

Motorized Stage

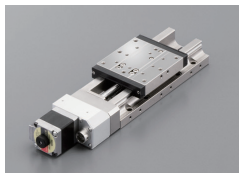
CAVE-X POSITIONER

X-axis Linear Ball Guide:KXL06030M/KXL06050M/KXL06075M

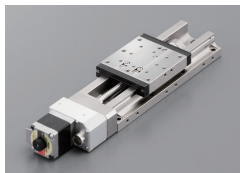
KXL06030M-N



KXL06050M-N



KXL06075M-N



KXL06030M-C



KXL06050M-C



KXL06075M-C



■ Clean grease is applied to the drive parts of the KXL series.

RoHS

Freely
customize
the motor

KXL 06 030 M- - -

1 2 3 4 5 5 6 7 7

● Cables, Positioning pin P. 1-207 ~
● Electrical specification P.1- KXL-043~

1 Travel distance

030	30mm
050	50mm
075	75mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

1	1mm
2	2mm

5 Motor option

Code	Specification
C	Standard
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T, 2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

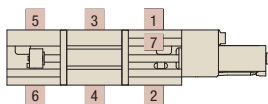
Code	Specification
MA	With electromagnetic brake(□42_100V)
MB	With electromagnetic brake(□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

※ See page, ● P.1-KXL-043~ for details of origin sensor option.

Origin sensor option (Please select one location)



7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	4 Only connector (Cable is not included) —	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

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).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank	3	5	3A			5A		
Cable	Motor	MA • MB/PA • ZA/UA			MA • MB	PA • ZA	UA	MA • MB	PA • ZA	UA
	Sensor	2m	3m	5m	3m			5m		
	Motor	None			3m			5m		
	Electromagnetic brake				3m	—	—	5m	—	—
Driver (Amplifier)	Encoder	None			—	—	3m	—	—	5m
					Available					

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
001

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
002

SPEC

Model	Uncovered	KXL06030M-N1-C	KXL06030M-N2-C	KXL06050M-N1-C	KXL06050M-N2-C	KXL06075M-N1-C	KXL06075M-N2-C	
	Covered	KXL06030M-C1-C	KXL06030M-C2-C	KXL06050M-C1-C	KXL06050M-C2-C	KXL06075M-C1-C	KXL06075M-C2-C	
Mechanical specification	Travel distance	30mm		50mm		75mm		
	Stage table size	60×60mm						
	Feed screw (Ball screw)	φ8 Lead 1	φ8 Lead 2	φ8 Lead 1	φ8 Lead 2	φ8 Lead 1	φ8 Lead 2	
	Guide	Linear Ball Guide						
	Main materials-Finishing	Stainless—Electroless nickel plating						
	Weight	Uncovered	1.27kg		1.37kg		1.53kg	
		Covered	1.33kg		1.43kg		1.59kg	
Accuracy specification	Resolution/Pulse	Full/Half	2μm/1μm	4μm/2μm	2μm/1μm	4μm/2μm	2μm/1μm	4μm/2μm
		Micro step	0.1μm(1/20 On resolution)	0.2μm(1/20 On resolution)	0.1μm(1/20 On resolution)	0.2μm(1/20 On resolution)	0.1μm(1/20 On resolution)	0.2μm(1/20 On resolution)
	MAX speed		30mm/sec	35mm/sec	30mm/sec	35mm/sec	30mm/sec	35mm/sec
	Uni-directional positioning accuracy		5μm				7μm	
	Repeatability positioning accuracy		±0.5μm					
	Load capacity		12kgf【117.6N】					
	Moment stiffness		Pitch 0.05/yaw 0.05/roll 0.05【°/N・cm】					
	Lost motion		1μm					
	Backlash		1μm					
	Straightness		3μm					
	Parallelism		15μm					
	Motion parallelism		10μm					
	Pitching/Yawing		20″/15″					
Sensor	Limit sensor		Available					
	Origin sensor		— *Can be installed with origin sensor option					
	Slit origin sensor		—					
Provided screw (Hexagon-headed bolt)			8 of M4—14					

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			C	F	G	T
Feature			Standard	High-torque	High resolution	—
Type			5 phase stepping motor (0.75A/Phase)			2 phase stepping motor (0.67A/Phase)
Motor model* 1			C005C-90215P-1	PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.72°	0.36°	1.8°
Resolution	Read 1mm	Full/Half	2µm/1µm		1µm/0.5µm	5µm/2.5µm
		Micro step (1/20 On resolution)	0.1µm		0.05µm	—
	Read 2mm	Full/Half	4µm/2µm		2µm/1µm	10µm/5µm
		Micro step (1/20 On resolution)	0.2µm		0.1µm	—
MAX speed	Lead 1mm		30mm/sec	35mm/sec	25mm/sec	25mm/sec
	Read 2mm		35mm/sec	45mm/sec	30mm/sec	40mm/sec
Weight	KXL06030M-N		1.27kg	1.36kg	1.27kg	1.27kg
	KXL06030M-C		1.33kg	1.42kg	1.33kg	1.33kg
	KXL06050M-N		1.37kg	1.46kg	1.37kg	1.37kg
	KXL06050M-C		1.43kg	1.52kg	1.43kg	1.43kg
	KXL06075M-N		1.53kg	1.62kg	1.53kg	1.53kg
	KXL06075M-C		1.59kg	1.68kg	1.59kg	1.59kg
Motor code			MA • MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* 1			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Resolution	Read 1mm	Full/Half	2µm/1µm	1µm(Set to 1000P/R)	1µm(Set to 1000P/R)	22 Bit encoder (4194304P/R)※2,3
		Micro step (1/20 On resolution)	0.1µm			
	Read 2mm	Full/Half	4µm/2µm	2µm(Set to 1000P/R)	2µm(Set to 1000P/R)	
		Micro step (1/20 On resolution)	0.2µm			
MAX speed	Lead 1mm		25mm/sec	40mm/sec	40mm/sec	50mm/sec
	Read 2mm		40mm/sec	80mm/sec	80mm/sec	100mm/sec
Weight	KXL06030M-N		1.71kg	1.32	1.32kg	1.54kg
	KXL06030M-C		1.77kg	1.38	1.38kg	1.60kg
	KXL06050M-N		1.81kg	1.42	1.42kg	1.64kg
	KXL06050M-C		1.87kg	1.48	1.48kg	1.70kg
	KXL06075M-N		1.97kg	1.58	1.58kg	1.80kg
	KXL06075M-C		2.03kg	1.64	1.64kg	1.86kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.03kg, [7]+0.01kg.

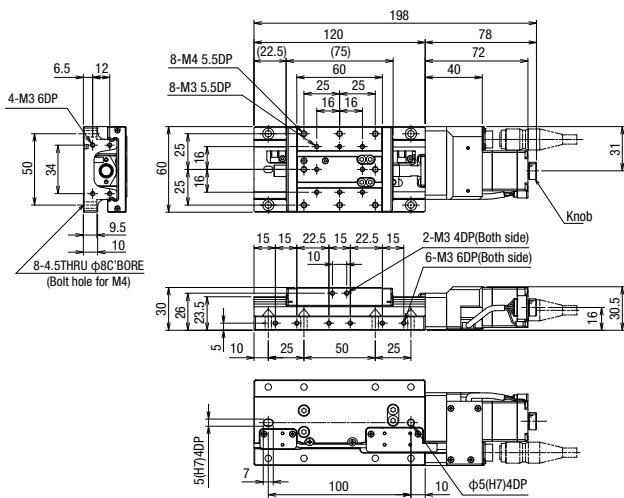
Motorized Stage

CAVE-X POSITIONER

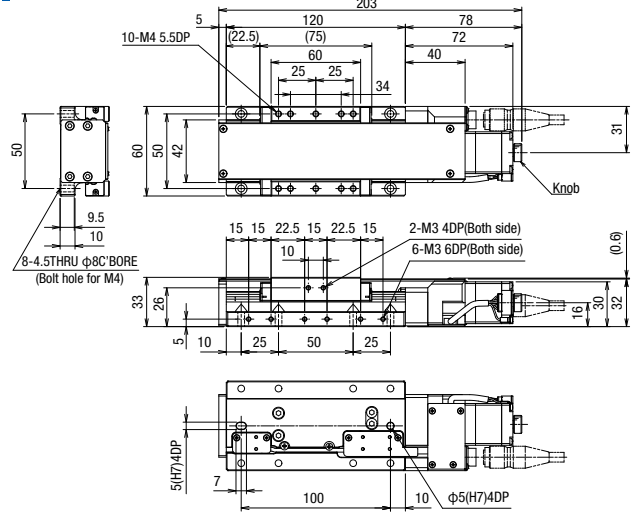
X-axis Linear Ball Guide: KXL06030/KXL06050/KXL06075

Dimensions

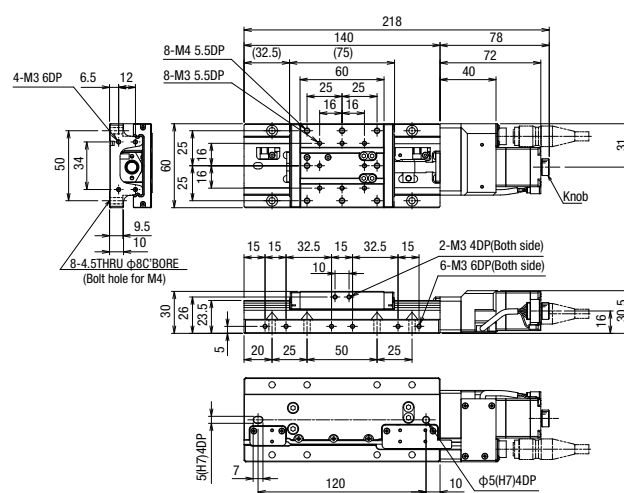
KXL06030M-N1-C(KXL06030M-N2-C)



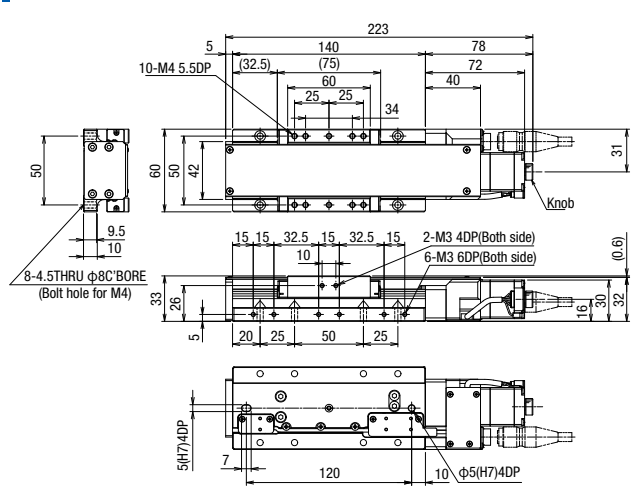
KXL06030M-C1-C(KXL06030M-C2-C)



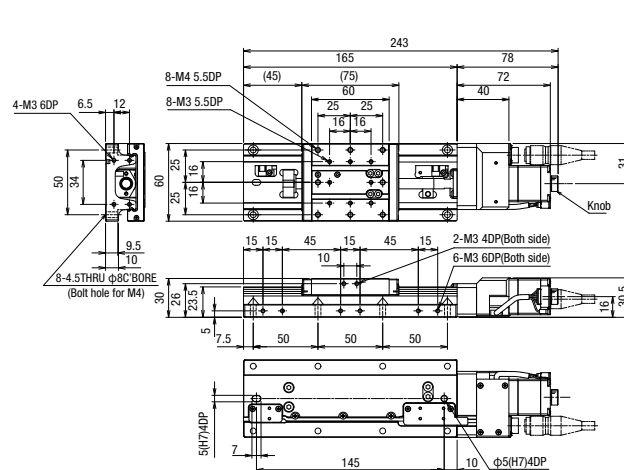
KXL06050M-N1-C(KXL06050M-N2-C)



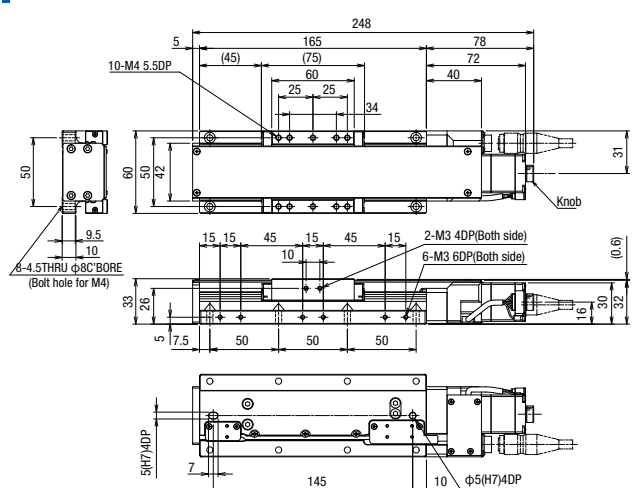
KXL06050M-C1-C(KXL06050M-C2-C)



KXL06075M-N1-C(KXL06075M-N2-C)



KXL06075M-C1-C(KXL06075M-C2-C)



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X
Linear ball

Cross Roller

Slide Guide

40

50

60

70

80

100

120

Other

1-KXL
003

PART
COMMUNITYCAD
DATA

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
004

Dimensions

C Standard

Motor model C005C-90215P-1

F High-torque

Motor model PK525HPB-C1

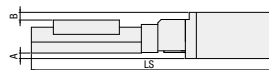
G High resolution

Motor model PK523HPMB-C1

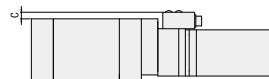
T 2 phase motor

Motor model SJA28N32-0674B-01

Side view



Top view



Uncoverd

Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque + High-resolution) Common	C (Standard)	F (High-torque)	G (High-resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N-□-C,F,G,T	□ 28	—	0.5	—	198
KXL06050M-N-□-C,F,G,T					218
KXL06075M-N-□-C,F,G,T					243

Coverd

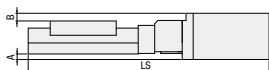
Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque + High-resolution) Common	C (Standard)	F (High-torque)	G (High-resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C-□-C,F,G,T	□ 28	—	—	—	203
KXL06050M-C-□-C,F,G,T					223
KXL06075M-C-□-C,F,G,T					248

MA MB With electromagnetic brake

*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncoverd

Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N- MA, MB	□42	5	7	6	245
KXL06050M-N- MA, MB					265
KXL06075M-N- MA, MB					290

Coverd

Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C-□-MA,MB	□42	5	4	6	250
KXL06050M-C-□-MA,MB					270
KXL06075M-C-□-MA,MB					295

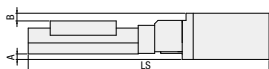
PA αSTEP (AR Series)

Motor model ARM24SAK

ZA αSTEP (AZ Series)

Motor model AZM24AK

Side view



Top view



Uncoverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-N□-PA,ZA	□ 28	—	0.5	6	211	220.5	198
KXL06050M-N□-PA,ZA					231	240.5	218
KXL06075M-N□-PA,ZA					256	265.5	243

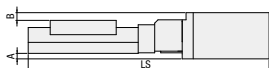
Coverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-C□-PA,ZA	□ 28	—	—	6	216	225.5	203
KXL06050M-C□-PA,ZA					236	245.5	223
KXL06075M-C□-PA,ZA					261	270.5	248

UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncoverd

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N-□-UA	□40	4.7	6.5	6	240.4
KXL06050M-N-□-UA					260.4
KXL06075M-N-□-UA					285.4

Coverd

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C-□-UA	□40	4.7	3.5	6	245.4
KXL06050M-C-□-UA					265.4
KXL06075M-C-□-UA					290.4

Motorized Stage

CAVE-X POSITIONER

X-axis Linear Ball Guide:KXL06030/KXL06050/KXL06075

Motor option

C Standard motor

Motor model
C005C-90215P-1

F High-torque

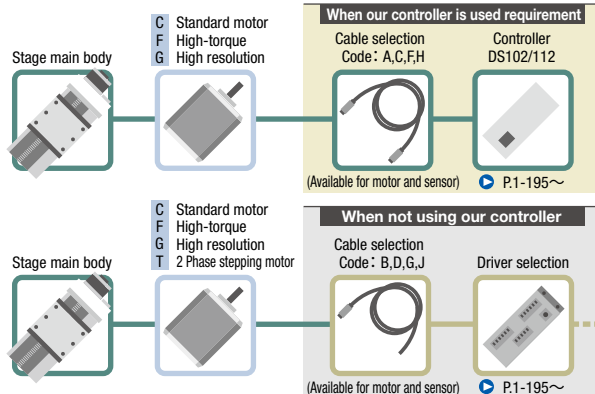
Motor model
PK525HPB-C1

G High resolution

Motor model
PK523HPMB-C1

T 2 Phase stepping motor

Motor model
SJA28N32-0674B-01

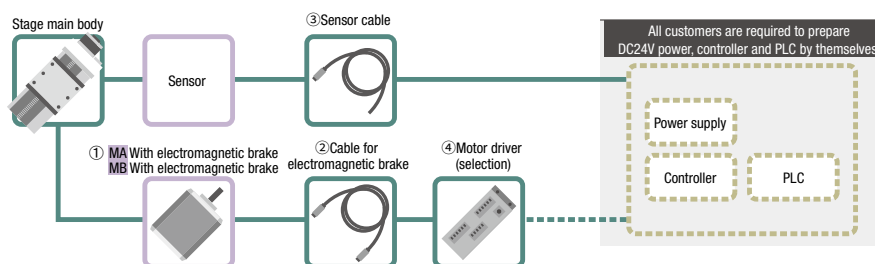


Motor option

MA With electromagnetic brake

Motor model
PKE545MC-A1

*Driver
MA : 100V
MB : 200V



Code	① Motor model	② Electromagnetic Brake Cable set (※)	③ Sensor cable selection	④ Driver selection
MA MB	PKE545MC-A1	3A : CC030VPFB 5A : CC050VPFB Blank : 3・5 : Not included	3A・3 : HR10AP-S-SB-6-3 5A・5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	[MA]3A・5A : RKSD503M-A [MB]3A・5A : RKSD503M-C Blank・3・5 : Not included

※ Motor cable, Electromagnetic Brake Cable.

