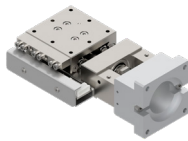
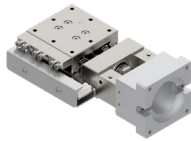
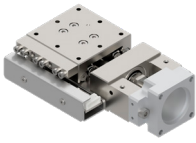


PG413V-L-P28

PG413V-L-S38

PG413V-L-S40

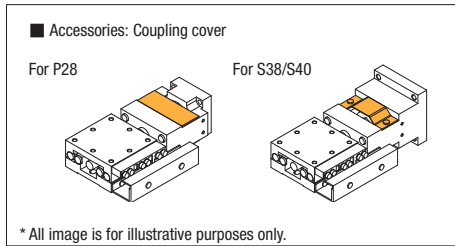


* All image is for illustrative purposes only.

Accessory	P28	S38	S40	
Motor bracket	Installed on main body			
Coupling (screws included)	○			
Coupling cover (screws included)	○			
Mounting screw	For Motor	4 of M2.5×10	4 of M3×12	2 of M4×12
	For Main Body	4 of M4×8 (PG615、PG715) M4×8 4本(PG615、PG715)		
Sensor cable	○(PG-H-ASSY5-□000) *			
Cable tie	-			

*Sensor cable: Choose from 2m, 3m, or 5m

Weight	P28	S38	S40
PG413	0.36kg	0.39kg	0.39kg
PG513	0.47kg	0.50kg	0.50kg
PG615	0.59kg	0.62kg	0.62kg
PG715	0.72kg	0.75kg	0.75kg

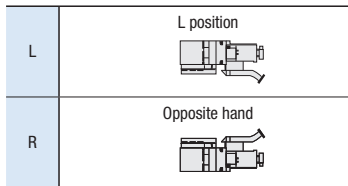


PG413V-LA-P28

1 Table size/Travel distance

Code	Size	Travel distance
413	□40mm	13mm
513	□50mm	
615	□60mm	
715	□70mm	15mm

2 Sensor cover location



3 Sensor logic

A	All N.C.
B	All N.O.
C	Limit: N.C / ORG: N.O.

4 Applicable Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□38 Servo motor specification

5 Cable option

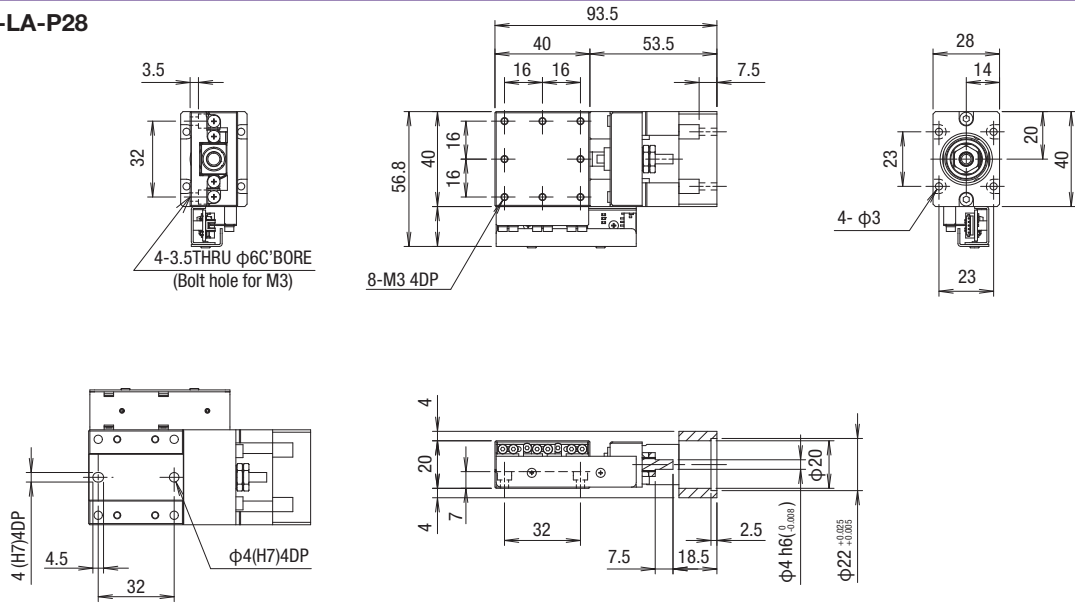
Code	Specification
Blank	Sensor cable 2m One end loose wire
3	Sensor cable 3m One end loose wire
5	Sensor cable 5m One end loose wire

		SPEC			
Model		PG413V-LA-P28	PG513V-LA-P28	PG615V-LA-P28	PG715V-LA-P28
(Opposite hand)		PG413V-RA-P28	PG513V-RA-P28	PG615V-RA-P28	PG715V-RA-P28
Mechanical specification	Travel distance	13mm		15mm	
	Stage table size	40×40mm	50×50mm	60×60mm	70×70mm
	Feed screw (Ball screw)	φ6 Lead 1			
	Guide	Linear Ball Guide			
	Main material— Surface finishing	Stainless—Electroless nickel plating			
Accuracy specification	Weight	0.36kg	0.47kg	0.59kg	0.72kg
	Resolution/Pulse	2μm(Full)/1μm(Half)			
	MAX speed	10mm/sec			
	Uni-directional positioning accuracy	6μm			
	Repeatability positioning accuracy	±0.5μm			
	Load capacity	10kgf [98N]			
	Moment stiffness	Pitch 0.22/yaw 0.17/ roll 0.12 ["/N · cm]	Pitch 0.14/yaw 0.10/ roll 0.06 ["/N · cm]	Pitch 0.08/yaw 0.07/ roll 0.03 ["/N · cm]	Pitch 0.03/yaw 0.03/ roll 0.01 ["/N · cm]
	Lost motion	1μm			
	Backlash	0.5μm			
	Straightness	1μm			
Sensor	Parallelism	15μm			
	Motion parallelism	5μm			
	Pitching/Yawing	15"/10"			
	Limit sensor	Available			
	Origin sensor	Available			
Slit origin sensor	-				

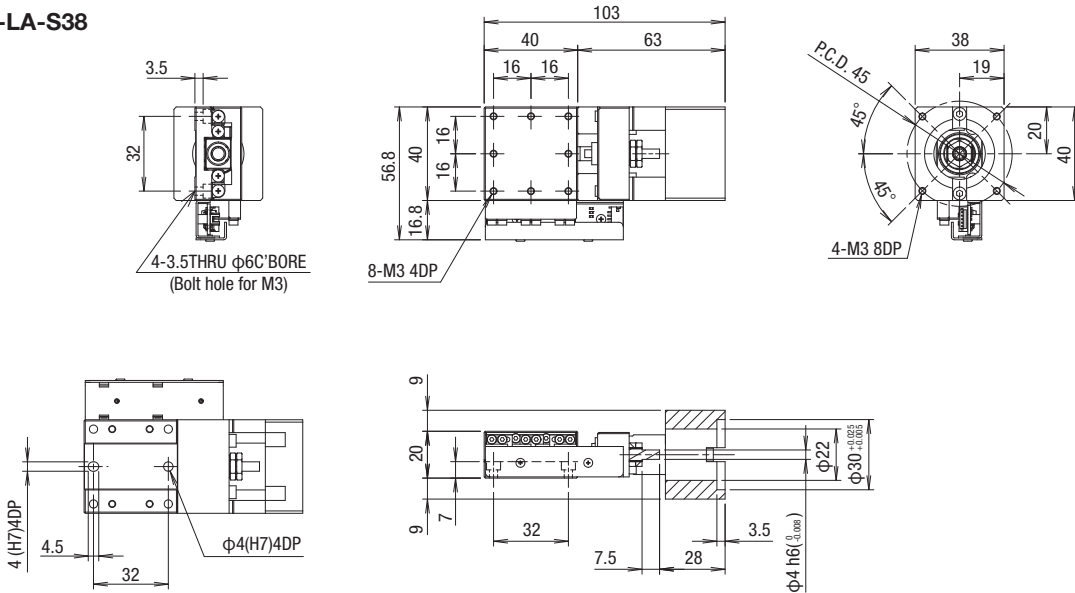
* is the standard motor value.

