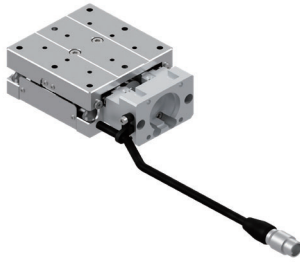


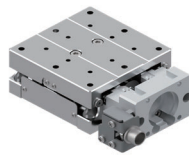
X-axis Linear Ball Guide:KXG06020V

RoHS

KXG06020TV-P28



KXG06020MV-P28



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

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

KXG06020TV-P28-

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

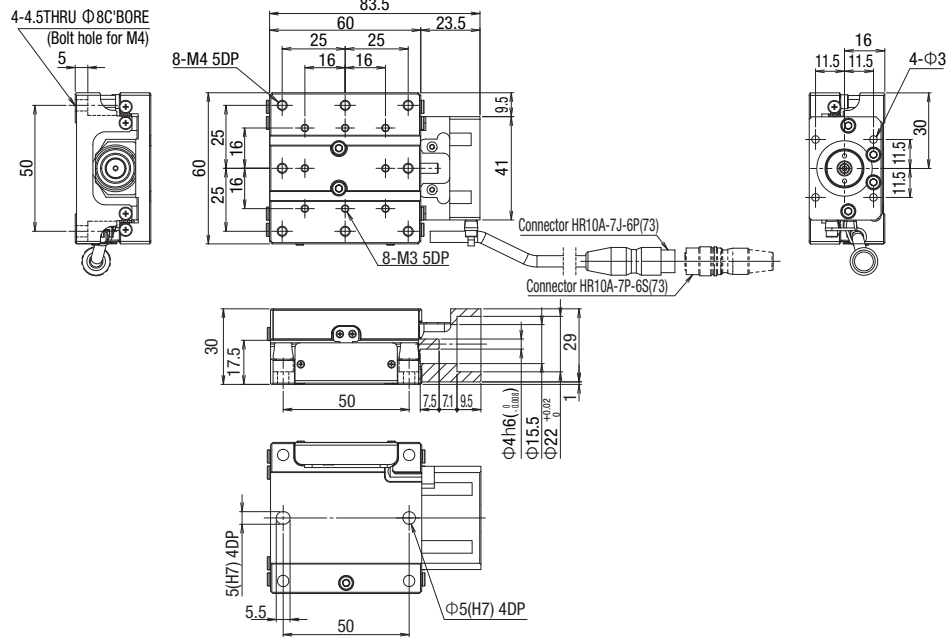
SPEC			
Model		KXG06020TV-P28	KXG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
	Main materials-Finishing	Special Steel—Electroless nickel plating	
Accuracy specification	Weight	0.60kg	
	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.

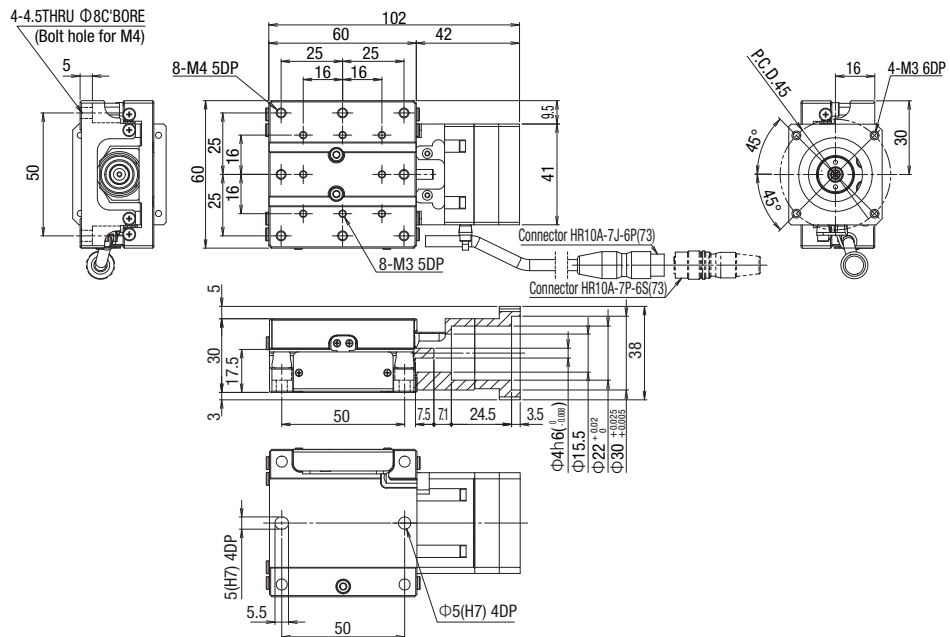
* When the applicable motor code [S38/S40] is selected, the weight is 0.64kg.

