



Air bearing **free of wear**  
Stator area up to **1000x850 mm**

# LMSP Series

Linear Planar Servo Motor

## Product Features



### Linear Planar Servo Motor

The planar motor LMSP has integrated distance measurement sensors and works with position control (closed loop).

#### XY table

Closed loop thanks to integrated distance measurement

Air bearing free of wear

No externally measurable magnetic fields

The position accuracy is stable because of low heat generation.

Can be mounted upside down

1000x850 mm

Stator area up to

0.001 mm

Resolution

$\pm 0.015$  mm

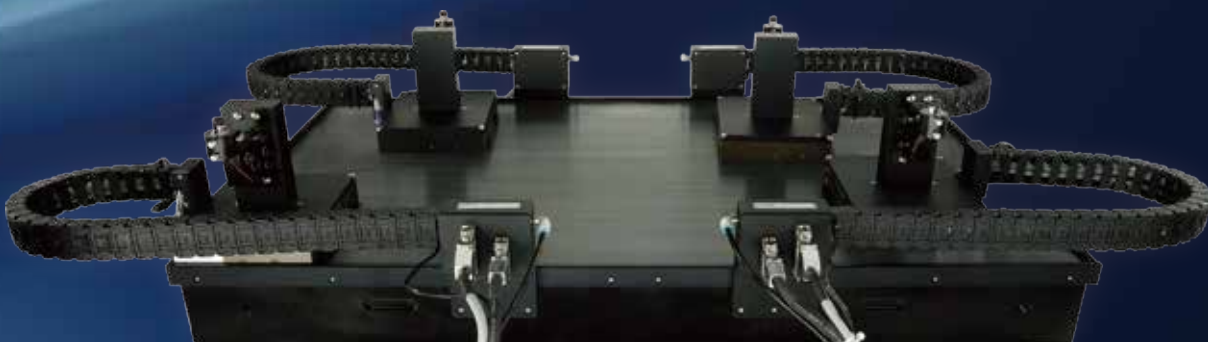
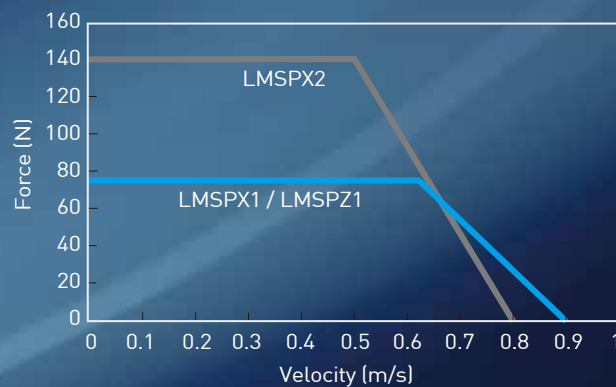
Accuracy  
(every 300mm)

