

Electric actuator Slider

ERL2 Series

Compatibility function allows the controller, actuator, and cable to be freely combined

The electric actuator that works like a pneumatic cylinder

● Motor sizes: □42 / □56



Actuator specifications

Descriptions		ERL2-45			ERL2-60			
Actuator		Slider						
Motor		Stepping motor						
Encoder		Incremental						
Drive system		Rolling ball screw Outer diameter 8 mm			Rolling ball screw Outer diameter 12 mm			
Motor size	mm	□42			□56			
Screw lead	mm	6	12	6	12			
Stroke	mm	50, 100, 150, 200 250, 300, 350, 400 450, 500			50, 100, 150, 200 250, 300, 350, 400 450, 500, 550, 600 700			
Operation speed range	mm/s	15 to 300	30 to 600	15 to 200	30 to 400			
Operation acceleration/deceleration speed range	m/s ²	1.0 to 3.0						
Repeatability	mm	±0.02						
Lost motion	mm	0.1 or less						
Max. load capacity	Horizontal	kg	10	5	30	16		
	Vertical	kg	5	2	11	6.5		
*1								
Maximum pressing force *2		N	220	110	640	320		
Motor power supply voltage			24 VDC±10%					
Motor section maximum instantaneous current		A	2.7		4			
Brake	Type		Non-excitation operation					
	Power supply voltage		24 VDC±10%					
	Power consumption	W	6.1		7.2			
	Holding force	N	140	70	610	305		
Insulation resistance			10 MΩ or higher 500 VDC					
Withstand voltage			500 VAC for 1 minute					
Operating ambient temperature			0 to 40°C (no freezing)					
Operating ambient humidity			35 to 80% RH (no condensation)					
Storage ambient temperature			-10 to 50°C (no freezing)					
Storage ambient humidity			35 to 80% RH (no condensation)					
Atmosphere			No corrosive gas, explosive gas, or dust					
Degree of protection			IP4X					

*1: The maximum load capacity decreases when the speed increases. For more details, refer to the vertical and horizontal load capacity charts and graphs in the next page.

*2: Use within the allowable moment. (Refer to page 46 for the allowable moment value.)

Weight

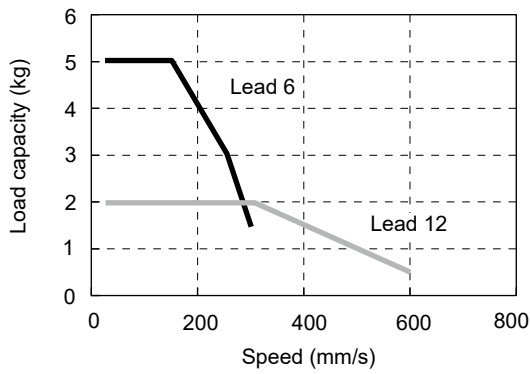
(kg)

Body size	Motor Mounting direction	50 st	100 st	150 st	200 st	250 st	300 st	350 st	400 st	450 st	500 st	550 st	600 st	700 st
ERL2-45	E	1.5 (1.8)	1.6 (1.9)	1.7 (2.0)	1.8 (2.1)	1.9 (2.2)	2.0 (2.3)	2.1 (2.4)	2.2 (2.5)	2.3 (2.6)	2.5 (2.8)	—	—	—
	R/L/D	1.7 (2.0)	1.8 (2.1)	1.9 (2.2)	2.0 (2.3)	2.1 (2.4)	2.2 (2.5)	2.3 (2.6)	2.4 (2.7)	2.5 (2.8)	2.7 (3.0)	—	—	—
ERL2-60	E	3.2 (3.8)	3.4 (4.0)	3.6 (4.2)	3.8 (4.4)	4.0 (4.6)	4.2 (4.8)	4.4 (5.0)	4.6 (5.2)	4.8 (5.4)	5.0 (5.6)	5.2 (5.8)	5.4 (6.0)	5.8 (6.4)
	R/L/D	3.7 (4.3)	3.9 (4.5)	4.1 (4.7)	4.3 (4.9)	4.5 (5.1)	4.7 (5.3)	4.9 (5.5)	5.1 (5.7)	5.3 (5.9)	5.5 (6.1)	5.7 (6.3)	5.9 (6.5)	6.3 (6.9)

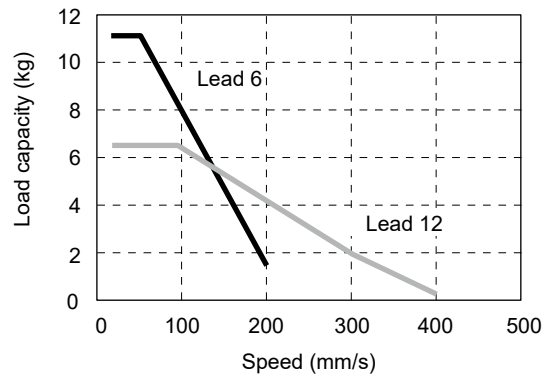
Note: the numbers in () indicate the product weight with the brake

