

2016-2017 General catalog update

Motorized Linear Stages : KX Series

Update

- ① Motor
- ② Slit origin sensor replaced
- ③ Motor code
- ④ Dimensions

Precision specifications and prices are unchanged by the motor modification. Motor code of XY-axis (KY) and Z-axis(KZ) changes as same as X-axis(KX).

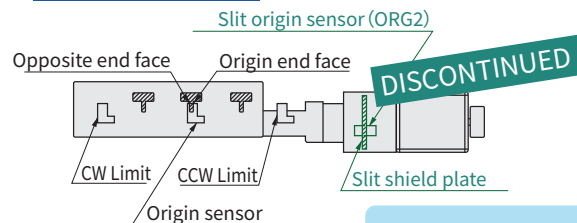
The slit origin sensor (ORG2) is replaced with the 3-sensor specification.

The sensor logic switching circuit board is still installed, sensor logic switching can be performed.

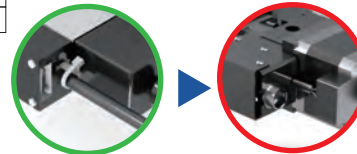
① Motor update

Current model	New model
Motor model no. C7214-9015-1	PK544PMB-C18
Phases 5Phase	5Phase
Rated current 0.75A/Phase	0.75A/Phase
Size □38mm	□42mm
Basic step angle 0.36°	0.36°
Excitation maximum still torque 0.135N · m	0.24N · m
Roter inertial moment $35 \times 10^{-7} \text{kg} \cdot \text{m}^2$	$60 \times 10^{-7} \text{kg} \cdot \text{m}^2$
Mass 0.27kg	0.3kg
Temperature -10°C ~ +50°C	-10°C ~ +50°C

② Slit origin sensor replaced



Replace to 3-sensor model.



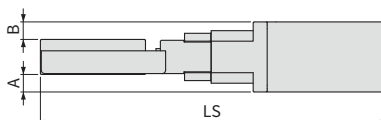
The connector is panel mounted.

③ Motor code update

Model	Select code	Option code
KX0725C-L 5	1 2 3 4 5 6	
1 Axis	2 Table size	3 Travel length
X X-axis	07 □70mm	25 25mm
Y XY-axis	08 □80mm	30 30mm
Z Z-axis	10 □100mm	40 40mm
	12 □120mm	50 50mm
4 Guide	5 Cable option	6 Sensor cover position
C closed	Blank 2m	L L position
	1 2m One end loose	R Opposite hand
	2 4m	
	3 4m One end loose	
	4 Only connector (Cable is not included)	
	5 Cable is not included (Standard)	
	6 Robot cable 2m	
	7 Robot cable 4m	
	8 Robot cable 4m One end loose	
	9 Robot cable One end loose	

Change of the select code. Add to "G" in to the select code.

④ Dimensions



A : The distance of the table bottom to the stage bottom.
B : The distance of the tabletop to the surface.
LS : Length(MAX length)

Product No.	A		B		LS	
	Old	New	Old	New	Old	New
KX0725	10.5	12.5	6.5	8.5	209.5	207.5
KX0830	9.5	11.5	2.5	4.5	227	225
KX1040			—	—	257	255
KX1250			—	—	288	286

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Motorized Linear Stages : KS101 Series

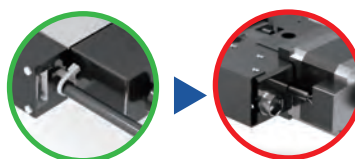
Update

- ① Micro step motor (M S)
- ② Motor code
- ③ Dimensions

Precision specifications and prices are unchanged by the motor modification.
Motor code of XY-axis(101-30)and Z-axis(103-30)changes as same as X-axis(101-30).

① Micro step motor update

	Current model	New model
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximum still torque	0.135N · m	0.24N · m
Roter inertial moment	$35 \times 10^{-7} \text{kg} \cdot \text{m}^2$	$60 \times 10^{-7} \text{kg} \cdot \text{m}^2$
Mass	0.27kg	0.3kg
Temperature	-10°C ~ +50°C	-10°C ~ +50°C



The connector is panel mounted.

