RCP6(S)W-RA4C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 24v Stepper Motor

■ Model Specification Items

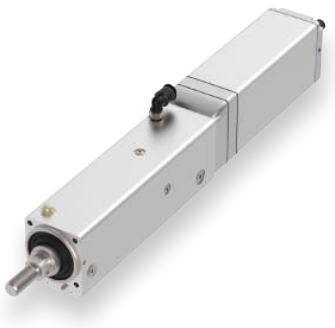
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA4C	WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ↓ 200:200mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCM-P6PC [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



POINT Selection Notes

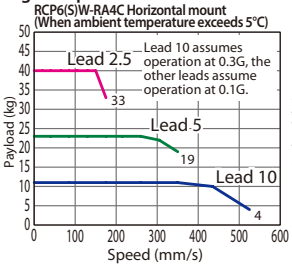
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

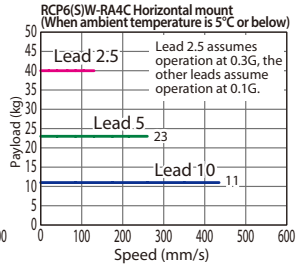
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA4C Horizontal mount (When ambient temperature exceeds 5°C)

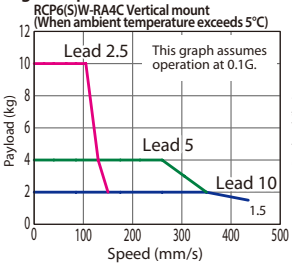


RCP6(S)W-RA4C Horizontal mount (When ambient temperature is 5°C or below)

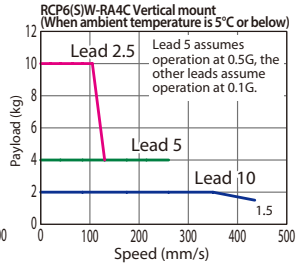


High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA4C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA4C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA4C-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4C-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4C-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**150**	○	○
100	○	○	**200**	○	○

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

③ Cable Length

Cable Type	Cable Code	RCP6W P3	RCP6W P5	RCP6SW SE
Standard	**P**(1m)	○	○	○
	S(3m)	○	○	○
	M(5m)	○	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○	○
	X11 (11m) ~**X15** (15m)	○	○	○
	X16 (16m) ~**X18** (18m)	○	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○	○
	R04 (4m) ~**R05** (5m)	○	○	○
	R06 (6m) ~**R10** (10m)	○	○	○
	R11 (11m) ~**R15** (15m)	○	○	○
	R16 (16m) ~**R18** (18m)	○	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

Actuator Specifications

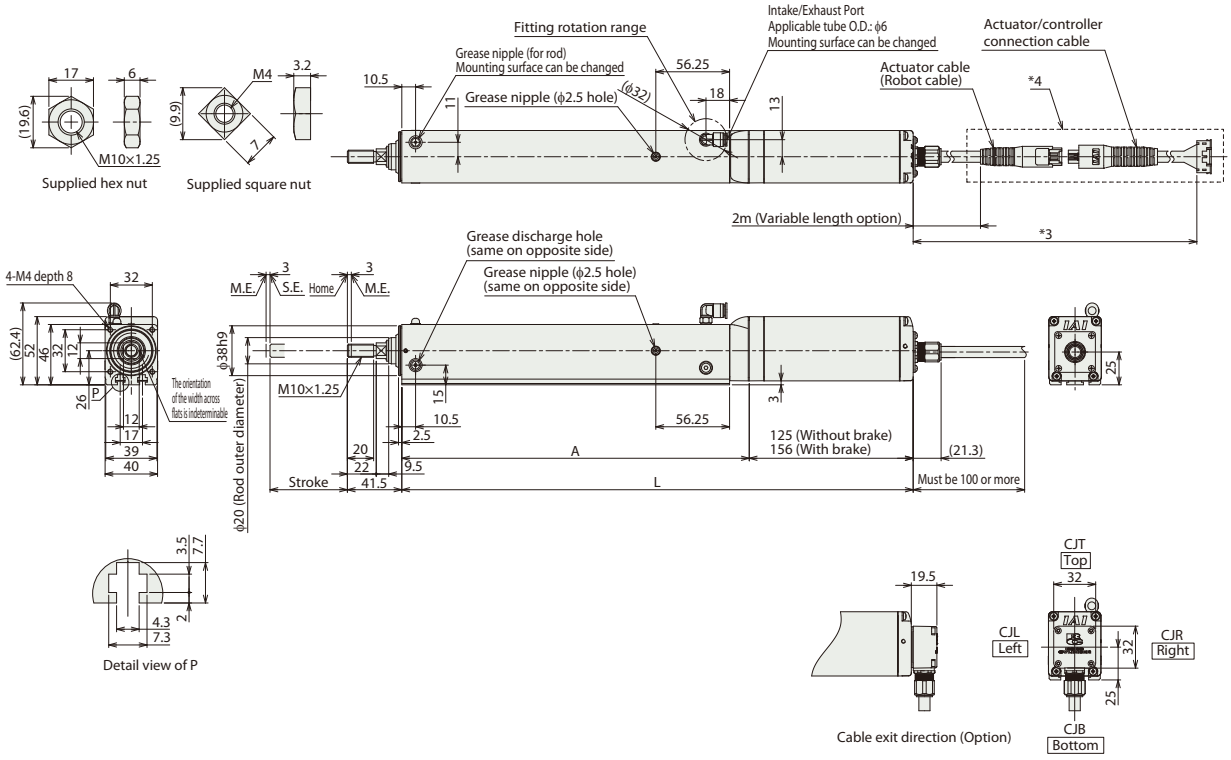
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm
Allowable static torque on rod tip	1.0N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

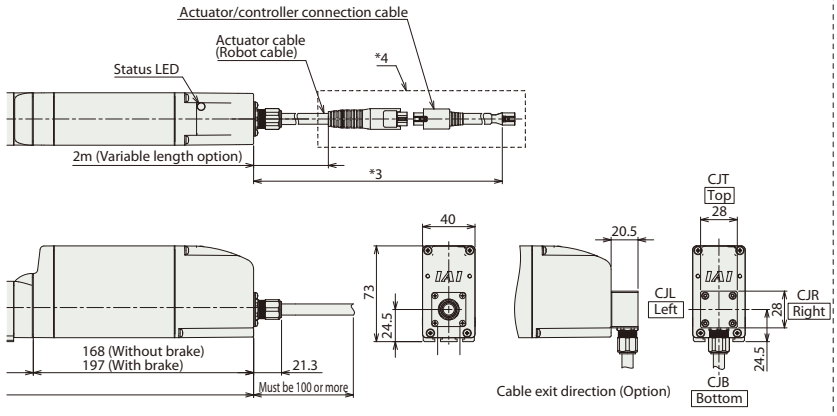
Dimensions

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

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■ RCP6SW-RA4C



*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L	RCP6W	w/o brake	288	338	388	438
		w/ brake	319	369	419	469
	RCP6SW	w/o brake	331	381	431	481
		w/ brake	360	410	460	510
A			163	213	263	313
Mass (kg)	RCP6W	w/o brake	1.4	1.6	1.8	2.0
		w/ brake	1.5	1.7	1.9	2.1
	RCP6SW	w/o brake	1.6	1.8	2.0	2.2
		w/ brake	1.7	1.9	2.1	2.3

* Please refer to P.249 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	Please contact IAI for more information.
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET, SSCNET III/H	512 (768 for network spec.)	See P.255
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		–	–	●		256	Please contact IAI for more information.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●		30,000	Please contact IAI for more information.
RCM-P6PC		1	Usable within the RCP6S Gateway system.					768	See P.279

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA6C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 58 mm | 24v Stepper Motor

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA6C	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCM-P6PC [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

POINT Selection Notes

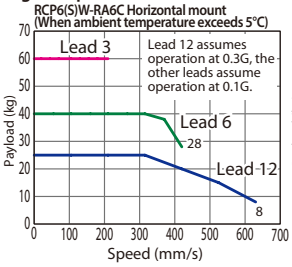
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.231 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

Correlation Diagrams of Speed and Payload

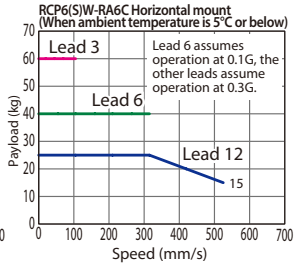
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA6C Horizontal mount (When ambient temperature exceeds 5°C)

