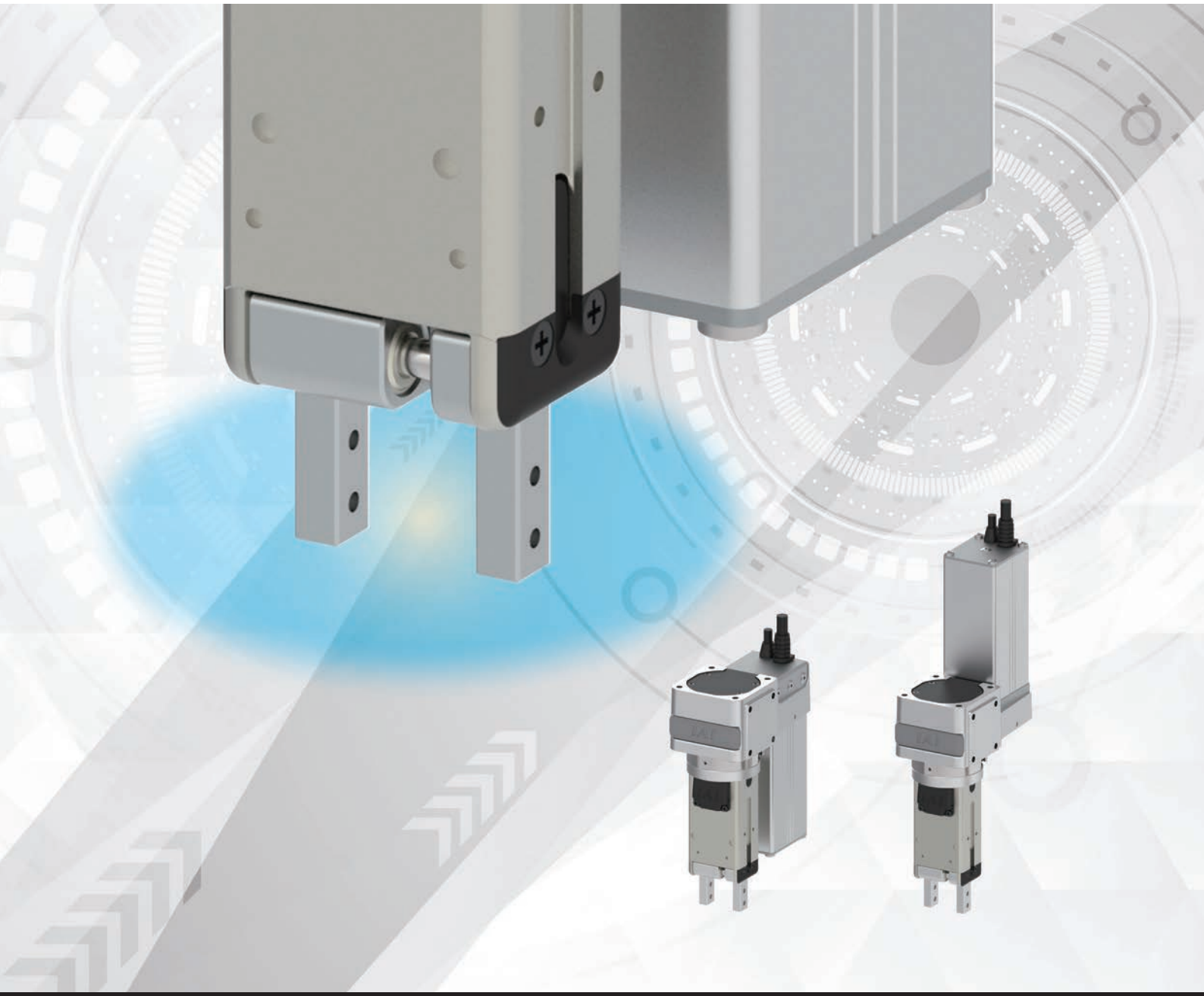


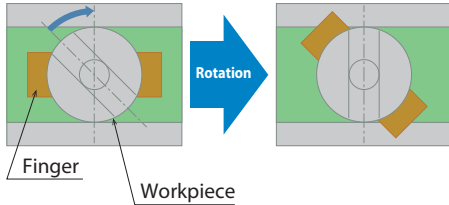
Rotary Chuck Unit **RCP6-RTCK**



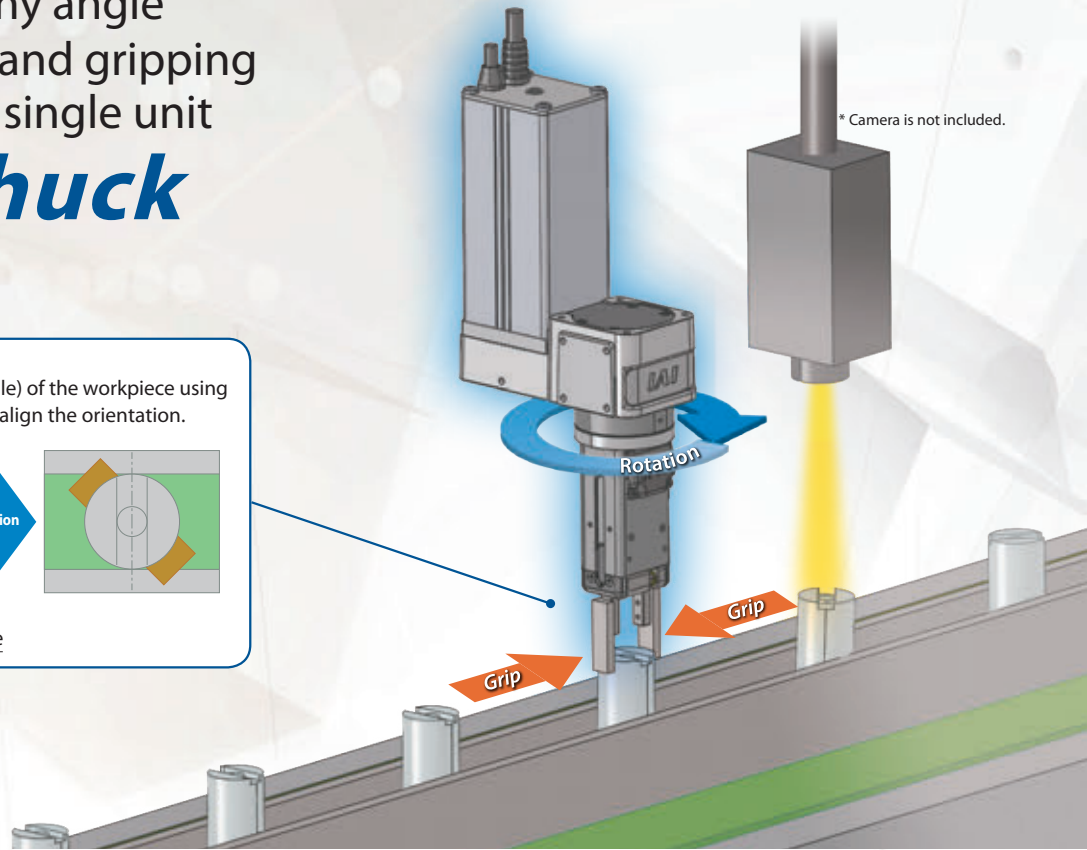
Can be rotated to any angle
 Motorized rotation and gripping
 consolidated into a single unit

Rotary Chuck

Check the orientation (angle) of the workpiece using a camera, then rotate it to align the orientation.



* Camera is not included.

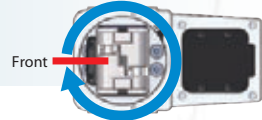


360° rotation in +CW (clockwise) direction

1

Multipoint positioning of the rotating part

The rotating axis can perform multipoint positioning between 0 and 360° (one rotation). The rotational speed and acceleration/deceleration can also be set to any value. Furthermore, the Battery-less Absolute Encoder equipped means that home return is not required.



Battery-less Absolute Encoder
 No Battery,
 No Maintenance, No Homing,
 No Going Back to Incremental.

2

Compact size

The chuck module is small and lightweight, as a solenoid gripper is used.

3

Highly flexible installation

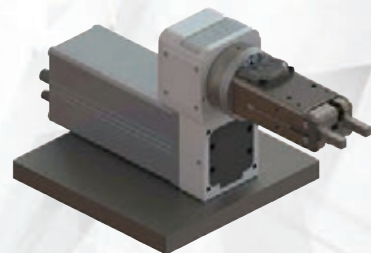
Motor placement can be selected from parallel type and side-mounted type. The parallel type can be mounted from 5 sides and the side-mounted type from 4 sides, to suit the equipment.



Parallel type mounted on bottom







Side-mounted type mounted on top



Parallel type mounted on back

Product Lineup

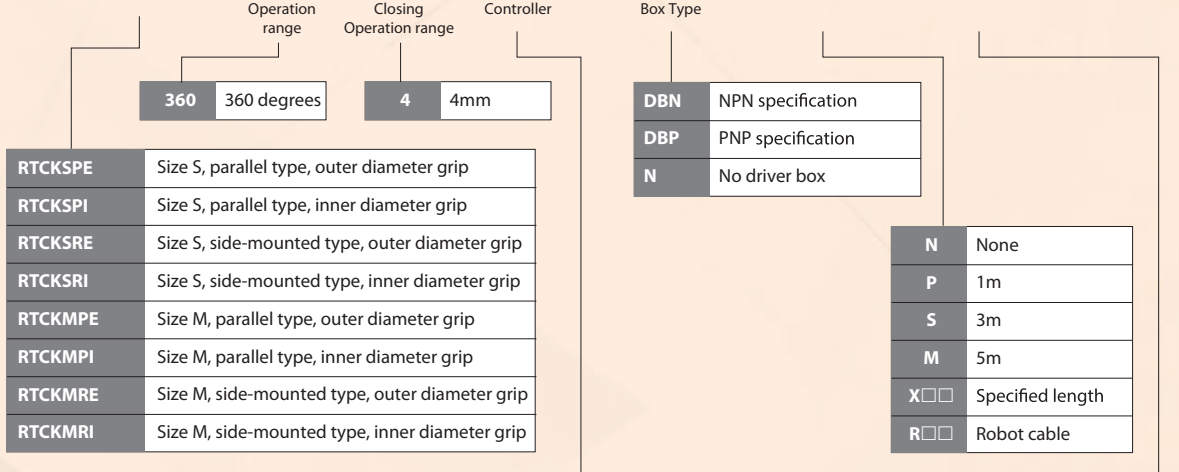
Size	S		M	
	Parallel type	Side-mounted type	Parallel type	Side-mounted type
Type				
Model	RCP6-RTCKSPE/RTCKSPI	RCP6-RTCKSRE/RTCKSRI	RCP6-RTCKMPE/RTCKMPI	RCP6-RTCKMRE/RTCKMRI
External view				
Rotation operation range [deg.]	0 to 360 (within one rotation)	0 to 360 (within one rotation)	0 to 360 (within one rotation)	0 to 360 (within one rotation)
Maximum rotation speed [deg./s]	1800	1800	1800	1800
Maximum torque [N·m]	0.29	0.29	0.36	0.36
Allowable inertia moment [kg·m ²]	0.00023	0.00023	0.00036	0.00036
Opening/closing stroke [mm]	4 (2 per side)	4 (2 per side)	4 (2 per side)	4 (2 per side)
Max grip force [N]	10 (5 per side)	10 (5 per side)	20 (10 per side)	20 (10 per side)
Grip operation time [s]	0.03 or less	0.03 or less	0.03 or less	0.03 or less
Grip operation frequency [CPM*]	120	120	120	120
Reference page	P. 3	P. 7	P. 11	P.15

*Cycle per minute

Explanation of Model Specification Items

RCP6 - - **360** - **4** - - - - -

Series Type Rotation Operation range Grip Opening/Closing Operation range Applicable Controller Driver Box Type Cable Length Options

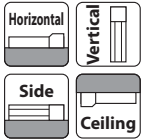


*Please refer to the pages of each type for details.

RCP6-RTCKSPE/I

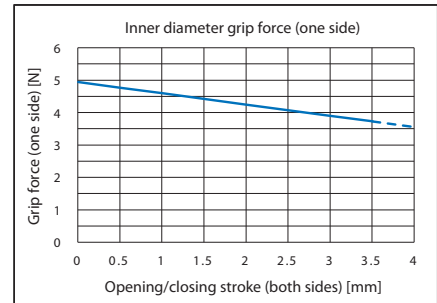
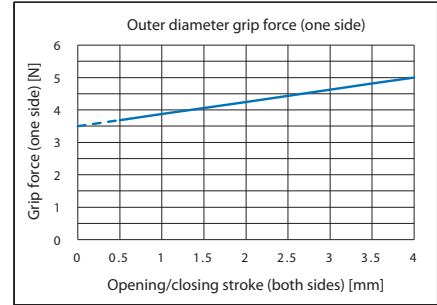
Outer/Inner Diam. Grip	Battery-less Absolute	Small 2-Finger Gripper	Finger Slide Guide	Straight Motor	Body Width 40 mm	24V Pulse Motor
------------------------	-----------------------	------------------------	--------------------	----------------	------------------	-----------------

Model Specification Items	RCP6	360	4					
	Series	Type	Rotation Operation Range	Grip Opening/Clos. Operation Range	Applicable Controllers	Driver Box	Cable Length	Options
	RTCKSPE: Parallel Type / Outer Diameter Grip	RTCKSPI: Parallel Type / Inner Diameter Grip	360: 360deg	4: 4mm (2mm per side)	P3: PCON MCON MSEL P5: RCON RSEL	DBN: Driver Box (NPN specification) DBP: Driver Box (PNP specification) N: No Driver Box	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	Please refer to the options table below.