Dimensions

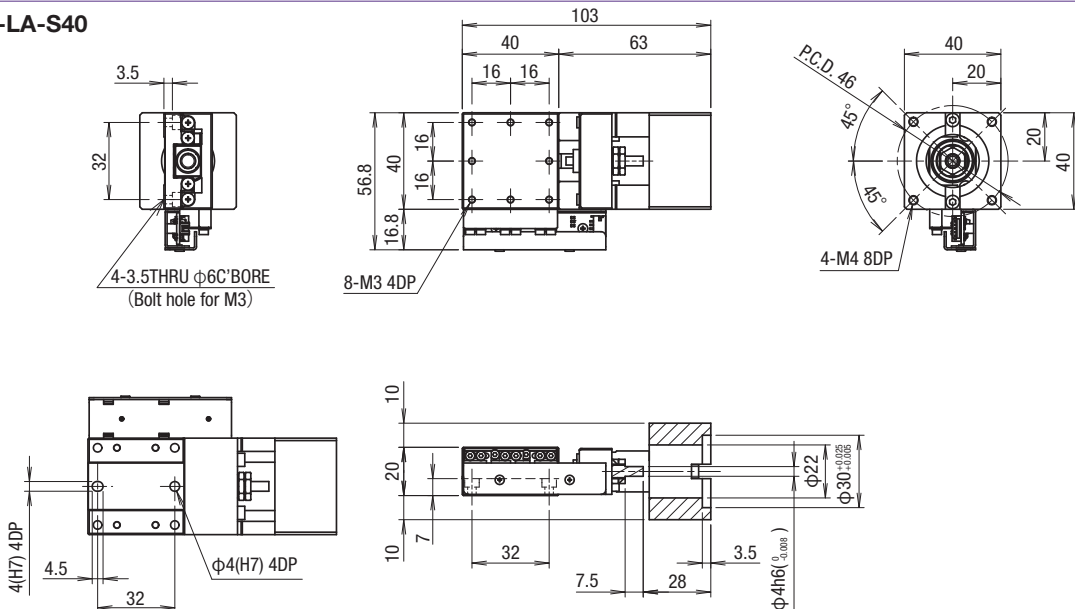
PG413V-LA-P28



PG413V-LA-S38



PG413V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

Ohter

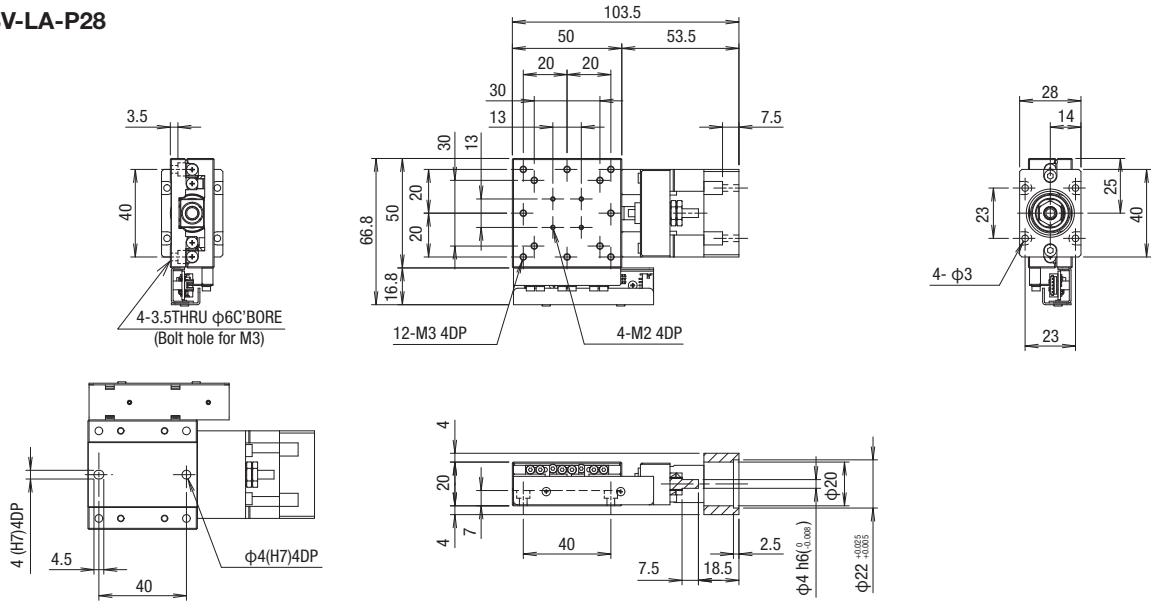
ML

002

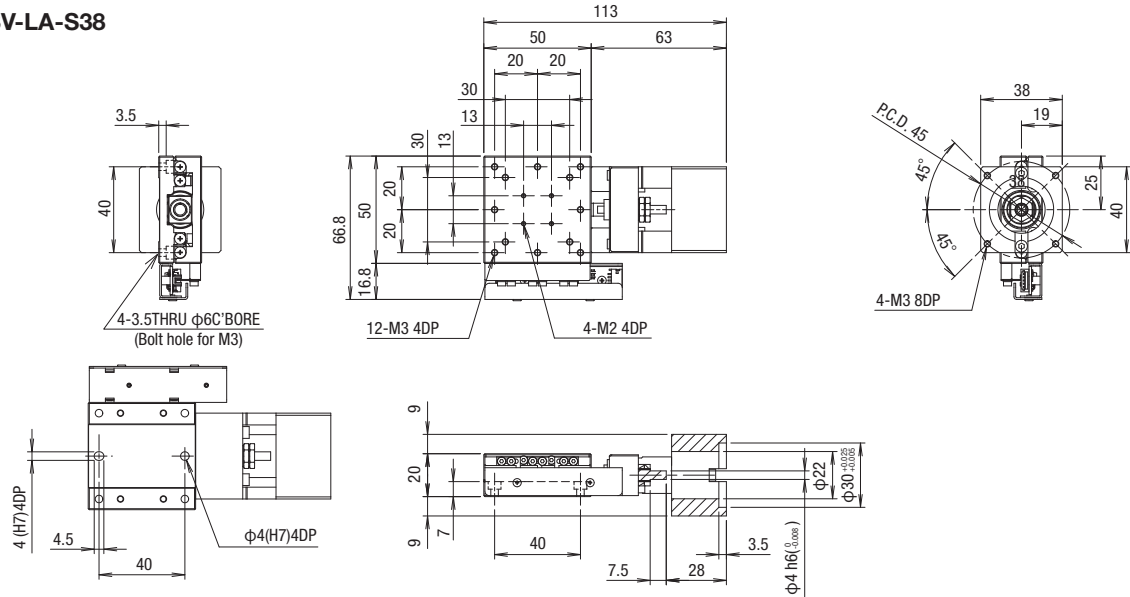
Motorless Specification

Dimensions

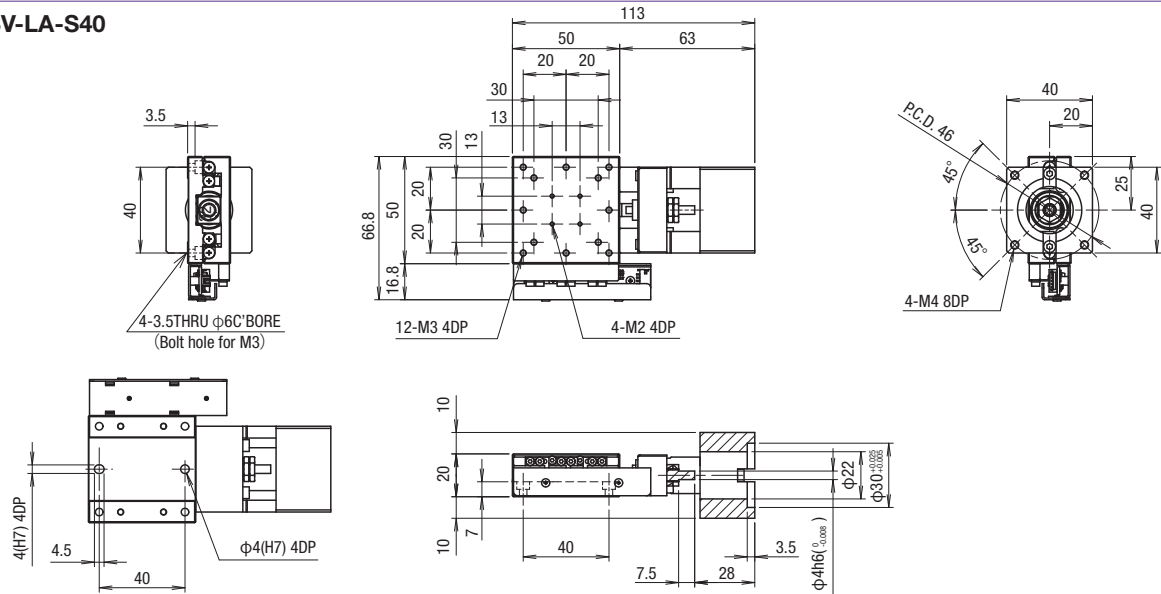
PG513V-LA-P28



PG513V-LA-S38



PG513V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

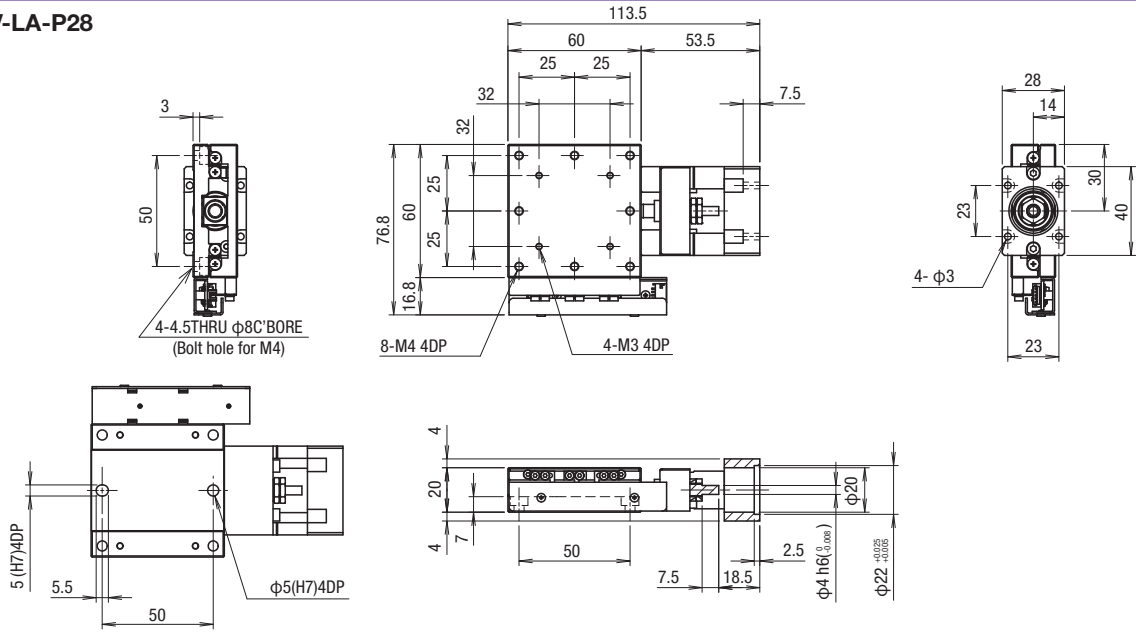
Other

ML

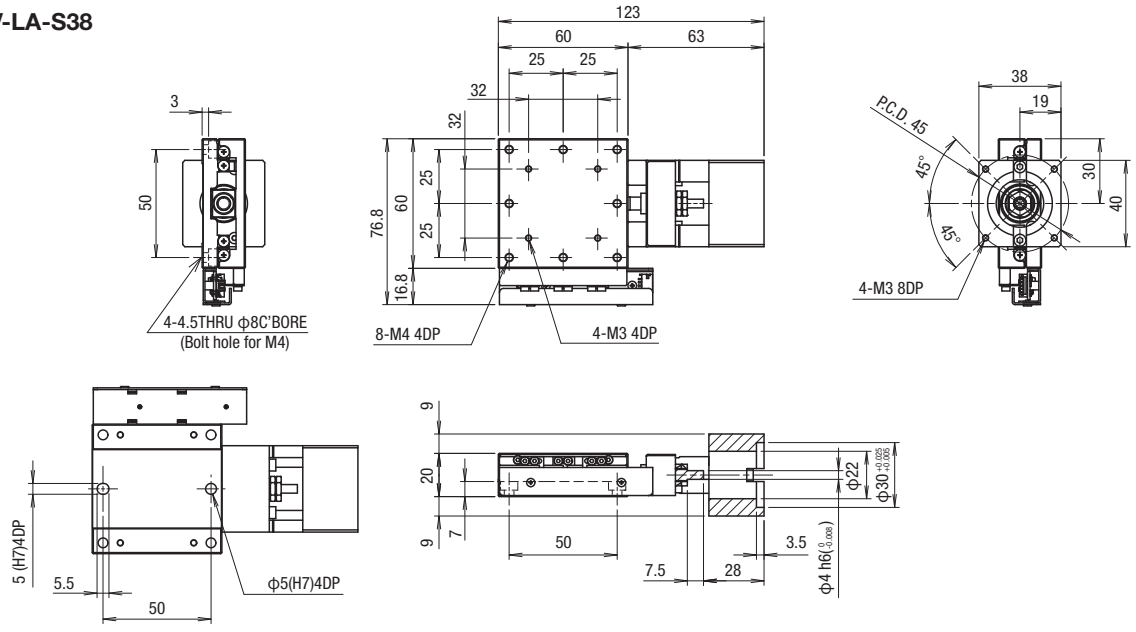
003

Dimensions

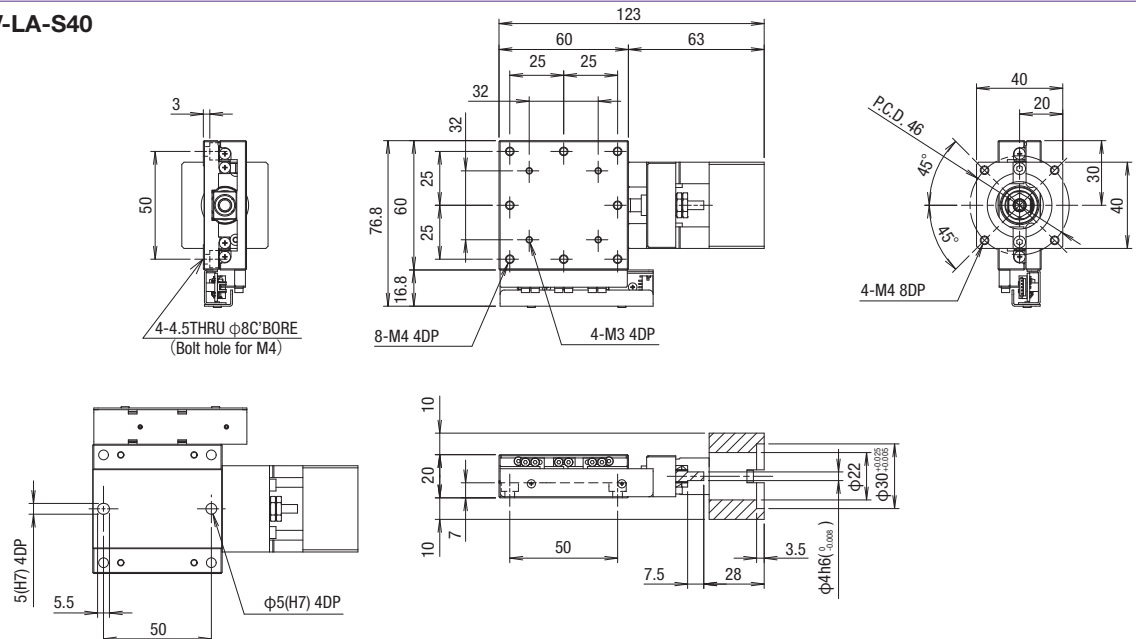
PG615V-LA-P28



PG615V-LA-S38



PG615V-LA-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

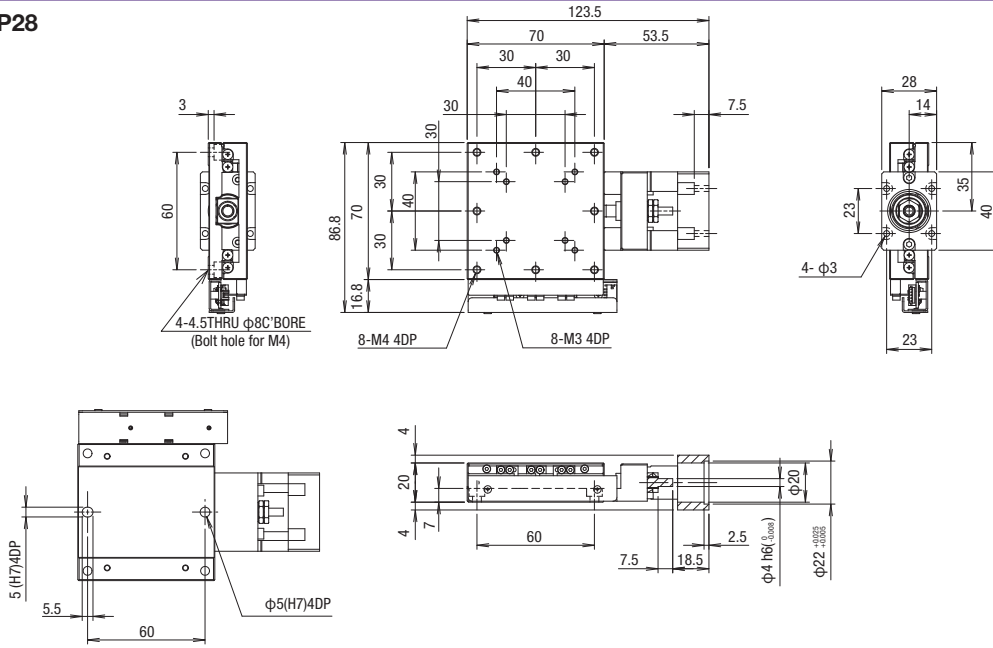
ML

004

Motorless Specification

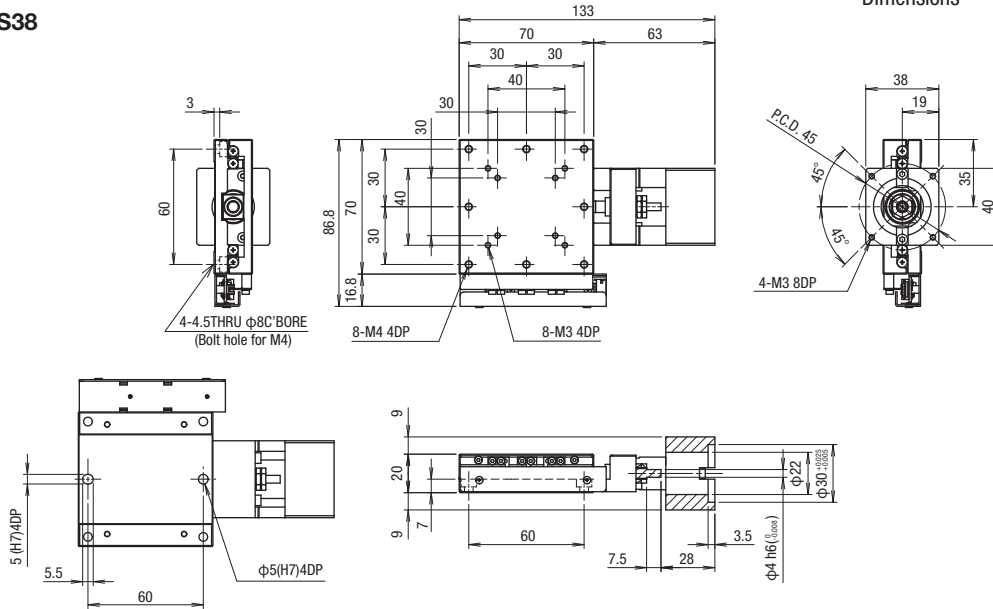
Dimensions

PG715V-LA-P28

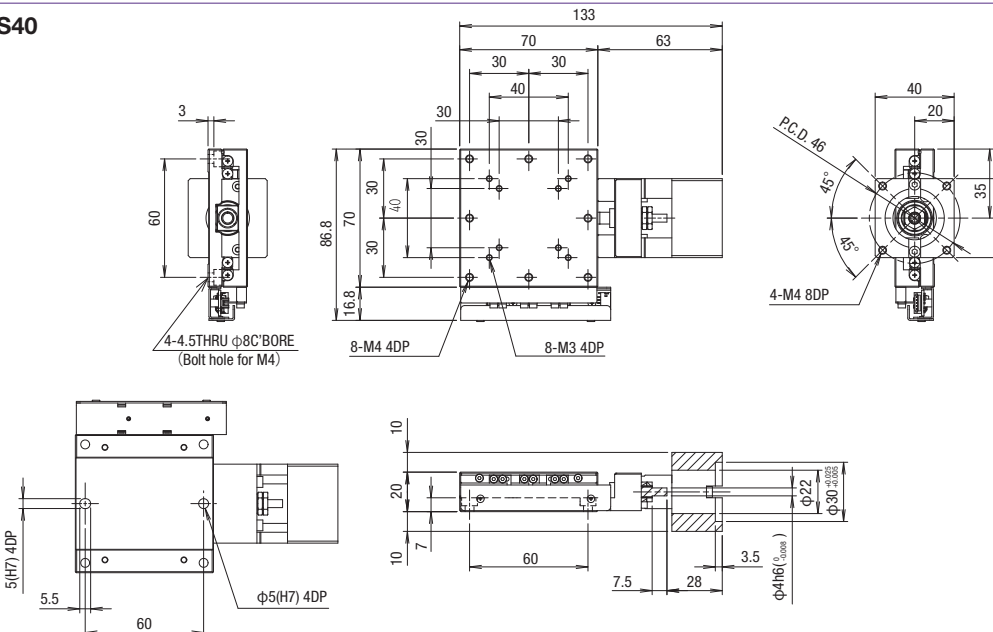


Dimensions

PG715V-LA-S38



PG715V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

005

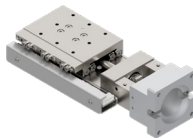
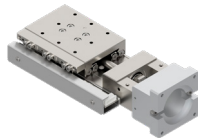
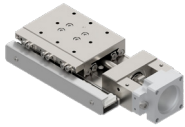
X-axis Linear Ball Guide:PG430V/PG530V/PG650V/PG750V

RoHS

PG430V-L-P28

PG430V-L-S38

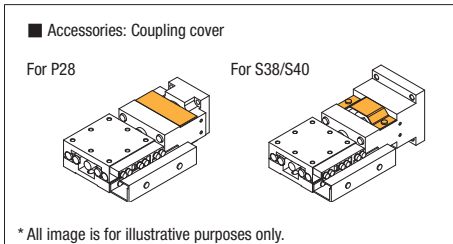
PG430V-L-S40



* All image is for illustrative purposes only.

Accessory	P28	S38	S40	
Motor bracket	Installed on main body			
Coupling (screws included)	○			
Coupling cover (screws included)	○			
Mounting screw	For Motor	4 of M2.5×10	4 of M3×12	2 of M4×12
	For Main Body	4 of M3×8 (PG430、PG530) 4 of M4×8 (PG650、PG750)		
Sensor cable	○ (PG-H-ASSY5-□000) *			
Cable tie	-			

*Sensor cable: Choose from 2m, 3m, or 5m



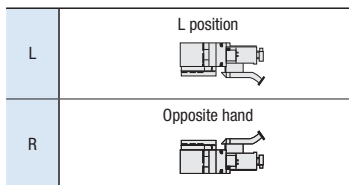
Weight	P28	S38	S40
PG430	0.50kg	0.53kg	0.53kg
PG530	0.63kg	0.66kg	0.66kg
PG650	0.95kg	0.98kg	0.98kg
PG750	1.12kg	1.15kg	1.15kg

PG430V-LA-P28

1 Table size/Travel distance

Code	Size	Travel distance
430	40×60mm	30mm
530	50×70mm	
650	60×100mm	50mm
750	70×110mm	

2 Sensor cover location



3 Sensor logic

A	All N.C.
B	All N.O.
C	Limit: N.C. / ORG: N.O.

4 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

5 Cable option

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

		SPEC			
Model		PG430V-LA-P28	PG530V-LA-P28	PG650V-LA-P28	PG750V-LA-P28
(Opposite hand)		PG430V-RA-P28	PG530V-RA-P28	PG650V-RA-P28	PG750V-RA-P28
Mechanical specification	Travel distance	30mm		50mm	
	Stage table size	40×60mm	50×70mm	60×100mm	70×110mm
	Feed screw (Ball screw)	φ6 Lead 1			
	Guide	Linear Ball Guide			
Mechanical specification	Main material- Surface finishing	Stainless—Electroless nickel plating			
	Weight	0.50kg	0.63kg	0.95kg	1.12kg
Accuracy specification	Resolution/Pulse	2μm(Full)/1μm(Half)			
	MAX speed	10mm/sec			
	Uni-directional positioning accuracy	12μm			
	Repeatability positioning accuracy	±0.5μm			
	Load capacity	10kgf [98N]			
	Moment stiffness	Pitch 0.24/yaw 0.18/ roll 0.26 ["/N · cm]	Pitch 0.12/yaw 0.13/ roll 0.1 ["/N · cm]	Pitch 0.05/yaw 0.05/ roll 0.05 ["/N · cm]	Pitch 0.03/yaw 0.03/ roll 0.03 ["/N · cm]
	Lost motion	1μm			
	Backlash	0.5μm			
	Straightness	2μm			
	Parallelism	15μm			
Sensor	Motion parallelism	10μm			
	Pitching/Yawing	20"/15"			
	Limit sensor	Available			
	Origin sensor	Available			
	Slit origin sensor	-			

※ is the value of the standard motor.

