RCP2-GR3SM

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

Model Specification Items

RCP2	— GR3SM	— I	— 42P	— 30	— 14	— □	— □	— □
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	14: 14mm (7mm per side)	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

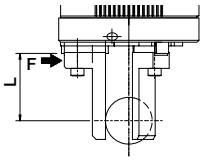
Technical References Appendix P.5

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.

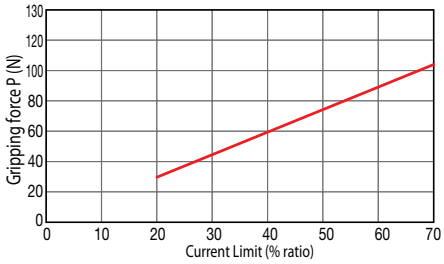
■ Gripping Force vs. Current Limit

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 5mm/s.

* Operate with the L distance up to 80mm.
* The gripping force value in the graph below is when L is at 0 mm. (For gripping force reference per L distance, see page A-87.)
The gripping force value is the sum of gripping forces of both fingers.



* 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 (mm)
RCP2-GR3SM-I-42P-30-14-①-②-③	30	102 (34 per side)	14

■ Stroke and Max. Opening/Closing Speed

Deceleration ratio \ Stroke	14 (mm)
30	50

(Unit: mm/s)

Code explanation ① Applicable Controller ② Cable length ③ Options

Stroke

Stroke (mm)	Standard price
14	—

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	±0.01mm
Backlash	0.3mm or less per side (constantly pressed out by a spring)
Lost motion	0.1mm or less per side
Guide	Cross roller guide
Allowable static load moment	Ma: 6.3 N·m, Mb: 6.3 N·m, Mc: 5.7 N·m
Weight	1.2kg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

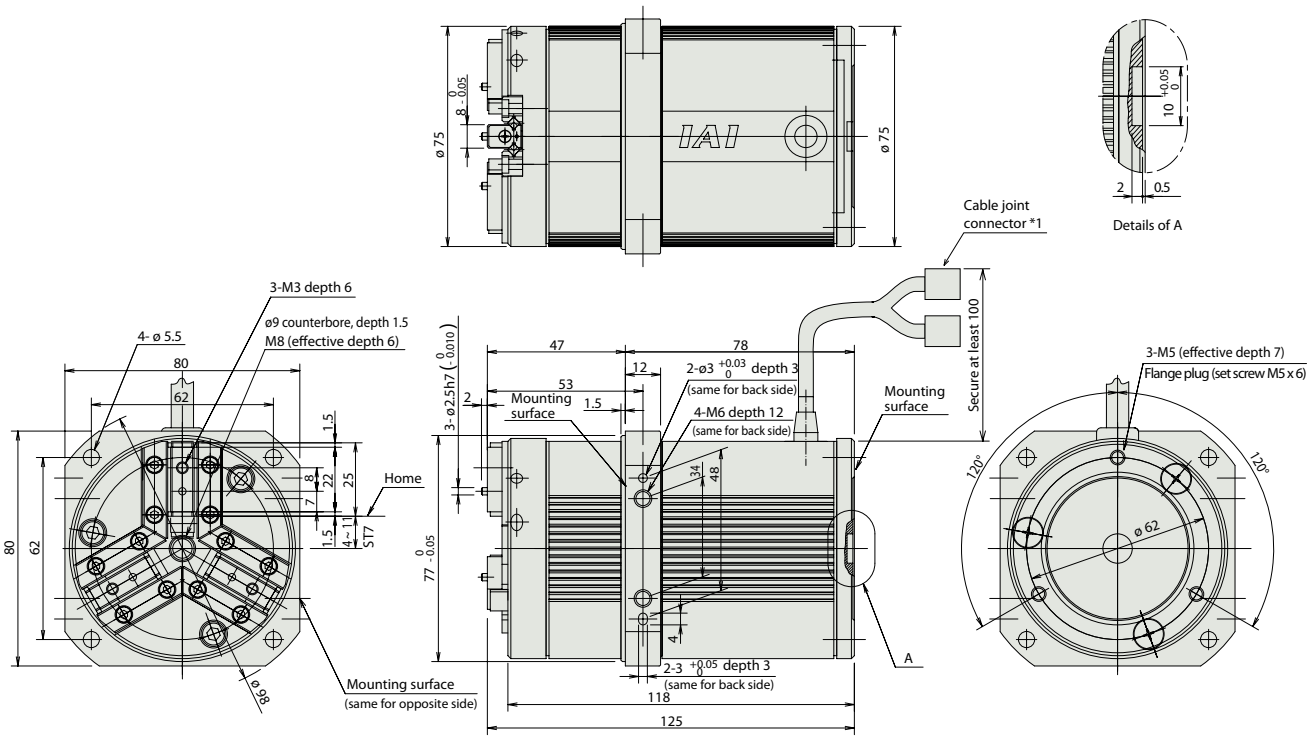
Dimensional Drawings

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

2D CAD 3D CAD

For Special Orders Appendix P.15

* When homing, the actuator swings 0.5mm 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)	1.2

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-42PI-①-2-⑪	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-42PI-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-42PI-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-42PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-42PI-Ⓥ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
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			—	
Program Control Type		PSEL-CS-1-42PI-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). * ⑪ indicates power supply voltage (1: 100V / 2: 100~240V).
* ⑩ indicates number of axes (1 to 8). * Ⓥ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.