



Nippon Pulse
Your Partner in Motion Control

SLP15
Acculine Stage

- High Thrust, High Speed, High Responsiveness, High Precision, Long Stroke
- Simple Design and Easy Installation
- Non-Contact Drive means Low Noise, Long Lifespan, and Maintenance-Free

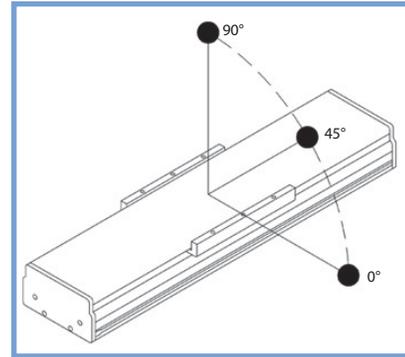


Stage Specifications

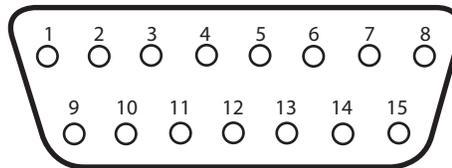
Rated Spec	Unit	Specification
Encoder Resolution	μm	1 (HEIDENHAIN LIDA279)
Continuous Force	N	17
Acceleration Force ¹	N	90
Continuous Current ²	A	0.51
Acceleration Current ¹	A	2.7
Force Constant (Kf)	N/A rms	33
Back-EMF Constant	V/m/s	11
Resistance ³	ohm	56
Inductance ³	mH	24
Magnetic Pitch (N-N)	mm	60
Maximum Acceleration ⁴	G	3.5
Maximum Velocity ^{4, 5}	m/s	3.0
Bi-Directional Repeatability	mm	±0.0005
Max Load, Horizontal	kg	5.0
Load Capacity	kg	3.0
Stroke, Single Forcer ⁶	mm	100~2000 (100 interval)
Stroke, Double Forcer ⁶	mm	100~1800 (100 interval)
Operating Temperature	°C	0~+40
Operating Humidity	%	20~80 (no condensation)
Storage Temperature	°C	-20~+60
Moving Mass	kg	0.5

Overhanging Weight Tolerance (mm)

	Load	0°	45°	90°
Horizontal	1kg	380	400	450
	2kg	220	250	270
	3kg	160	190	200
	4kg	120	140	150
	5kg	100	110	130
Wall	1kg	440	390	320
	2kg	260	230	180
	3kg	180	170	120

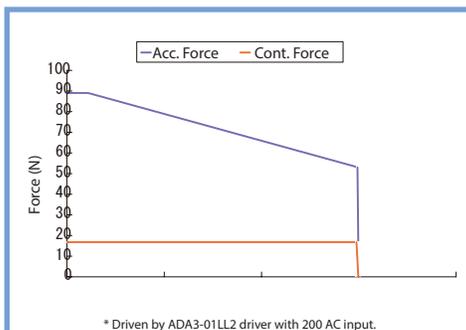


Note 1: Acceleration Force given is based on the output with the use of the following driver - SLP15: (14) Hitachi Production Machine System ADA3-01LL2
 Note 2: The effective amperage when the temperature increase of the coil front becomes 110K
 Note 3: An average value of U-V, U-W, and V-W
 Note 4: There are instances when this is not achieved due to load or operation specifications
 Note 5: There are instances when this is not achieved due to the length of the stroke
 Note 6: Contact NPA for longer stroke lengths

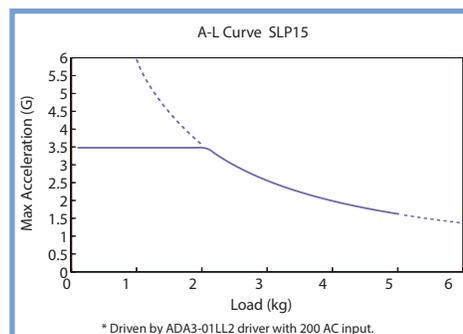


Pin	Signal	Wire Color	Function
1	A+	White	Incremental Signal
2	0V	Black/Red	Ground
3	B+	Green	Incremental Signal
4	5V	Red	Power
7	Z-	Black/Yellow	Reference Mark
9	A-	Black/White	Incremental Signal
11	B-	Black/Green	Incremental Signal
14	Z+	Yellow	Reference Mark