② Motor code update

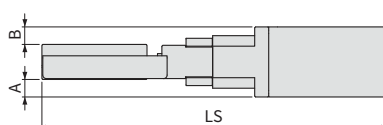
Model	Select code	Option code
KS101-30L	MS	5
KS101-30L	G	5

1 Axis	2 Travel length	3 Sensor cover position
1 X-axis	30 30mm	L L position
2 XY-axis		R Opposite hand
3 Z-axis		

4 Motor option	5 Cable option
C Standard	Blank 2m
MS □38Microstep	1 2m One end loose
PA □28αStep(DC)	2 4m
QA □42αStep(AC)	3 4m One end loose
	4 Only connector (Cable is not included)
	5 Cable is not included (Standard)
	6 Robot cable 2m
	7 Robot cable 4m
	8 Robot cable 4m One end loose
	9 Robot cable One end loose

Base step angle 0.36° motor's code are change for “MS” to “G”.

③ Dimensions



A : The distance of the table bottom to the stage bottom.
B : The distance of the tabletop to the surface.
LS : Length(MAX length)

Product No.	A		B		LS	
	Old	New	Old	New	Old	New
KS101-30	3	5	5	7	165.5	159.5

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Motorized Linear Stages : KS102 Series

Update

- ① Motor
- ② Motor code
- ③ Dimensions

Precision specifications and prices are unchanged by the motor modification.

① Motor update

	Current model	New model
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximus still torque	0.135N · m	0.24N · m
Roter inertial moment	$35 \times 10^{-7} \text{kg} \cdot \text{m}^2$	$60 \times 10^{-7} \text{kg} \cdot \text{m}^2$
Mass	0.27kg	0.3kg
Temperature	-10°C~+50°C	-10°C~+50°C

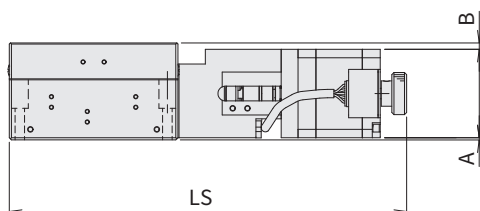
② Motor code update

Model	Select code	Option code
KS102-30	□	□-5
1 Axis	2 Travel length	3 Sensor cover position
1 X-axis	30 30mm 70 70mm 100 100mm	L L position R Opposite hand
4 Motor option	5 Cable option	
Blank Standard QA □42 α Step(AC)	Blank 2m 1 2m One end loose 2 4m 3 4m One end loose 4 Only connector (Cable is not included) 5 Cable is not included (Standard) 6 Robot cable 2m 7 Robot cable 4m 8 Robot cable 4m One end loose 9 Robot cable One end loose	
		※Omitted of cable for a step motor.

Model	Select code	Option code
KS102-30	□	G-5
1 Axis	2 Travel length	3 Sensor cover position
1 X-axis	30 30mm 70 70mm 100 100mm	L L position R Opposite hand
4 Motor option	5 Cable option	
G Standard QA □42 α Step(AC)	Blank 2m 1 2m One end loose 2 4m 3 4m One end loose 4 Only connector (Cable is not included) 5 Cable is not included (Standard) 6 Robot cable 2m 7 Robot cable 4m 8 Robot cable 4m One end loose 9 Robot cable One end loose	
		※Omitted of cable for a step motor.

Standard moto's code are change for "Blank" to "G".

③ Dimensions



A : The distance of the motor bottom to the tabl bottom.
B : The distance of the motor upper to the tabl upper.
LS : Length(MAX length)

mm						
Product No.	A		B		LS	
	Old	New	Old	New	Old	New
KS102-30	3	1	2	3	209.5	203.5
KS102-70			3		279.5	273.5
KS102-100					324.5	318.5

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Motorized Goniometer Stage : KG05/KA05 Series

Update

- ① Motor
- ② Slit origin sensor
- ③ Motor select code
- ④ Dimensions

Precision specifications and prices are unchanged by the motor modification.

