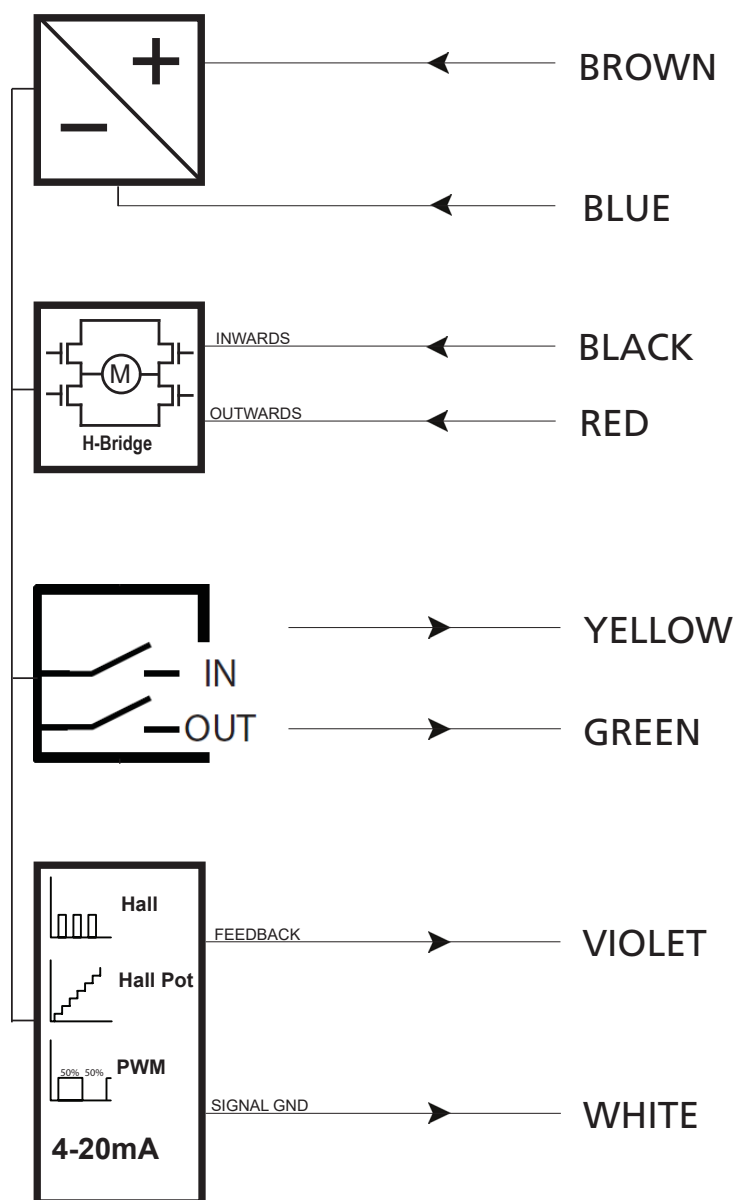




Actuator LA14  
IC Advanced and BusLink  
*Connection diagram*

# Connection diagram

14XXXXXXXXXX3X1X=XX1XXXXXXXXXX



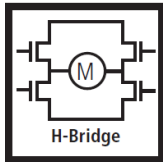
Please be aware that if the power supply is not properly connected, you might damage the actuator!



Configuration of IC Advanced is possible with the BusLink software for PC. The newest version is available online at [LINA.K.COM/TECHLINE](http://LINA.K.COM/TECHLINE)

Please note: The BusLink configuration cable must be purchased separately. Item number for BusLink cable kit: 0367999 (adapter + USB2Lin)

# I/O Specifications

Input/Output	Specification	Comments						
Description	<p>Easy to use interface with integrated power electronics (H-bridge).</p> <p>The actuator can also be equipped with electronic circuit that gives an absolute or relative feedback signal.</p> <p>The version with "IC option" cannot be operated with PWM (power supply).</p> <p>See connection diagram, figure above</p>	 <p>H-Bridge</p>						
Brown	<p>12-24VDC + (VCC)</p> <p>Connect Brown to positive</p> <p>12V ± 20% max. 5A depending on load</p> <p>24V ± 10% max. 2.5A depending on load</p> <table border="0"> <tr> <td>Standard motor</td> <td>Fast motor</td> </tr> <tr> <td>12V, current limit 8A</td> <td>12V, current limit 8A</td> </tr> <tr> <td>24V, current limit 5A</td> <td>24V, current limit 5A</td> </tr> </table>	Standard motor	Fast motor	12V, current limit 8A	12V, current limit 8A	24V, current limit 5A	24V, current limit 5A	<p>Note:</p> <p>Do not change the power supply polarity on the brown and blue wires!</p> <p>Power supply GND (-) is electrically connected to the housing</p>
Standard motor	Fast motor							
12V, current limit 8A	12V, current limit 8A							
24V, current limit 5A	24V, current limit 5A							
Blue	<p>12-24VDC - (GND)</p> <p>Connect Blue to negative</p> <p>12V ± 20% max. 5A depending on load</p> <p>24V ± 10% max. 2.5A depending on load</p> <table border="0"> <tr> <td>Standard motor</td> <td>Fast motor</td> </tr> <tr> <td>12V, current limit 8A</td> <td>12V, current limit 8A</td> </tr> <tr> <td>24V, current limit 5A</td> <td>24V, current limit 5A</td> </tr> </table>	Standard motor	Fast motor	12V, current limit 8A	12V, current limit 8A	24V, current limit 5A	24V, current limit 5A	<p>Current limit levels can be adjusted through BusLink</p> <p>If the temperature drops below 0°C, all current limits will automatically increase to 9A for both 12V and 24V</p>
Standard motor	Fast motor							
12V, current limit 8A	12V, current limit 8A							
24V, current limit 5A	24V, current limit 5A							
Red	Extends the actuator	<p>On/off voltages:</p> <p>&gt; 67% of <math>V_{IN}</math> = ON</p> <p>&lt; 33% of <math>V_{IN}</math> = OFF</p> <p>Input current: 10mA</p>						
Black	Retracts the actuator							
Green	Endstop signal out	<p>Output voltage min. <math>V_{IN} - 2V</math></p> <p>Source current max. 100mA</p> <p>Endstop signals are NOT potential free. Endstop signals can be configured with BusLink software according to any position needed.</p> <p>When configuring virtual endstop, it is not necessary to choose the position feedback.</p> <p>EOS and virtual endstop will work even when feedback is not chosen.</p>						
Yellow	Endstop signal in							