Vertical load capacity

● ERL2-45

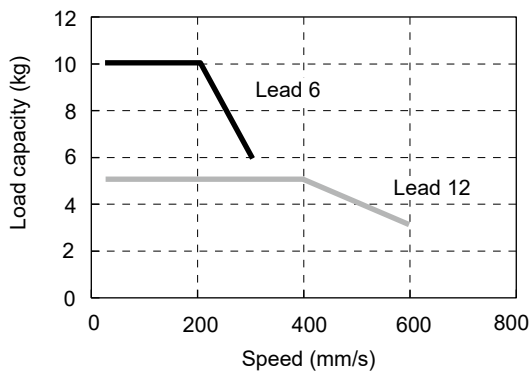


● ERL2-60

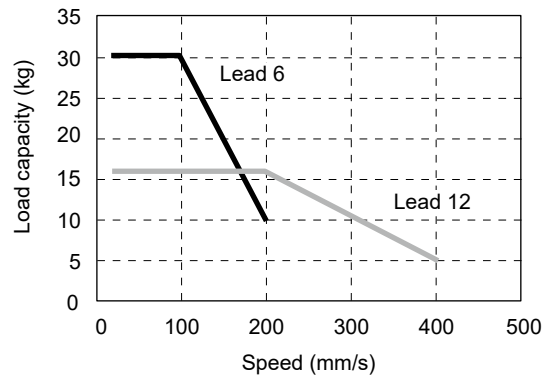


Horizontal load capacity

● ERL2-45

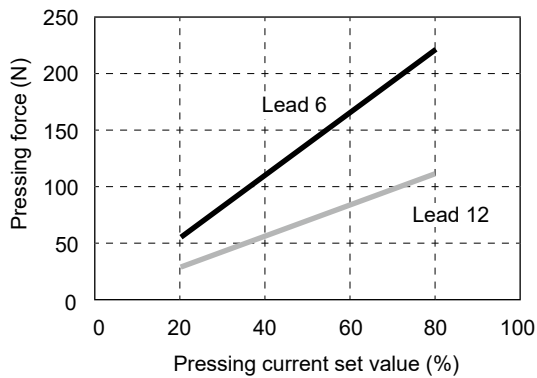


● ERL2-60



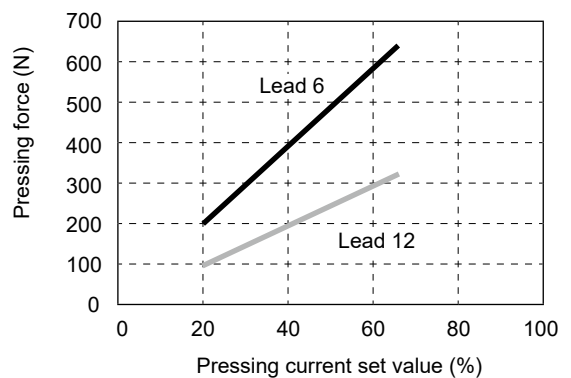
Pressing force (guideline)

● ERL2-45



Note: Use within the allowable moment.

● ERL2-60



Note: Use within the allowable moment.

ERL2 Series

How to order

● Set model No. (actuator, controller, cable)

ERL2 - **60** **E** **06** - **50** **B** **M** - **RX** **B** **2**

Model No.

A Body size

B Motor mounting direction

C Screw lead

D Stroke

E Brake

F Origin position

G Relay cable length

H Controller

[Example of model No.]

ERL2-60E06-50BM-RXB2

- A** Body size : 60
- B** Motor mounting direction : standard mounting (straight)
- C** Screw lead : 6 mm
- D** Stroke : 500 mm
- E** Brake : with brake
- F** Origin position : motor side
- G** Relay cable length: movable cable 10 m
- H** Controller : EC07 DIN mounting rail
- I** I/O Cable length : 2 m

*1: When **H** controller is set to "N", also select "N" for **I** I/O cable.

● Actuator body discrete model No.

ERL2 - **60** **E** **06** - **50** **B** **M** - **N0** **N** **N**

A Body size

E Brake

I I/O Cable length

B Motor mounting direction

F Origin position

C Screw lead

D Stroke

● Controller individual model No.

EC **07** - **B**

Series

Mounting method

*For details, refer to "How to order" on page 29.

● Cable discrete model No.

• Relay cable

EC-CBLME1 - **S** - **5**

Fixed/movable

Cable length

• I/O Cable

EC-CBLIF1 - **07** - **5**

Controller Series

*Refer to page 42 for details.

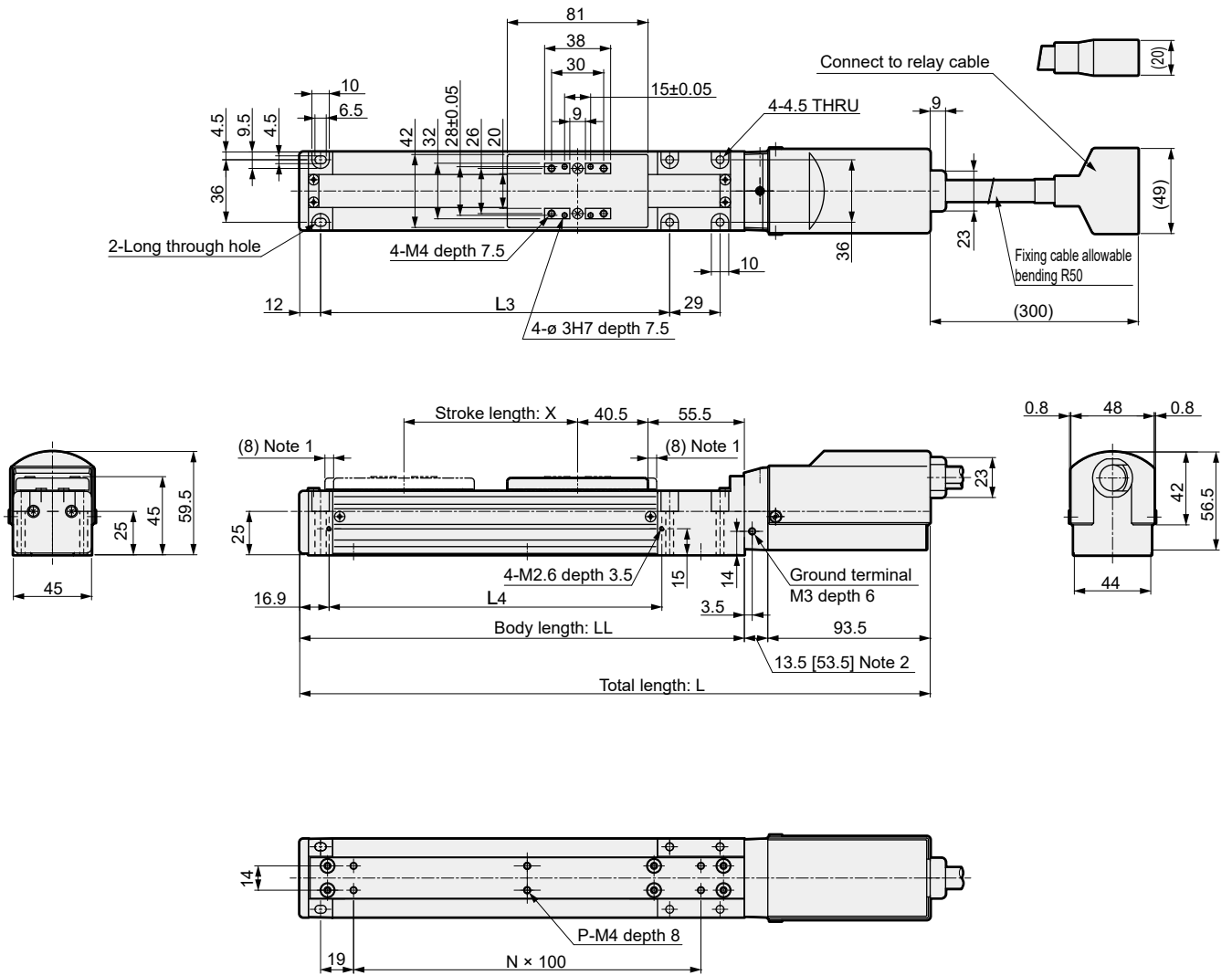
Code	Content				
A Body size					
45	Body size 45				
60	Body size 60				
B Motor mounting direction					
E	Standard mounting (straight)				
R	Right-hand mounting				
L	Left-hand mounting				
D	Bottom mounting				
C Screw lead					
06	6 mm				
12	12 mm				
D Stroke					
Code	Length	Body size/Motor mounting direction			
		45E/45R/45L	45D	60E/60R/60L	60D
05	50 mm	●		●	
10	100 mm	●		●	
15	150 mm	●	●	●	●
20	200 mm	●	●	●	●
25	250 mm	●	●	●	●
30	300 mm	●	●	●	●
35	350 mm	●	●	●	●
40	400 mm	●	●	●	●
45	450 mm	●	●	●	●
50	500 mm	●	●	●	●
55	550 mm			●	●
60	600 mm			●	●
70	700 mm			●	●
E Brake					
N	Without brake				
B	With brake				
F Origin position					
M	Motor side				
F	Opposite side of the motor				
G Relay cable length					
N0	None				
S1	Fixing cable	1 m			
S3	Fixing cable	3 m			
S5	Fixing cable	5 m			
SX	Fixing cable	10 m			
R1	Movable cable	1 m			
R3	Movable cable	3 m			
R5	Movable cable	5 m			
RX	Movable cable	10 m			
H Controller					
N	None	*1			
A	EC07	standard mounting			
B	EC07	DIN rail mount			
C	EC63	standard mounting			
D	EC63	DIN rail mount			
E	ECPT	standard mounting *2			
F	ECPT	DIN rail mount *2			
I I/O Cable length					
N	None				
2	2 m				
3	3 m	*3			
5	5 m	*3			