- POINT Selection Notes**
- The outer diameter grip opens when conducting an electricity current, and closes when not conducting (normally closed). The inner diameter grip closes when conducting an electricity current, and opens when not conducting (normally opened).
 - Since a spring is used for the grip mechanism, the grip force changes depending on the open/closing stroke of the fingers. Refer to "Correlation Diagram of Grip Force and Opening/Closing Stroke".
 - To operate the grip part, a driver box is essential. Please refer to P.21 for more information on specifications.
 - When the rotational speed is low (120 deg./s or less), the vibration and operating noise increase due to the rotation characteristics of the motor.
 - For the selection method, refer to P.15.
 - High output setting in controllers cannot be enabled.

Correlation Diagram of Grip Force and Opening/Closing Stroke



(Note) The grip force changes depending on the open/closing stroke of the fingers.

Actuator Specifications

Item	Description
Maximum torque	0.29N-m
Deceleration ratio	1/4
Maximum rotation speed	1800 deg/s
Max. acceleration/deceleration	29400 deg/s ²
Max. acceleration/deceleration (controller set value)	3G
Allowable inertia moment	0.00023 kg-m ²
Rotation operation range	0 to 360° (within one rotation)
Brake retaining torque of the rotating part	0.1N-m
Opening/closing stroke	4mm, 2mm per side
Max grip force	10N, 5N per side
Grip operation time	0.03s or less
Grip operation frequency	120CPM* <small>*CPM: Cycle per minute</small>

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		—

(Note) Even when a robot cable is specified, the grip cable will be a non-robot cable. Please refer to P. 20 for maintenance cables.

Options

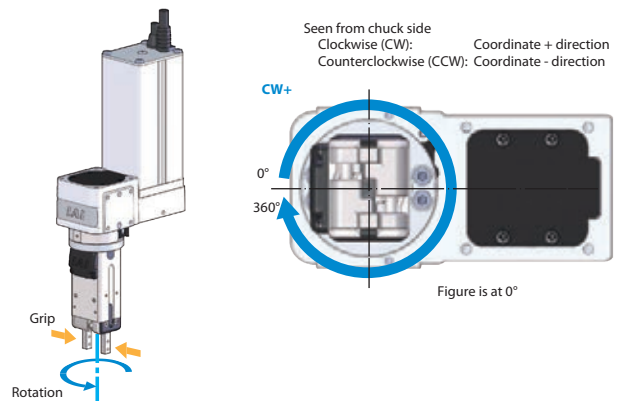
Name	Option code	Reference page
Actuator cable (pigtail cable) length: 2 m	AC2	See P.19
Actuator cable (pigtail cable) length: 5 m	AC5	
Brake	B	
Cable exit direction (Left) (Note 1)	CJL	
Cable exit direction (Right) (Note 1)	CJR	
Cable exit direction (Top) (Note 1)	CJT	
Rubber cover attached (chloroprene rubber)	RCH	
Rubber cover attached (silicone rubber)	RSL	
Sensor attached x 1 (NPN specification) (Note 2)	S1N	
Sensor attached x 2 (NPN specification) (Note 2)	S2N	
Sensor attached x 1 (PNP specification) (Note 2)	S1P	
Sensor attached x 2 (PNP specification) (Note 2)	S2P	

(Note 1) Be sure to fill in one of the codes in the Model Specification Items option column.
 (Note 2) Driver box: for DBN, only S1N/S2N can be selected; for DBP, only S1P/S2P can be selected.

Actuator Specifications

Item	Description	
Rotation drive system	Pulse motor + timing belt	
Rotation angle positioning repeatability	±0.02 degrees	
Rotation angle lost motion	0.05 degrees	
Rotation motor type	Pulse motor (28□ size)	
Rotation encoder type	Battery-less Absolute	
Rotation encoder pulse count	8192 pulse/rev	
Grip drive system	Grip mechanism (chuck): Compression spring + cam mechanism	
	Release mechanism (unchuck): Solenoid electromagnetism + cam mechanism	
	Grip repeatability	±0.1mm
	Grip backlash	0.5mm or less per side
Mass	W/o Brake: 0.67kg With Brake: 0.73kg	
Finger guide	Slide guide	
Ambient operating temp. & humidity	0 to 40°C, 85% RH or less (Non-condensing)	
Degree of protection	IP20	
Vibration resistance / shock resistance	4.9m/s ² 100Hz or less	
Compliant international standards	CE marking, RoHS Directive	

Rotation and Grip

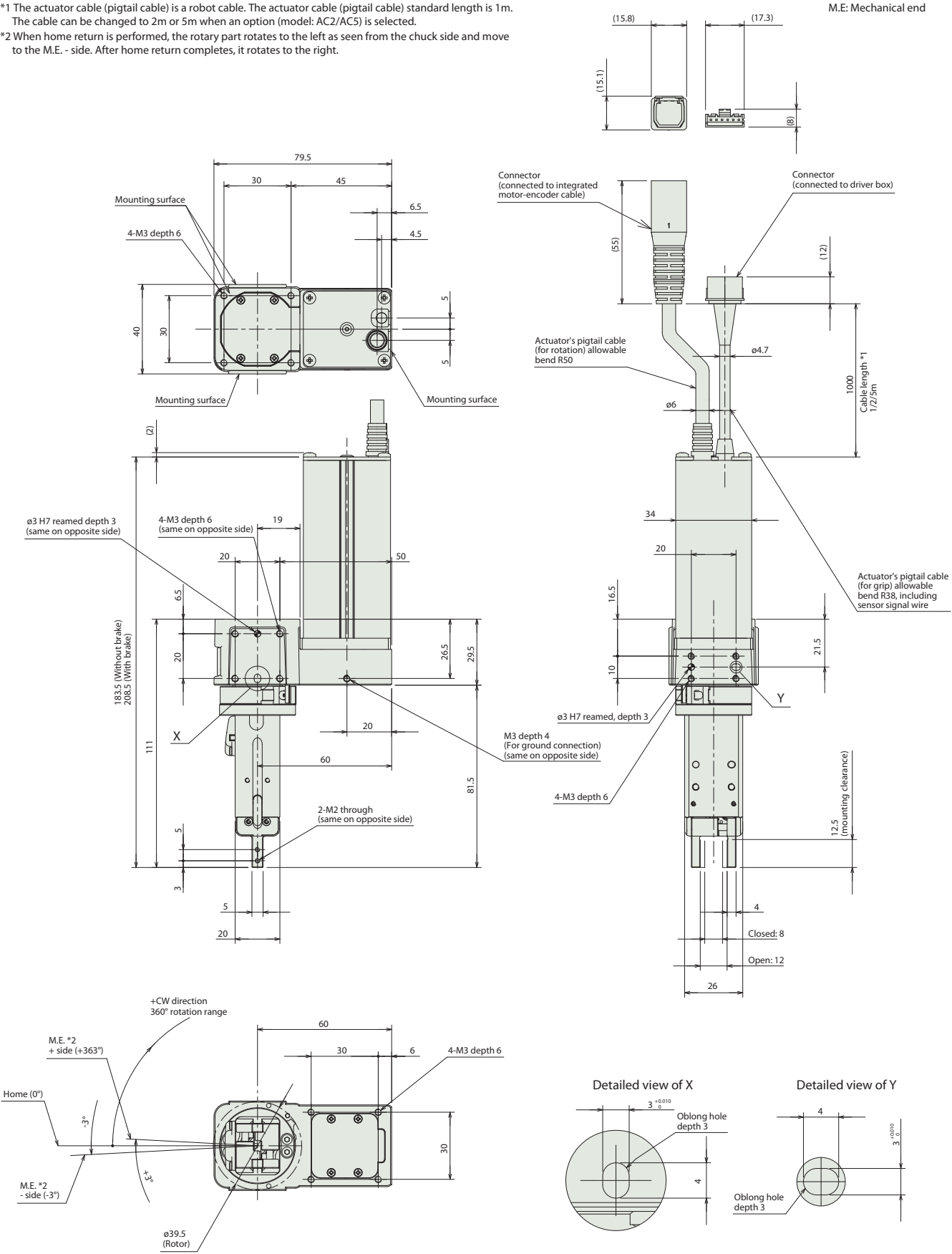


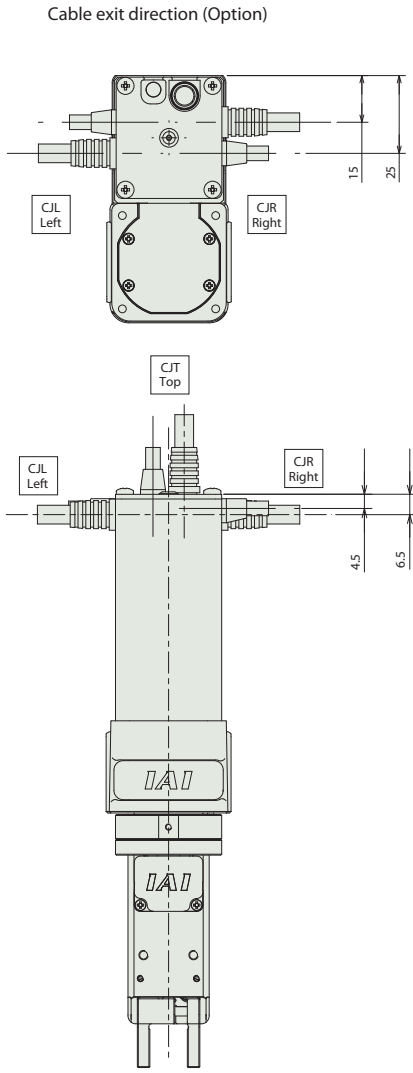
Dimensions

CAD drawings can be downloaded from our website. www.robocylinder.de **2D CAD** **3D CAD**

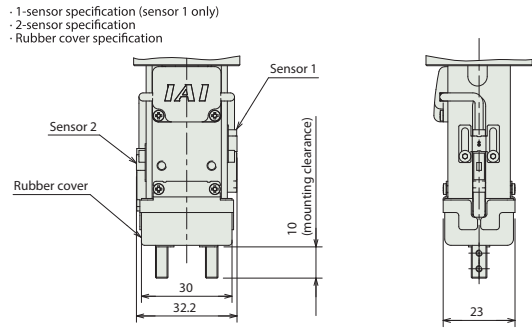
(Note) For the mounting method, refer to P.18.

*1 The actuator cable (pigtail cable) is a robot cable. The actuator cable (pigtail cable) standard length is 1m. The cable can be changed to 2m or 5m when an option (model: AC2/AC5) is selected.
 *2 When home return is performed, the rotary part rotates to the left as seen from the chuck side and move to the M.E. - side. After home return completes, it rotates to the right.





Sensor and rubber cover attached (option)



Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

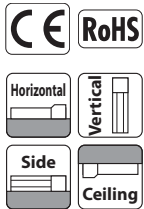
Name	External view	Max. number of connectable axes	Power supply voltage	Control method													Maximum number of positioning points	Reference page		
				Positioner	Pulse-train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT			SSN	ECM
MCON-C/CG		8 **	24VDC	-	-	-	●	●	-	●	●	-	○ ***	●	●	●	○ ***	●	256 (no position data for ECM)	Please see the dedicated catalog or manual.
MCON-LC/LCG (Coming soon)		6 **		-	-	●	●	●	-	●	●	-	-	●	●	●	-	-	256	
MSEL-PC/PG		4	Single phase 100~230VAC	-	-	●	●	●	-	●	-	-	-	●	●	●	-	-	30000	
PCON-CB/CGB		1	24VDC	● Option	● Option	-	●	●	●	●	○ ***	○ ***	●	●	●	-	-	512 (768 for network spec.)		
PCON-CYB/PLB/POB (Coming soon)		1		● Option	● Option	-	-	-	-	-	-	-	-	-	-	-	-	64		
RCON		16 (8 for ECM)		-	-	-	●	●	●	●	-	-	○ ***	●	●	●	○ ***	●	128 (no position data for ECM)	
RSEL		8	-	-	●	●	●	●	-	-	-	-	●	●	●	-	-	36000	Please see the R-unit catalog or RCON/RSEL manual.	

* Network abbreviations: DV - DeviceNet | CC - CC-Link | CIE - CC-Link IE | PR - Profibus-DP | CN - CompoNet | ML - Mechatrolink | ML3 - Mechatrolink-III | EC - EtherCAT | EP - Ethernet/IP | PRT - Profinet-IO | SSN - SSCNET III/H | ECM - EtherCAT Motion
 ** Please select "high-output setting specification" as an option for the MCON. When high output is enabled the max. number of connectable axes is 4 (MCON-C) or 3 (MCON-LC). *** Not yet available in Europe. For additional information, please ask IAI.