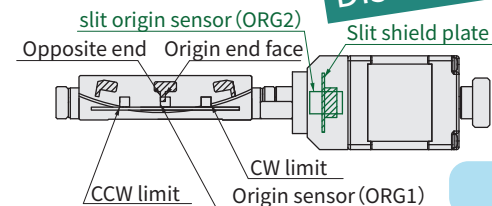
Motor code of 2-axis KA05 changes as same as 1-axis KG05.

Eliminate the use of slit origin sensors (ORG2) use three sensors as standard specifications.

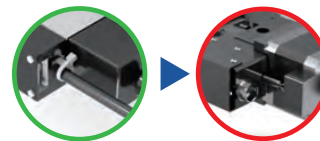
① Motor

	Current model	New model	New model
Motor model	C9582-9015-1	PK525HPMB-C1	PK544PMB-C18
Phases	5phases	5phases	5phases
Rated current	0.75A/phases	0.75A/phases	0.75A/phases
Size	□38mm	□28mm	□42mm
Basic step angle	0.36°	0.36°	0.36°
Excitation max torque	0.135N · m	0.073N · m	0.24N · m
Rotor moment of inertia	$35 \times 10^{-7} \text{kg} \cdot \text{m}^2$	$19 \times 10^{-7} \text{kg} \cdot \text{m}^2$	$60 \times 10^{-7} \text{kg} \cdot \text{m}^2$
Mass	0.27kg	0.2kg	0.3kg
Ambient temperature	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C

② Slit origin sensor



3sensor



Panel mount connector
※Image is for illustration purposes.

③ Motor select code

Model Select code Option code
KG05-W050A **□** **-5**

1 Axis	2 Work distance(W.D.)	3 Sensor cover position	4 Cable options
G 1-axis A 2-axes	050 50mm 068 68mm 086 86mm	None L R Opposite side	None 2m 1 2m Rose on one end 2 4m 3 4m Rose on one end 4 Connector only (no cable) 5 No cable (standard)

Model Select code Option code
KG05-W050A **□** **-** **□** **5**

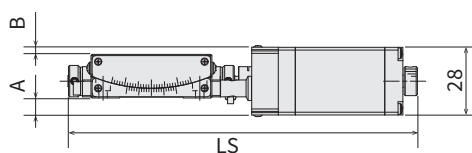
1 軸	2 Work distance(W.D.)	3 Sensor cover position	4 Motor options	5 Cable options
G 1-axis A 2-axes	050 50mm 068 68mm 086 86mm	L L R Opposite side	H 28mm Stpper G 42mm Stpper	None 2m 1 2m Rose on one end 2 4m 3 4m Rose on one end 4 Connector only (no cable) 5 No cable (standard)

Added motor option and □28mm(H)/□42mm(G) can be selected.
The L position code changes from "None" to "L".

* There is no difference in SPECS depending on the selected motor. External weight and dimensions differ.

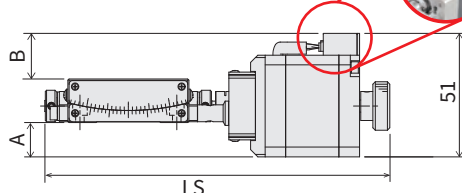
④ Dimensions

H : □28mm stepper motor



Model	A		B		LS	
	Old	New	Old	New	Old	New
KG05-W050A□-H	12.05	7.1	7.95	2.9	156	144.5
KG05-W068A□-H	11.4	6.4	8.6	3.6		
KG05-W086A□-H	12.15	7.2	7.85	2.8		

G : □42mm stepper motor



Model	A		B		LS	
	Old	New	Old	New	Old	New
KG05-W050A□-G	12.05	14.1	7.95	19	156	142.5
KG05-W068A□-G	11.4	13.4	8.6	19.6		
KG05-W086A□-G	12.15	14.2	7.85	18.9		

A: Distance from bottom of table to bottom of stage
B: Distance from desktop to stage
LS: Total length (stroke center)

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Motorized Goniometer Stage : KG07/KA07 Series

Update

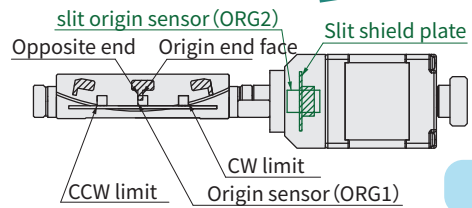
- ① Motor
- ② Slit origin sensor
- ③ Motor select code
- ④ Dimension

Precision specifications and prices are unchanged by the motor modification.
 Motor code of 2-axis KA07 changes as same as 1-axis KG07.
 Eliminate the use of slit origin sensors (ORG2) use three sensors as standard specifications.