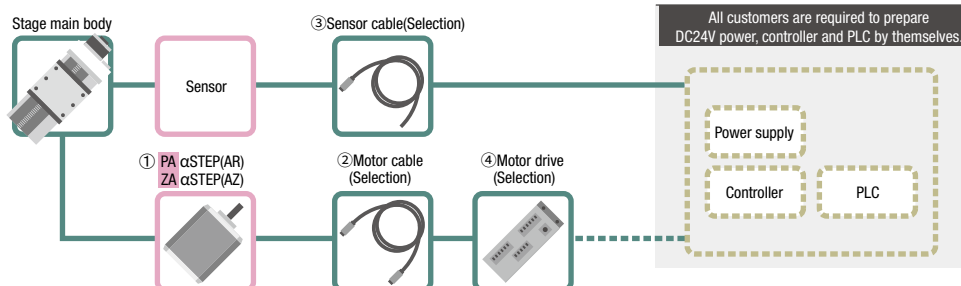
Motor option

PA αSTEP (AR Series)

Motor model
ARM24SAK

ZA αSTEP (AZ Series)

Motor model
AZM24AK



Code	① Motor model	② Motor cable selection	③ Sensor cable selection	④ Driver selection
PA	ARM24SAK	3A : CC030VA2R2 5A : CC050VA2R2 Blank : 3・5 : Not included	3A・3 : HR10AP-S-SB-6-3 5A・5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	3A・5A : ARD-K Blank・3・5 : Not included
ZA	AZM24AK	3A : CC030VZ2R2 5A : CC050VZ2R2 Blank : 3・5 : Not included		3A・5A : AZD-K Blank・3・5 : Not included

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

40

50

60

70

80

100

120

Other

1-KXL
005

New

Motorized Stage

X

XY

Z

**Horizontal
Z**

XYZ

Goniometer

Rotary

Unit

Controller

**Linear
Ball**

**CAVE-X
Linear ball**

**Cross
Roller**

**Slide
Guide**

☐ 40

☐ 50

☒ 60

☐ 70

☐ 80

☐ 100

☐ 120

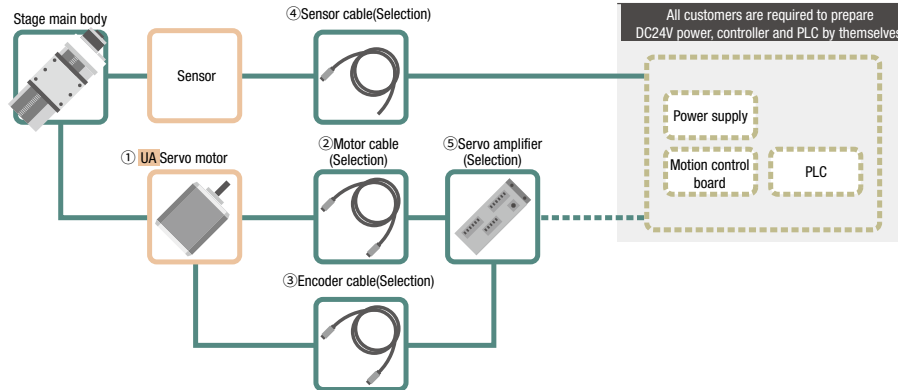
Other

1-KXL

006

Motor option

UA Servo motor
Motor model
 HG-KR053



Code	① Motor model	② Motor cable selection	③ Encoder cable selection	④ Sensor cable selection	⑤ servo amplifier selection
UA	HG-KR053	3A : SVPM-J3HF1-B-3-02S 5A : SVPM-J3HF1-B-5-02S Blank • 3 • 5 : Not included	3A : SVEM-J3HF1-B-3 5A : SVEM-J3HF1-B-5 Blank • 3 • 5 : Not included	3A • 3 : HR10AP-S-SB-6-3 5A • 5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	3A • 5A : MR-J4-10A Blank • 3 • 5 : Not included

Motorized Stage

CAVE-X POSITIONER

X-axis Linear Ball Guide:KXL06100M/KXL06150M

KXL06100M-N



KXL06150M-N



KXL06100M-C



KXL06150M-C



RoHS

Freely
customize
the motor

KXL 06 100 M- 2 - -

1

2

3

4

5

5

6

7

7

●Cables, Positioning pin P. 1-207 ~
●Electrical specification P.1- KXL-043~

1 Travel distance

100	100mm
150	150mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

2	2mm
---	-----

5 Motor option

Code	Specification
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T,2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

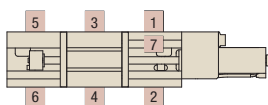
Code	Specification
MA	With electromagnetic brake(□42_100V)
MB	With electromagnetic brake(□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

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

Origin sensor option (Select one location)



7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	4 Only connector (Cable is not included) —	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

※ 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).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank	3	5	3A			5A		
Cable	Motor	MA • MB/PA • ZA/UA			MA • MB	PA • ZA	UA	MA • MB	PA • ZA	UA
	Sensor	2m	3m	5m	3m			5m		
	Motor				3m			5m		
	Electromagnetic brake	None			3m	—	—	5m	—	—
	Encoder				—	—	3m	—	—	5m
Driver (Amplifier)		None			Available					

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
007

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
008

SPEC

Model	Uncovered	KXL06100M-N2-F	KXL06150M-N2-F
	Covered	KXL06100M-C2-F	KXL06150M-C2-F
Mechanical specification	Travel distance	100mm	150mm
	Stage table size	60×60mm	
	Feed screw (Ball screw)	φ8 Lead 2	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Stainless—Electroless nickel plating	
Accuracy specification	Weight	Uncovered 1.79kg	2.09kg
		Covered 1.85kg	2.15kg
	Resolution/Pulse	4μm/2μm	
		0.2μm	
	MAX speed	45mm/sec	
Sensor	Uni-directional positioning accuracy	10μm	15μm
	Repeatability positioning accuracy	±0.5μm	
	Load capacity	12kgf [117.6N]	
	Moment stiffness	Pitch 0.05/yaw 0.05/roll 0.05 ["/N · cm]	
	Lost motion	1μm	
	Backlash	1μm	
	Straightness	5μm	
	Parallelism	15μm	
	Motion parallelism	10μm	15μm
	Pitching/Yawing	25"/20"	
Sensor	Limit sensor	Available	
	Origin sensor	— *Can be installed with origin sensor option	
	Slit origin sensor	—	
	Provided screw (Hexagon-headed bolt)	8 of M4-14	14 of M4-14

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			F	G	T
Feature			High-torque	High resolution	—
Type			5 phase stepping motor (0.75A/Phase)		2 phase stepping motor (0.67A/Phase)
Motor model* 1			PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.36°	1.8°
Resolution	Lead 2mm	Full/Half	4μm/2μm	2μm/1μm	10μm/5μm
		Micro step (1/20 On resolution)	0.2μm	0.1μm	—
MAX speed			45mm/sec	30mm/sec	40mm/sec
Weight ^{4,5}	KXL06100M-N		1.79kg	1.70kg	1.70kg
	KXL06100M-C		1.85kg	1.76kg	1.76kg
	KXL06150M-N		2.09kg	2.00kg	2.00kg
	KXL06150M-C		2.15kg	2.06kg	2.06kg

Motor code			MA・MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* ¹			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 2mm	Full/Half	4μm/2μm	2μm(Set to 1000P/R)	2μm(Set to 1000P/R)	22 Bit encoder (4194304P/R)※²,³
		Micro step (1/20 On resolution)	0.2μm			
MAX speed			40mm/sec	80mm/sec	80mm/sec	100mm/sec
Weight⁴,⁵	KXL06100M-N		2.14kg	1.75kg	1.75kg	1.97kg
	KXL06100M-C		2.20kg	1.81kg	1.81kg	2.03kg
	KXL06150M-N		2.44kg	2.05kg	2.05kg	2.27kg
	KXL06150M-C		2.50kg	2.11kg	2.11kg	2.33kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.03kg, [7]+0.01kg.

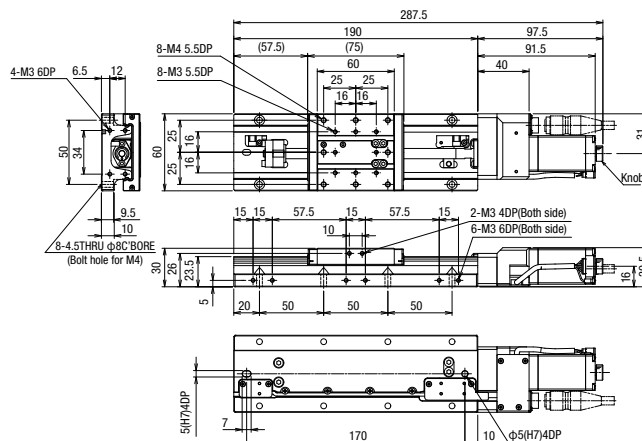
Motorized Stage

CAVE-X POSITIONER

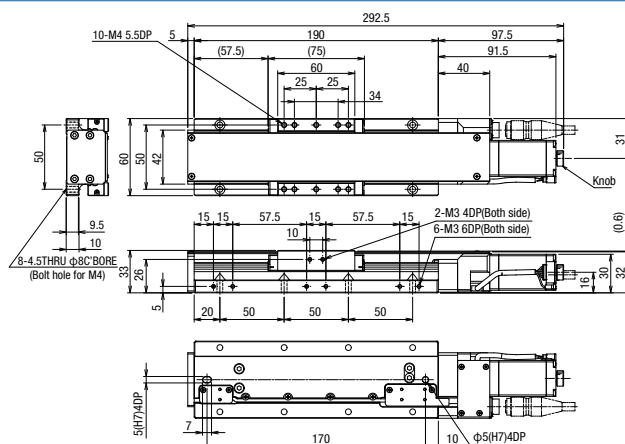
X-axis Linear Ball Guide: KXL06100/KXL06150

Dimensions

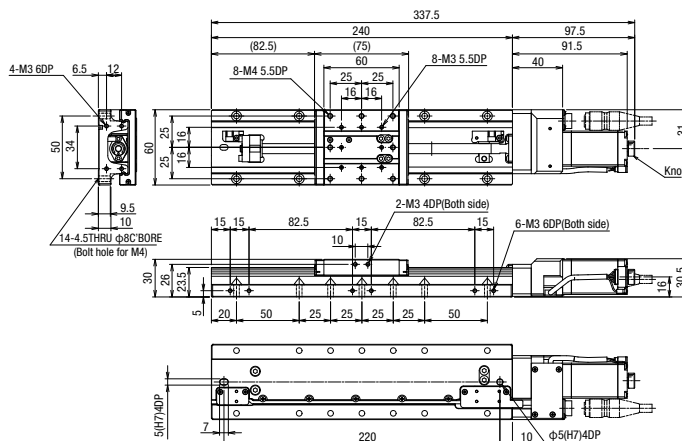
KXL06100M-N2-F



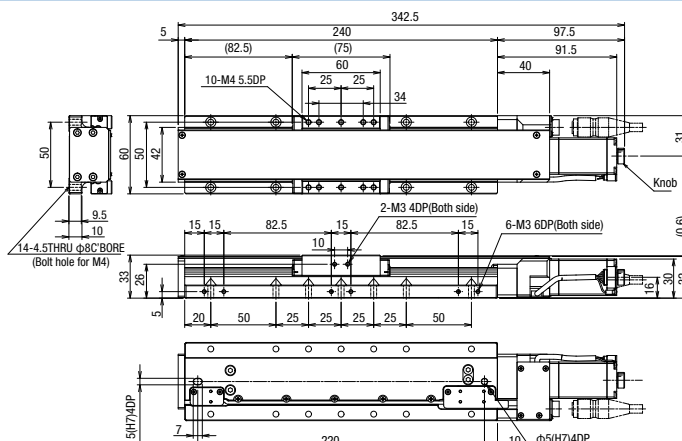
KXL06100M-C2-F



KXL06150M-N2-F



KXL06150M-C2-F



Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

40

50

60

70

80

100

120

Other

1-KXL
009

PART
COMMUNITYCAD
DATA

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□ 40

□ 50

□ 60

□ 70

□ 80

□ 100

□ 120

Other

1-KXL
010

Dimensions

F High-torque

Motor model PK525HPB-C1

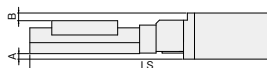
G High resolution

Motor model PK523HPMB-C1

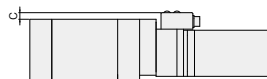
T 2 phase motor

Motor model SJA28N32-0674B-01

側面図



上面図



Uncoverd

Model	F (High-torque)/G (High-resolution)/T (2-phase) Common				F (High-torque)	G (High resolution)	T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06100M-N2-F,G,T	□ 28	—	0.5	—	288	268	268
KXL06150M-N2-F,G,T					338	318	318

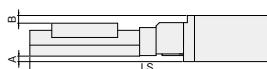
Coverd

Model	F (High-torque)/G (High-resolution)/T (2-phase) Common				F (High-torque)	G (High resolution)	T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06100M-C2-F,G,T	□ 28	—	—	—	293	273	273
KXL06150M-C2-F,G,T					343	323	323

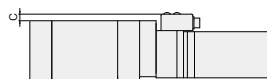
MA MB With electromagnetic brake *Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

側面図



上面図



Uncoverd

Model	(With electromagnetic brake) common				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06100M-N2-MA/	□ 42	5	7	6	315	288
KXL06150M-N2-MA,MB					365	338

Coverd

Model	(With electromagnetic brake) common				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06100M-C2-MA,MB	□ 42	5	4	6	320	293
KXL06150M-C2-MA,MB					370	343

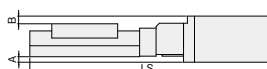
PA αSTEP (AR Series)

Motor model ARM24SAK

ZA αSTEP (AZ Series)

Motor model AZM24AK

側面図



上面図



Uncoverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06100M-N2-PA,ZA	□ 28	—	0.5	6	281	290.5	288
KXL06150M-N2-PA,ZA					331	340.5	338

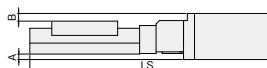
Coverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06100M-C2-PA,ZA	□ 28	—	—	6	286	295.5	293
KXL06150M-C2-PA,ZA					336	345.5	343

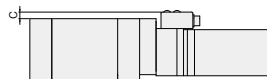
UA Servo motor (J4 [Mitsubishi Electric corporation])

Motor model HG-KR053

側面図



上面図



Uncoverd

Model	UA (AC servo motor)				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06100M-N2-UA	□ 40	4.7	6.5	6	310.4	288
KXL06150M-N2-UA					360.4	338

Coverd

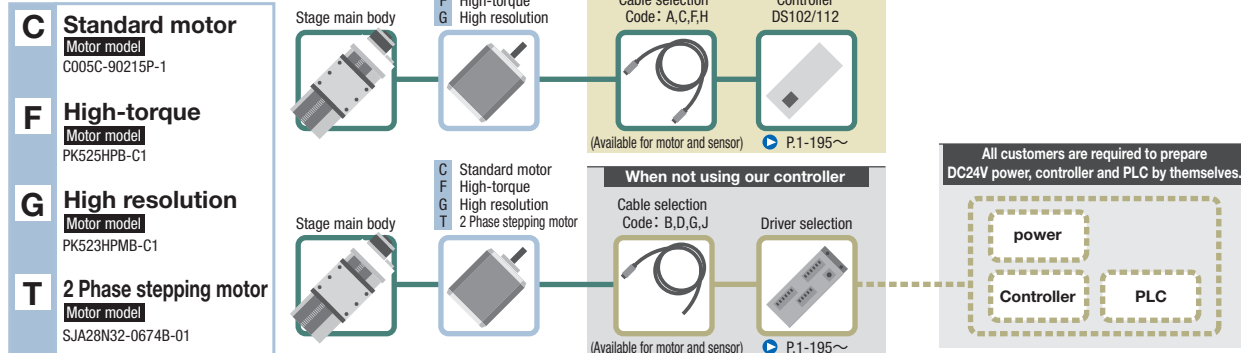
Model	UA (AC servo motor)				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06100M-C2-UA	□ 40	4.7	3.5	6	315.4	293
KXL06150M-C2-UA					365.4	343

Motorized Stage

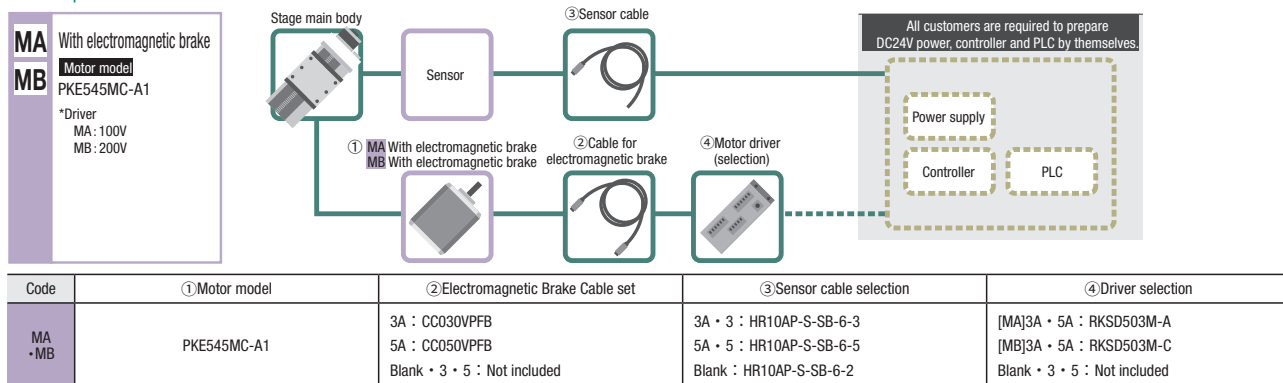
CAVE-X POSITIONER

X-axis Linear Ball Guide : KXL06100/KXL06150

Motor option

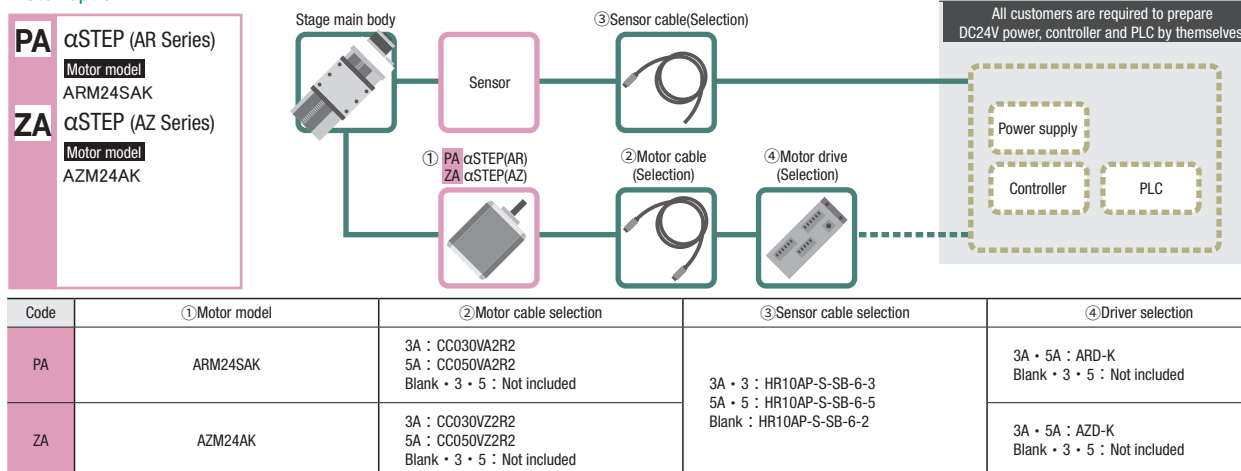


Motor option



※ Motor cable • Electromagnetic Brake Cable

Motor option



New

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

40

50

60

70

80

100

120

Other

1-KXL

011

New

Motorized Stage

X

XY

Z

**Horizontal
Z**

XYZ

Goniometer

Rotary

Unit

Controller

**Linear
Ball**

**CAVE-X
Linear ball**

**Cross
Roller**

**Slide
Guide**

☐ 40

☐ 50

☒ 60

☐ 70

☐ 80

☐ 100

☐ 120

Other

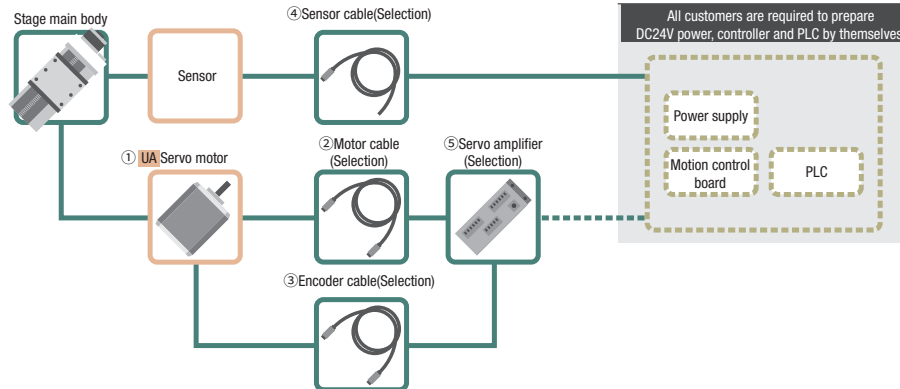
1-KXL

012

Motor option

UA

Servo motor
Motor model
HG-KR053



Code	①Motor model	②Motor cable selection	③Encoder cable selection	④Sensor cable selection	⑤servo amplifier selection
UA	HG-KR053	3A : SVPM-J3HF1-B-3-02S 5A : SVPM-J3HF1-B-5-02S Blank • 3 • 5 : Not included	3A : SVEM-J3HF1-B-3 5A : SVEM-J3HF1-B-5 Blank • 3 • 5 : Not included	3A • 3 : HR10AP-S-SB-6-3 5A • 5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	3A • 5A : MR-J4-10A Blank • 3 • 5 : Not included

X-axis Linear Ball Guide : KXL06200M/KXL06300M

KXL06200M-N



KXL06300M-N



KXL06200M-C



KXL06300M-C



RoHS

Freely
customize
the motor

KXL 06 200 M- 2 - -

1

2

3

4

5

5

6

7

7

Cables, Positioning pin P. 1-207 ~
 Electrical specification P.1- KXL-043~

1 Travel distance

200	200mm
300	300mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

2	2mm
---	-----

5 Motor option

Code	Specification
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T,2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

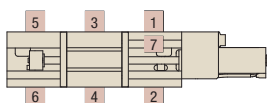
Code	Specification
MA	With electromagnetic brake(□42_100V)
MB	With electromagnetic brake(□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

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

Origin sensor option (Select one location.)

