

# ACTUATOR LA12 PLC

## Features:

- 24 V DC permanent magnetic motor
- Max. thrust 750 N
- Max. speed 40 mm/sec
- Duty cycle up to 100% at 0-20°C ambient temperature
- Built-in limit switches, relays and EOP
- Ambient temperature 0° to +40° C.
- Compact design
- Colour: black
- 2300 mm straight cable without plug (8 x 0,5 mm<sup>2</sup>)
- Reinforced glass fibre piston rod
- High-strength plastic housing protects motor and gear

## Options:

- Hall-sensor or potentiometer for relative or absolute positioning
- Protection class IP 51, 65 or IP 66
- ATEX approved for dust explosive atmospheres
- 3 different spindle pitches
- 4 different stroke length
- Back fixture available in 2 different variants: 01 or 02 (factory mounted)



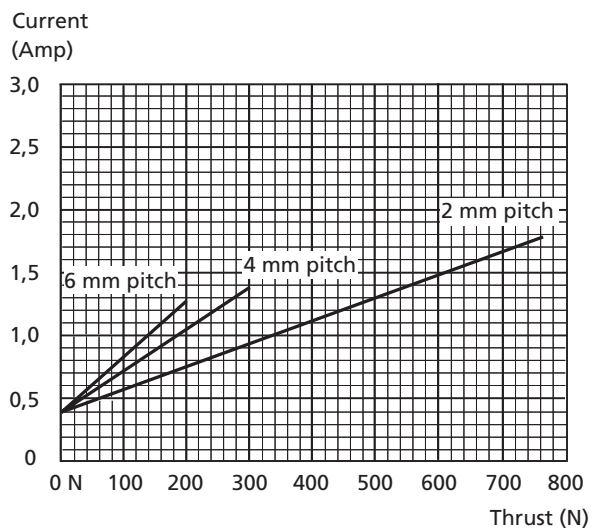
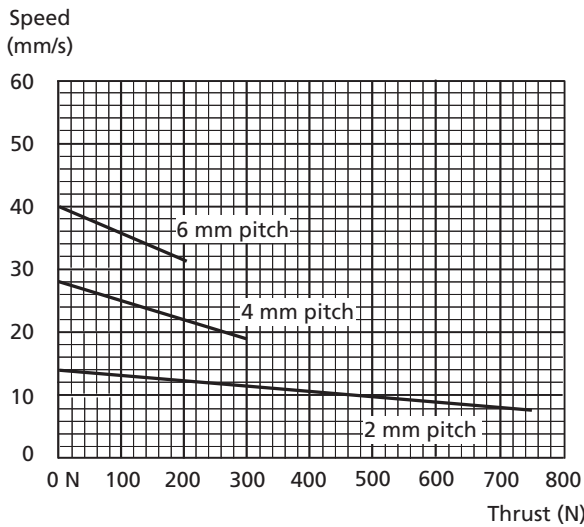
TECHLINE™  
IMPROVING FLEXIBILITY

The PLC-actuator is ideal for factory automation, ventilation plants and other industrial equipment controlled by Programmable Logic Controllers (PLC). The Actuator is designed for easy interface with most common PLC's. The integrated relays and electronic overload protection (EOP) makes it possible and safe to connect the PLC-actuator directly to the In-/outputs at the PLC.

**Technical specifications:**

Type	Spindle pitch (mm)	Thrust max. (N)	Self-lock max. (N)	Typical speed 0/full load (mm/s)		Stroke length (in steps of 30 mm) (potentiometer max. 100 mm stroke) (mm)			Typical amp. At full load (A) 24 V	Encoder pulses for positioning (mm/pulse)	
										2 pulses/rev	4 pulses/rev
12XX00-1XXX24XX	2	750	750	14	8	40	-	130	1.8	1	0,5
12XX00-2XXX24XX	4	300	300	27	16	40	-	130	1.5	2	1
12XX00-3XXX24XX	6	200	80	40	28	40	-	130	1.0	3	1,5