RCP6-RTCKSRE/I

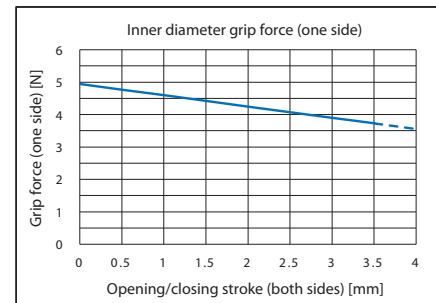
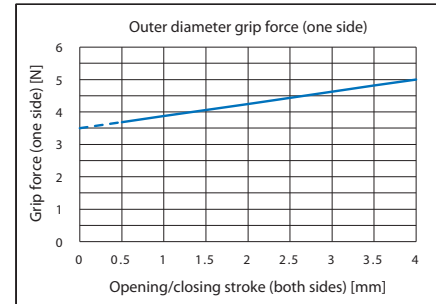
Outer/Inner Diam. Grip	Battery-less Absolute	Small 2-Finger Gripper	Finger Slide Guide	Side-mounted Motor	Body Width 40 mm	24V Pulse Motor
------------------------	-----------------------	------------------------	--------------------	--------------------	------------------	-----------------

Model Specification Items	RCP6	360	4					
	Series	Type	Rotation Operation Range	Grip Opening/Clos. Operation Range	Applicable Controllers	Driver Box	Cable Length	Options
	RTCKSRE: Side-mounted Type / Outer Diameter Grip	RTCKSRI: Side-mounted Type / Inner Diameter Grip	360: 360deg	4: 4mm (2mm per side)	P3: PCON MCON MSEL P5: RCON RSEL	DBN: Driver Box (NPN specification) DBP: Driver Box (PNP specification) N: No Driver Box	N: None P: 1m S: 3m M: 5m X□: Specified Length R□: Robot Cable	Please refer to the options table below.



- POINT Selection Notes**
- The outer diameter grip opens when conducting an electricity current, and closes when not conducting (normally closed). The inner diameter grip closes when conducting an electricity current, and opens when not conducting (normally opened).
 - Since a spring is used for the grip mechanism, the grip force changes depending on the open/closing stroke of the fingers. Refer to "Correlation Diagram of Grip Force and Opening/Closing Stroke".
 - To operate the grip part, a driver box is essential. Please refer to P.21 for more information on specifications.
 - When the rotational speed is low (120 deg./s or less), the vibration and operating noise increase due to the rotation characteristics of the motor.
 - For the selection method, refer to P.15.
 - High output setting in controllers cannot be enabled.

Correlation Diagram of Grip Force and Opening/Closing Stroke



(Note) The grip force changes depending on the open/closing stroke of the fingers.

Actuator Specifications

Item	Description
Maximum torque	0.29N·m
Deceleration ratio	1/4
Maximum rotation speed	1800 deg/s
Max. acceleration/deceleration	29400 deg/s ²
Max. acceleration/deceleration (controller set value)	3G
Allowable inertia moment	0.00023 kg·m ²
Rotation operation range	0 to 360° (within one rotation)
Brake retaining torque of the rotating part	0.1N·m
Opening/closing stroke	4mm, 2mm per side
Max grip force	10N, 5N per side
Grip operation time	0.03s or less
Grip operation frequency	120CPM* *CPM: Cycle per minute

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		—

(Note) Even when a robot cable is specified, the grip cable will be a non-robot cable. Please refer to P. 20 for maintenance cables.

Options

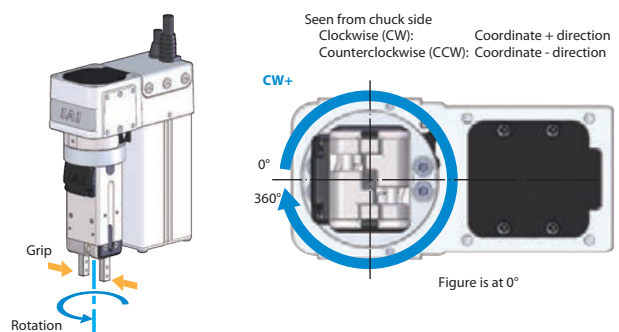
Name	Option code	Reference page
Actuator cable (pigtail cable) length: 2 m	AC2	See P.19
Actuator cable (pigtail cable) length: 5 m	AC5	
Brake	B	
Cable exit direction (Left) (Note 1)	CJL	
Cable exit direction (Right) (Note 1)	CJR	
Cable exit direction (Top) (Note 1)	CJT	
Rubber cover attached (chloroprene rubber)	RCH	
Rubber cover attached (silicone rubber)	RSL	
Sensor attached x 1 (NPN specification) (Note 2)	S1N	
Sensor attached x 2 (NPN specification) (Note 2)	S2N	
Sensor attached x 1 (PNP specification) (Note 2)	S1P	
Sensor attached x 2 (PNP specification) (Note 2)	S2P	

(Note 1) Be sure to fill in one of the codes in the Model Specification Items option column.
(Note 2) Driver box: for DBN, only S1N/S2N can be selected; for DBP, only S1P/S2P can be selected.

Actuator Specifications

Item	Description	
Rotation drive system	Pulse motor + timing belt	
Rotation angle positioning repeatability	±0.02 degrees	
Rotation angle lost motion	0.05 degrees	
Rotation motor type	Pulse motor (28□ size)	
Rotation encoder type	Battery-less Absolute	
Rotation encoder pulse count	8192 pulse/rev	
Grip drive system	Grip mechanism (chuck): Compression spring + cam mechanism	
	Release mechanism (unchuck): Solenoid electromagnetism + cam mechanism	
	Grip repeatability	±0.1mm
Grip backlash	0.5mm or less per side	
Mass	W/o Brake	0.68kg
	With Brake	0.74kg
Finger guide	Slide guide	
Ambient operating temp. & humidity	0 to 40°C, 85% RH or less (Non-condensing)	
Degree of protection	IP20	
Vibration resistance / shock resistance	4.9m/s ² 100Hz or less	
Compliant international standards	CE marking, RoHS Directive	

Rotation and Grip



Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

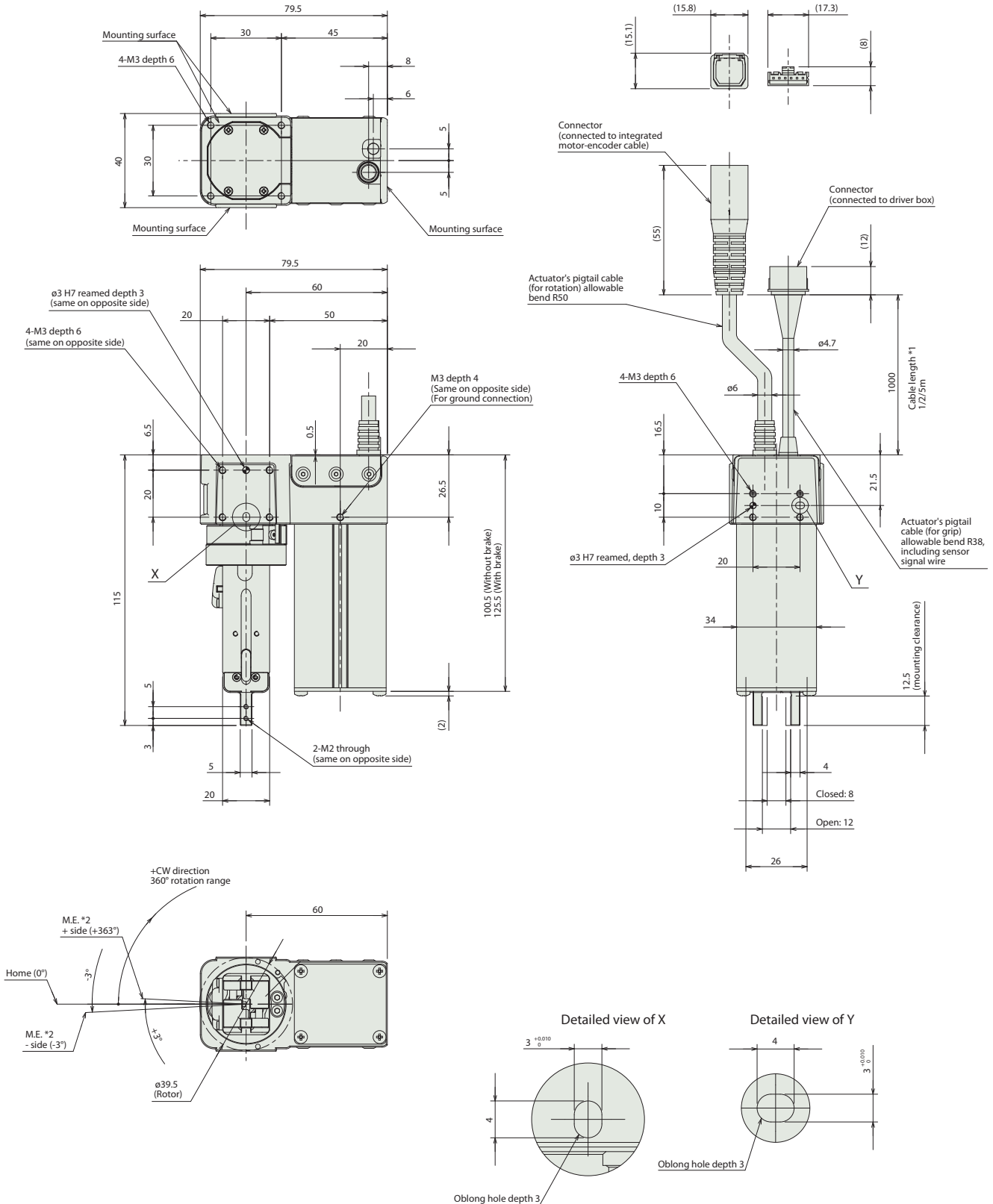


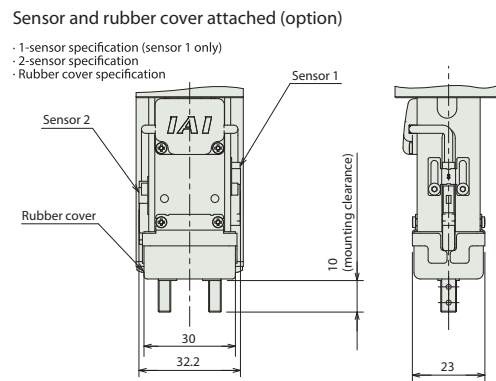
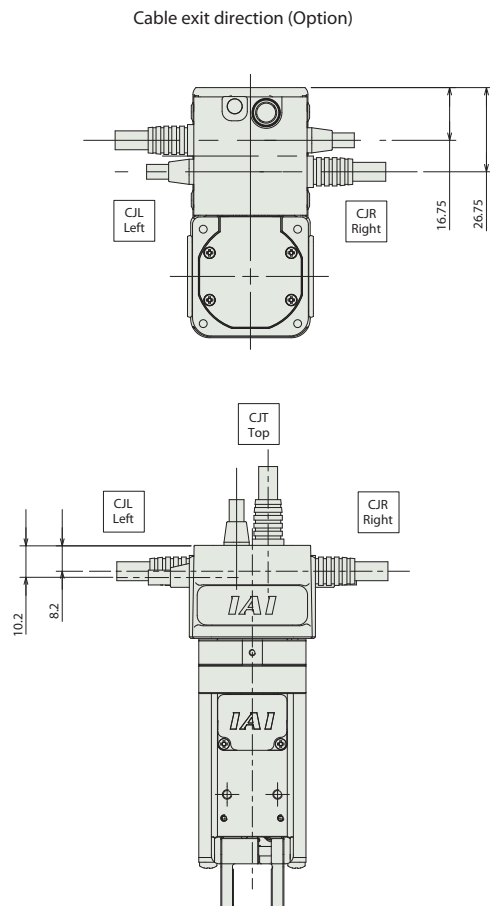
(Note) For the mounting method, refer to P.18.

*1 The actuator cable (pigtail cable) is a robot cable. The actuator cable (pigtail cable) standard length is 1m. The cable can be changed to 2m or 5m when an option (model: AC2/AC5) is selected.

*2 When home return is performed, the rotary part rotates to the left as seen from the chuck side and move to the M.E. - side. After home return completes, it rotates to the right.

M.E: Mechanical end





Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

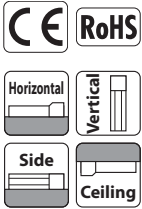
Name	External view	Max. number of connectable axes	Power supply voltage	Control method													Maximum number of positioning points	Reference page		
				Positioner	Pulse-train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT			SSN	ECM
MCON-C/CG		8 **	24VDC	-	-	-	●	●	-	●	●	-	○ ***	●	●	●	○ ***	●	256 (no position data for ECM)	Please see the dedicated catalog or manual.
MCON-LC/LCG (Coming soon)		6 **		-	-	●	●	-	●	●	-	-	●	●	●	-	-	-		
MSEL-PC/PG		4	Single phase 100~230VAC	-	-	●	●	●	-	●	-	-	-	●	●	●	-	-	30000	
PCON-CB/CGB		1	24VDC	● Option	● Option	-	●	●	●	●	○ ***	○ ***	●	●	●	-	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB (Coming soon)		1		● Option	● Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	
RCON		16 (8 for ECM)		-	-	-	●	●	●	●	-	-	○ ***	●	●	●	○ ***	●	128 (no position data for ECM)	
RSEL		8	-	-	●	●	●	●	●	-	-	-	●	●	●	-	-	36000	Please see the R-unit catalog or RCON/RSEL manual.	

