

Thomson Electrak[®] PPA Electric Linear Actuator

Installation manual

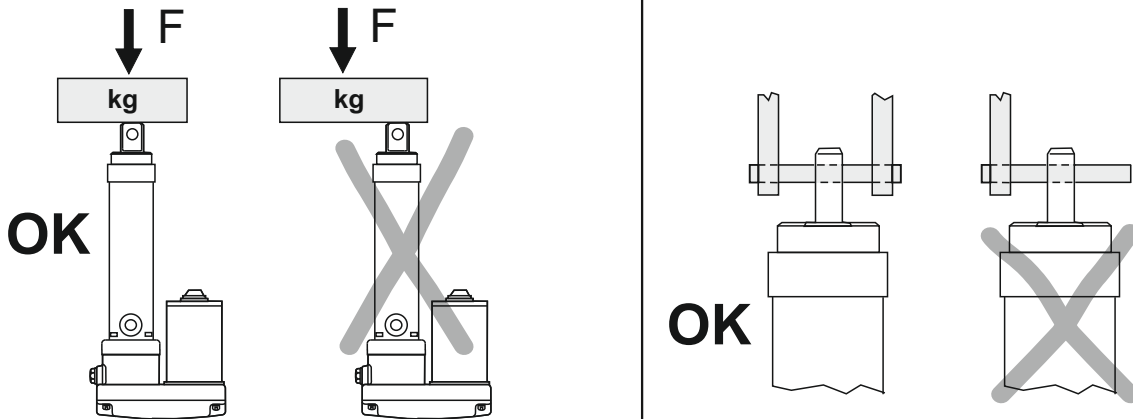
DW110503GB-1914



 THOMSON[®]
Linear Motion. Optimized.[™]

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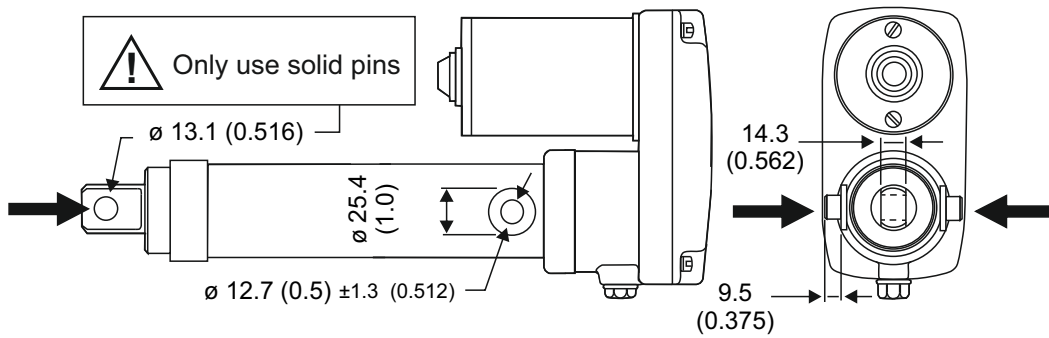
Basic mounting rules



Mounting points

Only install the actuator in these points!

mm (inch)



Temperature limits



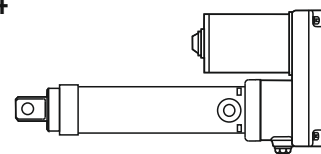
Min. - 25 °C
- 15 °F



Max. + 65 °C
+ 150 °F

Protection degree

IP44

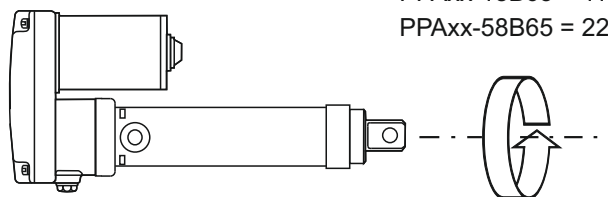


Restraining torque

Torque needed to prevent the extension tube from rotating.