*2: Use a PLC unit which meets the ECPT pulse train signal input specifications (refer to page 34).

*3: If the code for the controller is E or F, these cables can be used only when the differential system is used as the pulse train signal system. Only a cable length of 2 m can be used with the open collector system.

Dimensions

● ERL2-45E (standard mounting straight)



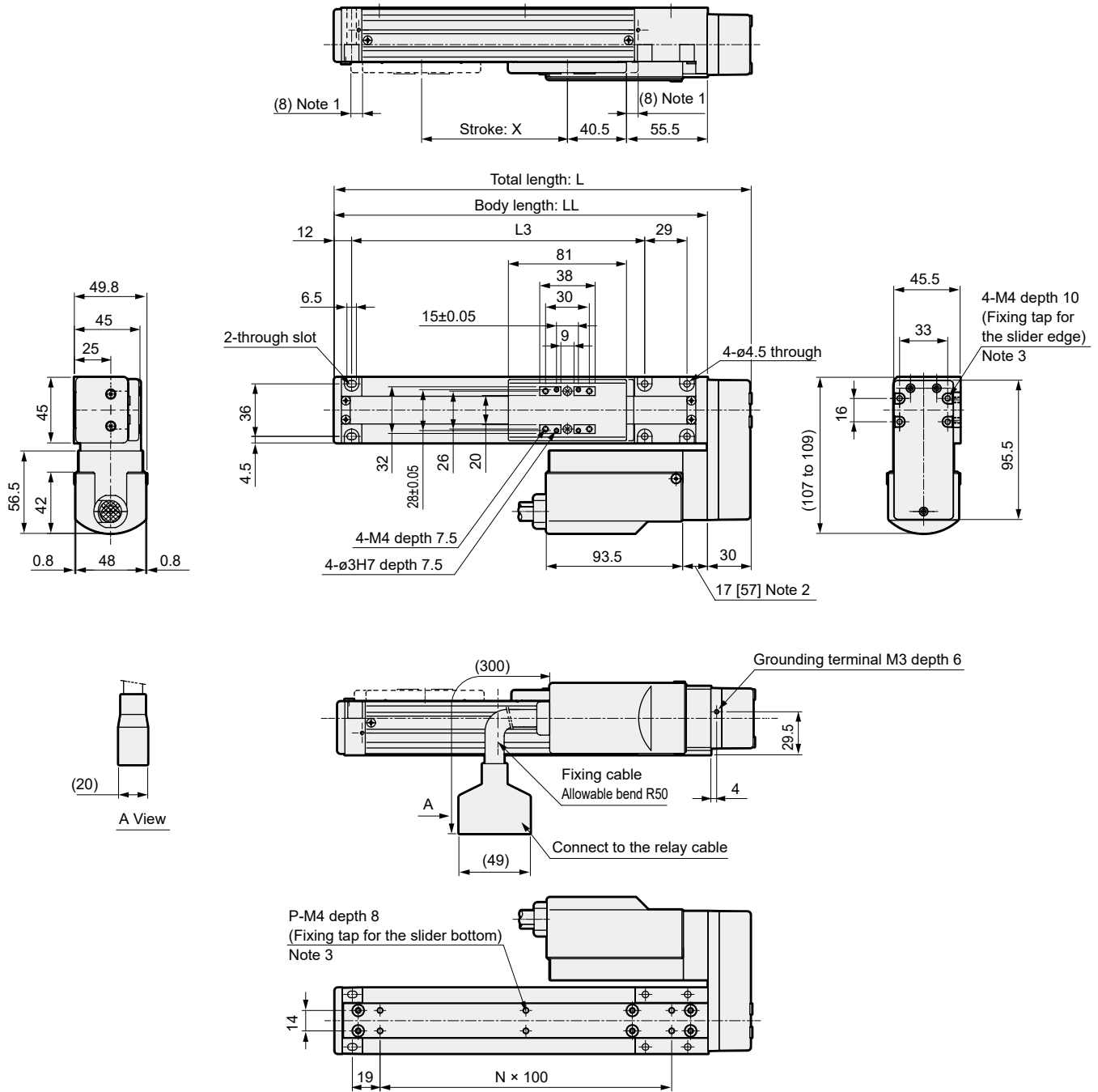
Note 1: Operating range during origin return

