

# FLSH

2-finger Gripper



## CONTENTS

Product introduction	Intro Pages
● Specifications/How to order/Dimensions	
· FLSH-16	2
· FLSH-20	4
· FLSH-25	6
● Model selection	8
● Technical data	10
⚠ Safety precautions	58
Model Selection Check Sheet	68

### FLSH Series variation

Model No.	Motor size	Stroke length and max. speed (mm/s)			Max. gripping power (N)
		6 mm	10 mm	14 mm	
FLSH-16	<input type="checkbox"/> 20	50 mm/s			20
FLSH-20	<input type="checkbox"/> 25		50		42
FLSH-25	<input type="checkbox"/> 25L			50	65



Electric actuator 2-finger gripper

# FLSH-16

20 stepper motor



## How to order

FLSH - 16 H1 06 N C N - F S03

**A Size**

16
----

**B Screw lead**

H1 1.5 mm
-----------

**C Stroke length**

06 6 mm (one side 3 mm)
-------------------------

**D Encoder**

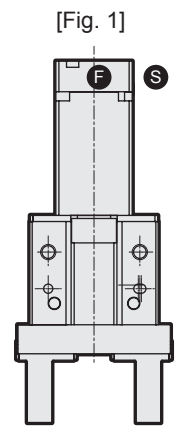
C Incremental encoder
-----------------------

**E Connector leadout direction \*1**

F Front
S Side

**F Relay cable \*2 \*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 Refer to Figure 1.  
 \*2 Select the controller from page 45.  
 \*3 Refer to page 55 for relay cable dimensions.

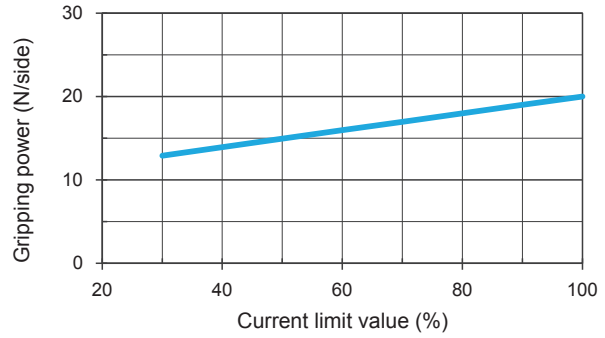
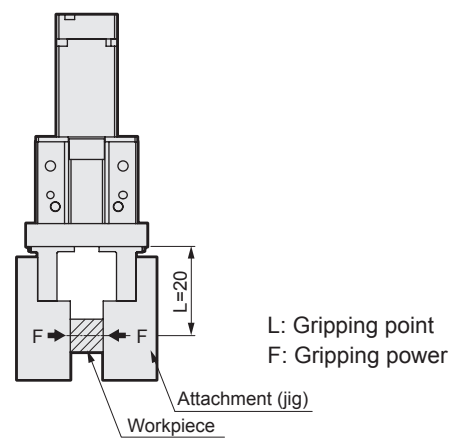
## Specifications

Motor	<input type="checkbox"/> 20 stepper motor
Encoder type	Incremental encoder
Drive method	Sliding screw
Stroke length mm	6 (one side 3)
Screw lead mm	1.5
Max. gripping power *1 N	20 (one side)
Open/close speed range mm/s	5 to 50 (one side)
Gripping speed range *1 mm/s	5 to 15 (one side)
Repeatability *2 mm	±0.02
Positioning repeatability *3 mm	±0.05 (one side)
Lost motion mm	0.3 or less (one side)
Static allowable moment N·m	MP=0.68, MY=0.68, MR=1.36
Motor power supply voltage	24 VDC ±10% or 48 VDC ±10%
Motor section maximum instantaneous current A	1.2
Insulation resistance	10 MΩ, 500 VDC
Withstand voltage	500 VAC for 1 minute
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage ambient temperature, 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
Weight g	250

\*1 Gripping is done with pressing operation.  
 \*2 Repeatability indicates variation when the same workpiece is repeatedly gripped at the same power, under the same operation conditions.  
 \*3 The stop position will vary if positioning is repeatedly performed to the same point.