Motorless

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

Other

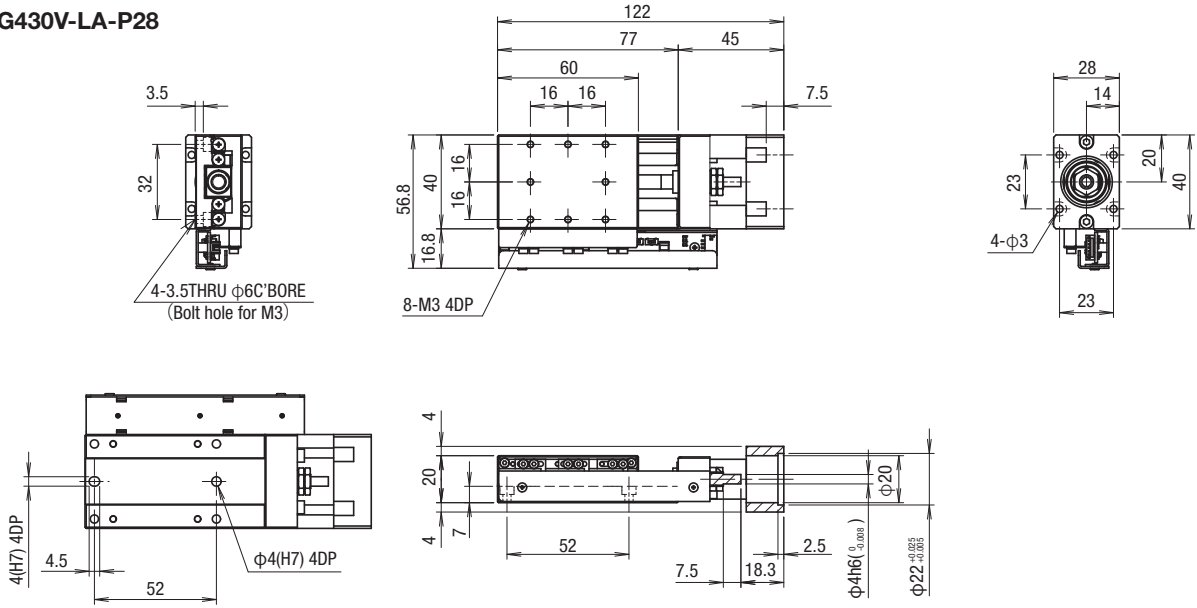
ML

006

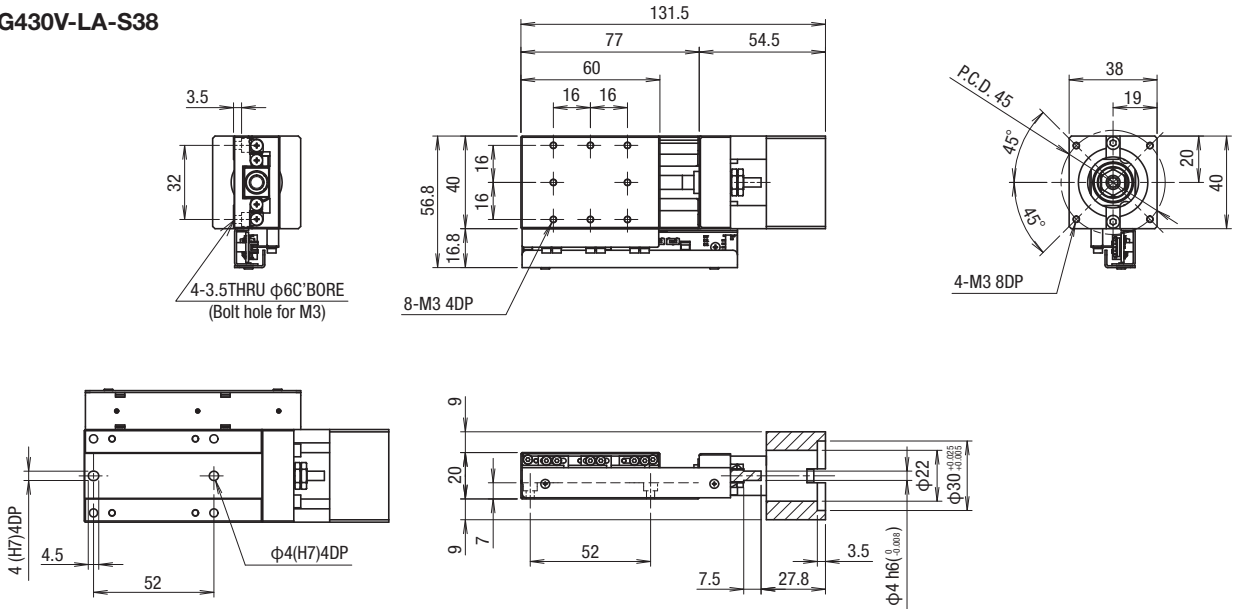
Motorless Specification

Dimensions

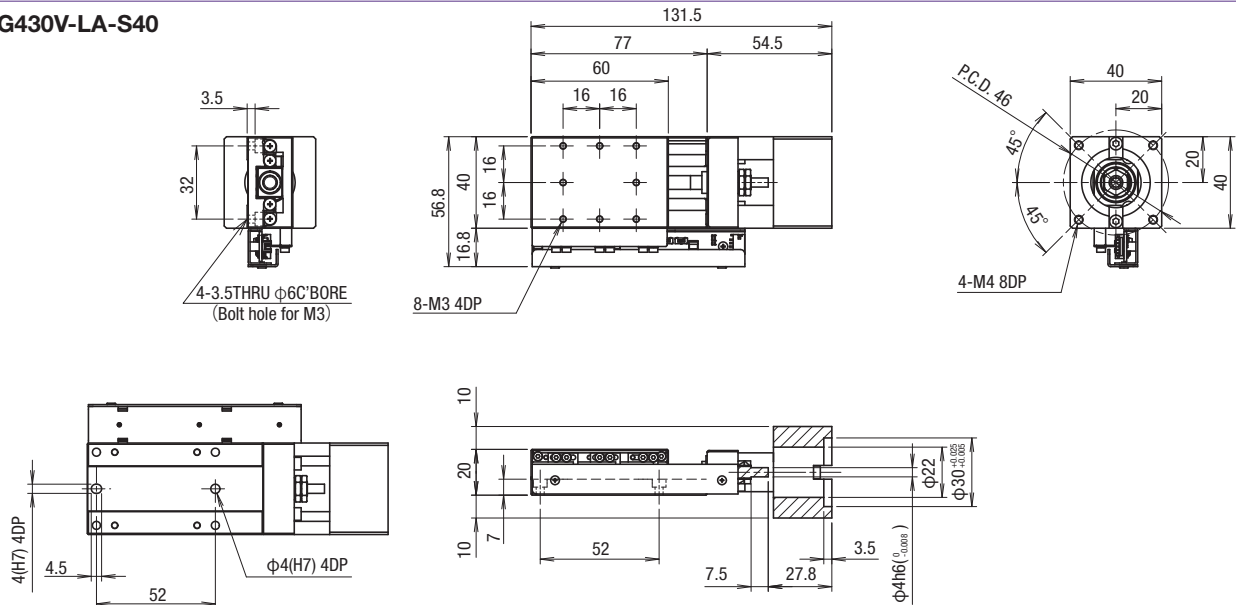
PG430V-LA-P28



PG430V-LA-S38



PG430V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

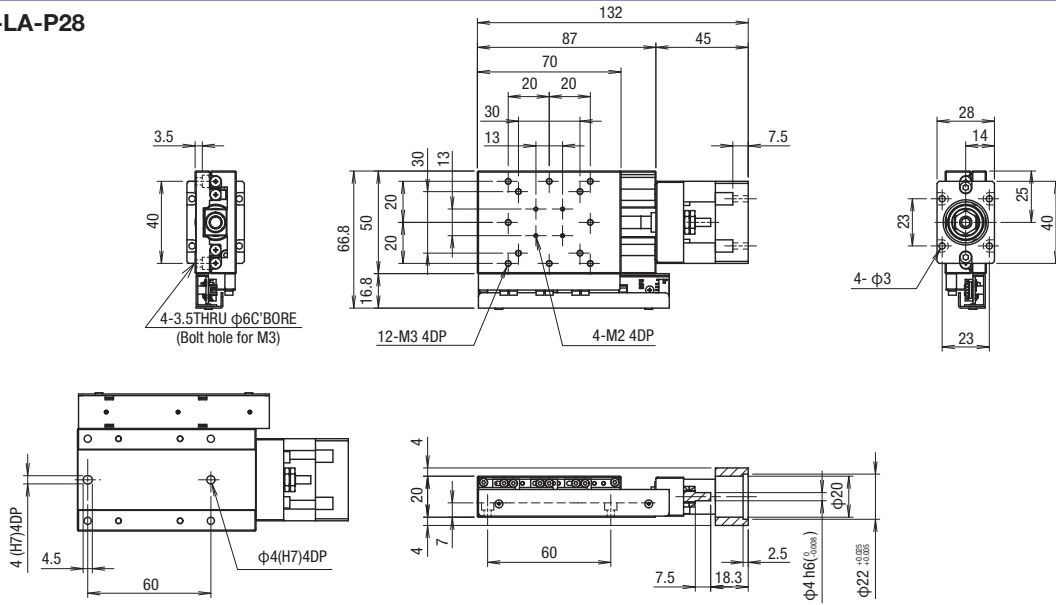
Other

ML

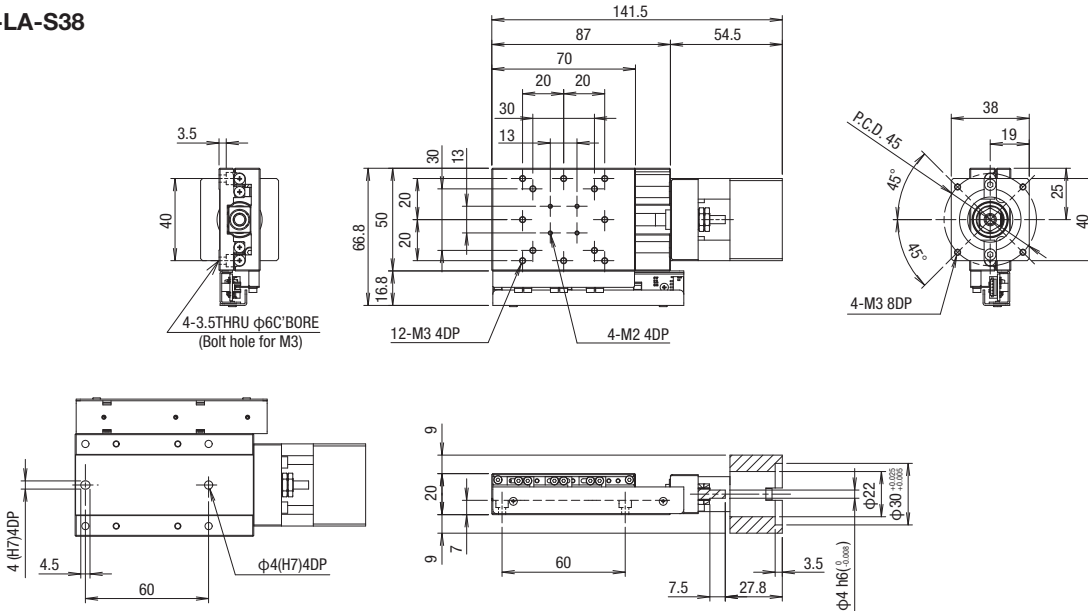
007

Dimensions

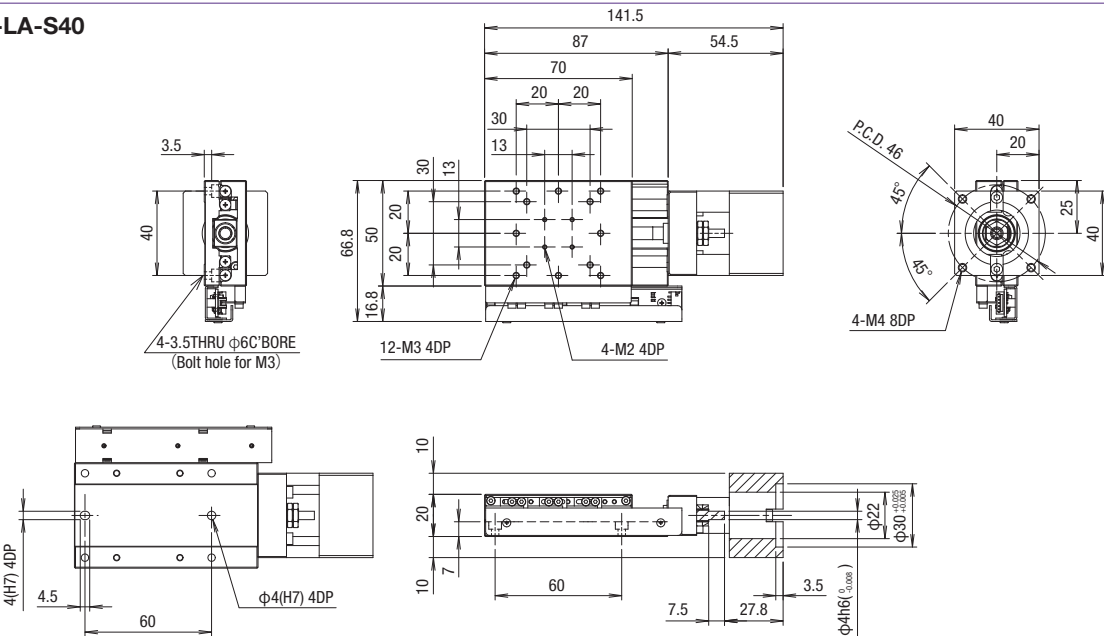
PG530V-LA-P28



PG530V-LA-S38



PG530V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

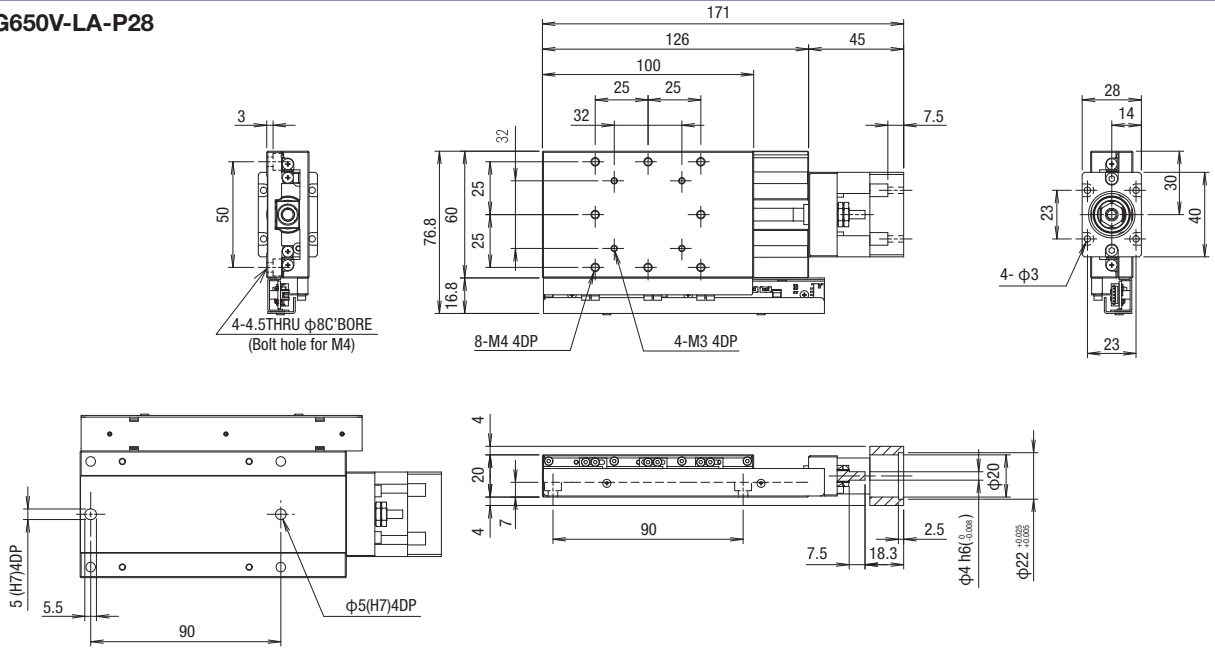
ML

008

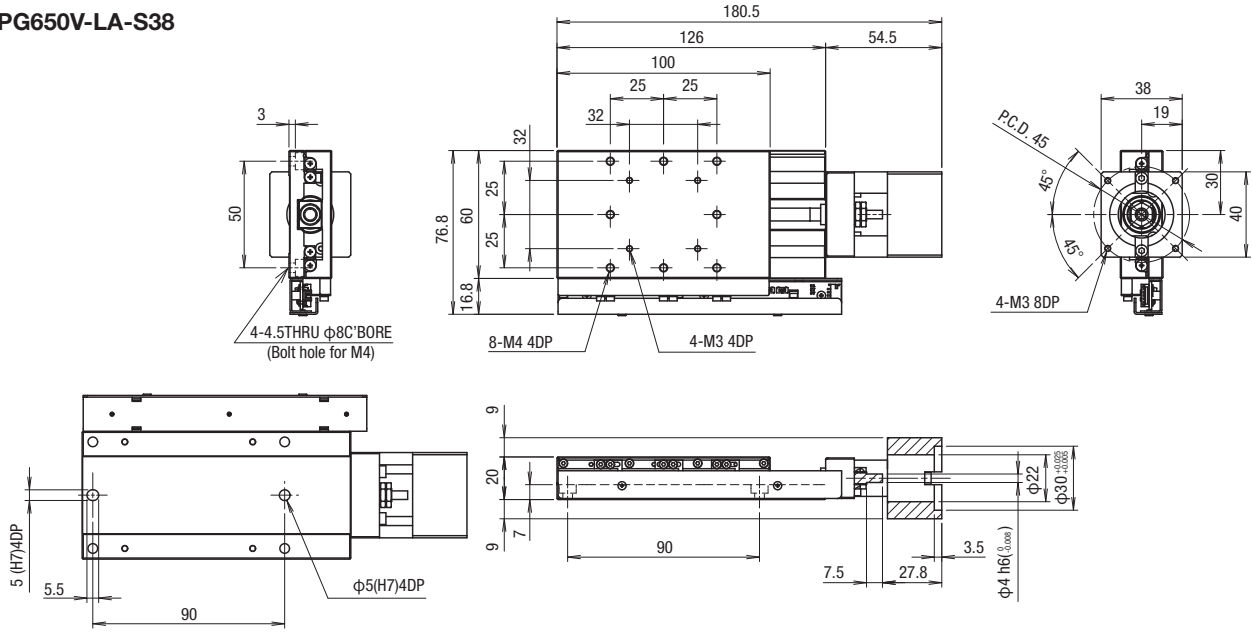
Motorless Specification

Dimensions

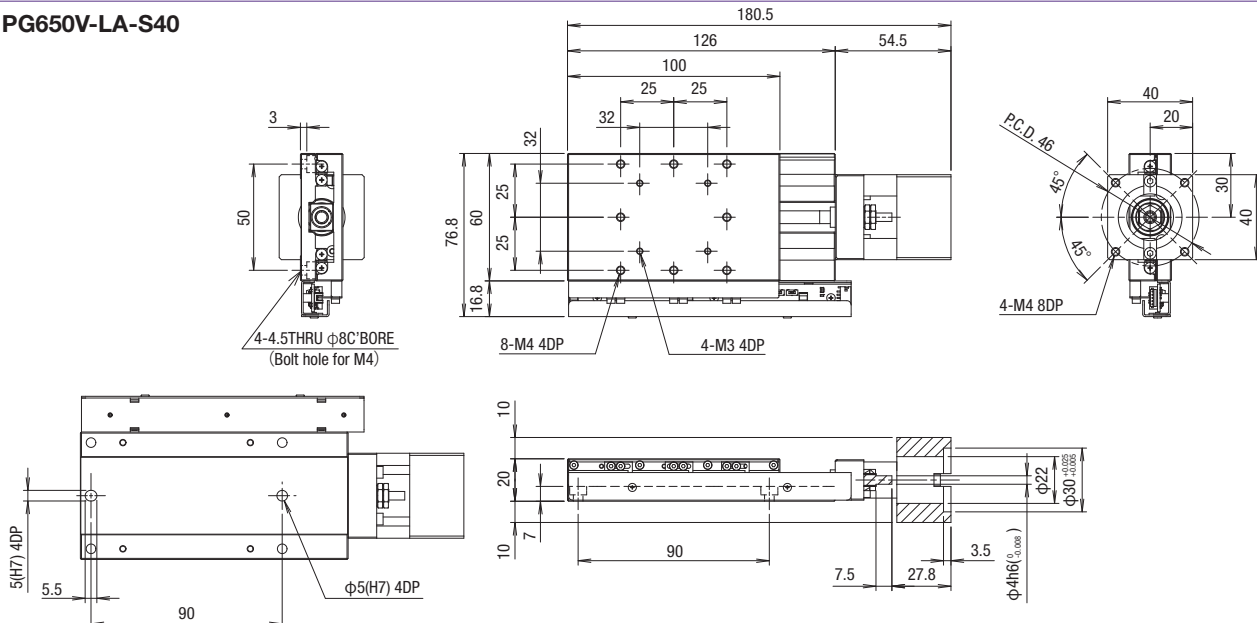
PG650V-LA-P28



PG650V-LA-S38



PG650V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

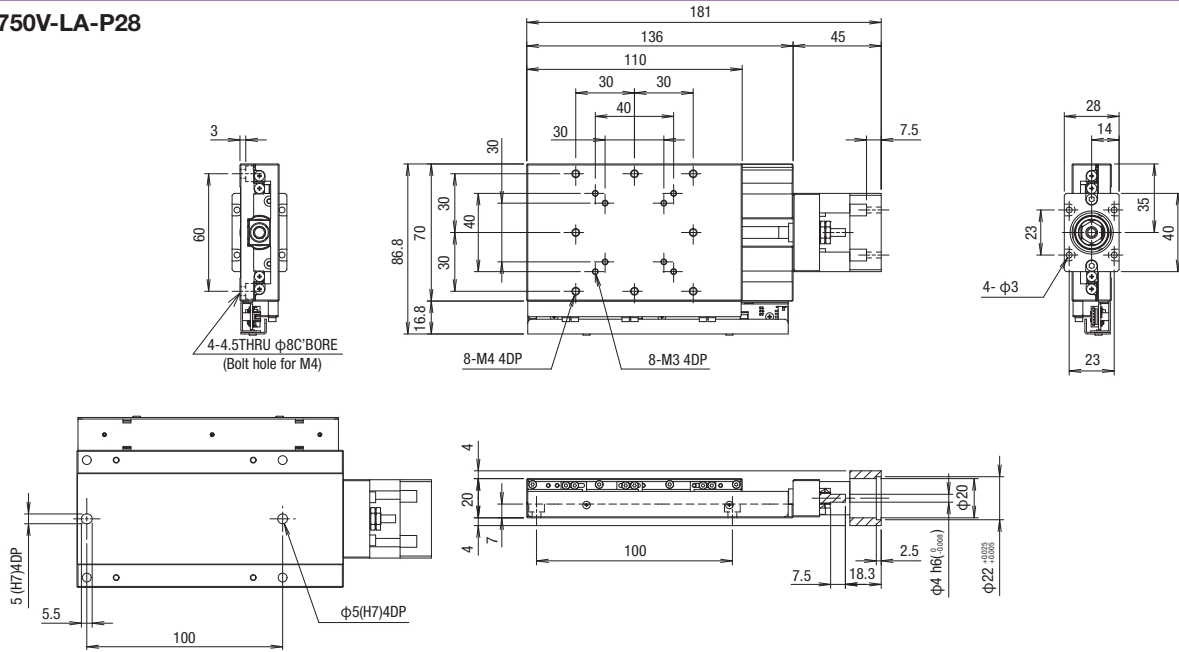
70

Other

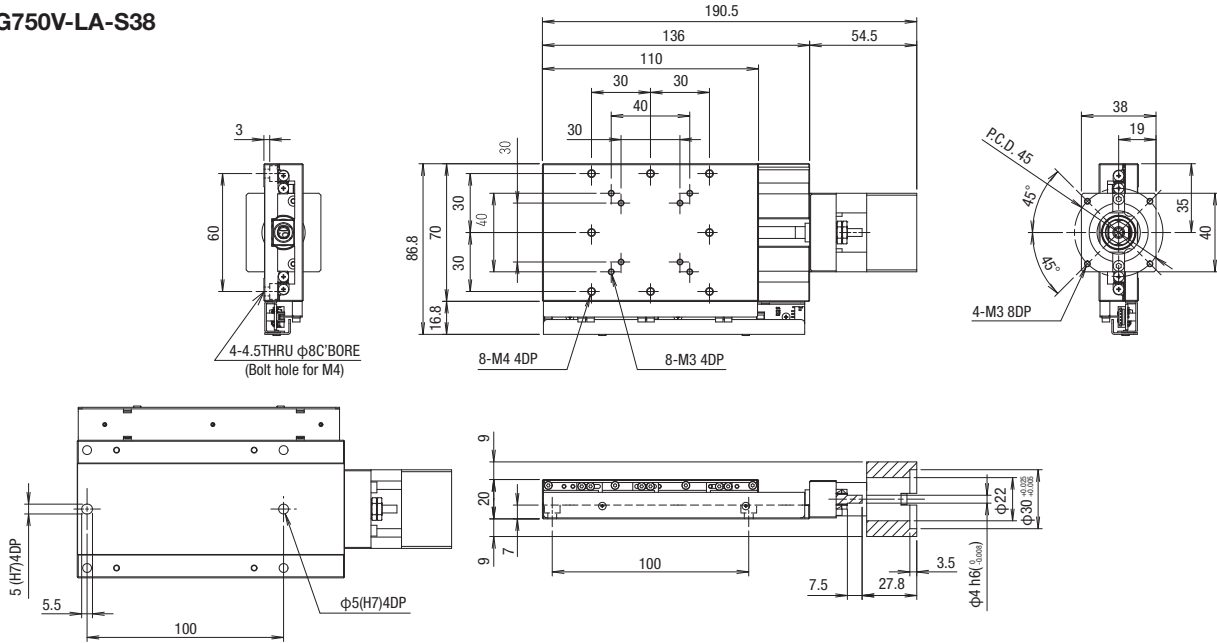
ML
009

Dimensions

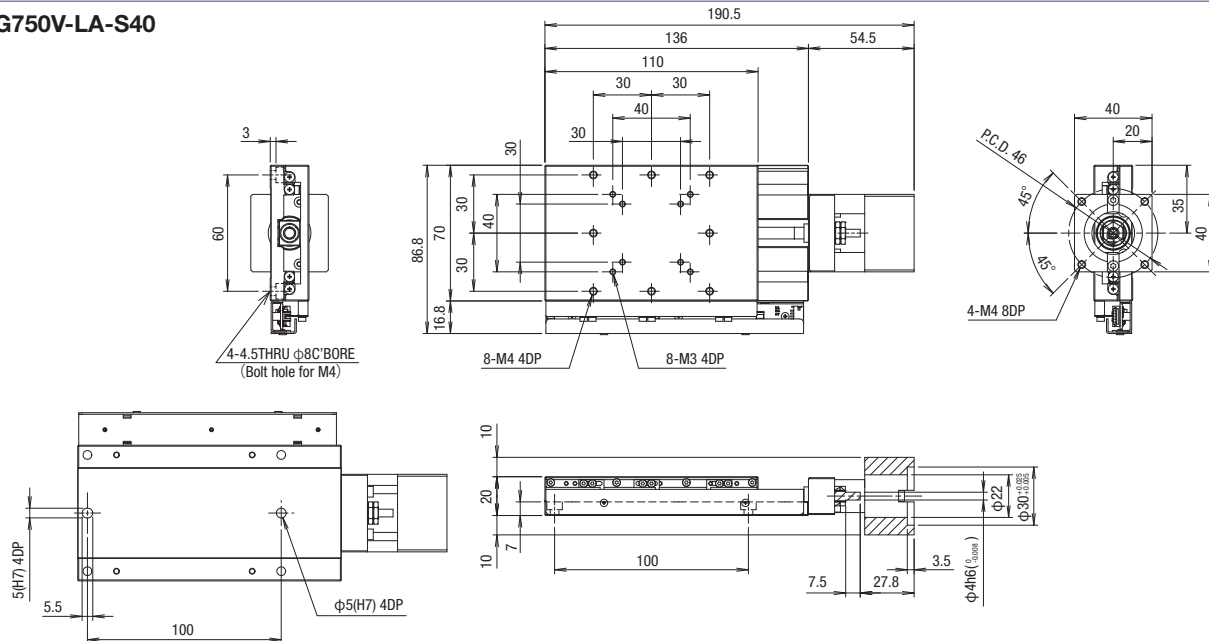
PG750V-LA-P28



PG750V-LA-S38



PG750V-LA-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

010

Motorless Specification

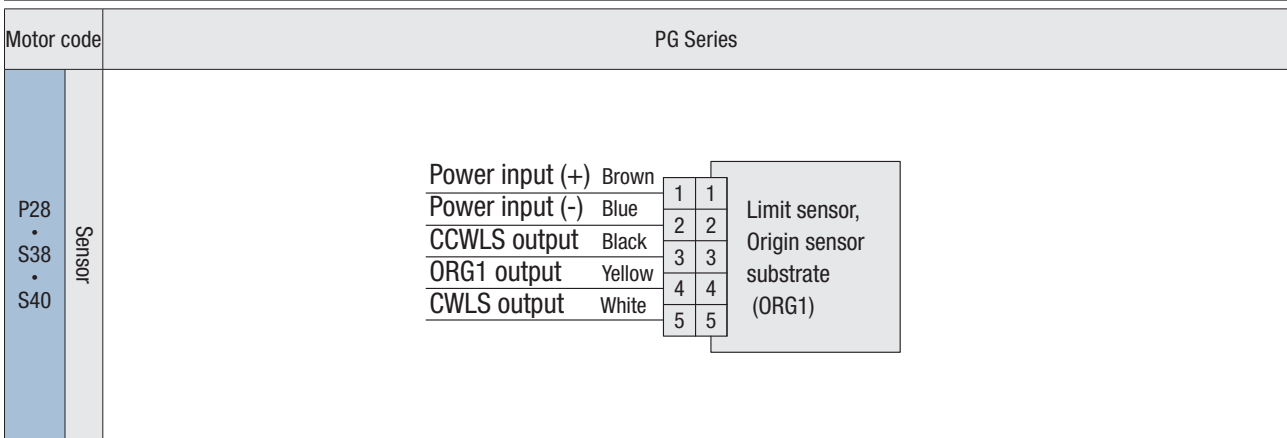
Electrical Specification: PG Series

Motorless

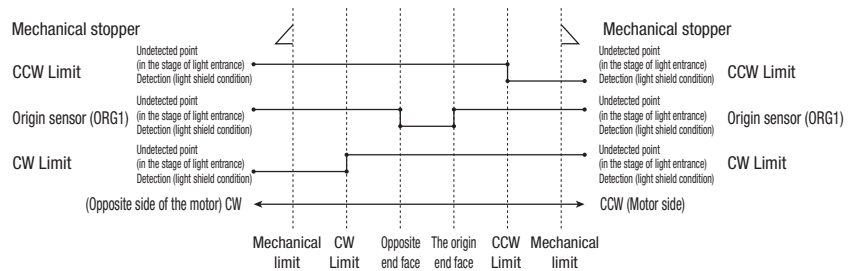
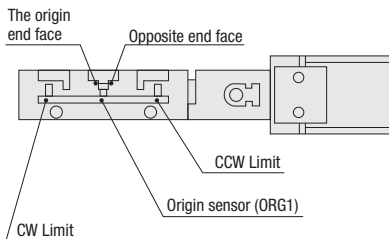
Electrical Specification

Motor code		P28	S38	S40
Feature		For □28mm Stepping motor	For □38mm AC Servo motor	For □40mm AC Servo motor
Model		PG413/PG513/PG615/PG715/PG430/PG530/PG650/PG750		
Connector	Model	Sensor		
	Receiving connector	sensor : ZHR-5 (JST)		
Sensor board	Limit sensor	Available		
	Origin sensor	Available		
	Slit origin sensor	-		
	Sensor	Photo microsensor EE-SX4320 (Omron Co., Ltd.)		
	Power-supply voltage	DC5~24V±5%		
	Current consumption	Total 60mA or less		
	Control output	NPN open collector output DC30V 10mA or less		
Output logic	Sensor logic option A	On detection : Output transistor OFF (Non-continuity)		
	Sensor logic option B	On detection : Output transistor ON (Continuity)		
	Sensor logic option C	When limit is detected : Output transistor OFF (Non-continuity) When returning to origin : Output transistor ON (Continuity)		

Connection diagram



Timing chart



Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	Opposite end face	Origin	CCW Limit	Mechanical limit
		Direction of CW ← → Direction of CCW					
PG413, PG513	Return to origin	7.5	7	2	0	7	7.5
PG615-PG715	Return to origin	8.5	8	2	0	8	8.5
PG430-PG530	Return to origin	16	15.5	2	0	15.5	16
PG650-PG750	Return to origin	26	25.5	2	0	25.5	26

* Return to origin means that is performed return to origin type 3 using DS102/DS112 series.(DS102/DS112 are dedicated to 5-phase motors)

* 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.

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

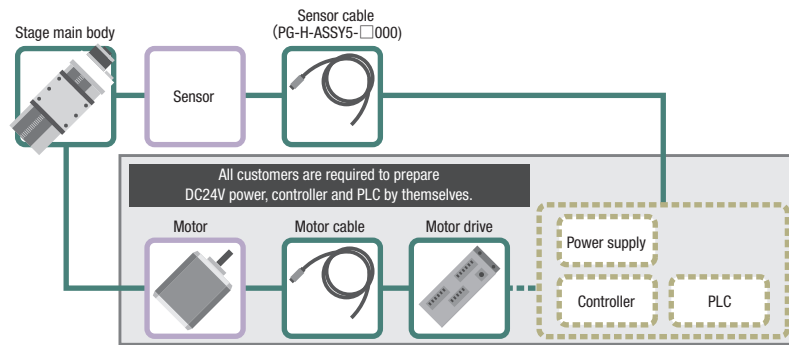
Other

ML

011

Applicable motor code

P28	<input type="checkbox"/> 28mm
	For Stepping motor
S38	<input type="checkbox"/> 38mm
	For AC servo motor
S40	<input type="checkbox"/> 40mm
	For AC servo motor

**[IMPORTANT]**

Unlike standard products, this is a motorless product without a drive source. Please read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchase.

● Scope of Warranty

The following are not covered by the warranty.

- Defects or troubles related to motor installation and adjustment.
- Accuracy after the motor has been assembled by the customer.

Note: Accuracy tests have been performed using a test motor to confirm that all specifications are met.

● Precautions and Restrictions**1. Specifications: Load Capacity and Maximum Speed**

- Use within the product's rated specifications, regardless of motor performance.
- Be aware that the short distance between the limit sensor and mechanical limit increases the risk of collision during overrun.
- Collisions with mechanical limits can damage accuracy and durability.

2. Torque Limits

Using high-torque motors may apply loads exceeding the product's tolerance. If the motor torque exceeds the values below, please apply a torque limit.

- PG Series: [P28] 0.25 N·m / [S38, S40] 1.0 N·m

3. Motor Installation

- Perform centering (alignment) for the stage body, motor, and coupling during installation.
- Misalignment may cause product damage or premature failure.
- Refer to the assembly manual for installation and adjustment procedures.

4. Securing the Connector

- On some products, the connector must be secured by the customer.
- Before securing, the connector is connected to the body only by lead wires.
- Handle with care to prevent wire breakage.

Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

 40 50 60 70

Other

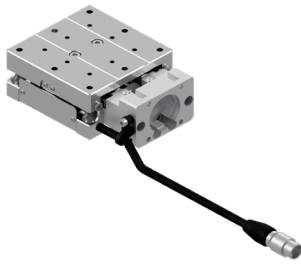
ML

012

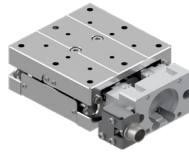
X-axis Linear Ball Guide: KXG06020V

RoHS

KXG06020TV-P28



KXG06020MV-P28



* All image is for illustrative purposes only.

