

Thomson Electrak[®] PPA Electric Linear Actuator

Installation manual

DW110503GB-1914

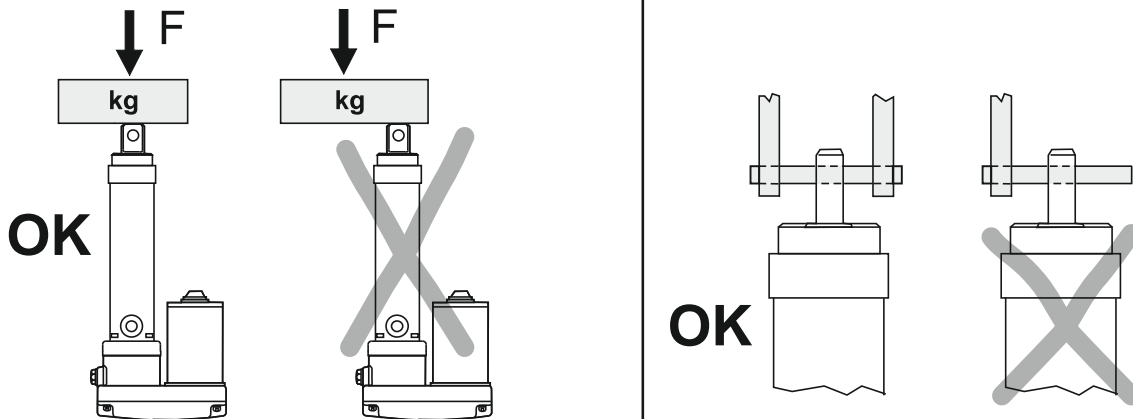


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Linear Motion. Optimized.[™]

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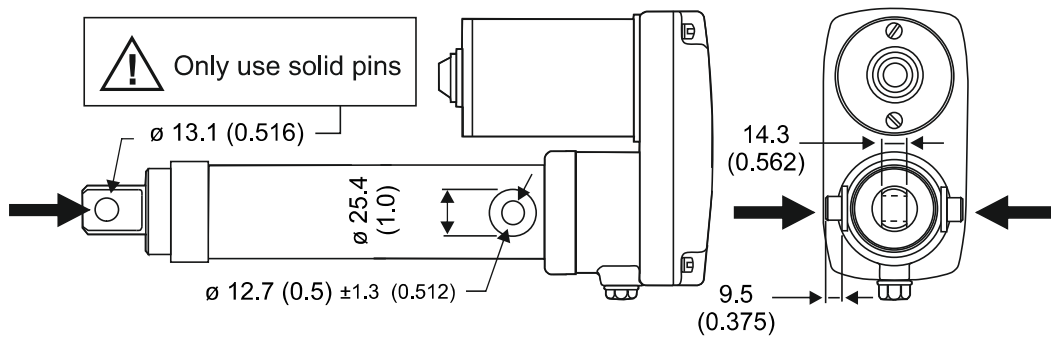
Basic mounting rules



Mounting points

Only install the actuator in these points!

mm (inch)



Temperature limits



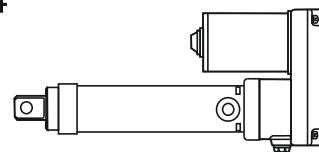
Min. - 25 °C
- 15 °F



Max. + 65 °C
+ 150 °F

Protection degree

IP44

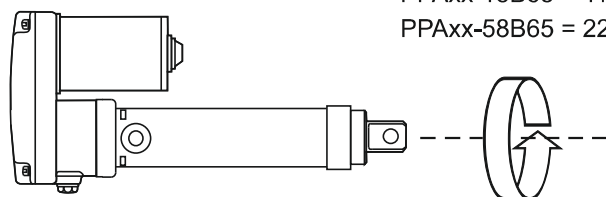


Restraining torque

Torque needed to prevent the extension tube from rotating.

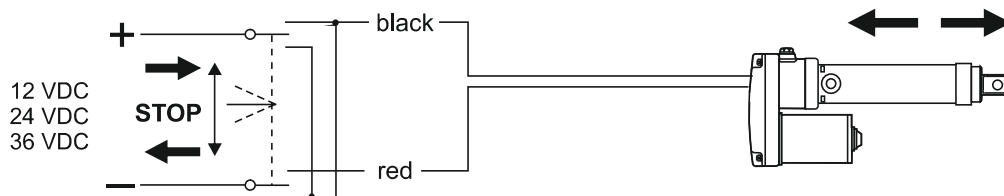
PPAxx-18B65 = 11 Nm (100 lbf-in)

PPAxx-58B65 = 22 Nm (200 lbf-in)