Note 2: The numbers within the [] are the dimensions with the brake

Stroke	Code	05	10	15	20	25	30	35	40	45	50
	X (mm)	50	100	150	200	250	300	350	400	450	500
Total length L (mm)	Without brake	313	363	413	463	513	563	613	663	713	763
	With brake	353	403	453	503	553	603	653	703	753	803
Body length LL (mm)		206	256	306	356	406	456	506	556	606	656
L3 (mm)		151	201	251	301	351	401	451	501	551	601
L4 (mm)		141.6	191.6	241.6	291.6	341.6	391.6	441.6	491.6	541.6	591.6
Number of mounting holes P		4	6	6	8	8	10	10	12	12	14
Number of mounting hole intervals N		1	2	2	3	3	4	4	5	5	6
Weight (kg)	Without brake	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.5
	With brake	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.8

Dimensions

● ERL2-45R (right-hand mounting)



Note 1: Operating range during origin return

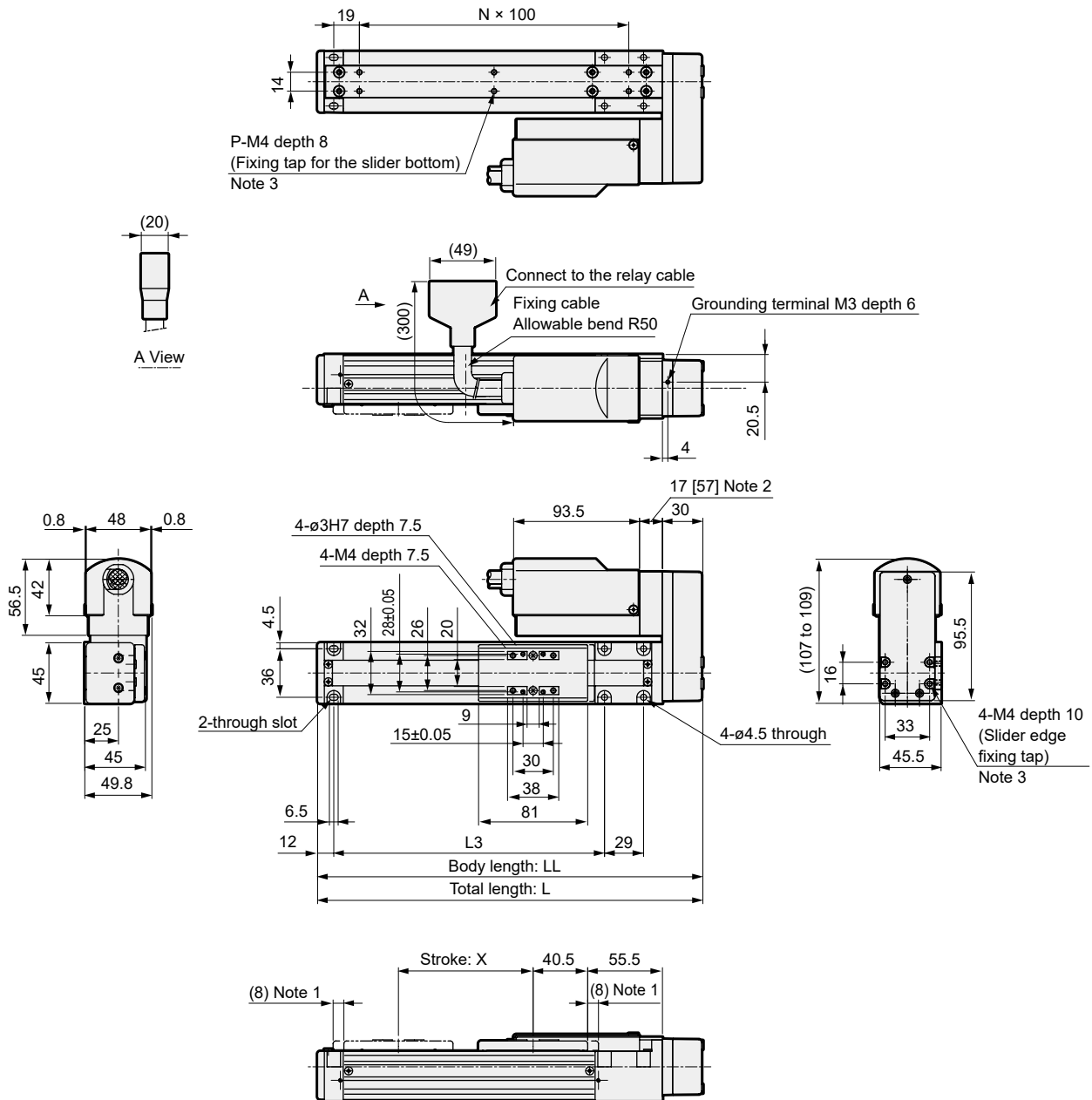
Note 2: The numbers within the [] are the dimensions with the brake

Note 3: Be sure to also mount and use the fixing tap for the slider bottom when using the fixing tap for the slider edge.

Stroke	Code	05	10	15	20	25	30	35	40	45	50
	X (mm)	50	100	150	200	250	300	350	400	450	500
Total length L (mm)		236	286	336	386	436	486	536	586	636	686
Body length LL (mm)		206	256	306	356	406	456	506	556	606	656
L3 (mm)		151	201	251	301	351	401	451	501	551	601
Number of mounting holes P		4	6	6	8	8	10	10	12	12	14
Number of mounting hole intervals N		1	2	2	3	3	4	4	5	5	6
Weight (kg)	Without brake	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.7
	With brake	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0

Dimensions

● ERL2-45L (left-hand mounting)