Dimensions

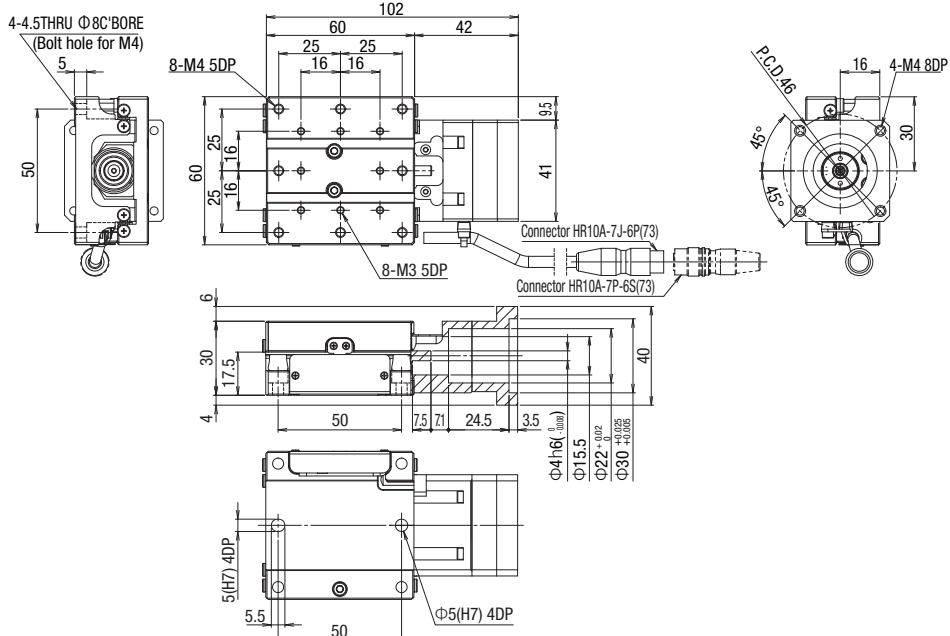
KXG06020TV-P28



KXG06020TV-S38



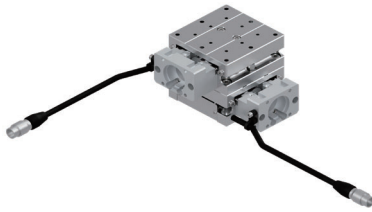
KXG06020TV-S40



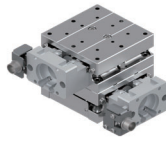
XY-axis Linear Ball Guide: KYG06020V

RoHS

KYG06020TV-P28



KYG06020MV-P28



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

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

KYG06020TV-P28-

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	☐ 28 Stepping motor specification
S38	☐ 38 Servo motor specification
S40	☐ 40 Servo motor specifications