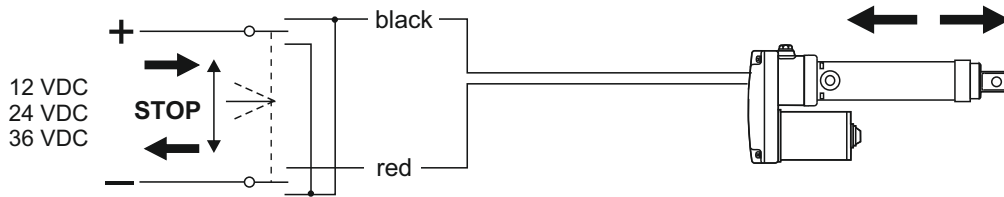
PPAxx-18B65 = 11 Nm (100 lbf-in)

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

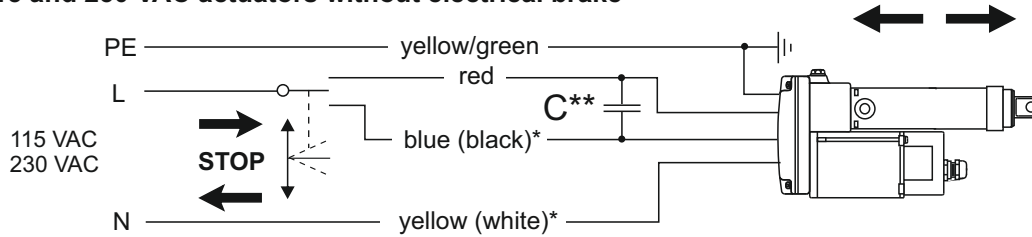


Electrical connections

12, 24 and 36 VDC actuators



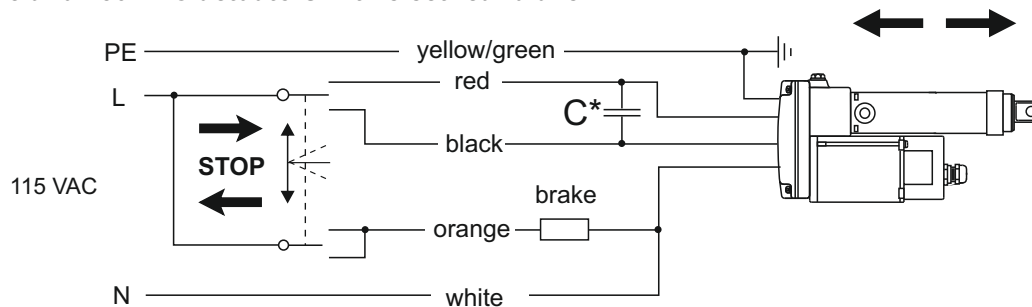
115 and 230 VAC actuators without electrical brake



* Old (new motor).

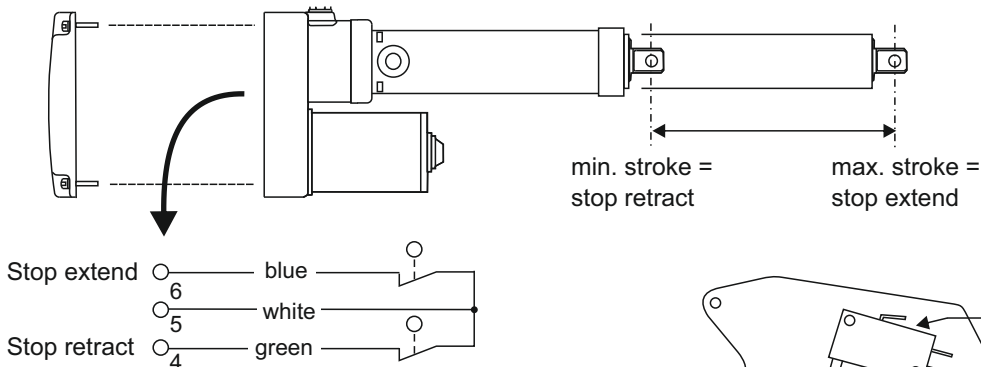
** A capacitor must be installed to between the motor windings to able to run the actuator. 115 VAC actuator = 25 microF, p/n 5704687, 230 VAC actuator = 6 microF, p/n 7825261.