Note 1: Operating range during origin return

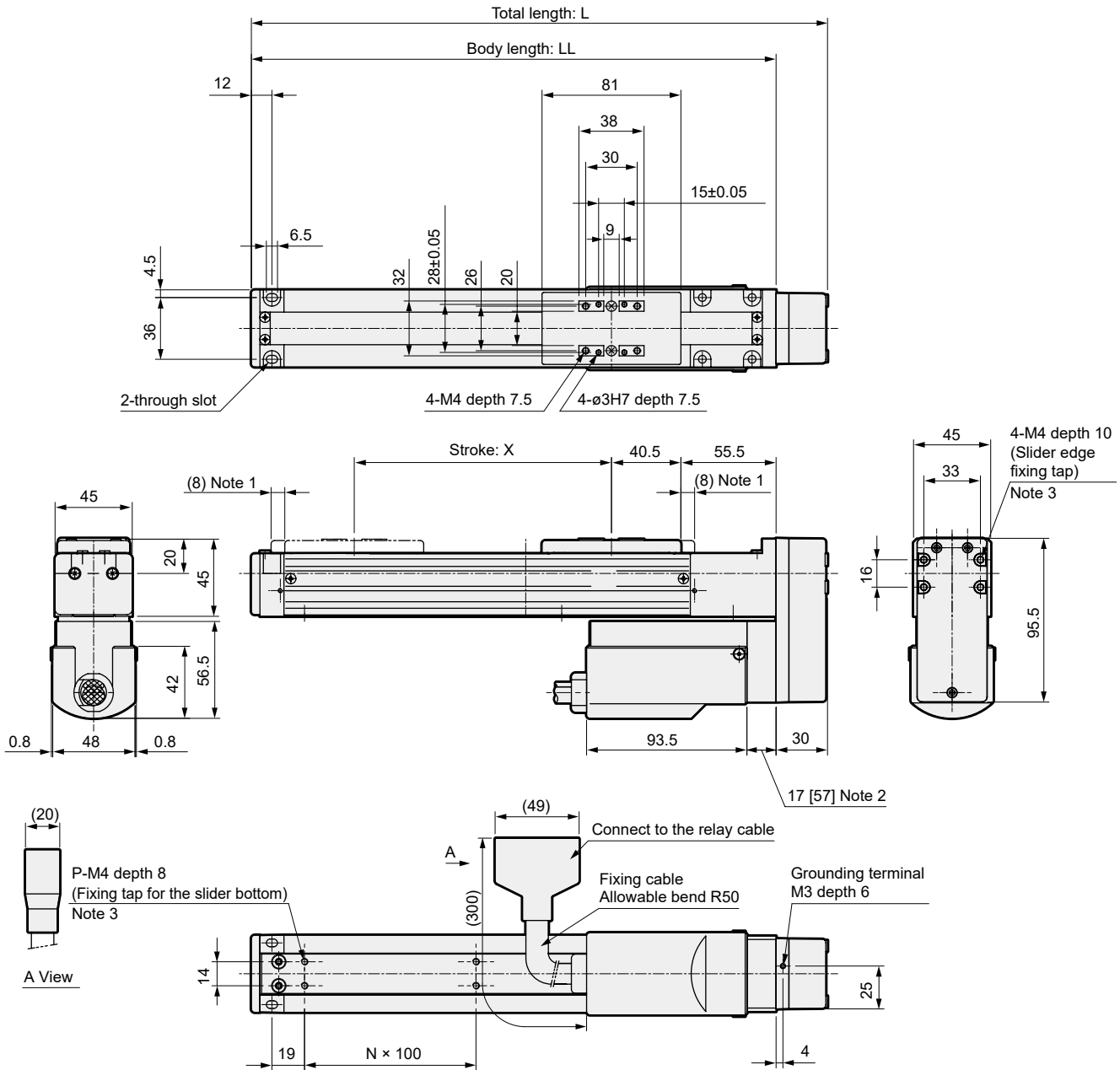
Note 2: The numbers within the [] are the dimensions with the brake

Note 3: Be sure to also mount and use the fixing tap for the slider bottom when using the fixing tap for the slider edge.

Stroke	Code	05	10	15	20	25	30	35	40	45	50
	X (mm)	50	100	150	200	250	300	350	400	450	500
Total length L (mm)		236	286	336	386	436	486	536	586	636	686
Body length LL (mm)		206	256	306	356	406	456	506	556	606	656
L3 (mm)		151	201	251	301	351	401	451	501	551	601
Number of mounting holes P		4	6	6	8	8	10	10	12	12	14
Number of mounting hole intervals N		1	2	2	3	3	4	4	5	5	6
Weight (kg)	Without brake	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.7
	With brake	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0

Dimensions

● ERL2-45D (bottom mounting)



Note 1: Operating range during origin return

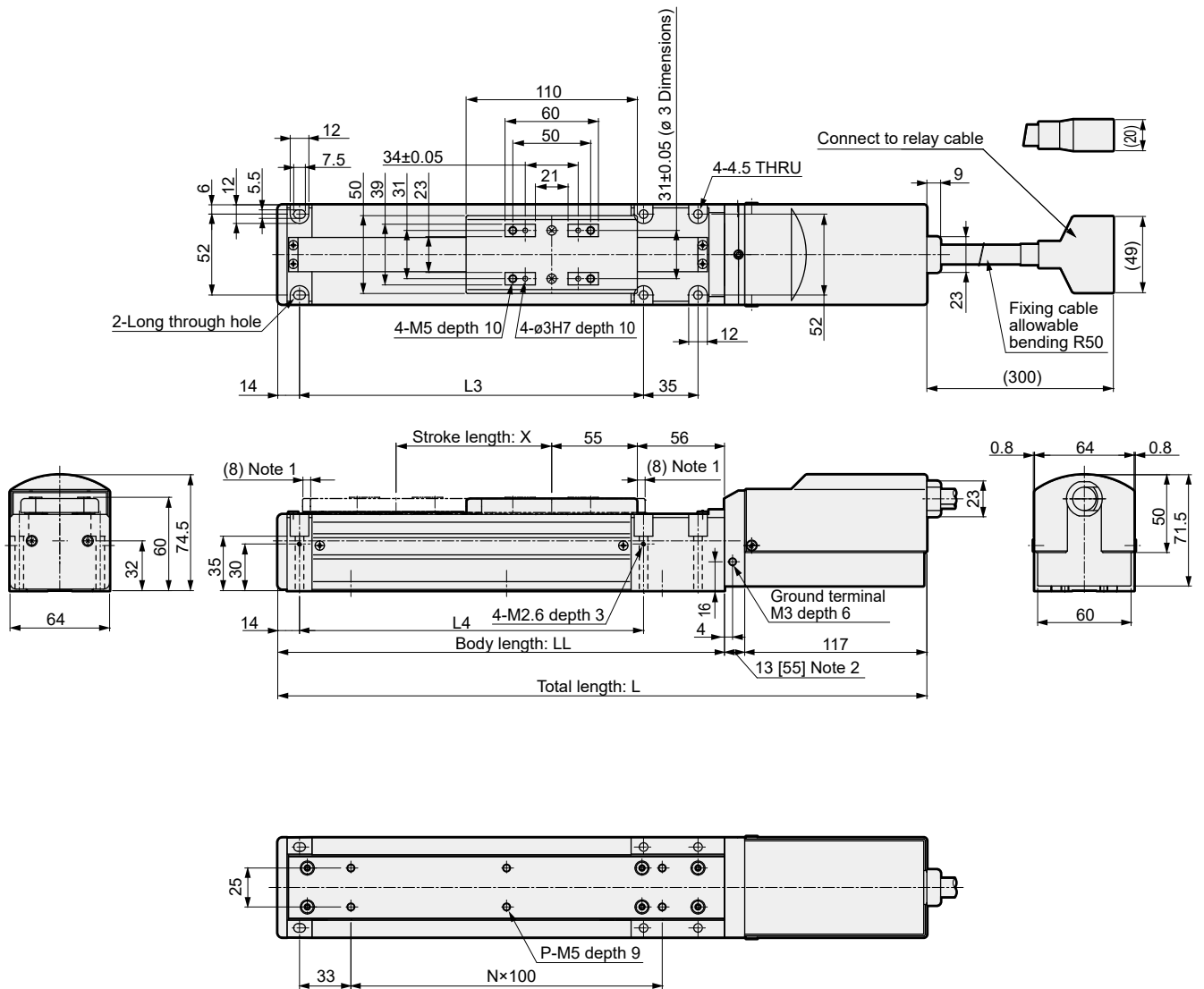
Note 2: The numbers within the [] are the dimensions with the brake