* Network abbreviations: DV - DeviceNet | CC - CC-Link | CIE - CC-Link IE | PR - Profibus-DP | CN - CompoNet | ML - Mechatrolink | ML3 - Mechatrolink-III | EC - EtherCAT | EP - Ethernet/IP | PRT - Profinet-IO | SSN - SSCNET III/H | ECM - EtherCAT Motion
 ** Please select "high-output setting specification" as an option for the MCON. When high output is enabled the max. number of connectable axes is 4 (MCON-C) or 3 (MCON-LC). *** Not yet available in Europe. For additional information, please ask IAI.

RCP6-RTCKMPE/I

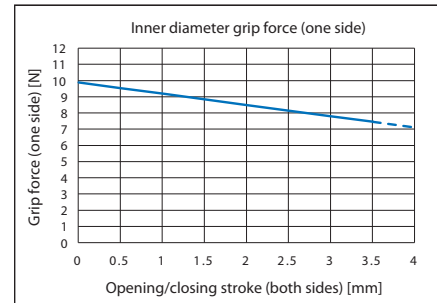
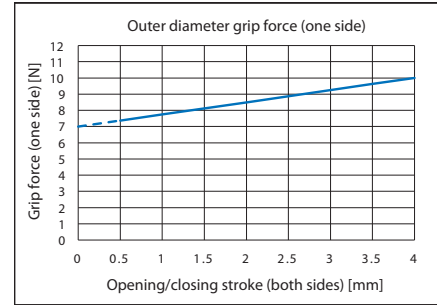
Outer/Inner Diam. Grip	Battery-less Absolute	Medium 2-Finger Gripper	Finger Slide Guide	Straight Motor	Body Width 50 mm	24V Pulse Motor
------------------------	-----------------------	-------------------------	--------------------	----------------	------------------	-----------------

Model Specification Items
RCP6 — **360** — **4** — — — — —
 Series — Type — Rotation Operation Range — Grip Opening/Clos. Operation Range — Applicable Controllers — Driver Box — Cable Length — Options
 RTCKMPE: Parallel Type / Outer Diameter Grip 360: 360deg 4: 4mm (2mm per side) P3: PCON MCON MSEL P5: RCON RSEL DBN: Driver Box (NPN specification) DBP: Driver Box (PNP specification) N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable
 RTCKMPI: Parallel Type / Inner Diameter Grip Please refer to the options table below.



- POINT Selection Notes**
- The outer diameter grip opens when conducting an electricity current, and closes when not conducting (normally closed). The inner diameter grip closes when conducting an electricity current, and opens when not conducting (normally opened).
 - Since a spring is used for the grip mechanism, the grip force changes depending on the open/closing stroke of the fingers. Refer to "Correlation Diagram of Grip Force and Opening/Closing Stroke".
 - To operate the grip part, a driver box is essential. Please refer to P.21 for more information on specifications.
 - When the rotational speed is low (90 deg./s or less), the vibration and operating noise increase due to the rotation characteristics of the motor.
 - For the selection method, refer to P.15.
 - High output setting in controllers cannot be enabled.

Correlation Diagram of Grip Force and Opening/Closing Stroke



(Note) The grip force changes depending on the open/closing stroke of the fingers.

Actuator Specifications

Item	Description
Maximum torque	0.36N-m
Deceleration ratio	1/5
Maximum rotation speed	1800 deg/s
Max. acceleration/deceleration	29400 deg/s ²
Max. acceleration/deceleration (controller set value)	3G
Allowable inertia moment	0.00036 kg-m ²
Rotation operation range	0 to 360° (within one rotation)
Brake retaining torque of the rotating part	0.125N-m
Opening/closing stroke	4mm, 2mm per side
Max grip force	20N, 10N per side
Grip operation time	0.03s or less
Grip operation frequency	120CPM* *CPM: Cycle per minute

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		—

(Note) Even when a robot cable is specified, the grip cable will be a non-robot cable. Please refer to P. 20 for maintenance cables.

Options

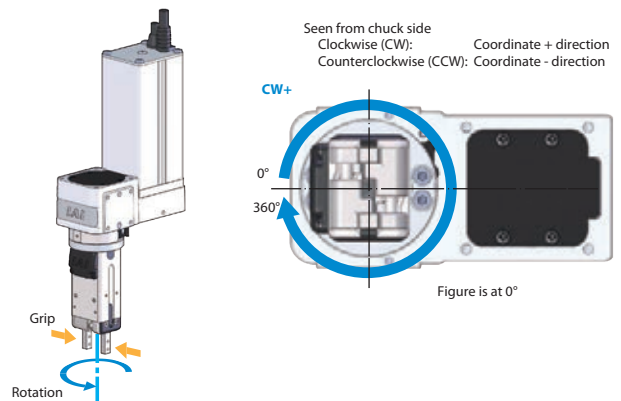
Name	Option code	Reference page
Actuator cable (pigtail cable) length: 2 m	AC2	See P.19
Actuator cable (pigtail cable) length: 5 m	AC5	
Brake	B	
Cable exit direction (Left) (Note 1)	CJL	
Cable exit direction (Right) (Note 1)	CJR	
Cable exit direction (Top) (Note 1)	CJT	
Rubber cover attached (chloroprene rubber)	RCH	
Rubber cover attached (silicone rubber)	RSL	
Sensor attached x 1 (NPN specification) (Note 2)	S1N	
Sensor attached x 2 (NPN specification) (Note 2)	S2N	
Sensor attached x 1 (PNP specification) (Note 2)	S1P	
Sensor attached x 2 (PNP specification) (Note 2)	S2P	

(Note 1) Be sure to fill in one of the codes in the Model Specification Items option column.
 (Note 2) Driver box: for DBN, only S1N/S2N can be selected; for DBP, only S1P/S2P can be selected.

Actuator Specifications

Item	Description	
Rotation drive system	Pulse motor + timing belt	
Rotation angle positioning repeatability	±0.02 degrees	
Rotation angle lost motion	0.05 degrees	
Rotation motor type	Pulse motor (28□ size)	
Rotation encoder type	Battery-less Absolute	
Rotation encoder pulse count	8192 pulse/rev	
Grip drive system	Grip mechanism (chuck): Compression spring + cam mechanism	
	Release mechanism (unchuck): Solenoid electromagnetism + cam mechanism	
	Grip repeatability	±0.1mm
	Grip backlash	0.5mm or less per side
Mass	W/o Brake 0.88kg	
	With Brake 0.94kg	
Finger guide	Slide guide	
Ambient operating temp. & humidity	0 to 40°C, 85% RH or less (Non-condensing)	
Degree of protection	IP20	
Vibration resistance / shock resistance	4.9m/s ² 100Hz or less	
Compliant international standards	CE marking, RoHS Directive	

Rotation and Grip



Dimensions

CAD drawings can be downloaded from our website. www.robocylinder.de

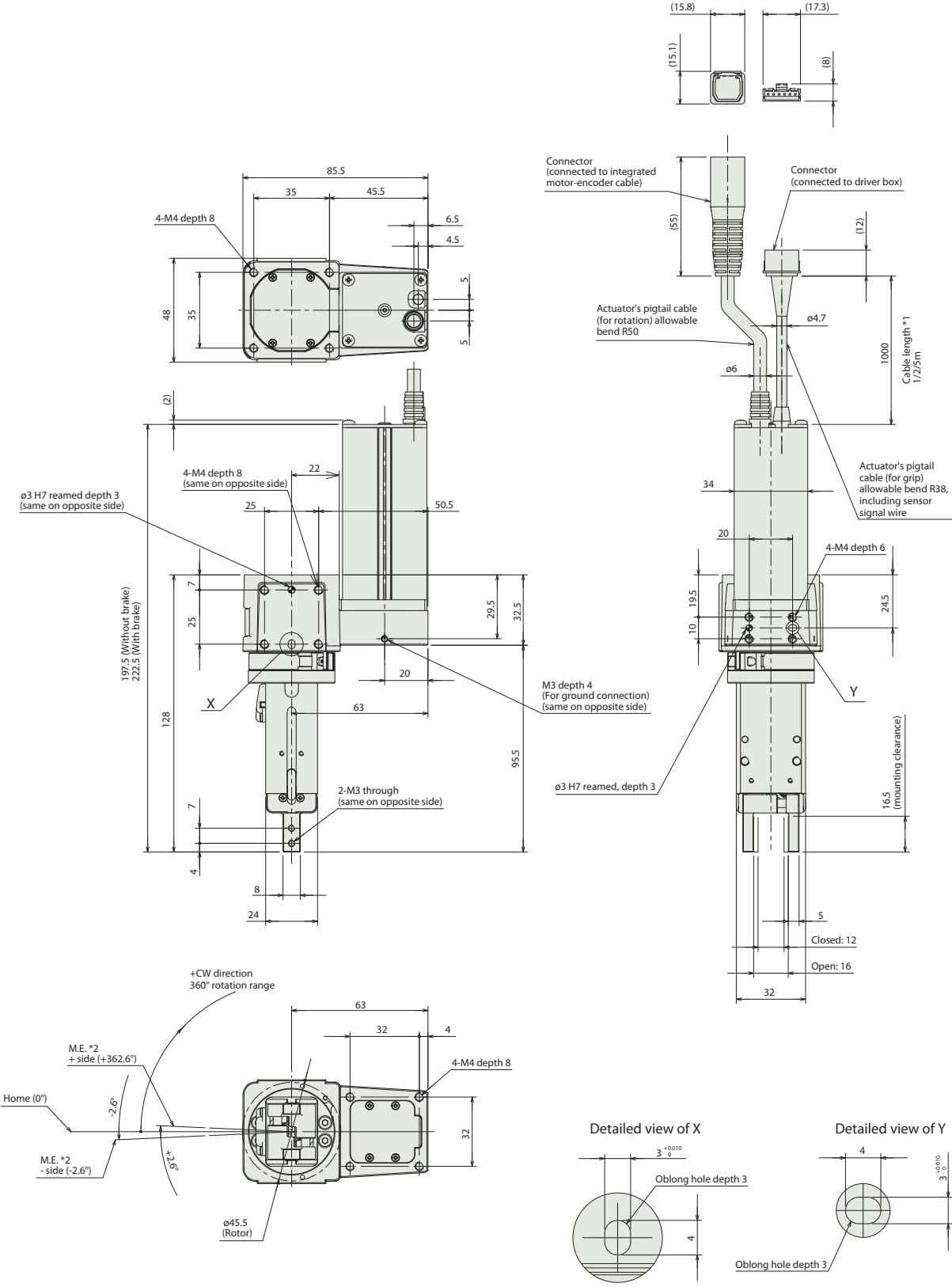


(Note) For the mounting method, refer to P.18.

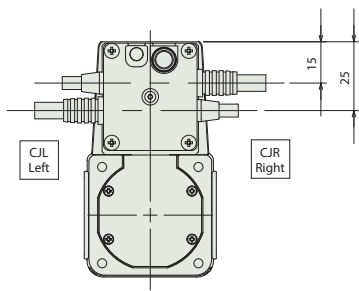
*1 The actuator cable (pigtail cable) is a robot cable. The actuator cable (pigtail cable) standard length is 1m. The cable can be changed to 2m or 5m when an option (model: AC2/AC5) is selected.

*2 When home return is performed, the rotary part rotates to the left as seen from the chuck side and move to the M.E. - side. After home return completes, it rotates to the right.

M.E: Mechanical end

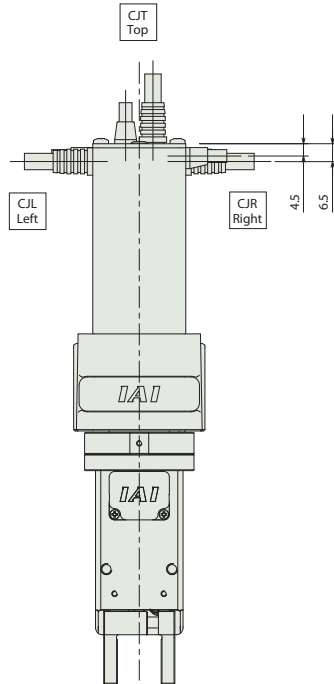
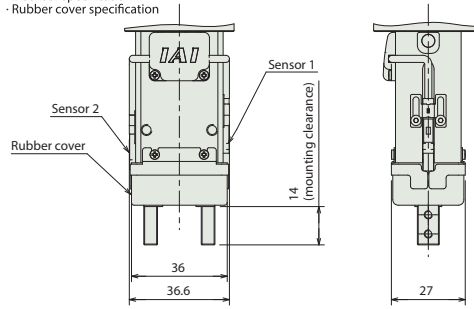


Cable exit direction (Option)



Sensor and rubber cover attached (option)

- 1-sensor specification (sensor 1 only)
- 2-sensor specification
- Rubber cover specification



Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

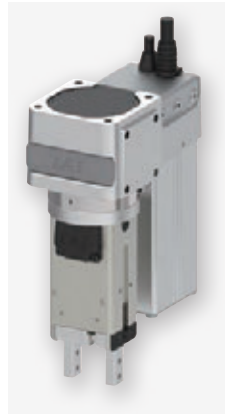
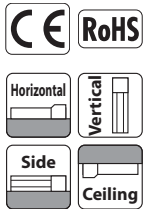
Name	External view	Max. number of connectable axes	Power supply voltage	Control method													Maximum number of positioning points	Reference page		
				Positioner	Pulse-train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT			SSN	ECM
MCON-C/CG		8 **	24VDC	-	-	-	●	●	-	●	●	-	○ ***	●	●	●	○ ***	●	256 (no position data for ECM)	Please see the dedicated catalog or manual.
MCON-LC/LCG (Coming soon)		6 **		-	-	●	●	-	●	●	-	-	●	●	●	-	-	-		
MSEL-PC/PG		4	Single phase 100~230VAC	-	-	●	●	●	-	●	-	-	-	●	●	●	-	-	30000	
PCON-CB/CGB		1	24VDC	● Option	● Option	-	●	●	●	●	○ ***	○ ***	●	●	●	-	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB (Coming soon)		1		● Option	● Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	
RCON		16 (8 for ECM)		-	-	-	●	●	●	●	-	-	○ ***	●	●	●	○ ***	●	128 (no position data for ECM)	
RSEL		8	-	-	●	●	●	●	-	-	-	-	●	●	●	-	-	36000	Please see the R-unit catalog or RCON/RSEL manual.	

