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

Technical data

**DC-motor with automatic reset thermal switch**
- 12 VDC (10 – 16 V) **
- 24 VDC (20 – 32 V) **
- 36 VDC (20 – 40 V) **
- 48 VDC **
- 80 VDC **

**AC-motor with automatic reset thermal switch**
- 115 VAC (102 – 130 V) **
- 230 VAC (210 – 240 V) **
- 380 VAC (360 – 420 V) **

Only accepts battery or full wave smoothed rectified voltage

Accepts battery, full wave smoothed or unsmoothed rectified voltage

**Lubrication**
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes

**Protection class**
- IP65
- IP65
- IP65
- Yes (set to 1.2 – 1.5 × max. dynamic load)

**Duty cycle**
- 25 – 65

**Ambient temperature (°C)**
- 25 – 65

**Max. rating**
- 1.5 W
- 2 W
- 1.5 W
- 1.5 W
- 1.5 W
- 1.5 W
- 1.5 W
- 1.5 W
- 1.5 W
- 1.5 W

**Max. current (A)**
- 12 VDC (10 – 16 V) **
- 24 VDC (20 – 32 V) **
- 36 VDC (20 – 40 V) **
- 48 VDC **
- 80 VDC **

**Max. on time (s)**
- 45
- 45
- 45
- 45
- 45

**Max. moment (A)**
- Yes
- Yes
- Yes
- Yes
- Yes

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

**Position of magnet for reed switch sensors**

<table>
<thead>
<tr>
<th>Actuator type</th>
<th>Actuator designation</th>
<th>L1 (mm)</th>
<th>L2 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA14, LA24, FA14</td>
<td>xxAxx</td>
<td>32</td>
<td>35</td>
</tr>
<tr>
<td>LA14, LA24, FA14, IA14</td>
<td>xxBxx</td>
<td>92</td>
<td>20</td>
</tr>
</tbody>
</table>

**Connection of potentiometer (optional)**

### LA1 with integrated end stroke limit switches

- Using a LA1 actuator with integrated end stroke limit switches (designation Sxx-xxAxx-xxxx), make sure to switch off the power to the motor if the extension tube can not extend or retract fully. Otherwise the motor will keep running which may cause damage to the actuator.

**POTENTIOMETER DATA**

- Resistance linearity: ± 0.25 %
- Resistance tolerance: ± 5 %
- Max. power: 2 W

**L1**

**L2**

**LA10, GX DC**

<table>
<thead>
<tr>
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<th>Actuator designation</th>
<th>L1 (mm)</th>
<th>L2 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA10, GA14, GA14</td>
<td>XXBxx</td>
<td>92</td>
<td>20</td>
</tr>
</tbody>
</table>

**LA14**

<table>
<thead>
<tr>
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<th>Actuator designation</th>
<th>L1 (mm)</th>
<th>L2 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA14, LA24, FA14</td>
<td>xxAxx</td>
<td>32</td>
<td>35</td>
</tr>
</tbody>
</table>

**Options**

- Yes
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes

For more information, visit www.thomsonlinear.com

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12 VDC

24 VDC

36 VDC

115 VAC

230 VAC

400 VAC

115 VAC

230 VAC

24 VDC

36 VDC

48 VDC

90 VDC

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

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Basic mounting rules

- Only mount actuator in these points!
- Correct tightening torque = 44 Nm.
- Trunnion holders (option), p/no. D603 030 (2×)
- LA10, LA14, IA14
- ø = 12 mm
- Only mount actuator in these points!
- Restraining torque
- Torque needed to prevent extension hole from rotating.
- LA10, LA14, IA14
- ø = 6.35 mm
- LA10, LA14, IA14
- ø = 12 mm
- LA10, LA14

Wire cross section

- Only use solid pins!
- 12 VDC
- 36 VDC
- 230 VAC
- 115 VAC
- L = 6 m
- L = 10 m

Connection of motor

- Motor flange
- Drill hole and make key way in the coupling to fit your motor shaft. The coupling accepts holes between 11 – 19 mm.

- Connection: 115 Vac supply without brake (A22-xxxx-xxxxBxxxx, AA22-xxxxxMxxxxBxxxx)
- 230 and 115 Vac supply with brake (A22-xxxx-xxxxBxxxx, AA22-xxxxxMxxxxBxxxx)
- 230 and 115 Vac supply without brake (A22-xxxx-xxxxNxxxx, AA22-xxxxxMxxxxNxxxx)
- 3 x 400 Vac supply without brake (A42-xxxxxxxMaxxxx, AA42-xxxxxxxMaxxxx)

- PE
- white
- yellow/green
- red
- orange (4)
- black (1)
- white (3)
- yellow/green
- red (2)
- red (2)
- yellow/green
- white
- black
- red
- white