**7** Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	4 Only connector (Cable is not included) —	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

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).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list **③** Motor **④** Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank	3	5	3A	5A
Motor		MA • MB/PA • ZA/UA	3m	5m	3m	5m
Cable	Sensor	2m	3m	5m	3m	5m
	Motor				3m	5m
	Electromagnetic brake				3m	5m
	Encoder				3m	5m
Driver (Amplifier)		None			Available	

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other1-KXL
014

SPEC

Model		Uncovered		Covered	
		KXL06200M-N2-F		KXL06300M-N2-F	
		KXL06200M-C2-F		KXL06300M-C2-F	
Mechanical specification	Travel distance	200mm		300mm	
	Stage table size	60×60mm			
	Feed screw (Ball screw)	φ8 Lead 2			
	Guide	Linear Ball Guide			
	Main materials-Finishing	Stainless—Electroless nickel plating			
Accuracy specification	Weight	Uncovered		2.41kg	
		Covered		2.47kg	
	Resolution/Pulse	Full/Half		4μm/2μm	
		Micro step		0.2μm	
	MAX speed	45mm/sec			
Sensor	Uni-directional positioning accuracy	15μm		25μm	
	Repeatability positioning accuracy	±0.5μm			
	Load capacity	12kgf [117.6N]			
	Moment stiffness	Pitch 0.05/yaw 0.05/roll 0.05 ["/N • cm]			
	Lost motion	1μm			
	Backlash	1μm			
	Straightness	7μm			
	Parallelism	15μm			
	Motion parallelism	20μm		25μm	
	Pitching/Yawing	30"/20"		35"/20"	
Sensor	Limit sensor	Available			
	Origin sensor	— *Can be installed with origin sensor option			
	Slit origin sensor	—			
	Provided screw (Hexagon-headed bolt)	12 of M4—14		16 of M4—14	

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			F	G	T
Feature			High-torque	High resolution	—
Type			5 phase stepping motor (0.75A/Phase)		2 phase stepping motor (0.67A/Phase)
Motor model* ¹			PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.36°	1.8°
Resolution	Lead 2mm	Full/Half	4µm/2µm	2µm/1µm	10µm/5µm
		Micro step (1/20 On resolution)	0.2µm	0.1µm	—
MAX speed		Lead 2mm	45mm/sec	30mm/sec	40mm/sec
Weight ^{4,5}	KXL06200M-N		2.41kg	2.32kg	2.32kg
	KXL06200M-C		2.47kg	2.38kg	2.38kg
	KXL06300M-N		3.01kg	2.92kg	2.92kg
	KXL06300M-C		3.11kg	3.02kg	3.02kg

Motor code			MA • MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* ¹			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 2mm	Full/Half	4µm/2µm	2µm(Set to 1000P/R)	2µm(Set to 1000P/R)	22 Bit encoder (4194304P/R)※ ^{2,3}
		Micro step (1/20 On resolution)	0.2µm			
MAX speed		Lead 2mm	40mm/sec	80mm/sec	80mm/sec	100mm/sec
Weight ^{4,5}	KXL06200M-N		2.76kg	2.37kg	2.37kg	2.59kg
	KXL06200M-C		2.82kg	2.43kg	2.43kg	2.65kg
	KXL06300M-N		3.36kg	2.97kg	2.97kg	3.19kg
	KXL06300M-C		3.46kg	3.07kg	3.07kg	3.29kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

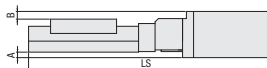
*5 Origin sensor option [1~6]+0.03kg, [7]+0.01kg.

Dimensions

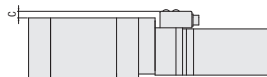
F High-torque

Motor model PK525HPB-C1

Side view



Top view



G High resolution

Motor model PK523HPMB-C1

T 2 phase motor

Motor model SJA28N32-0674B-01

Uncoverd

Model	F(High-torque)/G(High resolution)/T(2-phase)共通				F (High-torque)/G(High resolution)		T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06200M-N2-F,G,T	□ 28	—	0.5	—	388	368	368
KXL06300M-N2-F,G,T					488	468	468

Coverd

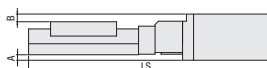
Model	F(High-torque)/G(High resolution)/T(2-phase) Common				F (High-torque)/G(High resolution)		T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06200M-C2-F,G,T	□ 28	—	—	—	393	373	373
KXL06300M-C2-F,G,T					493	473	473

MA MB With electromagnetic brake

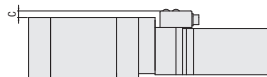
*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncoverd

Model	MA,MB(With electromagnetic brake) common				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-N2-MA,MB	□42	5	7	6	415	388
KXL06300M-N2-MA,MB					515	488

Coverd

Model	MA,MB(With electromagnetic brake) common				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-C2-MA,MB	□42	5	4	6	420	393
KXL06300M-C2-MA,MB					520	493

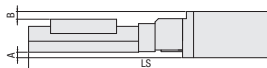
PA αSTEP (AR Series)

Motor model ARM24SAK

ZA αSTEP (AZ Series)

Motor model AZM24AK

Side view



Top view



Uncoverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06200M-N2-PA,ZA	□ 28	—	0.5	6	381	390.5	388
KXL06300M-N2-PA,ZA					481	490.5	488

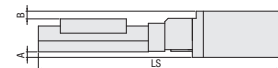
Coverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06200M-C2-PA,ZA	□ 28	—	—	6	386	395.5	393
KXL06300M-C2-PA,ZA					486	495.5	493

UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncoverd

Model	UA (AC servo motor)				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-N2-UA	□40	4.7	6.5	6	410.4	388
KXL06300M-N2-UA					510.4	488

Coverd

Model	UA (AC servo motor)				F (High-torque)	
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-C2-UA	□40	4.7	3.5	6	415.4	393
KXL06300M-C2-UA					515.4	493

Motorized Stage

CAVE-X POSITIONER

X-axis Linear Ball Guide : KXL06200/KXL06300

Motor option

C Standard motor

Motor model
C005C-90215P-1

F High-torque

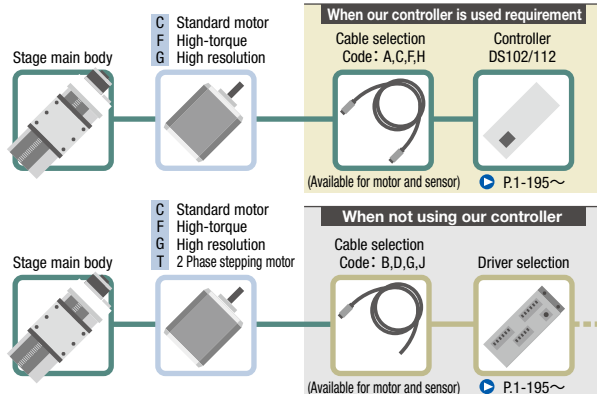
Motor model
PK525HPB-C1

G High resolution

Motor model
PK523HPMB-C1

T 2 Phase stepping motor

Motor model
SJA28N32-0674B-01

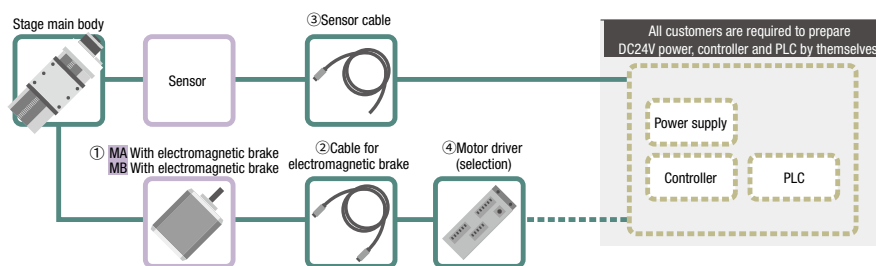


Motor option

MA With electromagnetic brake

Motor model
PKE545MC-A1

*Driver
MA : 100V
MB : 200V



Code	①Motor model	②Electromagnetic Brake Cable set ^(※)	③Sensor cable selection	④Driver selection
MA • MB	PKE545MC-A1	3A : CC030VPFB 5A : CC050VPFB Blank • 3 • 5 : Not included	3A • 3 : HR10AP-S-SB-6-3 5A • 5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	[MA]3A • 5A : RKSD503M-A [MB]3A • 5A : RKSD503M-C Blank • 3 • 5 : Not included

※ Motor cableElectromagnetic Brake Cable

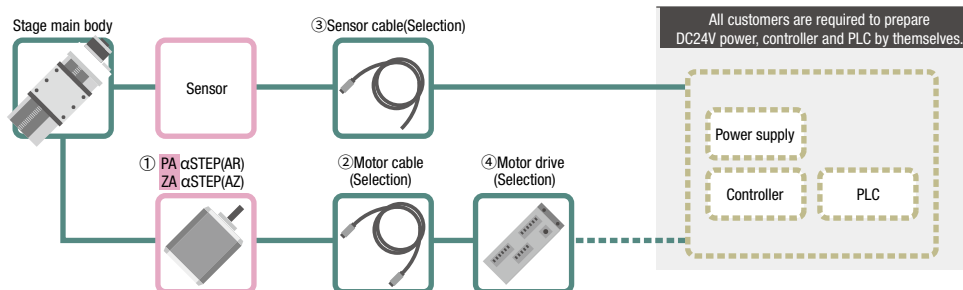
Motor option

PA αSTEP (AR Series)

Motor model
ARM24SAK

ZA αSTEP (AZ Series)

Motor model
AZM24AK



Code	①Motor model	②Motor cable selection	③Sensor cable selection	④Driver selection
PA	ARM24SAK	3A : CC030VA2R2 5A : CC050VA2R2 Blank • 3 • 5 : Not included	3A • 3 : HR10AP-S-SB-6-3 5A • 5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	3A • 5A : ARD-K Blank • 3 • 5 : Not included
ZA	AZM24AK	3A : CC030VZ2R2 5A : CC050VZ2R2 Blank • 3 • 5 : Not included		3A • 5A : AZD-K Blank • 3 • 5 : Not included

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

40

50

60

70

80

100

120

Other

1-KXL

017

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

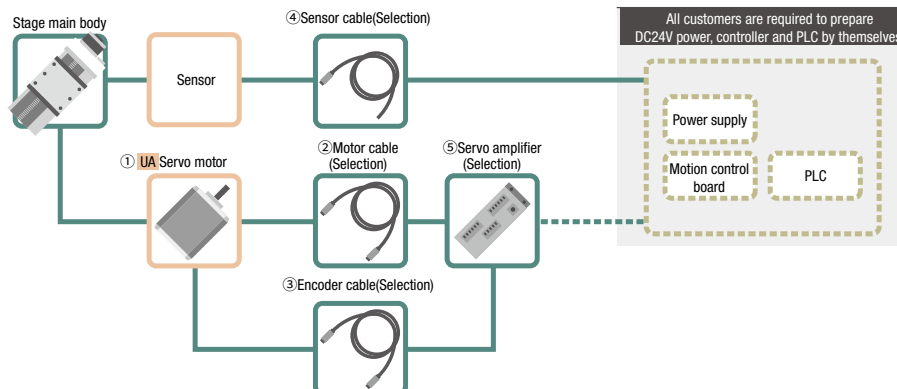
Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other

1-KXL

018

Motor option

UA Servo motor
Motor model
 HG-KR053



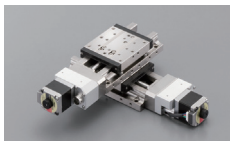
Code	①Motor model	②Motor cable selection	③Encoder cable 3m	④Sensor cable selection	⑤servo amplifier
UA	HG-KR053	3A : SVPM-J3HF1-B-3-02S 5A : SVPM-J3HF1-B-5-02S Blank • 3 • 5 : Not included	3A : SVEM-J3HF1-B-3 5A : SVEM-J3HF1-B-5 Blank • 3 • 5 : Not included	3A • 3 : HR10AP-S-SB-6-3 5A • 5 : HR10AP-S-SB-6-5 Blank : HR10AP-S-SB-6-2	3A • 5A : MR-J4-10A Blank • 3 • 5 : Not included

Motorized Stage

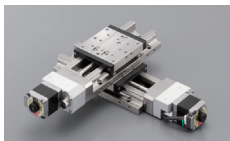
CAVE-X POSITIONER

XY-axis Linear Ball Guide : KYL06050M/KYL06075M

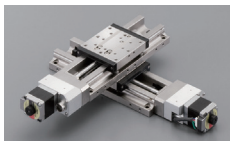
KYL06030M-N



KYL06050M-N



KYL06075M-N



KYL06030M-C



KYL06050M-C



KYL06075M-C



RoHS

KYL 06 030 M- - -

1 2 3 4 5 5 6 7 7

◀ Cables, Positioning pin P. 1-207 ~
▶ Electrical specification P.1- KXL-043 ~

1 Travel distance

030	30mm
050	50mm
075	75mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

1	1mm
2	2mm

5 Motor option

Code	Specification
C	Standard
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T, 2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

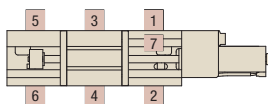
Code	Specification
MA	With electromagnetic brake (□42_100V)
MB	With electromagnetic brake (□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor (J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

※See page ▶ P.1-037 ~ for details of motor option.

■ Origin sensor option (Select one location.)



7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	4 Only connector (Cable is not included) —	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

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

※Please select "A, C, F and H" when connect with stepping motor controller (DS102/112).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank			3			5			3A			5A		
		MA • MB/PA • ZA/UA			2m			3m			3m			5m		
Cable	Motor	2m			3m			5m			3m			5m		
	Sensor	2m			3m			5m			3m			5m		
	Electromagnetic brake	None			—			—			—			—		
	Encoder	None			—			—			3m			—		
Driver (Amplifier)		None			—			—			Available			—		

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
019

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL

020

SPEC

Model	Uncovered	KYL06030M-N1-C	KYL06030M-N2-C	KYL06050M-N1-C	KYL06050M-N2-C	KYL06075M-N1-C	KYL06075M-N2-C	
	Covered	KYL06030M-C1-C	KYL06030M-C2-C	KYL06050M-C1-C	KYL06050M-C2-C	KYL06075M-C1-C	KYL06075M-C2-C	
Mechanical specification	Travel distance	30mm		50mm		75mm		
	Stage table size	60×60mm						
	Feed screw (Ball screw)	φ8 Lead 1	φ8 Lead 2	φ8 Lead 1	φ8 Lead 2	φ8 Lead 1	φ8 Lead 2	
	Guide	Linear Ball Guide						
	Main materials-Finishing	Stainless—Electroless nickel plating						
	Weight	Uncovered	2.54kg		2.74kg		3.06kg	
		Covered	2.66kg		2.86kg		3.18kg	
Accuracy specification	Resolution/Pulse	Full/Half	2μm/1μm	4μm/2μm	2μm/1μm	4μm/2μm	2μm/1μm	4μm/2μm
		Micro step	0.1μm(1/20 On resolution)	0.2μm(1/20 On resolution)	0.1μm(1/20 On resolution)	0.2μm(1/20 On resolution)	0.1μm(1/20 On resolution)	0.2μm(1/20 On resolution)
	MAX speed		30mm/sec	35mm/sec	30mm/sec	35mm/sec	30mm/sec	35mm/sec
	Load capacity		10kgf [98N]					
	Squareness		15μm/Full stroke		25μm/Full stroke		37.5μm/Full stroke	
Sensor	Limit sensor	Available						
	Origin sensor	— *Can be installed with origin sensor option						
	Slit origin sensor	—						
Provided screw (Hexagon-headed bolt)		8 of M4—14						
Stage accuracy specification	Uni-directional positioning accuracy	5μm				7μm		
	Repeatability positioning accuracy	±0.5μm						
	Lost motion	1μm						
	Backlash	1μm						
	Straightness	3μm						
	Pitching/Yawing	20°/15°						

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			C	F	G	T
Feature			Standard	High-torque	High resolution	—
Type			5 phase stepping motor (0.75A/Phase)			2 phase stepping motor (0.67A/Phase)
Motor model* 1			C005C-90215P-1	PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.72°	0.36°	1.8°
Resolution	Lead 1mm	Full/Half	2μm/1μm		1μm/0.5μm	5μm/2.5μm
		Micro step (1/20 On resolution)	0.1μm		0.05μm	—
	Lead 2mm	Full/Half	4μm/2μm		2μm/1μm	10μm/5μm
		Micro step (1/20 On resolution)	0.2μm		0.1μm	—
MAX speed	Lead 1mm		30mm/sec	35mm/sec	25mm/sec	25mm/sec
	Lead 2mm		35mm/sec	45mm/sec	30mm/sec	40mm/sec
Weight ^{4,5}	KYL06030M-N		2.54	2.72	2.54	2.54
	KYL06030M-C		2.66	2.84	2.66	2.66
	KYL06050M-N		2.74	2.92	2.74	2.74
	KYL06050M-C		2.86	3.04	2.86	2.86
	KYL06075M-N		3.06	3.24	3.06	3.06
	KYL06075M-C		3.18	3.36	3.18	3.18

Motor code			MA • MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* 1			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 1mm	Full/Half	2μm/1μm	1μm(Set to 1000P/R)	1μm(Set to 1000P/R)	22 Bit encoder (4194304P/R)※ ^{2,3}
		Micro step (1/20 On resolution)	0.1μm			
	Lead 2mm	Full/Half	4μm/2μm	2μm(Set to 1000P/R)	2μm(Set to 1000P/R)	
		Micro step (1/20 On resolution)	0.2μm			
MAX speed	Lead 1mm		25mm/sec	40mm/sec	40mm/sec	50mm/sec
	Lead 2mm		40mm/sec	80mm/sec	80mm/sec	100mm/sec
Weight ^{4,5}	KYL06030M-N		3.42	2.64	2.64	3.09
	KYL06030M-C		3.54	2.76	2.76	3.21
	KYL06050M-N		3.62	2.84	2.84	3.29
	KYL06050M-C		3.74	2.96	2.96	3.41
	KYL06075M-N		3.94	3.16	3.16	3.61
	KYL06075M-C		4.06	3.28	3.28	3.73

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.06kg, [7]+0.02kg.

