



Small Size Linear Motor Gripper

RCLE-GR5L

No controller required!

Approximately 40% more compact, super-small gripper.

Features

1

Super Small

By using the linear motor and coil spring mechanisms to open/close the fingers, it is approx. 40% smaller than conventional grippers.

2

Easy Control & Low Price

The fingers open and close via a DC24V ON/OFF switch in common with the solenoid. Big cost savings are achieved since no controller is required.

3

Energy-Saver

By adopting compression springs, power consumption is greatly reduced. There is no electric current used to grip the work part.

4

Maintenance Free

By using dry bearings, no lubrication is required.

5

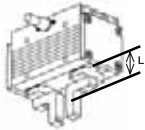
Option

A proximity sensor option is available to check the finger positions. The work part gripping condition can be monitored.

■ Model Items

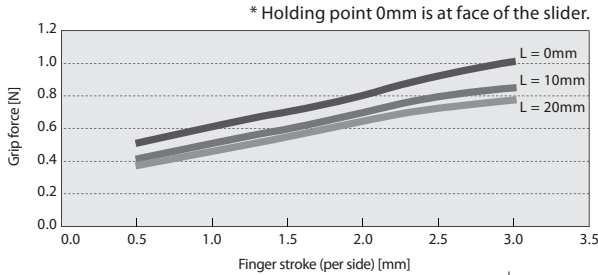
RCLE - GR5L - 6 - PS

Series	Type	Stroke	Option
		6 6mm (Per side 3mm)	
		(Blank) No option	
		PS With position sensor	



Correlation Diagram of Finger Stroke and Grip Force (Guideline)

Grip force measurement
 Method: pressed against one side of the finger with a force gage
 Range: entire stroke, up to holding point L = 20mm



■ Types

Model	
RCLE-GR5L-6	(Standard model)
RCLE-GR5L-6-PS	(With position sensor)

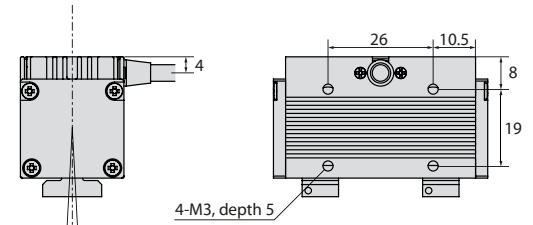
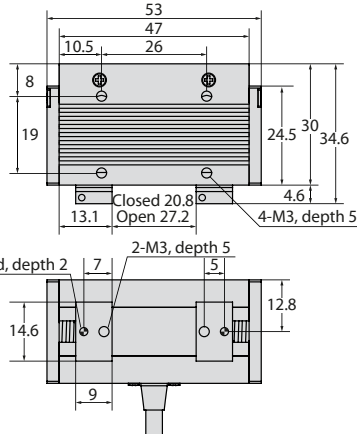
■ Specifications

Item	Standard model	With position sensor (optional)
Open/close stroke	6mm (3mm per side)	
Open/close mechanism	Always closed, open by magnetic excitation	
Max. open/close frequency	600 cycles/min.	
Min. open time	0.05 sec.	
Continuous operation time	Max. 60 sec.	
Max. grip force ^{*)}	1±0.2N	
Static allowable moment	Ma: 0.02N·m Mb: 0.02N·m Mc: 0.04N·m	
Power supply voltage	DC24V±10%	
Drive current	0.5A	
Inrush current	Max. 0.6A	
Inverse-current from ON to OFF	Inverse-voltage: approx. -40V	Inverse-current: approx. 0.1A
Life	10 million times opening/closing (guideline)	
Ambient operating temp./humidity	0 to 40°C, 20-85%RH max. (non-condensing)	
Weight	0.16kg	0.18kg

^{*)} Gripping force at holding point 0mm, overhang distance 0mm, and finger stroke 3mm. Gripping force will vary depending on the stroke where it grips the work part. (Left Graph) After 10 million times of opening and closing, the gripping force will vary by ± 0.05N.

■ Dimensions

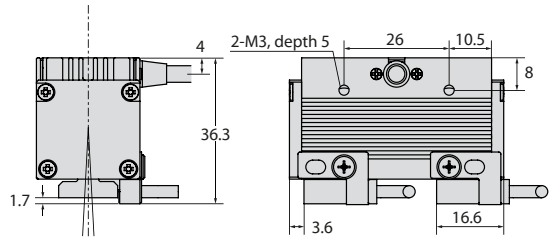
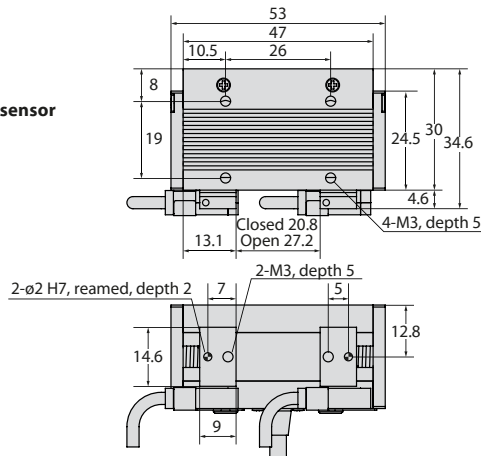
Standard model
Without position sensor



(Finger allowance less than 1°)

- Notes:
 1) Actuator cable bend radius = 33mm or larger
 2) Left and right finger mounting surface level = 0.3mm or smaller

With position sensor
(optional)



(Finger allowance less than 1°)

- Notes:
 1) Actuator cable bend radius = 33mm or larger
 2) Position sensor cable bend radius = 7mm or larger
 3) Left and right finger mounting surface level = 0.3mm or smaller

■ Cautions

- The continuous operation time (the finger open time) must not exceed 60 seconds. The duty must not exceed 50%.
- Since the actuator generates heat, it can become very hot depending on the mounting condition. Be careful not to burn or injure yourself. Refer to the operation manual for mounting and temperature elevation information.
- Be careful with the installation direction of the gripper in which it should only be mounted with the fingers facing down. Also, if the gripper is oriented such that the fingers are in front of and behind the work part when the gripper is in motion, the inertia of the work part may overcome the spring force causing unwanted finger movements.
- The distance from the finger attachment surface to the holding point must not exceed 20mm.