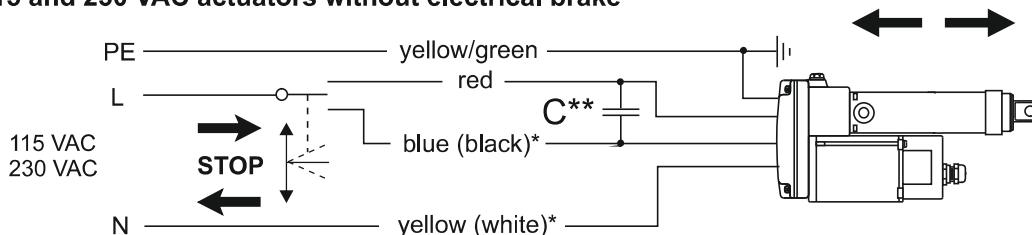


Electrical connections

12, 24 and 36 VDC actuators



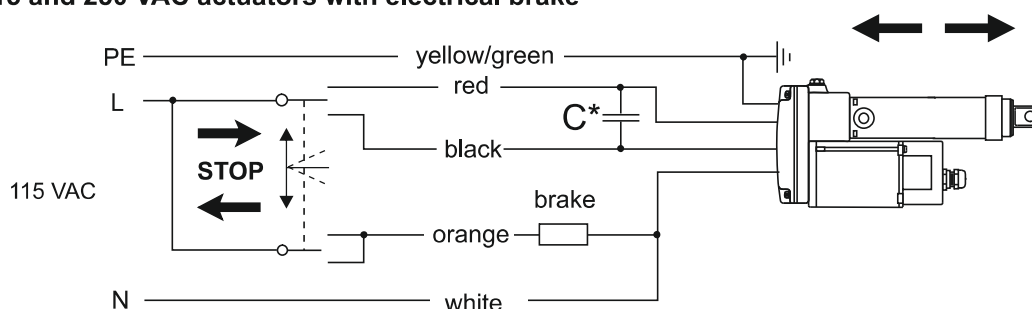
115 and 230 VAC actuators without electrical brake



* Old (new motor).

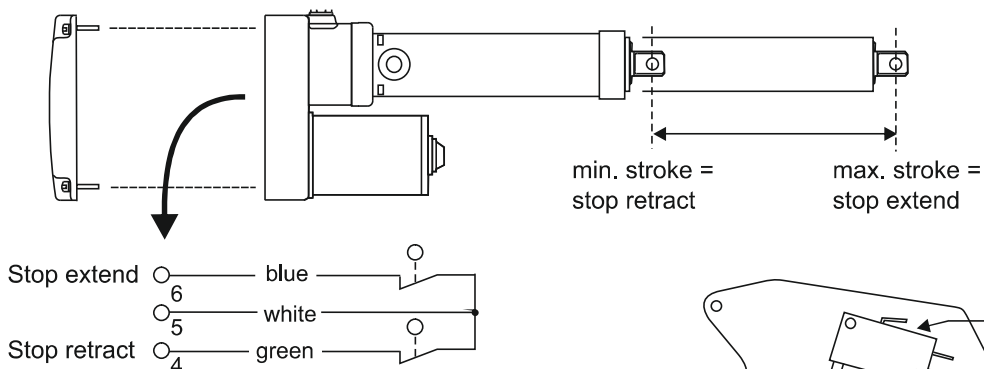
** A capacitor must be installed to between the motor windings to able to run the actuator. 115 VAC actuator = 25 microF, p/n 5704687, 230 VAC actuator = 6 microF, p/n 7825261.

115 and 230 VAC actuators with electrical brake

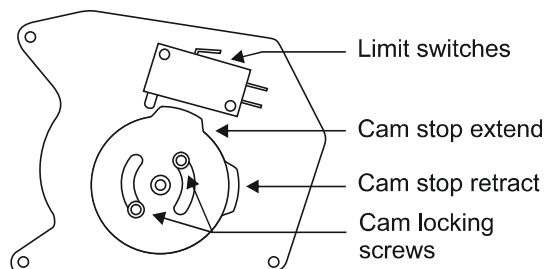


* A capacitor must be installed to between the motor windings to able to run the actuator. 115 VAC actuator = 25 microF, p/n 5704687, 230 VAC actuator = 6 microF, p/n 7825261.