Note 3: Be sure to also mount and use the fixing tap for the slider bottom when using the fixing tap for the slider edge.

Stroke	Code	05	10	15	20	25	30	35	40	45	50
	X (mm)	50	100	150	200	250	300	350	400	450	500
Total length L (mm)		—	—	336	386	436	486	536	586	636	686
Body length LL (mm)		—	—	306	356	406	456	506	556	606	656
Number of mounting holes P		—	—	4	4	6	6	8	8	10	10
Number of mounting hole intervals N		—	—	1	1	2	2	3	3	4	4
Weight (kg)	Without brake	—	—	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.7
	With brake	—	—	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0

Dimensions

● ERL2-60E (standard mounting straight)



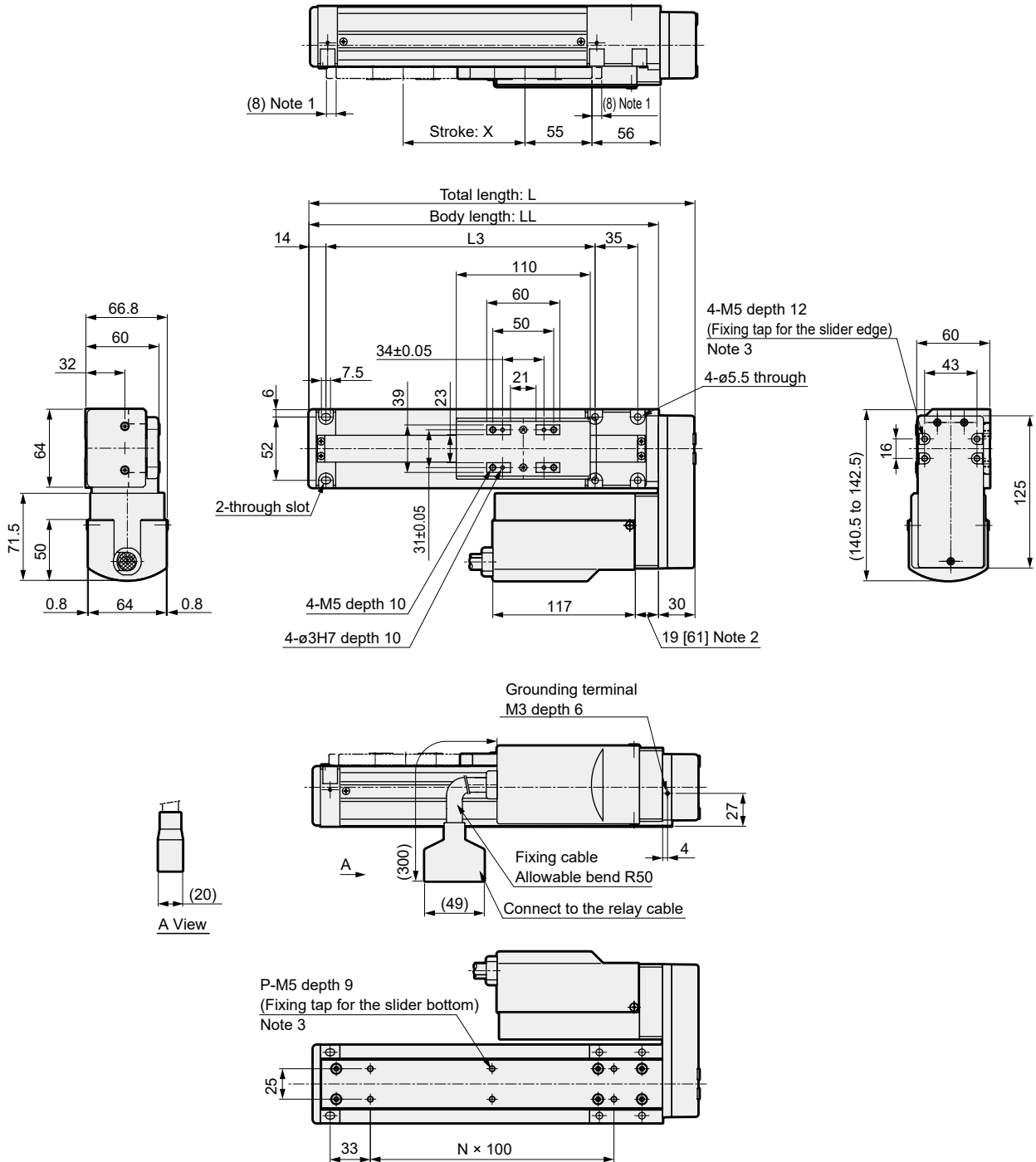
Note 1: Operating range during origin return

Note 2: The numbers within the [] are the dimensions with the brake

Stroke	Code	05	10	15	20	25	30	35	40	45	50	55	60	70
	X (mm)	50	100	150	200	250	300	350	400	450	500	550	600	700
Total length L (mm)	Without brake	367	417	467	517	567	617	667	717	767	817	867	917	1017
	With brake	409	459	509	559	609	659	709	759	809	859	909	959	1059
Body length LL (mm)		237	287	337	387	437	487	537	587	637	687	737	787	887
L3 (mm)		171	221	271	321	371	421	471	521	571	621	671	721	821
L4 (mm)		171	221	271	321	371	421	471	521	571	621	671	721	821
Number of mounting holes P		4	6	6	8	8	10	10	12	12	14	14	16	18
Number of mounting hole intervals N		1	2	2	3	3	4	4	5	5	6	6	7	8
Weight (kg)	Without brake	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.8
	With brake	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.4