## Gripping power and current limit value

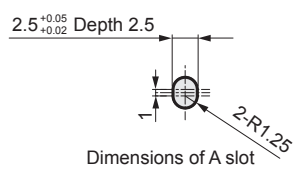
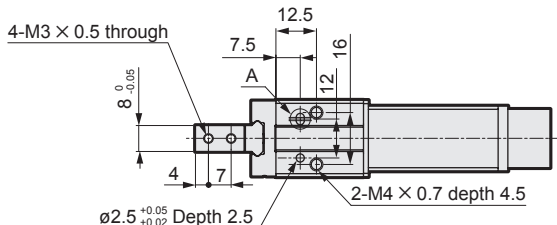
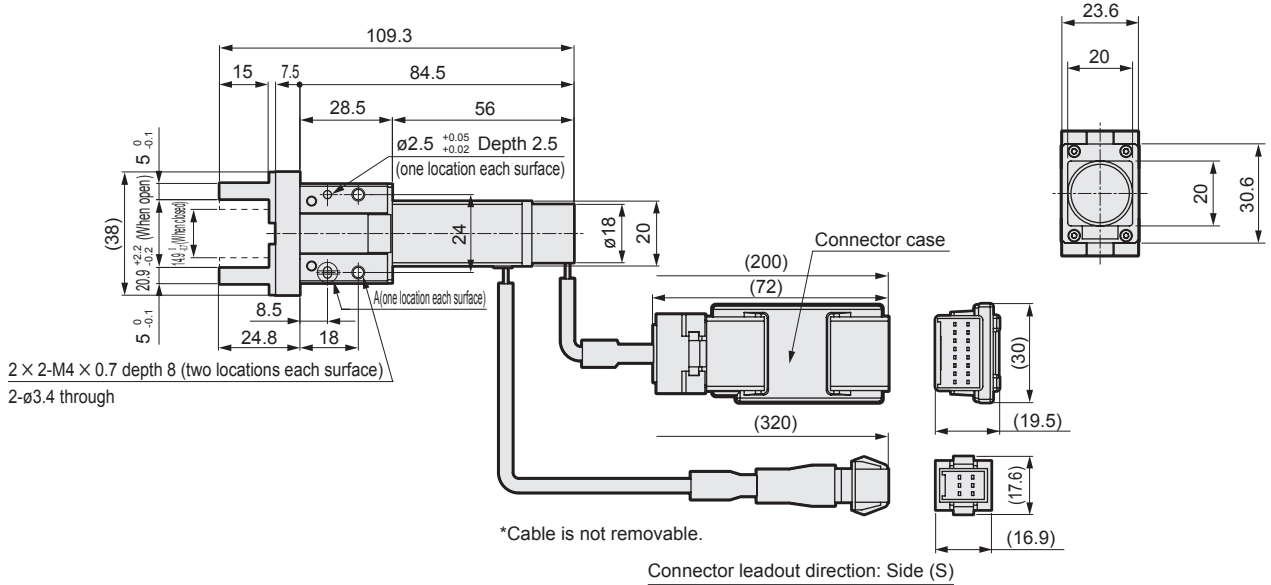
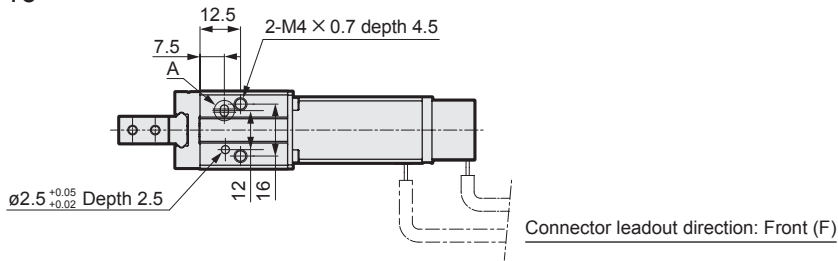
[At 24/48 VDC]



