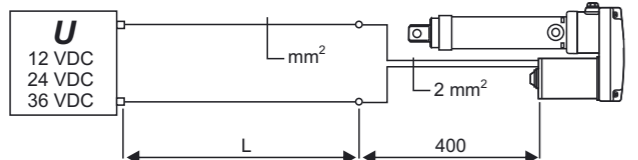
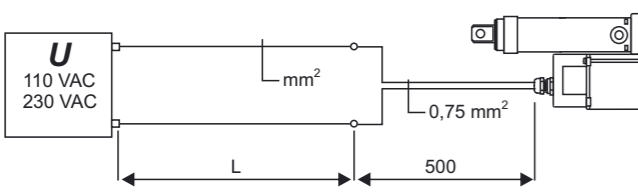


## Wire cross section



12 VDC				24 VDC			36 VDC	
Current [A]	mm <sup>2</sup>			Current [A]	mm <sup>2</sup>		Current [A]	mm <sup>2</sup>
	L = 3 m	L = 6 m	L = 10 m		L = 6 m	L = 10 m		L = 10 m
0 – 15	1,5	2,5	4	0 – 10	1,5	1,5	0 – 12	1,5
16 – 20	2,5	4	6	11 – 15	2,5	2,5		
21 – 28	4	6	10					

The tables are based on ambient temperature = 30 °C or less.

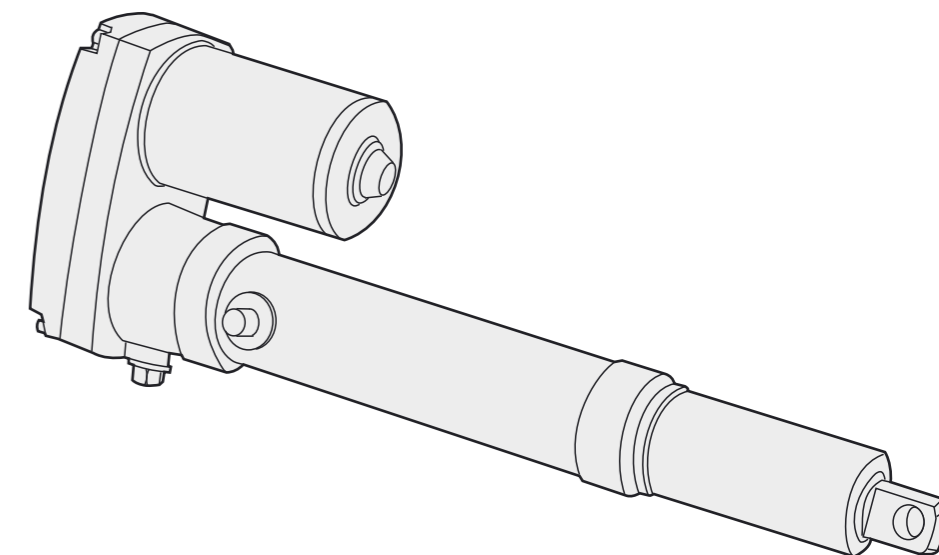


110 / 230 VAC		
Current [A]	L [m]	mm <sup>2</sup>
0 – 2	0 – 20	1,5

## 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	
End play max.	1 mm	
Duty cycle	30 % @ 20° C	
Restraining torque	5 Nm	
Ambient temperature	– 25 to + 65° C	
Lubrication	for life	
Protection class	IP44	IP44
Slip clutch	yes	
Brake options*	<ul style="list-style-type: none"> <li>• No brake option (code N–)</li> <li>• Anti coast brake (code SB)</li> <li>• Electrical brake (code EB)</li> </ul>	
Options**	<ul style="list-style-type: none"> <li>• No option (code XX)</li> <li>• Limit switches (code LS)</li> <li>• Potentiometer feedback (code PO)</li> <li>• Hall effect sensor feedback (code HS)</li> <li>• Hall effect sensor feedback + limit switches (code HL)</li> </ul>	

## Installation manual for linear actuator Electrak PPA



12 VDC  
24 VDC  
36 VDC  
110 VAC  
230 VAC

**CAUTION!**  
Always turn the power off before working on the actuator.

\* See position 15 and 16 on the actuator's type designation label, e.g. PPA22–58B65–06SBXXX

\*\* See position 17 and 18 on the actuator's type designation label, e.g. PPA22–58B65–06SBLSX