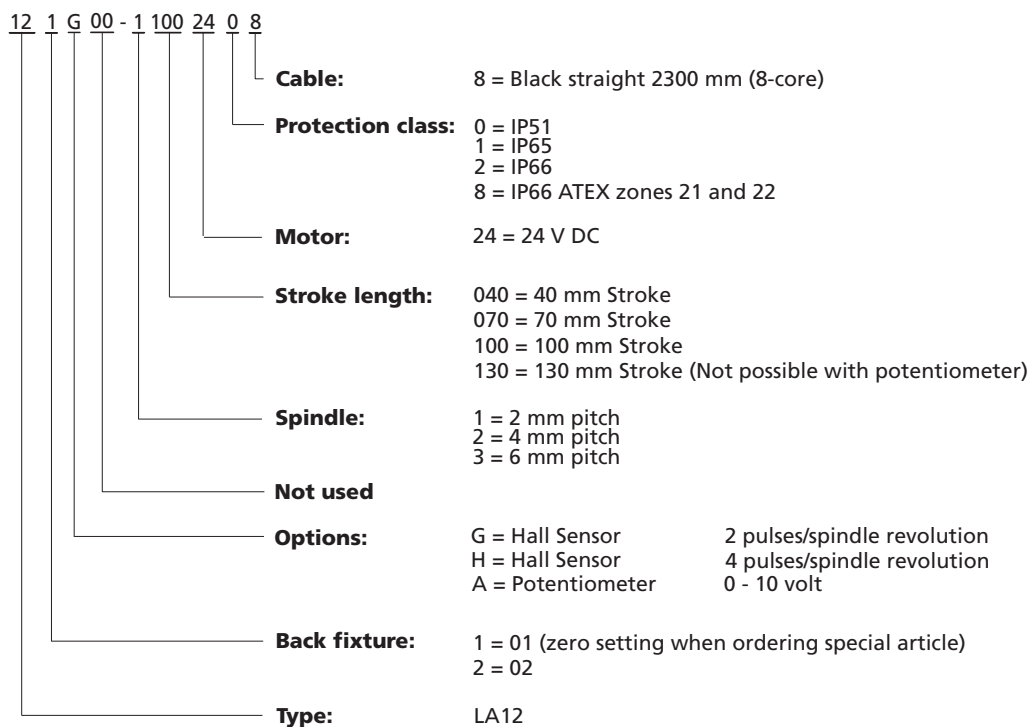
**Graphs for speed and current**



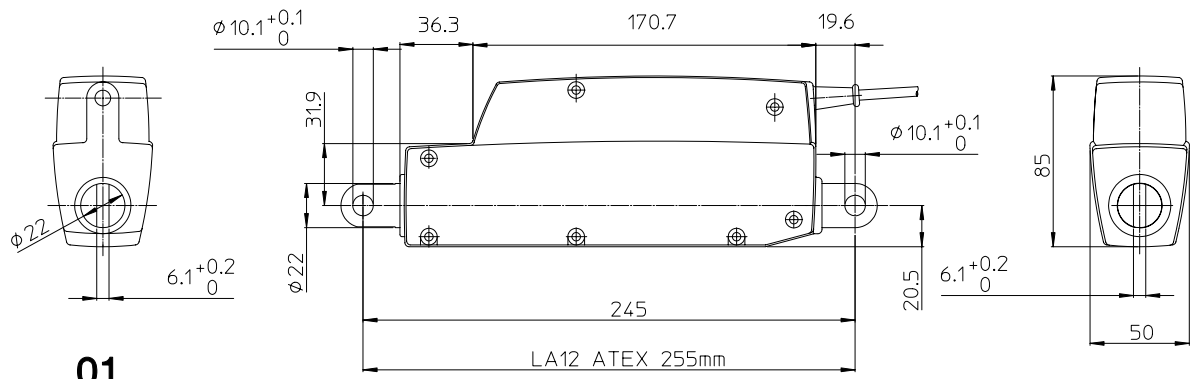
The above values are average values and made with a stable 24 V DC power supply at 20°C ambient temperature.

