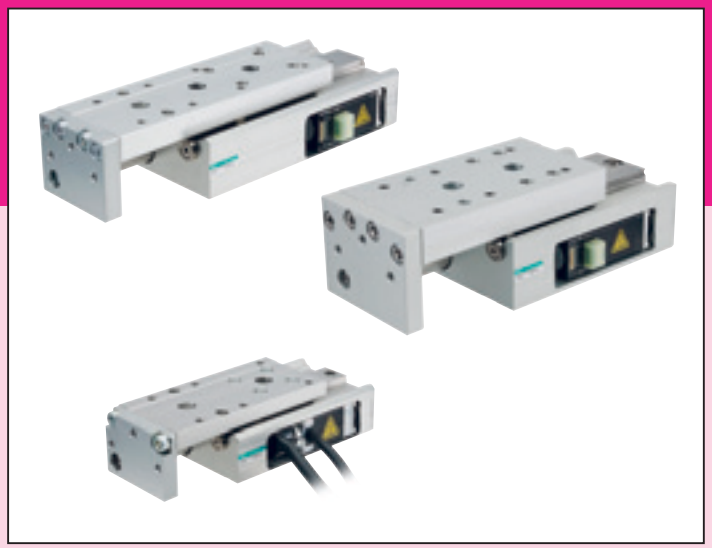
FLCR

Table type

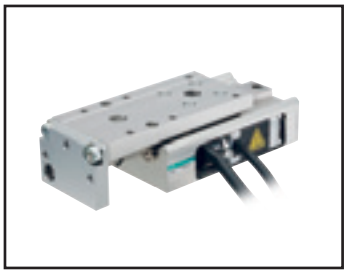
Electric actuator
Motor specification



CONTENTS

FLCR Series variation

Model No.	Motor size	Screw lead (mm)	Max. load capacity (kg)		Stroke and max. speed (mm/s)			Maximum pressing force (N)
			Horizontal	Vertical	50 mm	75 mm	100 mm	
FLCR-16	□20	2	4	4	100 mm/s			90
		8	3	0.5	300			20
FLCR-20	□25	2	5.5	6	100			150
		8	5	0.8	300			55
FLCR-25	□25L	2	11	8.5	100			210
		6	11	3	300			90



Electric actuator Table

FLCR-16

□ 20 stepper motor

For applicable controller ECR, 48 V and 24 V power supplies can be used.
For applicable controller ECG, 24 V power supplies can be used.

How to order

FLCR - 16 (A) G (B) 02 (C) 050 (D) N (E) C (F) N - L (G) S03 (H)

A Size

16

B Applicable controller *1

G	ECG
Blank	ECR

C Screw lead

02	2 mm
08	8 mm

D Stroke length

050	50 mm
075	75 mm
100	100 mm

E Brake

N	None
B	With brake (only with ECG)

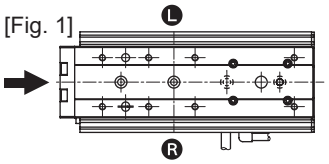
F Encoder

C	Incremental encoder

G Connector leadout direction *2

L	Left surface
R	Right surface

[Fig. 1]



H Relay cable *3

N00	None
S01	Fixing cable 1 m
S03	Fixing cable 3 m
S05	Fixing cable 5 m
S10	Fixing cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 45 or page 59.
*2 Refer to Figure 1.
*3 Refer to page 55 or page 70 for relay cable dimensions.

Specifications

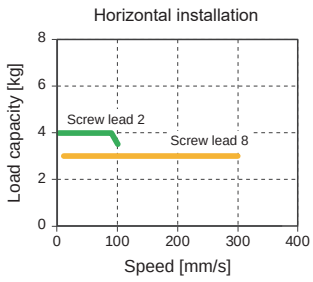
Motor		□ 20 stepper motor	
Encoder type		Incremental encoder	
Drive method		Ball screw (ø6) + belt	
Stroke	mm	50, 75, 100	
Screw lead	mm	2	8
Max. load capacity *1, *2	kg Horizontal	4 (4)	3 (3)
	Vertical	4 (4)	0.5 (0.5)
Operation speed range *3	mm/s	2 to 100 (100)	10 to 300 (250)
Maximum pressing force	N	90	20
Pressing operation speed range	mm/s	2 to 20	5 to 20
Repeatability	mm	±0.02	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	[50st] MP:17.8, MY:17.8, MR:19.2	
		[75 st or greater]: MP: 37.3, MY: 37.3, MR: 19.2	
Motor power supply voltage		24 VDC ±10% or 48 VDC ±10%	
Motor Max. instantaneous current	A	1.5	
Brake: Model, power supply voltage		Non-excitation actuated type, 24 VDC (+ 10% / -5%)	
Brake: Power consumption	W	1	
Brake: Holding force	N	51	9
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temp, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temp, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	
Degree of protection		IP40	

