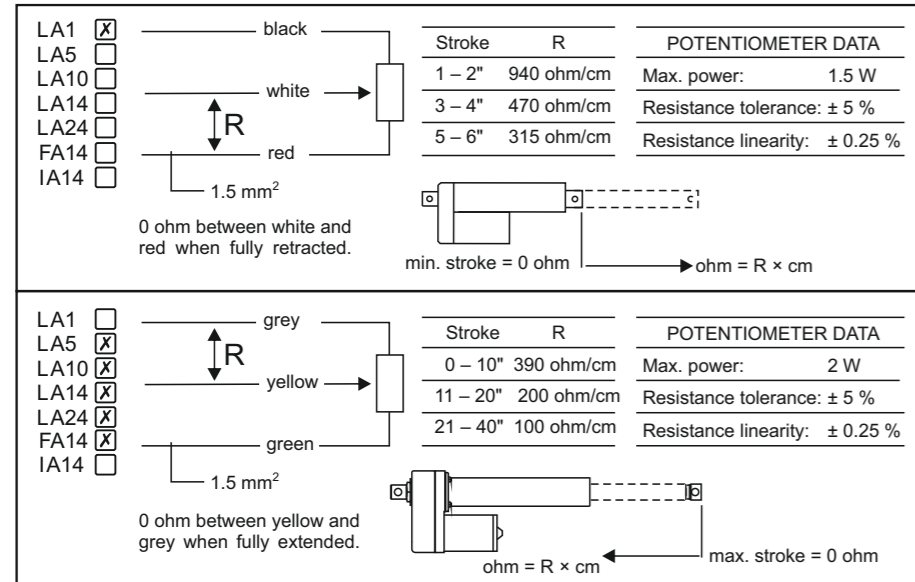
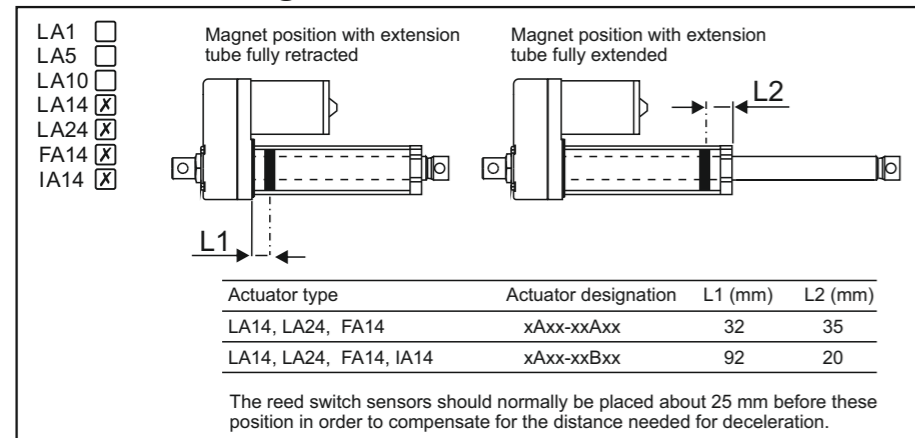


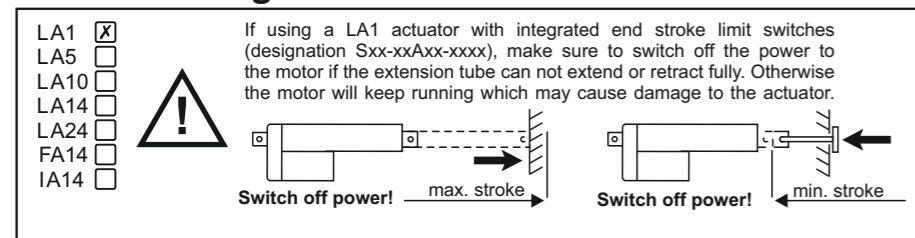
Connection of potentiometer (optional)



Position of magnet for reed switch sensors



LA1 with integrated end stroke limit switches



CAUTION!

