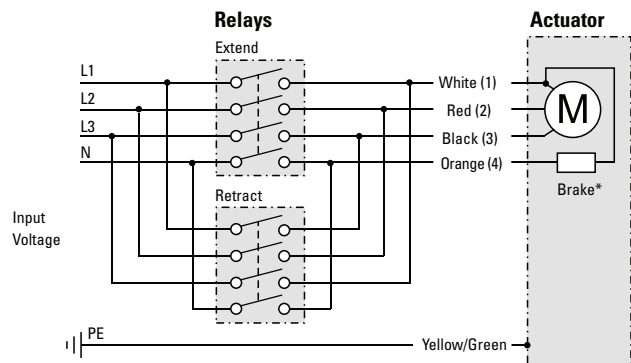
Leads can be either color or number marked. Connect black (1) lead to L1 and white (3) lead to N (neutral) to retract the actuator. Change L1 from lead black (1) to lead red (2) to extend the actuator. If the actuator is equipped with an anti coast brake, release the brake by connecting orange (4) lead lead to L1.

### Electrak 5, LA24 and DMA - 3 × 400 Vac

Without anti coast brake\*



With anti coast brake\*



\* Anti coast brake is optional on Electrak 5 / LA24 on both acme and ball screw models. On DMA there are no anti coast brake on acme models while ball screw models always are equipped with an anti coast brake.

Leads can be either color or number marked. Connect white (1) lead to L1, red (2) lead to L2 and black (3) lead to L3 to extend the actuator. Change the places of white (2) lead and black (3) to retract the actuator. If the actuator is equipped with an anti coast brake, release the brake by connecting orange (4) lead lead to N (neutral).

# Ordering Keys

## Electrak AC-actuators

Electrak LA24														
1	2	3	4	5										
AA22 -	20B65M	05	MF	BPO										
<p><b>1. Input voltage</b> AA22 - = 1 × 230 Vac AA42 - = 3 × 400 Vac</p> <p><b>2. Dynamic load capacity, screw type and maximum speed</b> 05A65M = 1100 N, acme, 54 mm/s<sup>1</sup> 10A65M = 2250 N, acme, 30 mm/s 20A65M = 2250 N, acme, 15 mm/s 05B65M = 2250 N, ball, 61 mm/s 10B65M = 4500 N, ball, 30 mm/s 20B65M = 4500 N, ball, 15 mm/s 21B65M = 6800 N, ball, 15 mm/s</p> <p><b>3. Stroke</b> 05 = 50 mm 10 = 100 mm 15 = 150 mm 20 = 200 mm 25 = 250 mm 30 = 300 mm 35 = 350 mm 40 = 400 mm 45 = 450 mm 50 = 500 mm 55 = 550 mm 60 = 600 mm</p>	<p><b>4. Rear / front adapter hole position<sup>2</sup></b> M0 = both adaptors at 0° (standard position) M1 = rear adaptor at 30°, front at 0° M2 = rear adaptor at 60°, front at 0° M3 = rear adaptor at 90°, front at 0° M4 = rear adaptor at 120°, front at 0° M5 = rear adaptor at 150°, front at 0° MF = rear and front adaptor at 90°</p> <p><b>5. Options<sup>3</sup></b> N = no option B = anti coast brake<sup>3</sup> NPO = potentiometer NHW = manual override<sup>4</sup> BPO = anti coast brake and potentiometer<sup>3</sup> BHW = anti coast brake and manual override<sup>3/4</sup></p> <p><sup>1</sup>05A65M not possible with 400 Vac input voltage. <sup>2</sup>Definition of adapter hole positions.</p> <div style="text-align: center;"> </div>	<p><sup>3</sup>Ball screw versions must always be ordered with an anti coast brake while acme versions can be ordered with or without an anti coast brake. <sup>4</sup>Dimensions for manual override option.</p> <div style="text-align: center;"> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Model</th> <th style="text-align: center;">X</th> <th style="text-align: center;">Y</th> </tr> </thead> <tbody> <tr> <td>05A(B)65M</td> <td style="text-align: center;">49,6</td> <td style="text-align: center;">0,0</td> </tr> <tr> <td>10A(B6)5M</td> <td style="text-align: center;">43,3</td> <td style="text-align: center;">5,2</td> </tr> <tr> <td>20(21)A(B)65M</td> <td style="text-align: center;">38,9</td> <td style="text-align: center;">0,0</td> </tr> </tbody> </table>	Model	X	Y	05A(B)65M	49,6	0,0	10A(B6)5M	43,3	5,2	20(21)A(B)65M	38,9	0,0
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05A(B)65M	49,6	0,0												
10A(B6)5M	43,3	5,2												
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