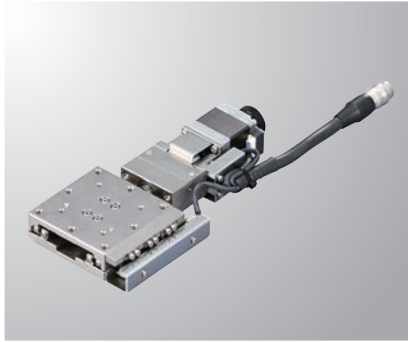


X-axis Linear Ball Guide: PG413/PG513/PG615/PG715

PG615-L



PG615-R



RoHS

Model Selection code Option code

PG 413-L05AG-C5

1 2 3 4 5 6 7

● Cable P.1-207~
● Electrical specification P.1-037~

1 Table size

4	<input type="checkbox"/> 40mm
5	<input type="checkbox"/> 50mm
6	<input type="checkbox"/> 60mm
7	<input type="checkbox"/> 70mm

* Cannot choose 415, 515, 613, 713 in combination with **1** and **2**.

2 Travel length

13	13mm
15	15mm

4 Sensor voltage

05	5V
24	24V

* 05 [5V] for standard

5 Sensor logic

A	N.C.
B	N.O.
C	Limit sensor is N.C., ORG1 and ORG2 are N.O.

* The sensor voltage/logic is different, but the external form dimension is the same.

* If you choose 24V, not available our controller DS102/112.

7 Cable option

※ See page ● P.1-039~ for ORG2 compatible cable.

Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
4	Only connector (Cable is not included)	—
5	Cable is not included (Standard)	—
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end loose	D214-2-4RK
9	Robot cable 2m one end loose	D214-2-2RK
M	Cable for electromagnetic brake	—
P	Cable for α step	
U	Cable for servo motor	

* One end loose position to only stage opposite side.

* The price includes M, P and U.

Not available non-cable.

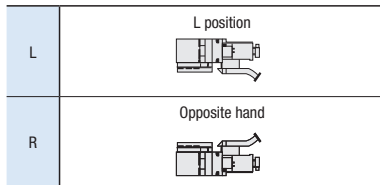
See page ● P.1-207,209~ for details of cable.

Please select "blank, 2, 6 and 7" when connect with stepping motor controller(DS102/112).

[Note]
Please check available cable from compatibility list.

Motor/cable products list	Motor code	Cable code
	C, D, E	Blank, 1~9
	MA	M
	PA	P
U	U	

3 Sensor cover location



6 Motor option

Code	Specification
C	Standard
D	High-torque
E	High resolution
MA	With electromagnetic brake (Driver set)
PA	α Step (Driver set)
U	Servo motor (Amplifier set)

* Code MA · PA · U is the set of driver and cable.

* See page ● P.1-037~ for details of motor option.

SPEC					
Model	PG413-L05AG-C5	PG513-L05AG-C5	PG615-L05AG-C5	PG715-L05AG-C5	
(Opposite hand)	PG413-R05AG-C5	PG513-R05AG-C5	PG615-R05AG-C5	PG715-R05AG-C5	
Mechanical specification	Travel length	13mm		15mm	
	Table size	40×40mm	50×50mm	60×60mm	70×70mm
	Feed screw (Ball screw)	φ6 lead 1			
	Guide	Linear ball guide			
	Main materials-Finishing	Stainless—Opposite side of the end face finishing			
Weight	0.5kg	0.6kg	0.7kg	0.9kg	
Accuracy specification	Resolution (Pulse)	2μm (Full)/1μm (Half)			
	MAX speed	10mm/sec			
	Uni-directional positioning accuracy	Within 6μm			
	Repeatability positioning accuracy	Within ±0.5μm			
	Load capacity	10kgf [98N]			
	Moment stiffness	Pitch 0.22/yaw 0.17/ roll 0.12 ["/N · cm]	Pitch 0.14/yaw 0.10/ roll 0.06 ["/N · cm]	Pitch 0.08/yaw 0.07/ roll 0.03 ["/N · cm]	Pitch 0.03/yaw 0.03/ roll 0.01 ["/N · cm]
	Lost motion	Within 1μm			
	Backlash	Within 0.5μm			
	Straightness	Within 1μm			
	Parallelism	Within 15μm			
Motion parallelism	Within 5μm				
Pitching/Yawing	Within 15"/Within 10"				
Sensor	Limit sensor	Installed			
	Origin sensor (ORG1)	Installed			
	Slit origin sensor (ORG2)	Installed See page ● P.1-039~			
Provided screw (Hexagon-headed bolt)	4 of M3—8		4 of M4—8		

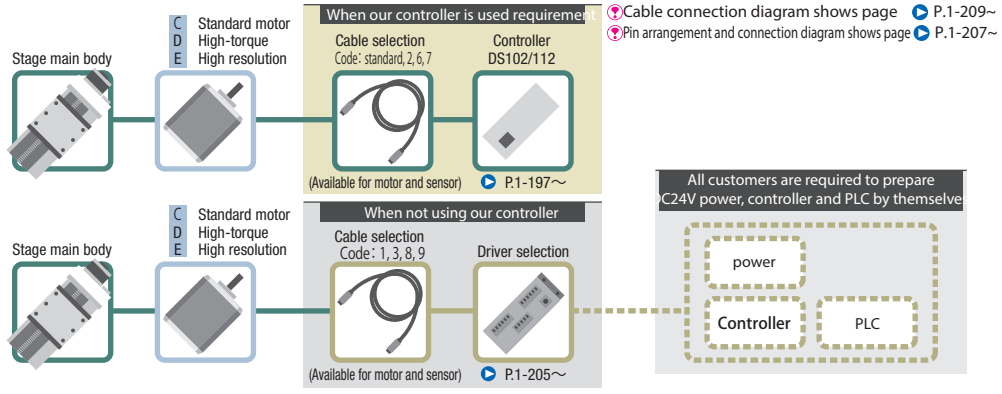
※ Might be changed specification due to motors. See page ● P.1-213~ for details.

Motor option

C Standard motor
 Motor model PK523HPB-C15

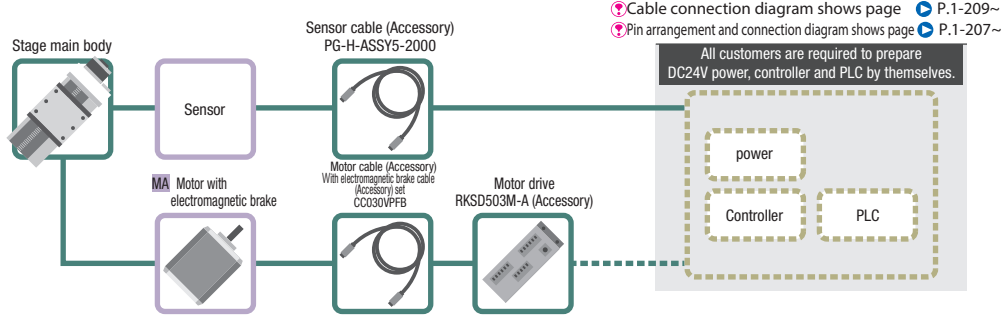
D High-torque
 Motor model PK525HPB

E High resolution
 Motor model PK523HPMB



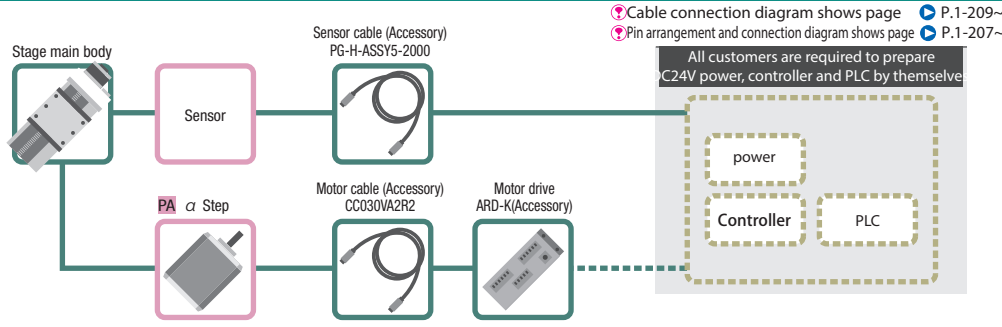
Motor option

MA With electromagnetic brake
 Motor model PKE545MC-A1



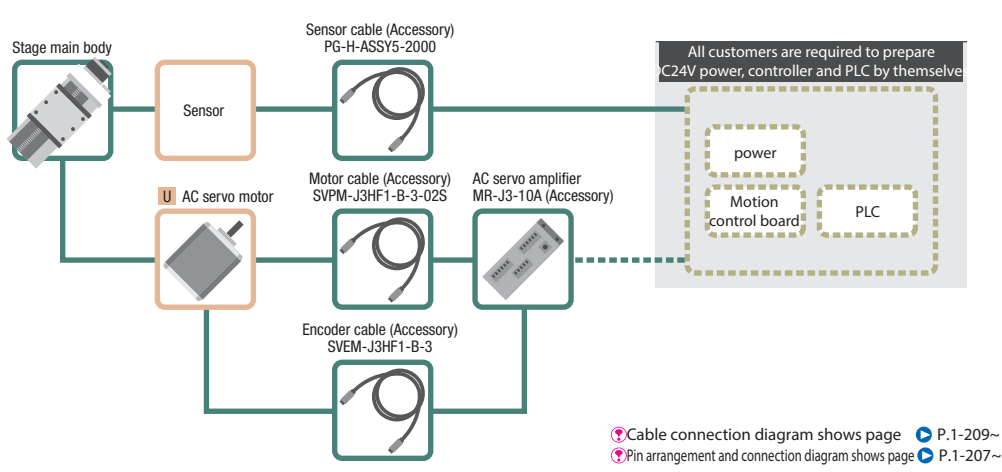
Motor option

PA α Step
 Motor model ARM24SAK



Motor option

U AC servo motor
 Motor model HF-KP053



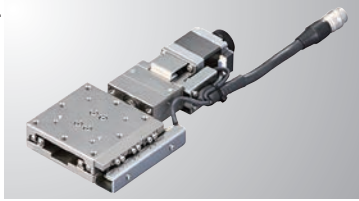
Motor code	C	D	E	MA	PA	U	
Feature	Standard	High-torque	High resolution	With electromagnetic brake	Small step-out	High speed	
Type	5 phase stepping motor 0.75A/Phase				α step motor	AC servo motor	
Model*	PK525HPB-C15	PK525HPB	PK523HPMB	PKE545MC-A1	ARM24SAK	HF-KP053	
Lead 1mm	Full/Half Micro step (1/20 split)		2μm/1μm	1μm/0.5μm	2μm/1μm	1μm (Set to 1000P/R)	18 bits encoder (262144P/R)
			0.1μm	0.05μm	0.1μm	-	

* Model is our own management model.