\*1 The gripping power and current limit value are merely guidelines. Power supply voltages, individual motor differences and variations in mechanical efficiency may result in differing actual values, even at the same current value.  
 \*2 At speed of 15 mm/s during pressing operation. (L20)

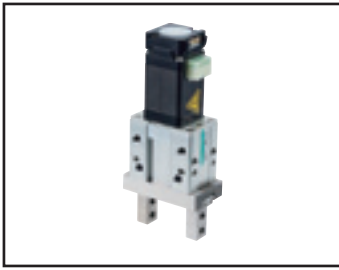
Dimensions

● FLSH-16



FLSH  
FLCR  
FGRC  
ECR  
(Controller)

Safety  
precautions



Electric actuator 2-finger gripper

# FLSH-20

25 stepper motor



## How to order

FLSH - 20 H1 10 N C N - F S03

**A** Size

20
----

**B** Screw lead

H1 1.5 mm
-----------

**C** Stroke length

10 10 mm (one side 5 mm)
--------------------------

**D** Encoder

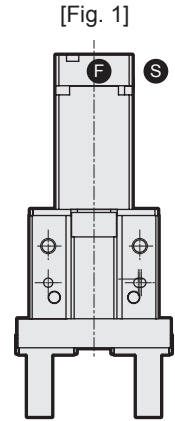
C Incremental encoder
-----------------------

**E** Connector leadout direction \*1

F Front
S Side

**F** Relay cable \*2 \*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 Refer to Figure 1.
- \*2 Select the controller from page 45.
- \*3 Refer to page 55 for relay cable dimensions.

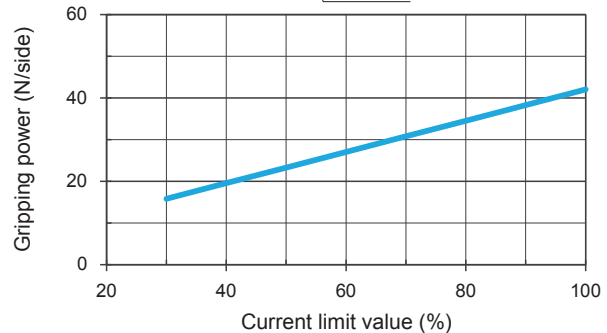
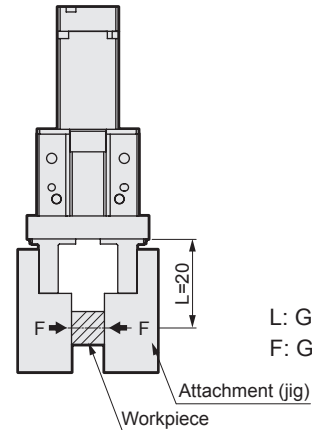
## Specifications

Motor	<input type="checkbox"/> 25 stepper motor
Encoder type	Incremental encoder
Drive method	Sliding screw
Stroke length mm	10 (one side 5)
Screw lead mm	1.5
Max. gripping power *1 N	42 (one side)
Open/close speed range mm/s	5 to 50 (one side)
Gripping speed range *1 mm/s	5 to 15 (one side)
Repeatability *2 mm	±0.02
Positioning repeatability *3 mm	±0.05 (one side)
Lost motion mm	0.3 or less (one side)
Static allowable moment N·m	MP=1.32, MY=1.32, MR=2.65
Motor power supply voltage	24 VDC ±10% or 48 VDC ±10%
Motor section maximum instantaneous current A	2.4
Insulation resistance	10 MΩ, 500 VDC
Withstand voltage	500 VAC for 1 minute
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage ambient temperature, 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
Weight g	380

- \*1 Gripping is done with pressing operation.
- \*2 Repeatability indicates variation when the same workpiece is repeatedly gripped at the same power, under the same operation conditions.
- \*3 The stop position will vary if positioning is repeatedly performed to the same point.

