

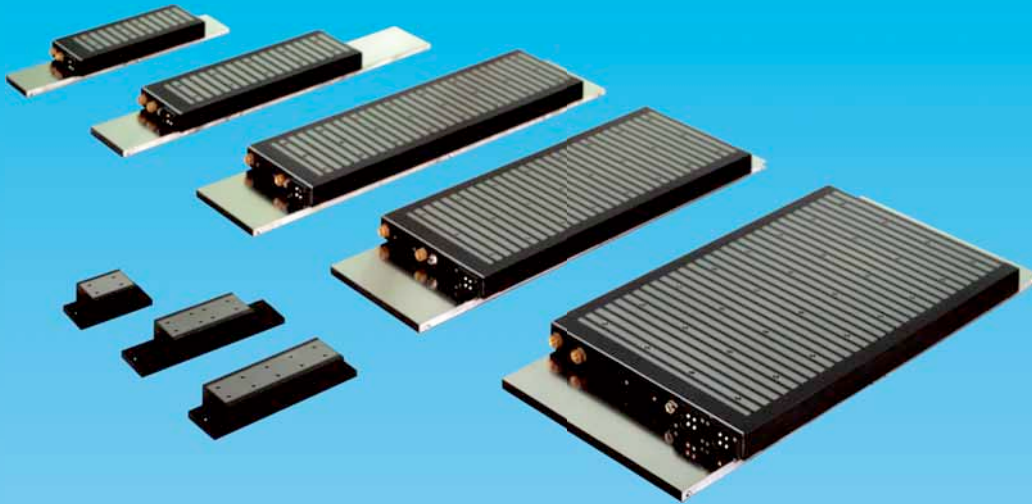
Linear Motor Realizing Ultimate High Speed and High Precision Feed

# FANUC LINEAR MOTOR *LiS* series



# Linear Motor Realizing Ultimate High Speed and High Precision Feed

## **FANUC** LINEAR MOTOR *L<sub>i</sub>S* series



### Features

FANUC LINEAR MOTOR *L<sub>i</sub>S* series, without deforming elements such as ball screw, or without wearing parts in mechanical structure, realizes high gain due to high rigidity of servo system, higher precision and maintenance free in mechanism. Additionally, rigid long stroke axis and increase of thrust force and multi-head configuration by arranging multiple coils on single magnet track are easily available.

\*) "S" of *L<sub>i</sub>S* means "Strong motor with neodymium-iron magnets".

### High Speed and High Acceleration

Realizing maximum speed of 4m/s and maximum acceleration of over 30G, which is difficult to be realized by using rotary motor.