**LA12 PLC**

**Ordering example:**



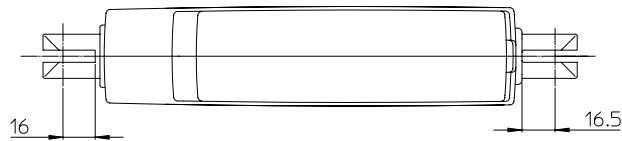
**Dimensions:**



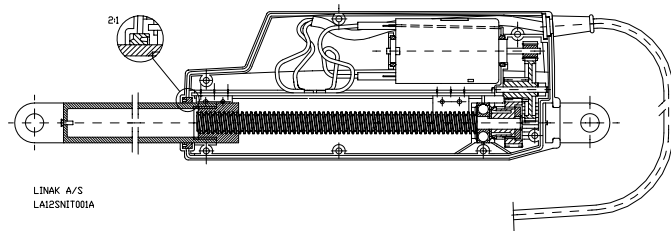
**01**



**02**

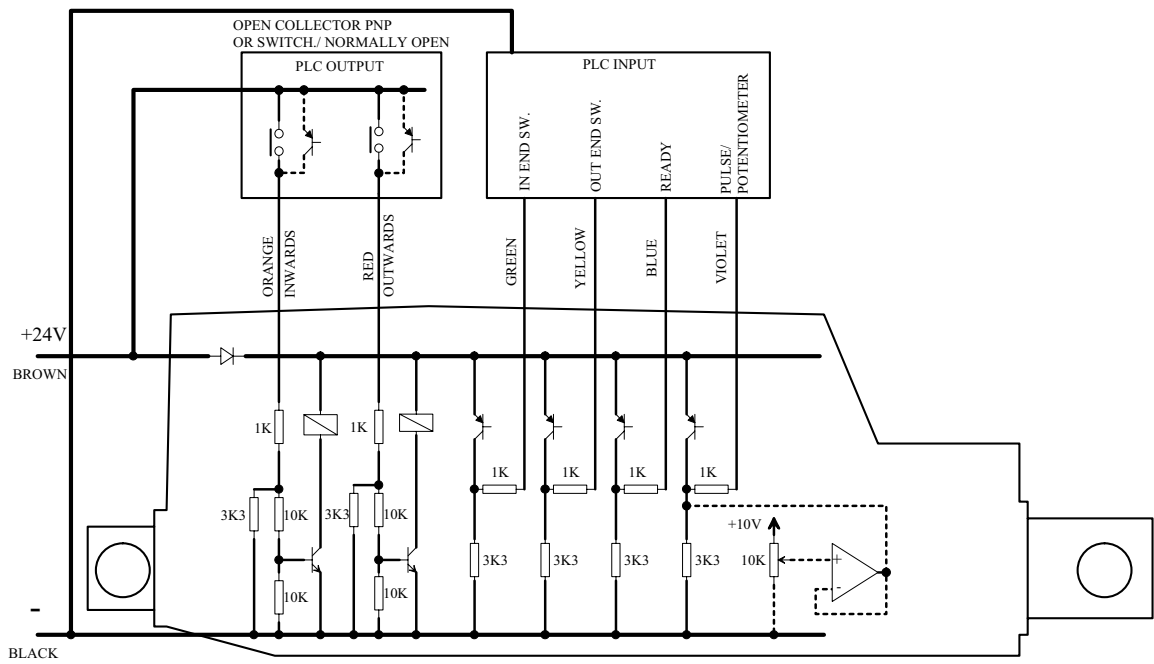


LINAK A/S  
LA12001C



LINAK A/S  
LA12SNT001A

**Connections:**



## General specifications:

### Cost-effective

The integration of relays and EOP in the actuator gives the user considerable cost savings. Not only savings due to the purchase of fewer components but also less time consumption on drawings, wiring, mounting and testing. The LA12 PLC-actuator provides a practical and cost-effective alternative to traditional pneumatic systems, gear motors and traditional linear actuators.

### Safety

Integrated safety - The Integrated Electronic Overload Protection (EOP) circuit ensures that the actuator and machinery will not be damaged due to an unforeseen overload situation. The actuator stops and gives a signal that can be used for error messages etc. Furthermore the motor temperature is monitored, if the actuator is used with a higher duty cycle than recommended, the actuator will stop before it is overheated and damaged. In all situations where the actuator stops because of safety reasons it gives a signal that can be used for error messages etc.

### End-stop monitoring

The built-in end-stop switch ensures that the actuator stops when reaching end of stroke, individual signals for both end-stops are available to the user.

### Relative or absolute positioning

Relative positioning - By means of a magnetic disc and a hall sensor in the PLC-actuator, it is possible to have encoder pulses with an accuracy down to 0.5 mm per pulse. This signal can be connected directly to the PLC's standard digital input. Absolute positioning - As an alternative the user can have a 0-10 V analogue signal from a potentiometer integrated in the PLC-actuator (max. stroke 100 mm). This signal can be connected directly to an analogue PLC input.

### Low energy consumption

During recent years energy consumption has been more and more important to the end users of production equipment. Compared to pneumatic systems the energy consumption is considerably lower.

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## LA12 ATEX

Facts about LA12 ATEX version.

LINAK is able to supply LA12 ATEX for dust explosive atmospheres zones 21 and 22.

There are some differences between the "standard" LA12 and the "LA12 ATEX"

Standard LA12	LA12ATEX
Can be opened and modified by subsidiaries	Must be opened and modified by LINAK A/S only due to the fact that our quality systems have been approved according to ATEX.
Housing is made of plastic	Housing is made of plastic but coated with grey painting that is conductive. This is to prohibit static electricity.
Inner tube is made of plastic	Inner tube is made of stainless steel – the same as used on LA22. This to prohibit static electricity.
Installation dimension 245mm	Installation dimension 255mm due to the fact that the inner tube is made of stainless steel.

## SUPPLEMENTARY FOR LA12 ATEX

Installation instructions.

The actuators model LA12 shall be used in a permanently fixed installation.

Special conditions for safe use:

The permanently attached cable shall be terminated in a non-hazardous area or inside an enclosure that is certified under the type of explosion protection as described in EN 50014 clause 1.2.

The duty cycle of the actuator is limited to 6 minutes ON - 54 minutes OFF.

The actuator model LA12 is to be installed where it is protected from direct sunlight.

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Specifications subject to change without prior notice.

It is the responsibility of the product user to determine the suitability of LINAK A/S products for a specific application. LINAK will at point of delivery replace/repair defective products covered by the warranty if promptly returned to the factory. No liability is assumed beyond such replacement/repair.