



Actuator LA14
IC Advanced with Feedback
Connection diagram

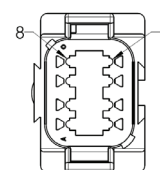
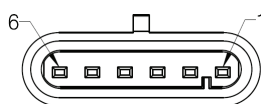
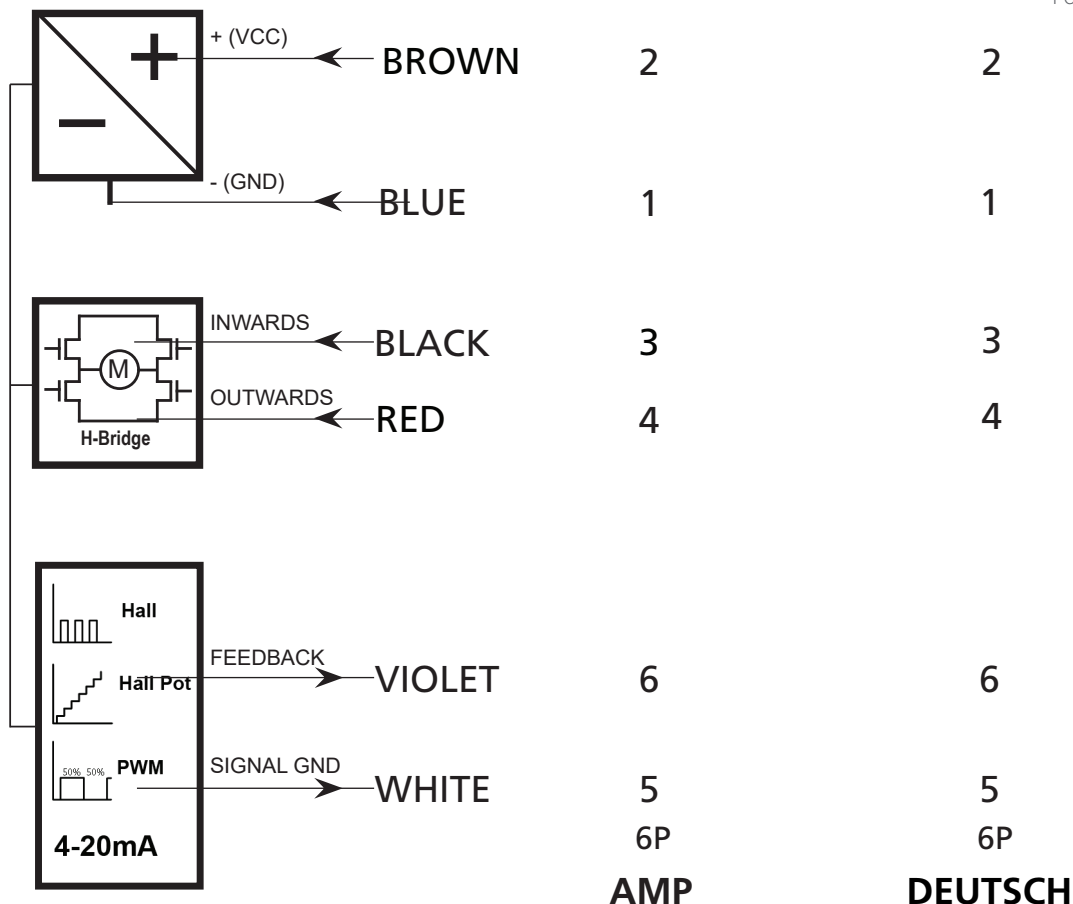
Connection diagram

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IC INTEGRATED CONTROLLER

Compliant with:

PLUS 1
Powered by Danfoss



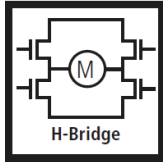
Please be aware that if the power supply is not properly connected, you might damage the actuator!



Configuration of IC Advanced is possible with the BusLink software for PC. The newest version is available online at LINAK.COM/TECHLINE