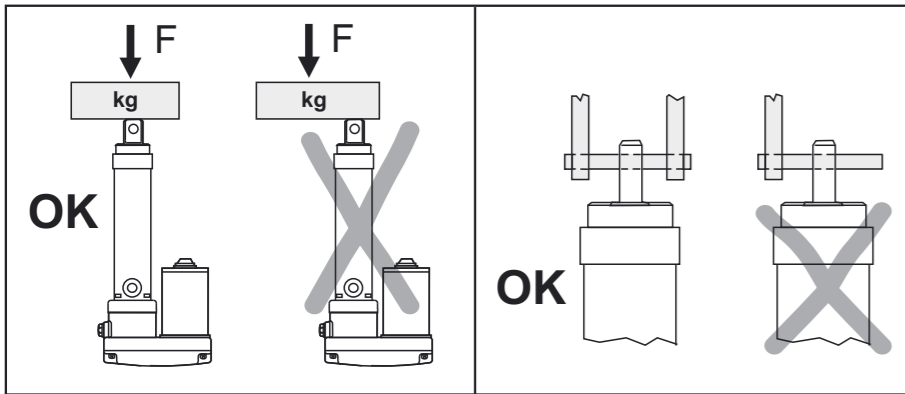
**Always install fuse and / or thermal breaker between motor and power supply to protect actuator, wiring and other items.**

**TOLLO LINEAR AB**

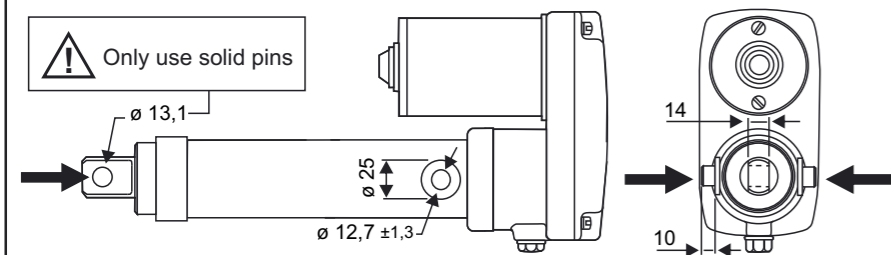
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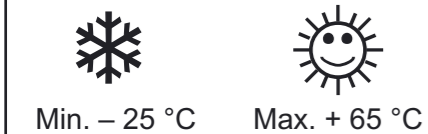
## Basic mounting rules



Only install the actuator in these points!

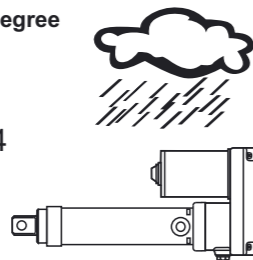


## Temperature limits



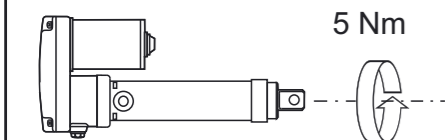
## Protection degree

IP44

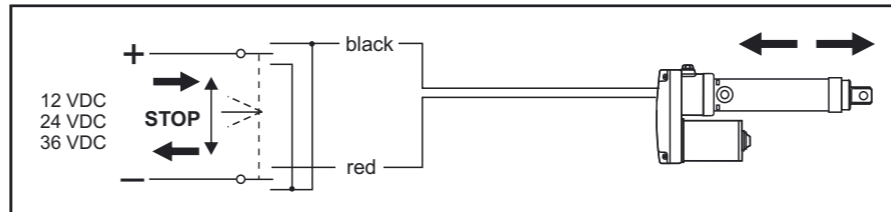


## Restraining torque

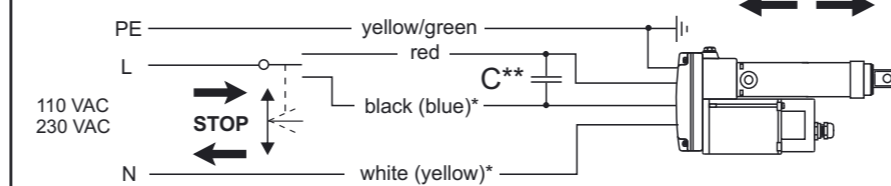
Torque needed to prevent the extension tube from rotating.



## Connection of actuator motor



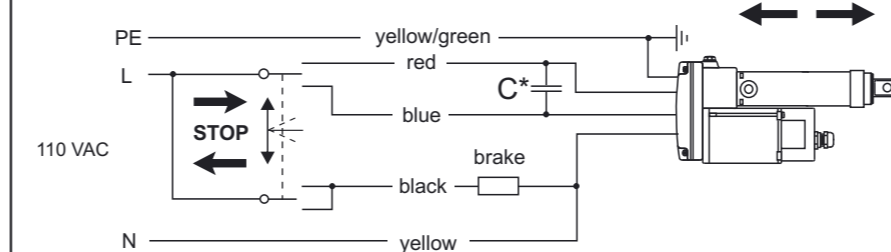
### Without electrical brake



\* Old(new motor).