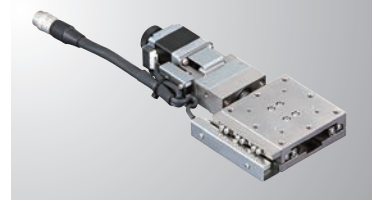
Motorized Stage

X-axis Linear Ball Guide : PG413/PG513/PG615/PG715

PG615-L

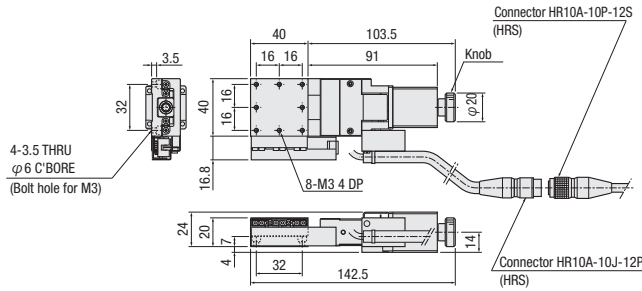


PG615-R

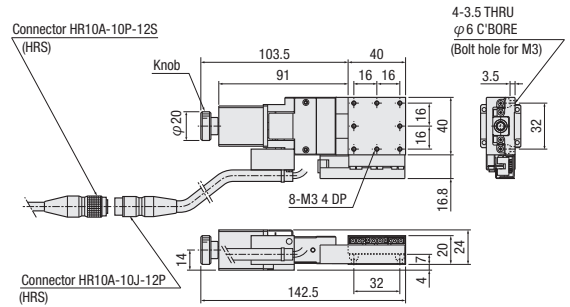


Dimensional outline drawings

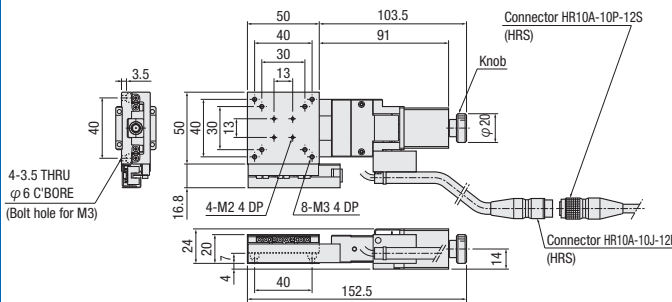
PG413-L



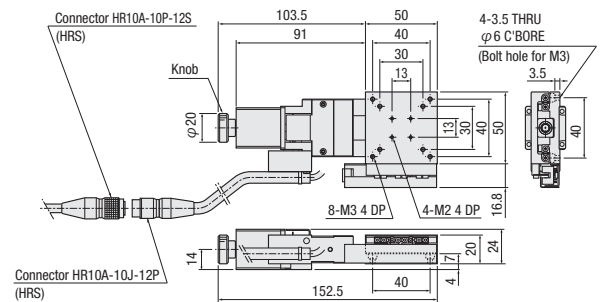
PG413-R



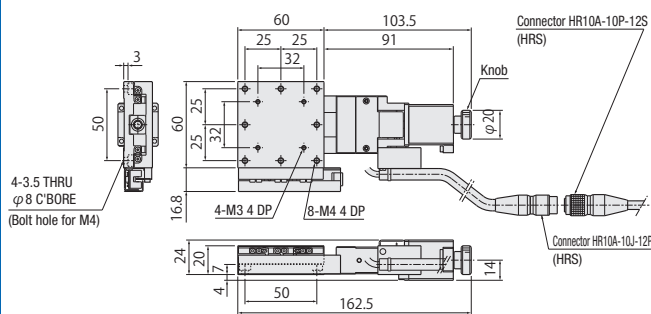
PG513-L



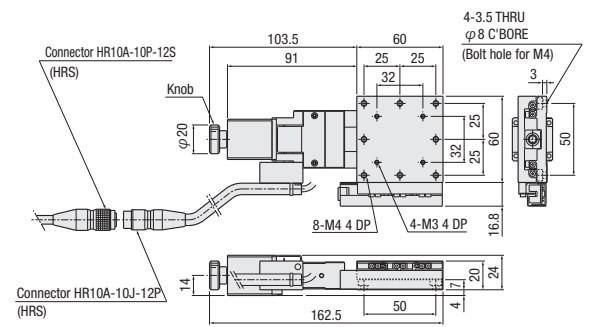
PG513-R



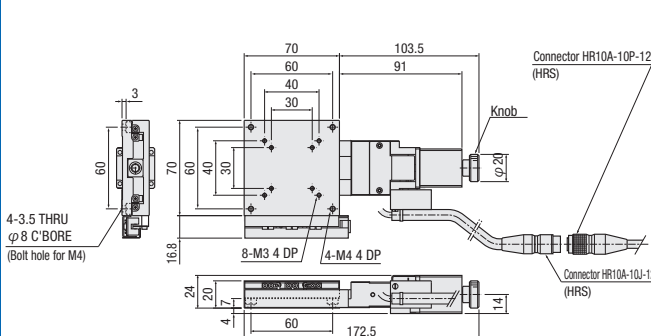
PG615-L



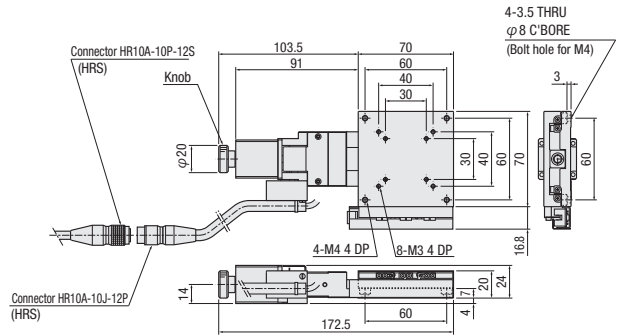
PG615-R



PG715-L



PG715-R



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

$\phi 40$

$\phi 50$

$\phi 60$

$\phi 70$

$\phi 80$

$\phi 100$

$\phi 120$

Other

Dimensional outline drawings

C Standard motor

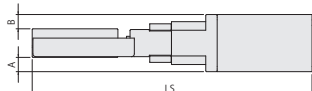
Motor model PK523HRB-C15

D High-torque

Motor model PK525HPB

E High resolution

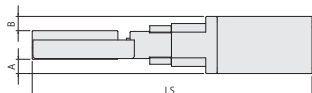
Motor model PK523HPMB



Model	C (Standard) / D (High-torque) / E (High resolution) Common			C (Standard)	D (High-torque)	E (High resolution)
	Motor size	A	B	LS		
PG413-****-□	□28	4	4	142.5	163	143.5
PG513-****-□				152.5	173	153.5
PG615-****-□				162.5	183	163.5
PG715-****-□				172.5	193	173.5

MA With electromagnetic brake

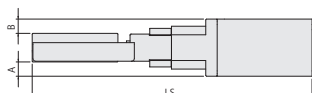
Motor model PKE545MC-A1



Model	MA (With electromagnetic brake)			C (Standard)	
	Motor size	A	B	LS	
PG413-****-MA	□42	11	11	180	143.5
PG513-****-MA				190	153.5
PG615-****-MA				200	163.5
PG715-****-MA				210	173.5

PA α step

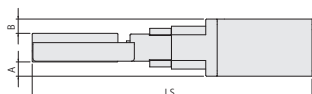
Motor model ARM24SAK



Model	PA (α step)			C (Standard)	
	Motor size	A	B	LS	
PG413-****-PA	□28	4	4	144	143.5
PG513-****-PA				154	153.5
PG615-****-PA				164	163.5
PG715-****-PA				174	173.5

U AC servo motor

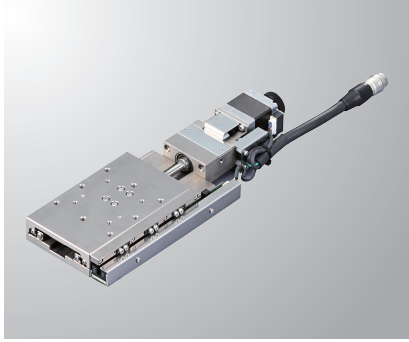
Motor model HF-KP053



Model	U (AC servo motor)			C (Standard)	
	Motor size	A	B	LS	
PG413-****-U	□40	10	10	175.9	143.5
PG513-****-U				185.9	153.5
PG615-****-U				195.9	163.5
PG715-****-U				205.9	173.5

X-axis Linear Ball Guide: PG430/PG530/PG650/PG750

PG650-L



PG650-R



Model Selection code Option code
PG 430-L05AG-C 5

1 2 3 4 5 6 7

☛ Cable P.1-207~
 ☛ Electrical specification P.1-037~

1 Table size

4	40×60mm
5	50×70mm
6	60×100mm
7	70×110mm

2 Travel length

30	30mm
50	50mm

4 Sensor voltage

05	5V
24	24V

* 05 [5V] for standard

5 Sensor logic

A	N.C.
B	N.O.
C	Limit sensor is N.C., ORG1 and ORG2 are N.O.

* The sensor voltage/logic is different, but the external form dimension is the same.
 * If you choose 24V, not available our controller DS102/112.

7 Cable option

※ See page P.1-039~ for ORG2 compatible cable.

Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
4	Only connector (Cable is not included)	—
5	Cable is not included (Standard)	—
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end loose	D214-2-4RK
9	Robot cable 2m one end loose	D214-2-2RK
M	Cable for electromagnetic brake	—
P	Cable for α step	—
U	Cable for servo motor	—

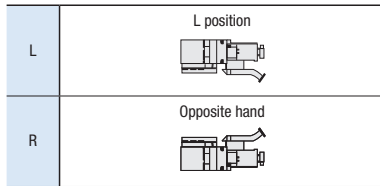
* One end loose position to only stage opposite side.
 * The price includes M, P and U.
 Not available non-cable.
 See page P.1-207,209~ for details of cable.
 Please select "blank, 2, 6 and 7" when connect with stepping motor controller(DS102/112).

[Note]
 Please check available cable from compatibility list.

Motor/cable products list	Motor code	Cable code
	C, D, E	Blank, 1~9
MA	M	
PA	P	
U	U	

* Cannot choose 450, 550, 630, 730 in combination with 1 and 2.

3 Sensor cover location



6 Motor option

Code	Specification
C	Standard
D	High-torque
E	High resolution
MA	With electromagnetic brake (Driver set)
PA	α Step (Driver set)
U	Servo motor (Amplifier set)

* Code MA · PA · U is the set of driver and cable.
 * See page P.1-037~ for details of motor option, about motors.

SPEC				
Model	PG430-L05AG-C5	PG530-L05AG-C5	PG650-L05AG-C5	PG750-L05AG-C5
(Opposite hand)	PG430-R05AG-C5	PG530-R05AG-C5	PG650-R05AG-C5	PG750-R05AG-C5
Travel length	30mm		50mm	
Table size	40×60mm	50×70mm	60×100mm	70×110mm
Feed screw (Ball screw)	φ6 lead 1			
Guide	Linear ball guide			
Main materials-Finishing	Stainless-Opposite side of the end face finishing			
Weight	0.6kg	0.78kg	1.08kg	1.16kg
Resolution (Pulse)	2μm (Full)/1μm (Half)			
MAX speed	10mm/sec			
Uni-directional positioning accuracy	Within 12μm			
Repeatability positioning accuracy	Within ±0.5μm			
Load capacity	10kgf [98N]			
Moment stiffness	Pitch 0.24/yaw 0.18/ roll 0.26 ["/N · cm]	Pitch 0.12/yaw 0.13/ roll 0.1 ["/N · cm]	Pitch 0.05/yaw 0.05/ roll 0.05 ["/N · cm]	Pitch 0.03/yaw 0.03/ roll 0.03 ["/N · cm]
Lost motion	Within 1μm			
Backlash	Within 0.5μm			
Straightness	Within 2μm			
Parallelism	Within 15μm			
Motion parallelism	Within 10μm			
Pitching/Yawing	Within 20"/Within 15"			
Limit sensor	Installed			
Origin sensor (ORG1)	Installed			
Slit origin sensor (ORG2)	Installed Refer page P.1-039~			
Provided screw (Hexagon-headed bolt)	4 of M3-8		4 of M4-8	

※ Specification will be changed due to a motor. Refer page P.1-213.

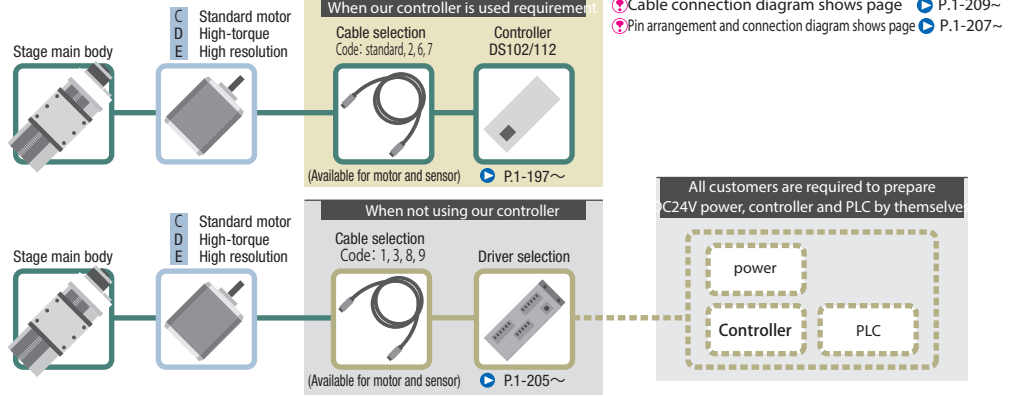
☉ The vertical load guideline 5kgf when use on Z-axis because of difference the load or speed.

