

# SANMOTION

## LINEAR SERVO MOTOR

### Multi-Axis Integrated Linear Servo Motor Unit

#### Compact and High-Speed

The individual cylinder linear servo motors in the unit achieved a maximum thrust of 11 N despite their compact 16 mm size. It contributes to reducing size and weight and increasing the speed of the equipment.

#### Reduce Assembly Work Hours

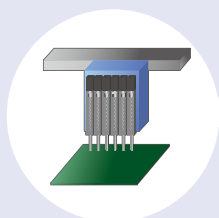
Multiple cylinder linear servo motors can be integrated into a single unit, with the number and size customizable to your needs. Individual motors are not separated but come pre-assembled as a single unit, saving assembly time.

#### Flexible Customization Tailored to Equipment

With a 4-axis unit as standard, customization with up to 8 axes can be made.



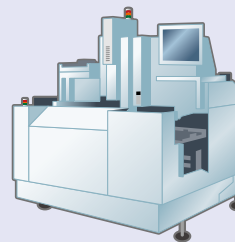
This pre-assembled unit can be installed to equipment easily in applications that require multiple linear servo motors, such as PCB surface mounter heads. It is also suitable for semiconductor manufacturing and inspection equipment.



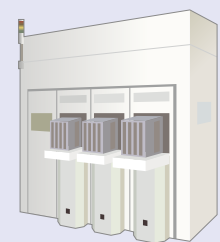
Mounter head



Surface mounter



PCB mounter



Semiconductor manufacturing equipment

#### Product design example

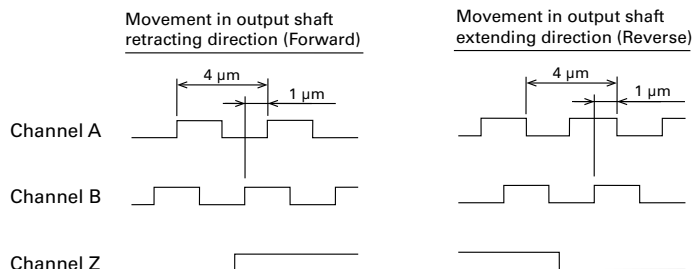
Single-axis motor	4-axis integrated unit
<p>Stroke: 37 mm</p>	<p>Stroke: 37 mm</p> <p>x4</p>

Note: Consult us or your point of sale for the installation method before finalizing the system design.

## Linear servo motor specifications

Model no.			DM01GG011A37CX00	DM04GG011A37CX00
	Symbol	Unit	Single-axis motor	4-axis integrated unit
Drive method			Sinusoidal	
Excitation			Permanent magnet	
Rated			Continuous	
Rated thrust	$F_R$	N	3.5	3.5
Continuous thrust at stall	$F_S$	N	3.5	3.5
Maximum thrust	$F_P$	N	11	11
Rated speed	$V_R$	m/s	1.0	1.0
Maximum speed	$V_{max}$	m/s	1.0	1.0
Distance between axes	$P_A$	mm	–	24
Mover mass	$M_C$	g	37	37
Motor mass	$W$	g	270	1300
Linear encoder			Incremental encoder	
Linear encoder resolution (×4 multiplier)		$\mu\text{m}$	1.0	1.0
Thrust-Speed Characteristics (48 VDC power supply)				

## Linear encoder signal output



Minimum linear encoder resolution: 1.0  $\mu\text{m}$   
9-pin D-sub connector pinout

No.	Signal
1	Free (unused)
2	Channel Z
3	Channel B
4	Channel A
5	+5 VDC
6	Channel $\bar{Z}$
7	Channel $\bar{B}$
8	Channel $\bar{A}$
9	GND

## Compatible servo amplifiers

Servo amplifier model no.	RF2G21L8A10	RS2K04AAHA5	RF2J24A8HL5
Amplifier capacity	40 A		
Power supply voltage (main/control)	48/5 VDC	48/24 VDC	
Interface	Pulse input	EtherCAT	
Dimensions [mm]	30 × 116 × 70	40 × 160 × 85	50 × 200 × 130
No. of controllable axes	1		4