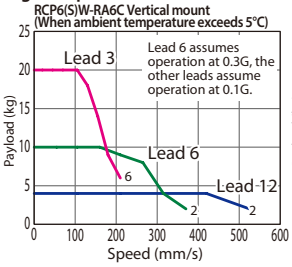


RCP6(S)W-RA6C Horizontal mount (When ambient temperature is 5°C or below)

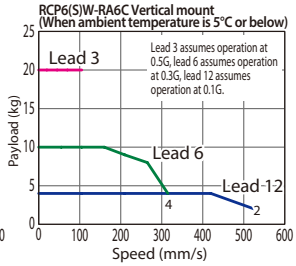


High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA6C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA6C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA6C-WA-42P-12-①-②-③-④	12	25	4	93	50~300 (Every 50mm)
RCP6(S)W-RA6C-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RA6C-WA-42P-3-①-②-③-④	3	60	20	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6W P3	RCP6W P5	RCP6SW SE
Standard	**P**(1m)	○	○	○
	S(3m)	○	○	○
	M(5m)	○	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○	○
	X11 (11m) ~**X15** (15m)	○	○	○
	X16 (16m) ~**X18** (18m)	○	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○	○
	R04 (4m) ~**R05** (5m)	○	○	○
	R06 (6m) ~**R10** (10m)	○	○	○
	R11 (11m) ~**R15** (15m)	○	○	○
	R16 (16m) ~**R18** (18m)	○	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

Actuator Specifications

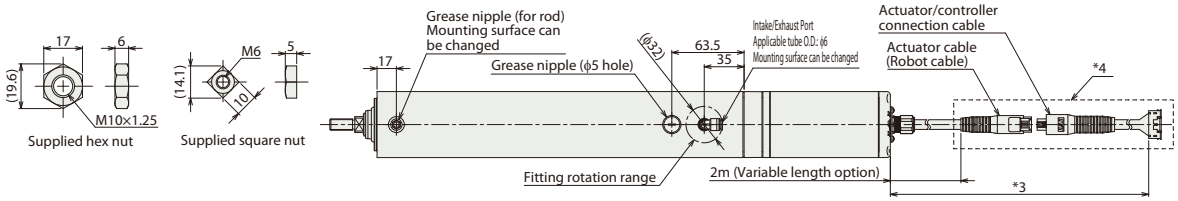
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm
Allowable static torque on rod tip	1.5N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

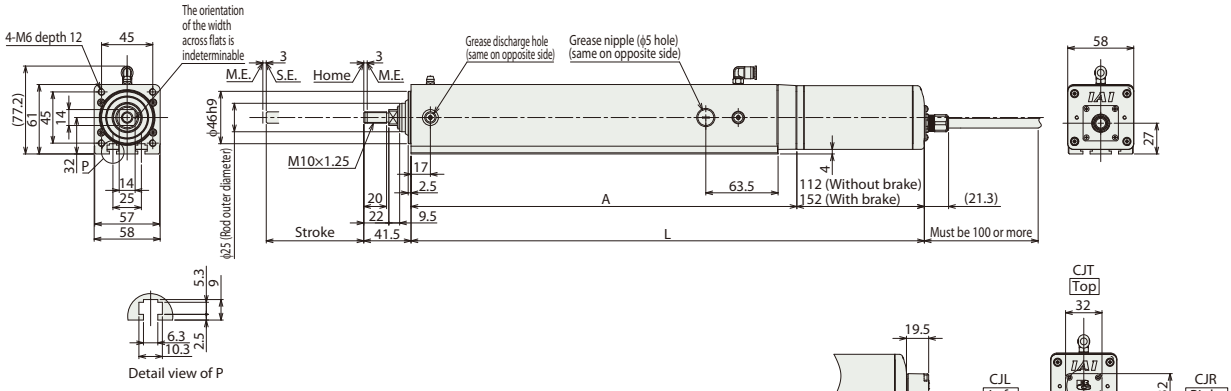
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

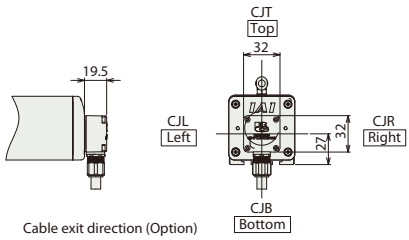
Dimensions

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

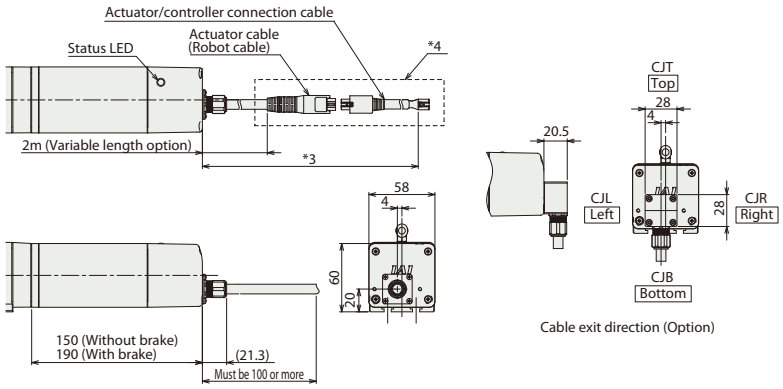
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.







■ RCP6SW-RA6C



*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6W	w/o brake	301	351	401	451	501	551
		w/ brake	341	391	441	491	541	591
	RCP6SW	w/o brake	339	389	439	489	539	589
		w/ brake	379	429	479	529	579	629
A			189	239	289	339	389	439
Mass (kg)	RCP6W	w/o brake	2.5	2.9	3.3	3.6	4.0	4.4
		w/ brake	2.8	3.2	3.6	3.9	4.3	4.7
	RCP6SW	w/o brake	2.7	3.1	3.5	3.8	4.2	4.6
		w/ brake	2.9	3.3	3.7	4.0	4.4	4.8

* Please refer to P.249 and P.250 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	Please contact IAI for more information.
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET, SSCNET III/H	512 (768 for network spec.)	See P.255
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		–	–	●		256	Please contact IAI for more information.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please contact IAI for more information.
RCM-P6PC		1	Usable within the RCP6S Gateway system.					768	See P.279

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA7C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 24v Stepper Motor

Model Specification Items

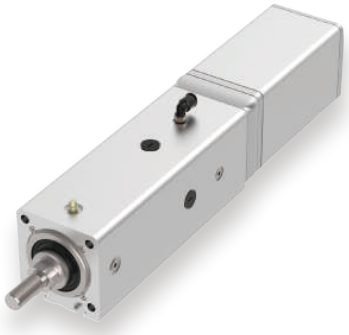
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA7C	WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCM-P6PC [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



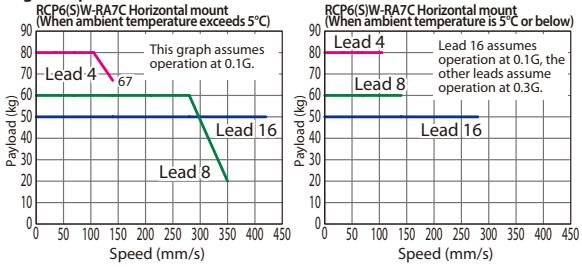
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.232 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

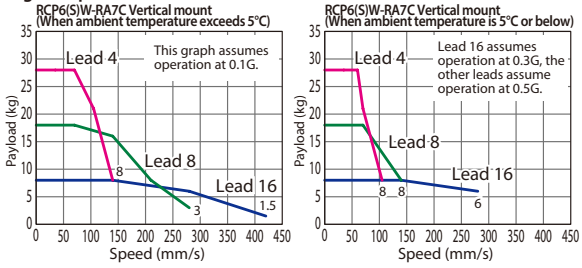
Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.