Always turn power off before working on the actuator or the wiring.

Technical data

	LA1	LA5	LA10	LA14	LA24	FA14	IA14	
DC-motor with automatic reset thermal switch *								
12 VDC (10 – 16 V) **	yes	–	yes	yes	–	–	–	
24 VDC (20 – 32 V) **	yes	–	yes	yes	–	–	–	
36 VDC (30 – 40 V) **	yes	–	yes	yes	–	–	–	
48 VDC **	–	–	yes	–	–	–	–	
90 VDC ***	–	–	yes	–	–	–	–	
Only accepts battery or full wave smoothed rectified voltage	yes	–	–	–	–	–	–	
Accepts battery, full wave smoothed or unsmoothed rectified voltage	–	yes	yes	yes	–	–	–	
AC-motor with automatic reset thermal switch *								
1 115 VAC (102 – 130 V) **	–	yes	–	–	yes	–	–	
1 230 VAC (212 – 240 V) **	–	yes	–	–	yes	–	–	
3 400 VAC (360 – 420 V) **	–	–	–	–	yes	–	–	
Capacitor necessary	–	yes	–	–	yes	–	–	
Max. current (A)	see actuator label						–	–
Duty cycle @ full load 25°C (%)	25	25	25	25	25	–	–	
Max. on time (s)	****	45	****	****	45	–	–	
Restraining torque (Nm)	2.3	11.3	11.3	0	0	0	0	
End play max. (mm)	0.9	1	1	1	1	1	1	
Ambient temperature (°C)	– 25 – + 65							
Lubrication	for life							
Anti backdriving mechanism	yes							
Slip clutch	–	yes (set to 1.2 – 1.5 × max. dynamic load)				–	–	
Protection class	IP65	–	IP65	IP65	–	–	–	
End stroke limit switches	yes	–	–	–	–	–	–	
Options								
Feedback potentiometer	yes						–	
Electrically released brake	–	yes	–	–	yes	–	–	
Reed switch sensors	–	–	–	yes				
Pins	yes							
Pin holders	–	–	–	yes			–	
Trunnion	–	–	–	yes			–	
Trunnion holders	–	–	–	yes			–	

* Do not use the thermal switch as overload protection
 ** CE complaint model
 *** Non CE compliant model
 **** One full cycle at full load

We recommend to always install fuse or thermal breaker between motor and power supply to protect actuator, wiring and other items.

Tollo Linear AB

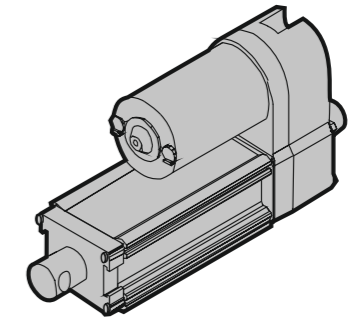
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 Tel. +46 (0)44-5902400, Fax +46 (0)44-244085