## Gripping power and current limit value

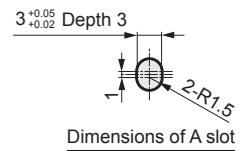
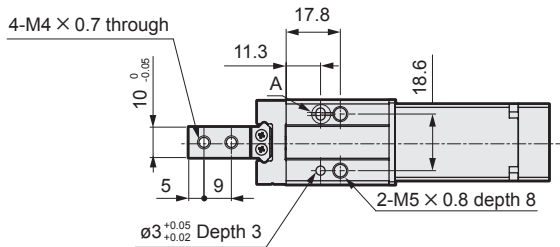
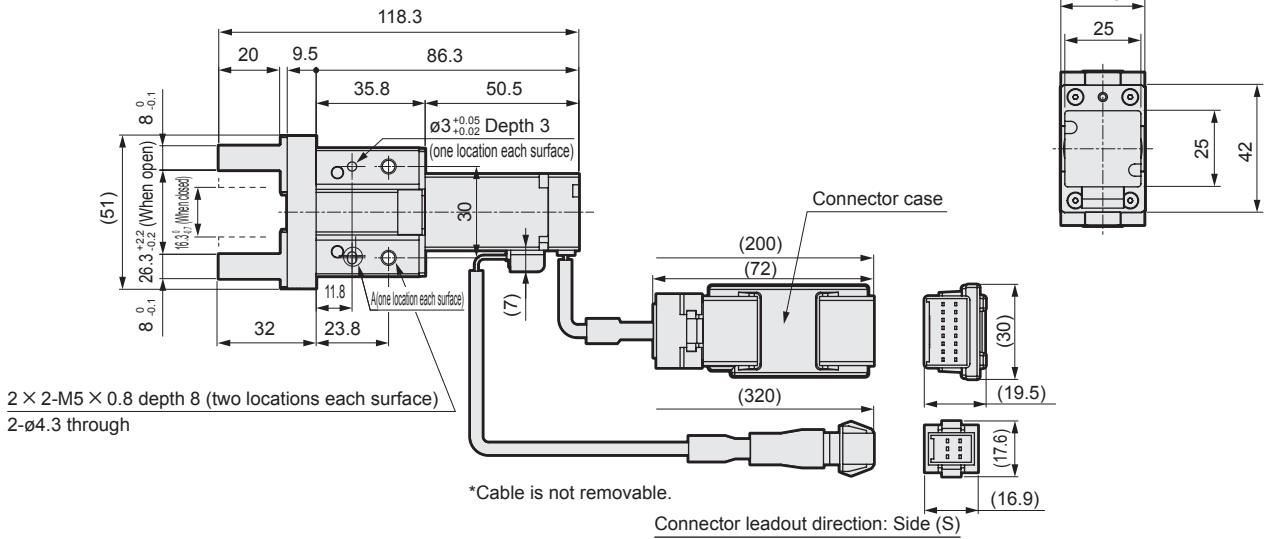
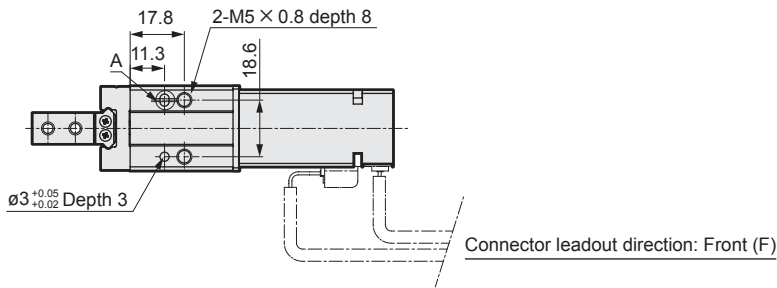
[At 24/48 VDC]



- \*1 The gripping power and current limit value are merely guidelines. Power supply voltages, individual motor differences and variations in mechanical efficiency may result in differing actual values, even at the same current value.
- \*2 At speed of 15 mm/s during pressing operation. (L20)

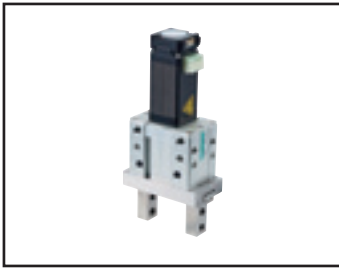
Dimensions

● FLSH-20



FLSH  
FLCR  
FGRC  
ECR (Controller)