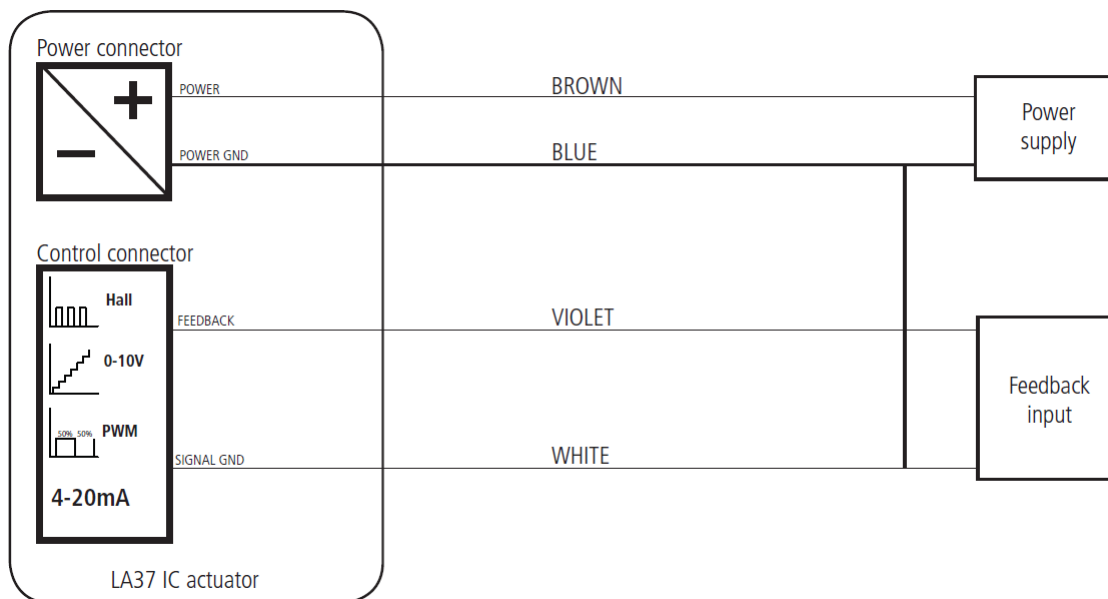
Input/Output	Specification	Comments
Violet (continued)	Analogue feedback (0-10V): Configure any high/low combination between 0-10V  0-10V (Option G) 0.5-4.5V (Option H) Special (Option X)	Ripple max. 200mV Transaction delay 20ms Linear feedback 0.5% Max. current output. 1mA
	Single Hall output (PNP)  Movement per single Hall pulse: LA14020 Actuator = 0.2 mm per pulse LA14040 Actuator = 0.4 mm per pulse  Frequency: 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. $V_{IN} - 2V$ Max. current output: 12mA Max. 680nF
	Digital output feedback PWM: Configure any high/low combination between 0-100%  10-90% (Option K) 20-80% (Option L) Special (Option X)	Output voltage min. $V_{IN} - 2V$ Frequency: 75Hz $\pm$ 10Hz as standard, but this can be customised. Duty cycle: Any low/high combination between 0 and 100 percent. Open collector source current max. 12mA
	Analogue feedback (4-20mA): Configure any high/low combination between 4-20mA  4-20mA (Option J) Special (Option X)	Tolerances $\pm$ 0.2mA Transaction delay 20ms Linear feedback 0.5% Output: Source Serial resistance: 12V max. 300 ohm 24V max. 900 ohm
	All absolute value feedbacks (0-10V, PWM and 4-20mA)	Standby power consumption: 12V, 60mA 24V, 45 mA  It is recommendable to have the actuator to activate its limit switches on a regular basis, to ensure more precise positioning
White	Signal GND	For correct wiring of Power GND and Signal GND - please see next page



- 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.

## Correct wiring of Power GND and Signal GND for IC Advanced:

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.



Please note: This section only applies for 0-10V, Hall and PWM feedback options.

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