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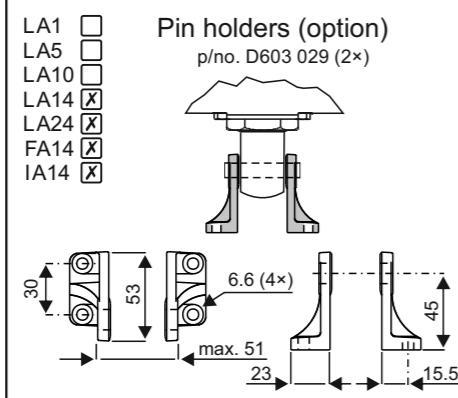
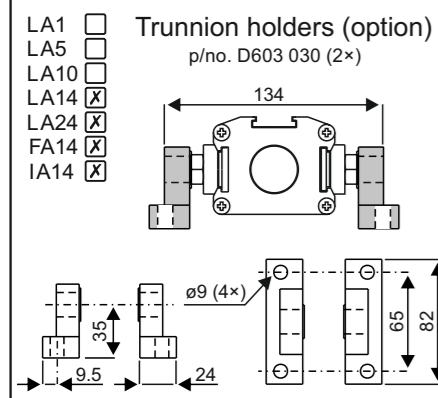
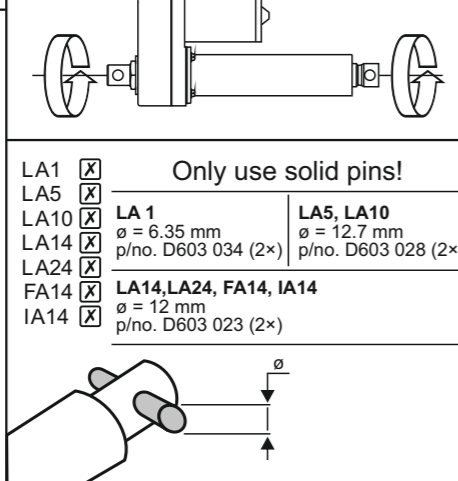
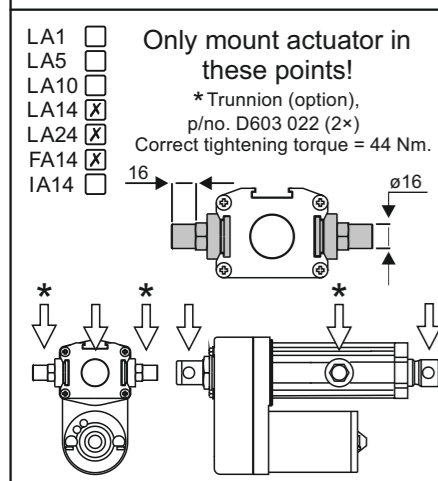
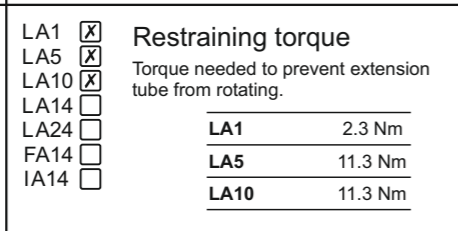
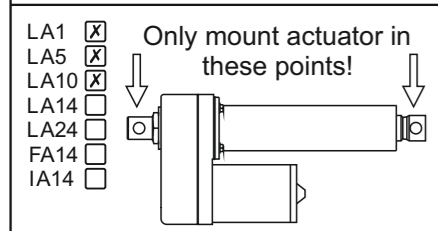
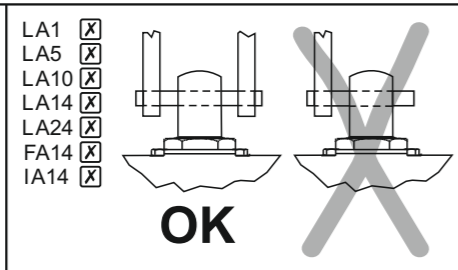
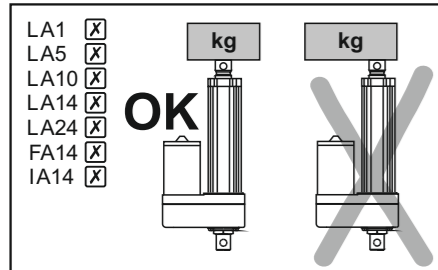
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Installation manual for LA1, LA5, LA10, LA14, LA24, FA14 and IA14 actuators