0.001 mm

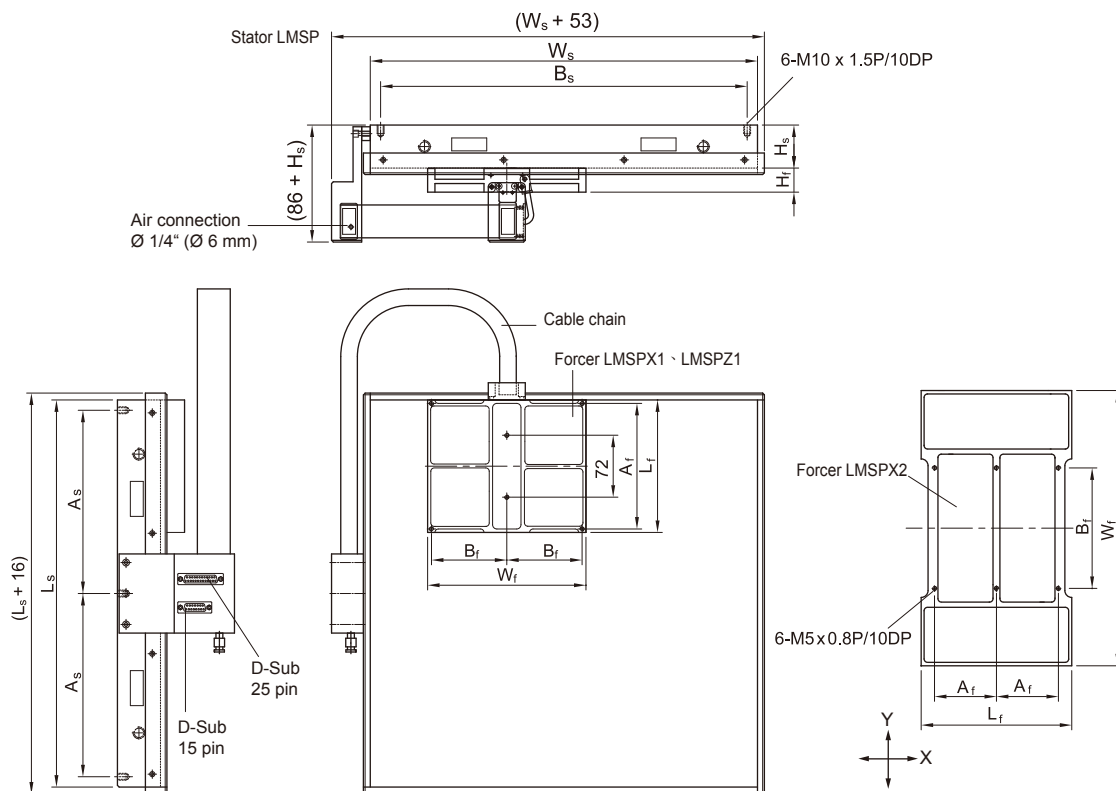
Repeatability  
(LMSPZ1)

### LMSP series F-V Curve

(DC bus voltage = 300V<sub>DC</sub>)