* Network abbreviations: DV - DeviceNet | CC - CC-Link | CIE - CC-Link IE | PR - Profibus-DP | CN - CompoNet | ML - Mechatrolink | ML3 - Mechatrolink-III | EC - EtherCAT | EP - Ethernet/IP | PRT - Profinet-IO | SSN - SSCNET III/H | ECM - EtherCAT Motion
 ** Please select "high-output setting specification" as an option for the MCON. When high output is enabled the max. number of connectable axes is 4 (MCON-C) or 3 (MCON-LC). *** Not yet available in Europe. For additional information, please ask IAI.

RCP6-RTCKMRE/I

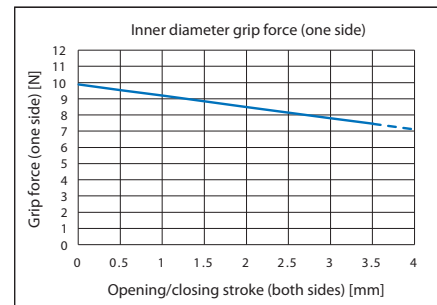
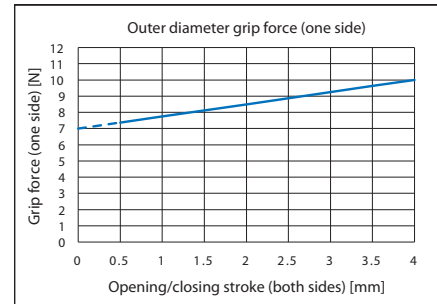
Outer/Inner Diam. Grip	Battery-less Absolute	Medium 2-Finger Gripper	Finger Slide Guide	Side-mounted Motor	Body Width 50 mm	24v Pulse Motor
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Model Specification Items	RCP6	360	4				
	Series	Type	Rotation Operation Range	Grip Opening/Clos. Operation Range	Applicable Controllers	Driver Box	Cable Length
	RTCKMRE: Side-mounted Type / Outer Diameter Grip	360: 360deg	4: 4mm (2mm per side)	P3: PCON MCON MSEL P5: RCON RSEL	DBN: Driver Box (NPN specification) DBP: Driver Box (PNP specification) N: No Driver Box	N: None P: 1m S: 3m M: 5m X□: Specified Length R□: Robot Cable	Please refer to the options table below.



- POINT Selection Notes**
- The outer diameter grip opens when conducting an electricity current, and closes when not conducting (normally closed). The inner diameter grip closes when conducting an electricity current, and opens when not conducting (normally opened).
 - Since a spring is used for the grip mechanism, the grip force changes depending on the open/closing stroke of the fingers. Refer to "Correlation Diagram of Grip Force and Opening/Closing Stroke".
 - To operate the grip part, a driver box is essential. Please refer to P.21 for more information on specifications.
 - When the rotational speed is low (90 deg./s or less), the vibration and operating noise increase due to the rotation characteristics of the motor.
 - For the selection method, refer to P.15.
 - High output setting in controllers cannot be enabled.

Correlation Diagram of Grip Force and Opening/Closing Stroke



(Note) The grip force changes depending on the open/closing stroke of the fingers.

Actuator Specifications

Item	Description
Maximum torque	0.36N-m
Deceleration ratio	1/5
Maximum rotation speed	1800 deg/s
Max. acceleration/deceleration	29400 deg/s ²
Max. acceleration/deceleration (controller set value)	3G
Allowable inertia moment	0.00036 kg-m ²
Rotation operation range	0 to 360° (within one rotation)
Brake retaining torque of the rotating part	0.125N-m
Opening/closing stroke	4mm, 2mm per side
Max grip force	20N, 10N per side
Grip operation time	0.03s or less
Grip operation frequency	120CPM* <small>*CPM: Cycle per minute</small>

Cable Length

Cable Type	Cable Code	Cable Type	Cable Code
Standard	P (1m)	Robot Cable	R01 (1m) ~R03 (3m)
	S (3m)		R04 (4m) ~R05 (5m)
	M (5m)		R06 (6m) ~R10 (10m)
Specified Length	X06 (6m) ~X10 (10m)		R11 (11m) ~R15 (15m)
	X11 (11m) ~X15 (15m)		—

(Note) Even when a robot cable is specified, the grip cable will be a non-robot cable. Please refer to P. 20 for maintenance cables.

Options

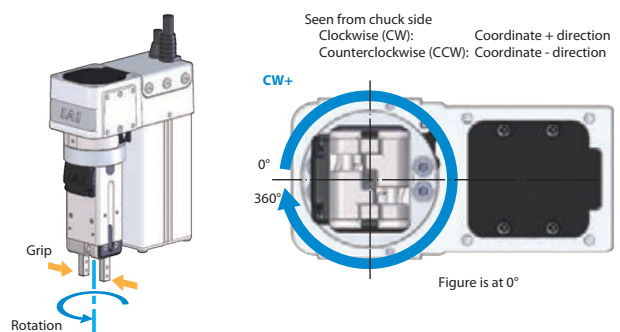
Name	Option code	Reference page
Actuator cable (pigtail cable) length: 2 m	AC2	See P.19
Actuator cable (pigtail cable) length: 5 m	AC5	
Brake	B	
Cable exit direction (Left) (Note 1)	CJL	
Cable exit direction (Right) (Note 1)	CJR	
Cable exit direction (Top) (Note 1)	CJT	
Rubber cover attached (chloroprene rubber)	RCH	
Rubber cover attached (silicone rubber)	RSL	
Sensor attached x 1 (NPN specification) (Note 2)	S1N	
Sensor attached x 2 (NPN specification) (Note 2)	S2N	
Sensor attached x 1 (PNP specification) (Note 2)	S1P	
Sensor attached x 2 (PNP specification) (Note 2)	S2P	

(Note 1) Be sure to fill in one of the codes in the Model Specification Items option column.
 (Note 2) Driver box: for DBN, only S1N/S2N can be selected; for DBP, only S1P/S2P can be selected.

Actuator Specifications

Item	Description	
Rotation drive system	Pulse motor + timing belt	
Rotation angle positioning repeatability	±0.02 degrees	
Rotation angle lost motion	0.05 degrees	
Rotation motor type	Pulse motor (28□ size)	
Rotation encoder type	Battery-less Absolute	
Rotation encoder pulse count	8192 pulse/rev	
Grip drive system	Grip mechanism (chuck): Compression spring + cam mechanism	
	Release mechanism (unchuck): Solenoid electromagnetism + cam mechanism	
	Grip repeatability	±0.1mm
	Grip backlash	0.5mm or less per side
Mass	W/o Brake	0.88kg
	With Brake	0.94kg
Finger guide	Slide guide	
Ambient operating temp. & humidity	0 to 40°C, 85% RH or less (Non-condensing)	
Degree of protection	IP20	
Vibration resistance / shock resistance	4.9m/s ² 100Hz or less	
Compliant international standards	CE marking, RoHS Directive	

Rotation and Grip



Dimensions

CAD drawings can be downloaded from our website.
www.robocylinder.de

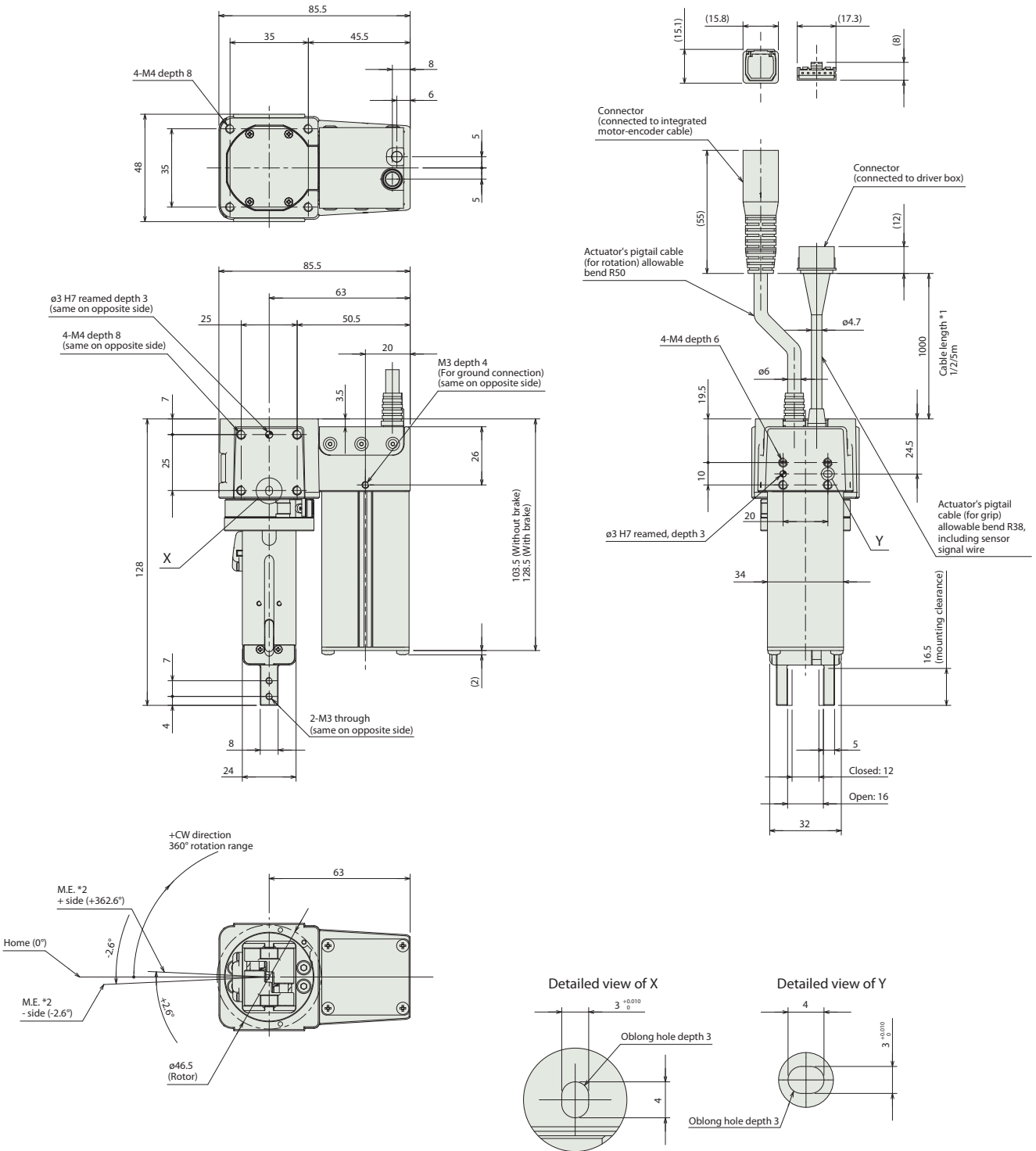


(Note) For the mounting method, refer to P.18.

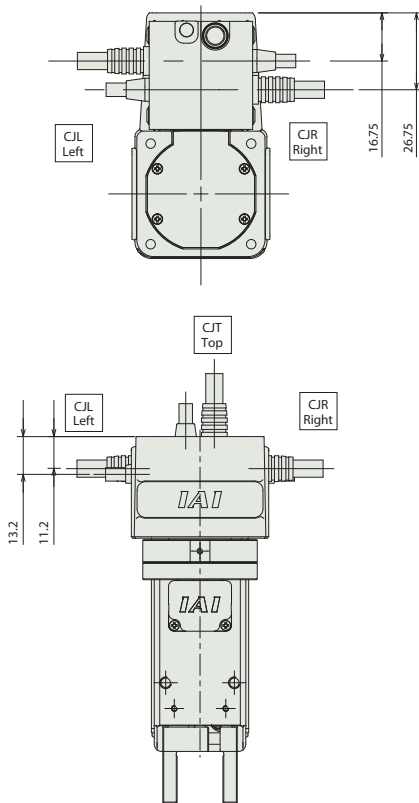
*1 The actuator cable (pigtail cable) is a robot cable. The actuator cable (pigtail cable) standard length is 1m. The cable can be changed to 2m or 5m when an option (model: AC2/AC5) is selected.

*2 When home return is performed, the rotary part rotates to the left as seen from the chuck side and move to the M.E. - side. After home return completes, it rotates to the right.