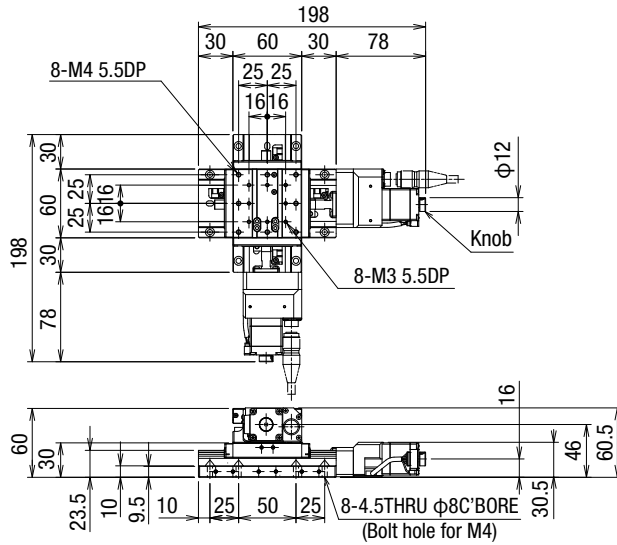
Motorized Stage

CAVE-X POSITIONER

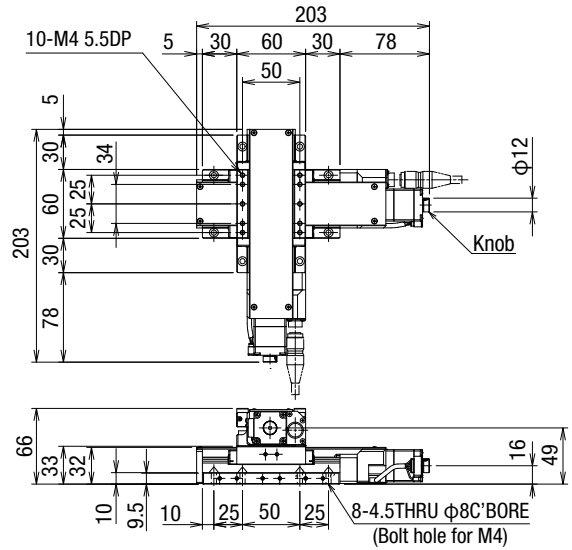
XY-axis Linear Ball Guide : KYL06050/KYL06075

Dimensions

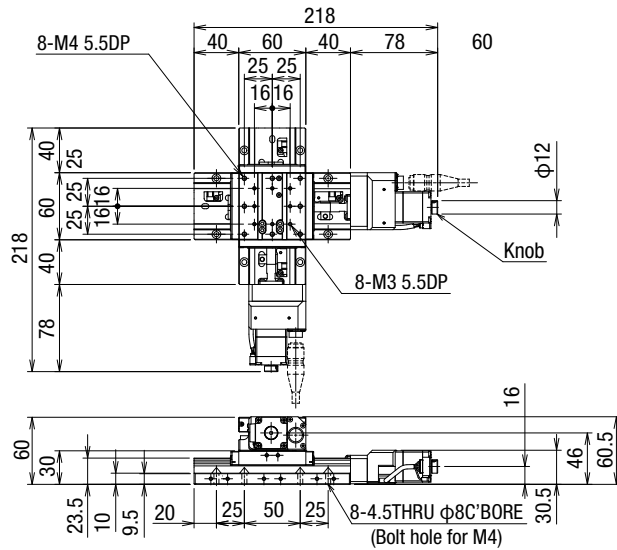
KYL06030M-N1-C (KYL06030M-N2-C)



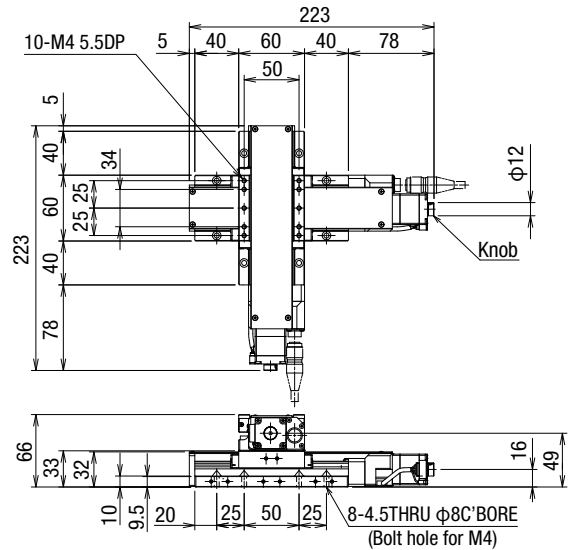
KYL06030M-C1-C (KYL06030M-C2-C)



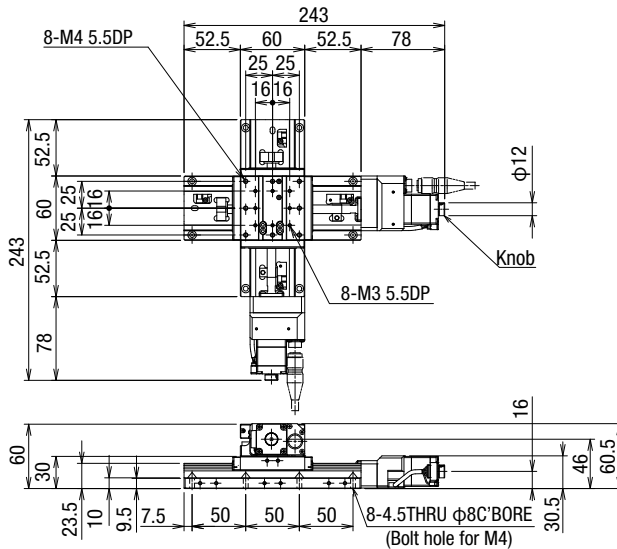
KYL06050M-N1-C (KYL06050M-N2-C)



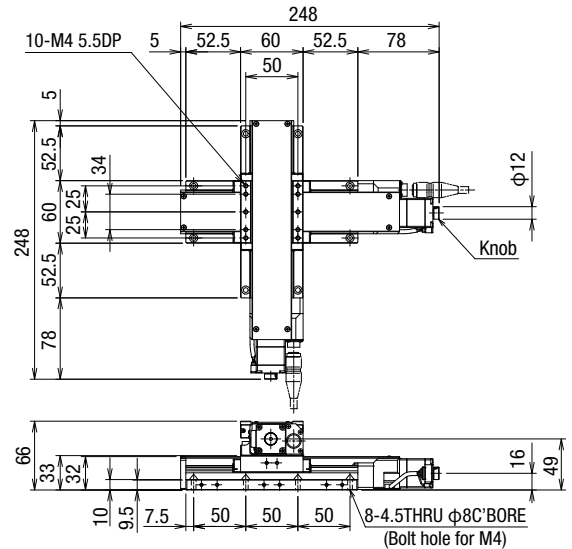
KYL06050M-C1-C (KYL06050M-C2-C)



KYL06075M-N1-C (KYL06075M-N2-C)



KYL06075M-C1-C (KYL06075M-C2-C)



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X
Linear ball

Cross Roller

Slide Guide

40

50

60

70

80

100

120

Other

1-KXL

021

PART
COMMUNITYCAD
DATA

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
022

Dimensions

C Standard

Motor model C005C-90215P-1

F High-torque

Motor model PK525HPB-C1

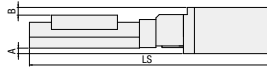
G High resolution

Motor model PK523HPMB-C1

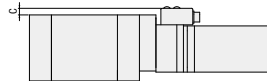
T 2 phase motor

Motor model SJA28N32-0674B-01

Side view



Top view



Uncoverd

Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque + High-resolution) Common	C (Standard)	F (High-torque)	G (High-resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N□-C,F,G,T	□ 28	—	0.5	—	198
KXL06050M-N□-C,F,G,T					218
KXL06075M-N□-C,F,G,T					243

Coverd

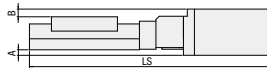
Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque + High-resolution) Common	C (Standard)	F (High-torque)	G (High-resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-C,F,G,T	□ 28	—	—	—	203
KXL06050M-C□-C,F,G,T					223
KXL06075M-C□-C,F,G,T					248

MA **MB** With electromagnetic brake

*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncoverd

Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N-MA, MB	□42	5	7	6	245
KXL06050M-N-MA, MB					265
KXL06075M-N-MA, MB					290

Coverd

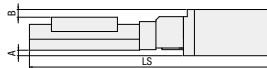
Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-MA,MB	□42	5	4	6	250
KXL06050M-C□-MA,MB					270
KXL06075M-C□-MA,MB					295

PA αSTEP (AR Series) **ZA** αSTEP (AZ Series)

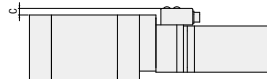
Motor model ARM24SAK

Motor model AZM24AK

Side view



Top view



Uncoverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-N□-PA,ZA	□ 28	—	0.5	6	211	220.5	198
KXL06050M-N□-PA,ZA					231	240.5	218
KXL06075M-N□-PA,ZA					256	265.5	243

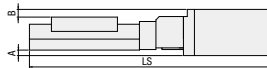
Coverd

Model	PA αSTEP (AR Series)/ZAαSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-C□-PA,ZA	□ 28	—	—	6	216	225.5	203
KXL06050M-C□-PA,ZA					236	245.5	223
KXL06075M-C□-PA,ZA					261	270.5	248

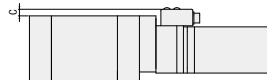
UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncoverd

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N□-UA	□40	4.7	6.5	6	240.4
KXL06050M-N□-UA					260.4
KXL06075M-N□-UA					285.4

Coverd

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-UA	□40	4.7	3.5	6	245.4
KXL06050M-C□-UA					265.4
KXL06075M-C□-UA					290.4

Motorized Stage

CAVE-X POSITIONER

XY-axis Linear Ball Guide : KYL06100M/KYL06150M

KYL06100M-N



KYL06150M-N



KYL06100M-C



KYL06150M-C



RoHS

KYL 06 100 M- 2- -

1

2

3

4

5

5

6

7

7

● Cables, Positioning pin P. 1-207 ~
● Electrical specification P.1- KXL-043~

1 Travel distance

100	100mm
150	150mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

2	2mm
---	-----

5 Motor option

Code	Specification
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T, 2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

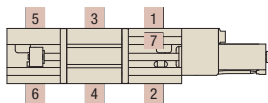
Code	Specification
MA	With electromagnetic brake (□42_100V)
MB	With electromagnetic brake (□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

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

Origin sensor option (Select one location.)



7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	Only connector (Cable is not included)	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

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

※Please select "A, C, F and H" when connect with stepping motor controller(DS102/112).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank			3			5			3A			5A		
		MA • MB/PA • ZA/UA			MA • MB			PA • ZA			UA			MA • MB		
Cable	Motor	2m			3m			5m			3m			5m		
	Sensor	2m			3m			5m			3m			5m		
	Motor	None			3m			3m			5m			5m		
	Electromagnetic brake	None			3m			3m			3m			5m		
Encoder		None			None			None			3m			5m		
Driver (Amplifier)		None			None			None			Available			Available		

New

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
023

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other

1-KXL

024

SPEC

Model	Uncovered		KYL06100M-N2-F	KYL06150M-N2-F
	Covered		KYL06100M-C2-F	KYL06150M-C2-F
Mechanical specification	Travel distance		100mm	150mm
	Stage table size		60×60mm	
	Feed screw (Ball screw)		φ8 Lead 2	
	Guide		Linear Ball Guide	
	Main materials-Finishing		Stainless—Electroless nickel plating	
	Weight	Uncovered	3.58kg	4.18kg
Covered		3.70kg	4.30kg	
Accuracy specification	Resolution/Pulse	Full/Half	4μm/2μm	
		Micro step	0.2μm	
	MAX speed	45mm/sec		
	Load capacity	10kgf [98N]		
	Squareness	50μm/Full stroke	75μm/Full stroke	
Sensor	Limit sensor	Available		
	Origin sensor	— *Can be installed with origin sensor option		
	Slit origin sensor	—		
Provided screw (Hexagon-headed bolt)		8 of M4—14	14 of M4—14	
Single axis accuracy specification	Uni-directional positioning accuracy	10μm	15μm	
	Repeatability positioning accuracy	±0.5μm		
	Lost motion	1μm		
	Backlash	1μm		
	Straightness	5μm		
	Pitching/Yawing	25"/20"		

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			F	G	T
Feature			High-torque	High resolution	—
Type			5 phase stepping motor (0.75A/Phase)		2 phase stepping motor (0.67A/Phase)
Motor model* ¹			PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.36°	1.8°
Resolution	Lead 2mm	Full/Half	4μm/2μm	2μm/1μm	10μm/5μm
		Micro step (1/20 On resolution)	0.2μm	0.1μm	—
MAX speed			45mm/sec	30mm/sec	40mm/sec
Weight ^{4,5}	KYL06100M-N		3.58kg	3.40kg	3.40kg
	KYL06100M-C		3.70kg	3.52kg	3.52kg
	KYL06150M-N		4.18kg	4.00kg	4.00kg
	KYL06150M-C		4.30kg	4.12kg	4.12kg

Motor code			MA・MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* ¹			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 2mm	Full/Half	4μm/2μm	2μm(Set to 1000P/R)	2μm(Set to 1000P/R)	22 Bit encoder (4194304P/R)※ ^{2,3}
		Micro step (1/20 0n resolution)	0.2μm			
MAX speed			40mm/sec	80mm/sec	80mm/sec	100mm/sec
Weight ^{4,5}	KYL06100M-N		4.28kg	3.50kg	3.50kg	3.95kg
	KYL06100M-C		4.40kg	3.62kg	3.62kg	4.07kg
	KYL06150M-N		4.88kg	4.10kg	4.10kg	4.55kg
	KYL06150M-C		5.00kg	4.22kg	4.22kg	4.67kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.06kg, [7]+0.02kg.

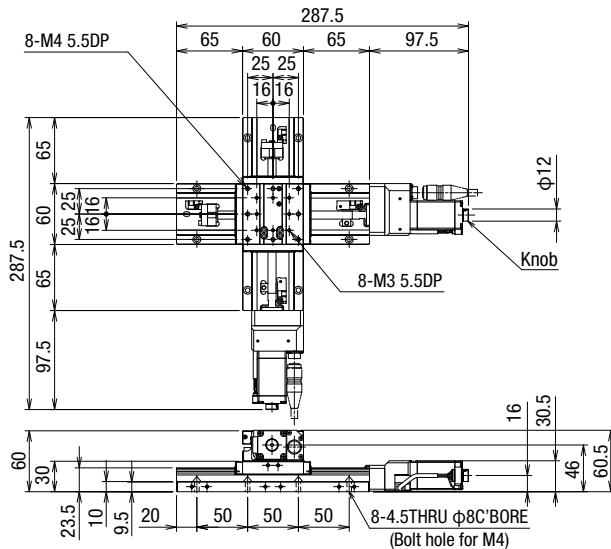
Motorized Stage

CAVE-X POSITIONER

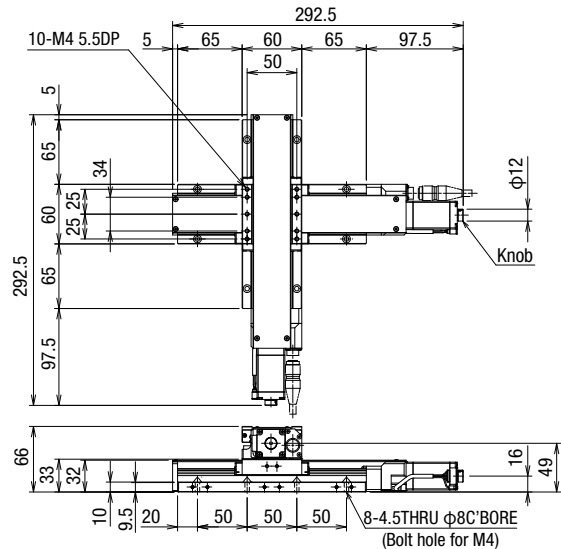
XY-axis Linear Ball Guide: KYL06100M/KYL06150