Safety precautions



Electric actuator 2-finger gripper

# FLSH-25

25L stepper motor



## How to order

FLSH - 25 H1 14 N C N - F S03

**A Size**

25
----

**B Screw lead**

H1 1.5 mm
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**C Stroke length**

14 14 mm (one side 7 mm)
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**D Encoder**

C Incremental encoder
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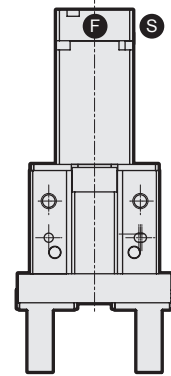
**E Connector leadout direction\*1**

F Front
S Side

**F Relay cable \*2 \*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

[Fig. 1]



- \*1 Refer to Figure 1.
- \*2 Select the controller from page 45.
- \*3 Refer to page 55 for relay cable dimensions.

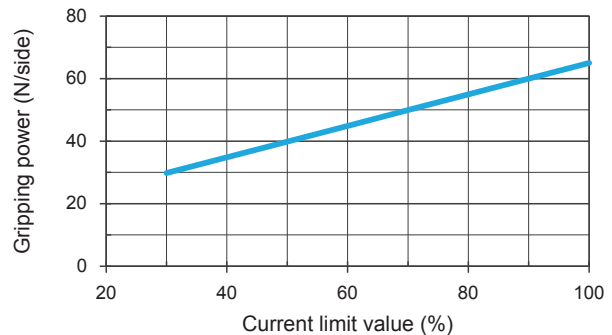
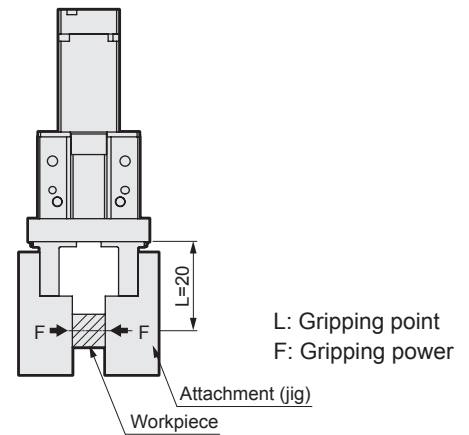
## Specifications

Motor	<input type="checkbox"/> 25L stepper motor
Encoder type	Incremental encoder
Drive method	Sliding screw
Stroke length mm	14 (one side 7)
Screw lead mm	1.5
Max. gripping power *1 N	65 (one side)
Open/close speed range mm/s	5 to 50 (one side)
Gripping speed range *1 mm/s	5 to 15 (one side)
Repeatability *2 mm	±0.02
Positioning repeatability *3 mm	±0.05 (one side)
Lost motion mm	0.3 or less (one side)
Static allowable moment N·m	MP=1.94, MY=1.94, MR=3.88
Motor power supply voltage	24 VDC ±10% or 48 VDC ±10%
Motor section maximum instantaneous current A	3.6
Insulation resistance	10 MΩ, 500 VDC
Withstand voltage	500 VAC for 1 minute
Operating ambient temperature, humidity	0 to 40 °C (no freezing) 35 to 80% RH (no condensation)
Storage ambient temperature, 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
Weight g	580

- \*1 Gripping is done with pressing operation.
- \*2 Repeatability indicates variation when the same workpiece is repeatedly gripped at the same power, under the same operation conditions.
- \*3 The stop position will vary if positioning is repeatedly performed to the same point.