# Product specifications

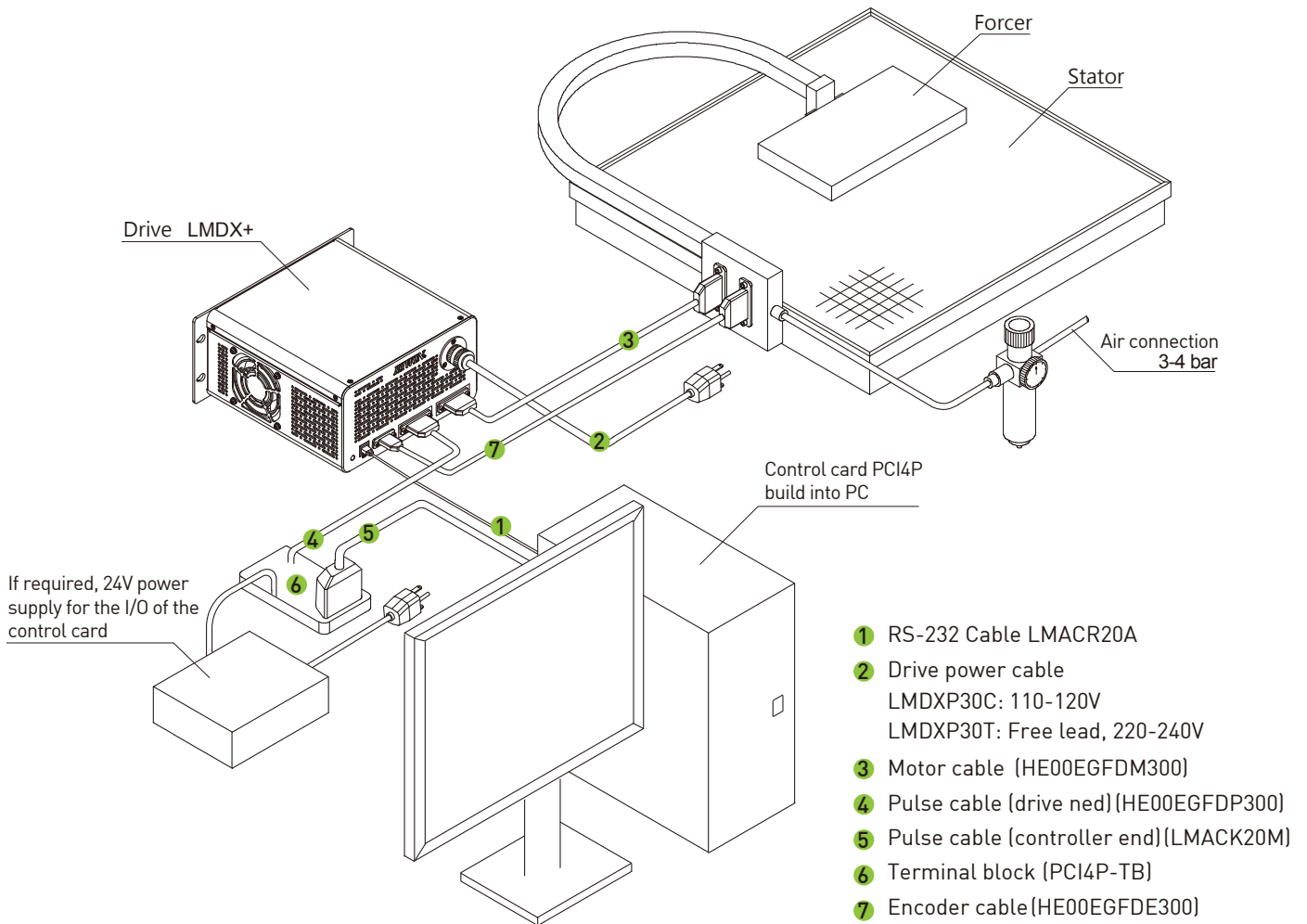


		Symbol	Unit	LMSPX1	LMSPZ1	LMSPX2
Performance	Max. forcer	$T_m$	N	75	75	140
	Resolution	$R_s$	mm	0.001	0.001	0.001
	Repeatability(unidirectional)	$R_p$	mm	0.002	0.001	0.002
	Accuracy(every 300mm)	$A_c$	mm	$\pm 0.015$	$\pm 0.015$	$\pm 0.015$
	Max. speed(no load)	$V$	m/s	0.9	0.9	0.8
	Max. load	-	kg	12.2	12.2	24.3
Forcer	Length	$L_f$	mm	154	154	175
	Width	$W_f$	mm	184	184	320
	Height	$H_f$	mm	28	28	30
	Air pressure	$P_s$	kg/cm <sup>2</sup>	3-4	3-4	3-4
	Air flow rate	$F_s$	l/min	6.4	6.4	11
	Mass	$M_f$	kg	1.8	1.8	3.7
	Fixing distance	$A_f \times B_f$	mm x mm	146 x 87.5	146 x 87.5	72 x 140

## Dimension

	Unit	P1	P2	P3	P4	P5	P6	
Stator dimensions	$L_s \times W_s$	mm	350 x 330	450 x 450	600 x 450	600 x 600	1000 x 600	850 x 850
Max. Stroke (One forcer)	LMSPX1/LMSPZ1	mm	190 x 140	290 x 260	440 x 260	440 x 410	840 x 410	690 x 660
	LMSPX2	mm		270 x 125	420 x 125	420 x 275	820 x 275	670 x 525
Stator height	$H_s$	mm	50	50	70	70	100	120
Mass of Stator		kg	27	36	52	66	120	250
Fixing Distance	$A_s \times B_s$	mm	165 x 310	213 x 426	288 x 426	288 x 576	(318-324-318)x 280	400 x 400
No. of mounting holes			6	6	6	6	10	9