Dimensions

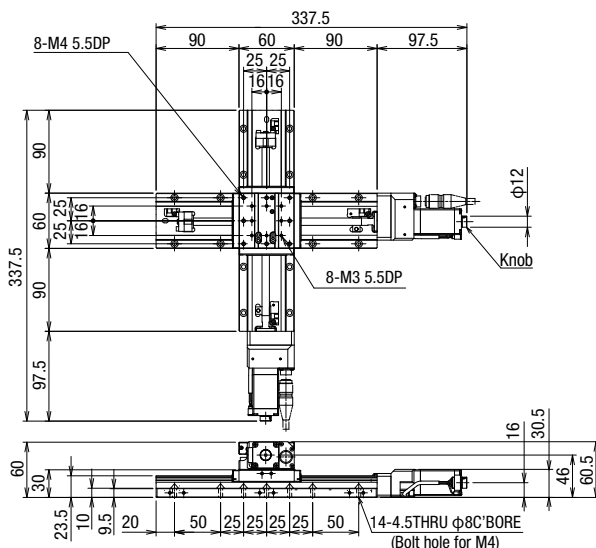
KYL06100M-N2-F



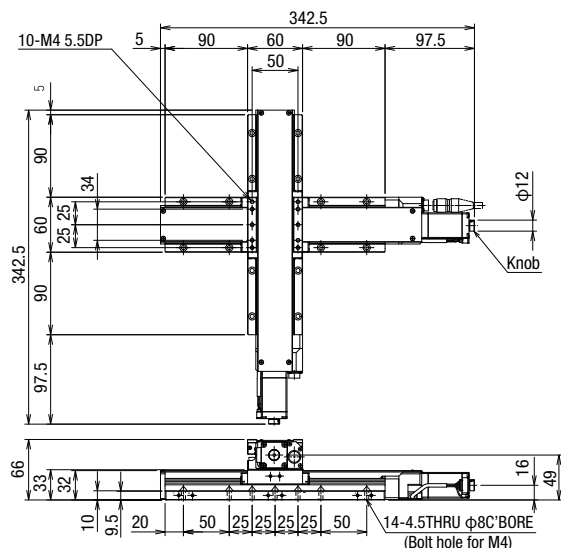
KYL06100M-C2-F



KYL06150M-N2-F



KYL06150M-C2-F



Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X
Linear ball

Cross Roller

Slide Guide

40

50

60

70

80

100

120

Other

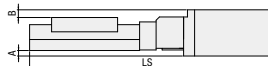
1-KXL
025

Dimensions

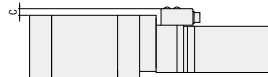
F High-torque

Motor model PK525HPB-C1

Side view



Top view



G High resolution

Motor model PK523HPMB-C1

T 2 phase motor

Motor model SJA28N32-0674B-01

Uncoverd

Model	F (High-torque)/G (High-resolution)/T (2 phase)				F (High-torque)/G (High resolution)	T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06100M-N2-F,G,T	□ 28	—	0.5	—	288	268
KXL06150M-N2-F,G,T					338	318

Coverd

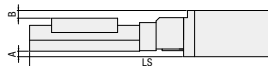
Model	F (High-torque)/G (High-resolution)/T (2 phase)				F (High-torque)/G (High resolution)	T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06100M-C2-F,G,T	□ 28	—	—	—	293	273
KXL06150M-C2-F,G,T					343	323

MA MB With electromagnetic brake

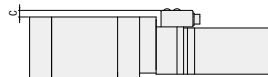
*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncoverd

Model	MA,MB(With electromagnetic brake) common				F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)
KXL06100M-N2-MA,MB	□ 42	5	7	6	315
KXL06150M-N2-MA,MB					365

Coverd

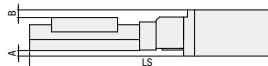
Model	MA,MB(With electromagnetic brake) common				F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)
KXL06100M-C2-MA,MB	□ 42	5	4	6	320
KXL06150M-C2-MA,MB					370

PA αSTEP (AR Series) ZA αSTEP (AZ Series)

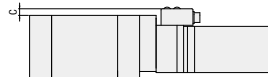
Motor model ARM24SAK

Motor model AZM24AK

Side view



Top view



Uncoverd

Model	PA αSTEP (AR Series)/ZA αSTEP (ZA Series)				PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)		LS(mm)	
KXL06100M-N2-PA,ZA	□ 28	—	0.5	6	281	290.5	288
KXL06150M-N2-PA,ZA					331	340.5	338

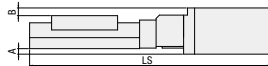
Coverd

Model	PA αSTEP (AR Series)/ZA αSTEP (ZA Series)				PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)		LS(mm)	
KXL06100M-C2-PA,ZA	□ 28	—	—	6	286	295.5	293
KXL06150M-C2-PA,ZA					336	345.5	343

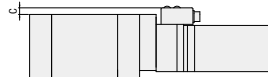
UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncoverd

Model	UA (AC servo motor)				F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)
KXL06100M-N2-UA	□ 40	4.7	6.5	6	310.4
KXL06150M-N2-UA					360.4

Coverd

Model	UA (AC servo motor)				F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)
KXL06100M-C2-UA	□ 40	4.7	3.5	6	315.4
KXL06150M-C2-UA					365.4

Motorized Stage

CAVE-X POSITIONER

XY-axis Linear Ball Guide : KYL06200/KYL06300

KYL06200M-N



KYL06300M-N



KYL06200M-C



KYL06300M-C



RoHS

KYL 06 200 M- 2 - -

1

2

3

4

5

5

6

7

7

☑ Cables, Positioning pin P. 1-207 ~
☑ Electrical specification P.1- KXL-043~

1 Travel distance

200	200mm
300	300mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

2	2mm
---	-----

5 Motor option

Code	Specification
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T, 2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

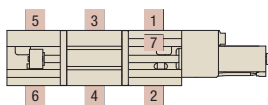
Code	Specification
MA	With electromagnetic brake(□42_100V)
MB	With electromagnetic brake(□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

* See page ☑ P.1-037~ for details of origin sensor option.

Origin sensor option (select one location.)



products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank			3A			5A		
	Motor	MA • MB/PA • ZA/UA			MA • MB	PA • ZA	UA	MA • MB	PA • ZA	UA
Cable	Sensor	2m	3m	5m	3m			5m		
	Motor	None			3m			5m		
	Electromagnetic brake				3m	—	—	5m	—	—
	Encoder				—	—	3m	—	—	5m
Driver (Amplifier)		None			Available					

7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	Only connector (Cable is not included) —	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

※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).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

New

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
027

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other

1-KXL

028

SPEC

Model	Uncovered		KYL06200M-N2-F	KYL06300M-N2-F
	Covered		KYL06200M-C2-F	KYL06300M-C2-F
Mechanical specification	Travel distance		200mm	300mm
	Stage table size		60×60mm	
	Feed screw (Ball screw)		φ8 Lead 2	
	Guide		Linear Ball Guide	
	Main materials-Finishing		Stainless—Electroless nickel plating	
Accuracy specification	Weight	Uncovered	4.82kg	6.02kg
		Covered	4.94kg	6.22kg
	Resolution/Pulse	Full/Half	4μm/2μm	
		Micro step	0.2μm	
	MAX speed	45mm/sec		
Load capacity	10kgf [98N]			
Sensor	Squareness	100μm/Full stroke	150μm/Full stroke	
	Limit sensor	Available		
	Origin sensor	— *Can be installed with origin sensor option		
	Slit origin sensor	—		
Provided screw (Hexagon-headed bolt)		12 of M4—14	16 of M4—14	
Stage accuracy specification	Uni-directional positioning accuracy	15μm	25μm	
	Repeatability positioning accuracy	±0.5μm		
	Lost motion	1μm		
	Backlash	1μm		
	Straightness	7μm		
	Pitching/Yawing	30"/20"	35"/20"	

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			F	G	T
Feature			高トルク	高分解能	—
Type			5 phase stepping motor (0.75A/Phase)		2 phase stepping motor (0.67A/Phase)
Motor model* ¹			PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.36°	1.8°
Resolution	Lead 2mm	Full/Half	4µm/2µm	2µm/1µm	10µm/5µm
		Micro step (1/20 On resolution)	0.2µm	0.1µm	—
MAX speed			45mm/sec	30mm/sec	40mm/sec
Weight※⁴,⁵	KYL06200M-N		4.82kg	4.64	4.64
	KYL06200M-C		4.94kg	4.76	4.76
	KYL06300M-N		6.02kg	5.84	5.84
	KYL06300M-C		6.22kg	6.04	6.04

Motor code			MA・MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* 1			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 2mm	Full/Half	4μm/2μm	2μm(Set to 1000P/R)	2μm(Set to 1000P/R)	22 Bit encoder
		Micro step (1/20 On resolution)	0.2μm			
MAX speed		Lead 2mm	40mm/sec	80mm/sec	80mm/sec	100mm/sec
Weight※ 4,5	KYL06200M-N		5.52kg	4.74kg	4.74kg	5.19kg
	KYL06200M-C		5.64kg	4.86kg	4.86kg	5.31kg
	KYL06300M-N		6.72kg	5.94kg	5.94kg	6.39kg
	KYL06300M-C		6.92kg	6.14kg	6.14kg	6.59kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.06kg, [7]+0.02kg.

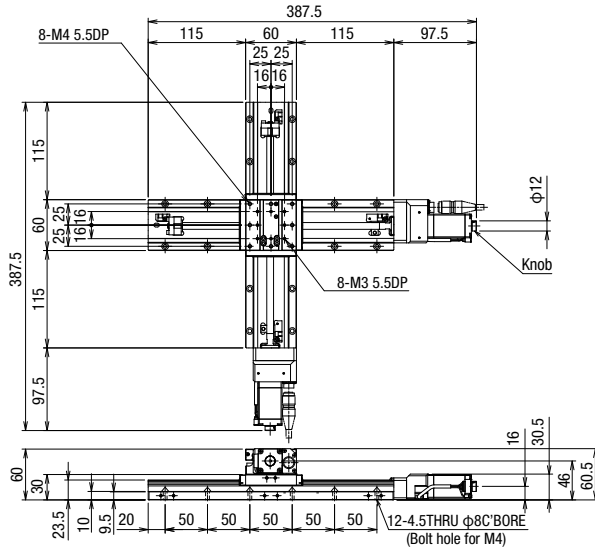
Motorized Stage

CAVE-X POSITIONER

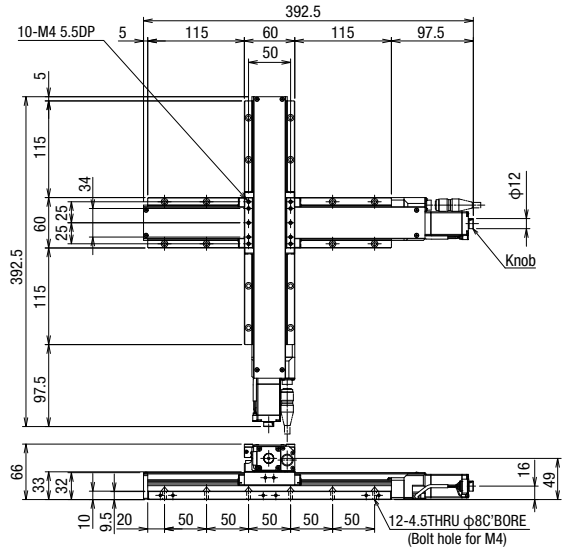
XY-axis Linear Ball Guide : KYL06200/KYL06300

Dimensions

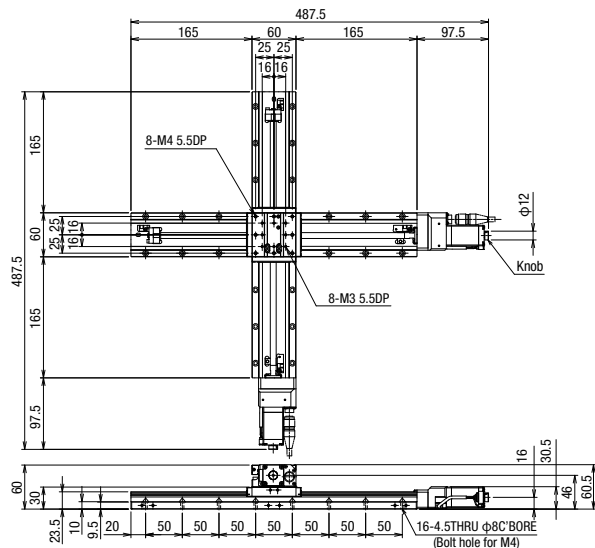
KYL06200M-N2-F



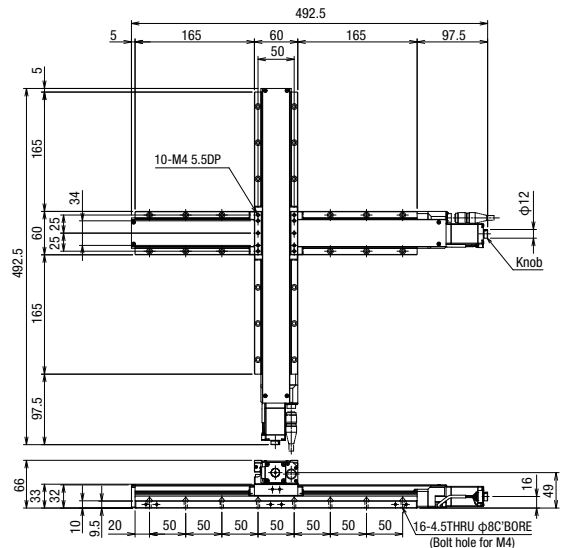
KYL06200M-C2-F



KYL06300M-N2-F



KYL06300M-C2-F



Support guide option

We have a support guide option for 200mm and 300mm.
You can use safely in overhang.

How to order

For Uncovered model

APW6016A-390A

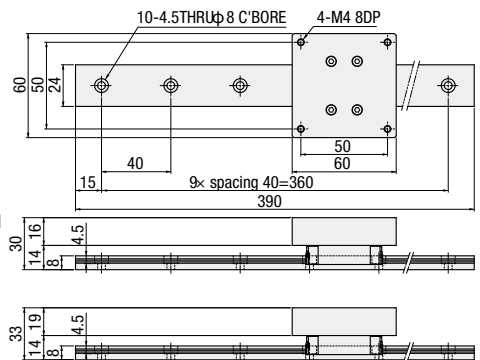
For covered model

APW6019A-390A

Notes:

- Combination with slideguide, adaptor plate or CAVE-X POSITIONER should be selected customer side.
- It is recommended to adjust in parallelism under 1 μ m and within 100mm.
- Slide guide materials: Stainless.
- Adaptor plate materials: Aluminum.
- Grease: Multemp PS2.
- If you have any questions, feel free to contact us.

[Dimensions] Slide guide model: SSEBW14-390(MISUMI)



For Uncovered model
APW6016A-390A

For covered model
APW6019A-390A

PART
COMMUNITYCAD
DATA

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

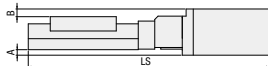
1-KXL
030

Dimensions

F High-torque

Motor model PK525HPB-C1

Side view



Top view

**G** High resolution

Motor model PK523HPMB-C1

T 2 phase motor

Motor model SJA28N32-0674B-01

Uncoverd

Model	F (High-torque)/G (High-resolution)			F (High-torque)	G (High resolution)	T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-N2-F,G,T	□28	—	0.5	—	388	368
KXL06300M-N2-F,G,T	□28	—	0.5	—	488	468

Coverd

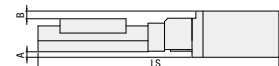
Model	F (High-torque)/G (High-resolution)			F (High-torque)	G (High resolution)	T (2 phase)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-C2-F,G,T	□28	—	—	—	393	373
KXL06300M-C2-F,G,T	□28	—	—	—	493	473

MA MB With electromagnetic brake

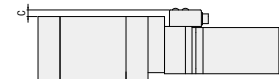
*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncoverd

Model	(With electromagnetic brake) common				F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)
KXL06200M-N2-MA,MB	□42	5	7	6	415
KXL06300M-N2-MA,MB	□42	5	7	6	515

Coverd

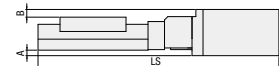
Model	(With electromagnetic brake) common				F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)
KXL06200M-C2-MA,MB	□42	5	4	6	420
KXL06300M-C2-MA,MB	□42	5	4	6	520

PA αSTEP (AR Series) **ZA αSTEP (AZ Series)**

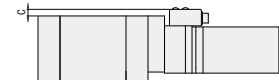
Motor model ARM24SAK

Motor model AZM24AK

Side view



Top view



Uncoverd

Model	PA αSTEP (AR Series)/ZAαSTEP (AZ Series)			PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-N2-PA,ZA	□28	—	0.5	6	381	390.5
KXL06300M-N2-PA,ZA	□28	—	0.5	6	481	490.5

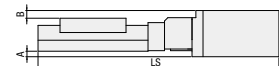
Coverd

Model	PA αSTEP (AR Series)/ZAαSTEP (AZ Series)			PA	ZA	F (High-torque)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06200M-C2-PA,ZA	□28	—	—	6	386	395.5
KXL06300M-C2-PA,ZA	□28	—	—	6	486	495.5

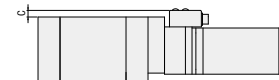
UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncoverd

Model	UA (AC servo motor)			F (High-torque)
	Motor size	A(mm)	B(mm)	LS(mm)
KXL06200M-N2-UA	□40	4.7	6.5	6
KXL06300M-N2-UA	□40	4.7	6.5	6

Coverd

Model	UA (AC servo motor)			F (High-torque)
	Motor size	A(mm)	B(mm)	LS(mm)
KXL06200M-C2-UA	□40	4.7	3.5	6
KXL06300M-C2-UA	□40	4.7	3.5	6

Motorized Stage

CAVE-X POSITIONER

Z-axis Linear Ball Guide : KZL06050M/KZL06075M

KZL06030M-N

KZL06050M-N

KZL06075M-N

KZL06030M-C

KZL06050M-C

KZL06075M-C

RoHS



Model

Selection code

Option code

KZL06 030-N2-F

1

2

3

4

5

6

☛ Cables, Positioning pin P. 1-207 ~
☛ Electrical specification P.1- KXL-043~

1 Travel distance

030	30mm
050	50mm
075	75mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

1	1mm
---	-----

5 Motor option

Code	Specification
C	Standard
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T,2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

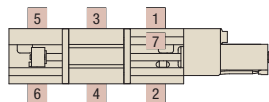
Code	Specification
MA	With electromagnetic brake(□42_100V)
MB	With electromagnetic brake(□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

* See page ☛ P.1-KXL-043~ for details of motor option.

• Origin sensor option (Select one location.)



