Actuator LA14
IC Basic
Connection diagram
Connection diagram

FOR MOUNTING INSTRUCTIONS AND GUIDANCE IN USAGE, PLEASE SEE THE RELEVANT USER'S MANUALS

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Connection diagram

14xxxxxxxxxxx3X1X=XX0xxxxxxxxxxx

BROWN
BLUE
BLACK
RED
VIOLET
WHITE

Please be aware that if the power supply is not properly connected, you might damage the actuator!
# I/O Specifications

<table>
<thead>
<tr>
<th>Input/Output</th>
<th>Specification</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Easy to use interface with integrated power electronics (H-bridge). The version with “IC option” cannot be operated with PWM (power supply). See connection diagram, figure above.</td>
<td></td>
</tr>
<tr>
<td><strong>Brown</strong></td>
<td>12-24VDC + (VCC) Connect Brown to positive 12V ± 20% max. 5A depending on load 24V ± 10% max. 2.5A depending on load</td>
<td>Notes: Do not change the power supply polarity on the brown and blue wires! Power supply GND (-) is electrically connected to the housing. If the temperature drops below 0°C, all current limits will automatically increase to 9A for both 12V and 24V.</td>
</tr>
<tr>
<td></td>
<td>Standard motor Fast motor 12V, current limit 8A 24V, current limit 5A</td>
<td></td>
</tr>
<tr>
<td><strong>Blue</strong></td>
<td>12-24VDC - (GND) Connect Blue to negative 12V ± 20% max. 5A depending on load 24V ± 10% max. 2.5A depending on load</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard motor Fast motor 12V, current limit 8A 24V, current limit 5A</td>
<td></td>
</tr>
<tr>
<td><strong>Red</strong></td>
<td>Extends the actuator</td>
<td>On/off voltages: &gt; 67% of $V_\text{IN}$ = ON &lt; 33% of $V_\text{IN}$ = OFF Input current: 10mA</td>
</tr>
<tr>
<td><strong>Black</strong></td>
<td>Retracts the actuator</td>
<td></td>
</tr>
<tr>
<td><strong>Green</strong></td>
<td>Endstop signal out</td>
<td>Output voltage min. $V_\text{IN}$ - 2V Source current max. 100mA Endstop signals are NOT potential free.</td>
</tr>
<tr>
<td><strong>Yellow</strong></td>
<td>Endstop signal in</td>
<td></td>
</tr>
<tr>
<td><strong>Violet</strong></td>
<td>Not to be connected</td>
<td></td>
</tr>
<tr>
<td><strong>White</strong></td>
<td>Not to be connected</td>
<td></td>
</tr>
</tbody>
</table>

- Current cut-offs should not be used as stop function! This might damage the actuator. Current cut-offs should only be used in emergencies!
- Current cut-off limits are not proportional with the load curves of the actuator. This means that the current cut-offs cannot be used as load indicator.
- There are tolerances on the spindle, nut, gear wheels etc. and these tolerances will have an influence on the current consumption for the specific actuator.
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</table>
| Violet      | Analogue feedback  
0-10V (Option A) | Standby power consumption:  
12V, 60mA  
24V, 45 mA  
Ripple max. 200mV  
Transaction delay 20ms  
Linear feedback 0.5%  
Max. current output: 1mA |
|             | Single Hall output (PNP)  
Movement per single Hall pulse:  
LA14020 Actuator = 0.2 mm per pulse  
LA14040 Actuator = 0.4 mm per pulse  
Frequency is 14-26 Hz on Single Hall output depending on load.  
Every pulse is "ON" for minimum 3ms.  
Overvoltage on the motor can result in shorter pulses. | Output voltage min. V/N - 2V  
Max. current output: 12mA  
Max. 680nF |
| White       | Signal GND | For correct wiring of power GND and Signal GND see section below |

When using the feedback output, it is important to use the right connection setup. Attention should be paid to the two ground connections. Power GND in the Power connector and Signal GND in the Control connector. When using either 0-10V, Hall or PWM feedback, the Signal GND must be used. For optimal accuracy, the Signal GND is connected to the Power GND as close as possible to the feedback input equipment.

![Diagram of power and control connectors](image-url)
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