High-output enabled with PCON/MCON/MSEL connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA7C-WA-56P-16-①-②-③-④	16	50	8	273	50~300 (Every 50mm)
RCP6(S)W-RA7C-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RA7C-WA-56P-4-①-②-③-④	4	80	28	1,094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

③ Cable Length

Cable Type	Cable Code	RCP6W P3	RCP6W P5	RCP6SW SE
Standard	**P**(1m)	○	○	○
	S(3m)	○	○	○
	M(5m)	○	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○	○
	X11 (11m) ~**X15** (15m)	○	○	○
	X16 (16m) ~**X18** (18m)	○	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○	○
	R04 (4m) ~**R05** (5m)	○	○	○
	R06 (6m) ~**R10** (10m)	○	○	○
	R11 (11m) ~**R15** (15m)	○	○	○
	R16 (16m) ~**R18** (18m)	○	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

Actuator Specifications

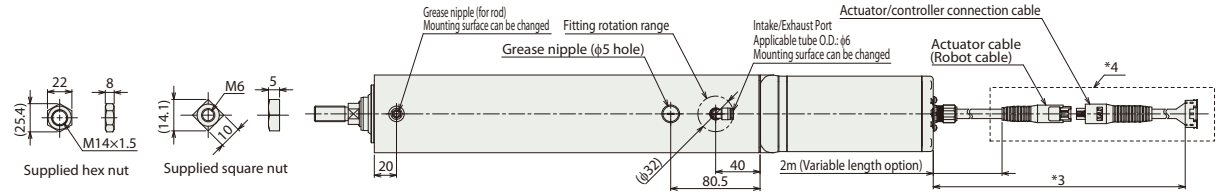
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm
Allowable static torque on rod tip	2.5N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

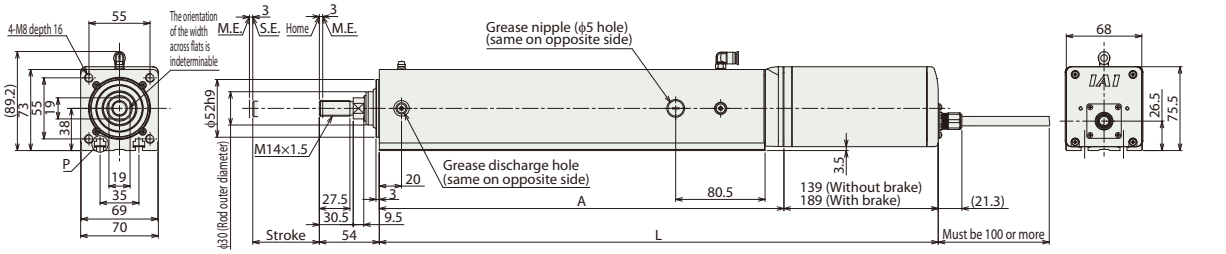
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

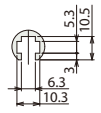
Dimensions

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

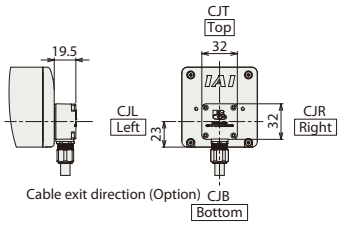
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





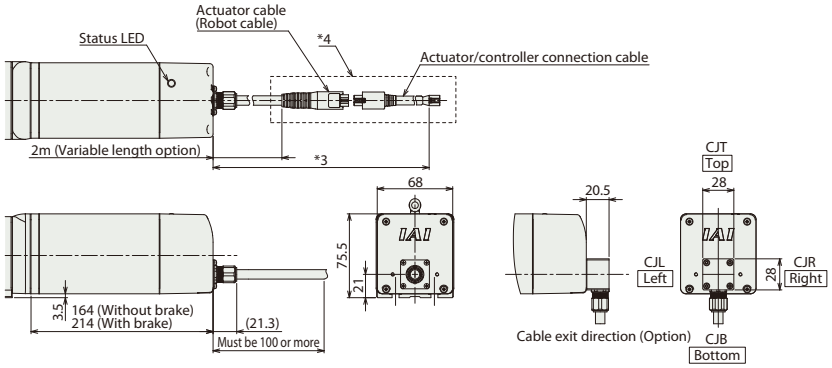


Detail view of P



Cable exit direction (Option)

■ RCP6SW-RA7C



Cable exit direction (Option)

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 6 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6W	w/o brake	353.5	403.5	453.5	503.5	553.5	603.5
		w/ brake	403.5	453.5	503.5	553.5	603.5	653.5
	RCP6SW	w/o brake	378.5	428.5	478.5	528.5	578.5	628.5
		w/ brake	428.5	478.5	528.5	578.5	628.5	678.5
A			214.5	264.5	314.5	364.5	414.5	464.5
Mass (kg)	RCP6W	w/o brake	4.5	5.1	5.7	6.3	6.8	7.4
		w/ brake	5.0	5.6	6.2	6.8	7.3	7.9
	RCP6SW	w/o brake	4.7	5.3	5.9	6.5	7.0	7.6
		w/ brake	5.1	5.7	6.3	6.9	7.4	8.0

* Please refer to P.250 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	Please contact IAI for more information.
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET, SSCNET III/H	512 (768 for network spec.)	See P.255
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		–	–	●		256	Please contact IAI for more information.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please contact IAI for more information.
RCM-P6PC		1	Usable within the RCP6S Gateway system.					768	See P.279

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA8C

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 85 mm | 24v Stepper Motor

■ Model Specification Items

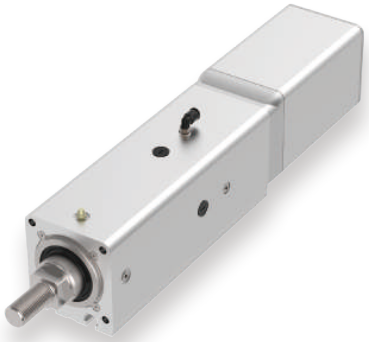
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA8C	WA: Battery-less Absolute	60P: Stepper Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P4 : PCON-CFB/CGFB [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



POINT Selection Notes

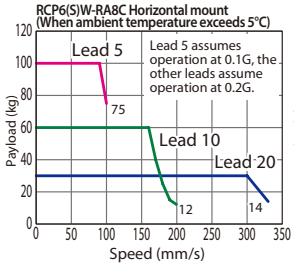
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.232 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

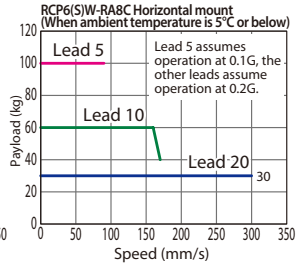
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON connected.

RCP6(S)W-RA8C Horizontal mount (When ambient temperature exceeds 5°C)

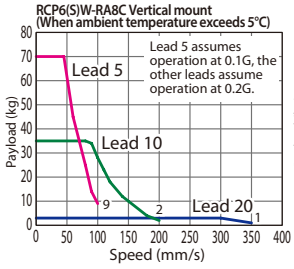


RCP6(S)W-RA8C Horizontal mount (When ambient temperature is 5°C or below)

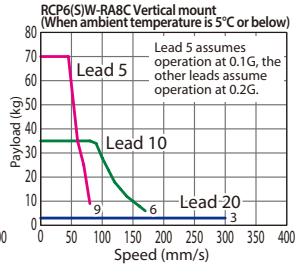


PCON connected.