7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	4 Only connector (Cable is not included) —	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

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

※Please select "A, C, F and H" when connect with stepping motor controller(DS102/112).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank	3	5	3A	5A
Motor		MA • MB/PA • ZA/UA	MA • MB/PA • ZA/UA	MA • MB/PA • ZA/UA	MA • MB/PA • ZA/UA	MA • MB/PA • ZA/UA
Sensor		2m	3m	5m	3m	5m
Motor					3m	5m
Electromagnetic brake		None			3m	—
Encoder					—	—
Driver (Amplifier)		None			3m	5m

New

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
031

Specification

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
032

SPEC

Model			Uncovered			Covered		
			KZL06030M-N1-C	KZL06050M-N1-C	KZL06075M-N1-C	KZL06030M-C1-C	KZL06050M-C1-C	KZL06075M-C1-C
Mechanical specification	Travel distance		30mm	50mm	75mm	30mm	50mm	75mm
	Stage table size		60×60mm					
	Feed screw (Ball screw)		φ8 Lead 1					
	Guide		Linear Ball Guide					
	Main materials-Finishing		Stainless—Electroless nickel plating					
	Weight		1.99kg	2.09kg	2.25kg	2.05kg	2.15kg	2.31kg
Accuracy specification	Resolution/Pulse	Full/Half	2μm/1μm					
		Micro step	0.1μm					
	MAX speed		20mm/sec					
	Load capacity		7kgf [68.6N]					
	Perpendicularity		15μm Storke	25μm Storke	37.5μm Storke	15μm Storke	25μm Storke	37.5μm Storke
Sensor	Limit sensor		Available					
	Origin sensor		— *Can be installed with origin sensor option					
	Slit origin sensor		—					
Provided screw (Hexagon-headed bolt)			4 of M4—10					
Stage accuracy specification	Uni-directional positioning accuracy		5μm		7μm	5μm		7μm
	Repeatability positioning accuracy		±0.5μm					
	Lost motion		1μm					
	Backlash		1μm					
	Straightness		3μm					
	Pitching/Yawing		20"/15"					

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			C	F	G	T
Feature			標準	高トルク	高分解能	—
Type			5 phase stepping motor (0.75A/Phase)			2 phase stepping motor (0.67A/Phase)
Motor model* 1			C005C-90215P-1	PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.72°	0.36°	1.8°
Resolution	Lead 1mm	Full/Half	2μm/1μm		1μm/0.5μm	5μm/2.5μm
		Micro step (1/20 On resolution)	0.1μm		0.05μm	—
MAX speed	Lead 1mm		20mm/sec	30mm/sec	15mm/sec	15mm/sec
Weight ^{4,5}	KZL06030M-N		1.99kg	2.08kg	1.99kg	1.99kg
	KZL06030M-C		2.05kg	2.14kg	2.05kg	2.05kg
	KZL06050M-N		2.09kg	2.18kg	2.09kg	2.09kg
	KZL06050M-C		2.15kg	2.24kg	2.15kg	2.15kg
	KZL06075M-N		2.25kg	2.34kg	2.25kg	2.25kg
	KZL06075M-C		2.31kg	2.4kg	2.31kg	2.31kg
Motor code			MA・MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* 1			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 1mm	Full/Half	2μm/1μm	1μm(Set to 1000P/R)	1μm(Set to 1000P/R)	22 Bit encoder (4194304P/R)※ ^{2,3}
		Micro step (1/20 On resolution)	0.1μm			
MAX speed	Lead 1mm		25mm/sec	40mm/sec	40mm/sec	50mm/sec
Weight ^{4,5}	KZL06030M-N		2.43kg	2.04kg	2.04kg	2.26kg
	KZL06030M-C		2.49kg	2.10kg	2.10kg	2.32kg
	KZL06050M-N		2.53kg	2.14kg	2.14kg	2.36kg
	KZL06050M-C		2.59kg	2.20kg	2.20kg	2.42kg
	KZL06075M-N		2.69kg	2.30kg	2.30kg	2.52kg
	KZL06075M-C		2.75kg	2.36kg	2.36kg	2.58kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.06kg, [7]+0.02kg.

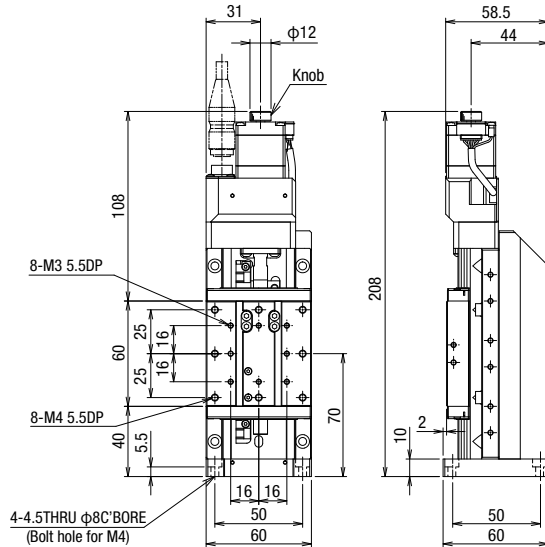
Motorized Stage

CAVE-X POSITIONER

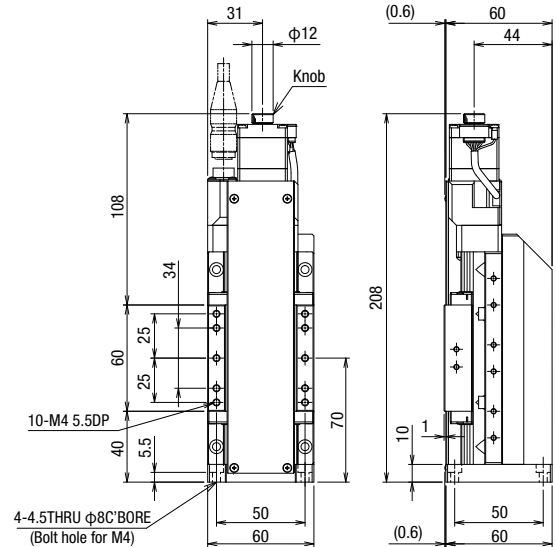
Z-axis Linear Ball Guide : KZL06050/KZL06075

Dimensions

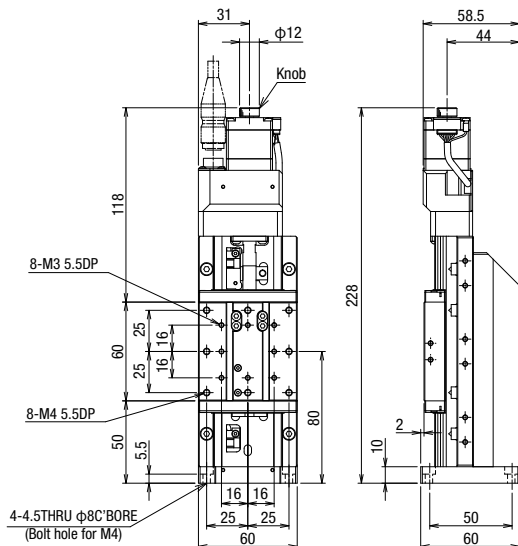
KZL06030M-N1-C



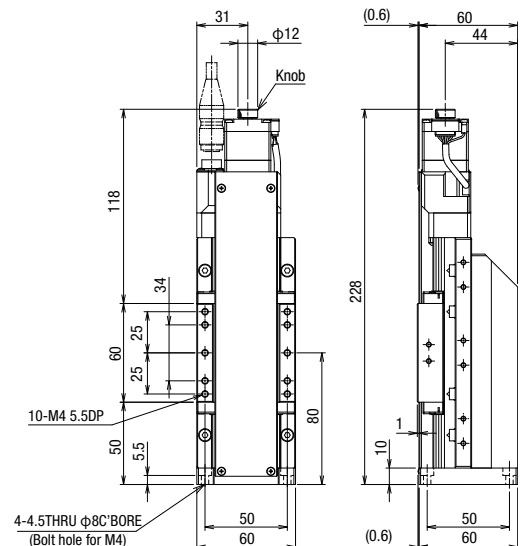
KZL06030M-C1-C



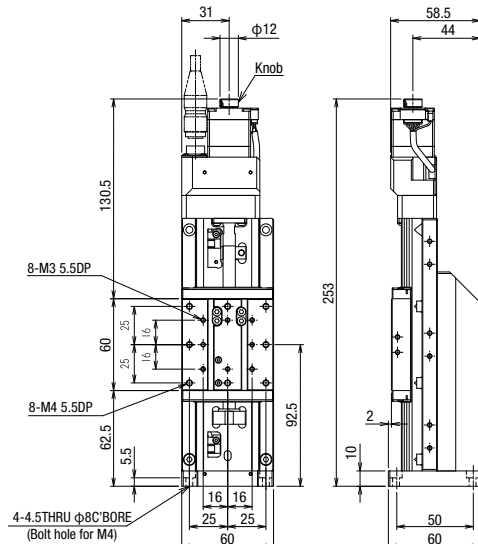
KZL06050M-N1-C



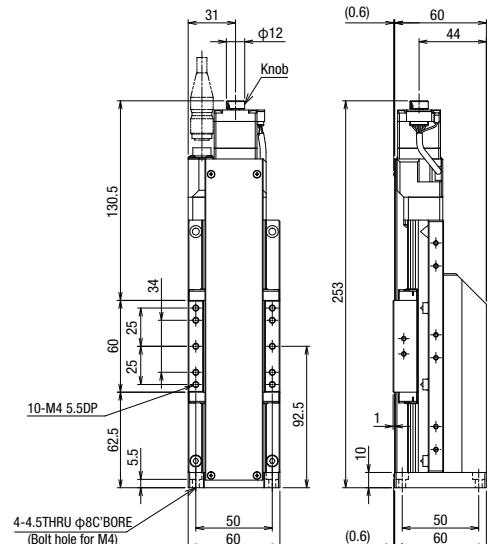
KZL06050M-C1-C



KZL06075M-N1-C



KZL06075M-C1-C



Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

40

50

60

70

80

100

120

Other

1-KXL
033

PART
COMMUNITYCAD
DATA

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL

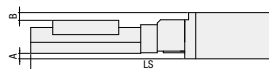
034

Dimensions

C Standard

Motor model C005C-90215P-1

Side view



Top view

**F** High-torque

Motor model PK525HPB-C1

G High resolution

Motor model PK523HPMB-C1

T 2 phase motor

Motor model SJA28N32-0674B-01

Uncover

Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque • High-resolution) Common	C (Standard)	F (High-torque)	G (High resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N□-C,F,G,T	□ 28	—	0.5	—	198
KXL06050M-N□-C,F,G,T					218
KXL06075M-N□-C,F,G,T					243

Cover

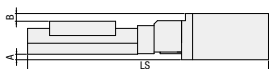
Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque • High-resolution) Common	C (Standard)	F (High-torque)	G (High resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-C,F,G,T	□ 28	—	—	—	203
KXL06050M-C□-C,F,G,T					223
KXL06075M-C□-C,F,G,T					248

MA **MB** With electromagnetic brake

*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncover

Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N-MA, MB	□42	5	7	6	245
KXL06050M-N-MA, MB					265
KXL06075M-N-MA, MB					290

Cover

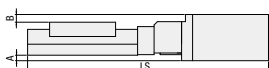
Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-MA,MB	□42	5	4	6	250
KXL06050M-C□-MA,MB					270
KXL06075M-C□-MA,MB					295

PA αSTEP (AR Series) **ZA** αSTEP (AZ Series)

Motor model ARM24SAK

Motor model AZM24AK

Side view



Top view



Uncover

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-N□-PA,ZA	□ 28	—	0.5	6	211	220.5	198
KXL06050M-N□-PA,ZA					231	240.5	218
KXL06075M-N□-PA,ZA					256	265.5	243

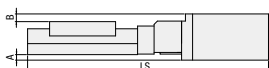
Cover

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-C□-PA,ZA	□ 28	—	—	6	216	225.5	203
KXL06050M-C□-PA,ZA					236	245.5	223
KXL06075M-C□-PA,ZA					261	270.5	248

UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncover

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N□-UA	□40	4.7	6.5	6	240.4
KXL06050M-N□-UA					260.4
KXL06075M-N□-UA					285.4

Cover

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-UA	□40	4.7	3.5	6	245.4
KXL06050M-C□-UA					265.4
KXL06075M-C□-UA					290.4

Motorized Stage

CAVE-X POSITIONER

XYZ-axis Linear Ball Guide : KWL06030/KWL06050

KWL06030M-N



KWL06050M-N



KWL06030M-C



KWL06050M-C



RoHS

KWL 06 030 M- 1 - - -

☑ Cables, Positioning pin P. 1-207 ~
☑ Electrical specification P.1- KXL-043 ~

1 Travel distance

030	30mm
050	50mm

2 Connector specifications

M	Panel mount	
---	-------------	--

3 Cover type

N	Uncovered	
C	Covered	

4 Ball screw lead

1	1mm
---	-----

5 Motor option

Code	Specification
C	Standard
F	High-torque
G	High resolution
T	2 Phase stepping motor

*For Code T, 2-phase stepping motor, our controller (DS102/112) cannot be used.

5 Motor option

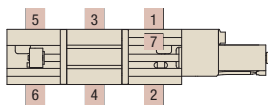
Code	Specification
MA	With electromagnetic brake(□42_100V)
MB	With electromagnetic brake(□42_200V)
PA	αSTEP (AR Series)
ZA	αSTEP (AZ Series)
UA	Servo motor(J4)

6 Origin sensor option

Code	Specification
Blank	None
1	CCW right side
2	CCW left side
3	Center right side
4	Center left side
5	CW right side
6	CW left side
7	Built-in

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

• Origin sensor option (Select one location.)



7 Cable option

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
A	2m	D214-2-2E
B	2m One end loose	D214-2-2EK
C	4m	D214-2-4E
D	4m One end loose	D214-2-4EK
E	Only connector (Cable is not included)	—
F	Robot cable 2m	D214-2-2R
G	Robot cable 2m one end loose	D214-2-2RK
H	Robot cable 4m	D214-2-4R
J	Robot cable 4m one end loose	D214-2-4RK

* One end loose position to only stage opposite side.

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

※ Please select "A, C, F and H" when connect with stepping motor controller(DS102/112).

7 Cable option (2 Phase stepping motor)

Code	Specification	Cable type
Blank	Cable is not included (Standard)	—
B	2m One end loose	DS1-2C-2-2EK
D	4m One end loose	DS1-2C-2-4EK
G	Robot cable 2m one end loose	DS1-2C-2-2RK
J	Robot cable 4m one end loose	DS1-2C-2-4RK

7 Cable option (Electromagnetic brake/αSTEP/Servo)

Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire
3A	Driver Amplifier (3m Cable Set)
5A	Driver Amplifier (5m Cable Set)

products list ③ Motor ④ Cable/Driver combination

Code	The screwdriver (amplifier) cable	Blank			3			5			3A			5A		
		MA	MB	PA	ZA	UA	MA	MB	PA	ZA	UA	MA	MB	PA	ZA	UA
Cable	Motor	2m	3m	5m			3m					5m				
	Sensor						3m					5m				
	Electromagnetic brake						3m				3m	5m				
	Encoder										3m					5m
Driver (Amplifier)		None					Available									

New

Motorized Stage

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear Ball

CAVE-X Linear ball

Cross Roller

Slide Guide

40

50

60

70

80

100

120

Other

1-KXL
035

Specification

New

Motorized Stage

SPEC						
Model		Uncovered		Covered		
		KWL06030M-N1-C	KWL06050M-N1-C	KWL06030M-C1-C	KWL06050M-C1-C	
Mechanical specification	Travel distance		30mm	50mm	30mm	50mm
	Stage table size		60×60mm			
	Feed screw (Ball screw)		φ8 Lead 1			
	Guide		Linear Ball Guide			
	Main materials-Finishing		Stainless—Electroless nickel plating			
Accuracy specification	Weight		4.53kg	4.83kg	4.71kg	5.01kg
	Resolution/Pulse	Full/Half	2μm/1μm			
		Micro step	0.1μm			
	MAX speed		20mm/sec			
	Load capacity		7kgf [68.6N]			
Sensor	Perpendicularity		15μm/Full stroke	25μm/Full stroke	15μm/Full stroke	25μm/Full stroke
	Limit sensor		Available			
	Origin sensor		— *Can be installed with origin sensor option			
	Slit origin sensor		—			
Provided screw (Hexagon-headed bolt)			8 of M4—14			
Stage accuracy specification	Uni-directional positioning accuracy		5μm			
	Repeatability positioning accuracy		±0.5μm			
	Lost motion		1μm			
	Backlash		1μm			
	Straightness		3μm			
	Pitching/Yawing		20"/15"			

* The SPEC varies depending on the motor.

Resolution • MAX speed • Weight

Motor code			C	F	G	T
Feature			Standard	High-torque	Hig resorution	—
Type			5 phase stepping motor (0.75A/Phase)			2 phase stepping motor (0.67A/Phase)
Motor model* 1			C005C-90215P-1	PK525HPB-C1	PK525HPMB-C1	SJA28N32-0674B-01
Step angle			0.72°	0.72°	0.36°	1.8°
Resolution	Lead 1mm	Full/Half	2μm/1μm		1μm/0.5μm	5μm/2.5μm
		Micro step (1/20 On resolution)	0.1μm		0.05μm	—
MAX speed	Lead 1mm		20mm/sec	30mm/sec	15mm/sec	15mm/sec
自重※4,5	KWL06030M-N		4.53kg	4.80kg	4.53kg	4.53kg
	KWL06030M-C		4.71kg	4.98kg	4.71kg	4.71kg
	KWL06050M-N		4.83kg	5.10kg	4.83kg	4.83kg
	KWL06050M-C		5.01kg	5.28kg	5.01kg	5.01kg
Motor code			MA • MB	PA	ZA	UA
Feature			With electromagnetic brake	Small step-out ,absolute	Small step-out ,absolute	High speed
Type			5 Phase stepping motor (With electromagnetic brake,0.35A/Phase)	αSTEP (AR Series)	αSTEP (AZ Series)	Servo motor
Motor model* 1			PKE545MC-A1	ARM24SAK	AZM24AK	HG-KR053
Step angle			0.72°	—	—	—
Resolution	Lead 1mm	Full/Half	2μm/1μm	1μm(Set to 1000P/R)	1μm(Set to 1000P/R)	22 Bit encoder
		Micro step (1/20 On resolution)	0.1μm			
MAX speed	Lead 1mm		25mm/sec	40mm/sec	40mm/sec	50mm/sec
自重※4,5	KWL06030M-N		5.85kg	4.68kg	4.68kg	5.35kg
	KWL06030M-C		6.03kg	4.86kg	4.86kg	5.53kg
	KWL06050M-N		6.15kg	4.98kg	4.98kg	5.65kg
	KWL06050M-C		6.33kg	5.16kg	5.16kg	5.83kg

*1 Model is our own management model.

*2 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*3 Optional encoder cable : for incremental system.

*4 4 Sensor Option Selection: Not Used.

*5 Origin sensor option [1~6]+0.09kg, [7]+0.03kg.