Motor option

C Standard motor
 Motor model PK525HPB-C15

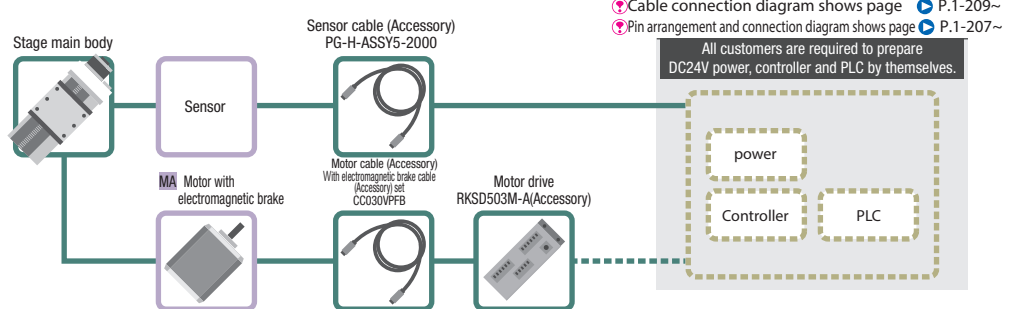
D High-torque
 Motor model PK525HPB

E High resolution
 Motor model PK523HPMB



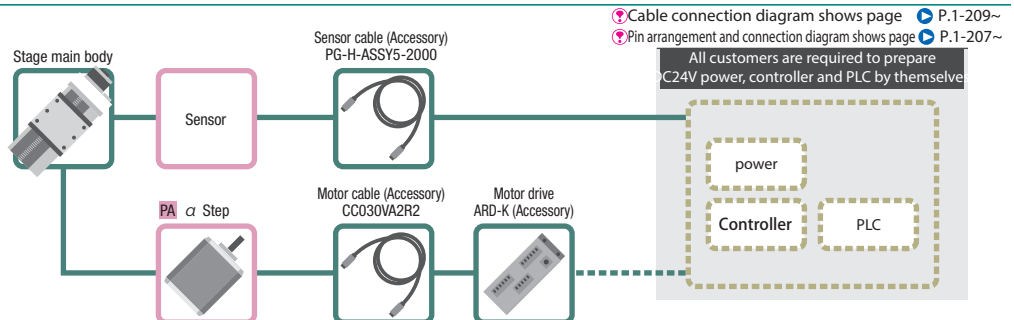
Motor option

MA With electromagnetic brake
 Motor model PKE545MC-A1



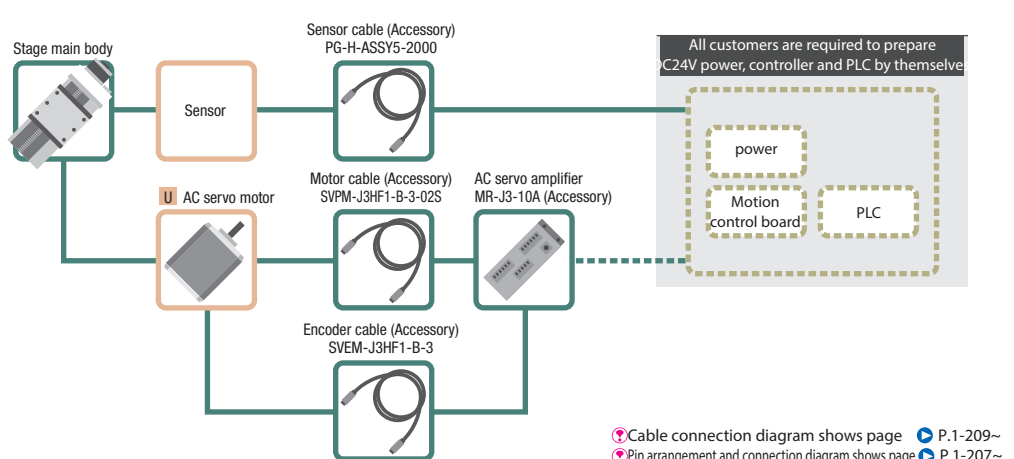
Motor option

PA α Step
 Motor model ARM24SAK



Motor option

U AC servo motor
 Motor model HF-KP053



Motor code	C	D	E	MA	PA	U
Feature	Standard	High-torque	High resolution	With electromagnetic brake	Small step-out	High speed
Type	5 phase stepping motor 0.75A/Phase				α step motor	AC servo motor
Model*	PK525HPB-C15	PK525HPB	PK523HPMB	PKE545MC-A1	ARM24SAK	HF-KP053
Lead 1mm	Full/Half	2μm/1μm		2μm/1μm	1μm (Set to 1000P/R)	18 bits encoder (262144P/R)
	Micro step (1/20 split)	0.1μm		0.1μm	—	

* Model is our own management model.

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

φ100

φ120

Other

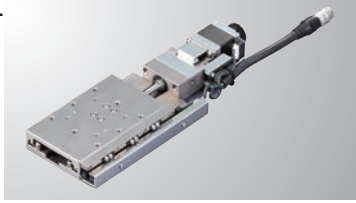
1

026

Motorized Stage

X-axis Linear Ball Guide : PG430/PG530/PG650/PG750

PG650-L

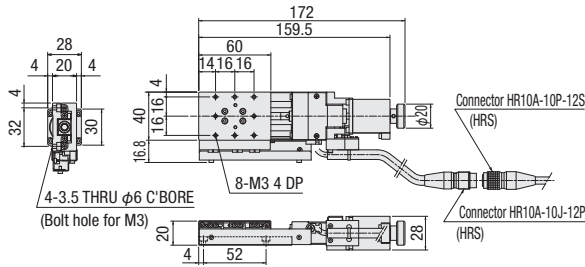


PG650-R

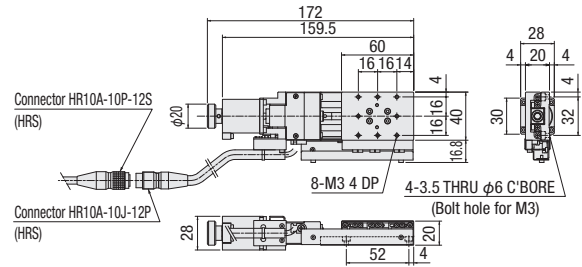


Dimensional outline drawings

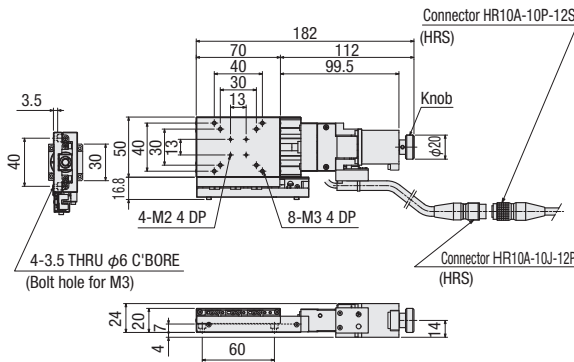
PG430-L



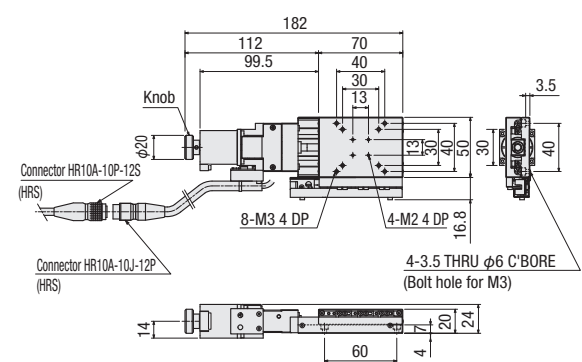
PG430-R



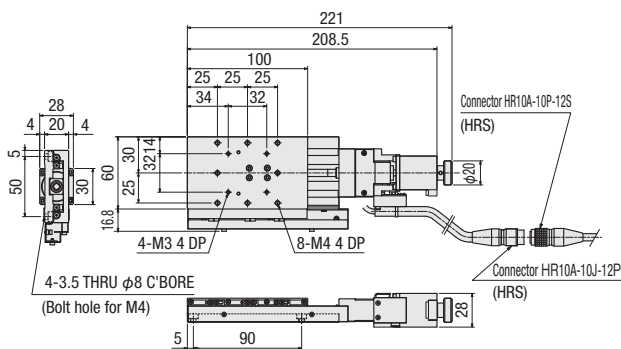
PG530-L



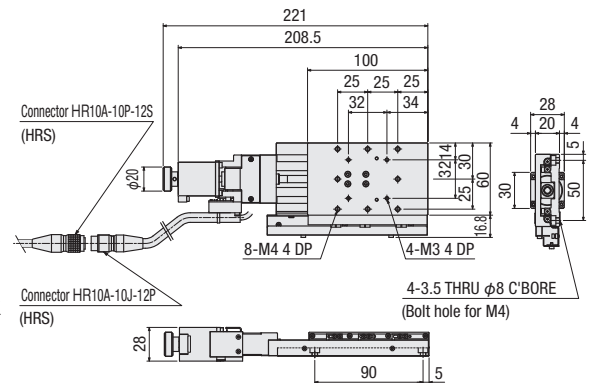
PG530-R



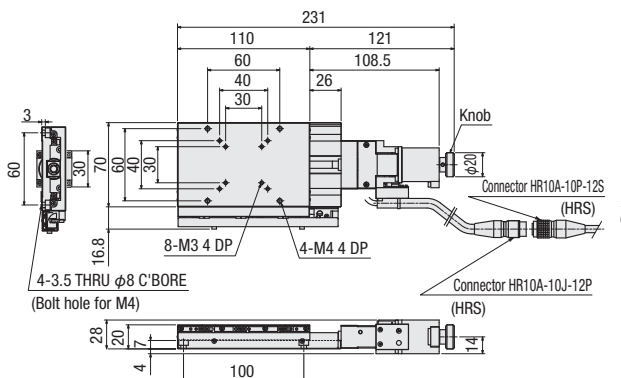
PG650-L



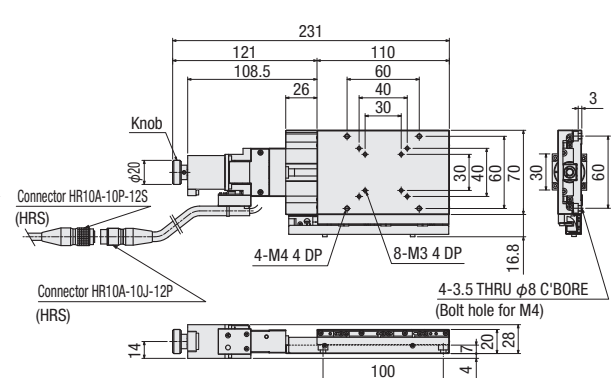
PG650-R



PG750-L



PG750-R



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

$\phi 40$

$\phi 50$

$\phi 60$

$\phi 70$

$\phi 80$

$\phi 100$

$\phi 120$

Other

Dimensional outline drawings

C Standard motor

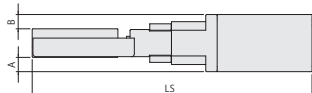
Motor model PK523HPB-C15

D High-torque

Motor model PK525HPB

E High resolution

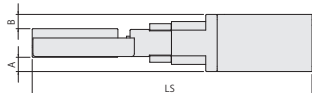
Motor model PK523HPMB



Model	C(Standard) / D (High-torque) / E (High resolution) Common		C (Standard)	D (High-torque)	E (High resolution)
	Motor size	A B			
PG430-***-□	□28	4	172	191.5	172
PG530-***-□					
PG650-***-□					
PG750-***-□					

MA With electromagnetic brake

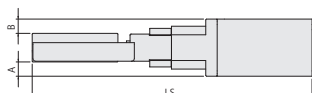
Motor model PKE545MC-A1



Model	MA (With electromagnetic brake)			C (Standard)
	Motor size	A	B	
PG430-***-MA	□42	11	11	208.5
PG530-***-MA				182
PG650-***-MA				221
PG750-***-MA				231

PA α step

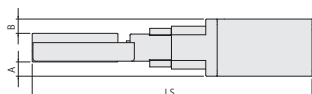
Motor model ARM24SAK



Model	PA (α step)			C(Standard)
	Motor size	A	B	
PG430-***-PA	□28	4	4	172.5
PG530-***-PA				182
PG650-***-PA				221
PG750-***-PA				231

U AC servo motor

Motor model HF-KP053



Model	U (AC servo motor)			C (Standard)
	Motor size	A	B	
PG430-***-U	□40	10	10	204.4
PG530-***-U				182
PG650-***-U				221
PG750-***-U				231

XY-axis Linear Ball Guide: PMG413/PMG513/PMG615/PMG715

Motorized Stage

PMG615-L



PMG615-R



RoHS

※A dedicated hex wrench for fixing bottom axis of XY is attached.