RCP6(S)W-RA8C Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA8C Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA8C-WA-60P-20-①-②-③-④	20	30	3	500	50~300 (Every 50mm)
RCP6(S)W-RA8C-WA-60P-10-①-②-③-④	10	60	35	1,000	
RCP6(S)W-RA8C-WA-60P-5-①-②-③-④	5	100	70	2,000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	350 <330> [300]
10	200 [170]
5	100 [80]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

③ Cable Length

Cable Type	Cable Code	RCP6W	RCP6SW
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X18** (18m)	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R18** (18m)	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

Actuator Specifications

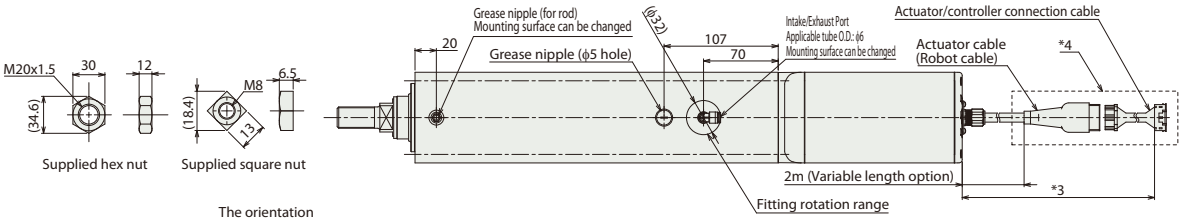
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm
Allowable static torque on rod tip	5N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

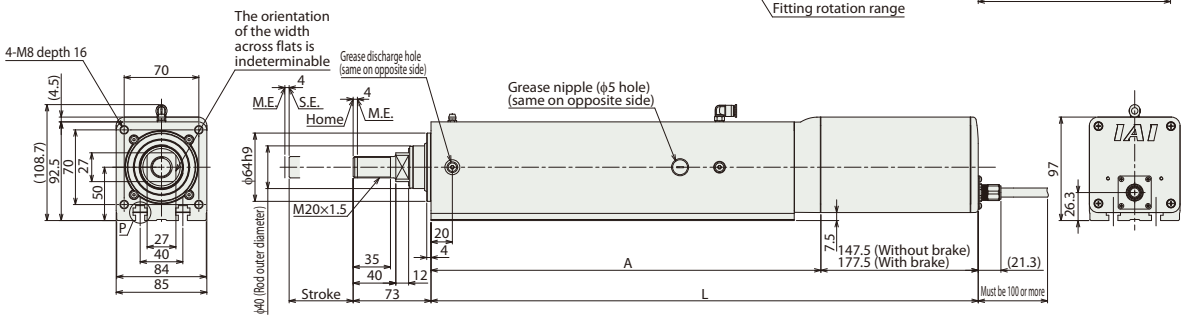
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

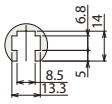
Dimensions

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

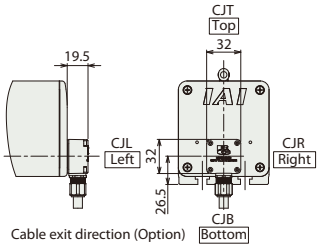
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





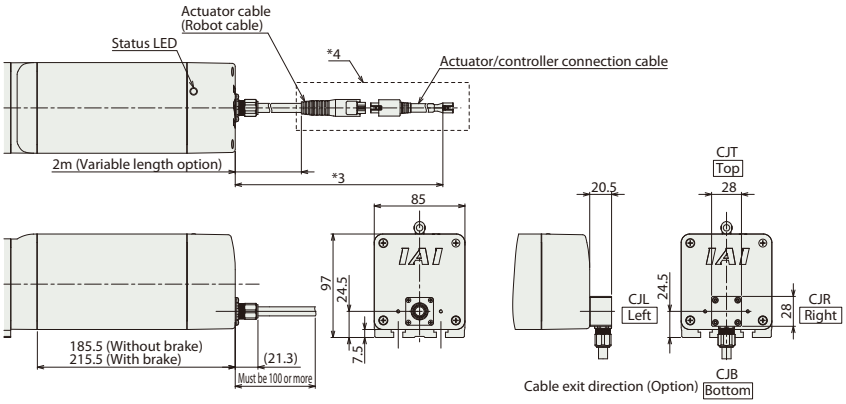


Detail view of P



Cable exit direction (Option)

■ RCP6SW-RA8C



Cable exit direction (Option)

*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 8 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L	RCP6W	w/o brake	413	463	513	563	613	663
		w/ brake	443	493	543	593	643	693
	RCP6SW	w/o brake	451	501	551	601	651	701
		w/ brake	481	531	581	631	681	731
A			265.5	315.5	365.5	415.5	465.5	515.5
Mass (kg)	RCP6W	w/o brake	8.0	8.8	9.7	10.5	11.4	12.2
		w/ brake	8.6	9.4	10.3	11.1	12.0	12.8
	RCP6SW	w/o brake	8.3	9.1	10.0	10.8	11.7	12.5
		w/ brake	8.9	9.7	10.6	11.4	12.3	13.1

* Please refer to P.250 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CFB/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT PROFINET	512 (768 for network spec.)	See P.255

RCP6(S)W-RA4R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 24v Stepper Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA4R	WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm ~ 200:200mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCM-P6PC [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

The figure above is the motor side-mounted to left (ML).

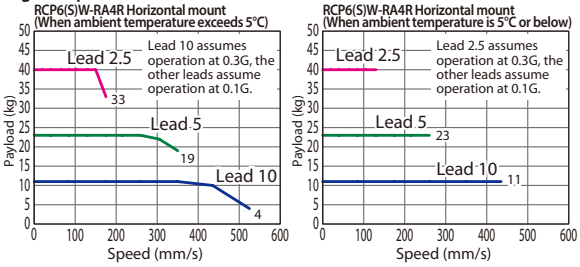
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.233 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

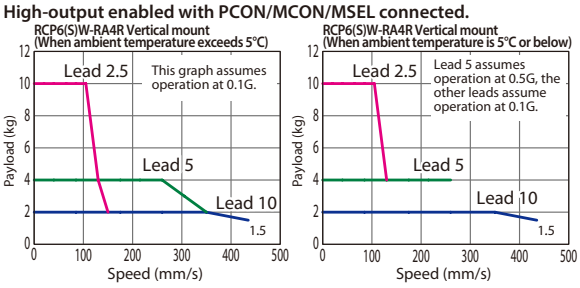
Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.



High-output enabled with PCON/MCON/MSEL connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA4R-WA-35P-10-①-②-③-④	10	11	2	77	50~200 (Every 50mm)
RCP6(S)W-RA4R-WA-35P-5-①-②-③-④	5	23	4	155	
RCP6(S)W-RA4R-WA-35P-2.5-①-②-③-④	2.5	40	10	310	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~200 (Every 50mm)
10	525 <435> [435]
5	350 [260]
2.5	175 <150> [130]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**150**	○	○
100	○	○	**200**	○	○

② Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

③ Cable Length

Cable Type	Cable Code	RCP6W P3	RCP6W P5	RCP6SW SE
Standard	**P**(1m)	○	○	○
	S(3m)	○	○	○
	M(5m)	○	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○	○
	X11 (11m) ~**X15** (15m)	○	○	○
	X16 (16m) ~**X18** (18m)	○	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○	○
	R04 (4m) ~**R05** (5m)	○	○	○
	R06 (6m) ~**R10** (10m)	○	○	○
	R11 (11m) ~**R15** (15m)	○	○	○
	R16 (16m) ~**R18** (18m)	○	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

Actuator Specifications

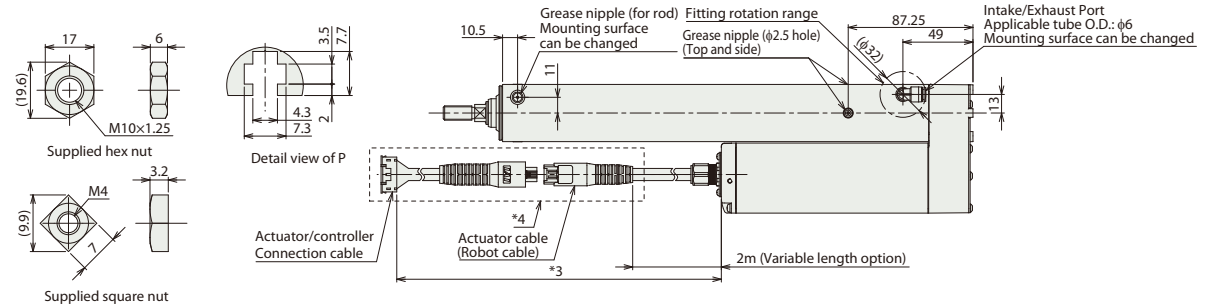
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm
Allowable static torque on rod tip	1.0N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

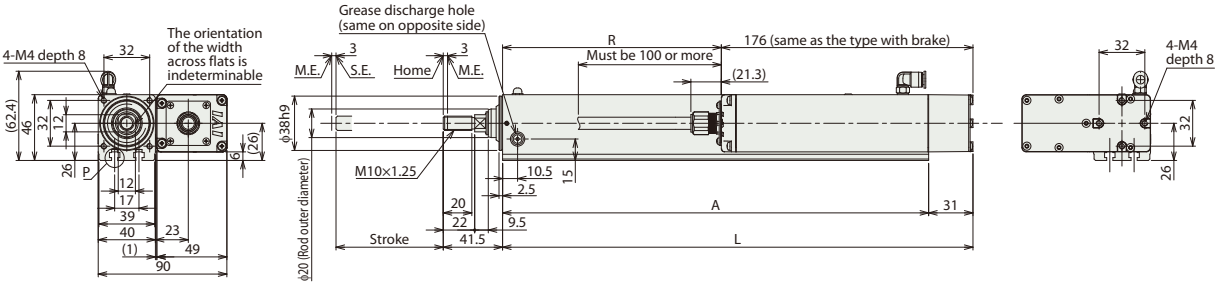
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