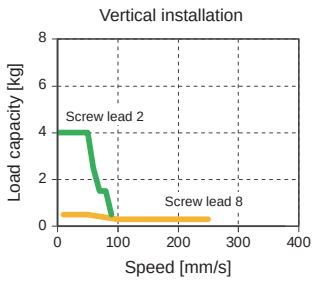
*1 The values in ( ) are at 24 VDC.
*2 Maximum value at acceleration/deceleration of 0.3 G. Load capacity varies according to acceleration/deceleration and speed. Refer to page 27 for details.
*3 The maximum speed values in ( ) are at 24 VDC.

Speed and load capacity

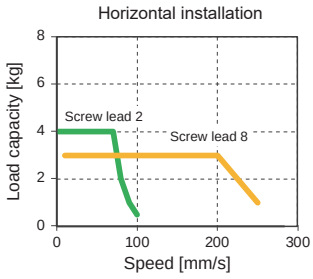
[At 48 VDC]

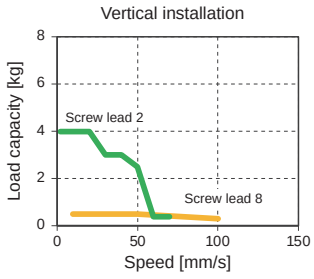
*Acceleration/deceleration 0.3 G





[At 24 VDC]





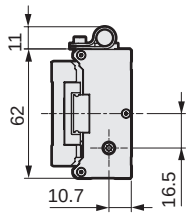
Stroke length and max. speed

(mm/s)

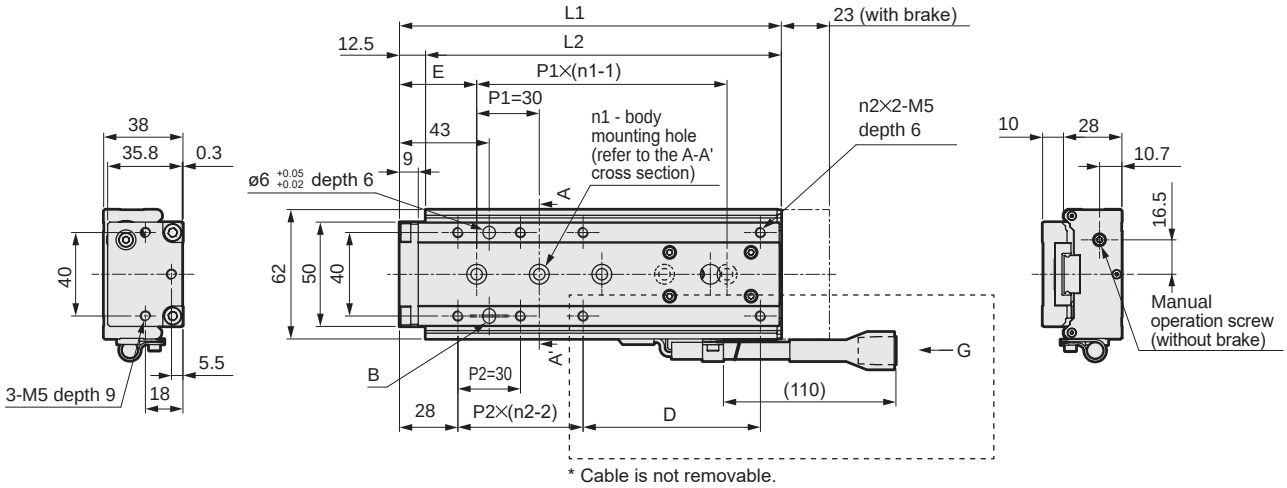
Screw lead	Power supply voltage	Stroke length
		50 to 100
2	48 VDC	100
	24 VDC	100
8	48 VDC	300
	24 VDC	250