Model Selection code Option code
PMG413-L05AL-C5

🔗 Cable P.1-207~
 🔗 Electrical specification P.1-037~

1 Table size

4	□40mm
5	□50mm
6	□60mm
7	□70mm

* Cannot choose 415, 515, 613, 713 in combination with **1** and **2**.

2 Travel length

13	13mm
15	15mm

4 Sensor voltage

05	5V
24	24V

* 05 [5V] for standard

* The sensor voltage/logic is different, but the external form dimension is the same.
 * If you choose 24V, not available our controller DS102/112.

5 Sensor logic

A	N.C.
B	N.O.
C	Limit sensor is N.C., ORG1 and ORG2 are N.O.

8 Cable option

※See page P.1-039~ for ORG2 compatible cable.

Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
4	Only connector (Cable is not included)	—
5	Cable is not included (Standard)	—
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end loose	D214-2-4RK
9	Robot cable 2m one end loose	D214-2-2RK
M	Cable for electromagnetic brake	—
P	Cable for α step	—
U	Cable for servo motor	—

* One end loose position to only stage opposite side.
 * The price includes M, P and U.
 Not available non-cable.
 See page P.1-207,209~ for details of cable.
 Please select "blank, 2, 6 and 7" when connect with stepping motor controller(DS102/112).

[Note]
 Please check available cable from compatibility list.

Motor/cable products list	Motor code	Cable code
	C, D, E	Blank, 1~9
MA	M	
PA	P	
U	U	

3 6 Identification mark

L	Sensor cover position is R for X and Y-axis.
R	Sensor cover position is L for X and Y-axis.

* **3** and **6** are linked. Cannot choose L and R at the same time.

7 Motor option

Code	Specification
C	Standard
D	High-torque
E	High resolution
MA	With electromagnetic brake (Driver set)
PA	α Step (Driver set)
U	Servo motor (Amplifier set)

* Code MA · PA · U is the set of driver and cable.
 * See page P.1-037~ for details of motor option.

SPEC

Model	PMG413-L05AL-C5	PMG513-L05AL-C5	PMG615-L05AL-C5	PMG715-L05AL-C5
(Opposite hand)	PMG413-R05AR-C5	PMG513-R05AR-C5	PMG615-R05AR-C5	PMG715-R05AR-C5
Mechanical specification	Travel length 13mm		15mm	
	40×40mm	50×50mm	60×60mm	70×70mm
	Feed screw (Ball screw) $\phi 6$ lead 1			
	Guide Linear ball guide			
	Main materials-Finishing Stainless—Opposite side of the end face finishing			
	1.0kg	1.2kg	1.7kg	1.8kg
Accuracy specification	Resolution (Pulse) $2\mu\text{m}$ (Full)/ $1\mu\text{m}$ (Half)			
	MAX speed 10mm/sec			
	9.5kgf [93.1N]	9.4kgf [92.1N]	9.3kgf [91.1N]	9.1kgf [89.2N]
	Perpendicularity Within $5\mu\text{m}$ /Full stroke			
Sensor	Limit sensor Installed			
	Origin sensor (ORG1) Installed			
	Slit origin sensor (ORG2) Installed Refer page P.1-039~			
	4 of M3—8		4 of M4—8	
Signature accuracy specification	Uni-directional positioning accuracy Within $6\mu\text{m}$			
	Repeatability positioning accuracy Within $\pm 0.5\mu\text{m}$			
	Lost motion Within $1\mu\text{m}$			
	Backlash Within $0.5\mu\text{m}$			
	Straightness Within $1\mu\text{m}$			
	Pitching/Yawing Within $15''$ / Within $10''$			

※ Might be changed specification due to motors P.1-213~.

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

$\phi 40$

$\phi 50$

$\phi 60$

$\phi 70$

$\phi 80$

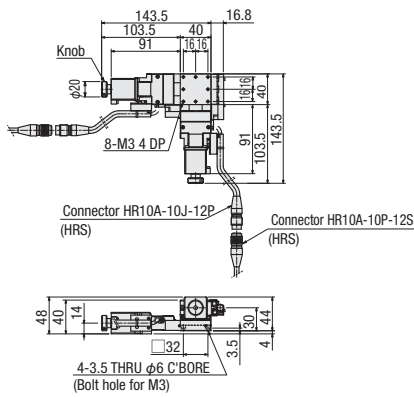
$\phi 100$

$\phi 120$

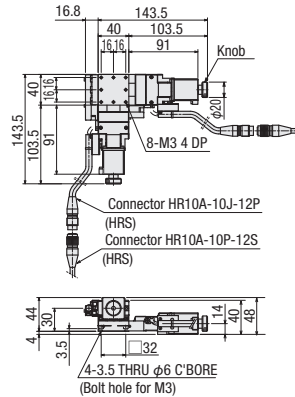
Other

Dimensional outline drawings

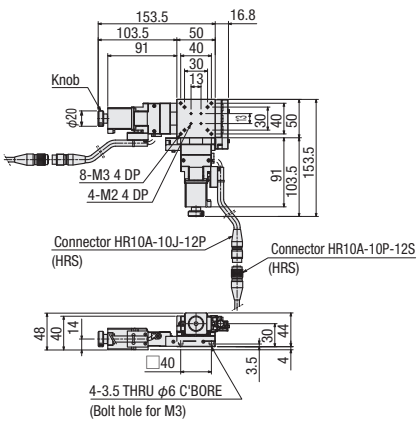
PMG413-L



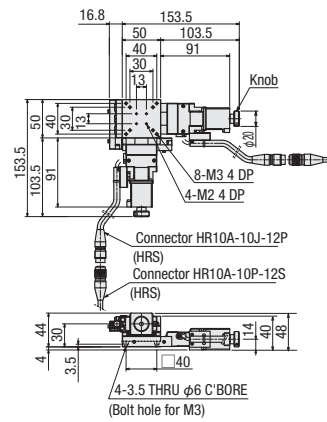
PMG413-R



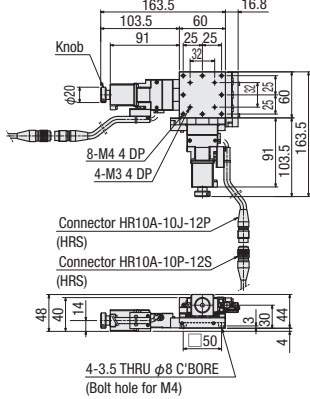
PMG513-L



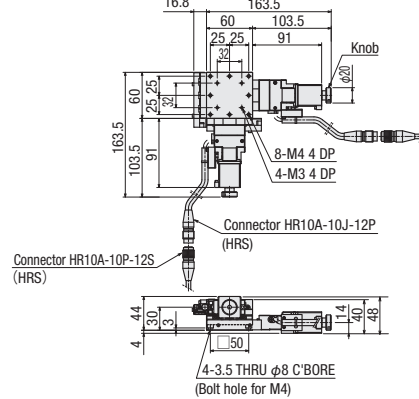
PMG513-R



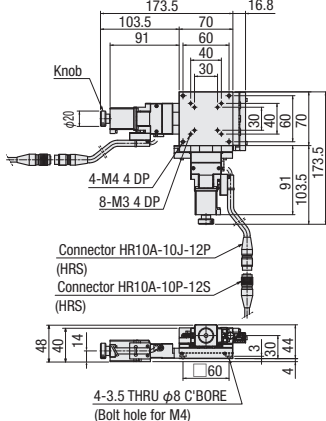
PMG615-L



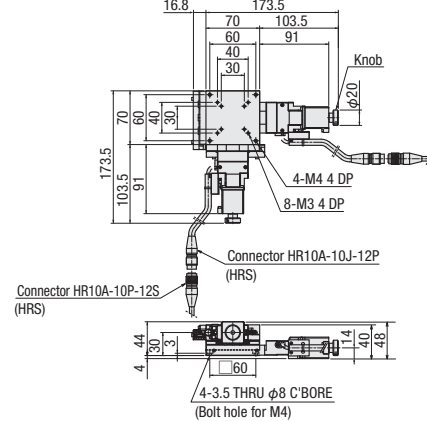
PMG615-R



PMG715-L



PMG715-R



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

φ100

φ120

Other

XY-axis Linear Ball Guide: PMG430/PMG530/PMG650/PMG750

PMG650-L



PMG650-R



※A dedicated hex wrench for fixing bottom axis of XY is attached.

Model Selection code Option code

PMG 430-L05AL-C5

1 2 3 4 5 6 7 8

● Cable P.1-207~
● Electrical specification P.1-037~

1 Table size

4	40×60mm
5	50×70mm
6	60×100mm
7	70×110mm

* Cannot choose 450, 550, 630, 730 in combination with **1** and **2**.

2 Travel length

30	30mm
50	50mm

4 Sensor voltage

05	5V
24	24V

* 05 [5V] for standard

5 Sensor logic

A	N.C.
B	N.O.
C	Limit sensor is N.C., ORG1 and ORG2 are N.O.

* The sensor voltage/logic is different, but the external form dimension is the same.
* If you choose 24V, not available our controller DS102/112.

8 Cable option

※See page P.1-039~ for ORG2 compatible cable.

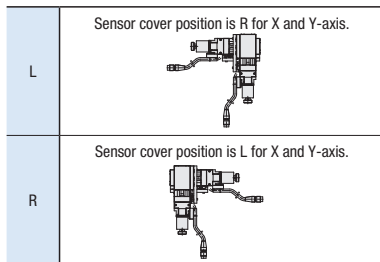
Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
4	Only connector (Cable is not included)	—
5	Cable is not included (Standard)	—
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end loose	D214-2-4RK
9	Robot cable 2m one end loose	D214-2-2RK
M	Cable for electromagnetic brake	—
P	Cable for α step	
U	Cable for servo motor	

* One end loose position to only stage opposite side.
* The price includes M, P and U.
Not available non-cable.
See page P.1-207,209~ for details of cable.
Please select "blank, 2, 6 and 7" when connect with stepping motor controller(DS102/112).

[Note]
Please check available cable from compatibility list.

Motor/ cable products list	Motor code	Cable code
	C, D, E	Blank, 1~9
MA	M	
PA	P	
U	U	

3 6 Identification mark



* **3** and **6** are linked. Cannot choose L and R at the same time.

7 Motor option

Code	Specification
C	Standard
D	High-torque
E	High resolution
MA	With electromagnetic brake (Driver set)
PA	α Step (Driver set)
U	Servo motor (Amplifier set)

* Code MA · PA · U is the set of driver and cable.
* See page P.1-037~ for details of motor option.

SPEC

Model	PMG430-L05AL-C5	PMG530-L05AL-C5	PMG650-L05AL-C5	PMG750-L05AL-C5
(Opposite hand)	PMG430-R05AR-C5	PMG530-R05AR-C5	PMG650-R05AR-C5	PMG750-R05AR-C5
Travel length	30mm		50mm	
Table size	40×60mm	50×70mm	60×100mm	70×110mm
Feed screw (Ball screw)	φ6 lead 1			
Guide	Linear ball guide			
Main materials-Finishing	Stainless—Opposite side of the end face finishing			
Weight	1.40kg	1.70kg	2.46kg	2.72kg
Resolution (Pulse)	2μm (Full)/1μm (Half)			
MAX speed	10mm/sec			
Load capacity	9.24kgf [90.5N]	9.04kgf [88.5N]	8.62kgf [84.4N]	8.44kgf [82.7N]
Perpendicularity	Within 10μm/Full stroke			
Limit sensor	Installed			
Origin sensor (ORG1)	Installed			
Slit origin sensor (ORG2)	Installed Refer page P.1-039~			
Provided screw (Hexagon-headed bolt)	4 of M3—8		4 of M4—8	
Uni-directional positioning accuracy	Within 12μm			
Repeatability positioning accuracy	Within ±0.5μm			
Lost motion	Within 1μm			
Backlash	Within 0.5μm			
Straightness	Within 2μm			
Pitching/Yawing	Within 20"/Within 15"			

Note:PMG430,530,650,750 includes spacer for XY mounting.
※ Might be changed specification due to motors P.1-213~.

