RCP2-GR3LS

ROBO Cylinder, 3-Finger Gripper, Lever Type, Actuator Width 62mm, Pulse Motor

Model Specification Items

RCP2	— GR3LS	— I	— 28P	— 30	— 19	— □	— □	— □
Series	— Type	— Encoder type	— Motor type	— Deceleration Ratio	— Stroke	— Applicable controller	— Cable length	— Options
		I: Incremental * The Simple absolute encoder is also considered type "I".	28P: Pulse motor, 28□ size	30: 1/30 deceleration ratio	19: 19 degrees	P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable	FB: Flange bracket SB: Shaft bracket

* See page Pre-47 for details on the model descriptions.

CE RoHS

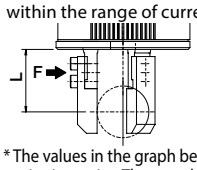
Technical References → Appendix P.5

POINT Notes on selection

(1) The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this value.
(2) The maximum gripping force is the sum of the gripping forces of all fingers with gripping point distance of 10mm and no overhang distance. For the actual transportable work piece weight, see explanation on the right, or page A-86.
(3) The rated acceleration while moving is 0.3G.

■ Gripping Force vs. Current Limit

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.



* Please note that, when gripping (pushing), the speed is fixed at 5 deg/s.

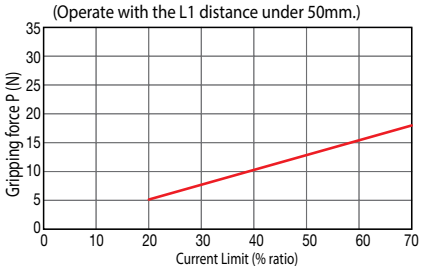
* The values in the graph below are gripping forces at 10mm gripping point. The actual gripping force decreases inversely proportional to the distance from the opening/closing point.

You can calculate the actual gripping force by the following equation.

Actual gripping force (GR3LS) = P × 24 / (L + 14)

P = Gripping force on graph

L = Distance from finger mounting surface to the gripping point.
(Operate with the L1 distance under 50mm.)



* The gripping force graph above shows reference numbers. Please allow margins up to ± 15%.

Actuator Specifications

■ Lead and Payload

Model number	Deceleration Ratio	Maximum Gripping Force (N)	Stroke (deg)
RCP2-GR3LS-I-28P-30-19-①-②-③	30	18 (6 per side)	19

■ Stroke and Max. Opening/Closing Speed

Stroke / Deceleration ratio	19 (deg)
30	200

(Unit: degrees/s)

Code explanation ① Applicable Controller ② Cable length ③ Options

Stroke

Stroke (deg)	Standard price
19	—

② Cable Length

Type	Cable symbol	Standard Price
Standard	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**X06** (6m) ~ **X10** (10m)	—
	X11 (11m) ~ **X15** (15m)	—
	X16 (16m) ~ **X20** (20m)	—
Robot Cable	**R01** (1m) ~ **R03** (3m)	—
	R04 (4m) ~ **R05** (5m)	—
	R06 (6m) ~ **R10** (10m)	—
	R11 (11m) ~ **R15** (15m)	—
	R16 (16m) ~ **R20** (20m)	—

* See page A-59 for cables for maintenance.

③ Options

Name	Option code	See page	Standard price
Flange bracket	**FB**	→ A-43	—
Shaft bracket	**SB**	→ A-55	—

Actuator Specifications

Item	Description
Drive System	Worm gear + worm wheel gear
Positioning repeatability	±0.01 degrees
Backlash	1degree or less per side (constantly pressed out by a spring)
Lost motion	0.15 degrees or less per side
Weight	0.6kg
Ambient operating temperature, humidity	0 to 40ºC, 85% RH or less (Non-condensing)

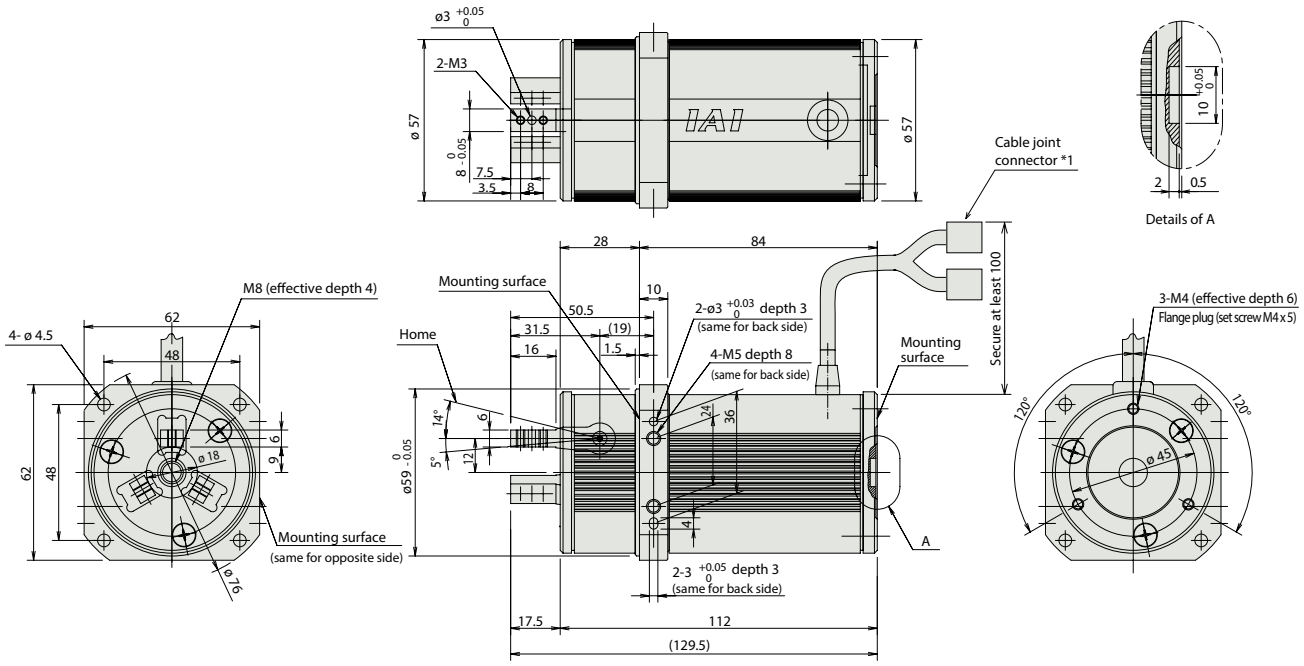
Dimensional Drawings

CAD drawings can be downloaded from the website. www.intelligentactuator.com

For Special Orders Appendix P.15

2D CAD 3D CAD

* When homing, the actuator swings 1 degree past the home position before returning. Therefore, please watch for any interference with the surrounding objects.
(*1) Connect the motor and encoder cables here. See page A-59 for details on cables.



Weight (kg)	0.6

①Applicable Controllers

RCP2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		PMEC-C-28PI-①-2-⑪	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-28PI-①-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	Refer to P555	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-⑩~~-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to P572	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-⑩~~-Ⓥ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type High-output specification		PCON-CA-28PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points		Refer to P618	—	→ P607
Pulse-train type High-output specification		PCON-CA-28PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-28PI-Ⓥ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-28PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-①-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		PCON-SE-28PI-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		PSEL-CS-1-28PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	—	→ P665

* This is for the single-axis PSEL. * ① indicates I/O type (NP/PN). * ⑩ indicates power supply voltage (1: 100V / 2: 100~240V).
* ⑪ indicates number of axes (1 to 8). * Ⓥ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.