Dimensions

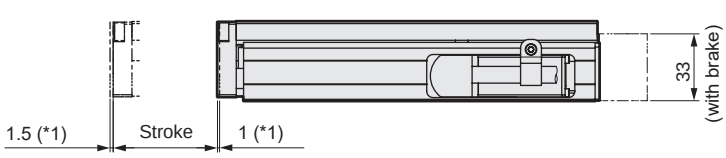
● FLCR-16



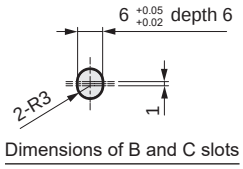
Connector leadout direction L (Left)



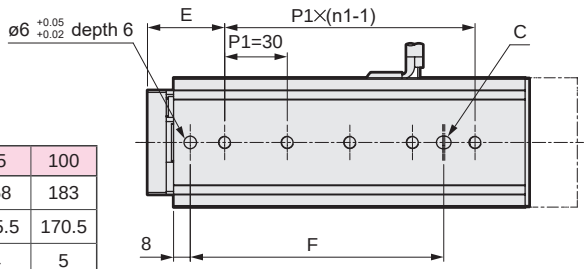
* Cable is not removable.

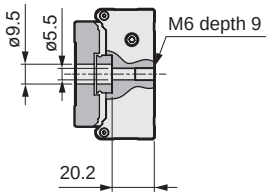


*1 Operating range to the mechanical stopper.

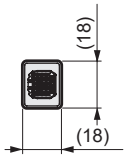


Dimensions of B and C slots





A-A' cross section



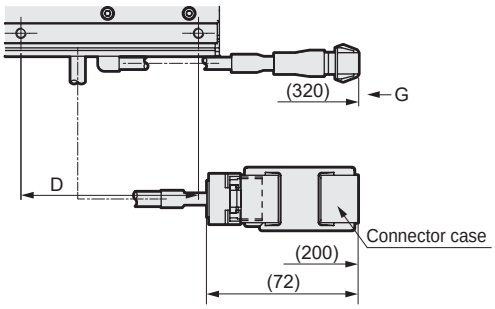
G arrow view

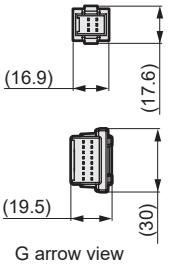
[Dimensions by stroke]

Stroke		50	75	100
L1		116	158	183
L2		103.5	145.5	170.5
n1		3	4	5
n2		3	4	4
D		48	60	85
E		35.5	39	37
F		60	93.5	121.5
Weight kg	without brake	0.8	1.1	1.3
	with brake	0.9	1.2	1.4

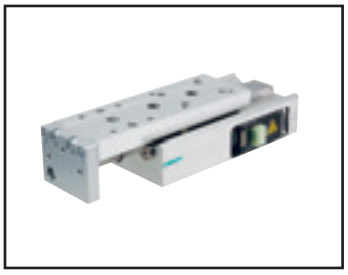
The figure shows connector leadout direction R (right side).

* When connecting ECR, the dotted lines should be as shown below.





G arrow view



Electric actuator Table

FLCR-20

□25 stepper motor

For applicable controller ECR, 48 V and 24 V power supplies can be used.
For applicable controller ECG, 24 V power supplies can be used.

How to order

FLCR - 20 (A) G (B) 02 (C) 050 (D) N (E) C (F) N - L (G) S03 (H)

A Size

20

B Applicable controller *1

G	ECG
Blank	ECR

C Screw lead

02	2 mm
08	8 mm

D Stroke length

050	50 mm
075	75 mm
100	100 mm

E Brake

N	None
B	With brake (only with ECG)

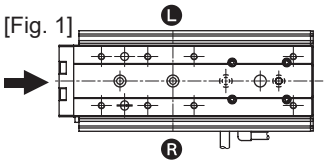
F Encoder

C	Incremental encoder

G Connector leadout direction *2

L	Left surface
R	Right surface

[Fig. 1]



H Relay cable *3

N00	None
S01	Fixing cable 1 m
S03	Fixing cable 3 m
S05	Fixing cable 5 m
S10	Fixing cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 45 or page 59.
*2 Refer to Figure 1.
*3 Refer to page 55 or page 70 for relay cable dimensions.