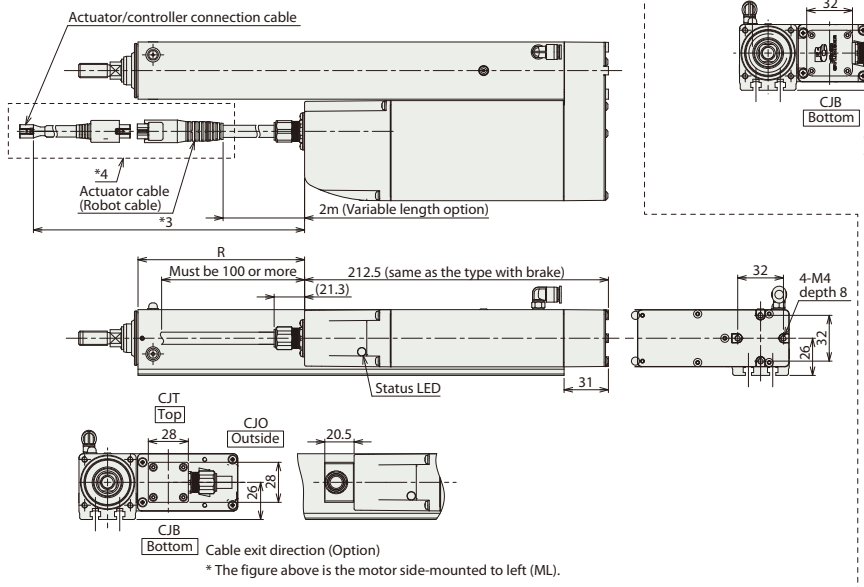
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

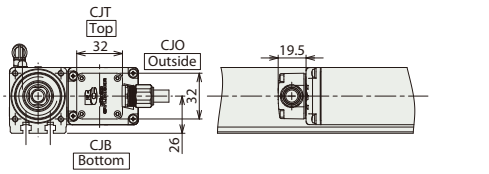
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





■ RCP6SW-RA4R





*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200
L			179	229	279	329
A			148	198	248	298
R	RCP6W		3	53	103	153
	RCP6SW		-33.5	16.5	66.5	116.5
Mass (kg)	RCP6W	w/o brake	1.5	1.7	1.9	2.1
		w/ brake	1.6	1.8	2.0	2.2
	RCP6SW	w/o brake	1.7	1.9	2.1	2.3
		w/ brake	1.8	2.0	2.2	2.4

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

* Please refer to P.249 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
PCON-CYB/PLB/POB		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	Please contact IAI for more information.
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET, SSCNET III/H	512 (768 for network spec.)	See P.255
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		–	–	●		256	Please contact IAI for more information.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●		30,000	Please contact IAI for more information.
RCM-P6PC		1	Usable within the RCP6S Gateway system.					768	See P.279

Note:
· The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA6R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 58* mm | 24v Stepper Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

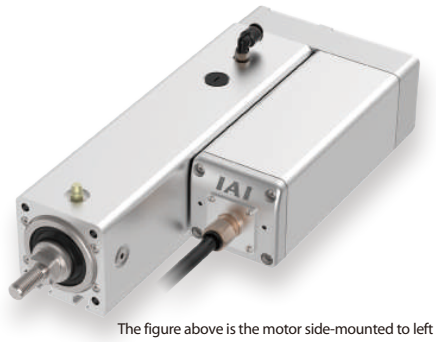
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA6R	WA: Battery-less Absolute	42P: Stepper Motor 42□ Size	12 :12mm 6 : 6mm 3 : 3mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCM-P6PC [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



The figure above is the motor side-mounted to left (ML).

POINT Selection Notes

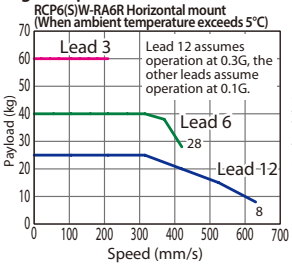
(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.233 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 3/6. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

Correlation Diagrams of Speed and Payload

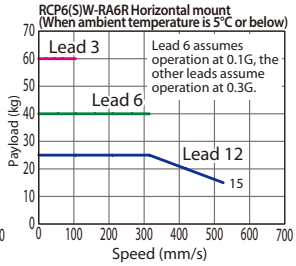
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA6R Horizontal mount (When ambient temperature exceeds 5°C)

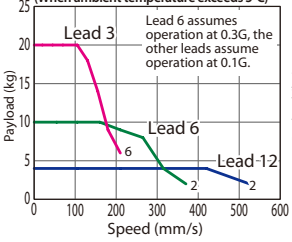


RCP6(S)W-RA6R Horizontal mount (When ambient temperature is 5°C or below)

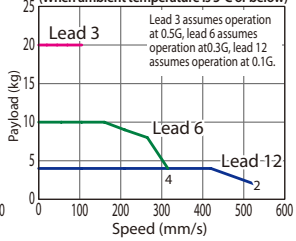


High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)W-RA6R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA6R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA6R-WA-42P-12-①-②-③-④	12	25	4	93	50~300 (Every 50mm)
RCP6(S)W-RA6R-WA-42P-6-①-②-③-④	6	40	10	185	
RCP6(S)W-RA6R-WA-42P-3-①-②-③-④	3	60	20	370	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
12	630 <525> [525]
6	420 <370> [315]
3	210 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	200	○	○
100	○	○	250	○	○
150	○	○	300	○	○

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	Not specified	See P.197
Actuator cable length 5m	AC5	See P.197
Actuator cable length 10m	AC10	See P.197
Actuator cable length 15m	AC15	See P.197
Brake	B	See P.197
Cable exit direction (Bottom)	CJB	See P.197
Cable exit direction (Left)	CJL	See P.197
Cable exit direction (Outside)	CJO	See P.197
Cable exit direction (Right)	CJR	See P.197
Cable exit direction (Top)	CJT	See P.197
Flange	FL	See P.198
Foot bracket	FT	See P.199
Motor side-mounted to left (standard)	ML	See P.201
Motor side-mounted to right	MR	See P.201
Motor side-mounted on top	MT	See P.201
Tip adapter (Internal thread)	NFA	See P.201
Non-motor end specification	NM	See P.202
T-slot nut bar	NTB	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

③ Cable Length

Cable Type	Cable Code	RCP6W P3	RCP6W P5	RCP6SW SE
Standard	P(1m)	○	○	○
	S(3m)	○	○	○
	M(5m)	○	○	○
Specified length	X06 (6m) ~X10 (10m)	○	○	○
	X11 (11m) ~X15 (15m)	○	○	○
	X16 (16m) ~X18 (18m)	○	○	○
Robot cable	R01 (1m) ~R03 (3m)	○	○	○
	R04 (4m) ~R05 (5m)	○	○	○
	R06 (6m) ~R10 (10m)	○	○	○
	R11 (11m) ~R15 (15m)	○	○	○
	R16 (16m) ~R18 (18m)	○	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