## Gripping power and current limit value

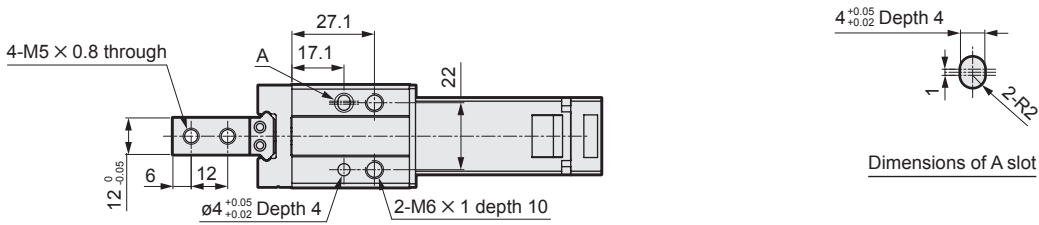
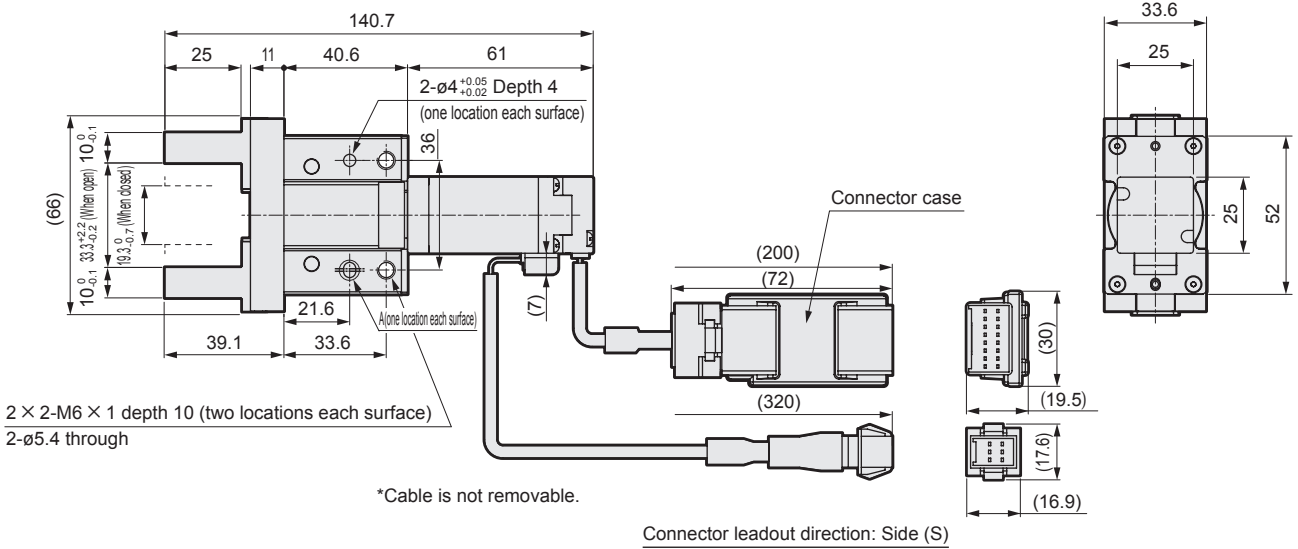
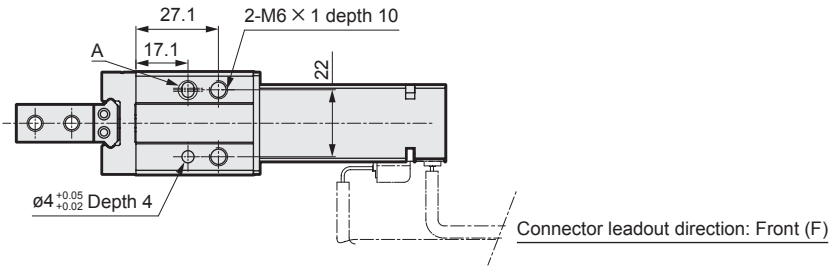
[At 24/48 VDC]



- \*1 The gripping power and current limit value are merely guidelines. Power supply voltages, individual motor differences and variations in mechanical efficiency may result in differing actual values, even at the same current value.
- \*2 At speed of 15 mm/s during pressing operation. (L20)

Dimensions

● FLSH-25



FLSH  
FLCR  
FGRC  
ECR (Controller)

Safety precautions