3 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

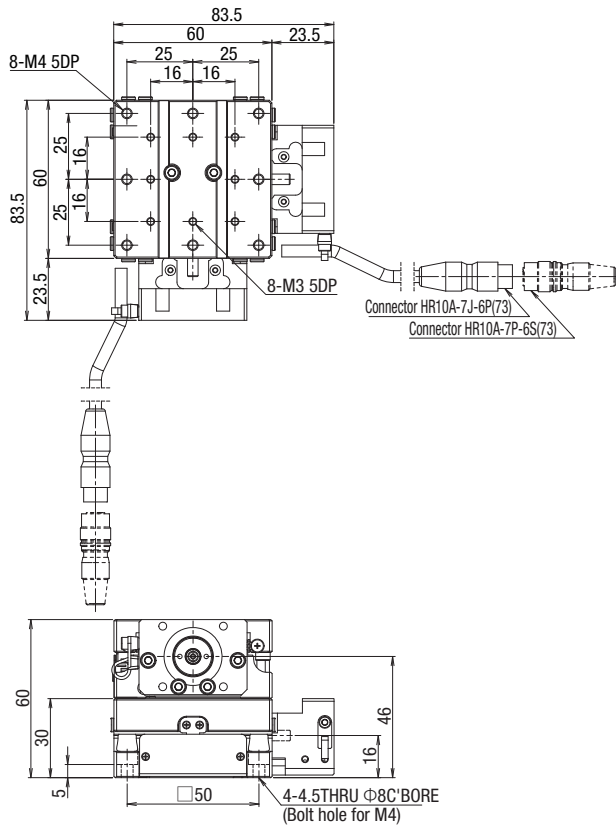
SPEC			
Model		KYG06020TV-P28	KYG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	1.20kg	
	Resolution/ Pulse	2μm/1μm	
	MAX speed	0.1μm(1/20 On resolution)	
	Load capacity	20mm/sec	
Sensor	Squareness	9kgf【88.2N】	
	Limit sensor	10μm/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.

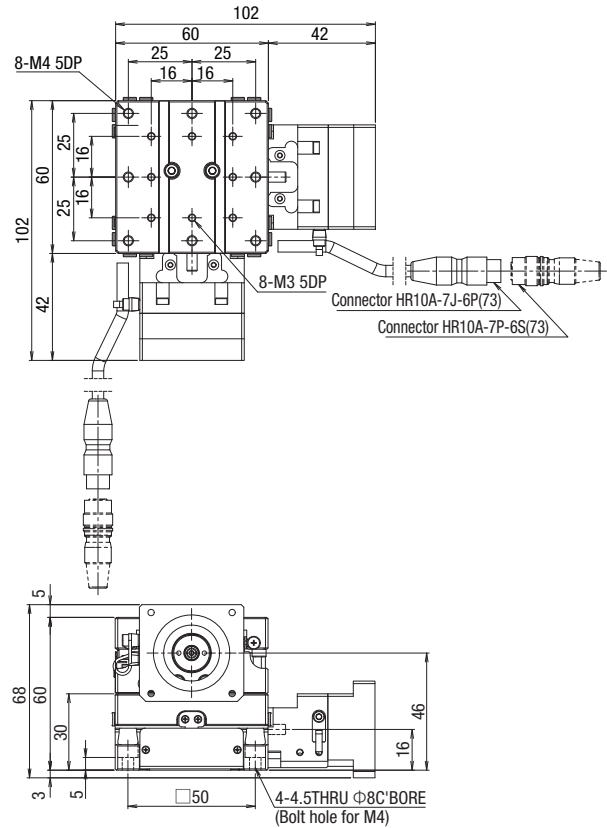
* When the applicable motor code [S38/S40] is selected, the weight is 1.28kg.