### High Accuracy

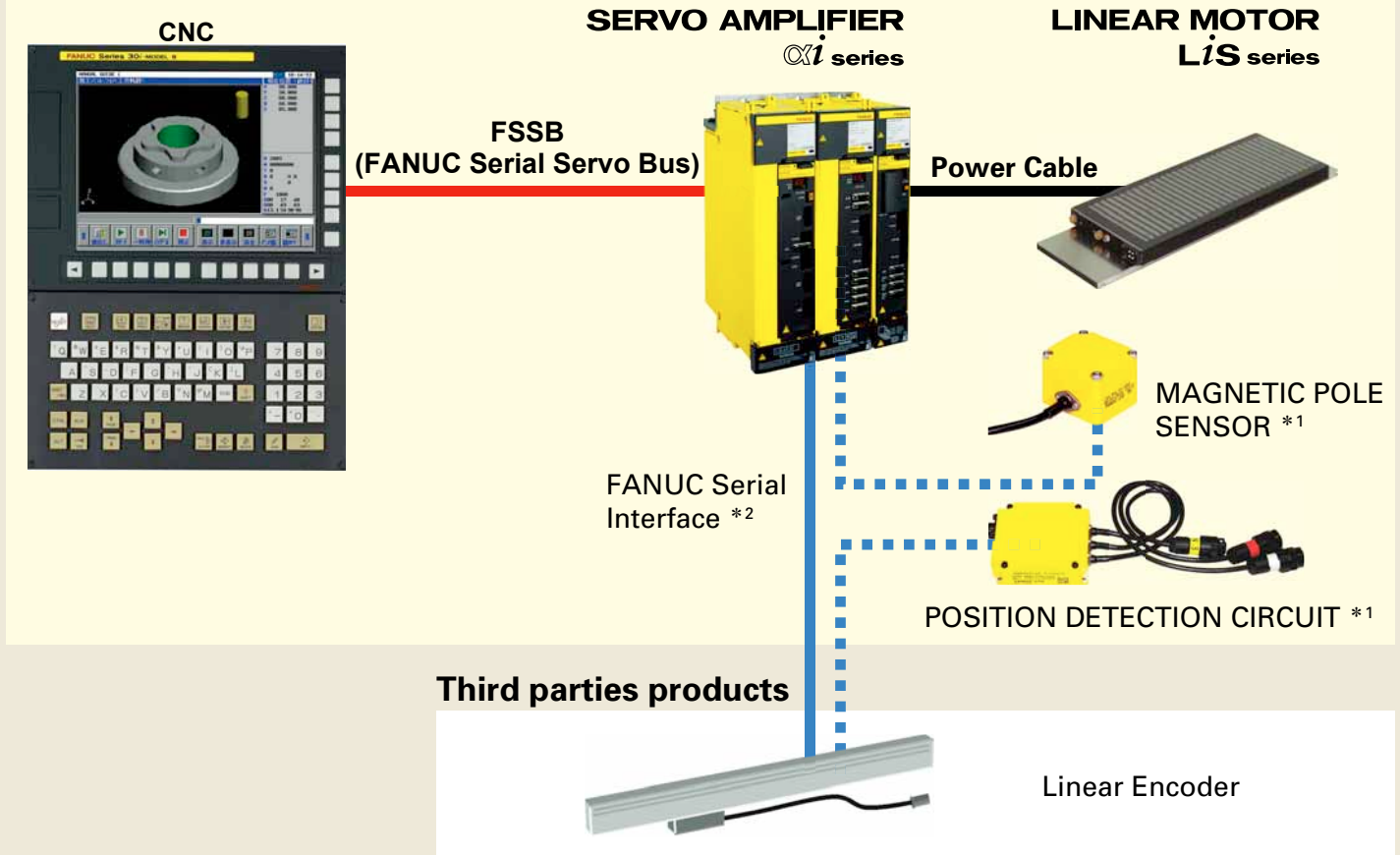
Cooling tube embedded near to coil winding of heat source carries out heat efficiently. This cooling structure minimizes effect of heat transmission from motor to machine, which results in higher accuracy of machine. Additionally, original position detection circuit by treating signal from linear encoder, realizes detection system of 0.001 $\mu$ m resolution up to 4m/s speed. And latest digital servo control technology such as SERVO HRV control, enables smooth and high accuracy feed up to high speed.

### Conforms to EMC Directive

FANUC LINEAR MOTOR *L<sub>i</sub>S* series conforms to EMC directive, so CE mark of the system will be easily acquired.

## System Configuration

### FANUC's products



— In case of an absolute linear encoder

■■■■ In case of an incremental linear encoder

\*1 Not necessary for absolute type linear encoder

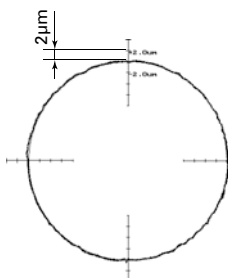
\*2 Necessary to conform to FANUC Serial Interface

### Sample data\*

#### High accuracy even at high speed

##### Circle (example)

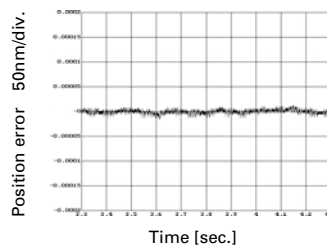
**F10000 (10m/min)**  
**R100**



- Roundness less than 1μm
- SERVO AMPLIFIER αi series
- SERVO HRV3 Control

#### Smooth feed

##### Feed smoothness at const. speed (example)



**F1 (1mm/min)**

- Smoothness 20nm
- SERVO AMPLIFIER αi series
- SERVO HRV3 Control

\*Feedback data from linear encoder

# Maintenance and Customer Support

## Worldwide Customer Service and Support

FANUC operates customer service and support network worldwide through subsidiaries and affiliates. FANUC provides the highest quality service with the prompt response at any location nearest you.



## FANUC Training Center

FANUC Training Center operates versatile training courses to develop skilled engineers effectively in several days.

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