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

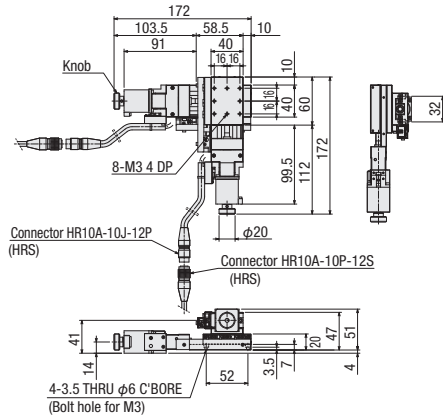
φ100

φ120

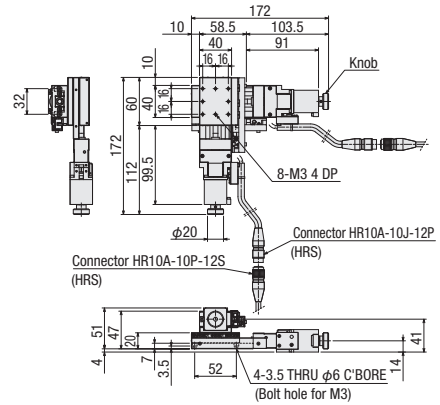
Other

Dimensional outline drawings

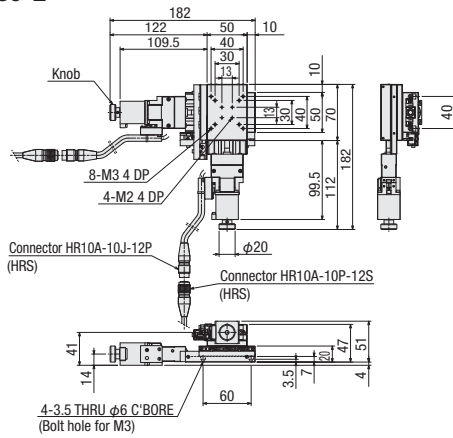
PMG430-L



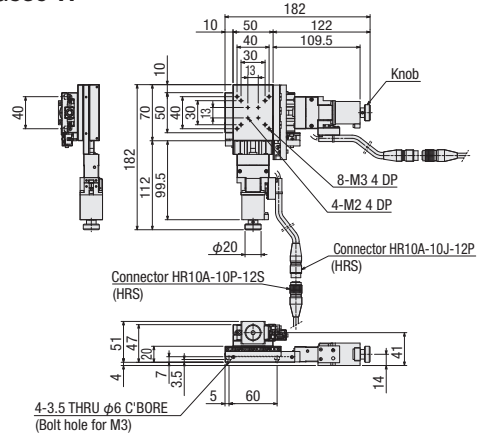
PMG430-R



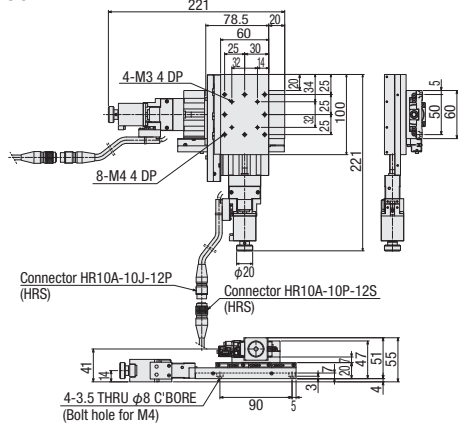
PMG530-L



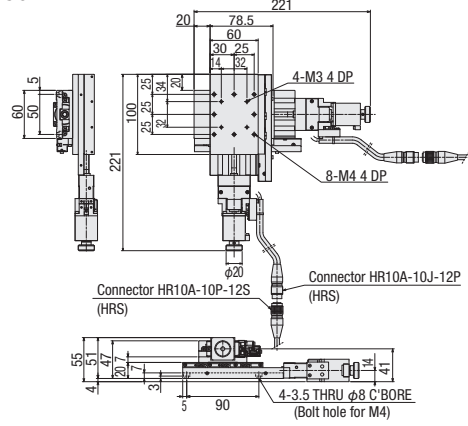
PMG530-R



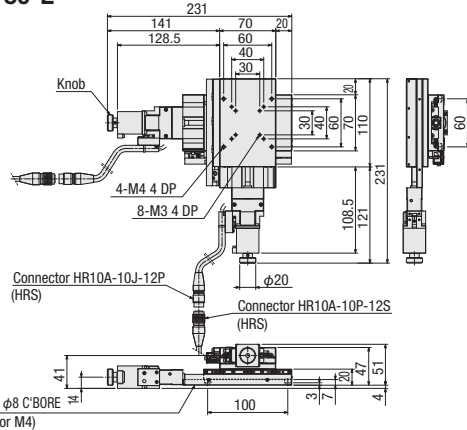
PMG650-L



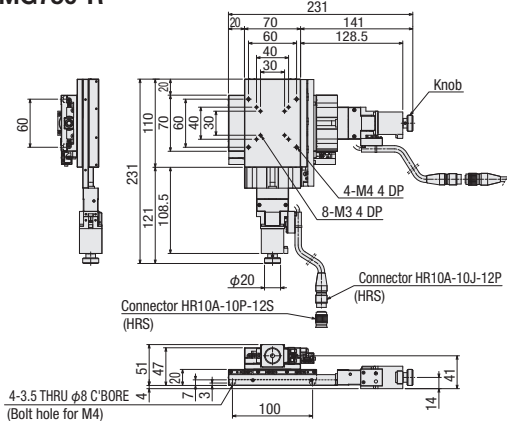
PMG650-R



PMG750-L



PMG750-R



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

φ100

φ120

Other

1

032

Z-axis Linear Ball Guide: PZG413/PZG513/PZG615/PZG715

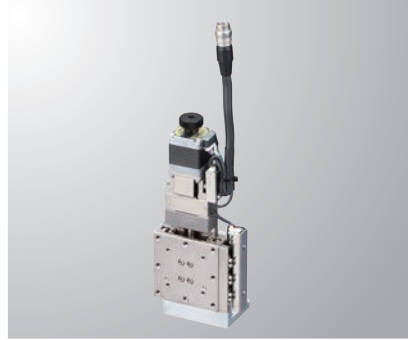
Motorized Stage

RoHS

PZG615-L



PZG615-R



Model Selection code Option code
PZG413-L05AG-C5

● Cable P.1-207~
 ● Electrical specification P.1-037~

1 Table size

4	<input type="checkbox"/> 40mm
5	<input type="checkbox"/> 50mm
6	<input type="checkbox"/> 60mm
7	<input type="checkbox"/> 70mm

* Cannot choose 415, 515, 613, 713 in combination with **1** and **2**.

2 Travel length

13	13mm
15	15mm

4 Sensor voltage

05	5V
24	24V

* 05 [5V] for standard

5 Sensor logic

A	N.C.
B	N.O.
C	Limit sensor is N.C., ORG1 and ORG2 are N.O.

* The sensor voltage/logic is different, but the external form dimension is the same.
 * If you choose 24V, not available our controller DS102/112.

7 Cable option

※See page ● P.1-039~ for ORG2 compatible cable.

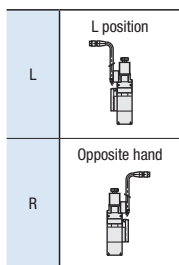
Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
4	Only connector (Cable is not included)	—
5	Cable is not included (Standard)	—
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end loose	D214-2-4RK
9	Robot cable 2m one end loose	D214-2-2RK
M	Cable for electromagnetic brake	—
P	Cable for α step	
U	Cable for servo motor	

* One end loose position to only stage opposite side.
 * The price includes M, P and U.
 Not available non-cable.
 See page ● P.1-207,209~ for details of cable.
 Please select "blank, 2, 6 and 7" when connect with stepping motor controller(DS102/112).

[Note]
 Please check available cable from compatibility list.

Motor/cable products list	Motor code	Cable code
	C, D, E	Blank, 1~9
	MA	M
	PA	P
U	U	U

3 Sensor cover location



6 Motor option

Code	Specification
C	Standard
D	High-torque
E	High resolution
MA	With electromagnetic brake (Driver set)
PA	α Step (Driver set)
U	Servo motor (Amplifier set)

* Code MA · PA · U is the set of driver and cable.
 * See page ● P.1-037~ for details of motor option.

SPEC

Model	PZG413-L05AG-C5	PZG513-L05AG-C5	PZG615-L05AG-C5	PZG715-L05AG-C5
(Opposite hand)	PZG413-R05AG-C5	PZG513-R05AG-C5	PZG615-R05AG-C5	PZG715-R05AG-C5
Travel length	13mm		15mm	
Table size	40×40mm	50×50mm	60×60mm	70×70mm
Feed screw (Ball screw)	φ6 lead 1			
Guide	Linear ball guide			
Main materials-Finishing	Stainless—Opposite side of the end face finishing			
Weight	0.6kg	0.8kg	0.9kg	1.2kg
Resolution (Pulse)	2μm (Full)/1μm (Half)			
MAX speed	10mm/ sec			
Load capacity (Excitation)	5kgf [49N]			
Limit sensor	Installed			
Origin sensor (ORG1)	Installed			
Slit origin sensor (ORG2)	Installed Refer page ● P.1-039~			
Provided screw (Hexagon-headed bolt)	4 of M3—10		4 of M4—12	
Uni-directional positioning accuracy	Within 6μm			
Repeatability positioning accuracy	Within ±0.5μm			
Lost motion	Within 1μm			
Backlash	Within 0.5μm			
Straightness	Within 1μm			
Pitching/Yawing	Within 15"/Within 10"			

※ Might be changed specification due to motors. See page ● P.1-213~ for details.