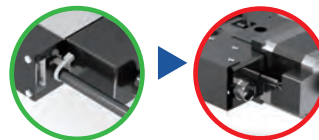
① Motor

Motor model	Current model	New model	New model
	C9582-9015-1	PK525HPMB-C1	PK544PMB-C18
Phases	5phases	5phases	5phases
Rated current	0.75A/phases	0.75A/phases	0.75A/phases
Size	□38mm	□28mm	□42mm
Basic step angle	0.36°	0.36°	0.36°
Excitation max torque	0.135N · m	0.073N · m	0.24N · m
Rotor moment of inertia	35×10 ⁻⁷ kg · m ²	19×10 ⁻⁷ kg · m ²	60×10 ⁻⁷ kg · m ²
Mass	0.27kg	0.2kg	0.3kg
Ambient temperature	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C

② Slit origin sensor



3sensor



Panel mount connector
 ※Image is for illustration purposes.

③ Motor select code

Model

Select code

Option code

KG07-W070

-5

1

2

3

4

5

1 Axis

G	1-axis
A	2-axes

3 Sensor logic

Type	CWLS	ORG1	CCWLS	ORG2
A	N.C.	N.C.	N.C.	
B	N.O.	N.O.	N.O.	N.O.
C	N.C.	N.O.	N.C.	

2 Work distance(W.D.)

070	70mm
096	96mm
122	122mm

5 Cable code

None	2m
1	2m Rose on one end
2	4m
3	4m Rose on one end
4	Connector only (no cable)
5	No cable (standard)

4 Sensor cover position

None	L
R	Opposite side

Model

Select code

Option code

KG07-W070

-

5

1

2

3

4

5

6

1 Axis

3 Sensor logic

Discor

ORG2

N.O.

G	1-axis
A	2-axes

Type	CWLS	ORG	CCWLS
A	N.C.	N.C.	N.C.
B	N.O.	N.O.	N.O.
C	N.C.	N.O.	N.C.

2 Work distance(W.D.)

4 Sensor cover position

5 Motor options

070	70mm
096	96mm
122	122mm

L	L	H	☐ 28motor
R	Opposite side	G	☐ 42motor

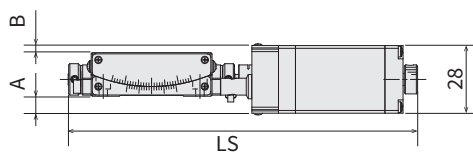
6 Cable code	
None	2m
1	2m Rose on one end
2	4m
3	4m Rose on one end
4	Connector only (no cable)
5	No cable (standard)

Added motor option and □28mm(H)/□42mm(G) can be selected.
 The L position code changes from "None" to "L".

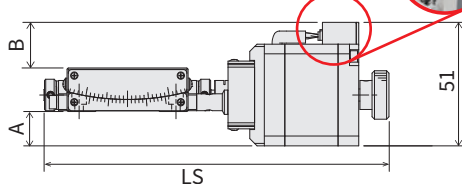
* There is no difference in SPECS depending on the selected motor. External weight and dimensions differ.

④ Dimensions

H : □28Motor



G : □42Motor



A: Distance from bottom of table to bottom of stage
 B: Distance from desktop to stage
 LS: Total length (stroke center)

Model	A		B		LS	
	Old	New	Old	New	Old	New
KG07-W070□□-H	10.1	5.1	1.9	-3.1	190	174.5
KG07-W096□□-H	7.25	2.2	4.75	-0.2		
KG07-W122□□-H	7.15	2.1	4.85	-0.1		

Position the motor connector on the top side of the stage.

Model	A		B		LS	
	Old	New	Old	New	Old	New
KG07-W070□□-G	10.1	12.1	1.9	3.9	190	175.5
KG07-W096□□-G	7.25	9.2	4.75	6.8		
KG07-W122□□-G	7.15	9.1	4.85	6.9		

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Motorized Rotary Stage : KS402-75

Update

- ① Motor
- ② Motor code
- ③ Dimensions

Precision specifications and prices are unchanged by the motor modification.
This update only KS402-75. KS402-100/KS402-180 are unchanged.