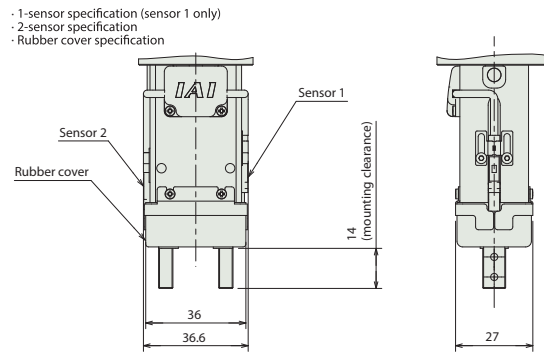
M.E: Mechanical end



Cable exit direction (Option)



Sensor and rubber cover attached (option)



Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method													Maximum number of positioning points	Reference page	
				Positioner	Pulse-train	Program	Network option *												
				DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM				
MCON-C/CG		8 **	24VDC	-	-	-	●	●	-	●	-	○ ***	●	●	●	○ ***	●	256 (no position data for ECM)	Please see the dedicated catalog or manual.
MCON-LC/LCG (Coming soon)		6 **		-	-	●	●	-	●	-	-	●	●	●	-	-	-	256	
MSEL-PC/PG		4	Single phase 100~230VAC	-	-	●	●	●	-	●	-	-	●	●	●	-	-	30000	
PCON-CB/CGB		1	24VDC	● Option	● Option	-	●	●	●	○ ***	○ ***	●	●	●	-	-	512 (768 for network spec.)		
PCON-CYB/PLB/POB (Coming soon)		1		● Option	● Option	-	-	-	-	-	-	-	-	-	-	-	-	64	
RCON		16 (8 for ECM)		-	-	-	●	●	●	●	-	-	○ ***	●	●	●	○ ***	●	
RSEL		8	-	-	●	●	●	●	-	-	-	●	●	●	-	-	36000	Please see the R-unit catalog or RCON/RSEL manual.	

* Network abbreviations: DV - DeviceNet | CC - CC-Link | CIE - CC-Link IE | PR - Profibus-DP | CN - CompoNet | ML - Mechatrolink | ML3 - Mechatrolink-III | EC - EtherCAT | EP - EtherNet/IP | PRT - Profinet-IO | SSN - SSCNET III/H | ECM - EtherCAT Motion
 ** Please select "high-output setting specification" as an option for the MCON. When high output is enabled the max. number of connectable axes is 4 (MCON-C) or 3 (MCON-LC). *** Not yet available in Europe. For additional information, please ask IAI.

Selection method

Step 1
Check the required grip force and allowable workpiece mass



Step 2
Check the distance to the gripping point



Step 3
Check external force applied to fingers



Step 4
Check the allowable moment of inertia

Step 1 Check the required grip force and allowable workpiece mass

When gripping the workpiece with frictional grip force, calculate the required grip force as follows.

(1) For normal transfer

F: Grip force (N) ... Total sum of push forces of both fingers
μ: Static friction coefficient between the finger attachment and the workpiece
m: Workpiece mass (kg)
g: Gravitational acceleration (= 9.8m/s²)

- The conditions under which the workpiece remains statically gripped without dropping are as follows:

$$F \mu > W \quad F > \frac{mg}{\mu}$$

- Assuming a recommended safety factor of 2 for normal transfer, the required gripping force is calculated as follows:

$$F > \frac{mg}{\mu} \times 2 \text{ (safety factor)}$$

- When the friction coefficient is $\mu 0.1 \sim 0.2$

$$F > \frac{mg}{0.1 \sim 0.2} \times 2 = (10 \sim 20) \times mg$$

For ordinary workpiece transferring

Required grip force ▶ **10~20 times or more** the workpiece mass
 Max. allowable mass ▶ **Not more than 1/10th to 1/20th** the gripping force

(2) When considerable acceleration, deceleration, or impact force is applied during transfer of the workpiece

In addition to gravity, a greater inertial force is applied to the workpiece. In this case, select a model with an even higher safety factor.

When large acceleration, deceleration, or shock is applied

Required grip force ▶ **30~50 times or more** the workpiece mass
 Max. allowable mass ▶ **Not more than 1/30th to 1/50th** the gripping force

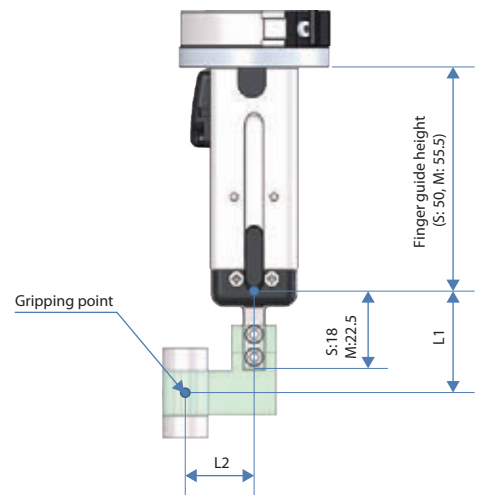
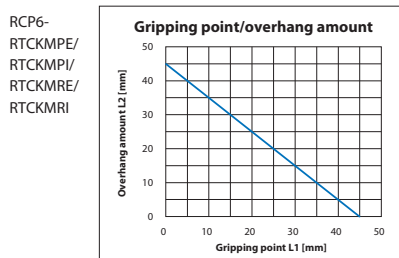
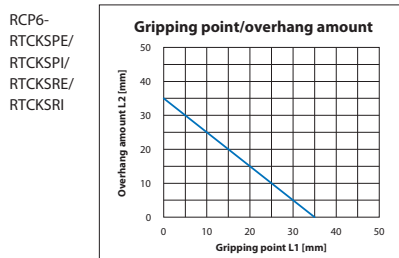


* The greater the coefficient of static friction, the greater the maximum allowable workpiece mass. However, select a model that can generate a gripping force of at least 10 to 20 times this workpiece mass to ensure safety.

Step 2 Check the distance to the gripping point

The distances (L1, L2) from the finger mounting surface to the gripping point have to fall in the ranges specified in the graph below.

If the limits are exceeded, excessive moments may act upon the sliding part of the finger and internal mechanism and it could shorten the service life.



Even if the gripping point distance is within the limit range, keep the finger attachment as small and lightweight as possible. If the fingers are long and large, or if the mass is large, inertial force and bending moment during opening and closing may worsen the performance and adversely affect the guide section.

Step 3 Check external force applied to fingers

(1) Allowable vertical load

Make sure that the vertical load applied to each finger is less than the allowable load.

(2) Allowable load moment

Calculate M_a and M_c using the value of L_1 , and M_b using L_2 . Make sure the moment applied to each finger is less than the maximum allowable load moment.

● The allowable external force when applying moment load to each claw is

$$\text{Allowable load } F(N) > \frac{M \text{ (Maximum allowable moment (N-m))}}{L(\text{mm}) \times 10^{-3}}$$

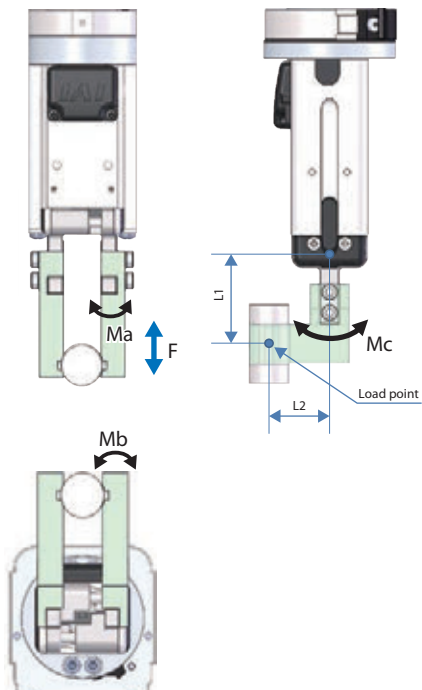
Calculate F (N) using L_1 and L_2 .

Check that the external force applied to the finger is less than the calculated allowable load F (N) (the smaller value of L_1 and L_2).

Model	Allowable vertical load F (N)	Maximum allowable load moment (N-m)		
		M_a	M_b	M_c
RCP6-RTCKSPE/RTCKSPI RTCKSRE/RTCKSRI	150	0.62	0.62	0.99
RCP6-RTCKMPE/RTCKMPI RTCKMRE/RTCKMRI	240	1.08	1.08	2.64

(Note) The allowable value above indicates a static value.
(Note) Indicates the allowable value per finger.

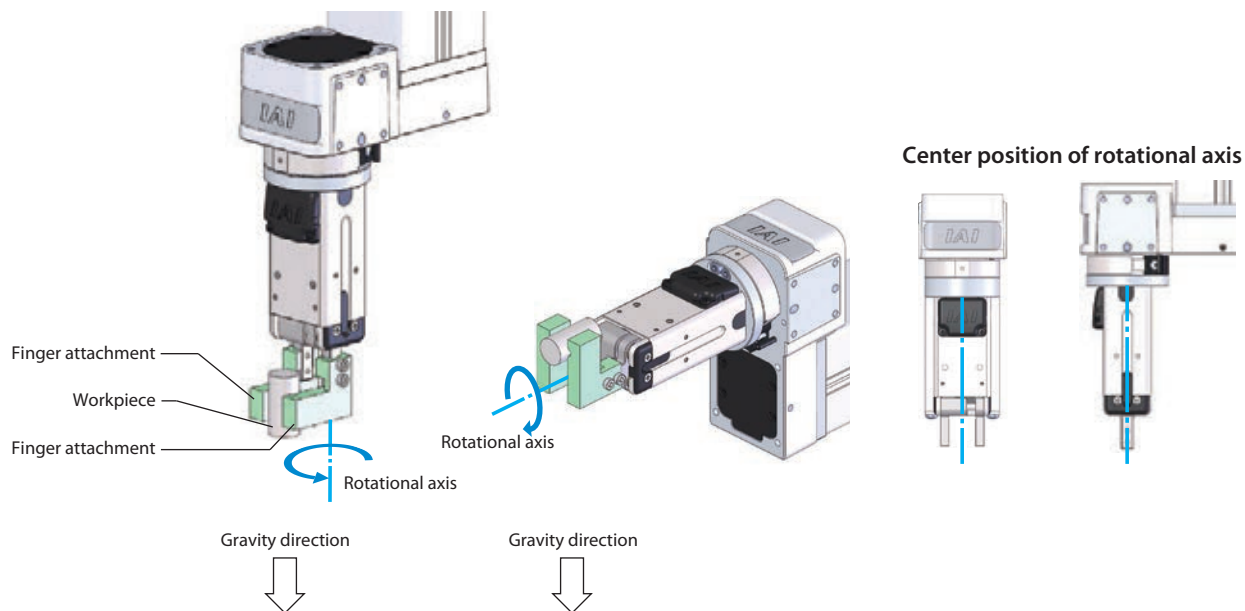
* The mass of the finger and the workpiece mass are also part of the external force.
Other external forces applied to the fingers are the centrifugal force when swiveling the gripper with the workpiece attachment gripped and the inertia force due to acceleration/deceleration during travel.



* The load point above indicates the load position on the fingers. The position varies depending on the type of load.
 · Load due to grip force: Gripping point
 · Load due to gravity: Center mass location
 · Inertial force during travel, centrifugal force during swivel: Center mass location
 The load moment is the total value calculated for each type of load.

Step 4 Check the allowable moment of inertia

Calculate the moment of inertia of the workpiece, etc., and make sure that it does not exceed the allowable moment of inertia. For the calculation method, refer to "Formulae for calculating moment of inertia of typical shapes" on the next page.