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

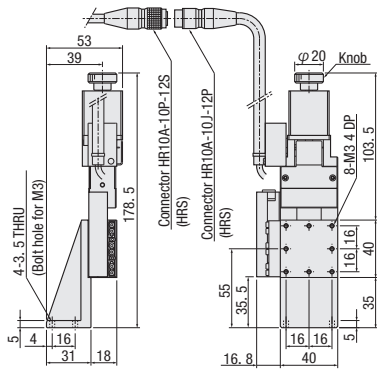
φ100

φ120

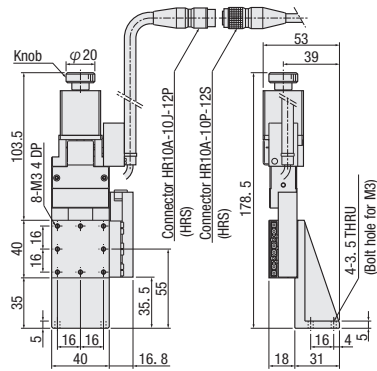
Other

Dimensional outline drawings

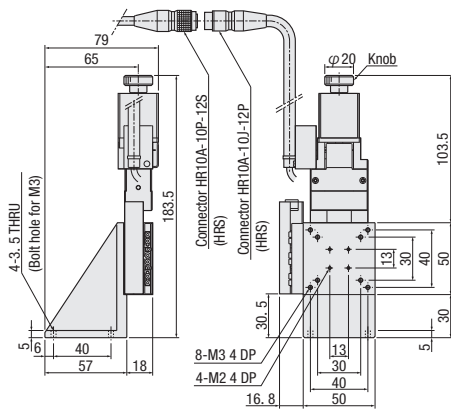
PZG413-L



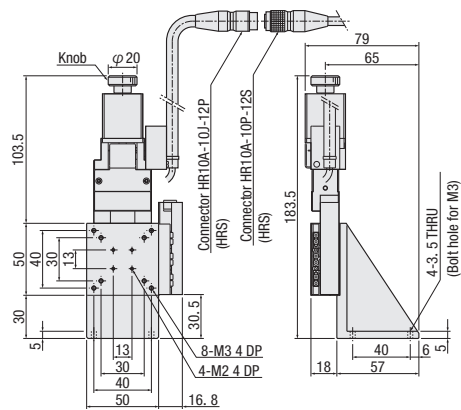
PZG413-R



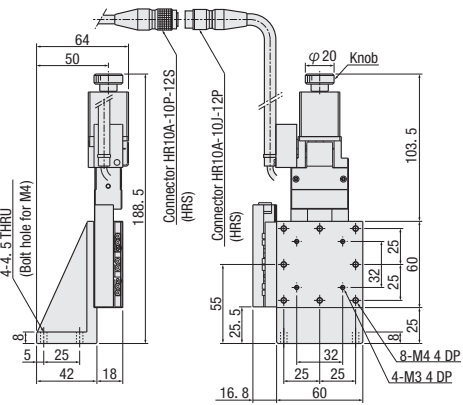
PZG513-L



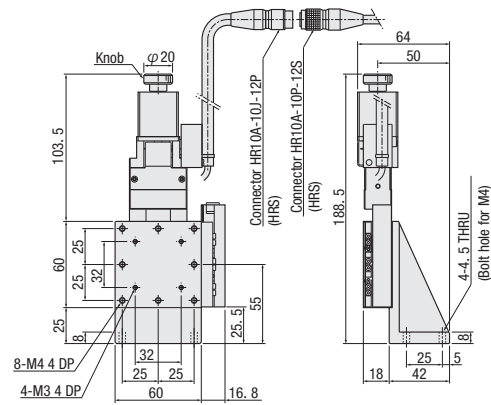
PZG513-R



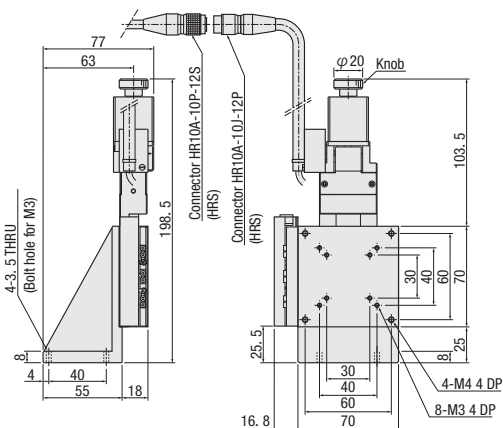
PZG615-L



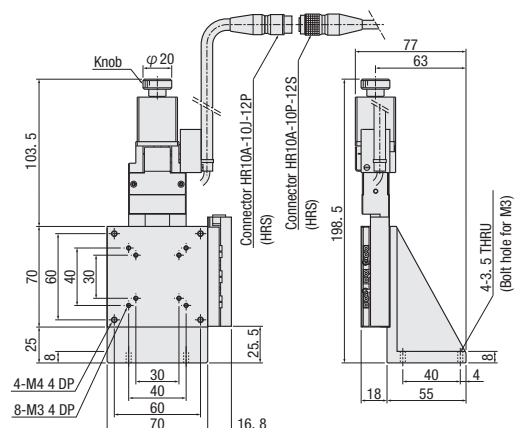
PZG615-R



PZG715-L



PZG715-R



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

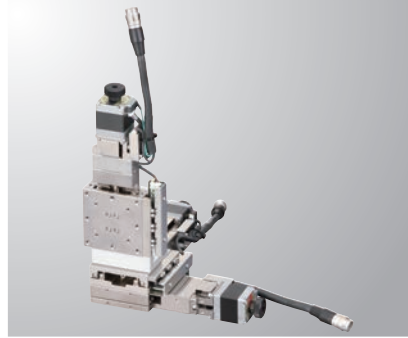
- φ40
- φ50
- φ60
- φ70
- φ80
- φ100
- φ120
- Other

XYZ-axis Linear Ball Guide: PMZG413/PMZG513/PMZG615/PMZG715

PMZG615-L



PMZG615-R



※A dedicated hex wrench for fixing bottom axis of XY is attached.

Model Selection code Option code

PMZG 413-L05AG-C 5

1 2 3 4 5 6 7

● Cable P.1-207~
● Electrical specification P.1-037~

1 Table size

4	□40mm
5	□50mm
6	□60mm
7	□70mm

* Cannot choose 415, 515, 613, 713 in combination with 1 and 2.

2 Travel length

13	13mm
15	15mm

4 Sensor voltage

05	5V
24	24V

* 05 [5V] for standard

* The sensor voltage/logic is different, but the external form dimension is the same.

* If you choose 24V, not available our controller DS102/112.

5 Sensor logic

A	N.C.
B	N.O.
C	Limit sensor is N.C., ORG1 and ORG2 are N.O.

7 Cable option

※ See page ● P.1-039~ for ORG2 compatible cable.

Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
4	Only connector (Cable is not included)	—
5	Cable is not included (Standard)	—
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end loose	D214-2-4RK
9	Robot cable 2m one end loose	D214-2-2RK
M	Cable for electromagnetic brake	—
P	Cable for α step	—
U	Cable for servo motor	—

* One end loose position to only stage opposite side.

* The price includes M, P and U.

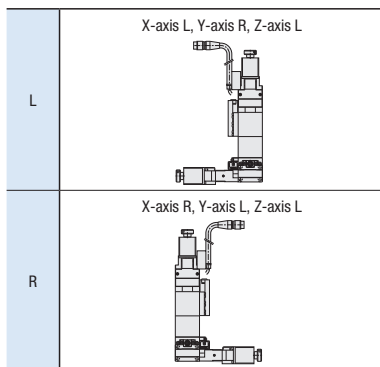
Not available non-cable.

See page ● P.1-207,209~ for details of cable. Please select "blank, 2, 6 and 7" when connect with stepping motor controller(DS102/112).

[Note] Please check available cable from compatibility list.

Motor/cable products list	Motor code	Cable code
	C, D, E	Blank, 1~9
MA	M	
PA	P	
U	U	

3 Sensor cover location specification



6 Motor option

Code	Specification
C	Standard
D	High-torque
E	High resolution
MA	With electromagnetic brake (Driver set)
PA	α Step (Driver set)
U	Servo motor (Amplifier set)

* Code MA · PA · U is the set of driver and cable.

* See page ● P.1-037~ for details of motor option.

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

φ100

φ120

Other

SPEC

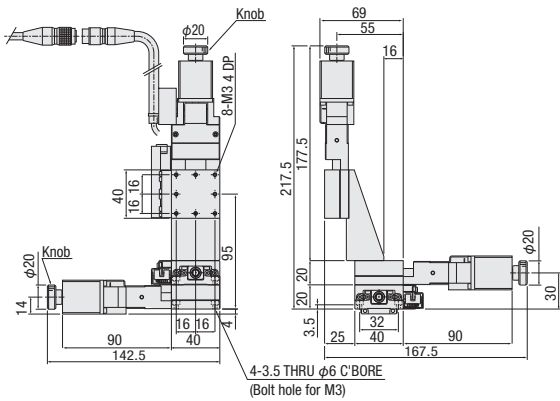
Model	PMZG413-L05AG-C5	PMZG513-L05AG-C5	PMZG615-L05AG-C5	PMZG715-L05AG-C5
(Opposite hand)	PMZG413-R05AG-C5	PMZG513-R05AG-C5	PMZG615-R05AG-C5	PMZG715-R05AG-C5
Travel length	13mm		15mm	
Table size	40×40mm	50×50mm	60×60mm	70×70mm
Feed screw (Ball screw)	φ6 lead 1			
Guide	Linear ball guide			
Main materials-Finishing	Stainless—Opposite side of the end face finishing			
Weight	1.6kg	2.0kg	2.6kg	3.0kg
Resolution (Pulse)	2μm (Full)/ 1μm (Half)			
MAX speed	10mm/sec			
Load capacity (Excitation)	5kgf [49N]			
Perpendicularity	Within 5μm/ Full stroke (XY-axis)			
Limit sensor	Installed			
Origin sensor (ORG1)	Installed			
Slit origin sensor (ORG2)	Installed Refer page ● P.1-039~			
Provided screw (Hexagon-headed bolt)	4 of M3—8		4 of M4—8	

Slide axis accuracy specification	
Uni-directional positioning accuracy	Within 6μm
Repeatability positioning accuracy	Within ±0.5μm
Lost motion	Within 1μm
Backlash	Within 0.5μm
Straightness	1μm
Pitching/Yawing	Within 15"/ Within 10"

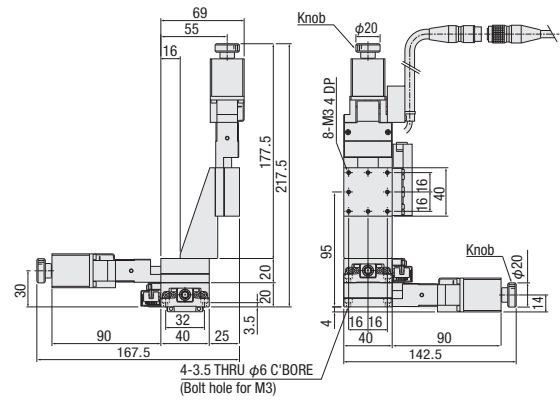
※ Might be changed specification due to motors. See page ● P.1-213~ for details.