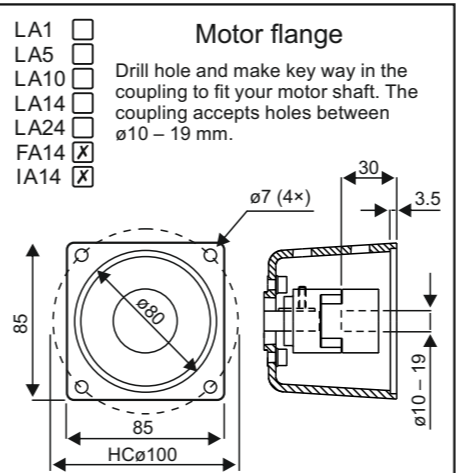
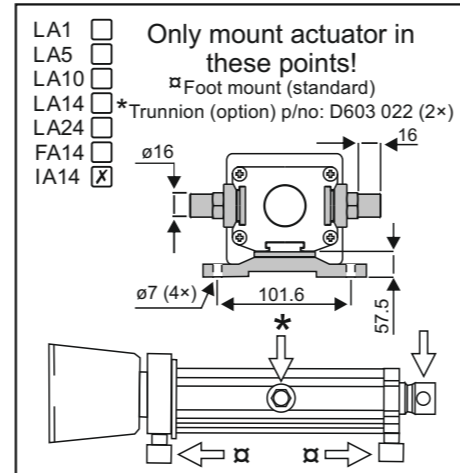


LA1 12 VDC 24 VDC 36 VDC	LA14 12 VDC 24 VDC 36 VDC
LA10 12 VDC 24 VDC 36 VDC 48 VDC 90 VDC	LA24 115 VAC 230 VAC 400 VAC
LA5 115 VAC 230 VAC	FA14, IA14 115 VAC 230 VAC

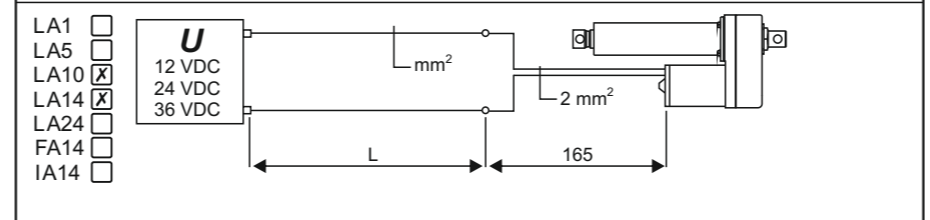
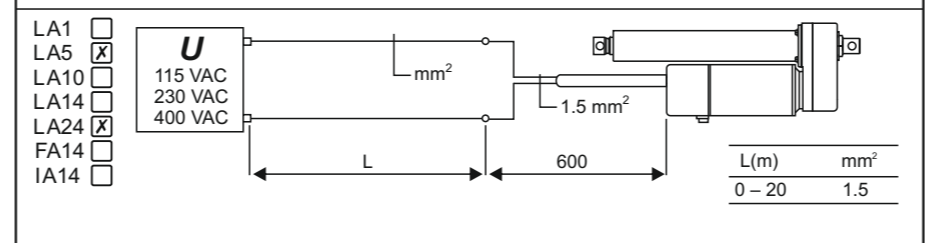
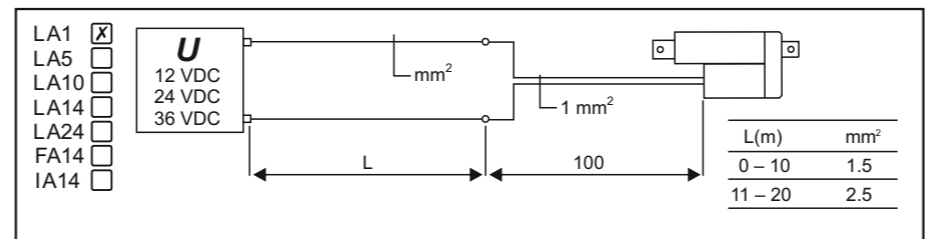
Basic mounting rules



Basic mounting rules



Wire cross section



12 VDC				24 VDC			36 VDC	
Current (A)	mm ²	L = 3 m	L = 6 m	L = 10 m	Current (A)	mm ²	L = 6 m	L = 10 m
0 - 15	1.5	2.5	4		0 - 10	1.5	1.5	
16 - 20	2.5	4	6		11 - 15	2.5	2.5	
21 - 28	4	6	10					
29 - 34	6	6	10					

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

Connection of motor