Dimensions

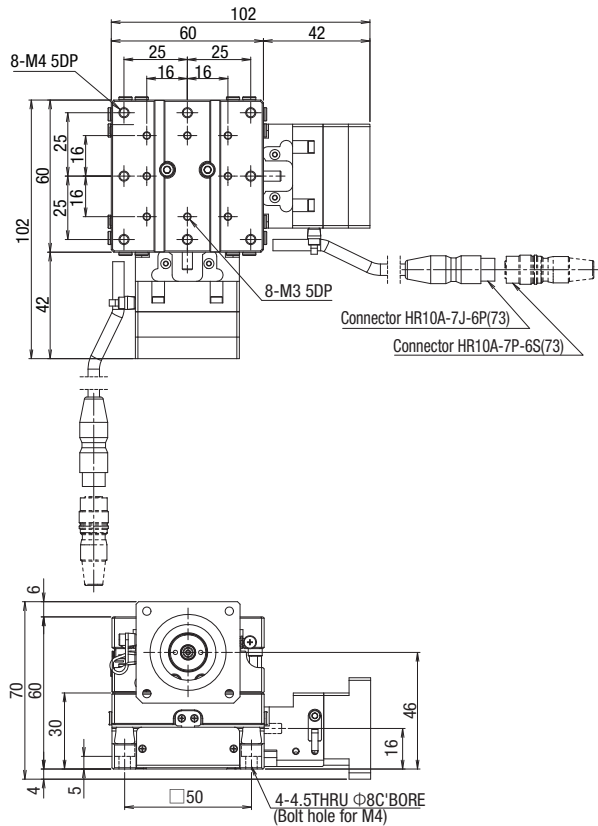
KYG06020TV-P28



KYG06020TV-S38



KYG06020TV-S40



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	4of M2.5-6	4of M3-12	2of M4-12
	For Main Body	4of M4-10		
Sensor cable		○(HR10AP-S-SB-6-□)		
Cable tie		○	-	-

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

KZG06020TV-P28-□

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

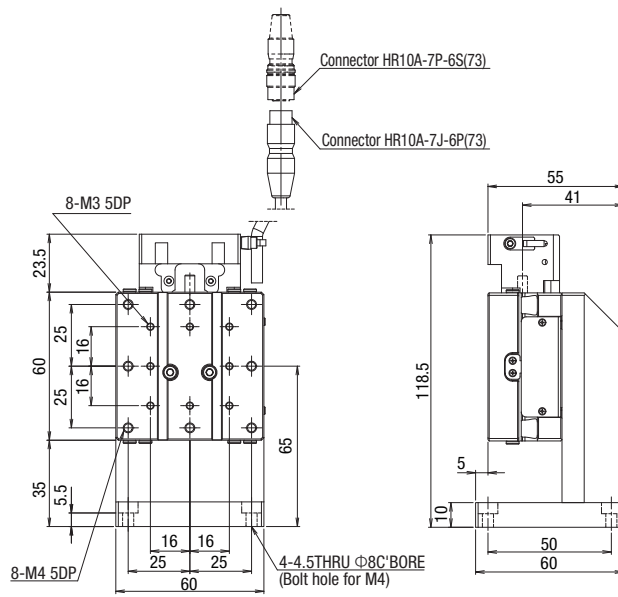
SPEC			
Model		KZG06020TV-P28	KZG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	0.96kg	
	Resolution/ Pulse	2μm/1μm	
	MAX speed	0.1μm(1/20 On resolution)	
	Load capacity	20mm/sec	
Sensor	Perpendicularity	3kgf [29.4N]	
	Limit sensor	10μm/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.

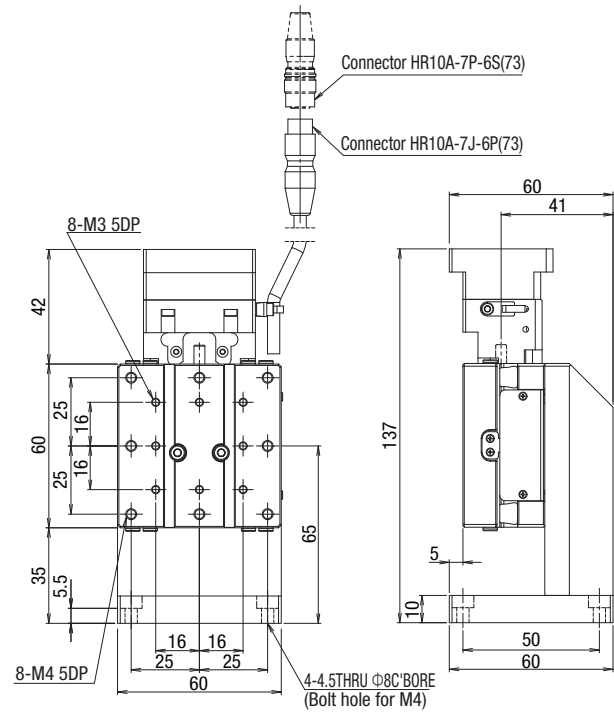
* When the applicable motor code [S38/S40] is selected, the weight is 1.00kg.