Specifications

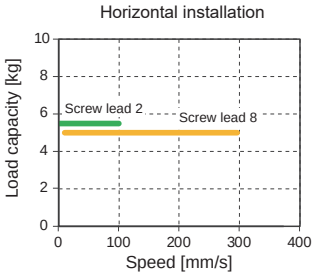
Motor		□25 stepper motor	
Encoder type		Incremental encoder	
Drive method		Ball screw (ø6) + belt	
Stroke	mm	50, 75, 100	
Screw lead	mm	2	8
Max. load capacity *1, *2	kg Horizontal	5.5 (5.5)	5 (5)
	Vertical	6 (6)	0.8 (0.8)
Operation speed range *3	mm/s	2 to 100 (100)	10 to 300 (300)
Maximum pressing force	N	150	55
Pressing operation speed range	mm/s	2 to 20	5 to 20
Repeatability	mm	±0.02	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	[50st] MP:31.1, MY:31.1, MR:37.6	
		[75 st or greater]: MP: 56.2, MY: 56.2, MR: 37.6	
Motor power supply voltage		24 VDC ±10% or 48 VDC ±10%	
Motor Max. instantaneous current	A	3	
Brake	Model, power supply voltage	Non-excitation actuated type, 24 VDC (+ 10% / -5%)	
	Power consumption W	1	
	Holding force N	77	15
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temp, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temp, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	
Degree of protection		IP40	

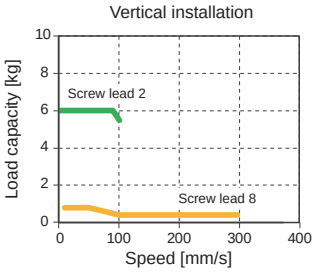
*1 The values in ( ) are at 24 VDC.
*2 Maximum value at acceleration/deceleration of 0.3 G. Load capacity varies according to acceleration/deceleration and speed. Refer to page 27 for details.
*3 The maximum speed values in ( ) are at 24 VDC.

Speed and load capacity

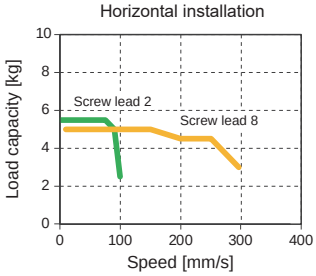
[At 48 VDC]

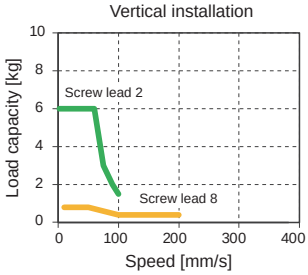
*Acceleration/deceleration 0.3 G





[At 24 VDC]





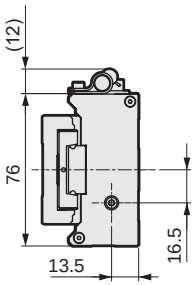
Stroke length and max. speed

(mm/s)

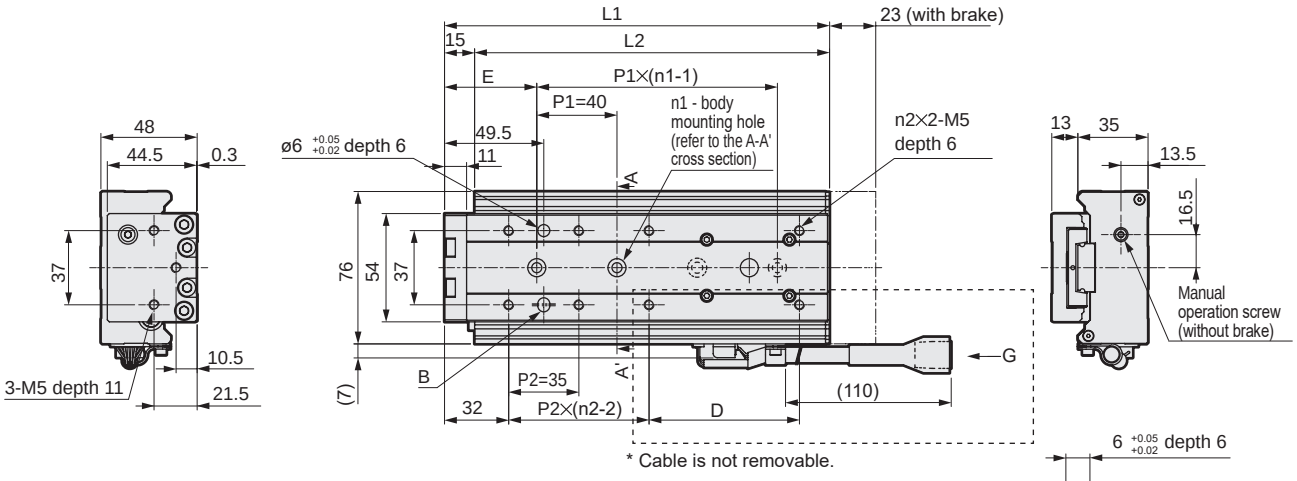
Screw lead	Power supply voltage	Stroke length
		50 to 100
2	48 VDC	100
	24 VDC	100
8	48 VDC	300
	24 VDC	300