Dimensional outline drawings

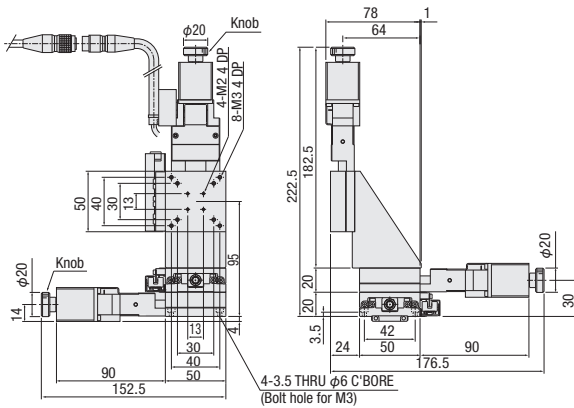
PMZG413-L



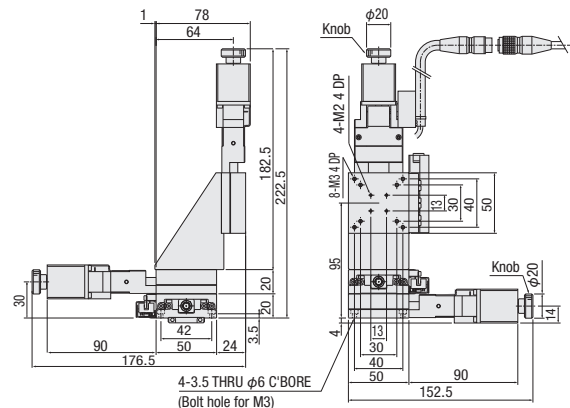
PMZG413-R



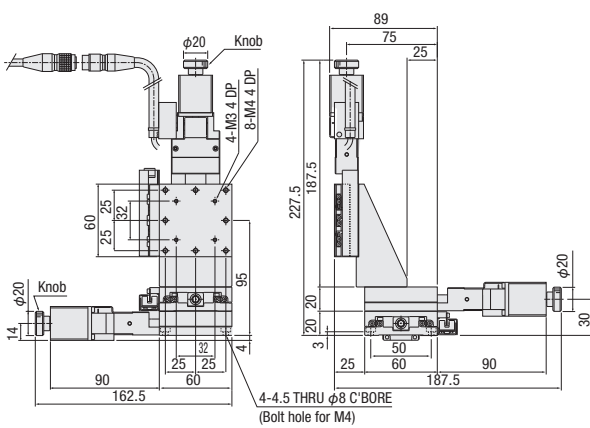
PMZG513-L



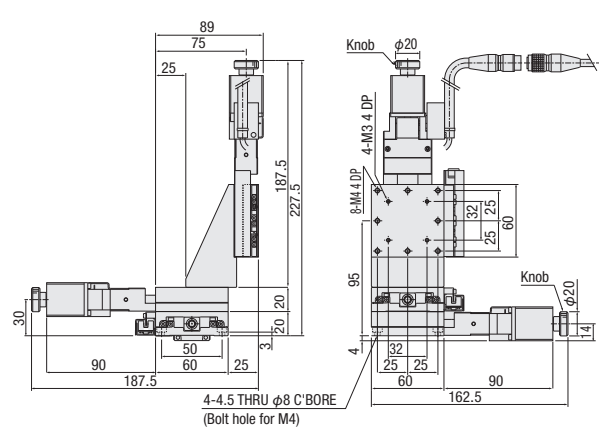
PMZG513-R



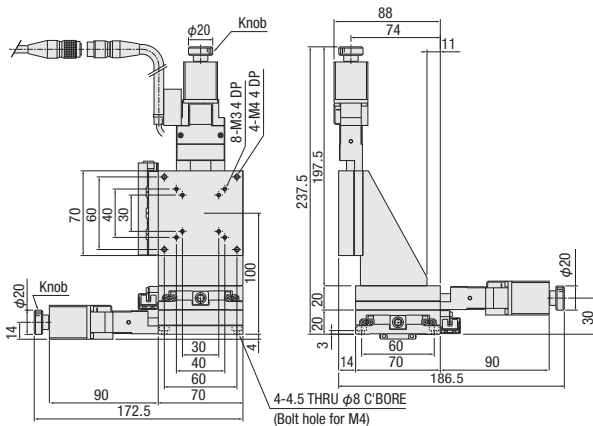
PMZG615-L



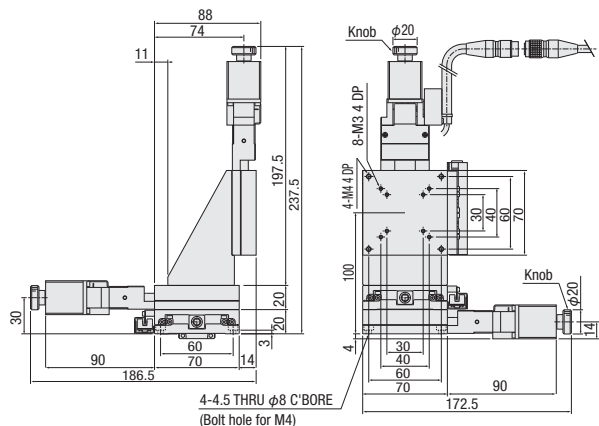
PMZG615-R



PMZG715-L



PMZG715-R



Motorized Stage

- X
- XY
- Z
- Horizontal Z
- XYZ
- Goniometer
- Rotary
- Unit
- Controller

- Linear Ball
- CAVE-X Linear ball
- Cross Roller
- Slide Guide

- $\phi 40$
- $\phi 50$
- $\phi 60$
- $\phi 70$
- $\phi 80$
- $\phi 100$
- $\phi 120$
- Other

Electrical Specification: PG Series

Motor • Electrical specification

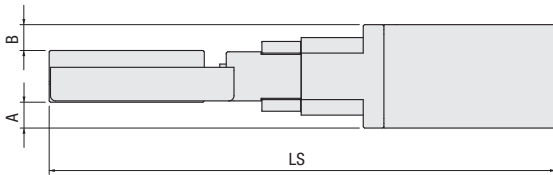
Motor code		C	D	E	MA	PA	U	
Models		PG413-****-C	PG413-****-D	PG413-****-E	PG413-****-MA	PG413-****-PA	PG413-****-U	
		PG513-****-C	PG513-****-D	PG513-****-E	PG513-****-MA	PG513-****-PA	PG513-****-U	
		PG615-****-C	PG615-****-D	PG615-****-E	PG615-****-MA	PG615-****-PA	PG615-****-U	
		PG715-****-C	PG715-****-D	PG715-****-E	PG715-****-MA	PG715-****-PA	PG715-****-U	
		PG430-****-C	PG430-****-D	PG430-****-E	PG430-****-MA	PG430-****-PA	PG430-****-U	
		PG530-****-C	PG530-****-D	PG530-****-E	PG530-****-MA	PG530-****-PA	PG530-****-U	
		PG650-****-C	PG650-****-D	PG650-****-E	PG650-****-MA	PG650-****-PA	PG650-****-U	
		PG750-****-C	PG750-****-D	PG750-****-E	PG750-****-MA	PG750-****-PA	PG750-****-U	
Motor Specification (*1)	Type	5 phase stepping motor 0.75A/Phase				a step motor	AC servo motor	
	Feature	Standard	High-torque	High resolution	With electromagnetic brake	Small step-out	High speed	
	Model (*2)	PK523HPB-C15	PK525HPB	PK523HPMB	PKE545MC-A1	ARM24SAK	HF-KP053	
	Electromagnetic brake	-			Installed	-		
	Maker	Oriental Motor Co.,Ltd.						Mitsubishi Electric corporation
	Step angle (Position detector)	0.72°			0.36°	0.72°	0.36° (Set to 1000P/R)	18 bits encoder (262144P/R)
	Mass	0.1kg	0.2kg	0.11kg	0.52kg	0.15kg	0.35kg	
	Motor size	□ size	28mm		42mm	42mm	28mm	40mm
		L size	42mm	61.5mm	42mm	69mm	45mm	66.4mm
	Excitation (moment) maximum torque	0.033N · m	0.073N · m	0.038N · m	0.240N · m	0.055N · m	0.480N · m	
Driver type	P.1-205~			RKSD503M-A	ARD-K	MR-J3-10A		
Input power (Voltage · frequency)	P.1-205~			Single phase AC100-120V 50/60Hz	DC24V±10%	Three and single phase AC200-230V 50/60Hz		
Sensor	Limit sensor	Installed						
	Origin sensor (ORG1)	Installed						
	Slit origin sensor (ORG2)	Installed						
	Model	Photo microsensor EE-SX384,EE-SX484 (Omuron Co.,Ltd.) (Slit origin sensor will be PM-L25(Panasonic Industrial Devices SUNX) in code M)						
	Power voltage	DC5V±5% (DC24V±10% Option) (PM-L25 power voltage: DC5~24V±10%)						
	Consumption current	100mA or less (25mA per 1 sensor) (PM-L25 consumption current: 15mA or less)						
	Control output	EE-SX384/EE-SX484: NPN open collector output DC5~24V 16mA or less Residual voltage 0.4V or less when the load current is 16mA PM-L25: NPN open collector output DC30V or less 50mA or less Residual voltage 2V or less when the load current is 50mA Residual voltage 1V or less when the load current is 16mA						
	Output logic	EE-SX384: Output transistor is ON at the light shield (continuity) EE-SX484: Output transistor is OFF at the light shield (Non-continuity) PM-L25: Output transistor is OFF at the light shield (Non-continuity)						
Connector	Motor	Model	HR10A-10J-12P (73) (Hirose Electric Co.,Ltd.)		motor side: 5557-06R-210 electromagnetic brake side: 5557-02R-210 (MOLEX)	43020-1000 (Japan Molex)	Motor cable: - Encoder: -	
		Receiving connector	HR10A-10P-12S (73) (Hirose Electric Co.,Ltd.)		motor side: 5559-06P-210 electromagnetic brake side: 5559-02P-210 (MOLEX)	43020-1000 (Japan Molex)	Motor cable: JN4FT045J1-R (JAE) Encoder: 1674320-1 (Tyro Electronics Japan G.K.)	
	Sensor	Model	Limit sensor	HR10A-10J-12P (73) (Hirose Electric Co.,Ltd.)		S5B-ZR-SM4-TF (LF) (SN) (JST Co.,Ltd.)		
			Origin sensor (ORG1) Slit origin sensor (ORG2)			PM-L25 Loose wire		
		Receiving connector	Limit sensor	HR10A-10P-12S (73) (Hirose Electric Co.,Ltd.)		ZHR-5 (JST Co.,Ltd.)		
			Origin sensor (ORG1) Slit origin sensor (ORG2)					

*1 See page P.1-213~ for details of single motor specification.

*2 Model is our own management model.

* The electric specification of XY (PMG), Z (PZG), XYZ (PMZG) are the same. [M/P]; Please see our web site for more details about motors.

Dimensional outline drawings



Motor code	Size □	A	B	LS							
				PG413	PG513	PG615	PG715	PG430	PG530	PG650	
C	28	4	4	143.5	153.5	163.5	173.5	172	182	221	231
D	28	4	4	163	173	183	193	191.5	201.5	240.5	250.5
E	28	4	4	143.5	153.5	163.5	173.5	172	182	221	231
MA	42	11	11	180	190	200	210	208.5	218.5	257.5	267.5
PA	28	4	4	144	154	164	174	172.5	182.5	221.5	231.5
U	40	10	10	175.9	185.9	195.9	205.9	204.4	214.4	253.4	263.4

Pin allocation · Connection diagram

Motor code	Pin allocation · Connection diagram (Motor)	Pin allocation · Connection diagram (Sensor)																																											
C · D · E	<p>[Motor and sensor pin allocation (the same)]</p> <p>[Motor and sensor connection diagram (the same)]</p>	<p>(Usage sensor for each logis)</p> <table border="1"> <thead> <tr> <th>Sensor logic</th> <th>ORG1</th> <th>ORG2</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>EE-SX484</td> <td>EE-SX384</td> </tr> <tr> <td>B</td> <td>EE-SX384</td> <td>EE-SX484</td> </tr> </tbody> </table> <p>* Please select the cable from the option code. ※ See page P.1-211 for details of cable.</p>	Sensor logic	ORG1	ORG2	A	EE-SX484	EE-SX384	B	EE-SX384	EE-SX484																																		
	Sensor logic	ORG1	ORG2																																										
A	EE-SX484	EE-SX384																																											
B	EE-SX384	EE-SX484																																											
MA	<p>Cable for motor (3m)</p> <p>5559-06P-210 (MOLEX)</p> <p>5557-06R-210 (MOLEX)</p> <p>Electromagnetic brake cable (3m)</p> <p>5559-02P-210 (MOLEX)</p> <p>※ Cable model: CC030VPFB See page P.1-211 for details.</p>	<p>[Connector diagram (sensor)]</p> <p>※ Attached sensor cable model: PG-H-ASSY5-2000 See page P.1-212 for details.</p> <p>Power input (+) Brown Power input (-) Blue CCWLS output Black ORG1 output Yellow CWLS output White</p> <p>Limit sensor, Origin sensor substrate (ORG1)</p> <p>Slit origin sensor (ORG2)</p> <p>※ See page P.1-212 for details of slit origin sensor PM-L25</p>																																											
PA	<p>Cable for motor (3m)</p> <p>43020-1000 (MOLEX) 43025-1000 (MOLEX)</p> <p>Motor cable model: CC030VA2R2 See page P.1-211 for details.</p>	<p>[Connector diagram (sensor)]</p> <p>Power input (+) Brown Power input (-) Blue CCWLS output Black ORG1 output Yellow CWLS output White</p> <p>Limit sensor, Origin sensor substrate (ORG1)</p> <p>※ Sensor cable model: PG-H-ASSY5-2000 See page P.1-212 for details.</p>																																											
U	<p>Driver-</p> <table border="1"> <thead> <tr> <th>Mark</th> <th>Pin</th> <th>Signals</th> </tr> </thead> <tbody> <tr> <td>FG</td> <td>1</td> <td>FG</td> </tr> <tr> <td>U</td> <td>2</td> <td>UPhase</td> </tr> <tr> <td>V</td> <td>3</td> <td>VPhase</td> </tr> <tr> <td>W</td> <td>4</td> <td>WPhase</td> </tr> </tbody> </table> <p>Motor cable model: SVPM-J3HF1-B-3-02S See page P.1-211 for details.</p> <table border="1"> <thead> <tr> <th>Signals</th> <th>Pin</th> <th>Pin</th> <th>Signals</th> </tr> </thead> <tbody> <tr> <td>P5</td> <td>1</td> <td>3</td> <td>P5</td> </tr> <tr> <td>LG</td> <td>2</td> <td>6</td> <td>LG</td> </tr> <tr> <td>MR</td> <td>3</td> <td>5</td> <td>MR</td> </tr> <tr> <td>MRR</td> <td>4</td> <td>4</td> <td>MRR</td> </tr> <tr> <td>BAT</td> <td>9</td> <td>2</td> <td>BAT</td> </tr> <tr> <td>SD</td> <td>Plate</td> <td>9</td> <td>SD</td> </tr> </tbody> </table> <p>encoder model: SVEM-J3HF1-B-3 See page P.1-211 for details.</p>	Mark	Pin	Signals	FG	1	FG	U	2	UPhase	V	3	VPhase	W	4	WPhase	Signals	Pin	Pin	Signals	P5	1	3	P5	LG	2	6	LG	MR	3	5	MR	MRR	4	4	MRR	BAT	9	2	BAT	SD	Plate	9	SD	<p>[Connector diagram (sensor)]</p> <p>Power input (+) Brown Power input (-) Blue CCWLS output Black ORG1 output Yellow CWLS output White</p> <p>Limit sensor, Origin sensor substrate (ORG1)</p> <p>※ Sensor cable model: PG-H-ASSY5-2000 See page P.1-212 for details.</p>
Mark	Pin	Signals																																											
FG	1	FG																																											
U	2	UPhase																																											
V	3	VPhase																																											
W	4	WPhase																																											
Signals	Pin	Pin	Signals																																										
P5	1	3	P5																																										
LG	2	6	LG																																										
MR	3	5	MR																																										
MRR	4	4	MRR																																										
BAT	9	2	BAT																																										
SD	Plate	9	SD																																										

Cable type

Code	Specification	Cable type
Blank	2m	D214-2-2E
1	2m One end loose	D214-2-2EK
2	4m	D214-2-4E
3	4m One end loose	D214-2-4EK
6	Robot cable 2m	D214-2-2R
7	Robot cable 4m	D214-2-4R
8	Robot cable 4m one end	D214-2-4RK
9	Robot cable 2m one end	D214-2-2RK

Motor code [MA · PA · U] compatible cable

One set in motor driver and motor cable (encoder).