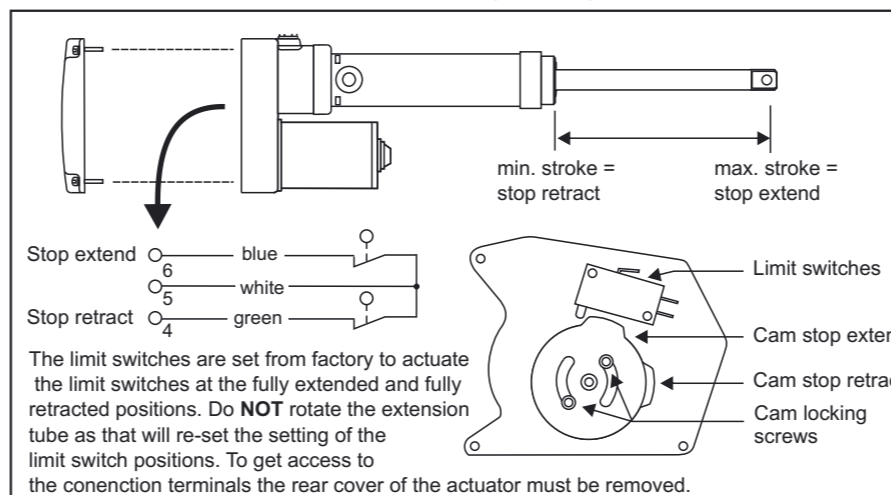
\*\*Capacitor comes installed in the actuator from factory: 110 VAC = 25  $\mu$ F, 230 VAC = 6  $\mu$ F

### With electrical brake

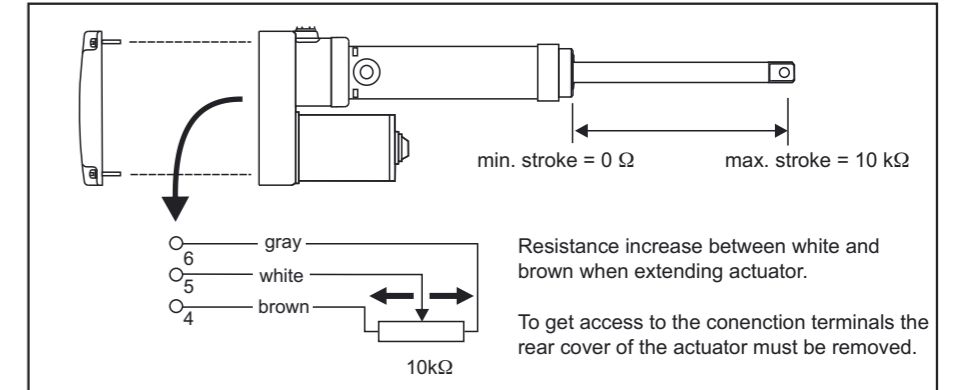


\*Capacitor comes installed in the actuator from factory: 110 VAC = 25  $\mu$ F

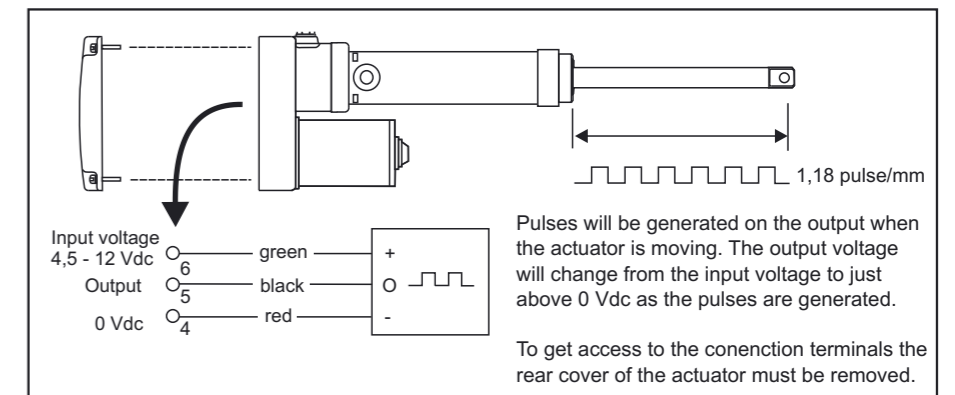
## Connection of limit switches (option\*\*)



## Connection of potentiometer (option\*\*)



## Connection of hall effect sensor (option\*\*)



## Connection of limit switches + hall effect sensor (option\*\*)