Dimensions

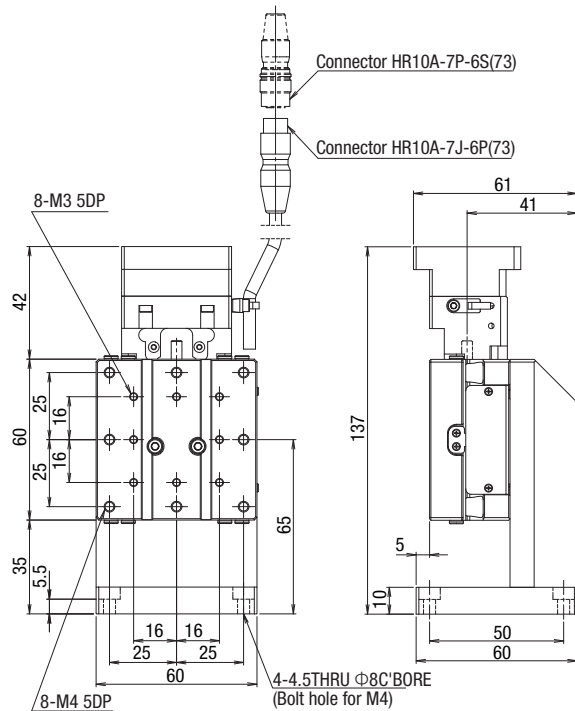
KZG06020TV-P28



KZG06020TV-S38



KZG06020TV-S40



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	12of M2.5-6	12of M3-12	6of M4-12
	For Main Body	4of M4-10		
Sensor cable		○(HR10AP-S-SB-6-□)		
Cable tie		○	-	-

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

KWG06020TV-P28-□

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

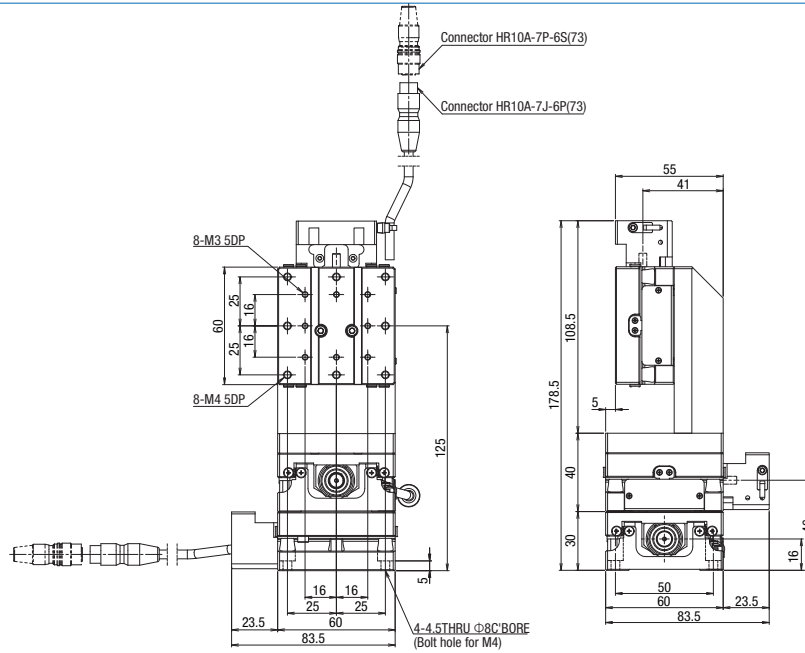
SPEC			
Model	KWG06020TV-P28		KWG06020MV-P28
Mechanical specification	Travel distance	20mm	
	Stage surface size	60×60mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating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

