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Actuator LA12

IC and end stop signals

Connection diagram

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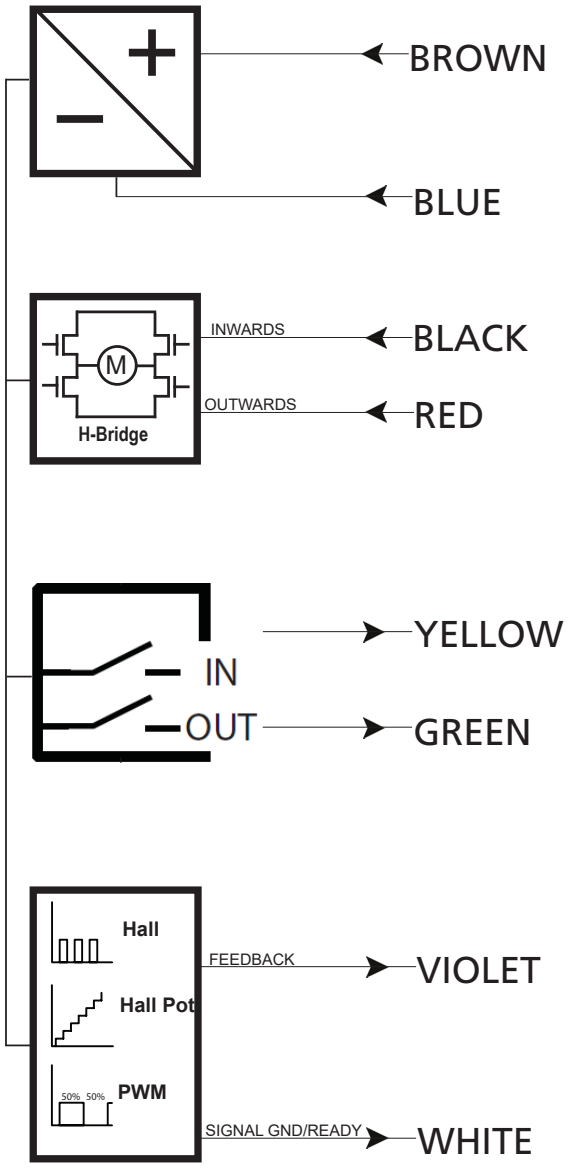
Connection diagram

12XXXX-XXXXXXX8



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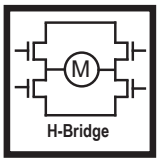
Please be aware that if the power supply is not properly connected, you might damage the actuator!

I/O Specifications

Input/Output	Specification	Comments
Description	Easy to use interface with integrated power electronics (H-bridge). The actuator can also be equipped with electronic circuit that gives an absolute or relative feedback signal. The version with "IC option" cannot be operated with PWM (power supply).	
Brown	12-24VDC Connect Brown to positive (VDC) 12V ± 20% 24V ± 10% Under normal conditions: 12V, max. 5A depending on load 24V, max. 2.5A depending on load	Note: Do not change the power supply polarity on the brown and blue wires! If the temperature drops below 0°C, all current limits will automatically increase to 11A
Blue	12-24VDC Connect Blue to negative (GND) 12V ± 20% 24V ± 10% Under normal conditions: 12V, max. 5A depending on load 24V, max. 2.5A depending on load	
Red	Extends the actuator	On/off voltages: > 67% of V_{IN} = ON < 33% of V_{IN} = OFF Input current: 10mA
Black	Retracts the actuator	
Green	Endstop signal out	Output voltage min. V_{IN} - 1V Source current max. 100mA Endstop signals are NOT potential free
Yellow	Endstop signal in	

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Input/Output	Specification	Comments
Violet	Mechanical slide potentiometer 0-10V (Option T) Slide potentiometer, 10 kohm 1 kohm = 0 mm stroke 11 kohm = 100 mm stroke The maximum effect: 0.1W	Max. 100mm stroke Linearity: ± 20% Minimum lifetime: 15,000 cycles Average lifetime: 40,000 cycles Max. current output: 1mA
	Analogue feedback 0-10V (Option F) 0.5-4.5V (Option K)	Tolerances +/- 0.2V Max. current output 1mA Ripple max. 200mV Transaction delay 100ms Linear feedback 0.5%
	Hall sensor 2 pulses (Option L) 4 pulses (Option N)	Max. current output 12mA Output = input -1V
	Single Hall (Option S) Movement per single Hall pulse: 12xLxx-1: Actuator = 1 mm per pulse 12xNxx-1: Actuator = 0.5 mm per pulse 12xLxx-2: Actuator = 2 mm per pulse 12xNxx-2: Actuator = 1 mm per pulse 12xLxx-3: Actuator = 3 mm per pulse 12xNxx-3: Actuator = 1.5 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.	Max. current output 12mA Output = input -1V Min. on time 2.5ms
	None (Option D)	Not available with feedback or endstop out
White	Signal GND	Only for mechanical slide potentiometer and analogue feedback Max. 1mA For correct wiring of power GND and Signal GND see: Correct wiring of Power GND and Signal GND for IC
	Ready signal	Only for single hall and PWM Max. 10mA

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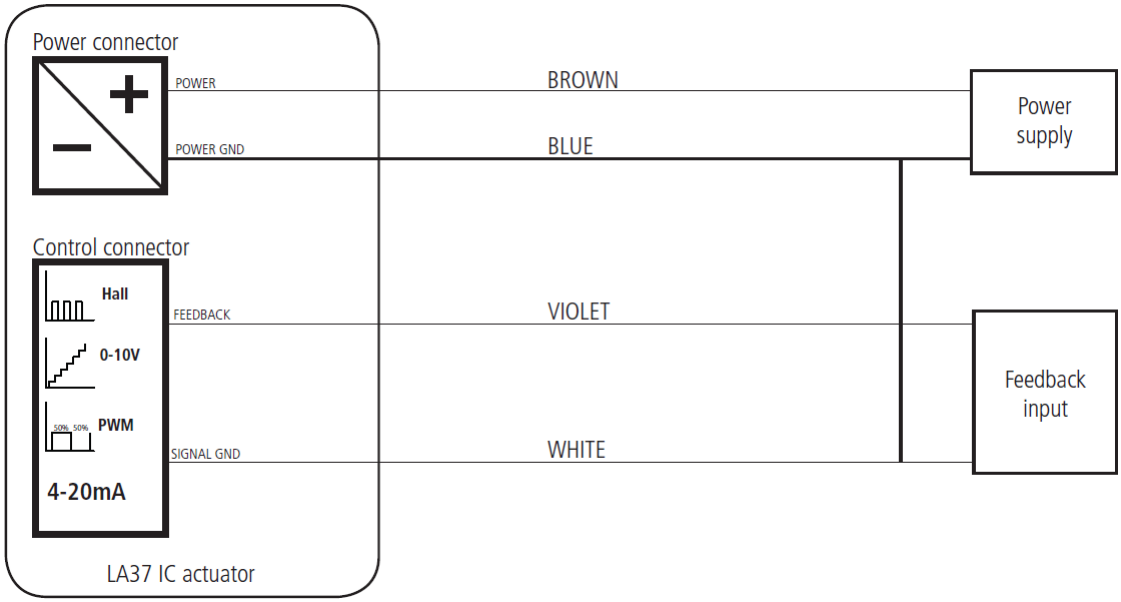
Correct wiring of Power GND and Signal GND for IC:

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 Analogue feedback or Mechanical potentiometer 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 that this section only applies to the following feedback options: Analogue feedback and Mechanical potentiometer.

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