RCP2W-GRLS

ROBO Cylinder, 2-Finger Gripper, Mini Lever Type, Actuator Width 42mm, Pulse Motor,

Model Specification Items

RCP2W — **GRLS** — **I** — **20P** — **30** — **180** — ☐ — ☐ — ☐

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".	20P: Pulse motor, 20☐ size	30: 1/30 deceleration ratio	180: 180 degrees (90 degrees 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	NM: Non-motor end FB: Flange bracket SB: Shaft bracket

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

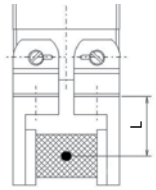
Technical References Appendix P.5

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 both fingers, at a gripping point where there is no offset or overhang distance. The work piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work piece. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force. (See page A-86 for details.)
(3) The rated acceleration while moving is 0.3G.
(4) Please note that the product has no splash-proof function.

■ Gripping Force Adjustment

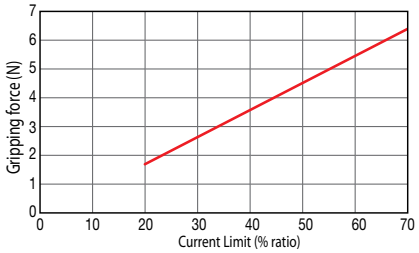
The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.



* The gripping force of the graph below is measured on the top face of the lever. The actual gripping force drops in inverse proportion to the distance from the opening/closing fulcrum. Calculate the effective gripping force using the formula below.

Effective gripping force (GRLS) = F x 15.5/ (L + 15.5)

* In the graph below, the gripping force value is the sum of gripping forces of both fingers.



* The gripping force graph above shows the number of references. Please allow margins up to ± 15%.

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

Actuator Specifications

■ Lead and Payload

Model number	Deceleration Ratio	Maximum Gripping Force (N)	Stroke (degrees)
RCP2W-GRLS-I-20P-30-180-①-②-③	30	6.4 (3.2 per side)	180 (90 per side)

■ Stroke and Maximum Speed

Deceleration ratio \ Stroke	180 (degrees)
30	600

(Unit: degree/s)

Code explanation ① Applicable controller ② Cable length ③ Options

Stroke

Stroke (degrees)	Standard price
180	—

②Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**X06** (6m) ~ **X10** (10m)	—
	X11 (11m) ~ **X15** (15m)	—
	X16 (16m) ~ **X20** (20m)	—

* The standard cable is the motor-encoder integrated robot cable.
* See page A-59 for cables for maintenance.

③Options

Name	Option code	See page	Standard price
Non-motor end specification	**NM**	→ A-52	—
Flange bracket	**FB**	→ A-43	—
Shaft bracket	**SB**	→ A-55	—

Actuator Specifications

Item	Description
Drive System	worm gear + helical gear
Positioning repeatability	±0.01mm
Backlash	1 degree or less per side (constantly pressed out by a spring)
Lost motion	0.1 deg (per side) or less
Guide	—
Allowable static load moment	—
Weight	0.2kg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

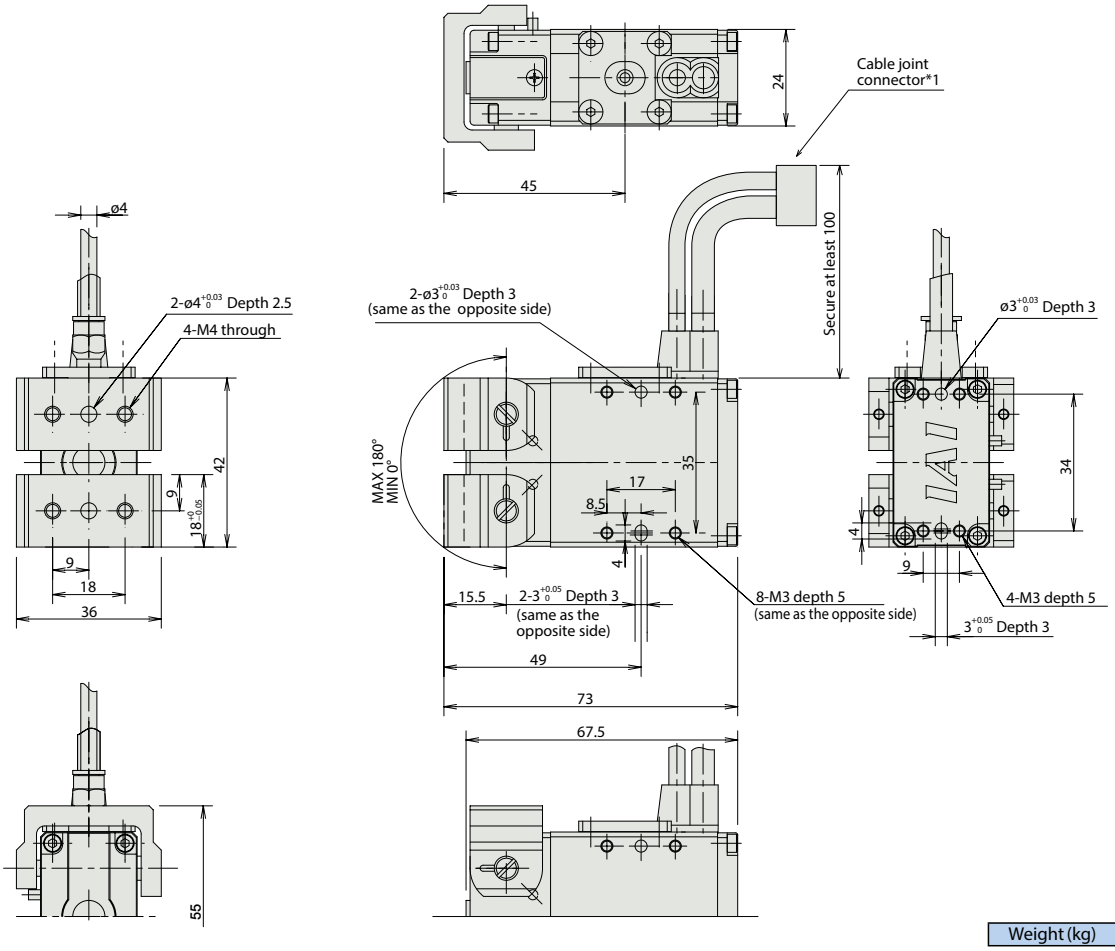
Dimensional Drawings

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

For Special Orders Appendix P.15

2D CAD 3D CAD

* The opening side of the slider is the home position.
(*1) Connect the motor-encoder integrated cable here.
See page A-59 for details on cables.



Weight (kg)	0.2

①Applicable Controllers

RCP2W 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-20PI-①-2-Ⅱ	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-20PI-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-Ⅲ-~-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-Ⅲ-~-Ⅳ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type High-output specification		PCON-CA-20PI-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-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-20PI-Ⅳ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-①-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		PSEL-CS-1-20PI-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). * Ⅲ indicates power supply voltage (1: 100V / 2: 100~240V).
* Ⅲ indicates number of axes (1 to 8). * Ⅳ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.