Actuator Specifications

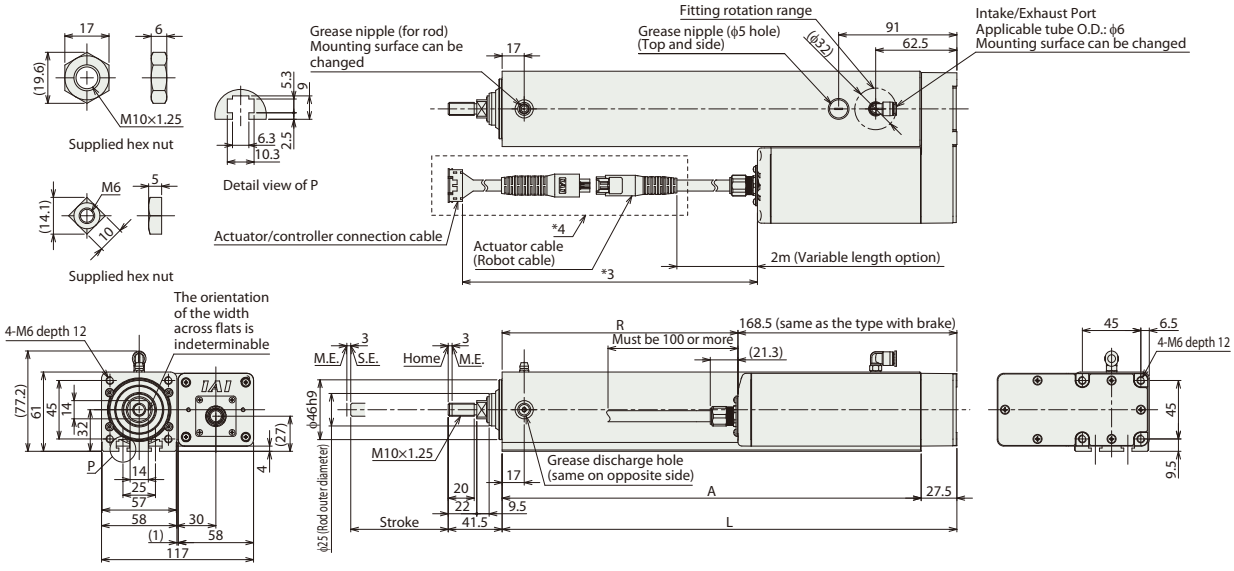
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm
Allowable static torque on rod tip	1.5N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

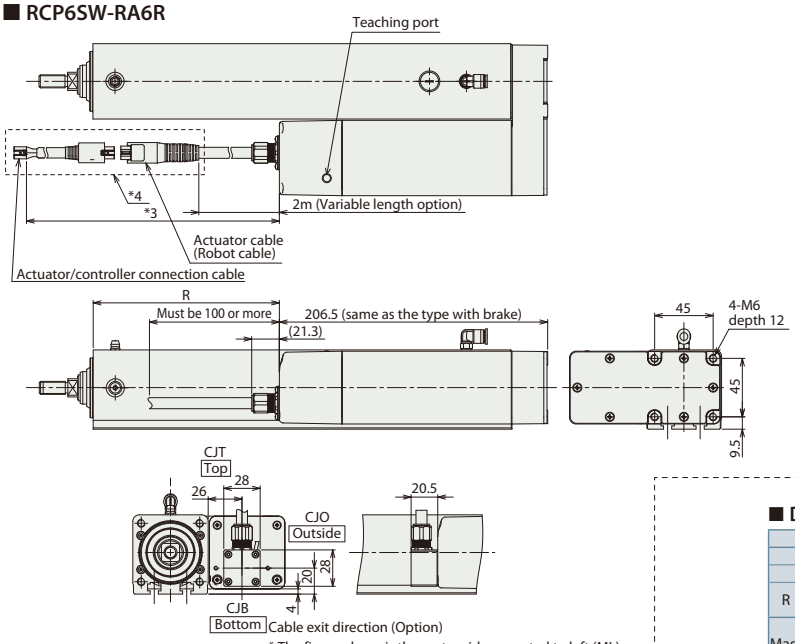
Dimensions

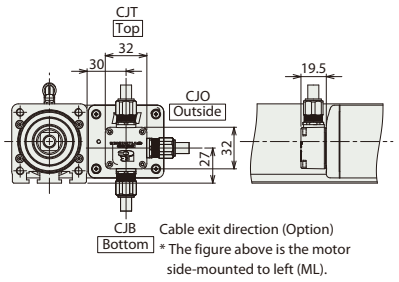
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■ RCP6SW-RA6R





*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 4 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			200	250	300	350	400	450
A			172.5	222.5	272.5	322.5	372.5	422.5
R	RCP6W		31.5	81.5	131.5	181.5	231.5	281.5
	RCP6SW		-6.5	43.5	93.5	143.5	193.5	243.5
Mass (kg)	RCP6W	w/o brake	2.8	3.2	3.6	3.9	4.3	4.7
		w/ brake	2.9	3.3	3.7	4.0	4.4	4.8
	RCP6SW	w/o brake	3.0	3.4	3.8	4.1	4.5	4.9
		w/ brake	3.1	3.5	3.9	4.2	4.6	5.0

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

* Please refer to P.249 and P.250 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	Please contact IAI for more information.
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET, SSCNET III/H	512 (768 for network spec.)	See P.255
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please contact IAI for more information.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●		30,000	Please contact IAI for more information.
RCM-P6PC		1	Usable within the RCP6S Gateway system.					768	See P.279

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA7R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 24v Stepper Motor

* Body width does not include the width of the side-mounted motor.

Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller	RA7R	WA: Battery-less Absolute	56P: Stepper Motor 56□ Size	16 :16mm 8 : 8mm 4 : 4mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P3 : PCON MCON MSEL P5 : RCM-P6PC [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/ side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

The figure above is the motor side-mounted to left (ML).

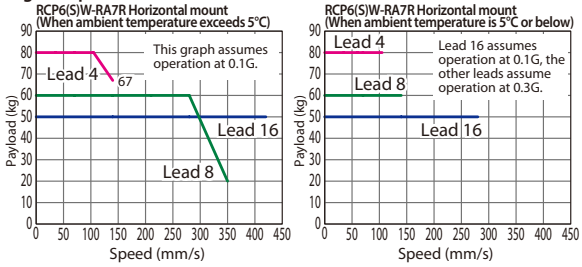
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.234 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) Depending on the ambient operating temperature, duty control is necessary for the RCP6SW (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information.
(6) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

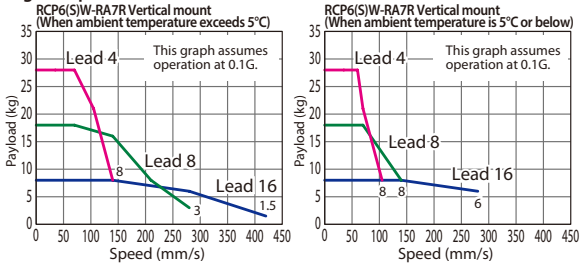
Correlation Diagrams of Speed and Payload

If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

High-output enabled with PCON/MCON/MSEL connected.



High-output enabled with PCON/MCON/MSEL connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA7R-WA-56P-16-①-②-③-④	16	50	8	273	50~300 (Every 50mm)
RCP6(S)W-RA7R-WA-56P-8-①-②-③-④	8	60	18	547	
RCP6(S)W-RA7R-WA-56P-4-①-②-③-④	4	80	28	1094	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
16	420 [280]
8	350 <280> [140]
4	140 [105]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

③ Cable Length

Cable Type	Cable Code	RCP6W P3	RCP6W P5	RCP6SW SE
Standard	**P**(1m)	○	○	○
	S(3m)	○	○	○
	M(5m)	○	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○	○
	X11 (11m) ~**X15** (15m)	○	○	○
	X16 (16m) ~**X18** (18m)	○	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○	○
	R04 (4m) ~**R05** (5m)	○	○	○
	R06 (6m) ~**R10** (10m)	○	○	○
	R11 (11m) ~**R15** (15m)	○	○	○
	R16 (16m) ~**R18** (18m)	○	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