Dimensions

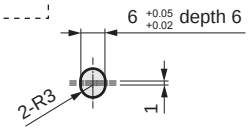
● FLCR-20



Connector leadout direction L (Left)

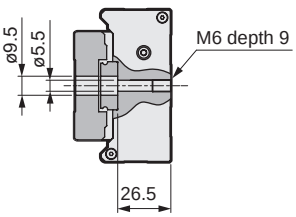


* Cable is not removable.



Dimensions of B and C slots

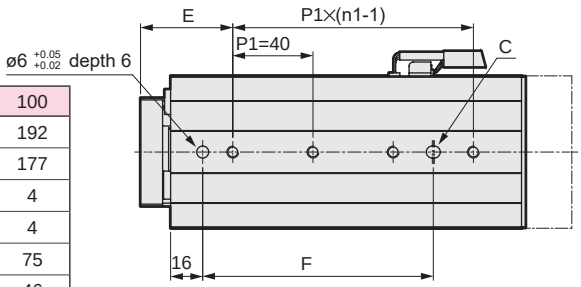
*1 Operating range to the mechanical stopper.

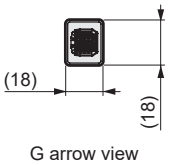


A-A' cross section

[Dimensions by stroke]

Stroke		50	75	100
L1		130.5	167	192
L2		115.5	152	177
n1		2	3	4
n2		3	4	4
D		48.5	50	75
E		49	46	46
F		38	75	115
Weight kg	without brake	1.3	1.7	1.9
	with brake	1.4	1.8	2.0

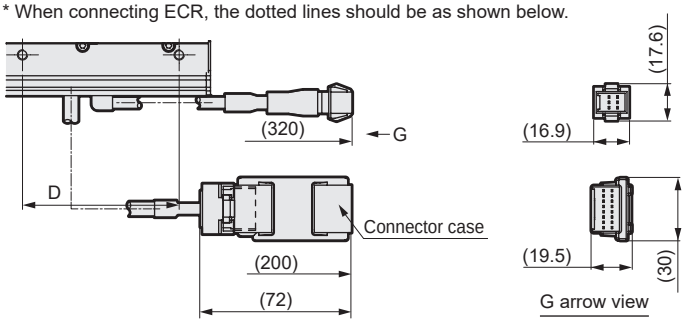




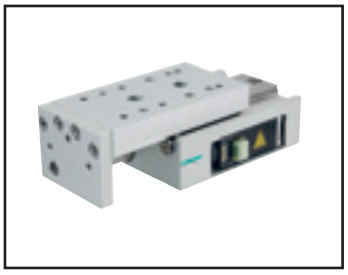
G arrow view

The figure shows connector leadout direction R (right side).

* When connecting ECR, the dotted lines should be as shown below.



G arrow view



Electric actuator Table

FLCR-25

☐ 25L stepper motor

For applicable controller ECR, 48 V and 24 V power supplies can be used.
For applicable controller ECG, 24 V power supplies can be used.

How to order

FLCR - 25 (A) G (B) 02 (C) 050 (D) N (E) C (F) N - L (G) S03 (H)

(A) Size

25

(B) Applicable controller *1

G	ECG
Blank	ECR

(C) Screw lead

02	2 mm
06	6 mm

(D) Stroke length

050	50 mm
075	75 mm
100	100 mm

(E) Brake

N	None
B	With brake (only with ECG)

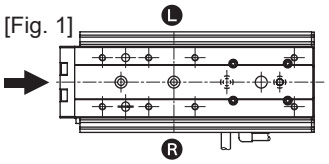
(F) Encoder

C	Incremental encoder

(G) Connector leadout direction *2

L	Left surface
R	Right surface

[Fig. 1]



(H) Relay cable *3

N00	None
S01	Fixing cable 1 m
S03	Fixing cable 3 m
S05	Fixing cable 5 m
S10	Fixing cable 10 m
R01	Movable cable 1 m
R03	Movable cable 3 m
R05	Movable cable 5 m
R10	Movable cable 10 m

*1 Select the controller from page 45 or page 59.
*2 Refer to Figure 1.
*3 Refer to page 55 or page 70 for relay cable dimensions.