Accessory		P28	S38	S40
Motor bracket		Installed on main body		
Coupling(with screws)		○		
Mounting screw	For Motor	4 of M2.5-6	4 of M3-12	2 of M4-12
	For Main Body	4 of M4-10		
Sensor cable		○(HR10AP-S-SB-6-□) *		
Cable tie		○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KXG06020	0.60kg	0.64kg	0.64kg

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

KXG06020TV-P28-

1

2

3

4

1 Table size/Travel distance

Code	Table size	Travel distance
06020	□60mm	20mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross Roller

□40

□50

□60

□70

Other

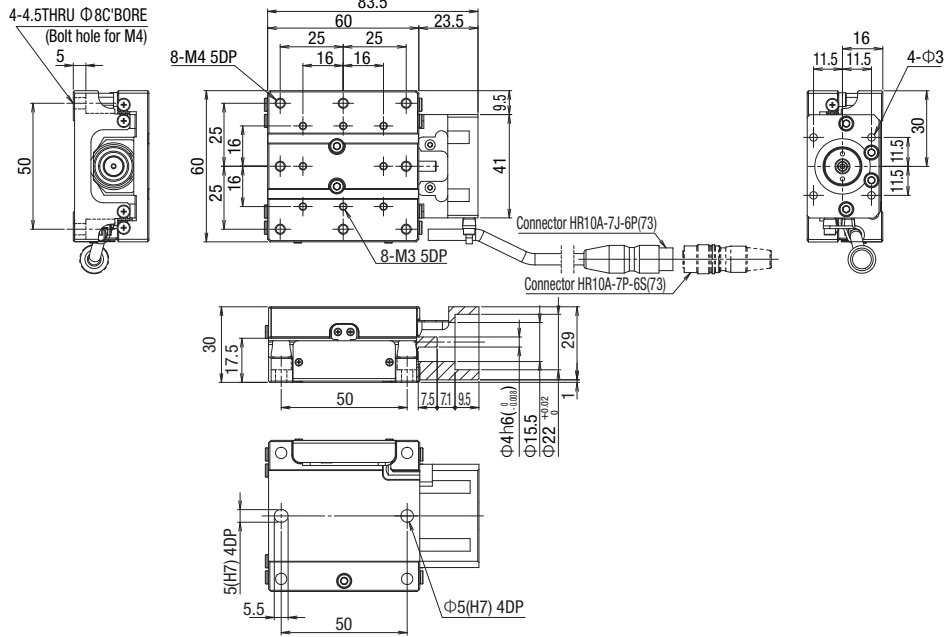
ML
013

		SPEC	
Model		KXG06020TV-P28	KXG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Main materials-Finishing		Special Steel—Electroless nickel plating	
Weight		0.60kg	
Accuracy specification	Resolution/ Pulse	Full/Half	2μm/1μm
		Micro step	0.1μm (1/20 On resolution)
	MAX speed	20mm/sec	
	Uni-directional positioning accuracy	5μm	
	Repeatability positioning accuracy	±0.5μm	
	Load capacity	10kgf [98N]	
	Moment stiffness	Pitch 0.08/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	Available	
	Slit origin sensor	—	

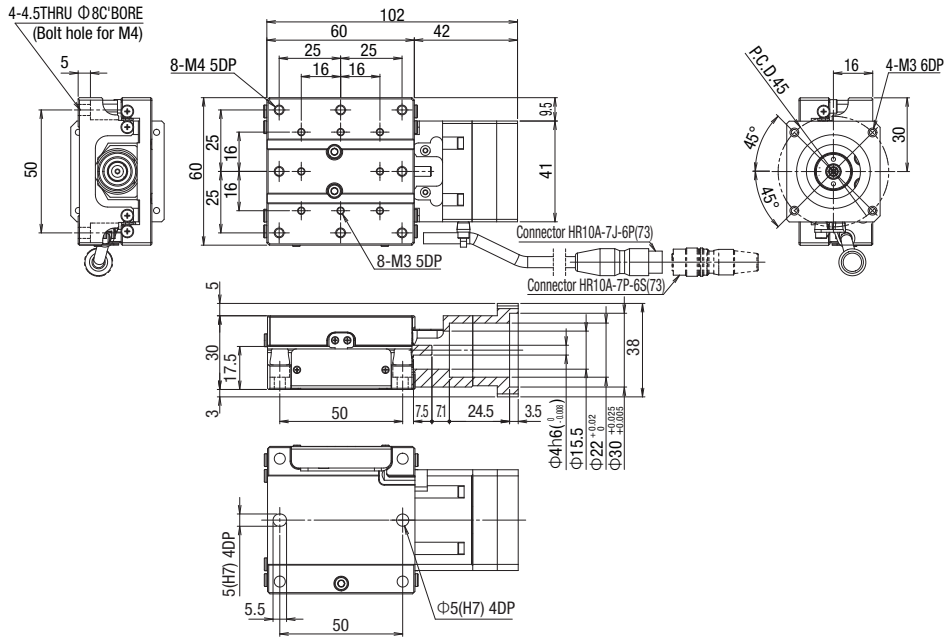
* SPEC is the value of the standard motor.

Dimensions

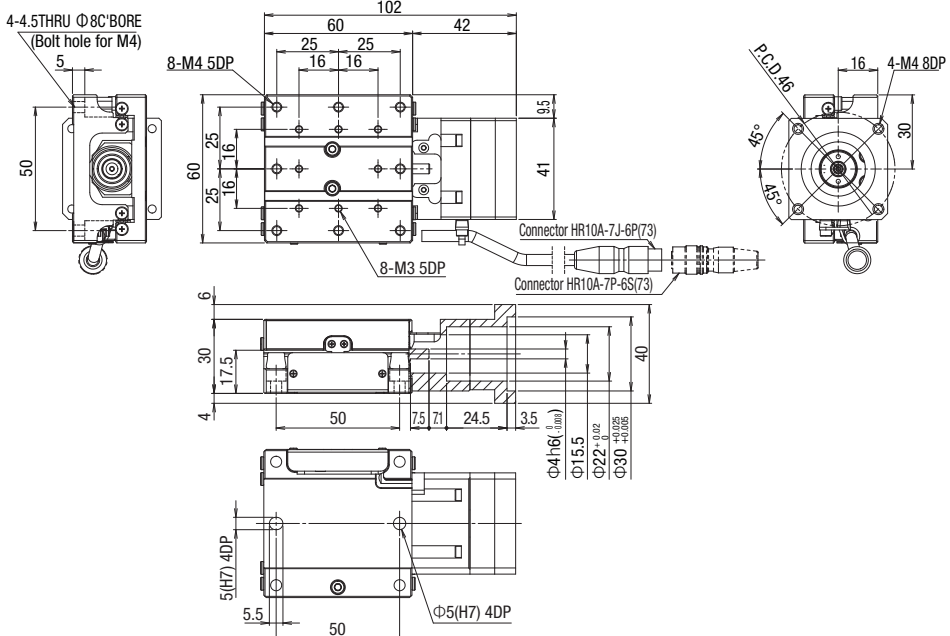
KXG06020TV-P28



KXG06020TV-S38



KXG06020TV-S40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

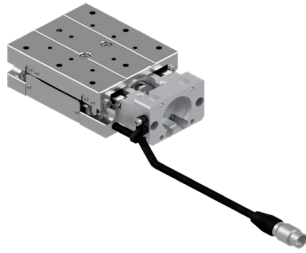
014

Motorless Specification

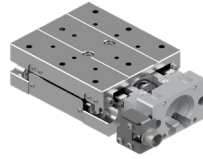
X-axis Linear Ball Guide: KXG06030V

RoHS

KXG06030TV-P28



KXG06030MV-P28



Accessory		P28	S38	S40
Motor bracket		Installed on main body		
Coupling(with screws)		○		
Mounting screw	For Motor	4 of M2.5-6	4 of M3-12	2 of M4-12
	For Main Body	4 of M4-10		
Sensor cable		○(HR10AP-S-SB-6-□) *		
Cable tie		○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KXG06030	0.70kg	0.74kg	0.74kg

* All image is for illustrative purposes only.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

KXG06030TV-P28-

1 Table size/Travel distance

Code	Table size	Travel distance
06030	□60mm	30mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross Roller

□40

□50

□60

□70

Other

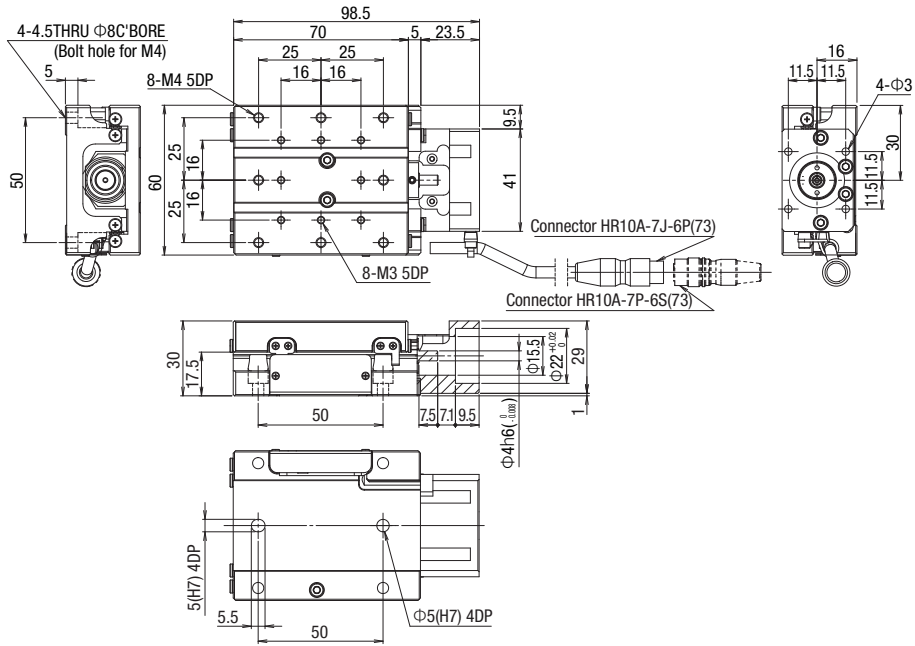
ML
015

		SPEC		
Model		KXG06030TV-P28	KXG06030MV-P28	
Mechanical specification	Travel distance	30mm		
	Stage surface size	60×70mm		
	Connector type	Pigtail	Panel Mount	
	Feed screw (Ball screw)	φ8 Lead 1		
	Guide	Linear Ball Guide		
	Main materials-Finishing	Special Steel—Electroless nickel plating		
Accuracy specification	Weight	0.70kg		
	Resolution/Pulse	Full/Half	2μm/1μm	
		Micro step	0.1μm(1/20 On resolution)	
	MAX speed	20mm/sec		
	Uni-directional positioning accuracy	5μm		
	Repeatability positioning accuracy	±0.5μm		
	Load capacity	10kgf [98N]		
	Moment stiffness	Pitch 0.06/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	Available		
	Slit origin sensor	—		

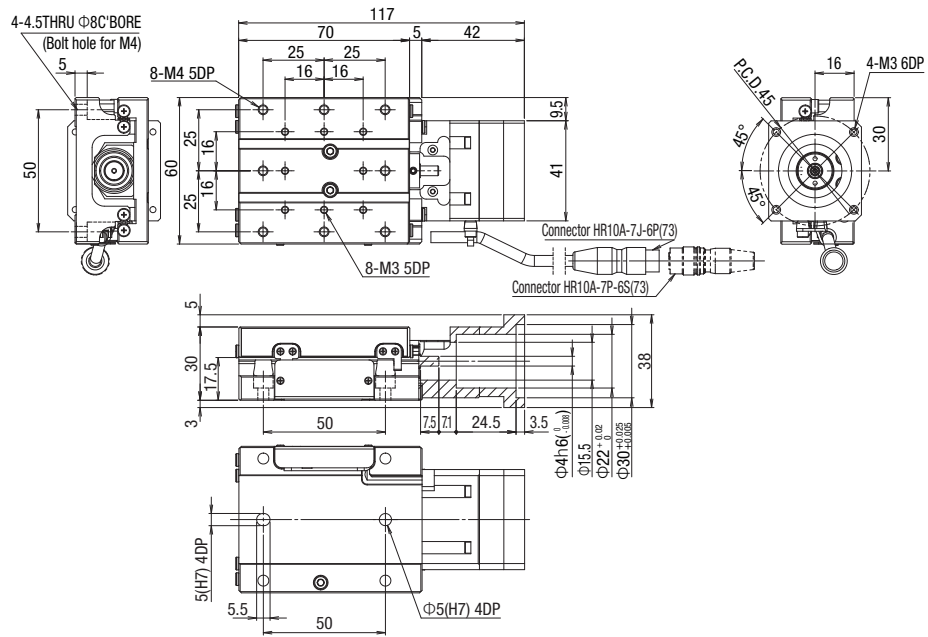
* SPEC is the value of the standard motor.

Dimensions

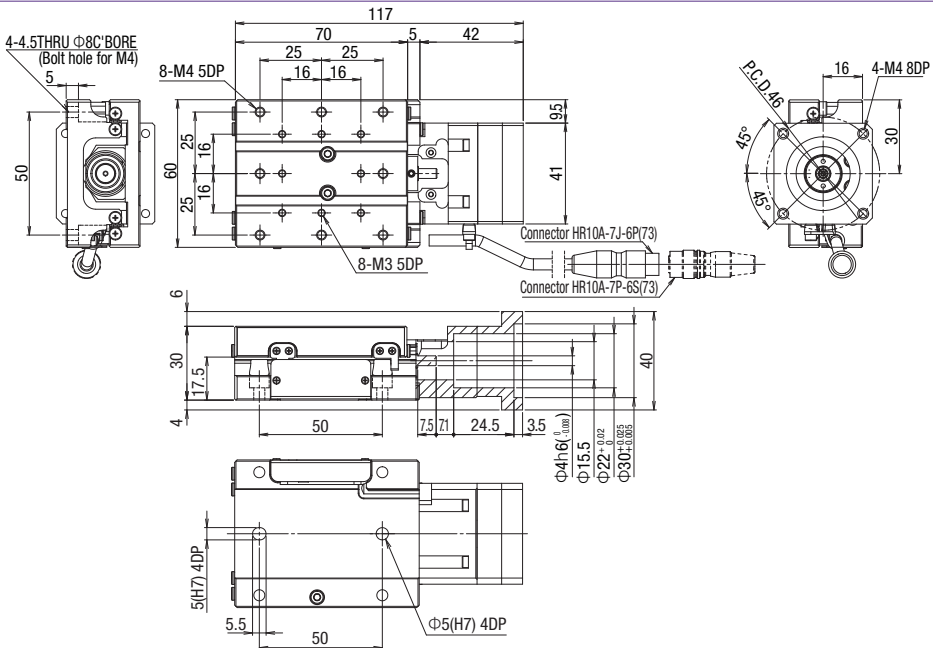
KXG06030TV-P28



KXG06030TV-S38



KXG06030TV-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

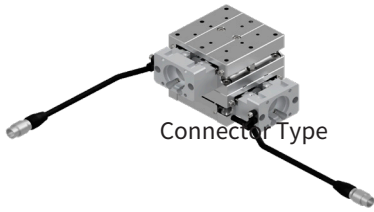
016

Motorless Specification

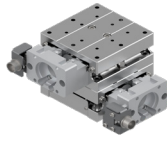
XY-axis Linear Ball Guide: KYG06020V

RoHS

KYG06020TV-P28



KYG06020MV-P28



Accessory	P28	S38	S40
Motor bracket	Installed on main body		
Coupling(with screws)	○		
Mounting screw	For Motor	8 of M2.5-6	8 of M3-12
	For Main Body	4 of M4-10	
Sensor cable	○(HR10AP-S-SB-6-□) *		
Cable tie	○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KYG06020	1.20kg	1.28kg	1.28kg

* All image is for illustrative purposes only.

KYG06020TV-P28-

1 Table size/Travel distance

Code	Table size	Travel distance
06020	□60mm	20mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

		SPEC	
Model		KYG06020TV-P28	KYG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	1.20kg	
Accuracy specification	Resolution/Pulse	2μm/1μm	
	Full/Half Micro step	0.1μm(1/20 On resolution)	
	MAX speed	20mm/sec	
	Load capacity	9kgf [88.2N]	
	Squareness	10μm/Full stroke	
Sensor	Limit sensor	Available	
	Origin sensor	Available	
	Slit origin sensor	—	
	—	—	
Single axis accuracy specification	Uni-directional positioning accuracy	5μm	
	Repeatability positioning accuracy	±0.5μm	
	Lost motion	1μm	
	Backlash	1μm	
	Straightness	3μm	
	Pitching/Yawing	20"/15"	

* SPEC is the value of the standard motor.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross
Roller

□40

□50

□60

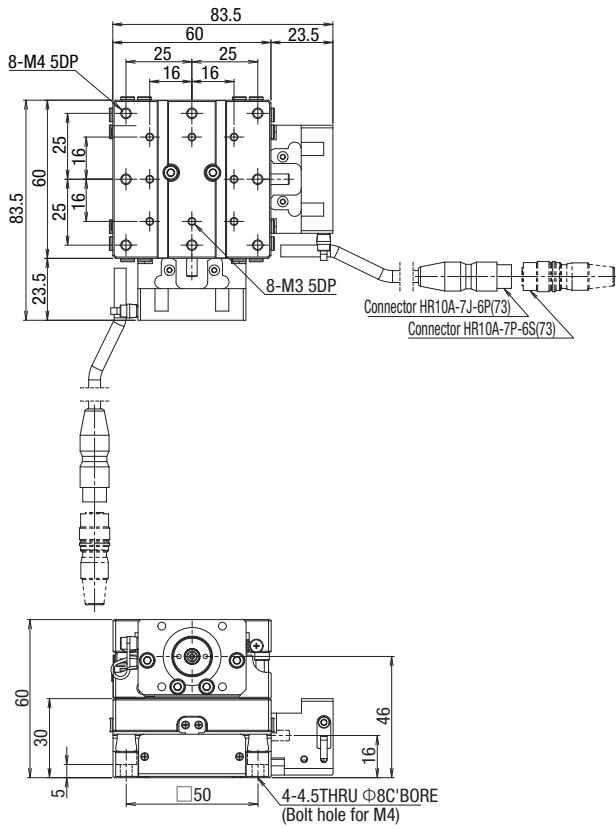
□70

Other

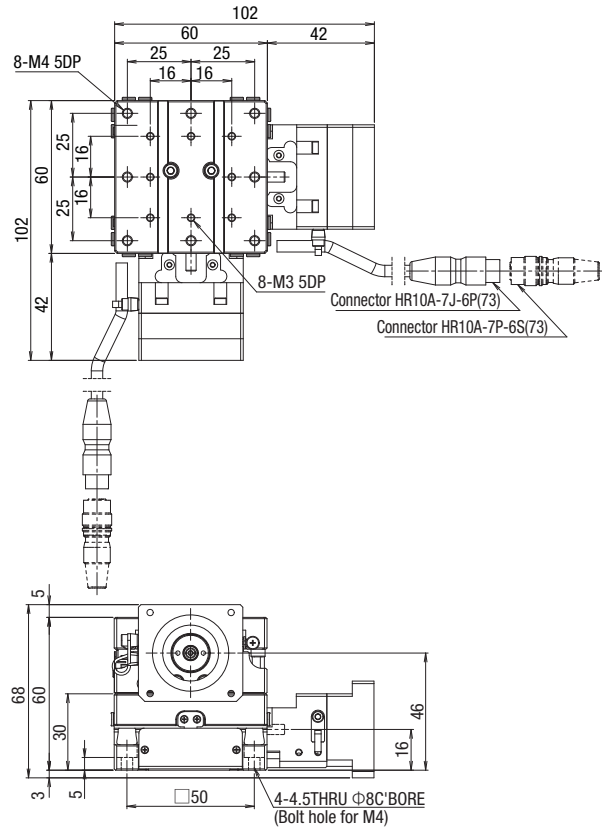
ML
017

Dimensions

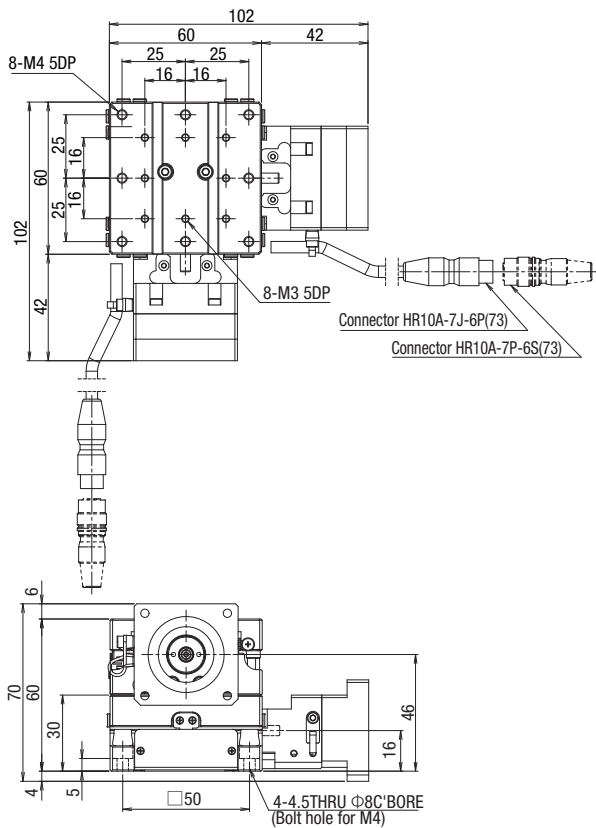
KYG06020TV-P28



KYG06020TV-S38



KYG06020TV-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

Other

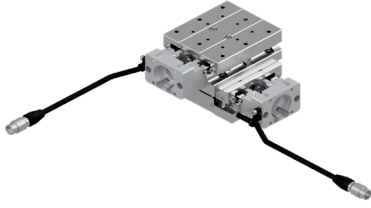
ML
018

Motorless Specification

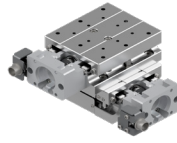
XY-axis Linear Ball Guide: KYG06030V

RoHS

KYG06030TV-P28



KYG06030MV-P28



Accessory	P28	S38	S40
Motor bracket	Installed on main body		
Coupling(with screws)	○		
Mounting screw	For Motor	8 of M2.5-6	8 of M3-12
	For Main Body	4 of M4-10	
Sensor cable	○(HR10AP-S-SB-6-□) *		
Cable tie	○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KYG06030	1.40kg	1.48kg	1.48kg

* All image is for illustrative purposes only.