Actuator Specifications

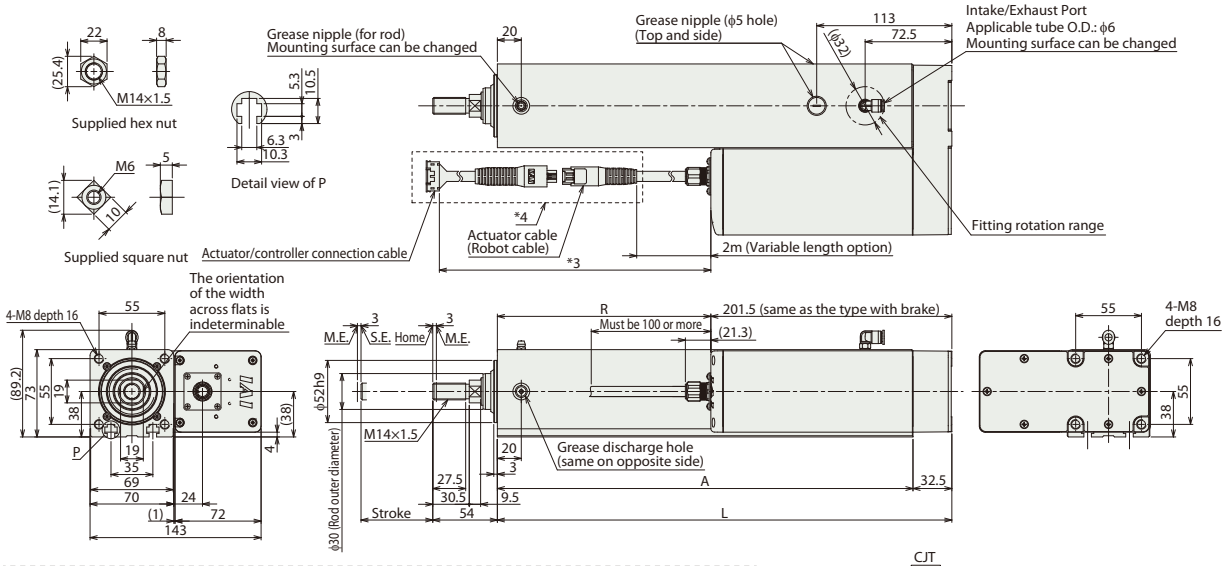
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm
Allowable static torque on rod tip	2.5N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

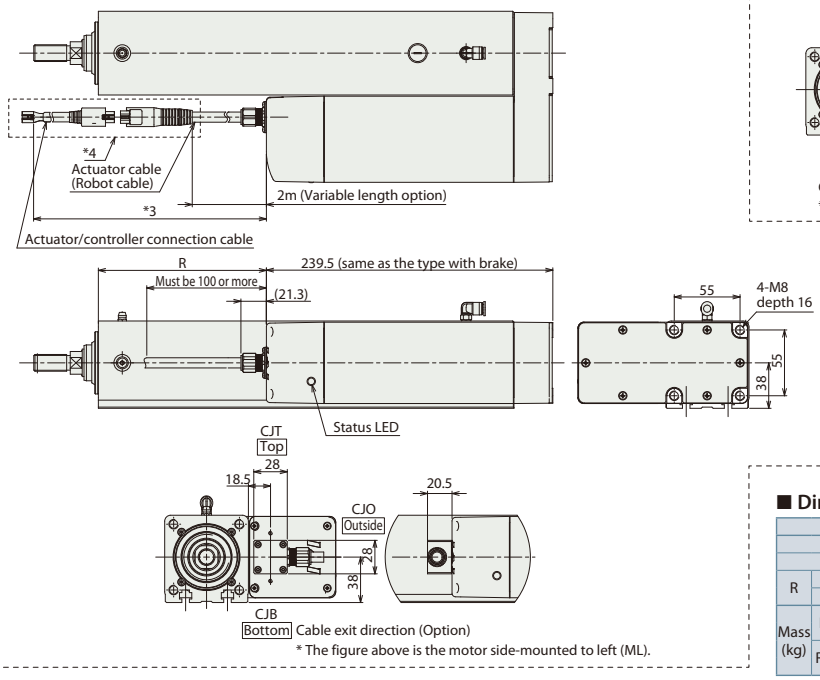
Dimensions

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

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.



■ RCP6SW-RA7R



*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 6 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			230	280	330	380	430	480
A			197.5	247.5	297.5	347.5	397.5	447.5
R	RCP6W		26.5	76.5	126.5	176.5	226.5	276.5
	RCP6SW		-9.5	40.5	90.5	140.5	190.5	240.5
Mass (kg)	RCP6W	w/o brake	5.2	5.8	6.4	7.0	7.5	8.1
		w/ brake	5.3	5.9	6.5	7.1	7.6	8.2
	RCP6SW	w/o brake	5.4	6.0	6.6	7.2	7.7	8.3
		w/ brake	5.5	6.1	6.7	7.3	7.8	8.4

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

* Please refer to P.250 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CYB/PLB/POB		1	DC24V	● * Option	● * Option	–	Network cannot be selected	64	Please contact IAI for more information.
PCON-CB/CGB		1		● * Option	● * Option	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET, SSCNET III/H	512 (768 for network spec.)	See P.255
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		–	–	●		256	Please contact IAI for more information.
MSEL-PC/PG		4	Single-phase 100 ~ 230 VAC	–	–	●	Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	30,000	Please contact IAI for more information.
RCM-P6PC		1	Usable within the RCP6S Gateway system.					768	See P.279

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)W-RA8R

Dust/Splash-Proof Spec | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 85* mm | 24v Stepper Motor

■ Model Specification Items

□ — RA8R — WA — 60P — □ — □ — □ — □ — □ — □

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6W: Separate Controller RCP6SW: Built-in Controller		WA: Battery-less Absolute	60P: Stepper Motor 60□ Size	20 :20mm 10 :10mm 5 : 5mm	50:50mm ~ 300:300mm (Every 50mm)	[RCP6W] P4 : PCON-CFB/CGFB [RCP6SW] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below. * Please make sure to specify ML, MR or MT when ordering the side-mounted motor type.

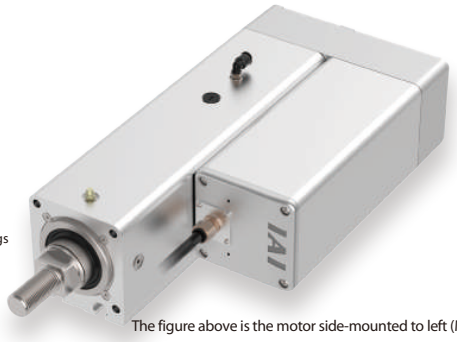
* Body width does not include the width of the side-mounted motor.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.19 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



The figure above is the motor side-mounted to left (ML).

POINT Selection Notes

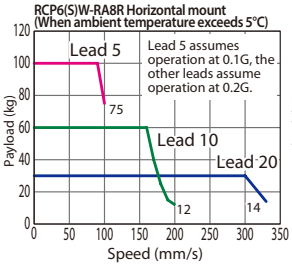
(1) The maximum acceleration/deceleration is 0.1G for lead 5 and 0.2G for lead 10/20.
(2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.234 for more details.
(3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) Please refer to P205 for performing push-motion operation.
(5) For RCP6SW (built-in controller type), please limit the duty cycle to 70% or less.
(6) The service life of an actuator varies depending on the payload when using vertically. Please refer to P. 206 for more information.
(7) The cable joint connector is not splash-proofed, so it should be located where there is no splash.

■ Correlation Diagrams of Speed and Payload

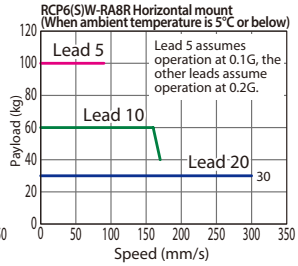
If the ambient temperature is 5°C or below, the speed will be lower than when it exceeds 5°C.

PCON connected.

RCP6(S)W-RA8R Horizontal mount (When ambient temperature exceeds 5°C)

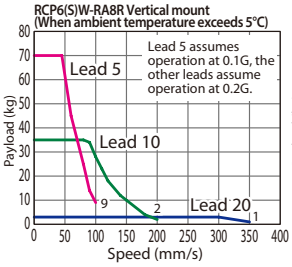


RCP6(S)W-RA8R Horizontal mount (When ambient temperature is 5°C or below)

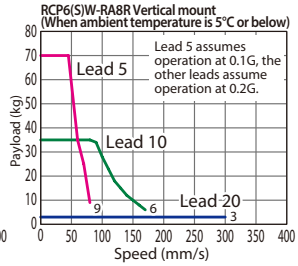


PCON connected.

RCP6(S)W-RA8R Vertical mount (When ambient temperature exceeds 5°C)



RCP6(S)W-RA8R Vertical mount (When ambient temperature is 5°C or below)



Actuator Specifications

■ Lead and Payload

* Push force only available during push mode w / limited speed.