# Configuration



# Model Number

**LMSP** □ 1 1 P1

**Series**

LMSPX:Hall sensor  
LMSPZ:Capacitive sensor

**Forcer**

1  
2

**Number of forcers**

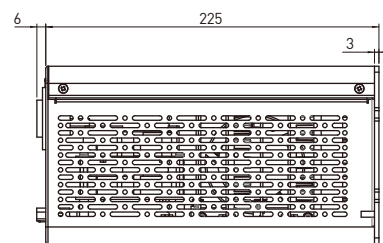
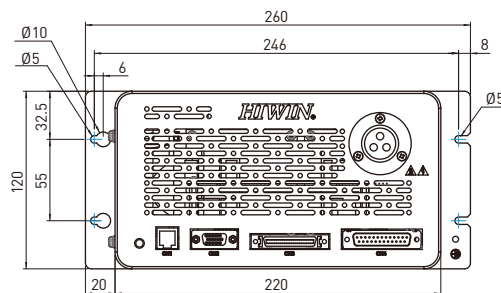
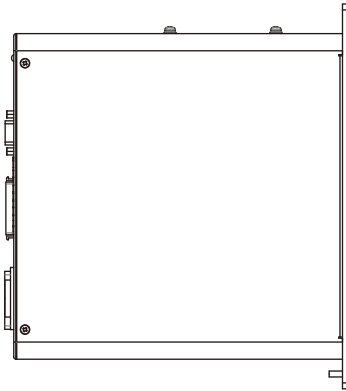
1  
2  
3  
4

**Stator**

P1 P4  
P2 P5  
P3 P6

# Servo Drive LMDX+

Servo drive LMDX+ is dedicated for planar servo motor LMSP.  
Smaller than one eighth of LMDX in size.



		Unit	Description
Power supply	Voltage	V <sub>AC</sub>	95-264
	Frequency output	Hz	50/60
Output current		A	3 (max.)
Interface	Parameter setting:RS-232 Digital I/O signal		115200 Baud · 8 data bits · 2 stop bits · odd parity 8 inputs:including HOME and RESET 8 outputs:including IN-POSITION,SVRDY,ALARM,HOMED and HOMING
	Pulse command	Pulse	STEP/DIR · CW/CCW · AqB
Resolution		µm/pulse	1(Set by parameter)
Weight		kg	5.4
Max. operation temperature		°C	40
Storage temperature		°C	0-80
Humidity		%	0-95

# HIWIN<sup>®</sup>

Motion Control and System Technology

## HIWIN MIKROSYSTEM CORP.

No.6, Jingke Central Rd.,  
Taichung Precision Machinery Park,  
Taichung 40852, Taiwan  
Tel: +886-4-23550110  
Fax: +886-4-23550123  
www.hiwinmikro.tw  
business@hiwinmikro.tw

## Subsidiaries & RD Centers

**HIWIN GmbH**  
OFFENBURG, GERMANY  
www.hiwin.de  
www.hiwin.eu  
info@hiwin.de  
Tel: +49-781-93278-0

**HIWIN JAPAN**  
KOBE · TOKYO · NAGOYA · NAGANO ·  
TOHOKU · HOKURIKU · HIROSHIMA ·  
KUMAMOTO · FUKUOKA, JAPAN  
www.hiwin.co.jp  
info@hiwin.co.jp  
Tel: +81-78-262-5413

**HIWIN USA**  
CHICAGO · SILICON VALLEY, U.S.A.  
www.hiwin.com  
info@hiwin.com  
Tel: +1-847-8272270

**HIWIN Srl**  
BRUGHERIO, ITALY  
www.hiwin.it  
info@hiwin.it  
Tel: +39-039-2876168

**HIWIN Schweiz GmbH**  
JONA, SWITZERLAND  
www.hiwin.ch  
info@hiwin.ch  
Tel: +41-55-2250025

**HIWIN s.r.o.**  
BRNO, CZECH REPUBLIC  
www.hiwin.cz  
info@hiwin.cz  
Tel: +42-05-48528238

**HIWIN SINGAPORE**  
SINGAPORE  
www.hiwin.sg  
info@hiwin.sg  
Tel: +65-62570656

**HIWIN KOREA**  
SUWON, KOREA  
www.hiwin.kr  
info@hiwin.kr  
Tel: +82-31-298-6435

**HIWIN CHINA**  
SUZHOU, CHINA  
www.hiwin.cn  
info@hiwin.cn  
Tel: +86-512-80685599

**Mega-Fabs Motion System,  
Ltd.**  
HAIFA, ISRAEL  
www.mega-fabs.com  
info@mega-fabs.com  
Tel: +972-4-9891050