Please note: The BusLink configuration cable must be purchased separately. Item number for BusLink cable kit: 0147999 (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 is 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>H-Bridge</p>
Brown	<p>12-24VDC + (VCC)</p> <p>Connect Brown to positive</p> <p>12 V ± 20% - max. 5 A depending on load</p> <p>24 V ± 10% - max. 2.5 A depending on load</p> <p>12 V, current limit 8 A</p> <p>24 V, current limit 5 A</p>	<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>
Blue	<p>12-24 VDC - (GND)</p> <p>Connect Blue to negative</p> <p>12 V ± 20% - max. 5 A depending on load</p> <p>24 V ± 10% - max. 2.5 A depending on load</p> <p>12 V, current limit 8 A</p> <p>24 V, current limit 5 A</p>	<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 9 A for 12 V, and 6 A for 24 V</p>
Red	Extends the actuator	<p>On/off voltages:</p> <p>> 67% of V_{IN} = ON</p> <p>< 33% of V_{IN} = OFF</p> <p>Input current: 10 mA</p>
Black	Retracts the actuator	
Green	Not to be connected	
Yellow	Not to be connected	
Violet	<p>Analogue feedback (0-10 V):</p> <p>Configure any high/low combination between 0-10 V</p>	
	<p>Single Hall output (PNP)</p> <p>Movement per Single Hall pulse:</p> <p>LA25030 Actuator = 0.25 mm per pulse</p> <p>LA25060 Actuator = 0.5 mm per pulse</p> <p>LA25090 Actuator = 0.75 mm per pulse</p> <p>LA25120 Actuator = 1.0 mm per pulse</p> <p>LA25200 Actuator = 1.7 mm per pulse</p> <p>Depending on load the frequency is 10-20 Hz</p> <p>Pulse ON time is minimum 8 ms.OFF time between two ON pulses is minimum 8 ms.</p> <p>Overtoltage on the motor can result in shorter pulses.</p>	<p>Output voltage min. V_{IN} - 2 V Max.</p> <p>current output: 12 mA</p> <p>Max. 680 nF</p>

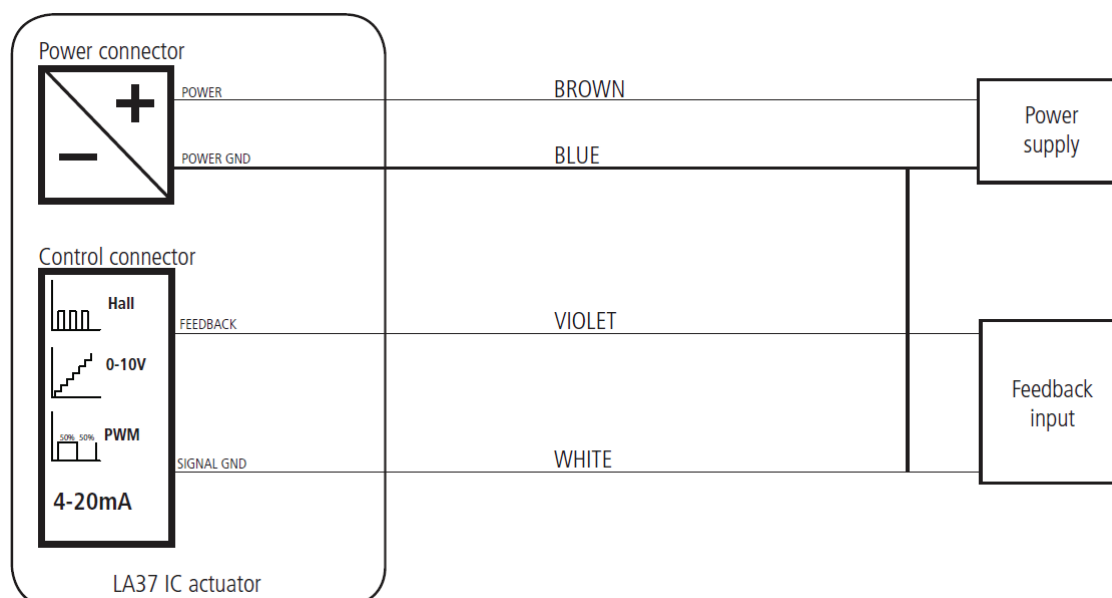
Input/Output	Specification	Comments
Violet (continued)	Digital output feedback PWM: Configure any high/low combination between 0-100%	Output voltage min. $V_{IN} - 2 V$ Frequency: 75 Hz \pm 10 Hz as standard, but this can be customised. Duty cycle: Any low/high combination between 0 and 100 percent. Open collector source current max. 12 mA
	Analogue feedback (4-20 mA): Configure any high/low combination between 4-20 mA	Tolerances \pm 0.2 mA Transaction delay 20 ms Linear feedback 0.5% Output: Source Serial resistance: 12 V max. 300 ohm 24 V max. 900 ohm
	All absolute value feedbacks (0-10 V, PWM and 4-20 mA)	Standby power consumption: 12 V, 60 mA 24 V, 45 mA
White	Signal GND	For correct wiring of Power GND and Signal GND - please see figure below



- 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.
- For actuators with analogue feedback it is recommended to fully extract and retract the actuator on a regular basis (thereby activating the limit switches) in order to ensure precise positioning.

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 0-10 V, 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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