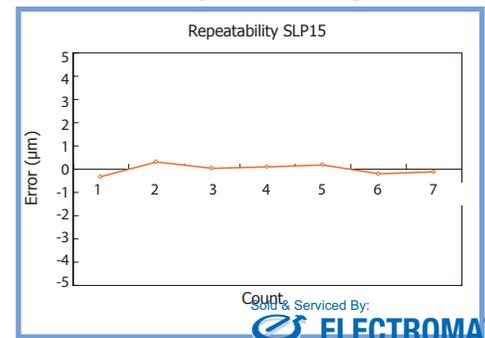
F-V Curve



Max. Acceleration vs. Load



Position Repeatability



info@nipponpulse.com | 1-540-633-1677

Toll Free Phone (877) SERV098
 Toll Free Fax (877) SERV099
 www.electromate.com
 sales@electromate.com

Single Slider Dimensions

For Frame Ground Travel
FG Label

4-M3 Depth 4
Opposite side is the same

48

84

10

40

40

40

60

2 x N-M3 Depth 5

Pitch 100 x (N-1)

100

60

46

2 x N - ϕ 3.5 Drill ϕ 6 Countersink Depth 3 (From Rear)

10 (Including Mechanical Stop)

4-M4 Depth 10

2- ϕ H7 Depth 10

10 (Including Mechanical Stop)

Stroke

140

25

45

45

82

Encoder Cable

Motor Power Supply Cable

Detail For P&Q

2.6

1

3.3

7

80

80

Motor Cable Specifications

Hitachi Cable
UL2464
AWG 25
U-red; V-white; W-black
Outer Diameter ϕ 4.3mm
JST XM Connector (Male)

Encoder Cable Specifications

Heidenhain
Outer Diameter ϕ 4.3 mm
Dsub 15 Pin Connector (Male)

All units are listed as mm

Stroke (mm)	L (mm)	N	Weight (Kg)
100	270	3	1.8
200	370	4	2.2
300	470	5	2.6
400	570	6	3.1
500	670	7	3.5
600	770	8	4.0
700	870	9	4.4
800	970	10	4.8
900	1070	11	5.3
1000	1170	12	5.7
1100	1270	13	6.1
1200	1370	14	6.6
1300	1470	15	7.0

N = sets of holes on stage

Double Slider Dimensions

For Frame Ground Travel
FG Label

4-M3 Depth 4
Opposite side is the same

48

88

84

10

40

40

40

60

2 x N-M3 Depth 5

Pitch 100 x (N-1)

100

60

46

2 x N - ϕ 3.5 Drill ϕ 6 Countersink Depth 3 (From Rear)

10 (Including Mechanical Stop)

4-M4 Depth 10

2- ϕ H7 Depth 10

5 (Mechanical Stop)

20 (Including Mechanical Stop)

5 (Mechanical Stop)

Stroke

140

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Encoder Cable

Motor Power Supply Cable

Detail For P&Q

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Encoder Cable Specifications

Heidenhain
Outer Diameter ϕ 4.3 mm
Dsub 15 Pin Connector (Male)

All units are listed as mm

Stroke (mm)	L (mm)	N	Weight (Kg)
100	420	4	3.0
200	520	5	3.5
300	620	6	3.9
400	720	7	4.3
500	820	8	4.8
600	920	9	5.2
700	1020	10	5.6
800	1120	11	6.1
900	1220	12	6.5
1000	1320	13	6.9
1100	1420	14	7.4
1200	1520	15	7.8

N = sets of holes on stage