KYG06030TV-P28-

1 Table size/Travel distance

Code	Table size	Travel distance
06030	□60mm	30mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

		SPEC	
Model		KYG06030TV-P28	KYG06030MV-P28
Mechanical specification	Travel distance	30mm	
	Stage surface size	60×70mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Special Steel—Electroless nickel plating	
Accuracy specification	Weight	1.40kg	
	Resolution/Pulse	2μm/1μm	
		Full/Half Micro step	
	MAX speed	0.1μm(1/20 On resolution)	
	Load capacity	20mm/sec	
	Squareness	9kgf [88.2N]	
Sensor	Limit sensor	15μm/Full stroke	
	Origin sensor	Available	
	Slit origin sensor	Available	
		—	
Single rate accuracy specification	Uni-directional positioning accuracy	5μm	
	Repeatability positioning accuracy	±0.5μm	
	Lost motion	1μm	
	Backlash	1μm	
	Straightness	3μm	
	Pitching/Yawing	20"/15"	

* SPEC is the value of the standard motor.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross
Roller

□40

□50

□60

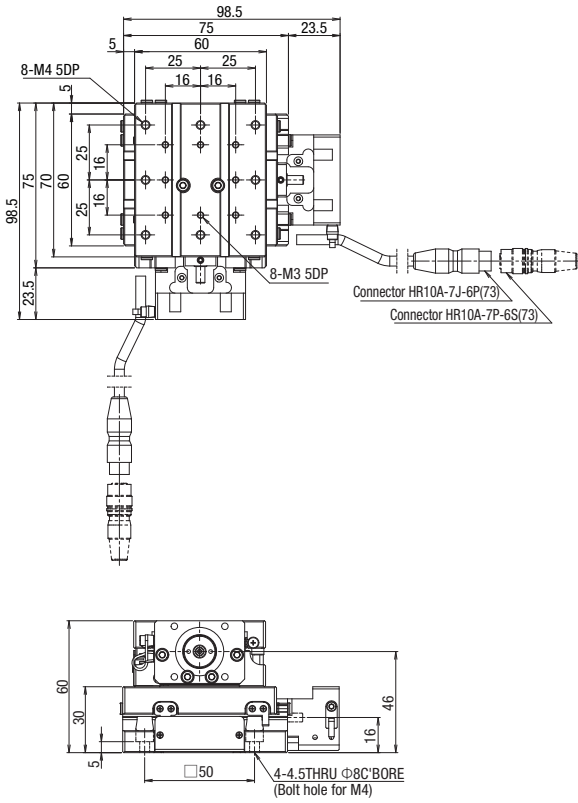
□70

Other

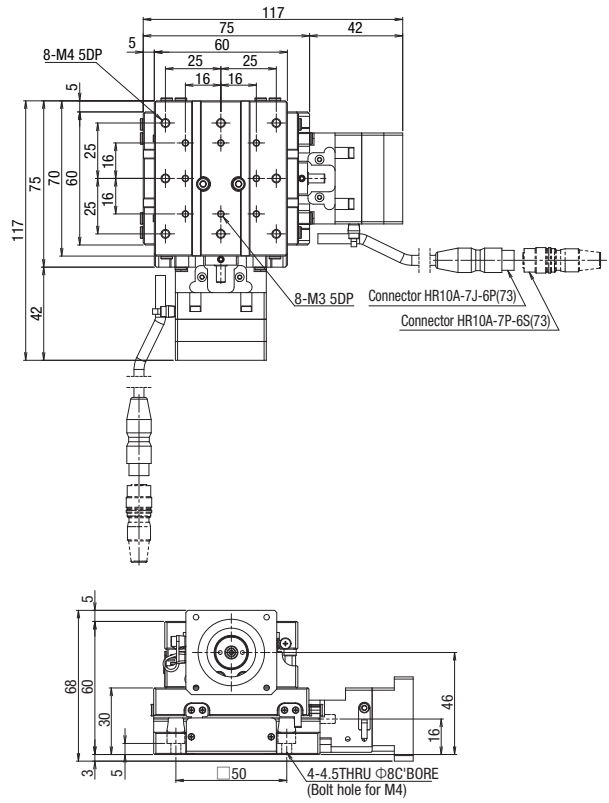
ML
019

Dimensions

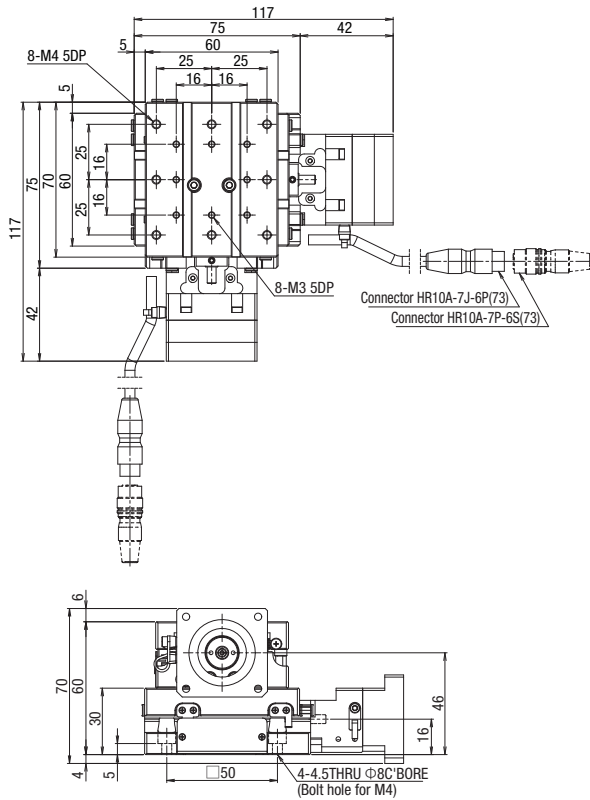
KYG06030TV-P28



KYG06030TV-S38



KYG06030TV-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

020

Motorless Specification

Z-axis Linear Ball Guide:KZG06020V

RoHS

KZG06020TV-P28



KZG06020MV-P28



Accessory	P28	S38	S40
Motor bracket	Installed on main body		
Coupling(with screws)	○		
Mounting screw	For Motor	4 of M2.5-6	4 of M3-12
	For Main Body	4 of M4-10	
Sensor cable	○(HR10AP-S-SB-6-□) ※		
Cable tie	○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KZG06020	0.96kg	1.00kg	1.00kg

* All image is for illustrative purposes only.

KZG06020TV-P28-

1 Table size/Travel distance

Code	Table size	Travel distance
06020	□60mm	20mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

		SPEC	
Model		KZG06020TV-P28	KZG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Special Steel—Electroless nickel plating	
Accuracy specification	Weight	0.96kg	
	Resolution/ Pulse	Full/Half	2μm/1μm
		Micro step	0.1μm(1/20 On resolution)
	MAX speed	20mm/sec	
	Load capacity	3kgf [29.4N]	
	Perpendicularity	10μm/Full stroke	
Sensor	Limit sensor	Available	
	Origin sensor	Available	
	Slit origin sensor	—	
	Single rate accuracy specification	Uni-directional positioning accuracy	5μm
Repeatability positioning accuracy		±0.5μm	
Lost motion		1μm	
Backlash		1μm	
Straightness		3μm	
Pitching/Yawing		20"/15"	

* SPEC is the value of the standard motor.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

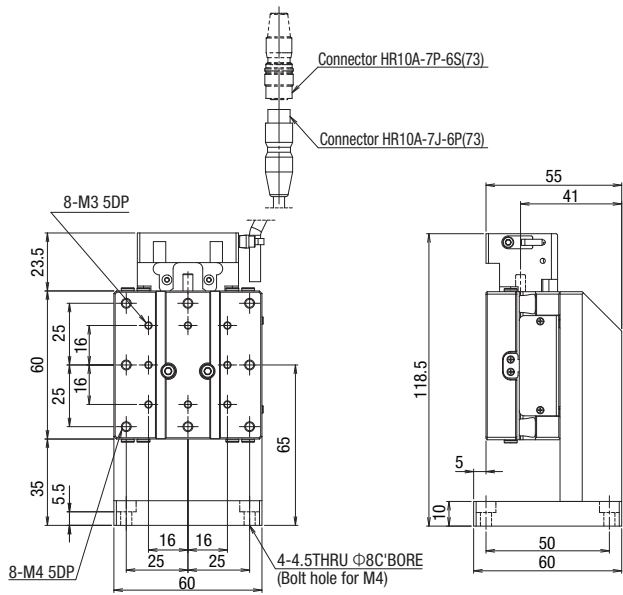
□70

Outer

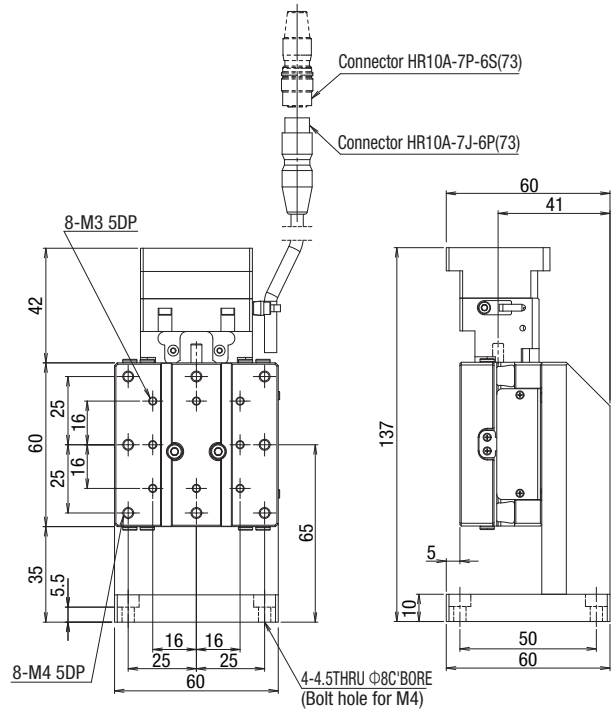
ML
021

Dimensions

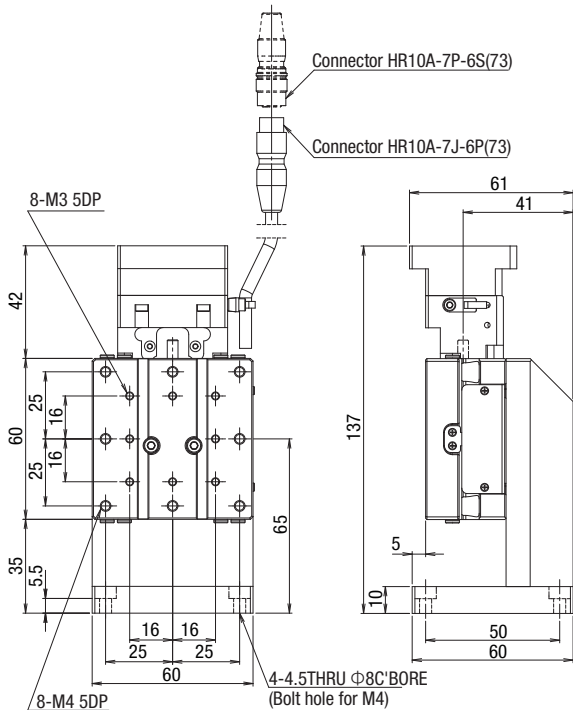
KZG06020TV-P28



KZG06020TV-S38



KZG06020TV-S40



Motorless

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

022

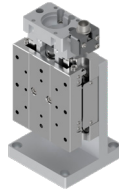
Z-axis Linear Ball Guide:KZG06030V

RoHS

KZG06030TV-P28



KZG06030MV-P28



Accessory	P28	S38	S40
Motor bracket	Installed on main body		
Coupling(with screws)	○		
Mounting screw	For Motor	4 of M2.5-6	4 of M3-12
	For Main Body	4 of M4-10	
Sensor cable	○(HR10AP-S-SB-6-□) *		
Cable tie	○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KZG06030	1.06kg	1.10kg	1.10kg

* All image is for illustrative purposes only.

KZG06030TV-P28-

1 Table size/Travel distance

Code	Table size	Travel distance
06030	□60mm	30mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

		SPEC	
Model		KZG06030TV-P28	KZG06030MV-P28
Mechanical specification	Travel distance		30mm
	Stage surface size		60×70mm
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	1.06kg	
Accuracy specification	Resolution (Pulse)	Full/Half	2μm/1μm
		Micro step	0.1μm(1/20 On resolution)
	MAX speed	20mm/sec	
	Load capacity	3kgf [29.4N]	
Sensor	Perpendicularity	15μm/Full stroke	
	Limit sensor	Available	
	Origin sensor	Available	
	Slit origin sensor	—	
	Single axis accuracy specification	Uni-directional positioning accuracy	5μm
Repeatability positioning accuracy		±0.5μm	
Lost motion		1μm	
Backlash		1μm	
Straightness		3μm	
Pitching/Yawing		20"/15"	

* SPEC is the value of the standard motor.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross
Roller

□40

□50

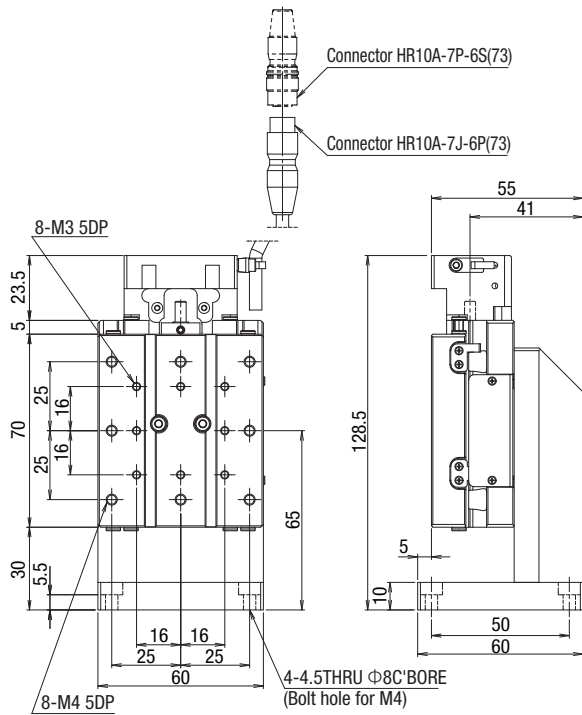
□60

□70

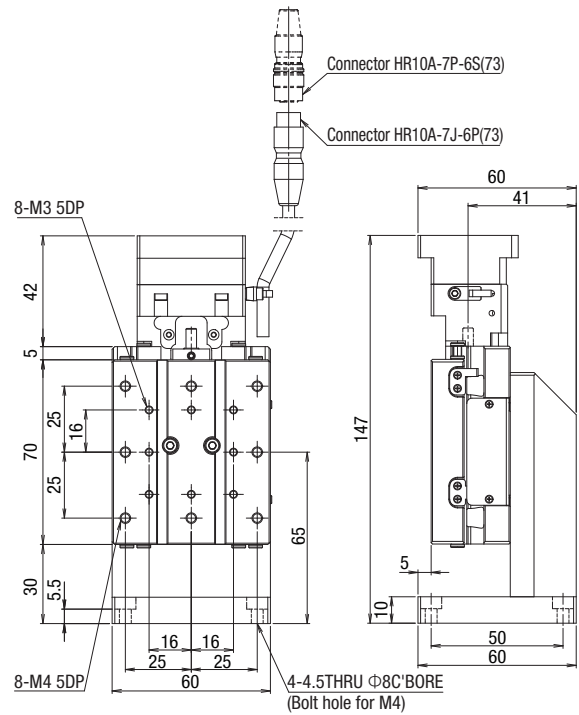
Other

Dimensions

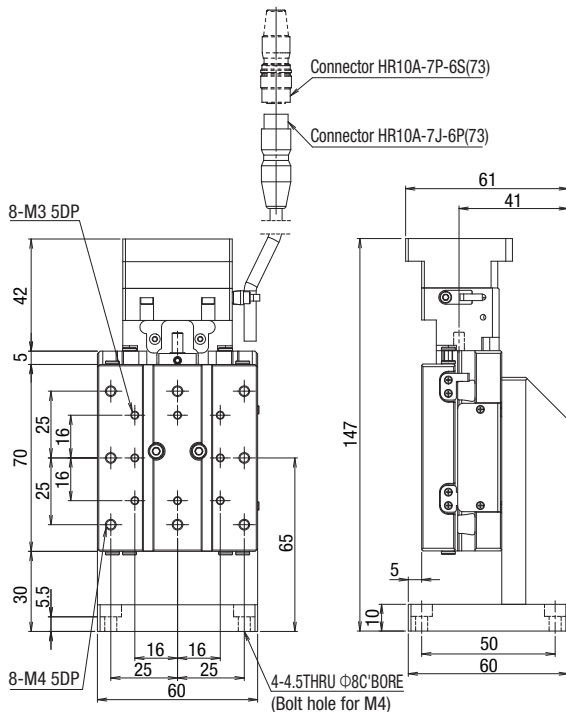
KZG06030TV-P28



KZG06030TV-S38



KZG06030TV-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

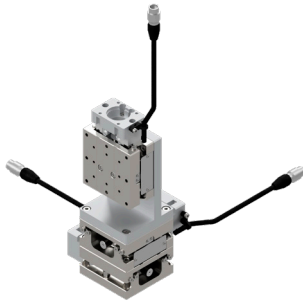
ML
024

Motorless Specification

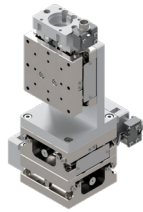
XYZ-axis Linear Ball Guide: KWG06020V

RoHS

KWG06020TV-P28



KWG06020MV-P28



Accessory	P28	S38	S40
Motor bracket	Installed on main body		
Coupling(with screws)	○		
Mounting screw	For Motor	12 of M2.5-6	12 of M3-12
	For Main Body	4 of M4-10	
Sensor cable	○(HR10AP-S-SB-6-□) *		
Cable tie	○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KWG06020	2.16kg	2.28kg	2.28kg

* All image is for illustrative purposes only.

KWG06020TV-P28-

1

2

3

4

1 Table size/Travel distance

Code	Table size	Travel distance
06020	□60mm	20mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

		SPEC		
Model		KWG06020TV-P28	KWG06020MV-P28	
Mechanical specification	Travel distance	20mm		
	Stage surface size	60×60mm		
	Connector type	Pigtail	Panel Mount	
	Feed screw (Ball screw)	φ8 Lead 1		
	Guide	Linear Ball Guide		
	Main materials-Finishing	Special Steel—Electroless nickel plating		
Accuracy specification	Weight	2.16kg		
	Resolution/ Pulse	Full/Half	2μm/1μm	
		Micro step	0.1μm(1/20 On resolution)	
	MAX speed	20mm/sec		
	Load capacity	3kgf [29.4N]		
	Squareness	10μm/Full stroke		
Sensor	Perpendicularity	10μm/Full stroke		
	Limit sensor	Available		
	Origin sensor	Available		
	Slit origin sensor	—		
	Shaft axis accuracy specification	Uni-directional positioning accuracy	5μm	
Repeatability positioning accuracy		±0.5μm		
Lost motion		1μm		
Backlash		1μm		
Straightness		3μm		
Pitching/Yawing		20"/15"		

* SPEC is the value of the standard motor.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross
Roller

□40

□50

□60

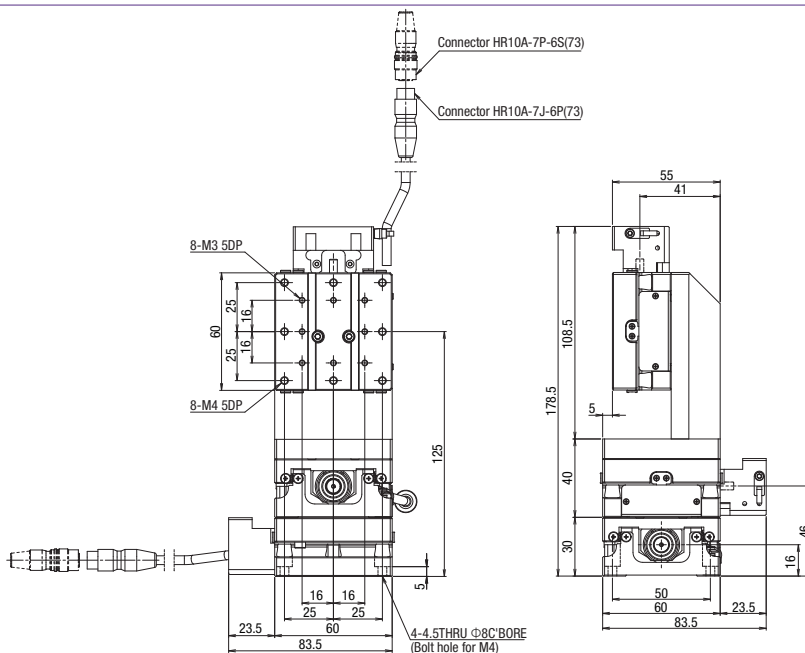
□70

Other

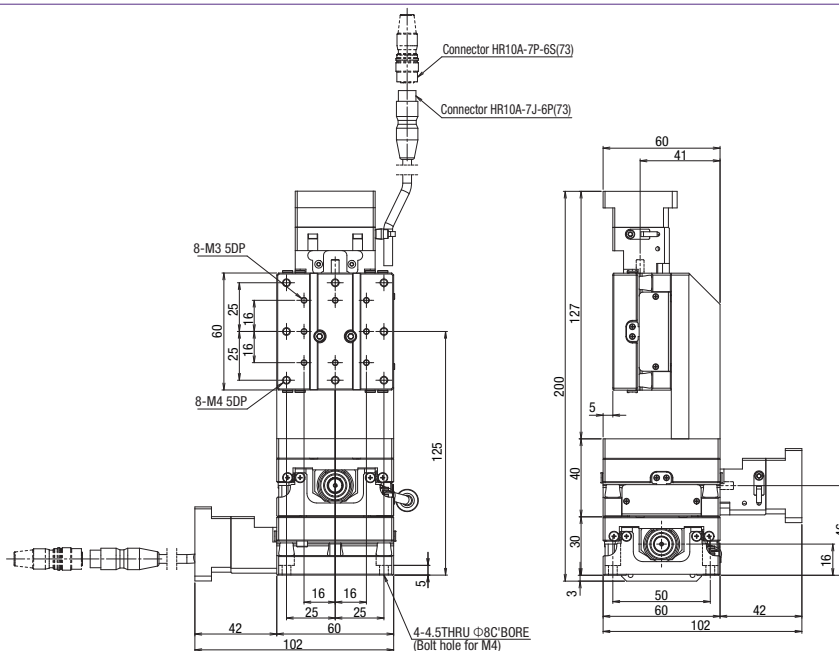
ML
025

Dimensions

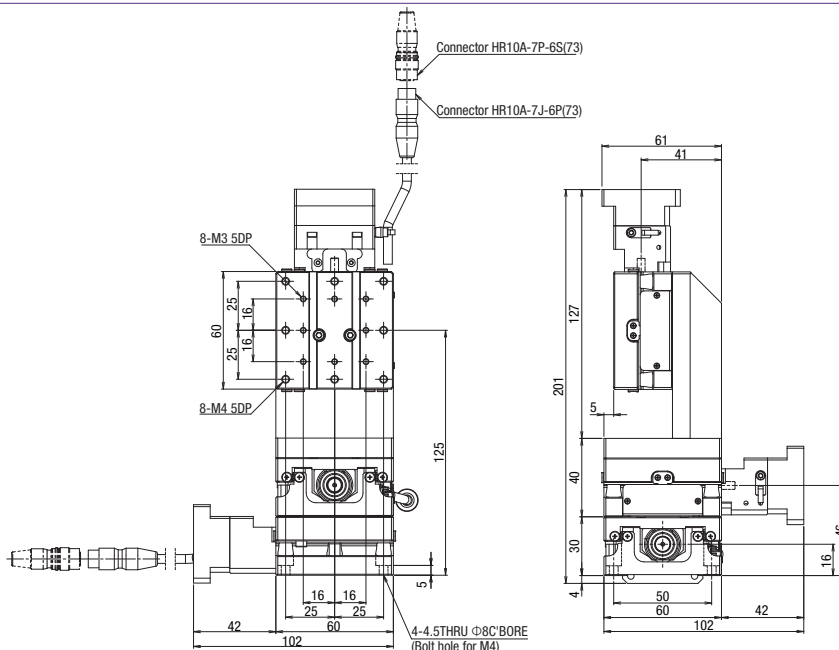
KWG06020TV-P28



KWG06020TV-S38



KWG06020TV-S40



Motorless

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross
Roller

40

50

60

70

Other

**ML
026**

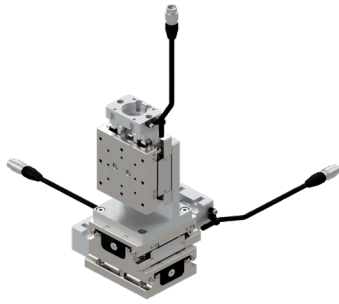
Motorless Specification

XYZ-axis Linear Ball Guide: KWG06030V

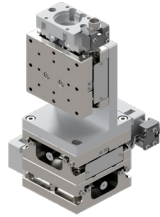
RoHS

Motorless

KWG06030TV-P28



KWG06030MV-P28



Accessory	P28	S38	S40
Motor bracket	Installed on main body		
Coupling(with screws)	○		
Mounting screw	For Motor	12 of M2.5-6	12 of M3-12
	For Main Body	4 of M4-10	
Sensor cable	○(HR10AP-S-SB-6-□) *		
Cable tie	○	—	—

* Sensor cable: Select from 2m, 3m, 5m

Weight	P28	S38	S40
KWG06030	2.46kg	2.58kg	2.58kg

* All image is for illustrative purposes only.

KWG06030TV-P28-

1 2 3 4

1 Table size/Travel distance

Code	Table size	Travel distance
06030	□60mm	30mm

2 Connector Type

T	Pigtail	
M	Panel mount	

3 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

4 Cable option

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

SPEC			
Model	KWG06030TV-P28	KWG06030MV-P28	
Mechanical specification	Travel distance	30mm	
	Stage surface size	60×70mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	2.46kg	
Accuracy specification	Resolution/ Pulse	2μm/1μm	
		0.1μm(1/20 On resolution)	
	MAX speed	20mm/sec	
	Load capacity	3kgf [29.4N]	
	Squareness	15μm/Full stroke	
Sensor	Perpendicularity	15μm/Full stroke	
	Limit sensor	Available	
	Origin sensor	Available	
	Slit origin sensor	—	
Single axis accuracy specification	Uni-directional positioning accuracy	5μm	
	Repeatability positioning accuracy	±0.5μm	
	Lost motion	1μm	
	Backlash	1μm	
	Straightness	3μm	
	Pitching/Yawing	20"/15"	

* SPEC is the value of the standard motor.