① Motor update

	Current model	New model
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximum still torque	0.135N · m	0.24N · m
Roter inertial moment	$35 \times 10^{-7} \text{kg} \cdot \text{m}^2$	$60 \times 10^{-7} \text{kg} \cdot \text{m}^2$
Mass	0.27kg	0.3kg
Temperature	-10°C ~ +50°C	-10°C ~ +50°C

② Motor code update

Model Select code Option code
KS402-75-5

1 Stage size

75	Φ75mm
100C	Φ100mm
180C	Φ180mm

2 Cable option

Blank	2m
1	2m One end loose
2	4m
3	4m One end loose
4	Only connector (Cable is not included)
5	Cable is not included (Standard)
6	Robot cable 2m
7	Robot cable 4m
8	Robot cable 4m One end loose
9	Robot cable One end loose

※100/180 Unchange.

Model Select code Option code
KS402-75G-5

1 Stage size

75G	Φ75mm
100C	Φ100mm
180C	Φ180mm

2 Cable option

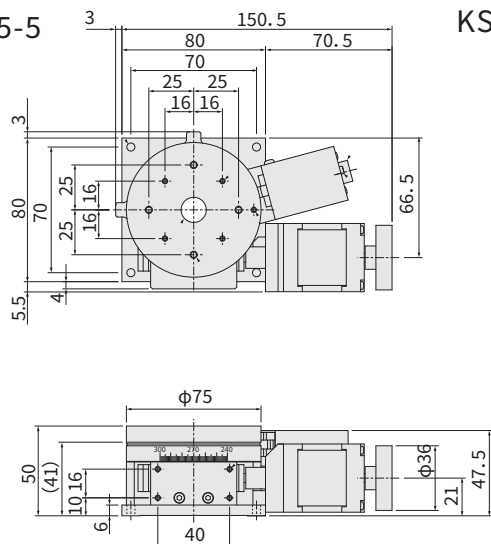
Blank	2m
1	2m One end loose
2	4m
3	4m One end loose
4	Only connector (Cable is not included)
5	Cable is not included (Standard)
6	Robot cable 2m
7	Robot cable 4m
8	Robot cable 4m One end loose
9	Robot cable One end loose

※100/180 Unchange.

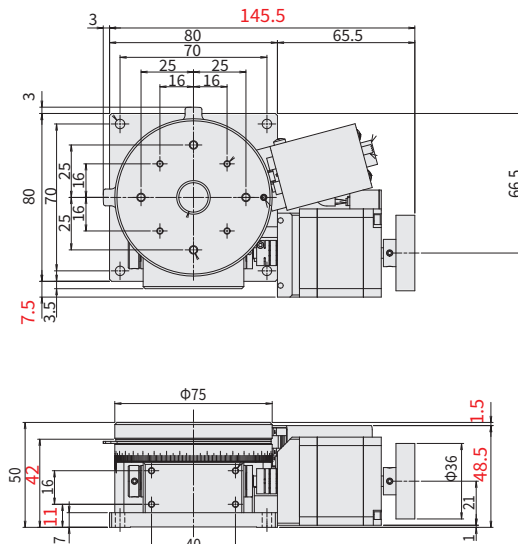
Change of the select code. Add to "G" in to the select code.

③ Dimensions

KS402-75-5



KS402-75-G5



2016-2017 Catalog update

Stepping motor rotation speed-torque characteristic diagram

This is a comparison material of motor torque characteristics.

This product has the same warranty specifications regardless of the motor size.

External weight and dimensions are different.

Please use within the specifications regardless of the difference in torque.

Product model (example)-Mounted motor

①KG05-W070A-5	□38mm	C9582-9015-1
②KG05-W070AL-H5	□28mm	PK525HPMB-C1
③KG05-W070AL-G5	□42mm	PK544PMB-C18

Measurement condition:24V DC power supply motor driver
(Set current: 0.75A/phase Step angle: 0.36°)