Specifications

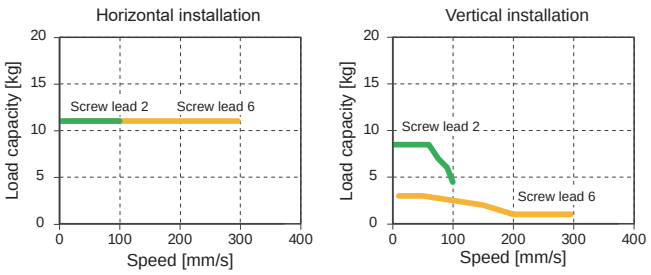
Motor		☐ 25L stepper motor	
Encoder type		Incremental encoder	
Drive method		Ball screw (ø10) + belt	
Stroke	mm	50, 75, 100	
Screw lead	mm	2	6
Max. load capacity *1, *2	kg Horizontal	11 (11)	11 (11)
	Vertical	8.5 (8.5)	3 (3)
Operation speed range *3	mm/s	2 to 100 (75)	7 to 300 (200)
Maximum pressing force	N	210	90
Pressing operation speed range	mm/s	2 to 20	5 to 20
Repeatability	mm	±0.02	
Lost motion	mm	0.1 or less	
Static allowable moment	N·m	[50st] MP:65.1, MY:65.1, MR:116.3	
		[75 st or greater]: MP: 127.5, MY: 127.5, MR: 116.3	
Motor power supply voltage		24 VDC ±10% or 48 VDC ±10%	
Motor Max. instantaneous current	A	4.5	
Brake	Model, power supply voltage	Non-excitation actuated type, 24 VDC (+ 10% / -5%)	
	Power consumption W	1	
	Holding force N	109	38
Insulation resistance		10 MΩ, 500 VDC	
Withstand voltage		500 VAC for 1 minute	
Operating ambient temp, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temp, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	
Degree of protection		IP40	

*1 The values in ( ) are at 24 VDC.
*2 Maximum value at acceleration/deceleration of 0.3 G. Load capacity varies according to acceleration/deceleration and speed. Refer to page 27 for details.
*3 The maximum speed values in ( ) are at 24 VDC.

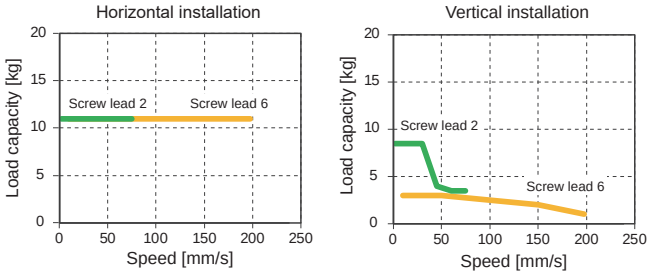
Speed and load capacity

[At 48 VDC]

*Acceleration/deceleration 0.3 G



[At 24 VDC]



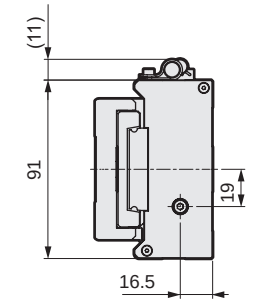
Stroke length and max. speed

(mm/s)