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross
Roller

□40

□50

□60

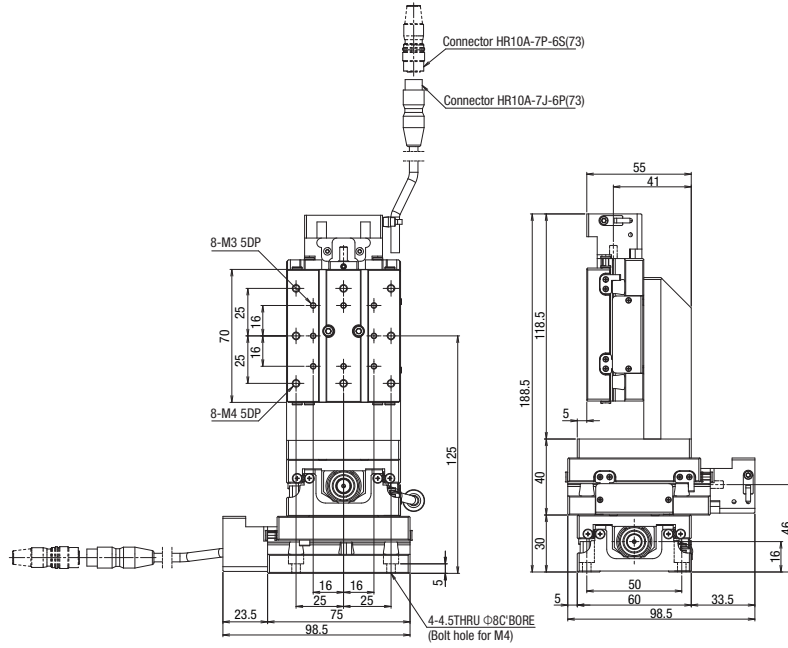
□70

Other

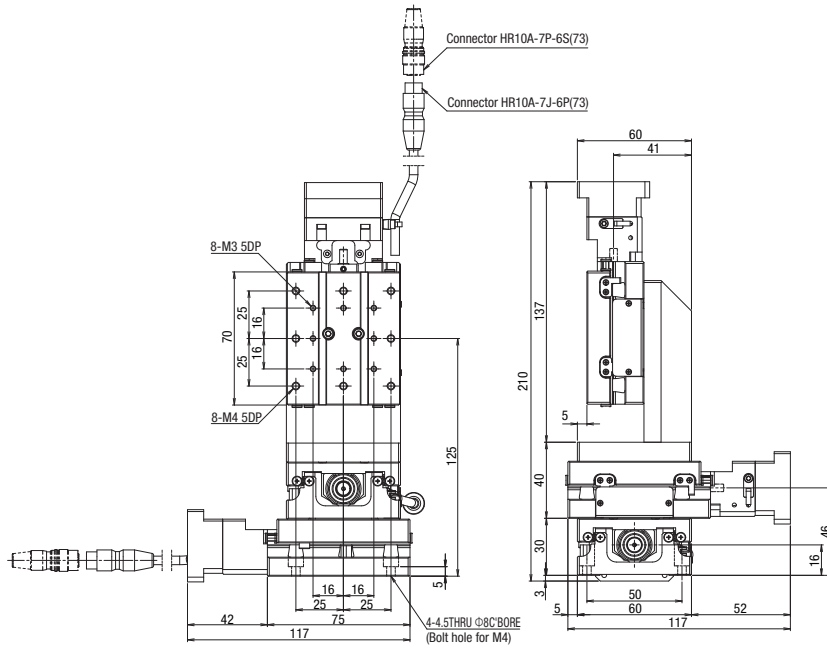
ML
027

Dimensions

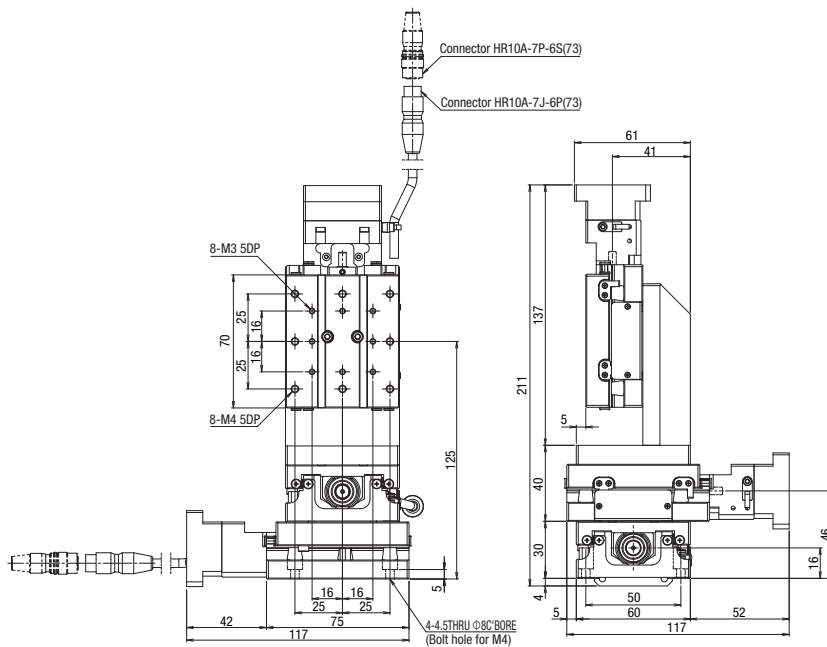
KWG06030TV-P28



KWG06030TV-S38



KWG06030TV-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

**ML
028**

Motorless Specification

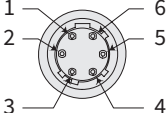
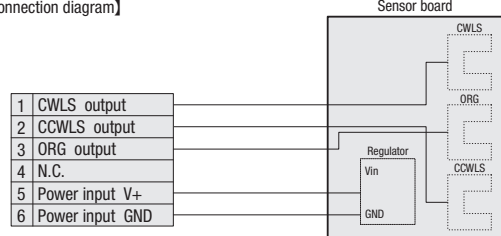
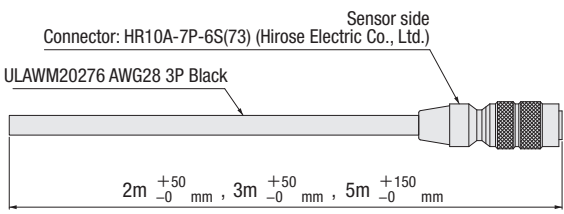
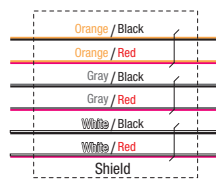
Electrical Specification: KXG06V

Motorless

Electrical specification

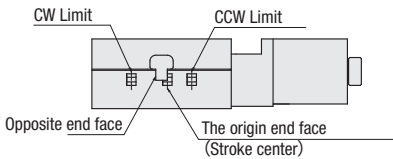
Applicable motor code		P28	S38	S40
Feature		For □28 Stepping motor	For □38 AC Servo motor	For □40 AC Servo motor
Model		KXG06020/KXG06030		
Connector	Pig tail	Sensor: HR10A-7J-6P(73) (Hirose Electric Co., Ltd.)		
	Panel mount	Sensor: HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)		
	Receiving connector	Sensor: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)		
Sensor board	Limit sensor	Available		
	Origin sensor	Available		
	Slit origin sensor	-		
	Sensor	Photo microsensor EE-SX4320 (Omron Co., Ltd.)		
	Power-supply voltage	DC5~24V±5%		
	Current consumption	Total 60mA or less		
	Control output	NPN open collector output DC30V 10mA or less		
Output logic	On detection (light shield condition): Output transistor OFF (Non-continuity)			

Pin allocation · Connection diagram

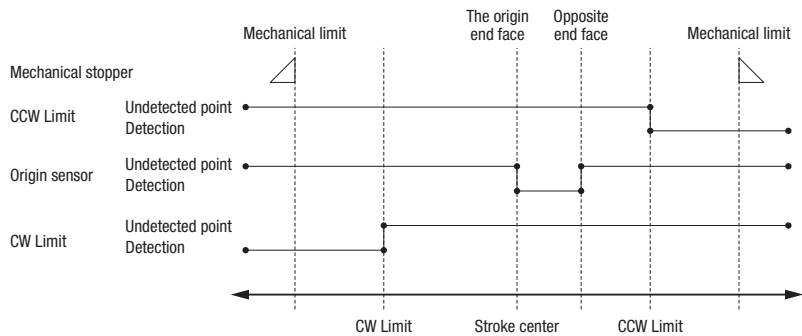
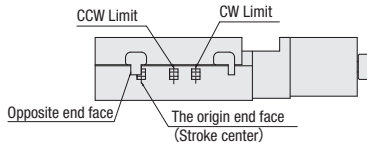
Motor code	KXG Series															
P28 • S38 • S40	<p>[Pin allocation] Pigtail specification : Connector model : HR10A-7J-6P(73) (Hirose Electric Co., Ltd.) Panel mount specification : Connector model : HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)</p> 	<p>[Connection diagram]</p> 														
	<p>[Cable model] Model:HR10AP-S-SB-6-□ (□ is the length.) * Fixed</p> 	 <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> <p>※The shields are connected with the connector shell.</p>	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

KXG06020



KXG06030



* Undetected point: in the stage of light entrance /Detection: light shield condition

Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	The origin end face (Stroke center)	Opposite end face	CCW Limit	Mechanical limit
□40	Return to origin	11.5	10.5	0	5	10.5	11.5
□50	Return to origin	16.5	15.5	0	5	15.5	16.5

* Return to origin means that is performed return to origin type 4 using DS102/DS112 series.(DS102/DS112 are dedicated to 5-phase motors)

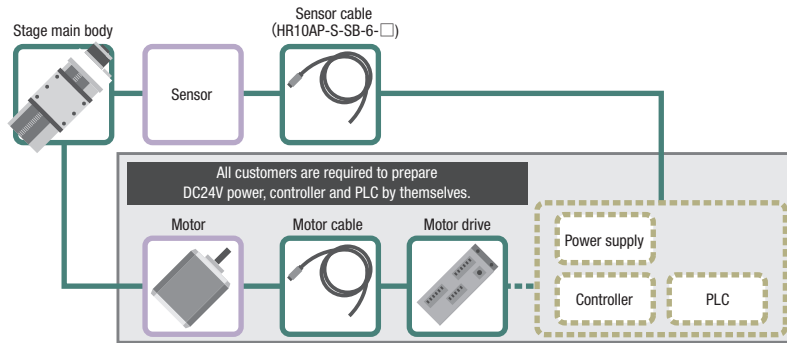
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

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.

Applicable motor code

P28	<input type="checkbox"/> 28mm	For Stepping motor
S38	<input type="checkbox"/> 38mm	For AC servo motor
S40	<input type="checkbox"/> 40mm	For AC servo motor



[IMPORTANT]

Unlike standard products, this is a motorless product without a drive source. Please read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchase.

● Scope of Warranty

The following are not covered by the warranty.

- Defects or troubles related to motor installation and adjustment.
- Accuracy after the motor has been assembled by the customer.

Note: Accuracy tests have been performed using a test motor to confirm that all specifications are met.

● Precautions and Restrictions

1. Specifications: Load Capacity and Maximum Speed

- Use within the product's rated specifications, regardless of motor performance.
- Be aware that the short distance between the limit sensor and mechanical limit increases the risk of collision during overrun.
- Collisions with mechanical limits can damage accuracy and durability.

2. Torque Limits

Using high-torque motors may apply loads exceeding the product's tolerance. If the motor torque exceeds the values below, please apply a torque limit.

- KXG Series: 0.25 N·m

3. Motor Installation

- Perform centering (alignment) for the stage body, motor, and coupling during installation.
- Misalignment may cause product damage or premature failure.
- Refer to the assembly manual for installation and adjustment procedures.

4. Securing the Connector

- On some products, the connector must be secured by the customer.
- Before securing, the connector is connected to the body only by lead wires.
- Handle with care to prevent wire breakage.

Motorless

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

40

50

60

70

Other

ML

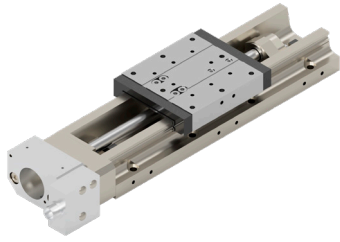
030

Motorless Specification

X-axis Linear Ball Guide: KXL06MV-N (without Cover)

RoHS

Motorless



* All image is for illustrative purposes only.

Accessory		P28	S38	S40
Motor bracket		Installed on main body		
Motor plate		○	—	—
Coupling(with screws)		○		
Mounting screw	For Motor	4 of M2.5-6	4 of M3-12	2 of M4-12
	For Motor plate	2 of M4-8	—	—
	For Main Body	30 - 100mm	8 of M4-14	
		150mm	14 of M4-14	
200mm		12 of M4-14		
	300mm	16 of M4-14		
Parallel pin		2 of $\phi 2 \times 8$	—	—
Sensor cable		○ (HR10AP-S-SB-6-□) *		

* Sensor cable: Select from 2m, 3m, 5m

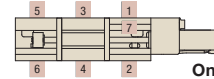
Weight (*)	P28	S38	S40
KXL06030MV-N	1.17 kg	1.20 kg	1.20 kg
KXL06050MV-N	1.27 kg	1.30 kg	1.30 kg
KXL06075MV-N	1.43 kg	1.46 kg	1.46 kg
KXL06100MV-N	1.60 kg	1.63 kg	1.63 kg
KXL06150MV-N	1.90 kg	1.93 kg	1.93 kg
KXL06200MV-N	2.22 kg	2.25 kg	2.25 kg
KXL06300MV-N	2.82 kg	2.85 kg	2.85 kg

* Values are for models without the Origin sensor option.

* Add 0.03 kg when Origin sensor option [1-6] is selected, and 0.01 kg when [7] is selected.

KXL06030MV-N1-P28

■ Origin sensor option installation position



Only one location can be selected.

1 Travel distance

030	30mm
050	50mm
075	75mm
100	100mm
150	150mm
200	200mm
300	300mm

3 Ball screw lead

1	Lead 1mm
2	Lead 2mm

* For 1mm lead, only 30mm, 50mm, and 75mm strokes are available.

4 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

2 Connector Type

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

5 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

For details, please refer to [P. ML-037](#) or later.

6 Cable option

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

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross Roller

40

50

60

70

Ohter

ML

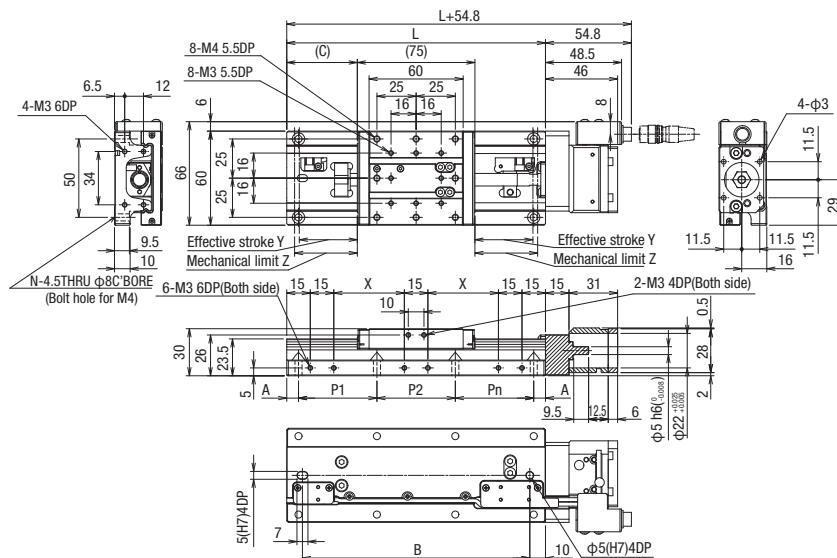
031

		SPEC										
Model		KXL06030MV-N1-P28	KXL06030MV-N2-P28	KXL06050MV-N1-P28	KXL06050MV-N2-P28	KXL06075MV-N1-P28	KXL06075MV-N2-P28	KXL06100MV-N2-P28	KXL06150MV-N2-P28	KXL06200MV-N2-P28	KXL06300MV-N2-P28	
Mechanical specification	Travel distance	30mm			50mm		75mm		100mm	150mm	200mm	300mm
	Stage table size	60×60mm										
	Feed screw (Ball screw)	$\phi 8$ Lead 1	$\phi 8$ Lead 2	$\phi 8$ Lead 1	$\phi 8$ Lead 2	$\phi 8$ Lead 1	$\phi 8$ Lead 2	$\phi 8$ Lead 2				
	Guide	Linear Ball Guide										
Accuracy specification	Main materials-Finishing	Stainless—Electroless nickel plating										
	Weight	1.17kg		1.27kg		1.43kg		1.60kg	1.90kg	2.22kg	2.82kg	
	Resolution (Pulse)	Full/Half	2 μ m/1 μ m	4 μ m/2 μ m	2 μ m/1 μ m	4 μ m/2 μ m	2 μ m/1 μ m	4 μ m/2 μ m	4 μ m/2 μ m			
		Micro step (1/20 Res.)	0.1 μ m	0.2 μ m	0.1 μ m	0.2 μ m	0.1 μ m	0.2 μ m	0.2 μ m			
	MAX speed	30mm/sec	35mm/sec	30mm/sec	35mm/sec	30mm/sec	35mm/sec	45mm/sec				
	Uni-directional positioning accuracy	5 μ m				7 μ m		10 μ m	15 μ m	15 μ m	25 μ m	
	Repeatability positioning accuracy	$\pm 0.5\mu$ m										
	Load capacity	12kgf [117.6N]										
	Moment stiffness	Pitch 0.05/yaw 0.05/roll 0.05 ["/N · cm]										
	Lost motion	1 μ m										
Backlash	1 μ m											
Straightness		3 μ m						5 μ m		7 μ m		
	Parallelism					15 μ m						
	Motion parallelism	10 μ m						10 μ m	15 μ m	20 μ m	25 μ m	
Pitching/Yawing	20"/15"						25"/20"		30"/20"	35"/20"		

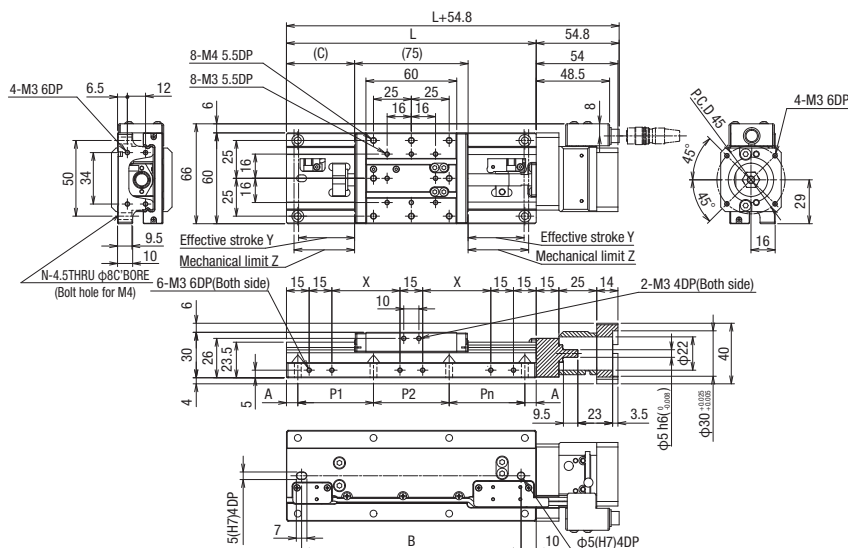
* The SPEC are for standard motor specifications.

Dimensions

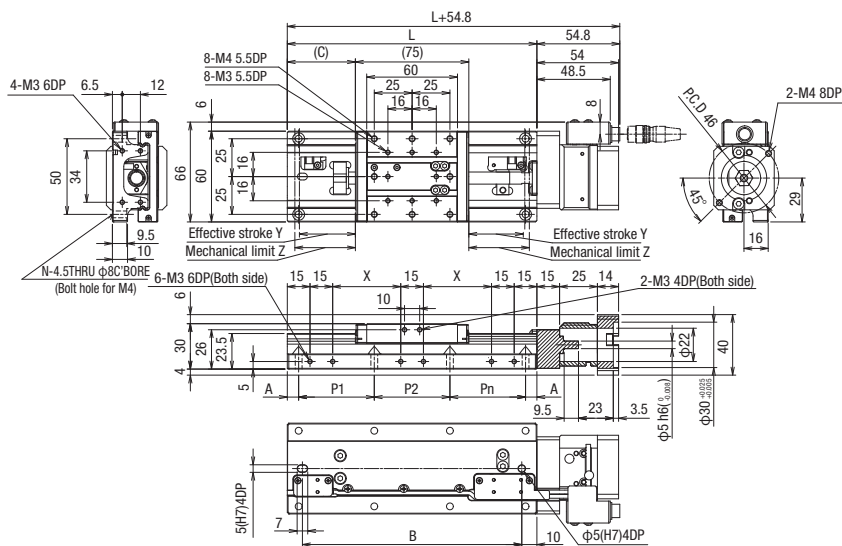
KXL06MV-N-P28



KXL06MV-N-S38



KXL06MV-N-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

Other

ML

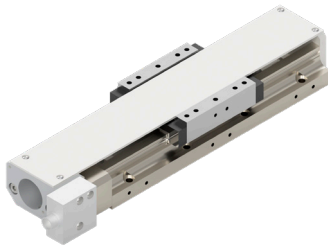
032

Model	L	N	A	B	C	P1	P2	P3	P4	PS	P6	P7	X	Y	Z
KXL06030	120	8	10	100	22.5	25	50	25	—	—	—	—	22.5	15	17.5
KXL06050	140	8	20	120	32.5	25	50	25	—	—	—	—	32.5	25	27.5
KXL06075	165	8	7.5	145	45	50	50	50	—	—	—	—	45	37.5	40
KXL06100	190	8	20	170	57.5	50	50	50	—	—	—	—	57.5	50	52.5
KXL06150	240	14	20	220	82.5	50	25	25	25	25	—	—	82.5	75	77.5
KXL06200	290	12	20	270	107.5	50	50	50	50	50	—	—	107.5	100	102.5
KXL06300	390	16	20	370	157.5	50	50	50	50	50	50	50	157.5	150	152.5

X-axis Linear Ball Guide: KXL06MV-C (with Cover)

RoHS

Motorless



* All image is for illustrative purposes only.

Accessory		P28	S38	S40	
Motor bracket		Installed on main body			
Motor plate		○	—	—	
Coupling(with screws)		○			
Mounting screw	For Motor	4 of M2.5-6	4 of M3-12	2 of M4-12	
	For Motor plate	2 of M4-8	—	—	
	For Main Body	30 - 100mm	8 of M4-14		
		150mm	14 of M4-14		
200mm		12 of M4-14			
	300mm	16 of M4-14			
Parallel pin		2 of $\phi 2 \times 8$	—	—	
Sensor cable		○ (HR10AP-S-SB-6-□) *			

* Sensor cable: Select from 2m, 3m, 5m

Weight (*)	P28	S38	S40
KXL06030MV-C	1.23 kg	1.26 kg	1.26 kg
KXL06050MV-C	1.33 kg	1.36 kg	1.36 kg
KXL06075MV-C	1.49 kg	1.52 kg	1.52 kg
KXL06100MV-C	1.66 kg	1.69 kg	1.69 kg
KXL06150MV-C	1.96 kg	1.99 kg	1.99 kg
KXL06200MV-C	2.28 kg	2.31 kg	2.31 kg
KXL06300MV-C	2.92 kg	2.95 kg	2.95 kg

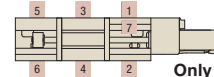
* Values are for models without the Origin sensor option.