Motor code	Cable code	Driver type	Motor cable	Encoder cable	Sensor cable
MA	M	RKSD503M-A (Oriental Motor Co.,Ltd.)	CC030VPFB P.1-211 Motor code MA	—	PG-H-ASSY5-2000 P.1-212 Refer the cable connection diagram
PA	P	ARD-K (Oriental Motor Co.,Ltd.)	CC030VA2R2 P.1-211 Motor code PA	—	
U	U	MR-J3-10A (Mitsubishi Electric corporation)	SVPM-J3HF1-B-3-02S P.1-211 Motor code U	SVEM-J3HF1-B-3 P.1-211 Motor code U	

Cable connection diagram shows page P.1-209~
 Great deal purchase both of cable and code.

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

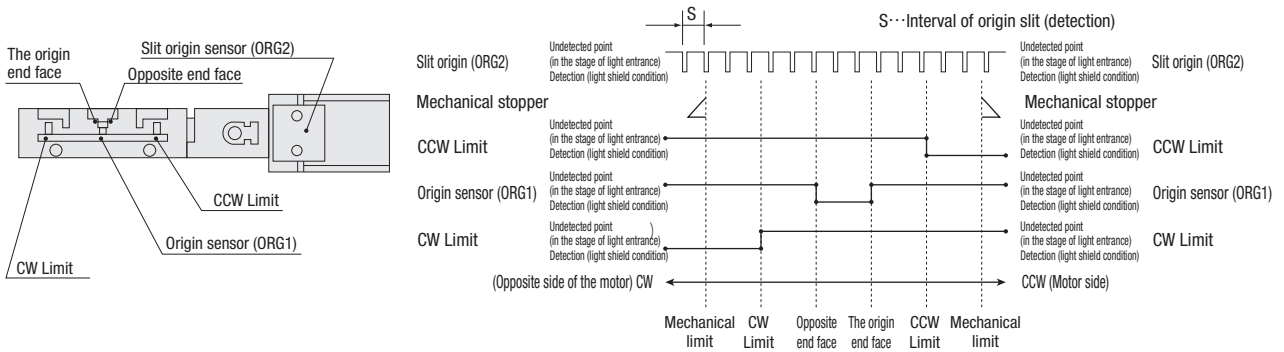
φ80

φ100

φ120

Other

Timing chart



Unit [mm]	Direction of CW ←						→ Direction of CCW	
	Reference coordinate	Mechanical limit	CW Limit	Opposite end face	Origin	Mechanical limit	Mechanical limit	
PG413-PG513	Return to origin	8.0	7.5	2	0	6.5	7.0	
PG615-PG715	Return to origin	9.0	8.5	2	0	7.5	8.0	
PG430-PG530	Return to origin	16.5	16.0	2	0	15.0	15.5	
PG650-PG750	Return to origin	26.5	26.0	2	0	25.0	25.5	
The same	Detection clearance of slit origin S=1							

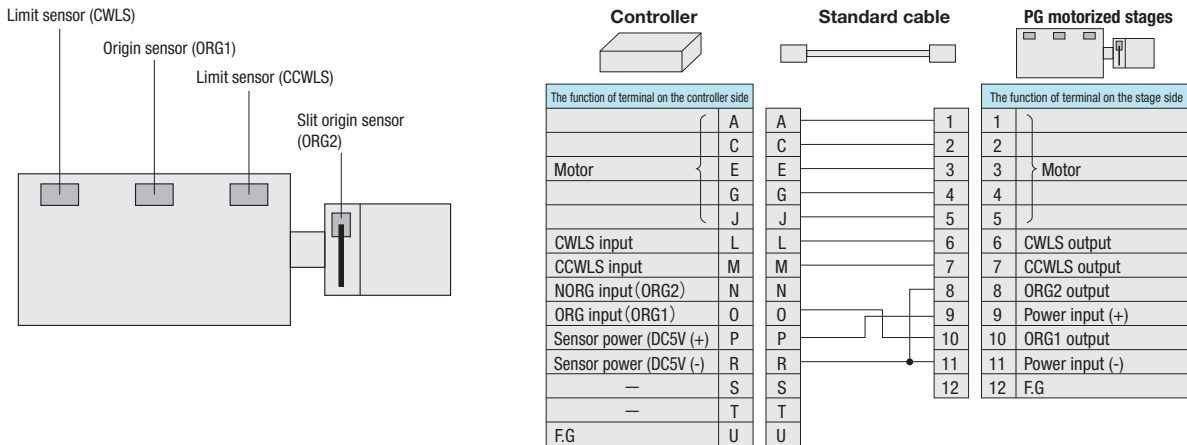
* Return to origin means use DS102/DS112 series controller for the return to origin type 3.

* The coordinate value should be on the design flaw. Dimension error may occur about plus or minus 0.5mm.

Built-in sensor

PG series have built-in sensors as below.

■ The connecting diagram that connected to our controller using standard attached cable is shown as below.



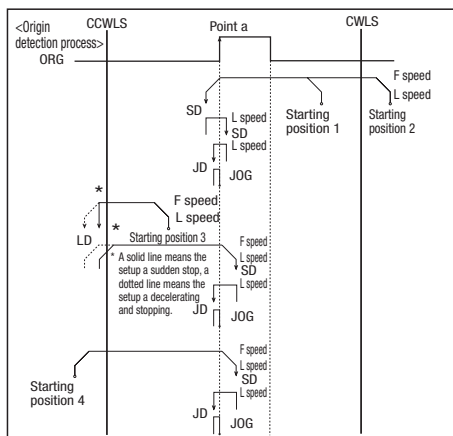
The CWLS(pin#6) and CCWLS(pin#7) on the motorized stage side are connected to CWLS(Lpin) and CCWLS(Mpin) of controller as usual. However ORG2 output (Pin#8) is connected to DC5V(-) and ORG1 output (pin#10) will be connected to ORG. In other words, the sensor of ORG2 does not work on this wire connection, only ORG1 sensor is recognized by the controller as origin signal. As a result, return to origin should be done without the slit origin sensor as same as function of motorized stages that have only three sensors (CWLS, CCWLS and ORG).

● About a correspondence cable for a slit origin sensor (ORG2)! ※ See page P.1-207 for details.

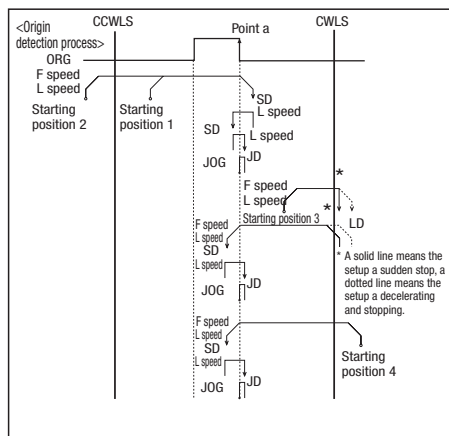
This series are included four sensors as standard. In case of using four sensors with slit origin sensor (ORG2), you need the cable for four sensors. Also please note that the type is different from recommendation return to origin. Should be selected cable code 5 (without cable), and order the cable for four. When use all of 4 sensors, please select the cable for 4 sensors from page P.1-207~.

PG series recommendation return to origin method

[Type3] Detect in the direction of CCW and perform detected process for CCW edge (a point) of ORG signal.



[Type4] Detect in the direction of CW and perform detected process for CW edge of ORG signal.

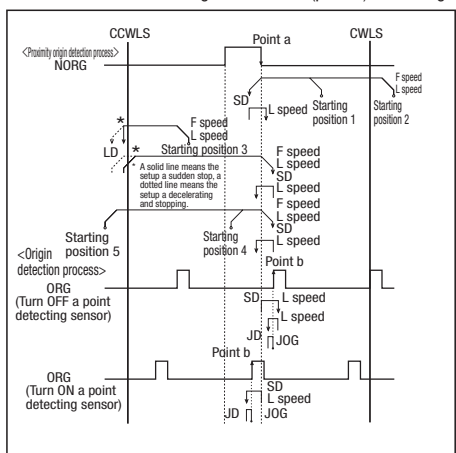


[Type9] After finished Type3, perform detected process for CCW edge of TIMING signal.

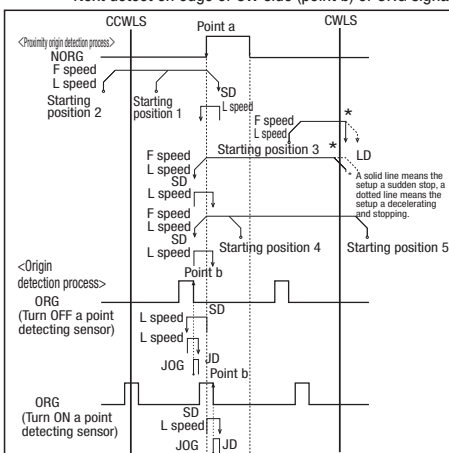
[Type10] After finished Type4, perform detected process for CW edge of TIMING signal.

● Select return to origin type from the followings when use the slit origin sensor (ORG2).

[Type1] Detect in the direction of CCW and perform detected process for CW edge (point a) of NORG signal. Next detect an edge of CCW side (point b) of ORG signal.



[Type2] Detect in the direction of CW and perform detected process for CCW edge (point a) of NORG signal. Next detect on edge of CW side (point b) of ORG signal.



[Type7] After finished type1, perform detected process for CCW edge (point c) of TIMING signal.

[Type8] After finished type2, perform detected process for CW edge (point c) of TIMING signal.

Return to origin sequence ▶ P.1-201~

Adaptive driver

■ Driver ▶ P.1-205~

DC24 type input

Model	CRD5107P	SD5107P3-A22
Divisions	Micro step (1~1/250 [16 steps])	Normal (Full/Half)

AC100V input

Model	RKD507-A
Divisions	Micro step (1~1/250 [16 steps])

Adaptive stepping motor controller

■ Controller ▶ P.1-197~

Input power	General-purpose input/output port	Driver type (Divisions)	
		Normal (Full/Half)	Micro step (1~1/250 [16 steps])
AC100-240V	Without	DS102NR	DS102MS
	With	DS102NR-IO	DS102MS-IO
DC24V	Without	DS112NR	DS112MS
	With	DS112NR-IO	DS112MS-IO



- X
- XY
- Z
- Horizontal Z
- XYZ
- Goniometer
- Rotary
- Unit
- Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

φ40

φ50

φ60

φ70

φ80

φ100

φ120

Other