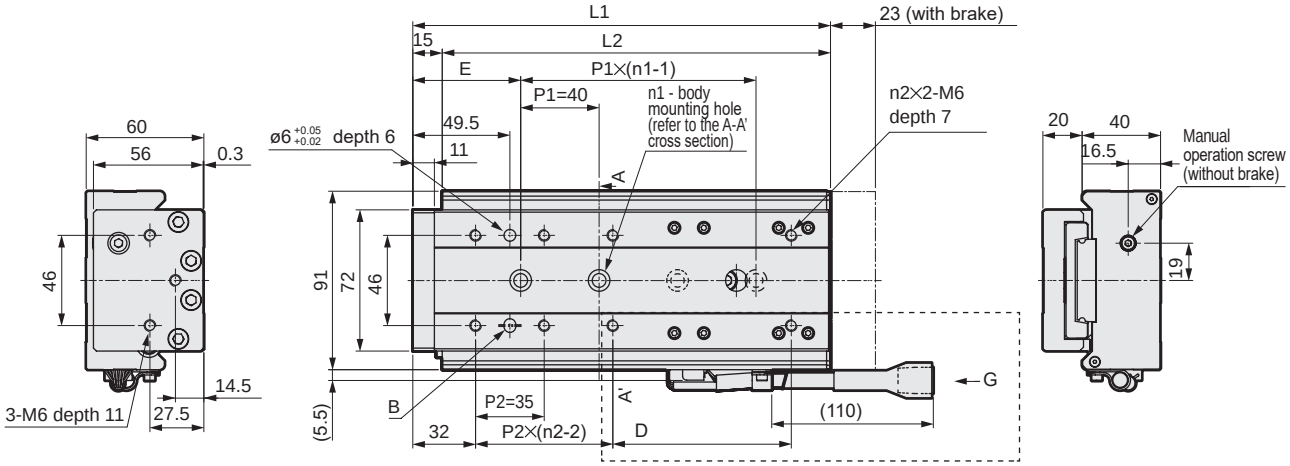
Screw lead	Power supply voltage	Stroke length 50 to 100
2	48 VDC	100
	24 VDC	75
6	48 VDC	300
	24 VDC	200

Dimensions

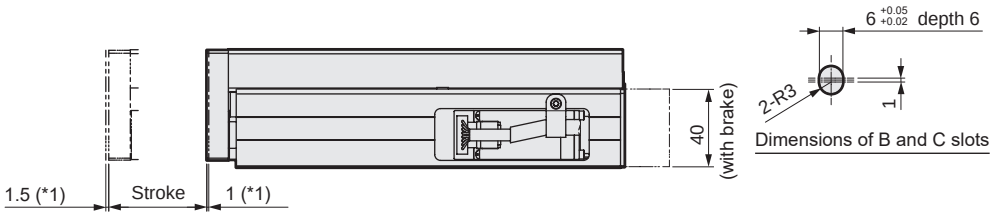
● FLCR-25



Connector leadout direction L (Left)



* Cable is not removable.



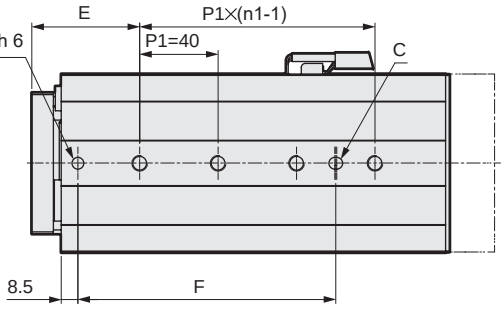
Dimensions of B and C slots

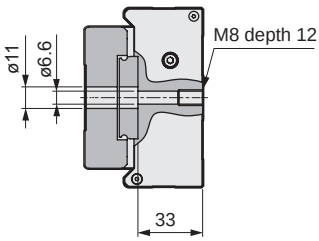
*1 Operating range to the mechanical stopper.

[Dimensions by stroke]

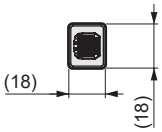
Stroke		50	75	100
L1		142.5	188	213
L2		127.5	173	198
n1		2	3	4
n2		3	4	4
D		55.5	66	91
E		60.5	60	55
F		57	96.5	131.5
Weight kg	without brake	2.3	3.0	3.3
	with brake	2.5	3.2	3.5

The figure shows connector leadout direction R (right side).



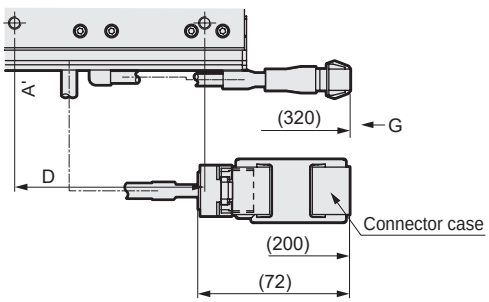


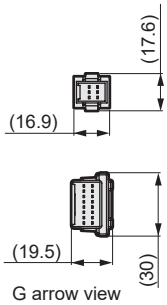
A-A' cross section



G arrow view

* When connecting ECR, the dotted lines should be as shown below.





G arrow view