* Add 0.03 kg when Origin sensor option [1-6] is selected, and 0.01 kg when [7] is selected.

KXL06030MV-N1-P28

1 2 3 4 5 6

■ Origin sensor option installation position



Only one location can be selected.

1 Travel distance

030	30mm
050	50mm
075	75mm
100	100mm
150	150mm
200	200mm
300	300mm

2 Connector Type

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

3 Ball screw lead

1	Lead 1mm
2	Lead 2mm

* For 1mm lead, only 30mm, 50mm, and 75mm strokes are available.

4 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

5 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

For details, please refer to [P. ML-037](#) or later.

6 Cable option

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

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross Roller

40

50

60

70

Ohter

ML

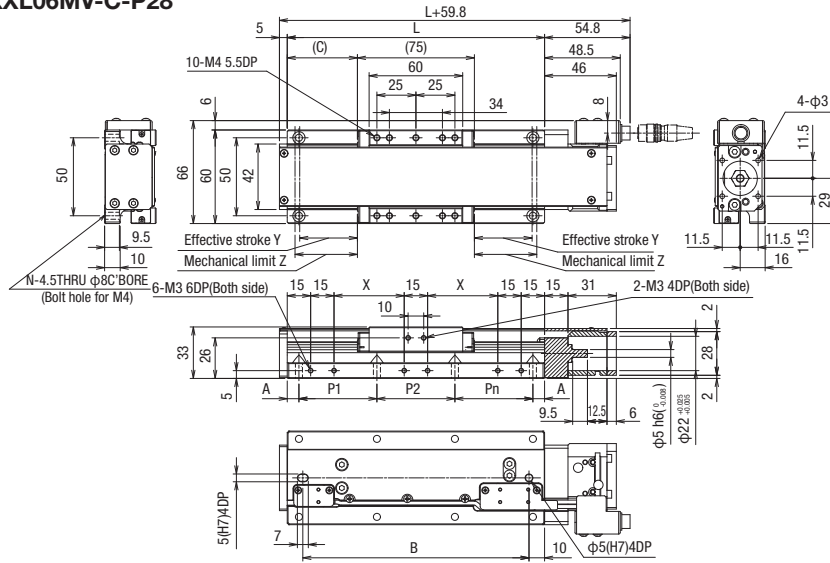
033

SPEC											
Model	KXL06030MV-N1-P28	KXL06030MV-N2-P28	KXL06050MV-N1-P28	KXL06050MV-N2-P28	KXL06075MV-N1-P28	KXL06075MV-N2-P28	KXL06100MV-N2-P28	KXL06150MV-N2-P28	KXL06200MV-N2-P28	KXL06300MV-N2-P28	
Travel distance	30mm		50mm		75mm		100mm	150mm	200mm	300mm	
Stage table size	60×60mm										
Feed screw (Ball screw)	$\phi 8$ Lead 1	$\phi 8$ Lead 2	$\phi 8$ Lead 1	$\phi 8$ Lead 2	$\phi 8$ Lead 1	$\phi 8$ Lead 2	$\phi 8$ Lead 2				
Guide	Linear Ball Guide										
Main materials-Finishing	Stainless—Electroless nickel plating										
Weight	1.17kg		1.27kg		1.43kg		1.60kg	1.90kg	2.22kg	2.82kg	
Resolution (Pulse)	Full/Half	2 μ m/1 μ m	4 μ m/2 μ m	2 μ m/1 μ m	4 μ m/2 μ m	2 μ m/1 μ m	4 μ m/2 μ m	4 μ m/2 μ m			
	Micro step (1/20 Res.)	0.1 μ m	0.2 μ m	0.1 μ m	0.2 μ m	0.1 μ m	0.2 μ m	0.2 μ m			
MAX speed	30mm/sec	35mm/sec	30mm/sec	35mm/sec	30mm/sec	35mm/sec	45mm/sec				
Uni-directional positioning accuracy	5 μ m				7 μ m		10 μ m	15 μ m	15 μ m	25 μ m	
Repeatability positioning accuracy	$\pm 0.5\mu$ m										
Load capacity	12kgf [117.6N]										
Moment stiffness	Pitch 0.05/yaw 0.05/roll 0.05 ["/N · cm]										
Lost motion	1 μ m										
Backlash	1 μ m										
Straightness	3 μ m				5 μ m			7 μ m			
Parallelism	10 μ m					15 μ m					
Motion parallelism	10 μ m				10 μ m		15 μ m	20 μ m	25 μ m		
Pitching/Yawing	20"/15"				25"/20"			30"/20"	35"/20"		

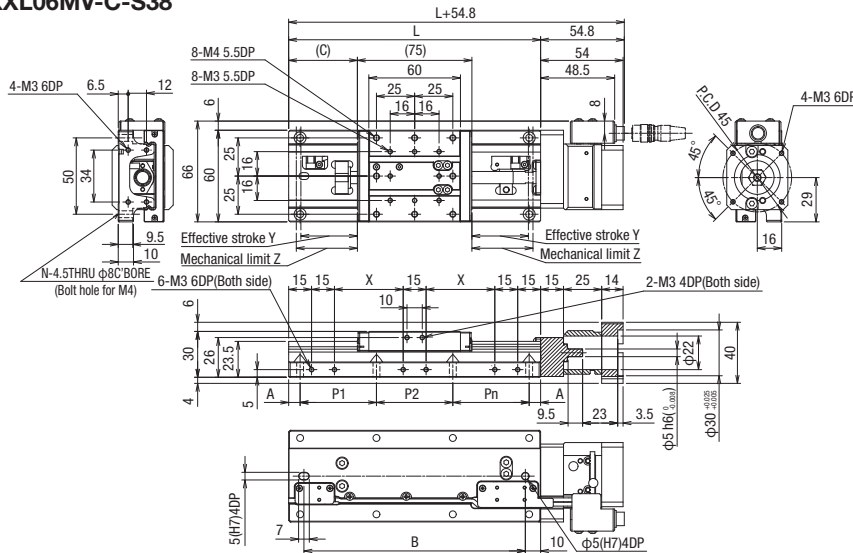
* The SPEC are for standard motor specifications.

Dimensions

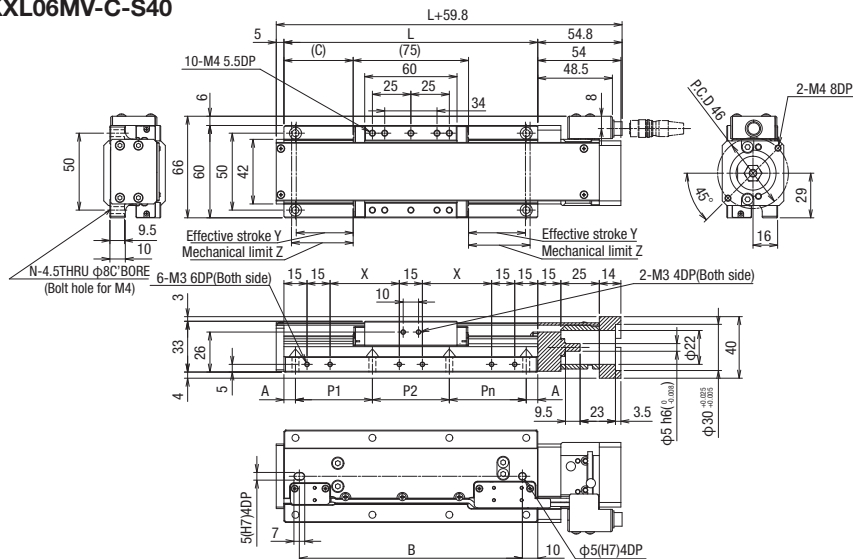
KXL06MV-C-P28



KXL06MV-C-S38



KXL06MV-C-S40



Model	L	N	A	B	C	P1	P2	P3	P4	PS	P6	P7	X	Y	Z
KXL06030	120	8	10	100	22.5	25	50	25	—	—	—	—	22.5	15	17.5
KXL06050	140	8	20	120	32.5	25	50	25	—	—	—	—	32.5	25	27.5
KXL06075	165	8	7.5	145	45	50	50	50	—	—	—	—	45	37.5	40
KXL06100	190	8	20	170	57.5	50	50	50	—	—	—	—	57.5	50	52.5
KXL06150	240	14	20	220	82.5	50	25	25	25	25	50	—	82.5	75	77.5
KXL06200	290	12	20	270	107.5	50	50	50	50	50	—	—	107.5	100	102.5
KXL06300	390	16	20	370	157.5	50	50	50	50	50	50	50	157.5	150	152.5

Motorless

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

Other

ML

034

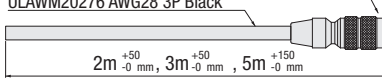
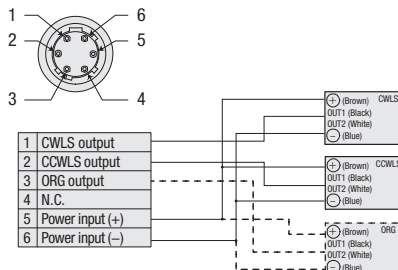
Motorless Specification

Electrical Specification: KXL06MV

Electrical Specification

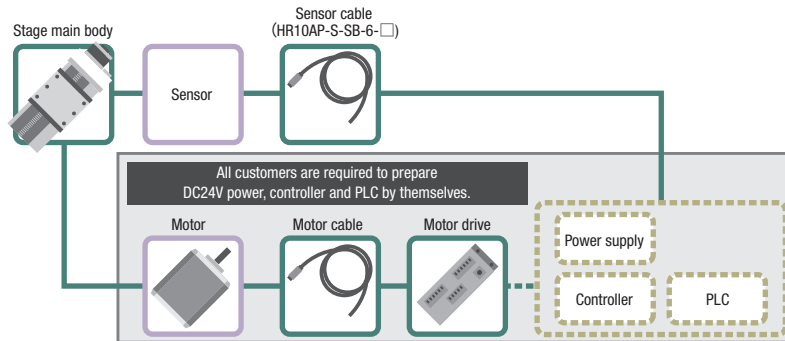
Motor code		P28	S38	S40
Feature		For <input type="checkbox"/> 28mm Stepping motor	For <input type="checkbox"/> 38mm AC Servo motor	For <input type="checkbox"/> 40mm AC Servo motor
Model		KXL06030MV/KXL06050MV/KXL06075MV/KXL06100MV/KXL06150MV/KXL06200MV/KXL06300MV		
Connector	Panel mount	Sensor: HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)		
	Receiving connector	Sensor: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)		
Sensor board	Limit sensor	Available		
	Origin sensor	— *Can be installed with origin sensor option		
	Slit origin sensor	—		
	Sensor	Micro Photoelectric Sensor PM-L25 (Panasonic Industrru 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)			

Pin allocation • Connection diagram

Motor code	KXL Series														
P28 • S38 • S40	Sensor	<p>【 Receiver cable 】 Model: HR10AP-S-SB-6-□ (□ is the length.) * Fixed</p> <p>Sensor side Connector (Female): HR10A-7P-6S (73) (HRS)</p> <p>ULAWM20276 AWG28 3P Black</p> 	<p>【 Connection diagram(Sensor) 】 Connector:HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)</p>  <p>----- When the origin sensor option is selected.</p>												
		<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>	Pin	Signals	1	CWLS	2	CCWLS	3	ORG	4	NORG	5	V+	6
Pin	Signals														
1	CWLS														
2	CCWLS														
3	ORG														
4	NORG														
5	V+														
6	V-														

Applicable motor code

P28	<input type="checkbox"/> 28mm For Stepping motor
S38	<input type="checkbox"/> 38mm For AC servo motor
S40	<input type="checkbox"/> 40mm For AC servo motor



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

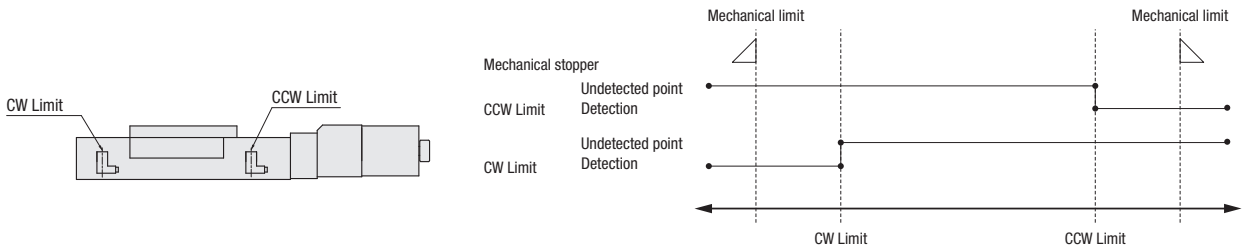
□50

□60

□70

Ohter

Timing chart

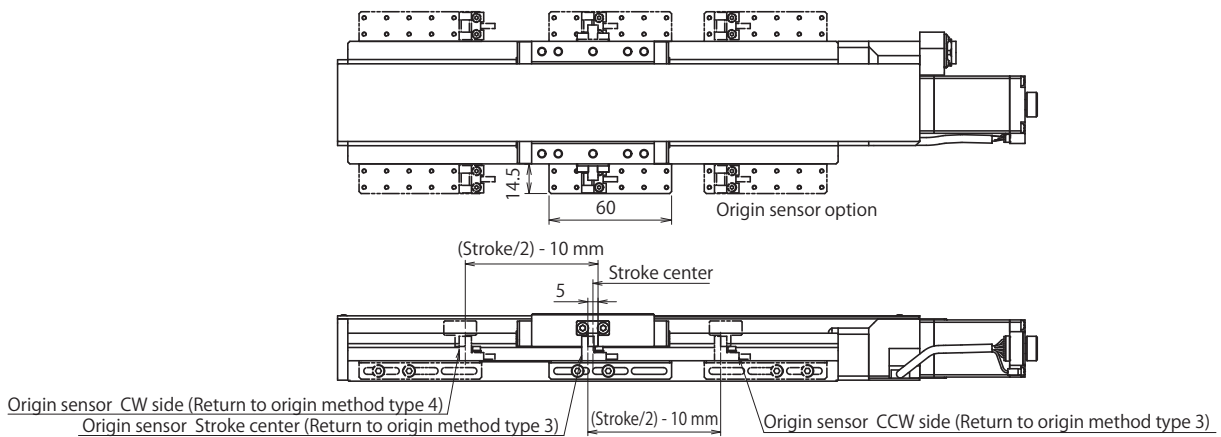


Unit [mm]	Reference coordinate	Mechanical limit	CW Limit	CCW Limit	Mechanical limit
KXL06030MV	Storke center	17.5	15.5	15.5	17.5
KXL06050MV	Storke center	27.5	25.5	25.5	27.5
KXL06075MV	Storke center	40	38	38	40
KXL06100MV	Storke center	52.5	50.5	50.5	52.5
KXL06150MV	Storke center	77.5	75.5	75.5	77.5
KXL06200MV	Storke center	102.5	100.5	100.5	102.5
KXL06300MV	Storke center	152.5	150.5	150.5	152.5

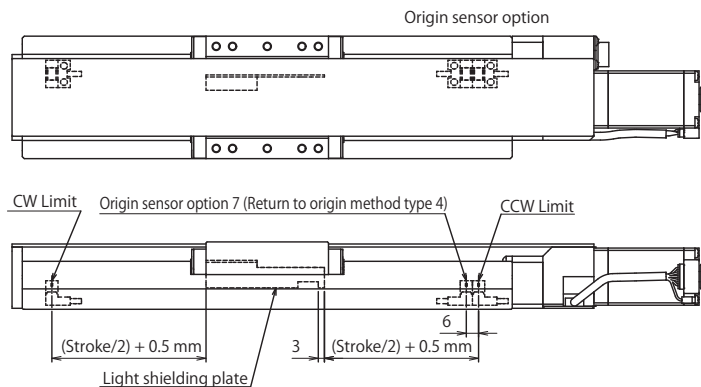
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

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 (Origin sensor option 1~6)



Sensor option dimensions (Origin sensor option 7)



X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

□40

□50

□60

□70

Other

ML

036

Motorless Specification

Electrical Specification: KXL06MV

• Origin sensor option 1 - 2

Unit [mm]	Direction of CW ←						→ Direction of CCW	
	Reference coordinate	Mechanical limit	CW Limit	Storke center	Opposite end face to origin	The origin end face	CCW Limit	Mechanical limit
KXL06030MV	Return to origin	22.5	20.5	5	5	0	10.5	12.5
KXL06050MV	Return to origin	42.5	40.5	15	5	0	10.5	12.5
KXL06075MV	Return to origin	67.5	65.5	27.5	5	0	10.5	12.5
KXL06100MV	Return to origin	92.5	90.5	40	5	0	10.5	12.5
KXL06150MV	Return to origin	142.5	140.5	65	5	0	10.5	12.5
KXL06200MV	Return to origin	192.5	190.5	90	5	0	10.5	12.5
KXL06300MV	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]	Direction of CW ←				→ Direction of CCW			
	Reference coordinate	Mechanical limit	CW Limit	Opposite end face to origin	The origin end face Storke center	CCW Limit	Mechanical limit	
KXL06030MV	Return to origin	17.5	15.5	5	0	15.5	17.5	
KXL06050MV	Return to origin	27.5	25.5	5	0	25.5	27.5	
KXL06075MV	Return to origin	40	38	5	0	38	40	
KXL06100MV	Return to origin	52.5	50.5	5	0	50.5	52.5	
KXL06150MV	Return to origin	77.5	75.5	5	0	75.5	77.5	
KXL06200MV	Return to origin	102.5	100.5	5	0	100.5	102.5	
KXL06300MV	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]	Direction of CW ←						→ Direction of CCW	
	Reference coordinate	Mechanical limit	CW Limit	The origin end face	Opposite end face to origin	Storke center	CCW Limit	Mechanical limit
KXL06030MV	Return to origin	12.5	10.5	0	5	5	20.5	22.5
KXL06050MV	Return to origin	12.5	10.5	0	5	15	40.5	42.5
KXL06075MV	Return to origin	12.5	10.5	0	5	27.5	65.5	67.5
KXL06100MV	Return to origin	12.5	10.5	0	5	40	90.5	92.5
KXL06150MV	Return to origin	12.5	10.5	0	5	65	140.5	142.5
KXL06200MV	Return to origin	12.5	10.5	0	5	90	190.5	192.5
KXL06300MV	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]	Direction of CW ←						→ Direction of CCW	
	Reference coordinate	Mechanical limit	CW Limit	Storke center	The origin end face	Opposite end face to origin	CCW Limit	Mechanical limit
KXL06030MV	Return to origin	27	25	9.5	0	3	6	8
KXL06050MV	Return to origin	47	45	19.5	0	3	6	8
KXL06075MV	Return to origin	72	70	32	0	3	6	8
KXL06100MV	Return to origin	97	95	44.5	0	3	6	8
KXL06150MV	Return to origin	147	145	69.5	0	3	6	8
KXL06200MV	Return to origin	197	195	94.5	0	3	6	8
KXL06300MV	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.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG
Linear ball

KXG
Linear ball

KXL
Linear ball

Cross Roller

40

50

60

70

Other

[IMPORTANT]

Unlike standard products, this is a motorless product without a drive source. Please read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchase.

● Scope of Warranty

The following are not covered by the warranty.

- Defects or troubles related to motor installation and adjustment.
- Accuracy after the motor has been assembled by the customer.

Note: Accuracy tests have been performed using a test motor to confirm that all specifications are met.

● Precautions and Restrictions**1. Specifications: Load Capacity and Maximum Speed**

- Use within the product's rated specifications, regardless of motor performance.
- Be aware that the short distance between the limit sensor and mechanical limit increases the risk of collision during overrun.
- Collisions with mechanical limits can damage accuracy and durability.

2. Torque Limits

Using high-torque motors may apply loads exceeding the product's tolerance. If the motor torque exceeds the values below, please apply a torque limit.

- KXL Series: [P28] 0.6 N·m / [S38, S40] 1.0 N·m

3. Motor Installation

- Perform centering (alignment) for the stage body, motor, and coupling during installation.
- Misalignment may cause product damage or premature failure.
- Refer to the assembly manual for installation and adjustment procedures.

4. Securing the Connector

- On some products, the connector must be secured by the customer.
- Before securing, the connector is connected to the body only by lead wires.
- Handle with care to prevent wire breakage.

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

PG
Linear ballKXG
Linear ballKXL
Linear ballCross
Roller 40 50 60 70

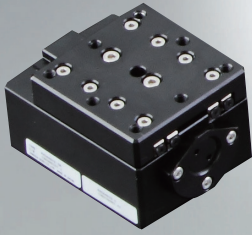
Other

ML
038

Motorless Specification

X-axis Cross Roller Guide :KXC04015V

RoHS



* All image is for illustrative purposes only.

Accessory	P28	S38	S40	
Motor bracket	Installed on main body			
Coupling(with screws)	○			
Mounting screw	For Motor	2 of M2.5-6	4 of M3-12	2 of M4-12
	For Motor plate	4 of M3-16		
Sensor cable 2m One end loose wire	○(HR10AP-S-SB-6-2)			
Hexagonal Wrench (for motor mounting)	○	-	-	

KXC04015V-P28

1

2

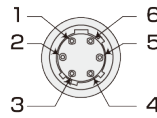
1 Table size/Travel distance

Code	Table size	Travel distance
04015	□40mm	15mm

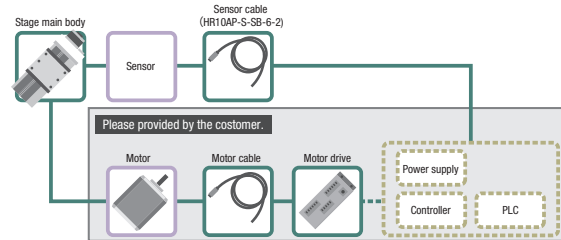
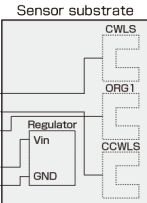
2 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

Pin allocation



- 1 CWLS output
- 2 CCWLS output
- 3 ORG output(ORG1)
- 4 N.C.
- 5 Power input(+)
- 6 Power input(-)



		SPEC		
Model		KXC04015V-P28	KXC04015V-S38	KXC04015V-S40
Mechanical specification	Travel distance		15mm	
	Table size		40×40mm	
	Feed screw (Ball screw)		φ6 lead 1	
	Guide		Crossed roller guide	
Main materials-Finishing			Aluminum—Black almite finishing	
	Weight	0.19 kg	0.20 kg	0.20 kg
Accuracy specification	Resolution (Pulse)	Full/Half Microstep	2μm/1μm 0.1μm (1/20 on resolution)	
	MAX speed		10mm/sec	
	Uni-directional positioning accuracy		10μm	
	Repeatability positioning accuracy		±0.2μm	
	Load capacity		5.0kgf [49N]	
	Moment stiffness		Pitch 0.33/yaw 0.44/roll 0.37 ["/N · cm]	
	Lost motion		1μm	
	Backlash		0.5μm	
	Straightness		3μm	
	Parallelism		30μm	
Motion parallelism		10μm		
Pitching/Yawing		25"/20"		

* SPEC is the value of the standard motor.