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other

1-KXL

036

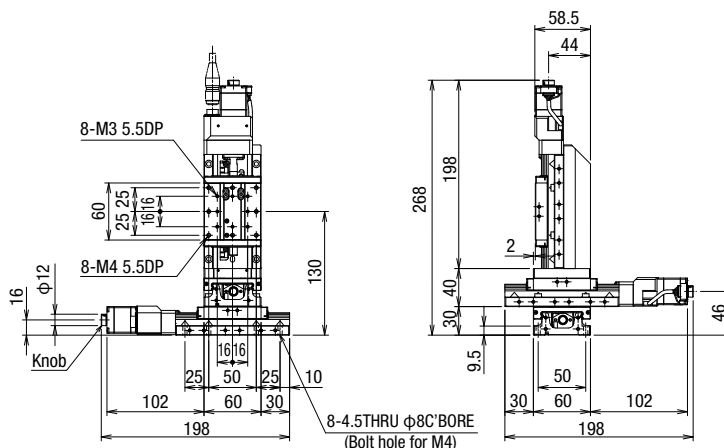
Motorized Stage

CAVE-X POSITIONER

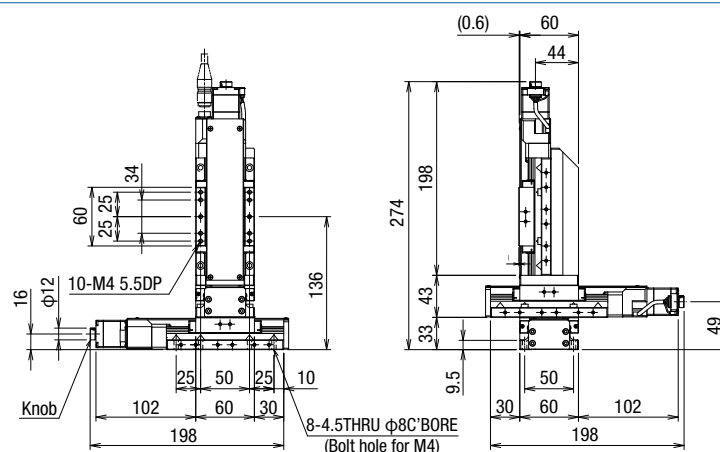
XYZ-axis Linear Ball Guide: KWL06030/KWL06050

Dimensions

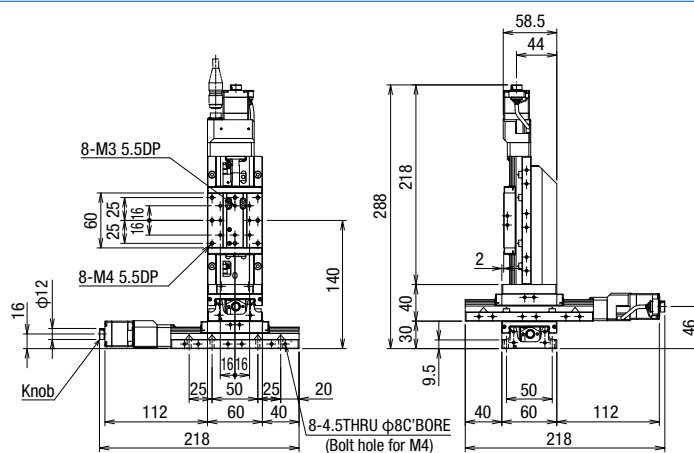
KWL06030M-N1-C



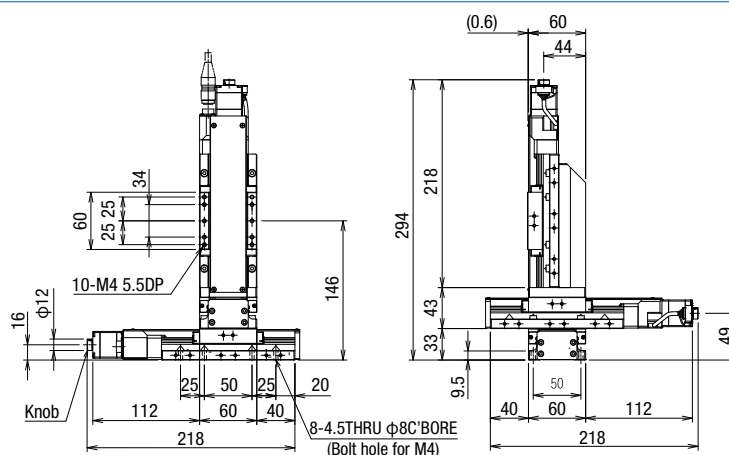
KWL06030M-C1-C



KWL06050M-N1-C



KWL06050M-C1-C



Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
Ball

CAVE-X
Linear ball

Cross
Roller

Slide
Guide

40

50

60

70

80

100

120

Other

1-KXL
037

PART
COMMUNITYCAD
DATA

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□ 40

□ 50

□ 60

□ 70

□ 80

□ 100

□ 120

Other

1-KXL

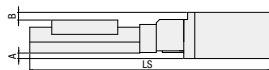
038

Dimensions

C Standard

Motor model C005C-90215P-1

Side view



Top view

**F** High-torque

Motor model PK525HPB-C1

Motor model PK523HPMB-C1

T 2 phase motor

Motor model SJA28N32-0674B-01

Uncoverd

Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque • High-resolution) Common	C (Standard)	F (High-torque)	G (High resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N□-C,F,G,T	□ 28	—	0.5	—	198
KXL06050M-N□-C,F,G,T	□ 28	—	0.5	—	218

Coverd

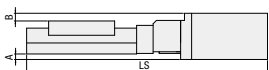
Model	C (Standard)/F (High-torque)/G (High-resolution)/H (High-torque • High-resolution) Common	C (Standard)	F (High-torque)	G (High resolution)	T (2 phase)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-C,F,G,T	□ 28	—	—	—	203
KXL06050M-C□-C,F,G,T	□ 28	—	—	—	223

MA **MB** With electromagnetic brake

*Included driver: MA selected: 100V, MB selected: 200V

Motor model PKE545MC-A1

Side view



Top view



Uncoverd

Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N-MA, MB	□ 42	5	7	6	245
KXL06050M-N-MA, MB	□ 42	5	7	6	265

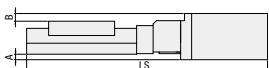
Coverd

Model	MA, MA (With electromagnetic brake) common				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-MA, MB	□ 42	5	4	6	250
KXL06050M-C□-MA, MB	□ 42	5	4	6	270

PA αSTEP (AR Series) **ZA** αSTEP (AZ Series)

Motor model AZM24AK

Side view



Top view



Uncoverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-N□-PA, ZA	□ 28	—	0.5	6	211	220.5	198
KXL06050M-N□-PA, ZA					231	240.5	218

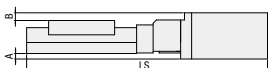
Coverd

Model	PA αSTEP (AR Series)/ZA αSTEP (AZ Series)				PA (αSTEP)	ZA (αSTEP)	C (Standard)
	Motor size	A(mm)	B(mm)	C(mm)	LS(mm)		
KXL06030M-C□-PA, ZA	□ 28	—	—	6	216	225.5	203
KXL06050M-C□-PA, ZA					236	245.5	223

UA AC servo motor(J4)

Motor model HG-KR053

Side view



Top view



Uncoverd

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-N□-UA	□ 40	4.7	6.5	6	240.4
KXL06050M-N□-UA	□ 40	4.7	6.5	6	260.4

Coverd

Model	UA (AC servo motor)				C (Standard)
Motor size	A(mm)	B(mm)	C(mm)	LS(mm)	
KXL06030M-C□-UA	□ 40	4.7	3.5	6	245.4
KXL06050M-C□-UA	□ 40	4.7	3.5	6	265.4

Electrical Specification: KXL Series

Motor Specification

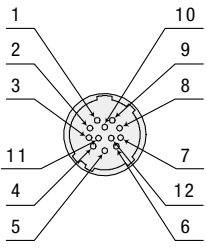
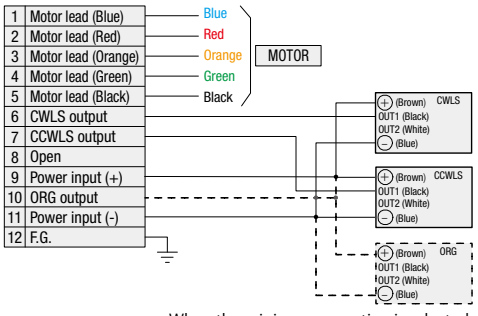
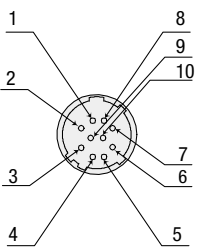
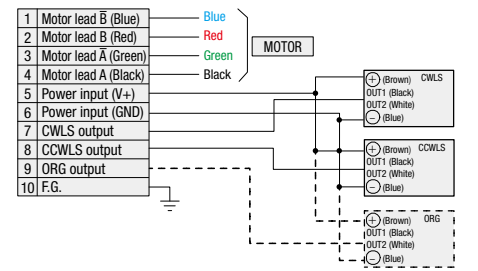
Motor code		C	F	G	T
Stage model		KXL06030M / KXL06050M / KXL06075M			
		KXL06100M / KXL06150 M/ KXL06200M / KXL06300M			
Motor Specification (*1)	Type	5 phase stepping motor (0.75A/Phase)			
	Feature	Standard	High-torque	High resolution	-
	Model*1	C005C-90215P-1	PK525HPB-C1	PK523HPMB-C1	SJA28N32-0674B-01
	With electromagnetic brake	-			
	Manufacturer	Oriental Motor Co., Ltd.			
	Step angle Position detector	0.72°		0.36°	1.8°
	Motor size	28mm			
	Excitation (moment) maximum torque	0.048N · m	0.073N · m	0.038N · m	0.059N · m
	Driver model	CVD507-K-A9			
	Driver power input	DC24V±10% 1.4A(MAX)			
Connector	Motor	HR10A-10R-12P(73) (HRS)			
	Receiving connector	HR10A-10P-12S(73) (HRS)			
Sensor	Limit sensor	Available			
	Origin sensor	- *Can be installed with origin sensor option			
	Slit origin sensor	-			
	Sensor	Micro Photoelectric Sensor PM-L25 (Panasonic Industry)			
	Power-supply voltage	DC5~24V±10%			
	Current consumption	Total 45mA or less (15mA or less per 1 sensor)			
	Control output	NPN open collector output DC30V 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	On detection (light shield condition): Output transistor OFF (Non-continuity)			

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

*2 Model is our own management model.

* The electric specification of XY (KYL), Z (KZL), XYZ (KWL) are the same.

Pin allocation • Connection diagram

C • F • G	Available for motor and sensor	【 Connection diagram (common) 】 Connector: HR10A-10R-12P(73) (Hirose Electric Co., Ltd.) 	【 Connection diagram (common) 】  ----- When the origin sensor option is selected. See page P.1-207,209 for details of cable.
T	Available for motor and sensor	【 Connection diagram (common) 】 Connector: HR10A-10R-10P(73) (Hirose Electric Co., Ltd.) 	【 Connection diagram (common) 】 [Motor and sensor connection diagram (the same)]  ----- When the origin sensor option is selected. See page P.1-207,209 for details of cable.

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

40

50

60

70

80

100

120

Other

1-KXL

040

Motor • Electrical specification(Electromagnetic brake)

Motor code		MA	MB
Stage model		KXL06030M / KXL06050M / KXL06075M KXL06100M / KXL06150 M / KXL06200M / KXL06300M	
Motor Specification (*1)	Type	5 phase stepping motor (0.35A/Phase)	
	Feature	With electromagnetic brake	
	Model*1	PKE545MC-A1	
	With electromagnetic brake	Available	
	Manufacturer	Oriental Motor Co., Ltd.	
	Step angle Position detector	0.72°	
	Motor size	42mm	
	Excitation (moment) maximum torque	0.27N · m	
	Driver model	RKSD503M-A	RKSD503M-C
	Driver power input	Single phase AC100-120V 50/60Hz	Single phase AC200-240V 50/60Hz
	Brake power input	DC24V±5% 0.08A	
Connector	Motor	Panel mount	Motor: 5557-06R-210 (Molex) Electromagnetic brake side: 5557-02R-210 (MOLEX) Sensor: HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)
		Receiving connector	Motor: 5559-06P-210 (Molex) Electromagnetic brake side: 5559-02P-210 (MOLEX) Sensor: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)
Sensor	Limit sensor	Available	
	Origin sensor	— *Can be installed with origin sensor option	
	Slit origin sensor	—	
	Sensor	Micro Photoelectric Sensor PM-L25 (Panasonic Industry)	
	Power-supply voltage	DC5~ 24V±10%	
	Current consumption	Total 45mA or less (15mA or less per 1 sensor)	
	Control output	NPN open collector output DC30V 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	On detection (light shield condition): Output transistor OFF (Non-continuity)	

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

*2 Model is our own management model.

* The electric specification of XY (KYL), Z (KZL), XYZ (KWL) are the same.

Pin allocation • Connection diagram

Motor • Electromagnetic brake	【Receiver cable】Model : CC0□0VPFB (□ is the length.) * Fixed													
MA • MB	Sensor	【Receiver cable】 Model: HR10AP-S-SB-6-□ (□ is the length.) * Fixed												
		Sensor side Connector (Female): HR10A-7P-6S (73) (HRS) ULAWM20276 AWG28 3P Black <table><thead><tr><th>Pin</th><th>Signals</th></tr></thead><tbody><tr><td>1</td><td>CWLS</td></tr><tr><td>2</td><td>CCWLS</td></tr><tr><td>3</td><td>ORG</td></tr><tr><td>4</td><td>NORG</td></tr><tr><td>5</td><td>V+</td></tr><tr><td>6</td><td>V-</td></tr></tbody></table>	Pin	Signals	1	CWLS	2	CCWLS	3	ORG	4	NORG	5	V+
Pin	Signals													
1	CWLS													
2	CCWLS													
3	ORG													
4	NORG													
5	V+													
6	V-													
		【Connection diagram(Sensor)】 Panel mount specification Connector model : HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)												
		----- When the origin sensor option is selected.												

----- When the origin sensor option is selected.

Electrical Specification: KXL Series

Motor Specification

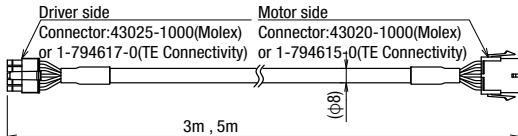
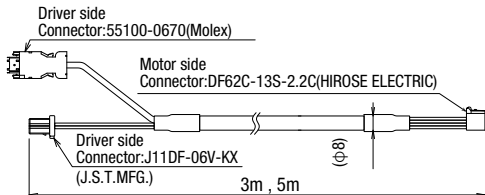
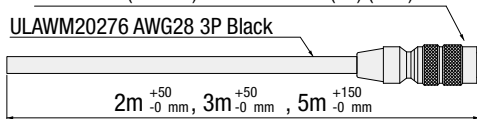
Motor code		PA	ZA
Stage model		KXL06030M / KXL06050M / KXL06075M KXL06100M / KXL06150M / KXL06200M / KXL06300M	
Motor Specification (*1)	Type	αSTEP (AR Series)	
	Feature	Small step-out, incremental	Small step-out, absolute
	Model*2	ARM24SAK	AZM24AK
	With electromagnetic brake	—	
	Manufacturer	Oriental Motor Co., Ltd.	
	Step angle Position detector	0.36°(1000P/R設定時)	
	Motor size	28mm 45mm	
	Excitation (moment) maximum torque	0.055N · m	0.095N · m
	Driver model	ARD-K	AZD-K
	Driver power input	DC24V±10%	DC24V±5%
	Brake power input	—	
Connector	Motor	Panel mount	Motor: 43025-1000 (Molex) or 1-794617-0 (TE Connectivity) Sensor: HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)
		Receiving connector	Motor: 43020-1000 (Molex) or 1-794615-0 (TE Connectivity) Sensor: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)
Sensor	Limit sensor		Available
	Origin sensor		— *Can be installed with origin sensor option
	Slit origin sensor		—
	Sensor		Micro Photoelectric Sensor PM-L25 (Panasonic Industry Co., Ltd.)
	Power-supply voltage		DC5~24V±10%
	Current consumption		Total 45mA or less (15mA or less per 1 sensor)
	Control output		NPN open collector output DC30V 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		On detection (light shield condition): Output transistor OFF (Non-continuity)

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

*2 Model is our own management model.

* The electric specification of XY (KYL), Z (KZL), XYZ (KWL) are the same.

Pin allocation • Connection diagram

		PA	ZA													
PA • ZA	Motor	【 Receiver cable 】 Model: CC0□0VA2R2 (□ is the length.) *Flexible cable 	【 Receiver cable 】 Model : CC0□0VZ2R2 (□ is the length)) *Flexible cable 													
	Sensor	【 Receiver cable 】 Model: HR10AP-S-SB-6-□ (□ is the length.) * Fixed Sensor side Connector (Female): HR10A-7P-6S (73) (HRS) ULAWM20276 AWG28 3P Black  <table border="1" data-bbox="510 1924 826 2072"><thead><tr><th>Pin</th><th>Signals</th></tr></thead><tbody><tr><td>1</td><td>CWLS</td></tr><tr><td>2</td><td>CCWLS</td></tr><tr><td>3</td><td>ORG</td></tr><tr><td>4</td><td>NORG</td></tr><tr><td>5</td><td>V+</td></tr><tr><td>6</td><td>V-</td></tr></tbody></table> 	Pin	Signals	1	CWLS	2	CCWLS	3	ORG	4	NORG	5	V+	6	V-
Pin	Signals															
1	CWLS															
2	CCWLS															
3	ORG															
4	NORG															
5	V+															
6	V-															

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide

□40

□50

□60

□70

□80

□100

□120

Other

1-KXL
042

Motor • Electrical specification

Motor code	UA	
Stage model	KXL06030M / KXL06050M / KXL06075M KXL06100M / KXL06150M / KXL06200M / KXL06300M	
Motor Specification (*1)	Type	Servo motor Motor J4(Mitsubishi Electric corporation)
	Feature	High speed
	Model*2	HG-KR053
	With electromagnetic brake	—
	Manufacturer	Mitsubishi Electric corporation
	Step angle Position detector	22 Bit encoder (4194304P/R)※3
	Motor size	□ size L size
	Excitation (moment) maximum torque	40mm 66.4mm 0.56N · m
	Driver model	MR-J4-10A
	Driver power input	Three and Single phase AC200-240V 50/60Hz
	Brake power input	—
Connector	Motor	Panel mount
		Receiving connector
Sensor	Limit sensor	Available
	Origin sensor	— *Can be installed with origin sensor option
	Slit origin sensor	—
	Sensor	Micro Photoelectric Sensor PM-L25 (Panasonic Industry Co., Ltd.)
	Power-supply voltage	DC5~24V±10%
	Current consumption	Total 45mA or less (15mA or less per 1 sensor)
	Control output	NPN open collector output DC30V 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	On detection (light shield condition): Output transistor OFF (Non-continuity)
	Motor: Manufacturer standard Encoder: Manufacturer standard Sensor: HR10A-7P-6P(73) (Hirose Electric Co., Ltd.)	
	Motor: JN4FT04SJ1-R (JAE) Encoder: 1674320-1 (TE Connectivity) Sensor: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)	

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

*2 Model is our own management model.

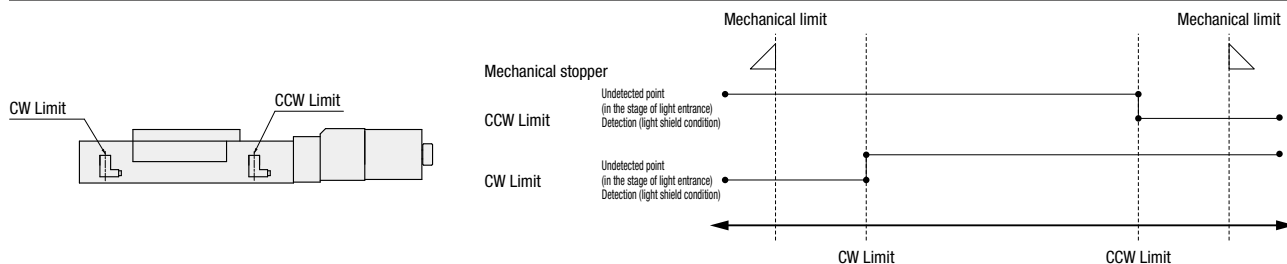
*3 When constructing an absolute system, it is necessary to install a battery in the amplifier.