Allowable moment of inertia

Model	Allowable moment of inertia (kg-m ²)
RCP6-RTCKSPE/RTCKSPI/RTCKSRE/RTCKSRI	2.30×10^{-4}
RCP6-RTCKMPE/RTCKMPI/RTCKMRE/RTCKMRI	3.60×10^{-4}

Formulae for calculating moment of inertia of typical shapes

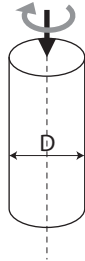
Step 1 When the rotational axis passes through the center of the object

(1) Moment of inertia of cylinder 1

* The same formula can be applied irrespective of the height of the cylinder (also for circular plate)

<Formula> $I = M \times D^2 / 8$

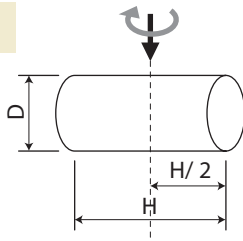
Moment of inertia of cylinder: I (kg·m²)
Cylinder weight: M (unit: kg)
Cylinder diameter: D (m)



(2) Moment of inertia of cylinder 2

<Formula> $I = M \times (D^2/4 + H^2/3) / 4$

Moment of inertia of cylinder: I (kg·m²)
Cylinder weight: M (kg)
Cylinder diameter: D (m)
Cylinder length: H (m)

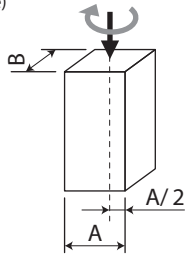


(3) Moment of inertia of cuboid 1

* The same formula can be applied irrespective of the height of the cuboid (also for rectangular plate)

<Formula> $I = M \times (A^2 + B^2) / 12$

Moment of inertia of cuboid: I (kg·m²)
Cuboid weight: M (kg)
First side of cuboid: A (m)
Second side of cuboid: B (m)



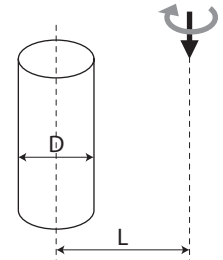
Step 2 When the center of the object is offset from the rotational axis

(4) Moment of inertia of cylinder 3

* The same formula can be applied irrespective of the height of the cylinder (also for circular plate)

<Formula> $I = M \times D^2 / 8 + M \times L^2$

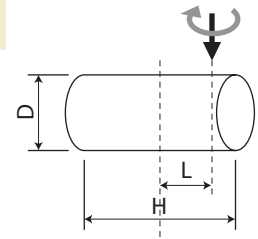
Moment of inertia of cylinder: I (kg·m²)
Cylinder weight: M (kg)
Cylinder diameter: D (m)
Distance from rotational axis to center: L (m)



(5) Moment of inertia of cylinder 4

<Formula> $I = M \times (D^2/4 + H^2/3) / 4 + M \times L^2$

Moment of inertia of cylinder: I (kg·m²)
Cylinder weight: M (kg)
Cylinder diameter: D (m)
Cylinder length: H (m)
Distance from rotational axis to center: L (m)

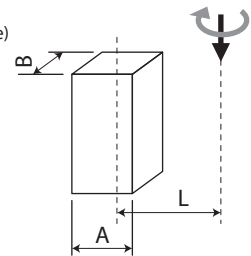


(6) Moment of inertia of cuboid 2

* The same formula can be applied irrespective of the height of the cuboid (also for rectangular plate)

<Formula> $I = M \times (A^2 + B^2) / 12 + M \times L^2$

Moment of inertia of cuboid: I (kg·m²)
Cuboid weight: M (kg)
First side of cuboid: A (m)
Second side of cuboid: B (m)
Distance from rotational axis to center: L (m)



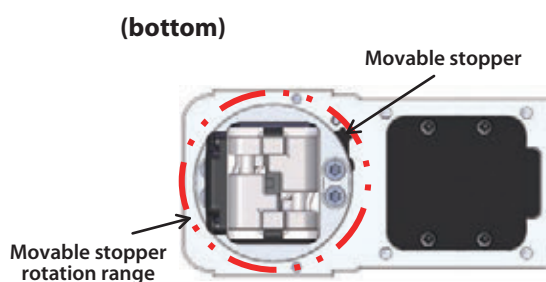
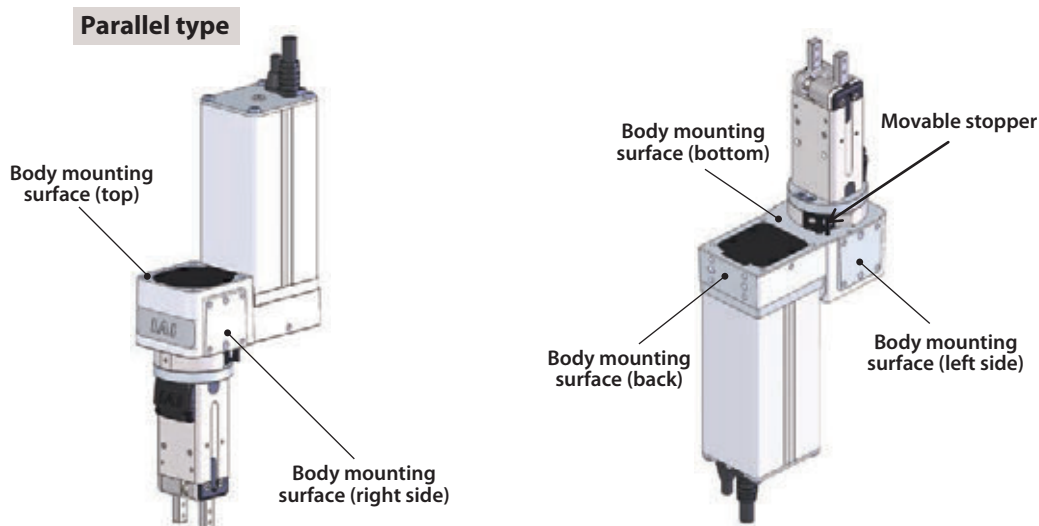
Mounting method

The parallel type can be mounted and fixed from 5 sides and the side-mounted type from 4 sides.

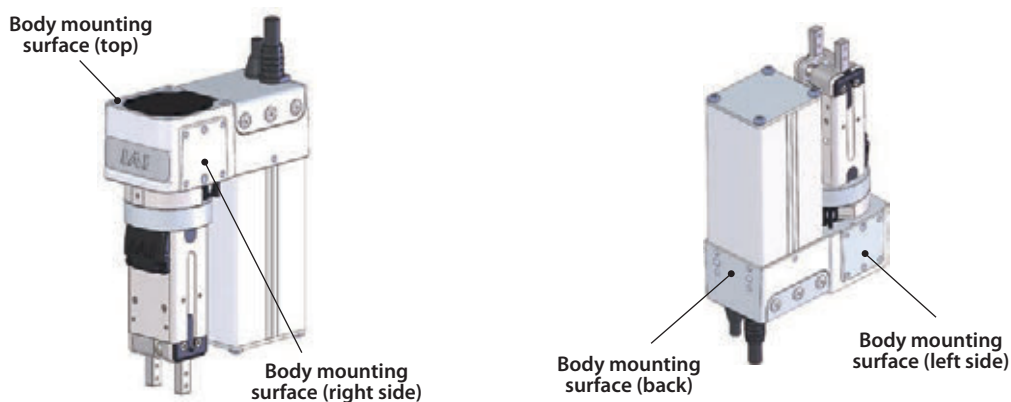
The body includes tapped mounting holes for mounting. The mounting surface should be a machined surface or a plane with similar accuracy.

For fixation, use all the screw holes (4 holes) on the surface to be used for mounting. If not all the screw holes are used, depending on the load applied to the body, the bolts or screw holes may be damaged.

When fixing the parallel type to the bottom surface, be careful not to cause interference with the movable range of the rotating movable stopper.



Side-mounted type

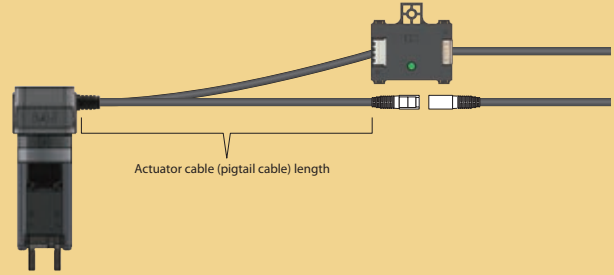


Options

Actuator cable (pigtail cable) length

Model AC2 / AC5

Description Although the standard length of the actuator's pigtail cables for rotation and grip is 1m, they can be changed to 2m/5m as an option.



Brake

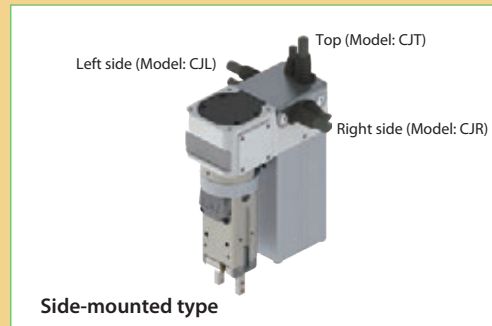
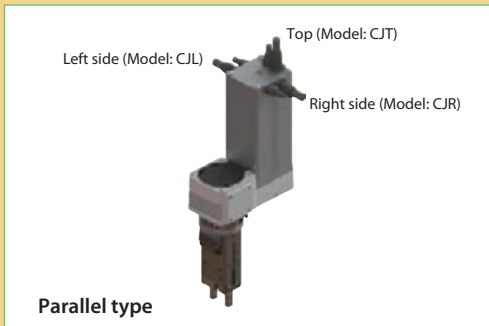
Model B

Description This works as a holding mechanism that prevents rotation and damage to any attachments when the power or servo is turned off.

Cable exit direction

Model CJT / CJR / CJL

Description The mounting direction of the actuator's pigtail cable can be changed to top, left, or right.



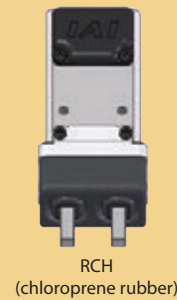
Rubber cover attached

Model RCH / RSL

Description A rubber cover can be added to the chuck part.

Applicable models	Rubber cover material	Single product model number
RCP6-RTCKSPE/RTCKSPI RTCKSRE/RTCKSRI	RCH (chloroprene rubber)	GRS-RCH-S
RCP6-RTCKMPE/RTCKMPI RTCKMRE/RTCKMRI		GRS-RCH-M
RCP6-RTCKSPE/RTCKSPI RTCKSRE/RTCKSRI	RSL (silicone rubber)	GRS-RSL-S
RCP6-RTCKMPE/RTCKMPI RTCKMRE/RTCKMRI		GRS-RSL-M

(When ordering by single product model number, a mounting bracket and screws will also be included)



Sensor

Model S1N / S2N / S1P / S2P

Description One or two sensors can be attached to the chuck part.

Applicable models	Sensor specification	Number of sensors	Single product model number
RCP6-RTCKSPE/RTCKSPI RTCKSRE/RTCKSRI	NPN	1	GRS-S1N-S
		2	GRS-S2N-S
	PNP	1	GRS-S1P-S
		2	GRS-S2P-S
RCP6-RTCKMPE/RTCKMPI RTCKMRE/RTCKMRI	NPN	1	GRS-S1N-M
		2	GRS-S2N-M
	PNP	1	GRS-S1P-M
		2	GRS-S2P-M

(When ordering by single product model number, a mounting bracket and bolts will also be included)



Maintenance parts

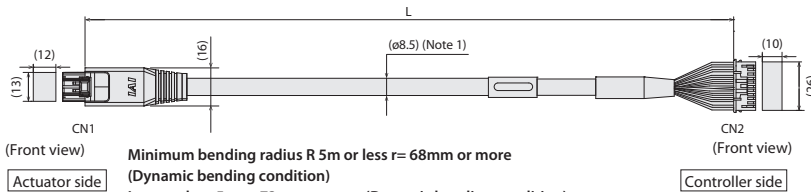
When placing an order for a replacement cable, please use the model name shown below.

■ Table of compatible cables

	Connected controller	Integrated motor-encoder cable	Integrated motor-encoder robot cable
Rotation cable	PCON	CB-CAN-MPA□□□□	CB-CAN-MPA□□□□-RB
	MCON		
	MSEL		
	RCON	CB-ADPC-MPA□□□□	CB-ADPC-MPA□□□□-RB
	RCM-P6PC		
Grip cable		Solenoid driver cable CB-GRS-PCS□□□□	*Non-robot cable

Model: **CB-CAN-MPA□□□□/CB-CAN-MPA□□□□-RB**

* Please indicate the cable length (L) in □□□, e.g.) 080 = 8m, maximum 15m



Minimum bending radius R 5m or less $r=68\text{mm}$ or more
(Dynamic bending condition)
Longer than 5m $r=73\text{mm}$ or more (Dynamic bending condition)

* The robot cable is designed for flex-resistance:
Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is 5m or more, ø9.1 cable diameter applies for both robot and non-robot cables.

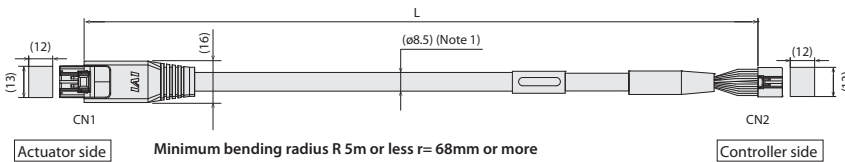
Actuator side
DF62DL-24S-2.2C
(HIROSE ELECTRIC CO., LTD.)

Controller side
PADP-24V-1-S
(J.S.T.MFG.CO.,LTD.)

Color (wiring)	Signal name	Pin No.	Pin No.	Signal name	Color (wiring)
Blue(AWG22/19)	eA	3	1	eA	Blue(AWG22/19)
Orange(AWG22/19)	VMM	5	2	VMM	Orange(AWG22/19)
Brown(AWG22/19)	eB	10	3	eB	Brown(AWG22/19)
Gray(AWG22/19)	VMM	9	4	VMM	Gray(AWG22/19)
Green(AWG22/19)	e.A	4	5	e.A	Green(AWG22/19)
Red(AWG22/19)	e.B	15	6	e.B	Red(AWG22/19)
Light blue (AWG26)	SA (mABS)	12	11	SA (mABS)	Light blue (AWG26)
Orange(AWG26)	SB (mABS)	17	12	SB (mABS)	Orange(AWG26)
Green(AWG26)	A+	1	13	A+	Green(AWG26)
Brown(AWG26)	A-	6	14	A-	Brown(AWG26)
Gray(AWG26)	B+	11	15	B+	Gray(AWG26)
Red(AWG26)	B-	16	16	B-	Red(AWG26)
Black(AWG26)	VPS	18	18	VPS	Black(AWG26)
Yellow(AWG26)	LS+	8	7	LS+	Yellow(AWG26)
Light blue (AWG26)	BK+	20	9	BK+	Light blue (AWG26)
Orange(AWG26)	BK-	2	10	BK-	Orange(AWG26)
Gray(AWG26)	VCC	21	17	VCC	Gray(AWG26)
Red(AWG26)	GND	7	19	GND	Red(AWG26)
Brown(AWG26)	LS-	14	8	LS-	Brown(AWG26)
Green(AWG26)	LS_GND	13	20	LS_GND	Green(AWG26)
—	—	19	22	—	—
Pink(AWG26)	CF_VCC	22	21	CF_VCC	Pink(AWG26)
—	—	23	23	—	—
Black(AWG26)	FG	24	24	FG	Black(AWG26)

Model: **CB-ADPC-MPA□□□□/CB-ADPC-MPA□□□□-RB**

* Please indicate the cable length (L) in □□□, e.g.) 030 = 3m, maximum 15m



Minimum bending radius R 5m or less $r=68\text{mm}$ or more
(Dynamic bending condition)
Longer than 5m $r=73\text{mm}$ or more (Dynamic bending condition)

* The robot cable is designed for flex-resistance:
Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is over 5m, ø9.1 cable diameter applies.