Model Number	Lead (mm)	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Max. Push Force (N)*	Stroke (mm)
RCP6(S)W-RA8R-WA-60P-20-①-②-③-④	20	30	3	500	50~300 (Every 50mm)
RCP6(S)W-RA8R-WA-60P-10-①-②-③-④	10	60	35	1,000	
RCP6(S)W-RA8R-WA-60P-5-①-②-③-④	5	100	70	2,000	

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

■ Stroke and Max Speed (Unit: mm/s)

Lead (mm)	50~300 (Every 50mm)
20	350 <330> [300]
10	200 [170]
5	100 [80]

Values in brackets < > are for vertical use.
Values in brackets [ ] are when ambient temperature is 5°C or below.

① Stroke

Stroke (mm)	RCP6W	RCP6SW	Stroke (mm)	RCP6W	RCP6SW
50	○	○	**200**	○	○
100	○	○	**250**	○	○
150	○	○	**300**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6W	RCP6SW
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length	**X06** (6m) ~**X10** (10m)	○	○
	X11 (11m) ~**X15** (15m)	○	○
	X16 (16m) ~**X18** (18m)	○	○
Robot cable	**R01** (1m) ~**R03** (3m)	○	○
	R04 (4m) ~**R05** (5m)	○	○
	R06 (6m) ~**R10** (10m)	○	○
	R11 (11m) ~**R15** (15m)	○	○
	R16 (16m) ~**R18** (18m)	○	○

* Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Actuator cable length 2m	**Not specified**	See P.197
Actuator cable length 5m	**AC5**	See P.197
Actuator cable length 10m	**AC10**	See P.197
Actuator cable length 15m	**AC15**	See P.197
Brake	**B**	See P.197
Cable exit direction (Bottom)	**CJB**	See P.197
Cable exit direction (Left)	**CJL**	See P.197
Cable exit direction (Outside)	**CJO**	See P.197
Cable exit direction (Right)	**CJR**	See P.197
Cable exit direction (Top)	**CJT**	See P.197
Flange	**FL**	See P.198
Foot bracket	**FT**	See P.199
Motor side-mounted to left (standard)	**ML**	See P.201
Motor side-mounted to right	**MR**	See P.201
Motor side-mounted on top	**MT**	See P.201
Tip adapter (Internal thread)	**NFA**	See P.201
Non-motor end specification	**NM**	See P.202
T-slot nut bar	**NTB**	See P.202

* Be sure to confirm with the "Selection Notes (P.204)" when selecting options.

Actuator Specifications

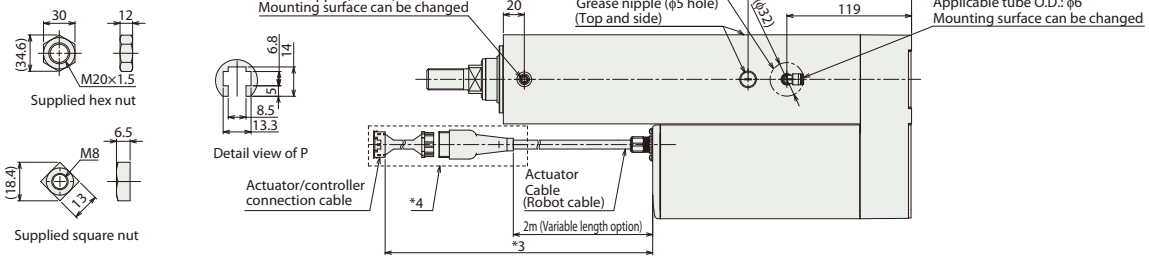
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm
Allowable static torque on rod tip	5N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Protective structure	IP65 (IEC 60529/JIS C 0920)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

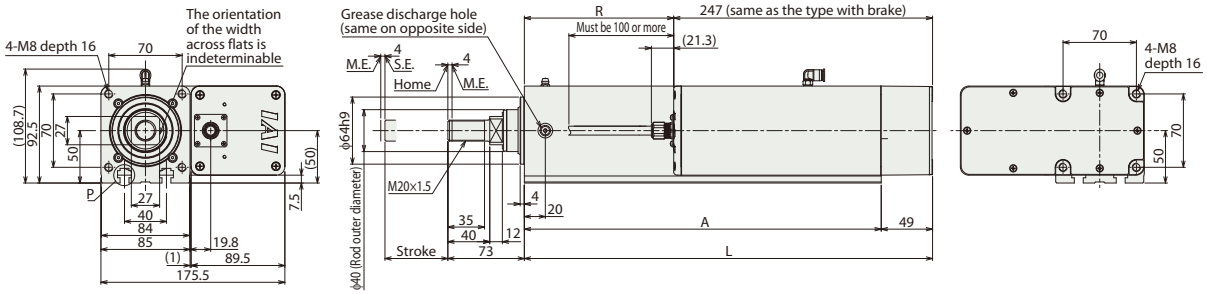
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

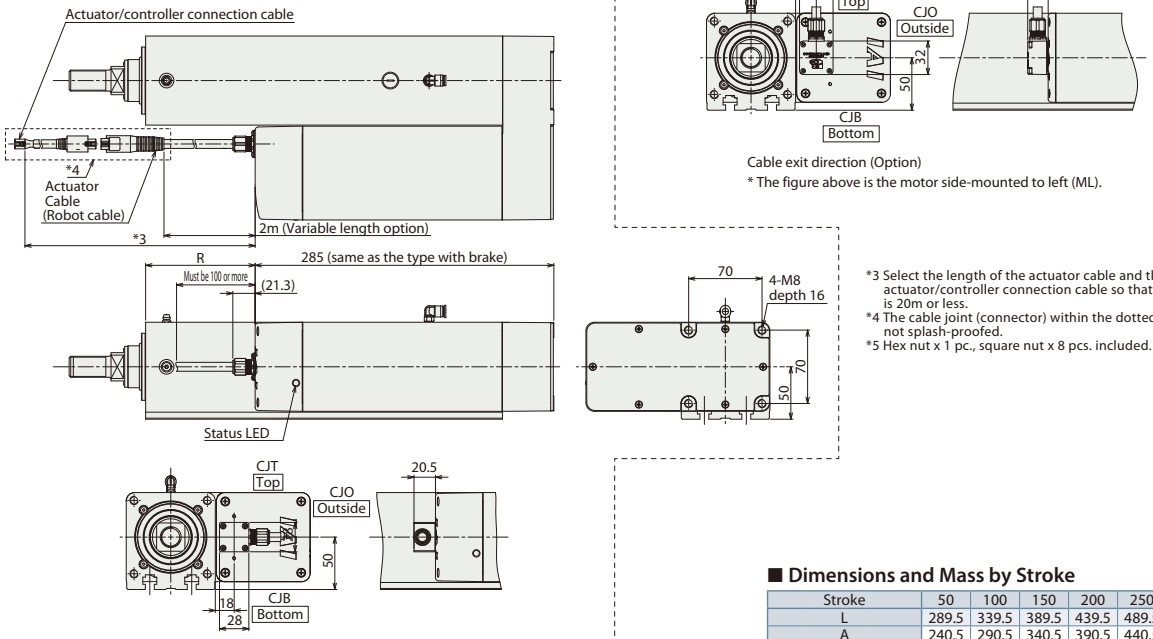
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product.





■ RCP6SW-RA8R



*3 Select the length of the actuator cable and the actuator/controller connection cable so that the total is 20m or less.
*4 The cable joint (connector) within the dotted line is not splash-proofed.
*5 Hex nut x 1 pc., square nut x 8 pcs. included.

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300
L			289.5	339.5	389.5	439.5	489.5	539.5
A			240.5	290.5	340.5	390.5	440.5	490.5
R	RCP6W		42.5	92.5	142.5	192.5	242.5	292.5
	RCP6SW		4.5	54.5	104.5	154.5	204.5	254.5
Mass (kg)	RCP6W	w/o brake	9.2	10.0	10.9	11.7	12.6	13.4
		w/ brake	9.5	10.3	11.2	12.0	12.9	13.7
	RCP6SW	w/o brake	9.5	10.3	11.2	12.0	12.9	13.7
		w/ brake	9.8	10.6	11.5	12.3	13.2	14.0

* Please refer to P.250 for more information on component materials.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
PCON-CFB/CGFB		1	DC24V	● * Option	● * Option	–	DeviceNet CompoNet EtherNet/IP CC-Link MECHATROLINK PROFIBUS EtherCAT PROFINET	512 (768 for network spec.)	See P.255