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.

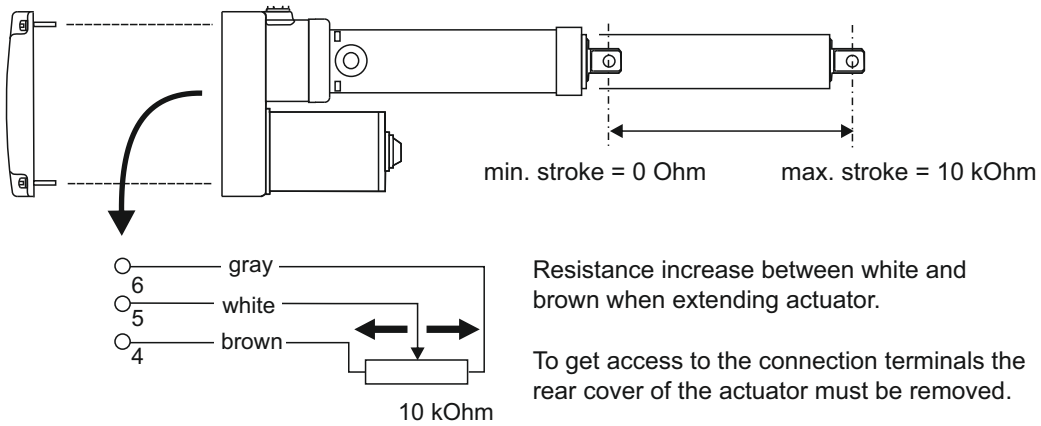
Connection of limit switches (option)



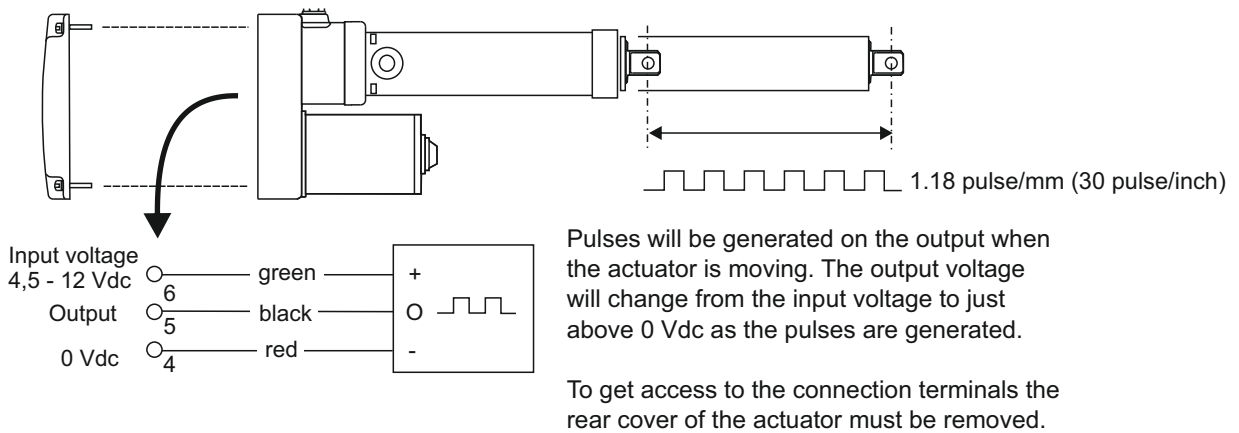
The limit switches are set from factory to actuate the limit switches at the fully extended and fully retracted positions. Do **NOT** rotate the extension tube as that will re-set the setting of the limit switch positions. To get access to the connection terminals the rear cover of the actuator must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