Dimensions

● ERL2-60R (right-hand mounting)



Note 1: Operating range during origin return

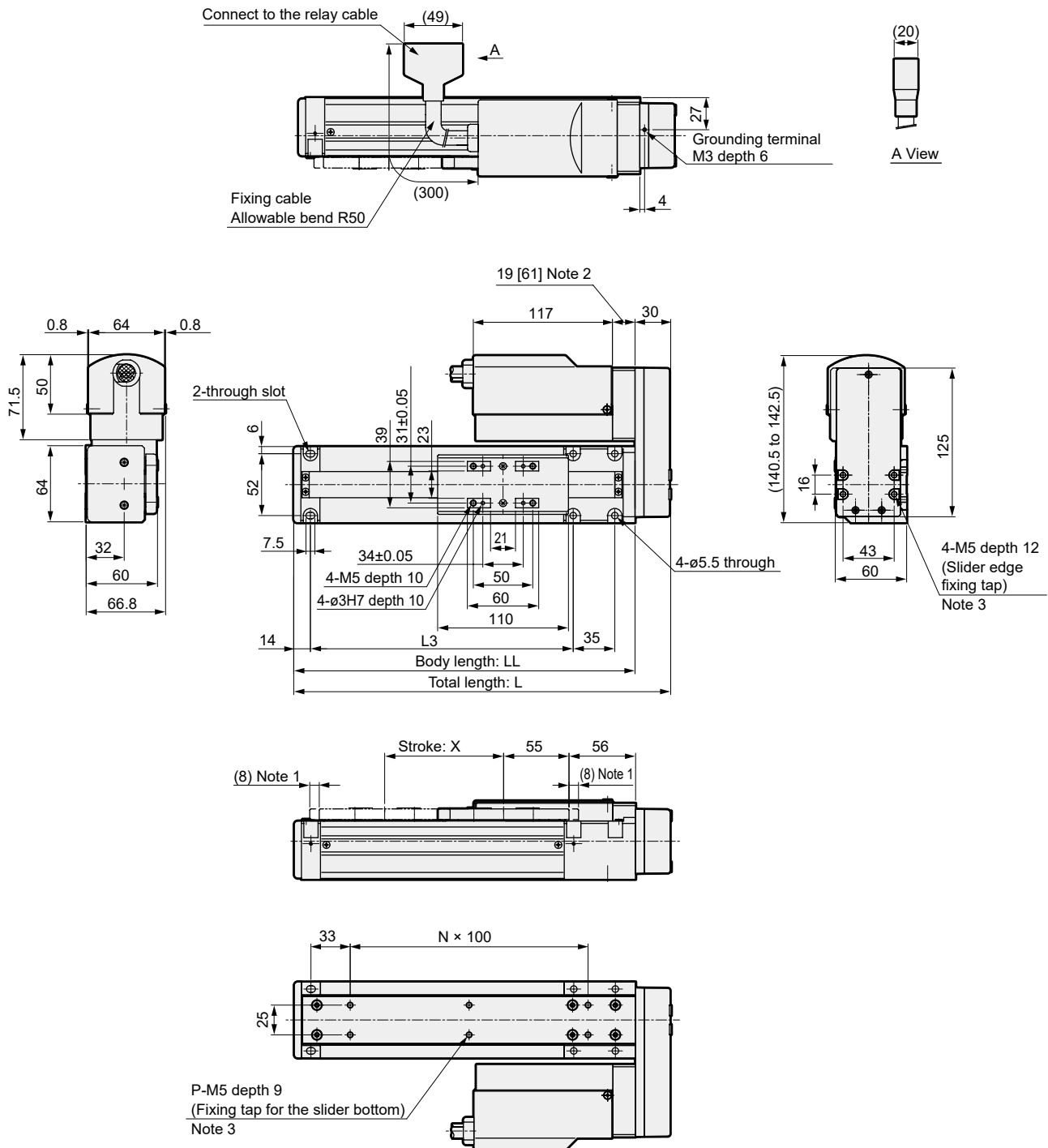
Note 2: The numbers within the [] are the dimensions with the brake

Note 3: Be sure to also mount and use the fixing tap for the slider bottom when using the fixing tap for the slider edge.

Stroke	Code	05	10	15	20	25	30	35	40	45	50	55	60	70
	X (mm)	50	100	150	200	250	300	350	400	450	500	550	600	700
Total length L (mm)		267	317	367	417	467	517	567	617	667	717	767	817	917
Body length LL (mm)		237	287	337	387	437	487	537	587	637	687	737	787	887
L3 (mm)		171	221	271	321	371	421	471	521	571	621	671	721	821
Number of mounting holes P		4	6	6	8	8	10	10	12	12	14	14	16	18
Number of mounting hole intervals N		1	2	2	3	3	4	4	5	5	6	6	7	8
Weight (kg)	Without brake	3.7	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.3
	With brake	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.9

Dimensions

● ERL2-60L (left-hand mounting)