*The electric specification of XY (KYL), Z (KZL), XYZ (KWL) are the same.

Pin allocation • Connection diagram

Motor • Encoder	【 Receiver cable 】 Model: SVPM-J3HF1-B-□ (□ is the length.) *Flexible cable 【 Motor Cable 】 【 Receiver cable 】 Model: SVEM-J3HF1-B-3-□ (□ is the length.) *Flexible cable 【 Encoder Cable 】														
UA	【 Receiver cable 】 Model: HR10AP-S-SB-6-□ (□ is the length.) * Fixed Sensor side Connector (Female): HR10A-7P-6S (73) (HRS) ULAWM20276 AWG28 3P Black 【 Connection diagram(Sensor) 】 Panel mount specification Connector model: HR10A-7P-6P(73) (Hirose Electric Co., Ltd.) <table border="1"> <thead> <tr> <th>Pin</th> <th>Signals</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CWLS</td> </tr> <tr> <td>2</td> <td>CCWLS</td> </tr> <tr> <td>3</td> <td>ORG</td> </tr> <tr> <td>4</td> <td>NORG</td> </tr> <tr> <td>5</td> <td>V+</td> </tr> <tr> <td>6</td> <td>V-</td> </tr> </tbody> </table> ----- When the origin sensor option is selected.	Pin	Signals	1	CWLS	2	CCWLS	3	ORG	4	NORG	5	V+	6	V-
Pin	Signals														
1	CWLS														
2	CCWLS														
3	ORG														
4	NORG														
5	V+														
6	V-														

Timing chart



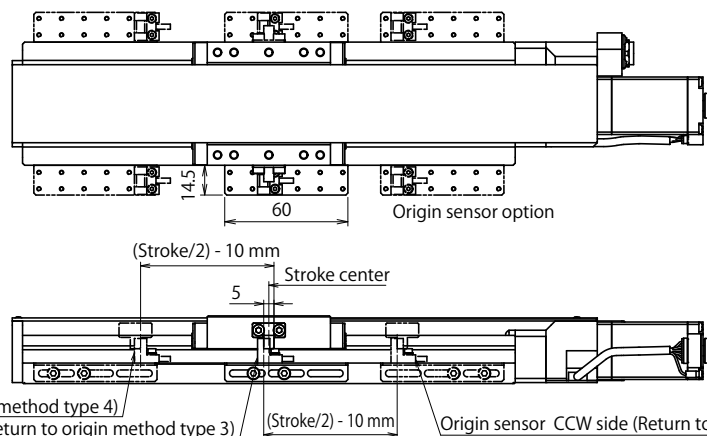
Unit [mm]	Direction of CW 				Direction of CCW 	
	Reference coordinate	Mechanical limit	CW Limit		CCW Limit	Mechanical limit
KXL06030M	Storke center	17.5	15.5		15.5	17.5
KXL06050M	Storke center	27.5	25.5		25.5	27.5
KXL06075M	Storke center	40	38		38	40
KXL06100M	Storke center	52.5	50.5		50.5	52.5
KXL06150M	Storke center	77.5	75.5		75.5	77.5
KXL06200M	Storke center	102.5	100.5		100.5	102.5
KXL06300M	Storke center	152.5	150.5		150.5	152.5

* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

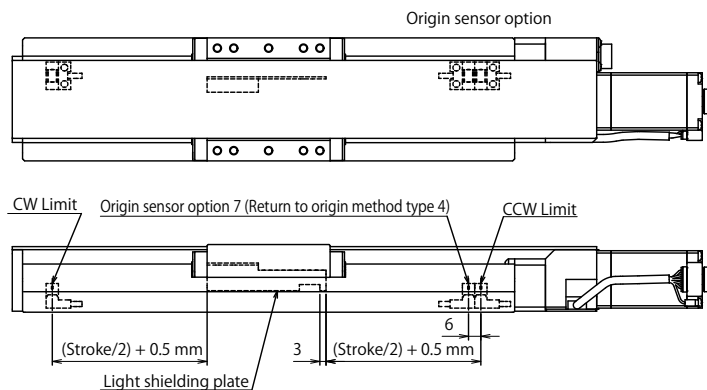
Note: The timing chart shows only timing of sensor, it is not for output signal logic.

Refer to ON/OFF display of output transistor that shows on electrical specifications-sensor-output logic for output signal logic.

Sensor option dimensions(Sensor option 1~6)



Sensor option dimensions(Sensor option 7)



New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other1-KXL
044

Origin sensor option 1~2

Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	Storke center	Opposite end face to origin	The origin end face	CCW Limit	Mechanical limit
KXL06030M	Return to origin	22.5	20.5	5	5	0	10.5	12.5
KXL06050M	Return to origin	42.5	40.5	15	5	0	10.5	12.5
KXL06075M	Return to origin	67.5	65.5	27.5	5	0	10.5	12.5
KXL06100M	Return to origin	92.5	90.5	40	5	0	10.5	12.5
KXL06150M	Return to origin	142.5	140.5	65	5	0	10.5	12.5
KXL06200M	Return to origin	192.5	190.5	90	5	0	10.5	12.5
KXL06300M	Return to origin	292.5	290.5	140	5	0	10.5	12.5

* Return to origin means that is performed return to origin type 3 using DS102/DS112 series.

* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

Origin sensor option 3~4

Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	Opposite end face to origin	The origin end face Storke center	CCW Limit	Mechanical limit
KXL06030M	Return to origin	17.5	15.5	5	0	15.5	17.5
KXL06050M	Return to origin	27.5	25.5	5	0	25.5	27.5
KXL06075M	Return to origin	40	38	5	0	38	40
KXL06100M	Return to origin	52.5	50.5	5	0	50.5	52.5
KXL06150M	Return to origin	77.5	75.5	5	0	75.5	77.5
KXL06200M	Return to origin	102.5	100.5	5	0	100.5	102.5
KXL06300M	Return to origin	152.5	150.5	5	0	150.5	152.5

* Return to origin means that is performed return to origin type 3 using DS102/DS112 series.

* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

Origin sensor option 5~6

Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	The origin end face	Opposite end face to origin	Storke center	CCW Limit	Mechanical limit
KXL06030M	Return to origin	12.5	10.5	0	5	5	20.5	22.5
KXL06050M	Return to origin	12.5	10.5	0	5	15	40.5	42.5
KXL06075M	Return to origin	12.5	10.5	0	5	27.5	65.5	67.5
KXL06100M	Return to origin	12.5	10.5	0	5	40	90.5	92.5
KXL06150M	Return to origin	12.5	10.5	0	5	65	140.5	142.5
KXL06200M	Return to origin	12.5	10.5	0	5	90	190.5	192.5
KXL06300M	Return to origin	12.5	10.5	0	5	140	290.5	292.5

* Return to origin means that is performed return to origin type 4 using DS102/DS112 series.

* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

Origin sensor option 7

Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	Storke center	The origin end face	Opposite end face to origin	CCW Limit	Mechanical limit
KXL06030M	Return to origin	27	25	9.5	0	3	6	8
KXL06050M	Return to origin	47	45	19.5	0	3	6	8
KXL06075M	Return to origin	72	70	32	0	3	6	8
KXL06100M	Return to origin	97	95	44.5	0	3	6	8
KXL06150M	Return to origin	147	145	69.5	0	3	6	8
KXL06200M	Return to origin	197	195	94.5	0	3	6	8
KXL06300M	Return to origin	297	295	144.5	0	3	6	8

* Return to origin means that is performed return to origin type 4 using DS102/DS112 series.

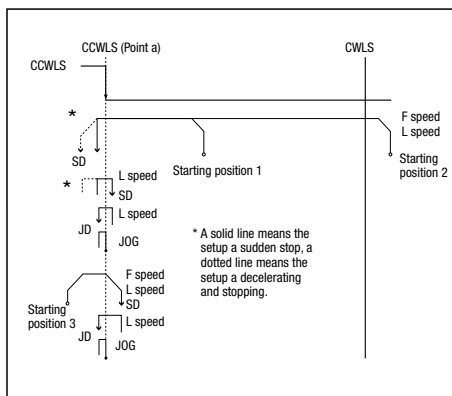
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

KXL series recommendation return to origin method

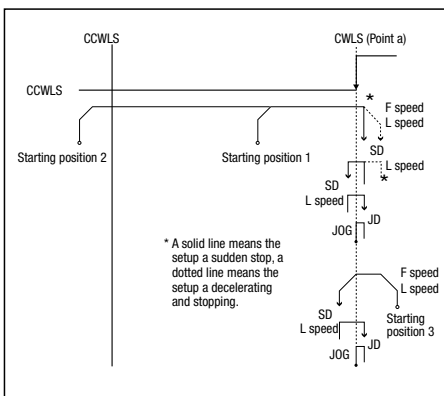
Suruga's motorized stages are different from the specification depending on the models. Therefore return to origin method other than recommendation may not be work correctly. Set to the way of recommendation return origin when using our controller.

■ Origin sensor option when not use

[Type5] Detect in the direction of CCW and perform detected process for CW edge (point a) of CWLS signal.



[Type6] Detect in the direction of CW and perform detected process for CCW edge (point a) of CWLS signal.



[Type11]

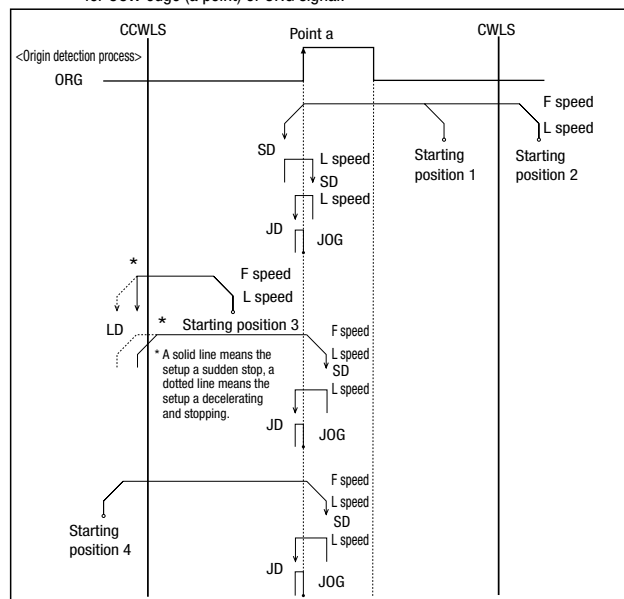
After finished type5, perform detected process for CCW edge of TIMING signal.

[Type12]

After finished type6, perform detected process for CW edge of TIMING signal.

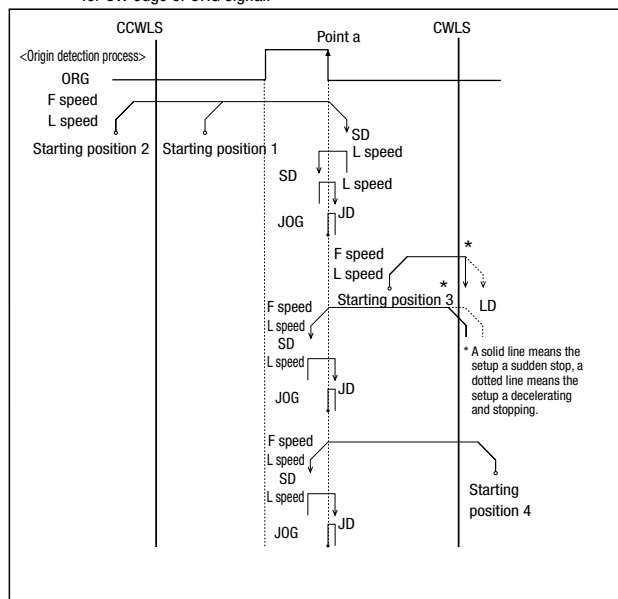
■ Origin sensor option when use

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



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

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



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

Return to sequence

▶ P.1-201~

Adaptive driver

■ Driver ▶ P.1-205~

DC24V type input

Model	CVD507-K-A9	CRD5107P
Divisions	1~1/250 (16 steps)	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



DS112/102

New

Motorized Stage

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Unit

Controller

Linear
BallCAVE-X
Linear ballCross
RollerSlide
Guide☐ 40☐ 50☒ 60☐ 70☐ 80☐ 100☐ 120☐ Other

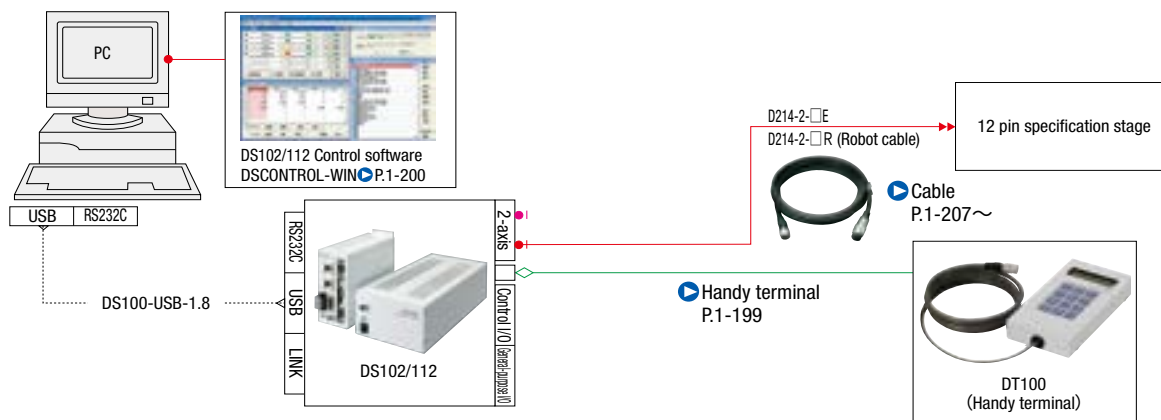
1-KXL

046

Connectin example

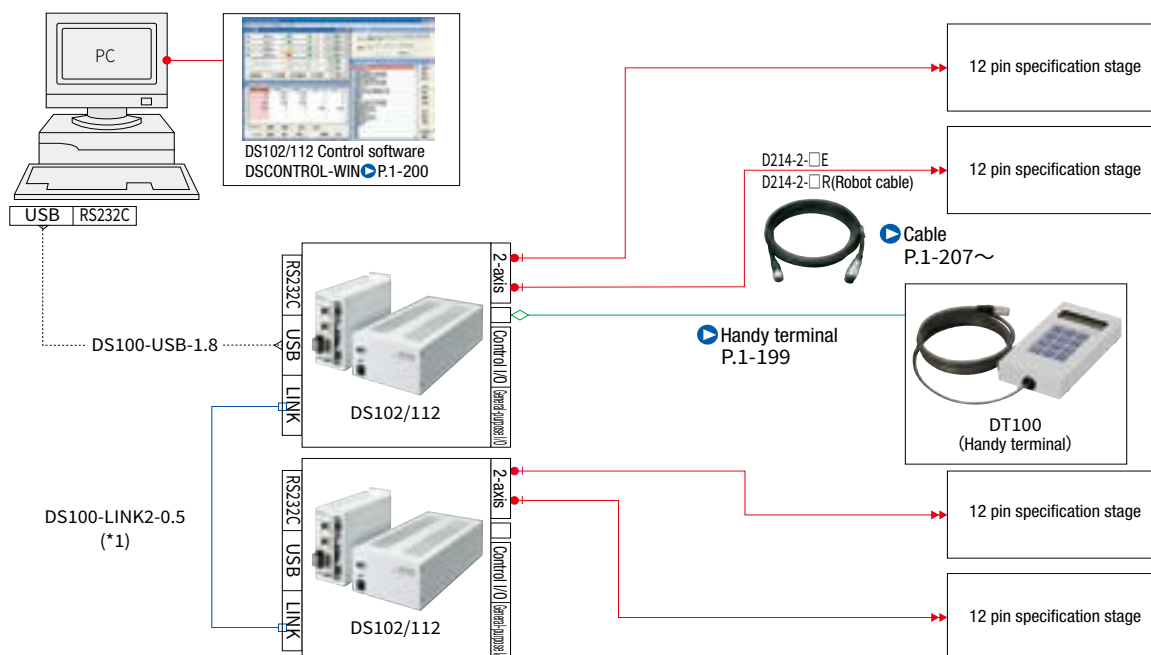
■ Connection example 1 Motorized Stage 1axis: When holding a terminal device (using control software)

*USB cable connection between PC and controller.



■ Connection example 2 Motorized Stage 4axis: When holding a terminal device (using control software)

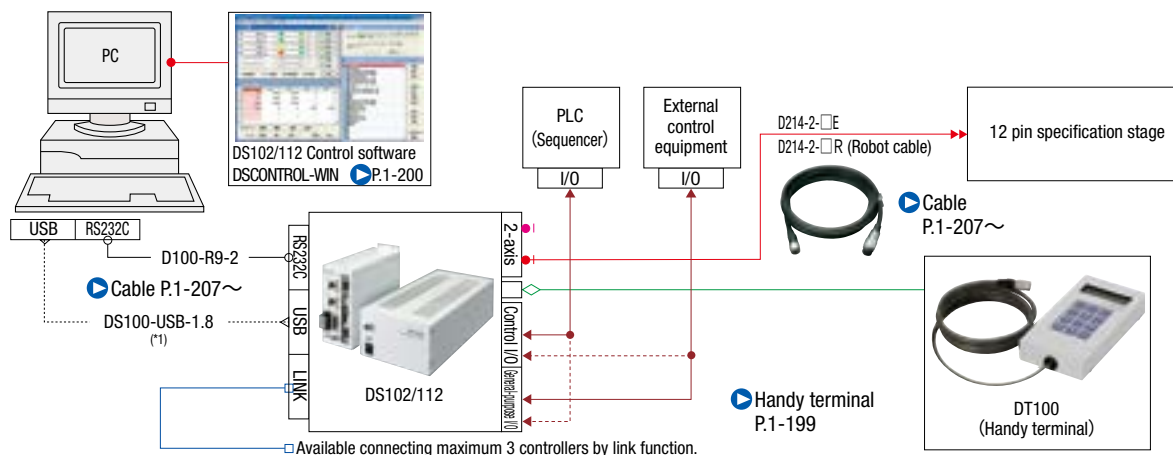
*USB cable connection between PC and controller.



(*1) It is possible to control up to 3 controllers (for a maximum of 6-axis control) with link function.

■ Connection example 3 When controlling from the PLC I/O Unit.

*USB cable connection between PC and controller.



(*1) Using the USB hub, it is controllable in a single PC up to four link networks (24-axis).