Connection of limit switches (option)

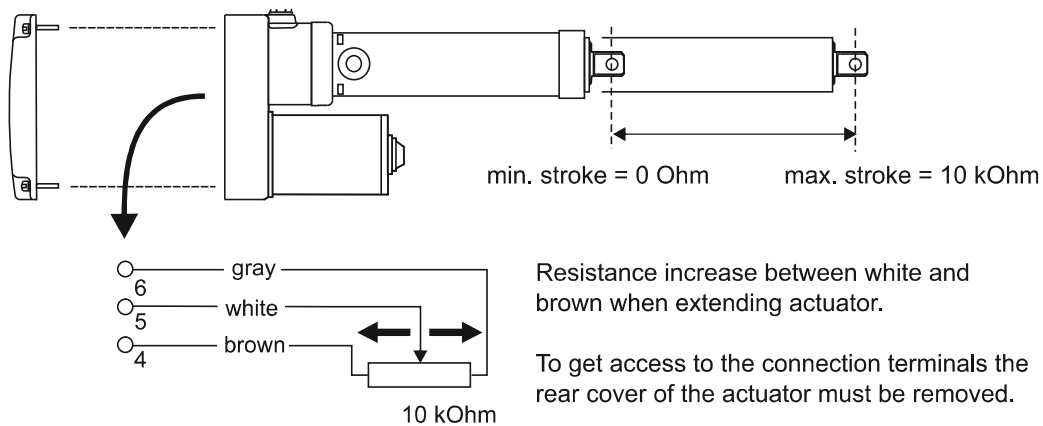


The limit switches are set from factory to actuate the limit switches at the fully extended and fully retracted positions. Do **NOT** rotate the extension tube as that will re-set the setting of the limit switch positions. To get access to the connection terminals the rear cover of the actuator must be removed.

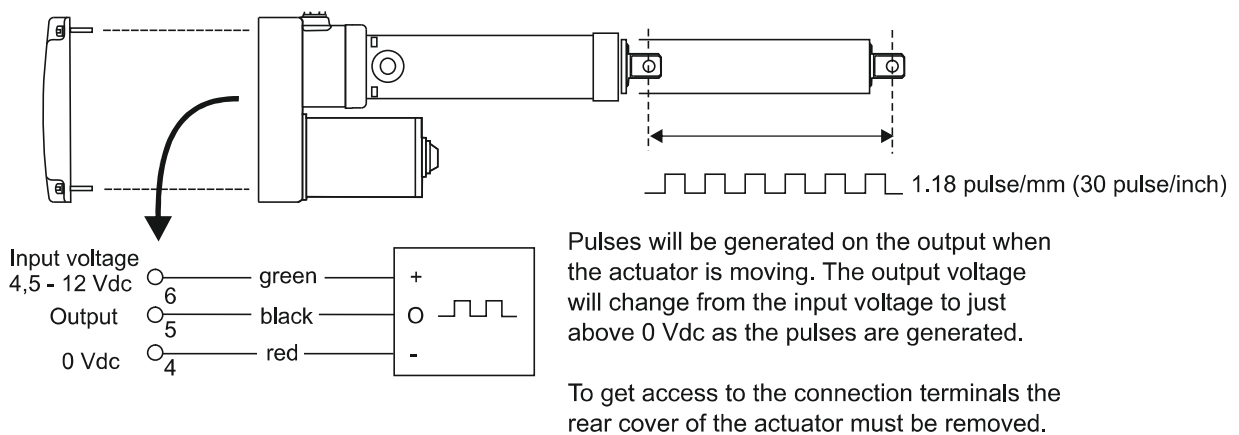


Electrical connections

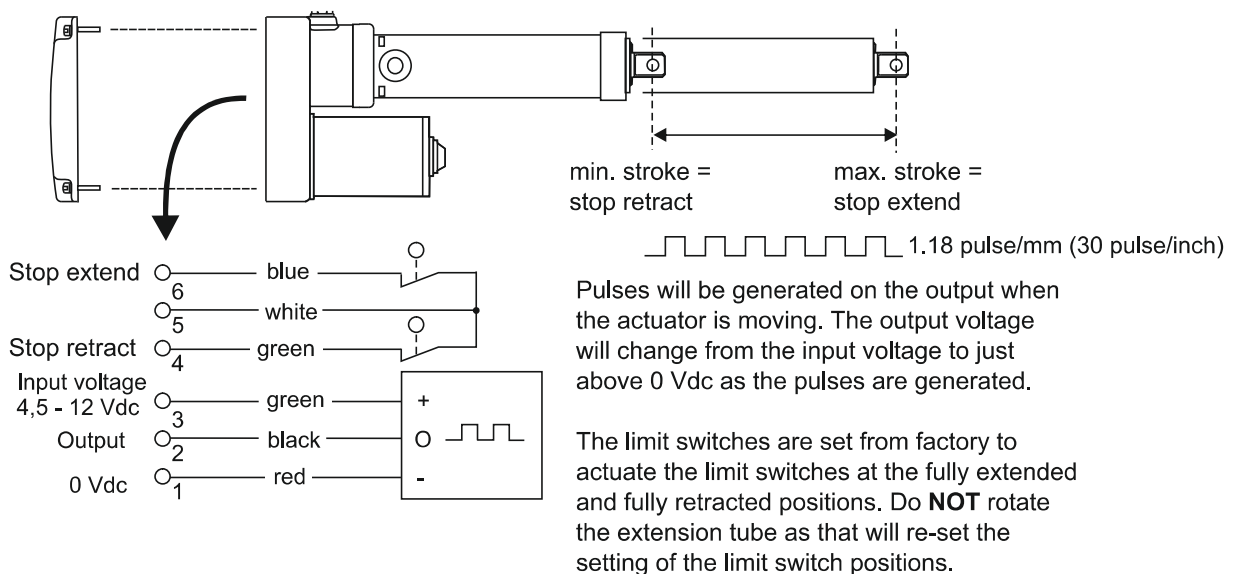
Connection of potentiometer (option)