Electrical connections

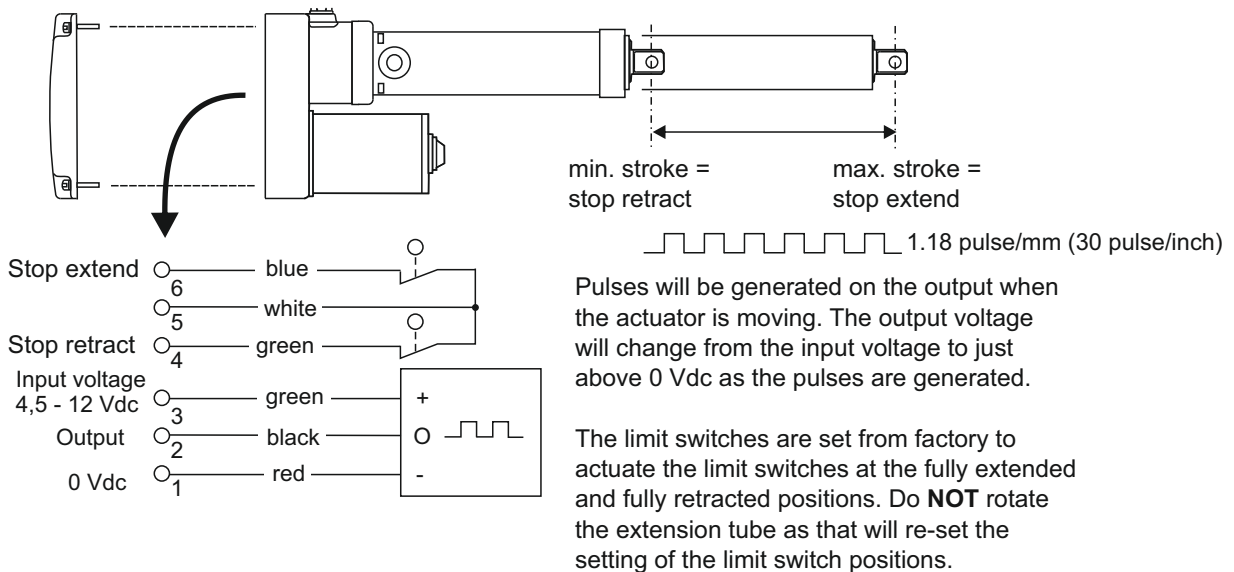
Connection of potentiometer (option)



Connection of hall effect sensor (option)



Connection of limit switches + hall effect sensor (option)

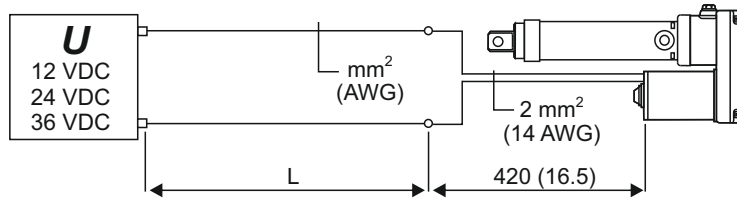


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Wire cross section

12, 24 and 36 VDC actuators

mm (inch)



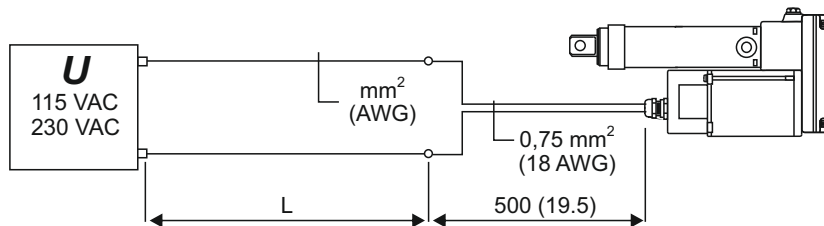
12 VDC			
Current	mm ² (AWG)		
[A]	L max. = 3000 (120)	L max. = 6000 (240)	L max. = 10000 (390)
0 – 15	1.5 (15)	2.5 (13)	4 (11)
16 – 20	2.5 (13)	4 (11)	6 (9)
21 – 28	4 (11)	6 (9)	10 (7)

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.

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.