Note 1: Operating range during origin return

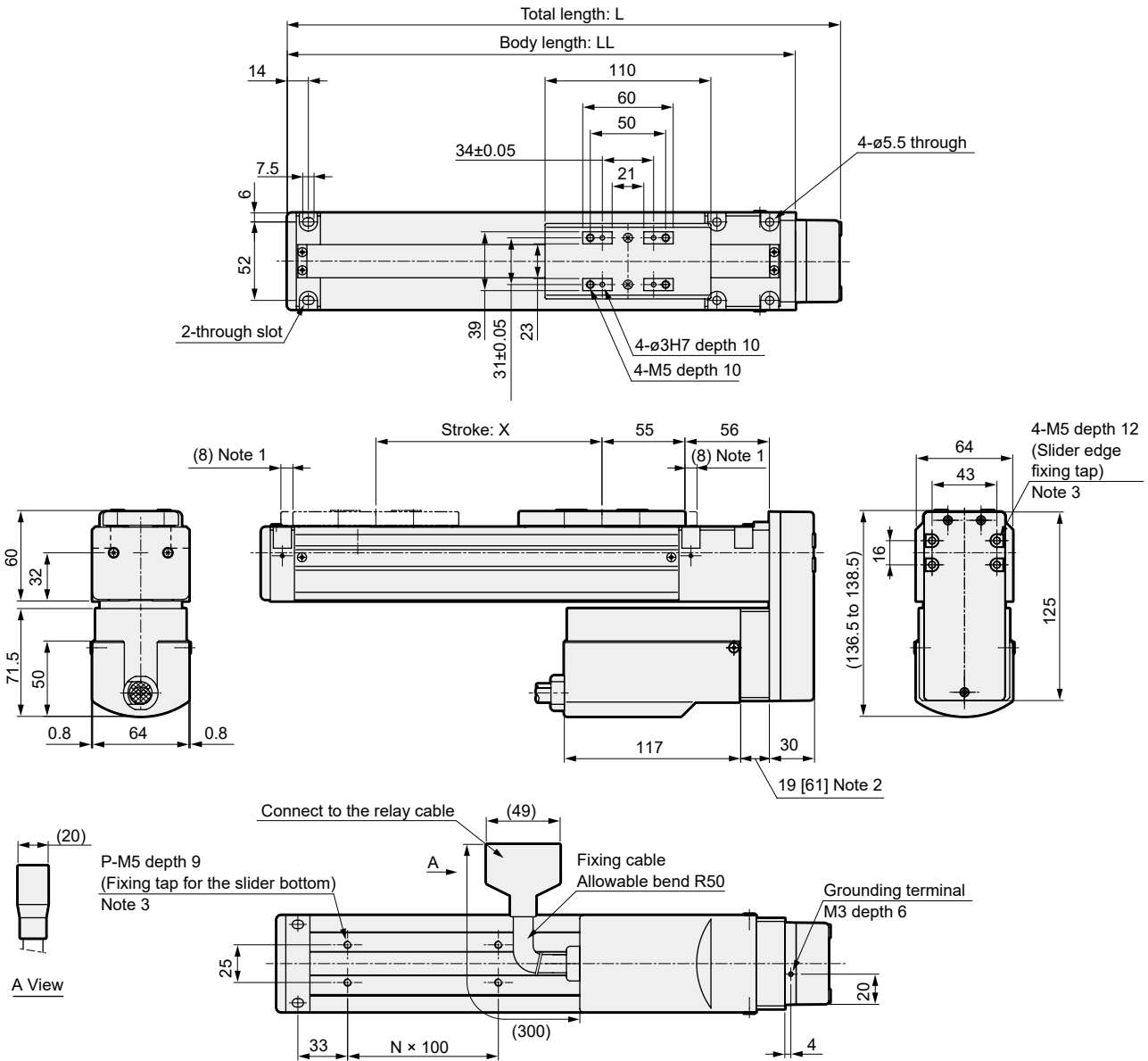
Note 2: The numbers within the [] are the dimensions with the brake

Note 3: Be sure to also mount and use the fixing tap for the slider bottom when using the fixing tap for the slider edge.

Stroke	Code	05	10	15	20	25	30	35	40	45	50	55	60	70
	X (mm)	50	100	150	200	250	300	350	400	450	500	550	600	700
Total length L (mm)		267	317	367	417	467	517	567	617	667	717	767	817	917
Body length LL (mm)		237	287	337	387	437	487	537	587	637	687	737	787	887
L3 (mm)		171	221	271	321	371	421	471	521	571	621	671	721	821
Number of mounting holes P		4	6	6	8	8	10	10	12	12	14	14	16	18
Number of mounting hole intervals N		1	2	2	3	3	4	4	5	5	6	6	7	8
Weight (kg)	Without brake	3.7	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.3
	With brake	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.9

Dimensions

● ERL2-60D (bottom mounting)



Note 1: Operating range during origin return

Note 2: The numbers within the [] are the dimensions with the brake

Note 3: Be sure to also mount and use the fixing tap for the slider bottom when using the fixing tap for the slider edge.

Stroke	Code	05	10	15	20	25	30	35	40	45	50	55	60	70
	X (mm)	50	100	150	200	250	300	350	400	450	500	550	600	700
Total length L (mm)		—	—	367	417	467	517	567	617	667	717	767	817	917
Body length LL (mm)		—	—	337	387	437	487	537	587	637	687	737	787	887
Number of mounting holes P		—	—	4	4	6	6	8	8	10	10	12	12	14
Number of mounting hole intervals N		—	—	1	1	2	2	3	3	4	4	5	5	6
Weight (kg)	Without brake	—	—	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.3
	With brake	—	—	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.9

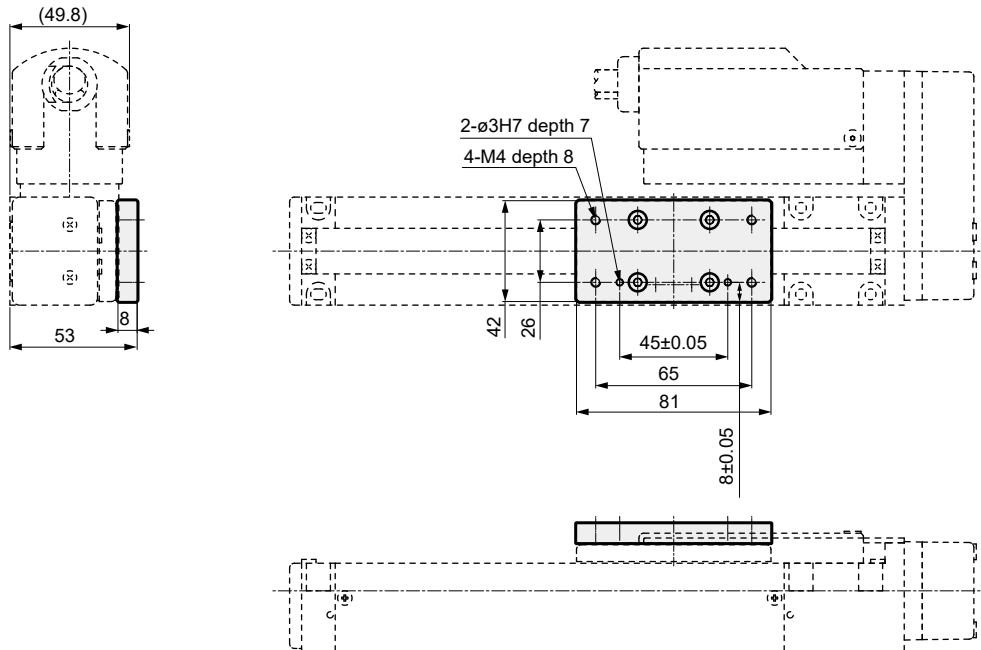
ERL2 Optional parts

Use the following slider spacer kit with the ERL2 if the workpiece mounted on the slider interferes with the motor.

● Slider spacer kit: SSP

ERL2-45 model number: EA-45-SSP

Dimensions



ERL2-60 model number: EA-60-SSP

Dimensions