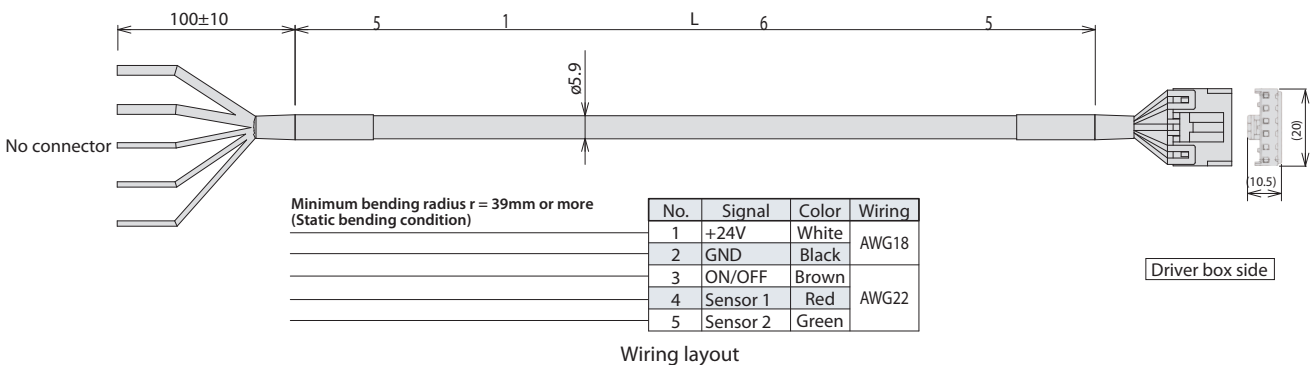
Actuator side
DF62DL-24S-2.2C
(HIROSE ELECTRIC CO., LTD.)

Controller side
DF62DL-24S-2.2C
(HIROSE ELECTRIC CO., LTD.)

Color (wiring)	Signal name	Pin No.	Pin No.	Signal name	Color (wiring)
Blue(AWG22/19)	eA	3	3	eA	Blue(AWG22/19)
Orange(AWG22/19)	VMM	5	5	VMM	Orange(AWG22/19)
Brown(AWG22/19)	eB	10	10	eB	Brown(AWG22/19)
Gray(AWG22/19)	VMM	9	9	VMM	Gray(AWG22/19)
Green(AWG22/19)	e.A	4	4	e.A	Green(AWG22/19)
Red(AWG22/19)	e.B	15	15	e.B	Red(AWG22/19)
Light blue (AWG26)	SA (mABS)	12	17	SA (mABS)	Light blue (AWG26)
Orange(AWG26)	SB (mABS)	17	12	SB (mABS)	Orange(AWG26)
Green(AWG26)	A+	1	1	A+	Green(AWG26)
Brown(AWG26)	A-	6	6	A-	Brown(AWG26)
Gray(AWG26)	B+	11	11	B+	Gray(AWG26)
Red(AWG26)	B-	16	16	B-	Red(AWG26)
Black(AWG26)	VPS	18	18	VPS	Black(AWG26)
Yellow(AWG26)	LS+	8	8	LS+	Yellow(AWG26)
Light blue (AWG26)	BK+	20	20	BK+	Light blue (AWG26)
Orange(AWG26)	BK-	2	2	BK-	Orange(AWG26)
Gray(AWG26)	VCC	21	21	VCC	Gray(AWG26)
Red(AWG26)	GND	7	7	GND	Red(AWG26)
Brown(AWG26)	LS-	14	14	LS-	Brown(AWG26)
Green(AWG26)	LS_GND	13	13	LS_GND	Green(AWG26)
—	—	19	19	—	—
Pink(AWG26)	CF_VCC	22	22	CF_VCC	Pink(AWG26)
—	—	23	23	—	—
Black(AWG26)	FG	24	24	FG	Black(AWG26)

Model: **CB-GRS-PCS□□□□**

* Please indicate the cable length (L) in □□□, e.g.) 050 = 5m, maximum 15m



Minimum bending radius $r=39\text{mm}$ or more
(Static bending condition)

Driver box side

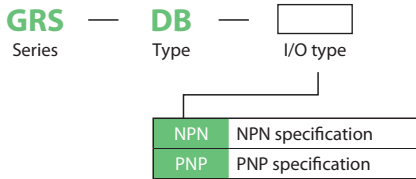
Wiring layout

Driver box

A driver box is required to operate the chuck part. In accordance with the ON/OFF signals from the external control device, control the current so as to avoid heat generation in the chuck part and operate the chuck. It is possible to purchase separately as a spare part.



Model Configuration



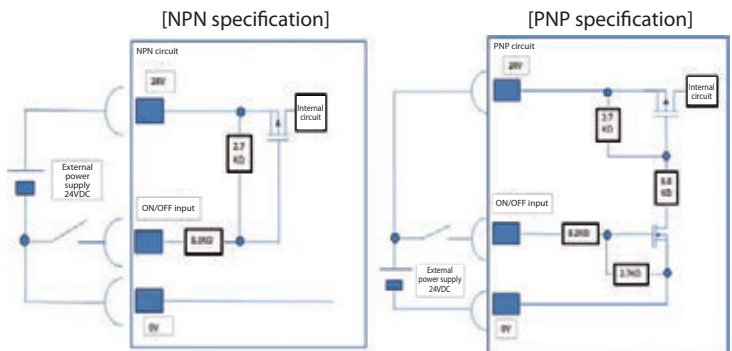
Specification

Item	Description	
Control target	RCP6-RTCKS	RCP6-RTCKM
Control method	PWM current control	
Power supply voltage	24VDC ± 10%	
Maximum output current (Release initial instantaneous 40ms)	2.8A	3.7A
Maximum power consumption (Release initial instantaneous 40ms)	74W	97W
Power consumption for release retention (Release status retained)	2.0W	2.1W
Power consumption for grip status	0W	0W
Open/close signal input	Signal input dedicated for 24VDC (NPN/PNP selection)	
Position sensor signal output	Signal output dedicated for 24VDC (NPN/PNP selection)	
Indicator light	LED during release operation: Light ON (green) LED during gripping operation: Light OFF	
Manual switch	OFF during normal operation Manual switch ON is enabled only when open/close signal input is OFF	
Ambient operating temperature	0 to 40°C	
Ambient operating humidity	85% RH or less (non-condensing)	
Operating ambience	No corrosive gas	
Ambient storage humidity	-10 to 65°C	
Ambient storage temperature	90% RH or less (non-condensing)	
Degree of protection	IP20	
Mass	22g	
External dimensions	58mm (W) x 58.1mm (H) x 16mm (T)	

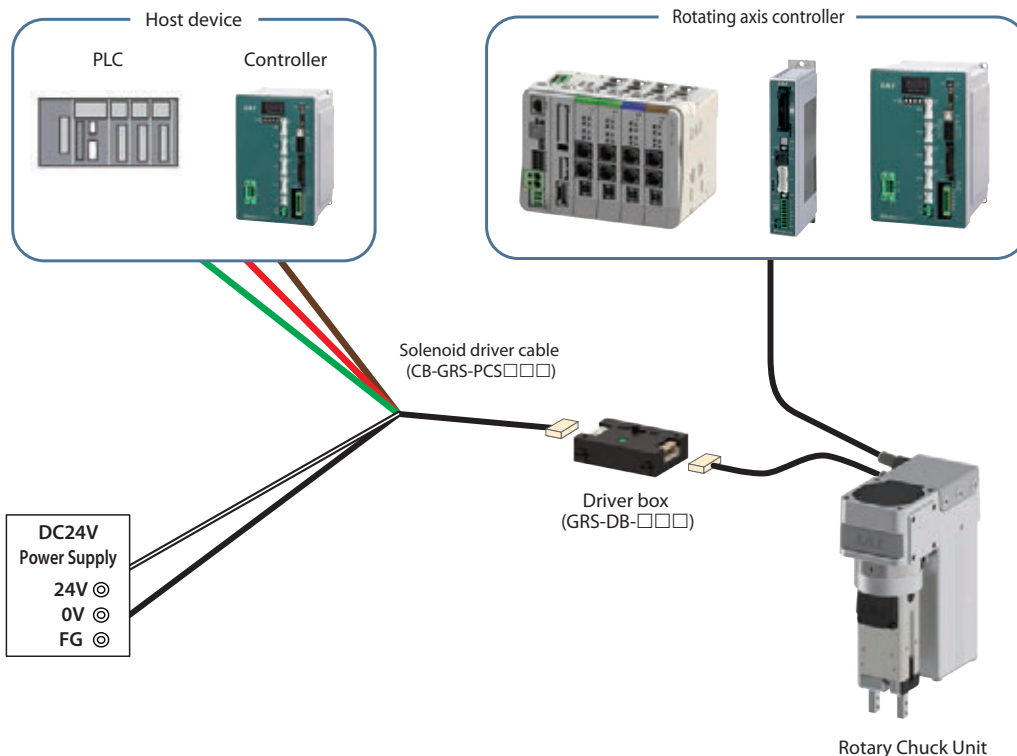
Open/close Signal Input Specification

Item	NPN specification	PNP specification
Input voltage	24V ±10%	24V ±10%
Input current	2mA	2mA
Leakage current	0.25mA Max	0.25mA Max
Operating voltage	ON voltage: 6.0V or less	ON voltage: 18.0V or more
	OFF voltage: Input voltage - 3.0V or more	OFF voltage: Input voltage 3.0V or less
Isolation method	Non-isolated	Non-isolated

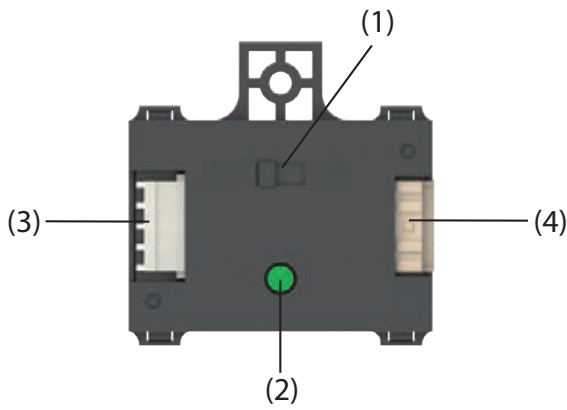
Internal Circuit Specification



System Configuration

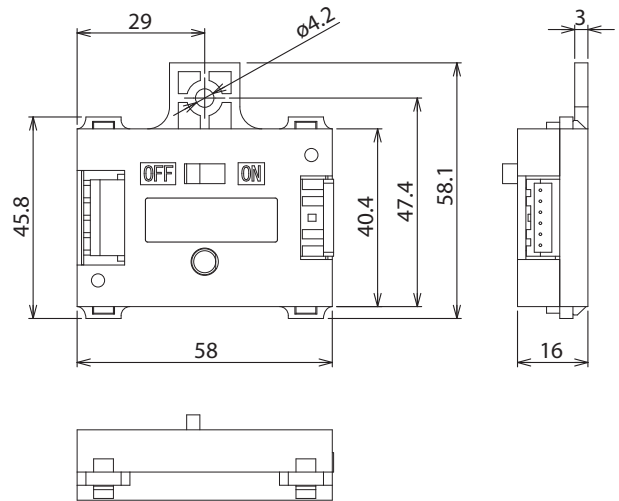


■ Names of Each Part



- (1) Slide switch
For manual grip/release.
(Enabled only when open/close signal from external device is OFF)
- (2) LED display
Light turns ON via signals from the external control device.
Light is also ON during forced ON via slide switch.
- (3) Power/control device side connector
Connects cables from power supply, host devices and control.
- (4) Gripper side connector
Connects the rotary chuck (actuator's pigtail cable for grip).

■ External View



■ Signal Names (power/control device side)

Wire color	Signal name	Description
White	24V	24VDC ±10% power input for driver box, chuck part sensor
Black	0V	0V(GND)
Brown	ON/OFF	Chuck part open/close signal input
Red	Sensor 1	Chuck part sensor 1 output
Green	Sensor 2	Chuck part sensor 2 output

**RCP6 Series
Rotary Chuck Unit
Catalogue No. 0319-E**

The information contained in this catalog
is subject to change without notice for the
purpose of product improvement



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