

RCP2-GR3LM

ROBO Cylinder, 3-Finger Gripper, Lever Type, Actuator Width 80mm, Pulse Motor

Model Specification Items	RCP2 — GR3LM — I — 42P — 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".	42P: Pulse motor, 42□ 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.



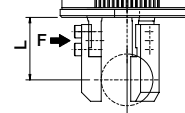
Technical References Appendix P.5



- (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 Adjustment

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.

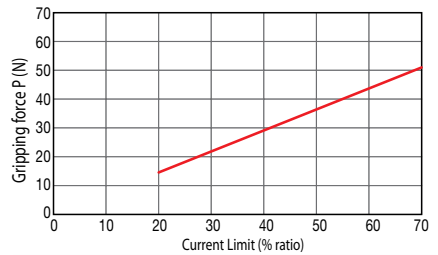
You can calculate the actual gripping force by the following equation.

$$\text{Actual gripping force (GR3LM)} = P \times 28.5 / (L + 18.5)$$

P = Gripping force on graph

L = Distance from finger mounting surface to the gripping point.

(Operate with the L distance up to 80mm.)



* 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-GR3LM-I-42P-30-19-①-②-③	30	51 (17 per side)	19

Code explanation ① Applicable Controller ② Cable length ③ Options

Stroke and Max. Opening/Closing Speed

Stroke / Deceleration ratio	19 (deg)
	200

(Unit: degrees/s)

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	1 degree or less per side (constantly pressed out by a spring)
Lost motion	0.15 degrees or less per side
Weight	1.1kg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

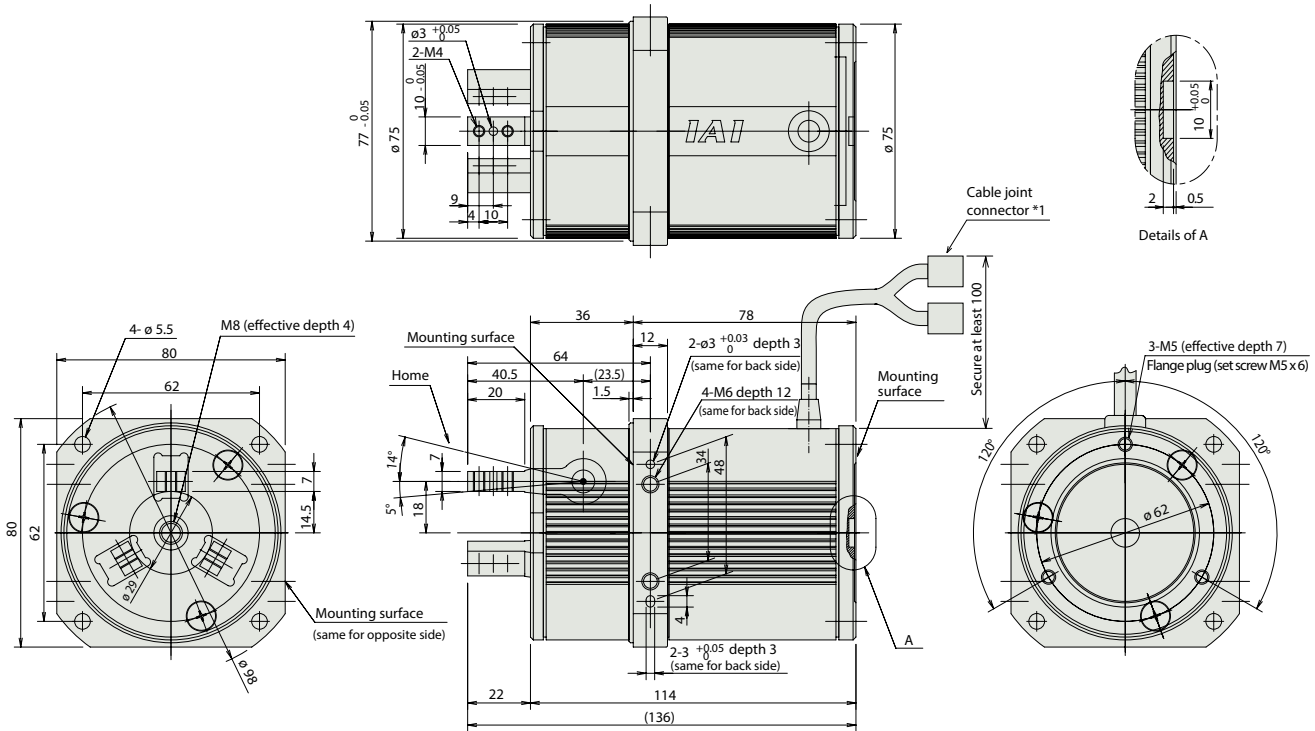


* When homing, the actuator swings 1 degree past the home position before returning. Therefore, please watch for any interference with the surrounding objects.
 (*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

For Special Orders



Appendix P.15



Weight (kg) 1.1

Applicable 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-42PI-①-2-①①	Easy-to-use controller, even for beginners	3 points	DC24V	Refer to P541 Refer to P555	—	→ P537			
		PSEP-C-42PI-①-2-0	Simple controller operable with the same signal as a solenoid valve						→ P547		
Solenoid valve multi-axis type PIO specification		MSEP-C-①①①-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points				Refer to P572	—	→ P563	
Solenoid valve multi-axis type Network specification		MSEP-C-①①①-①-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					DC24V	Refer to P618	—	→ P607
Positioner type High-output specification		PCON-CA-42PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control								
Pulse-train type High-output specification		PCON-CA-42PI-PL-①-2-0	Equipped with a high-output driver Pulse-train input type	(—)							
Field network type High-output specification		PCON-CA-42PI-①-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points				Refer to P628	—	→ P623	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-①-2-0	Pulse train input type with differential line driver support	(—)				Refer to P628	—	→ P623	
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-①-2-0	Pulse train input type with open collector support								
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated Serial Communication	64 points	Refer to P671	—	→ P665				
Program Control Type		PSEL-CS-1-42PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points							

* This is for the single-axis PSEL. * ① indicates I/O type (NP/PN). * ①① indicates power supply voltage (1: 100V / 2: 100~240V). * ①①① indicates number of axes (1 to 8). * ①①① indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.