Connection of hall effect sensor (option)



Connection of limit switches + hall effect sensor (option)

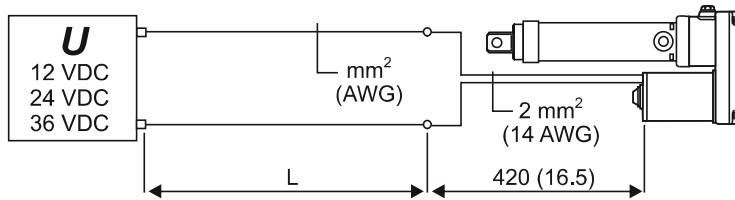


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Wire cross section

12, 24 and 36 VDC actuators

mm (inch)



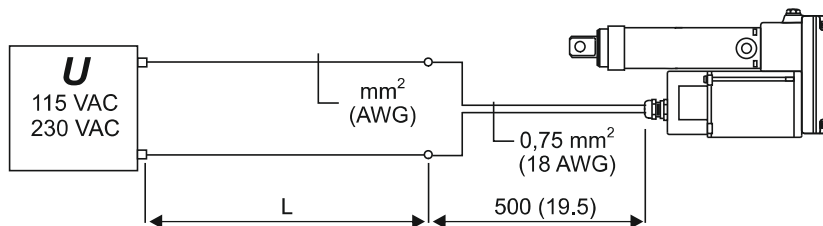
| 12 VDC | | | |
|---------|-----------------------|---------------------|----------------------|
| Current | mm ² (AWG) | | |
| [A] | L max. = 3000 (120) | L max. = 6000 (240) | L max. = 10000 (390) |
| 0 – 15 | 1.5 (15) | 2.5 (13) | 4 (11) |
| 16 – 20 | 2.5 (13) | 4 (11) | 6 (9) |
| 21 – 28 | 4 (11) | 6 (9) | 10 (7) |

| 24 / 36 VDC | |
|-------------|-----------------------|
| Current | mm ² (AWG) |
| [A] | L max. = 10000 (390) |
| 0 – 10 | 1.5 (15) |
| 11 – 15 | 2.5 (13) |

The tables are based on ambient temperature = 30 °C (86 °F) or less.

115 and 230 VAC actuators

mm (inch)



| 115 / 230 VAC | |
|---------------|-----------------------|
| Current | mm ² (AWG) |
| [A] | L max. = 20000 (790) |
| 0 – 2 | 1.5 (15) |

Always install fuse and / or thermal breaker between motor and power supply to protect actuator, wiring and other items.

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Technical data

| | PPA 12, 24, 36 Vdc | PPA 110, 230 Vac |
|--|---|---|
| Motor | DC-motor | AC-motor with auto reset thermal switch |
| Supply voltage | see label on actuator | |
| Max. current | see label on actuator | |
| Max. static load @ fully retracted | 13 350 N (3000 lbs) | |
| End play max. | 1 mm (0.04 inch) | |
| Duty cycle | 30 % @ 25 °C (77 °F) | |
| Restraining torque PPAxx-18B65 PPAxx-58B65 | 11 Nm (100 lbf-in) 22 Nm(200 lbf-in) | |
| Ambient temperature | – 25 to + 65 °C (– 15 to + 150 °F) | |
| Lubrication | for life | |
| Protection class | IP54 | IP22 |
| Slip clutch | yes | |
| Brake options* | <ul style="list-style-type: none"> • No brake option (code N–) • Anti coast brake (code SB) • Electrical brake (code EB) | |
| Options** | <ul style="list-style-type: none"> • No option (code XX) • Limit switches (code LS) • Potentiometer feedback (code PO) • Hall effect sensor feedback (code HS) • Hall effect sensor feedback + limit swiches (code HL) | |

* See position 15 and 16 on the actuator's type designation label.

** See position 17 and 18 on the actuator's type designation label.

CAUTION!

Always turn the power off before working on the actuator.

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Specifications are subject to change without notice.

It is the responsibility of the product user to determine the suitability of this product for a specific application.

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