# Components for building Your Own Robot

## MLA

MLA Linear Module is an economic solution for linear displacement applications which require positioning. Its construction is based on aluminum profile and linear guide, block is driven by tooth belt.

Standard version of MLA module is driven by stepper motor. It enables controlling in an open loop without an additional position sensor. On request it can be equipped with a DC, BLDC, servo motor or crank for positioning of the block.

**Advantages:**

- Max. linear speed* 1 [m/s]
- Positioning accuracy* 0.1 [mm]
- Max. force Fmax* 100 N [N]
- Drive ratio 1 rpm/ 150 mm [mm]

*Parameters depend on the motor used.

### MLA-KX Linear module with a stepper motor

Option of adjusting other type stepper motor to implement it in the module.
Interface: Stepper motor requires an external controller.

### MLA-SKX Linear module with a stepper motor and a driver

The driver allows controlling motors with current up to 4 A and step division up to 1/64.
It guarantees positioning accuracy with resolution up to 0.1 mm.

Interface: Signals CLK, DIR, ENABLE in 0-5 V standard.

### MLA-SIC Linear module with stepper motor and build-in programmable motion controller


The programmable controller allows setting any block motion trajectory and execution of pre-programmed motion programs.
The SIC184 controller is equipped with universal digital outputs, a RS485 Modbus-RTU interface and a USB connector.
For programming and configuration of module motion parameters is designed SIC-KONFIGURATOR application.
Additional ML-PROG software allows creation of motion programs for independent operation of the module.

### MLA-DX Linear module with DC motor and a gear

This module is equipped with 1.61.xxx.xxx series DC motors. It guarantees low noise and fast movement.

Typical applications: photography, medical equipment, advertising.

### MLA-SX Linear module with a servo motor

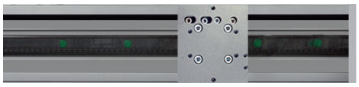
A linear module with a servo motor provides high speed and positioning accuracy.
Motor can be additionally equipped with a brake.

It requires an external controller.

### MLA-R Linear module with a crank

Linear module with a manual drive is equipped with a crank for easy positioning of a block.
Module can be additionally equipped with encoder and counter with a display.

### MLA-H Passive linear module



Passive linear module is vey often used at XYZ systems, based on modules. It function as support.

## MLAS

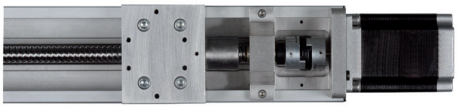
The MLAS construction is based on an aluminum profile, a linear guide and a ball screw.

Thanks to the ball screw the module ensures high positioning accuracy of up to 0.01 mm and displacement of high payload.

Advantages:
- Max. linear velocity* 0.25 [m/s]
- Positioning accuracy* 0.01 [mm]
- Max. force Fmax* 1000 [N]
- Drive ratio 1 rpm/ 4 or 5 [mm]

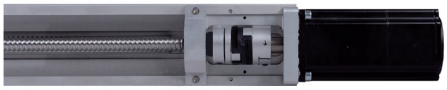
*Parameters depend on the motor used.

### MLAS-KX Linear module with a stepper motor



Option of adjusting other type stepper motor to implement it in the module.
Interface: stepper motor requires an external controller.

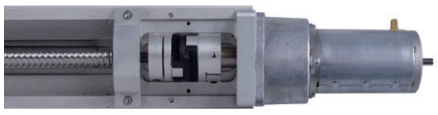
### MLAS-SX Linear module with a servo motor



A linear module with a servo motor provides high speed and positioning accuracy.
Motor can be additionally equipped with a brake.

It requires an external controller.

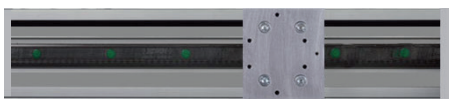
### MLAS-DX Linear module with DC motor and a gear



This module is equipped with 1.61.xxx.xxx series DC motors. It guarantees low noise and fast movement.

Typical applications: photography, medical equipment, advertising.

### MLAS-E Passive linear module



Passive linear module is vey often used at XYZ systems, based on modules. It function as support.

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## MLA Slim - module for photography and scanning

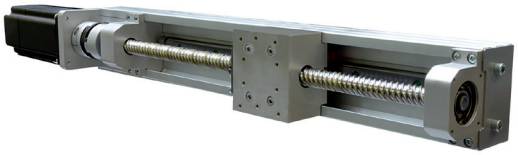
Compact linear module in low desing with integrated drive - 1.61.077.4xx DC motor with a gear and build-in encoder. There is an option to integrate controller in a module.
This version is perfect for measurement applications, scanning, photography and filming. Drive can be adjusted for customer's requirements.

- Max. linear velocity 1 m/s*
- Positioning accuracy 0,1 mm
- Max. force 50 N*
- Drive ratio 1 rpm/ 90 mm

* Parameters depend on the motor used

## MLAS16 - reinforced version of the module

Linear module with drive transition made by Ø15 or Ø16 ball screw with increased maximal operating range up to 1 m. There is an option to integrate an encoder and to adjust the module to customer's requirements. We offer wide range of drives and external drivers for the module.



- Max. linear velocity 0,8 m/s*
- Positioning accuracy 0,01 mm
- Max. force 1000 N*
- Drive ratio 1 rpm/ 5, 10 or 16 mm

* Parameters depend on motor used

## MLA2P - reinforced version with additional dust protection

Linear module with rigrid construction allows moving higher loads. Block is driven by tooth belt. Module has compact design with dust protection. There is an option to integrate an encoder and to adjust the module to customer's requirements.

- Max linear velocity 1 m/s*
- Positioning accuracy 0,1 mm
- Max. force 500 N*
- Drive ratio 1 rpm/ 150 mm

* Parameters depend on motor used