SENSOR	
Limit sensor	Installed
Origin sensor	Installed
Slit origin sensor	-
Model	Photo microsensor EE-SX4320 (Omron Co., Ltd.)
Power voltage	DC5 - 24V ±10%
Consumption current	Total 60mA or less
Control output	NPN open collector output DC5-24V 8mA or less Residual voltage 0.3V or less when the load current is 2mA
Output logic	On detection (light shield condition): Output transistor OFF (Non-continuity)

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross Roller

□40

□50

□60

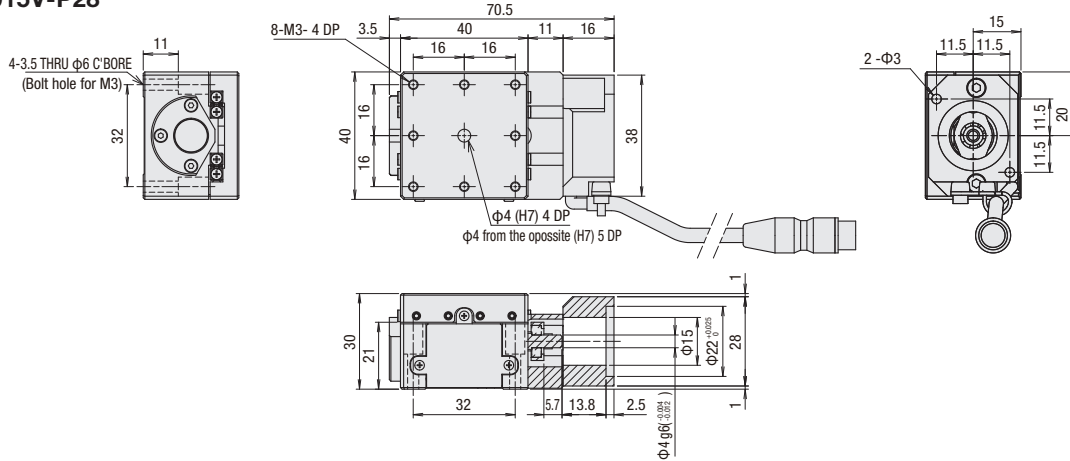
□70

Other

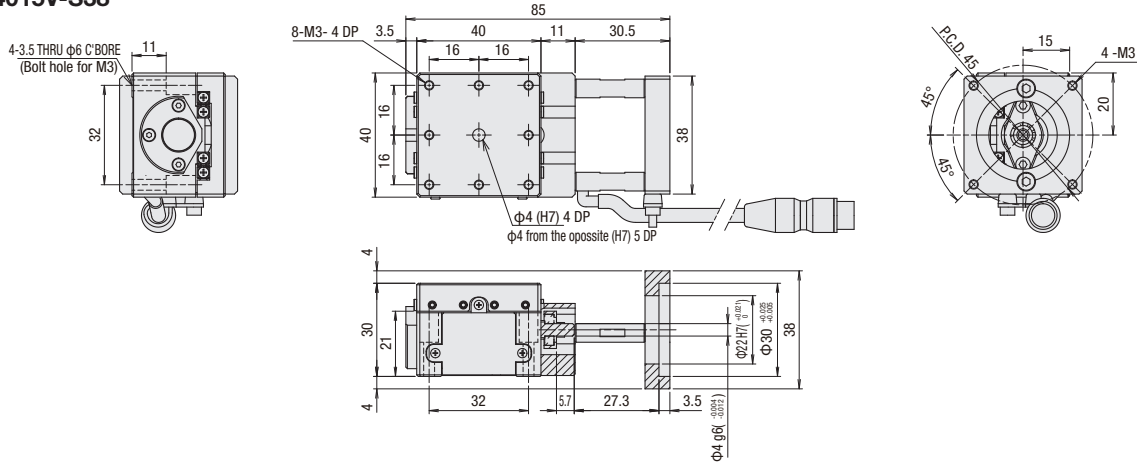
ML
039

Dimensions

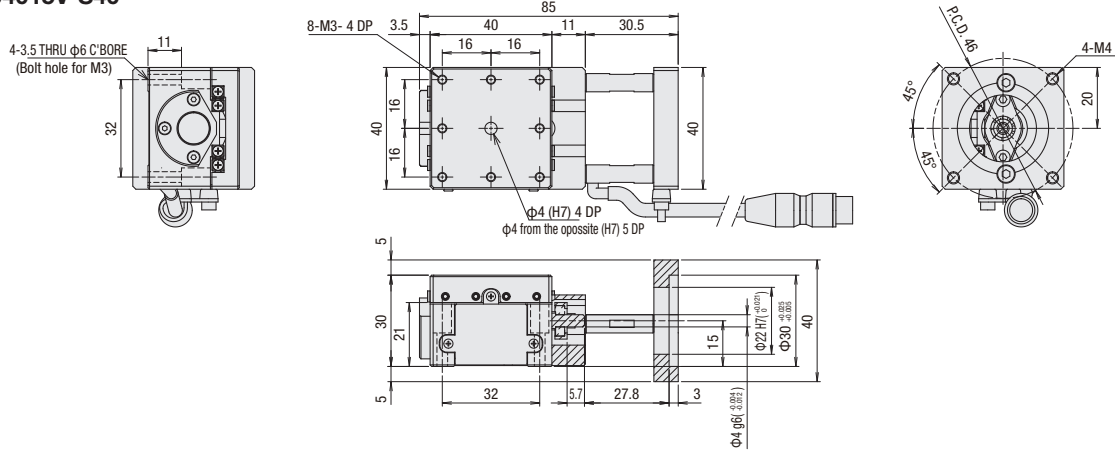
KXC04015V-P28



KXC04015V-S38



KXC04015V-S40



[IMPORTANT]

Unlike standard products, this is a motorless product without a drive source. Please read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchase.

•Scope of Warranty

The following are not covered by the warranty. (1) Defects or troubles related to motor installation and adjustment. (2) Accuracy after the motor has been assembled by the customer.
 Note: Accuracy tests have been performed using a test motor to confirm that all specifications are met.

•Precautions and Restrictions

1. Specifications: Load Capacity and Maximum Speed
 - Use within the product's rated specifications, regardless of motor performance.
 - Be aware that the short distance between the limit sensor and mechanical limit increases the risk of collision during overrun.
 - Collisions with mechanical limits can damage accuracy and durability.
2. Torque Limits

Using high-torque motors may apply loads exceeding the product's tolerance. If the motor torque exceeds the values below, please apply a torque limit.

KXC Series: 0.25 N·m
3. Motor Installation
 - Perform centering (alignment) for the stage body, motor, and coupling during installation.
 - Misalignment may cause product damage or premature failure.
 - Refer to the assembly manual for installation and adjustment procedures.
4. Securing the Connector
 - On some products, the connector must be secured by the customer.
 - Before securing, the connector is connected to the body only by lead wires.
 - Handle with care to prevent wire breakage.

- Motorless
- X
- XY
- Z
- Horizontal Z
- XYZ
- Goniometer
- Rotary

- PG Linear ball
- KXG Linear ball
- KXL Linear ball
- Cross Roller

- 40
- 50
- 60
- 70
- Other
- ML 040**

Motorless Specification

X-axis Cross Roller Guide :KXC06020V

RoHS

Motorless



* All image is for illustrative purposes only.

Accessory		P28	S38	S40
Motor bracket		Installed on main body		
Coupling(with screws)		○		
Mounting screw	For Motor	2 of M2.5-5	4 of M3-12	2 of M4-12
	For Motor plate	4 of M4-16		
Sensor cable 2m One end loose wire		○(HR10AP-S-SB-6-2)		
Hexagonal Wrench (for motor mounting)		○	-	-

KXC06020V-P28

1

2

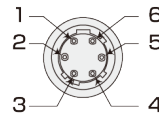
1 Table size/Travel distance

Code	Table size	Travel distance
06020	□60mm	20mm

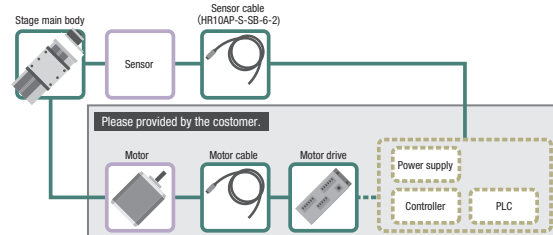
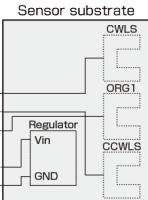
2 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

Pin allocation



1	CWLS output
2	CCWLS output
3	ORG output(ORG1)
4	N.C.
5	Power input(+)
6	Power input(-)



		SPEC		
Model		KXC06020V-P28	KXC06020V-S38	KXC06020V-S40
Mechanical specification	Travel distance		20mm	
	Table size		60×60mm	
	Feed screw (Ball screw)		φ8 lead 1	
	Guide		Crossed roller guide	
	Main materials-Finishing		Aluminum—Black almite finishing	
	Weight	0.32 kg	0.37 kg	0.37 kg
Accuracy specification	Resolution (Pulse)	Full/Half	2μm/1μm	
		Microstep	0.1μm (1/20 on resolution)	
	MAX speed		20mm/sec	
	Uni-directional positioning accuracy		5μm	
	Repeatability positioning accuracy		±0.2μm	
	Load capacity		5.0kgf [49N]	
	Moment stiffness		Pitch 0.15/yaw 0.12/roll 0.07 ["/N · cm]	
	Lost motion		1μm	
	Backlash		0.5μm	
	Straightness		3μm	
Parallelism		30μm		
Motion parallelism		10μm		
Pitching/Yawing		20"/15"		

* SPEC is the value of the standard motor.

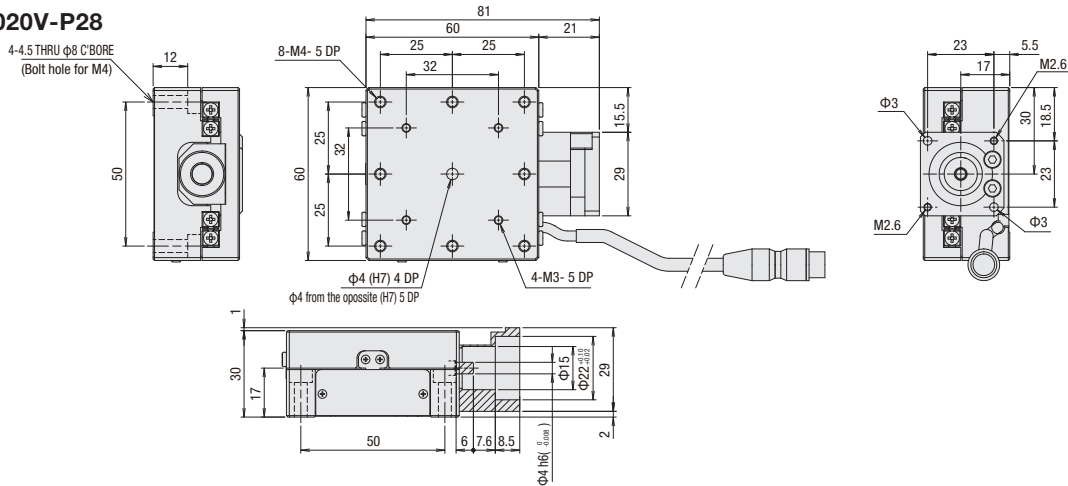
SENSOR

Limit sensor	Installed
Origin sensor	Installed
Slit origin sensor	-
Model	Photo microsensor EE-SX4320 (Omron Co., Ltd.)
Power voltage	DC5~24V ±10%
Consumption current	Total 60mA or less
Control output	NPN open collector output DC5~24V 8mA or less Residual voltage 0.3V or less when the load current is 2mA
Output logic	On detection (light shield condition): Output transistor OFF (Non-continuity)

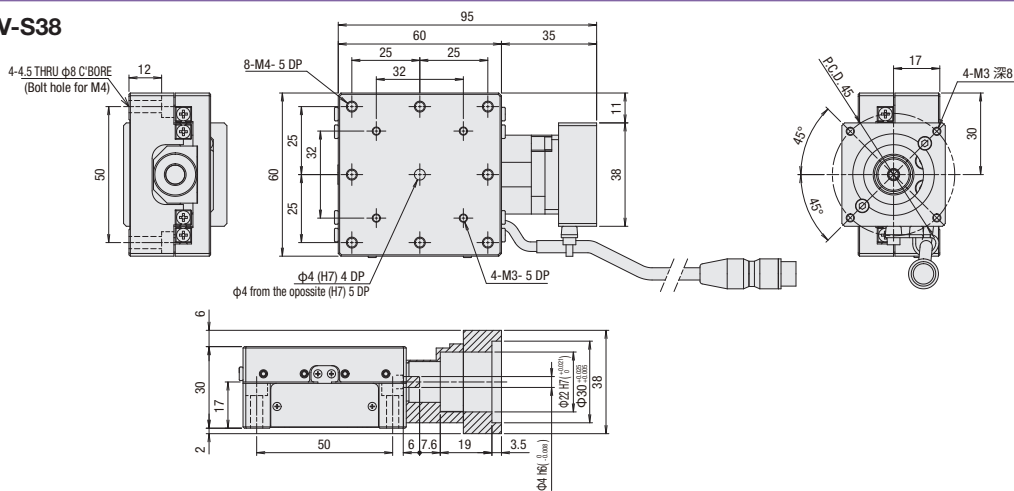
ML
041

Dimensions

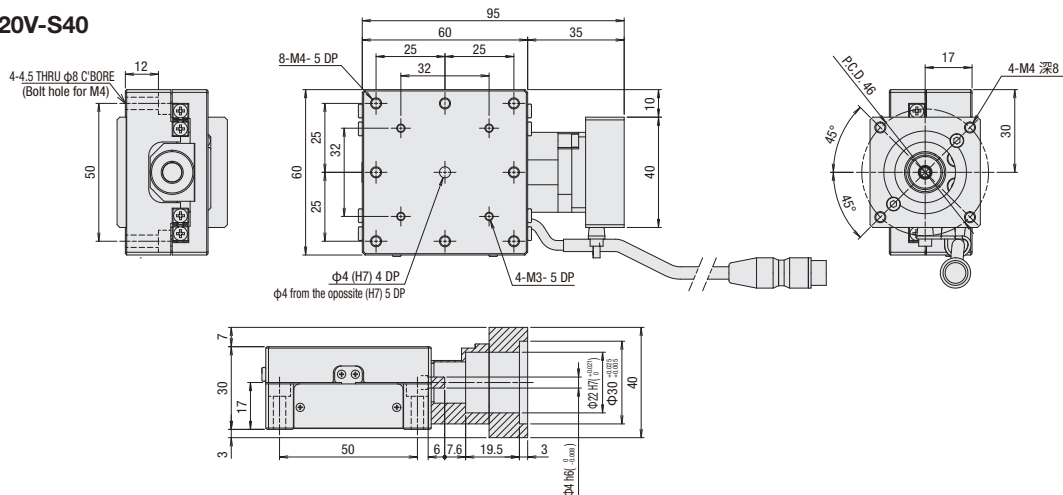
KXC06020V-P28



KXC06020V-S38



KXC06020V-S40



Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

PG

Linear ball

KXG

Linear ball

KXL

Linear ball

Cross

Roller

[IMPORTANT]

Unlike standard products, this is a motorless product without a drive source. Please read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchase.

•Scope of Warranty

The following are not covered by the warranty. (1) Defects or troubles related to motor installation and adjustment. (2) Accuracy after the motor has been assembled by the customer.

Note: Accuracy tests have been performed using a test motor to confirm that all specifications are met.

•Precautions and Restrictions

1. Specifications: Load Capacity and Maximum Speed

- Use within the product's rated specifications, regardless of motor performance.
- Be aware that the short distance between the limit sensor and mechanical limit increases the risk of collision during overrun.
- Collisions with mechanical limits can damage accuracy and durability.

2. Torque Limits

Using high-torque motors may apply loads exceeding the product's tolerance. If the motor torque exceeds the values below, please apply a torque limit.

KXC Series: 0.25 N·m

3. Motor Installation

- Perform centering (alignment) for the stage body, motor, and coupling during installation.
- Misalignment may cause product damage or premature failure.
- Refer to the assembly manual for installation and adjustment procedures.

4. Securing the Connector

- On some products, the connector must be secured by the customer.
- Before securing, the connector is connected to the body only by lead wires.
- Handle with care to prevent wire breakage.

□40

□50

□60

□70

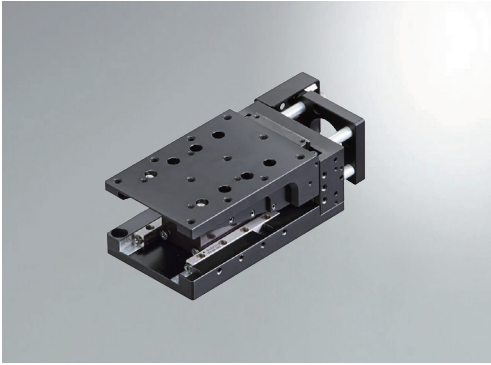
Other

ML
042

Horizontal Z-axis Cross Roller Guide :KHC06004V

RoHS

Motorless



* All image is for illustrative purposes only.

Accessory		P28	S38	S40
Motor bracket		Installed on main body		
Coupling(with screws)		○		
Mounting screw	For Motor	2 of M2.5-6	4 of M3-12	2 of M4-12
	For Main Body	4 of M4-12		
Sensor cable 2m One end loose wire		○ (HR10AP-S-SB-6-2)		
Hexagonal Wrench (for motor mounting)		○	—	—

KHC06004V-P28

1

2

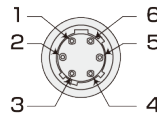
1 Table size/Travel distance

Code	Table size	Travel distance
06004	□60mm	4mm

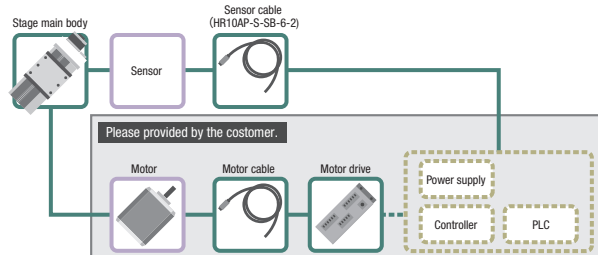
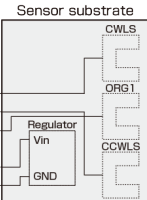
2 Applicable Motor

Code	Specification
P28	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 40 Servo motor specification

Pin allocation



1	CWLS output
2	CCWLS output
3	ORG output(ORG1)
4	N.C.
5	Power input(+)
6	Power input(-)



		SPEC		
Model		KHC06004V-P28	KHC06004V-S38	KHC06004V-S40
Mechanical specification	Travel length		4mm	
	Table size		60×60mm	
	Feed screw		Ball screw φ8 lead 1	
	Guide		Wedge type Crossed roller guide	
	Main materials-Finishing		Aluminum—Black almite finishing	
Accuracy specification	Weight	0.79 kg	0.84 kg	0.84 kg
	Resolution (Pulse)		0.5μm (Full) / 0.25μm (Half)	
	MAX speed		2.5mm/sec	
	Uni-directional positioning accuracy		7μm	
	Repeatability positioning accuracy		±0.5μm	
	Load capacity		7kgf [68.6N]	
	Moment stiffness		Pitch 0.2/yaw 0.04/roll 0.14 [°/N · cm]	
	Lost motion		1μm	
	Parallelism		50μm	

* SPEC is the value of the standard motor.

SENSOR

Limit sensor	Installed
Origin sensor	Installed
Slit origin sensor	—
Model	Photo microsensor EE-SX4320 (Omron Co., Ltd.)
Power voltage	DC5~24V ±10%
Consumption current	Total 60mA or less
Control output	NPN open collector output DC5~24V 8mA or less Residual voltage 0.3V or less when the load current is 2mA
Output logic	On detection (light shield condition): Output transistor OFF (Non-continuity)

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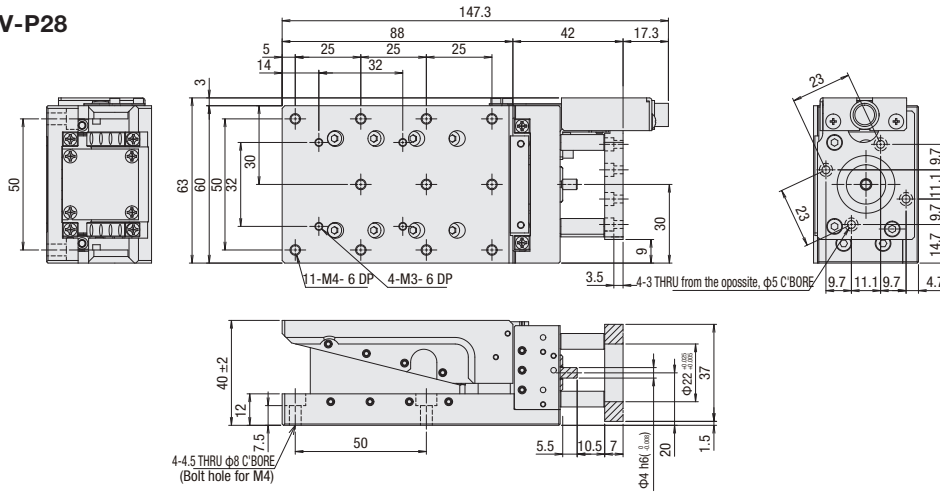
□60

□70

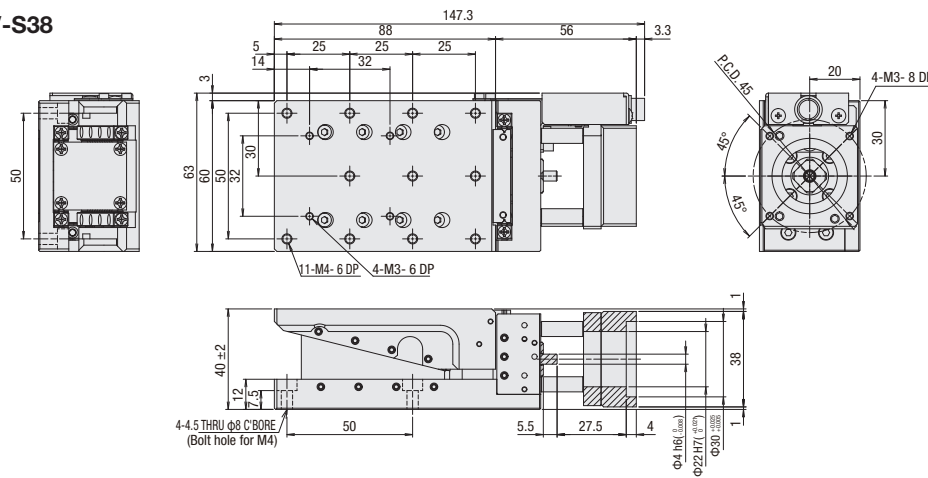
Other

外形寸法図

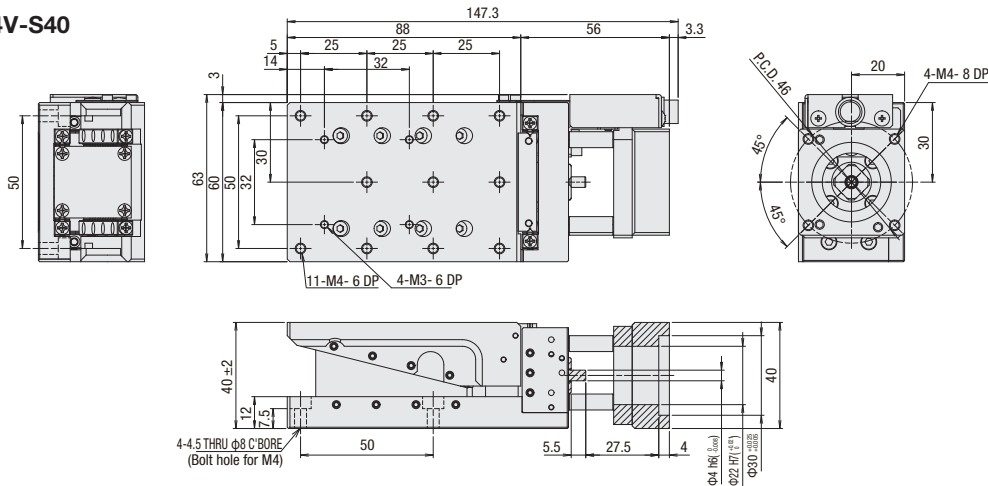
KHC06004V-P28



KHC06004V-S38



KHC06004V-S40



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