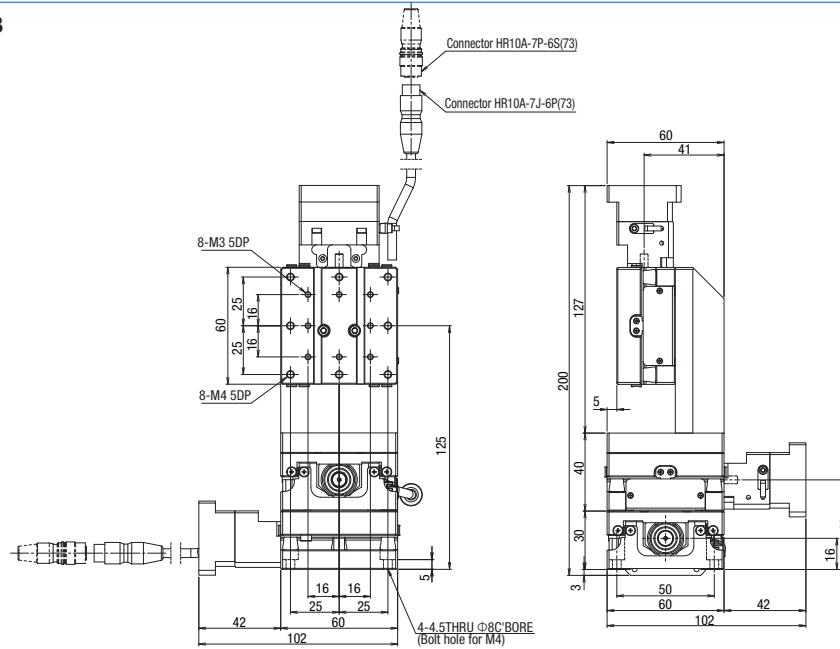
* When the applicable motor code [S38/S40] is selected, the weight is 2.28kg.

Dimensions

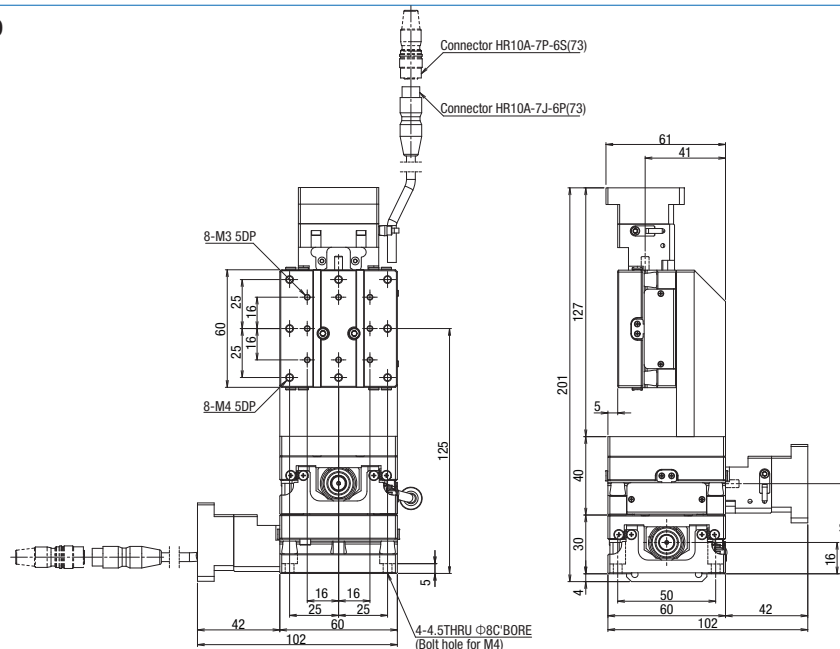
KWG06020TV-P28



KWG06020TV-S38



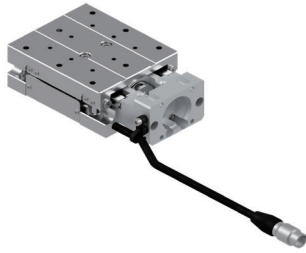
KWG06020TV-S40



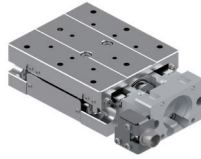
X-axis Linear Ball Guide:KXG06030V

RoHS

KXG06030TV-P28



KXG06030MV-P28



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

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

KXG06030TV-P28-□

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

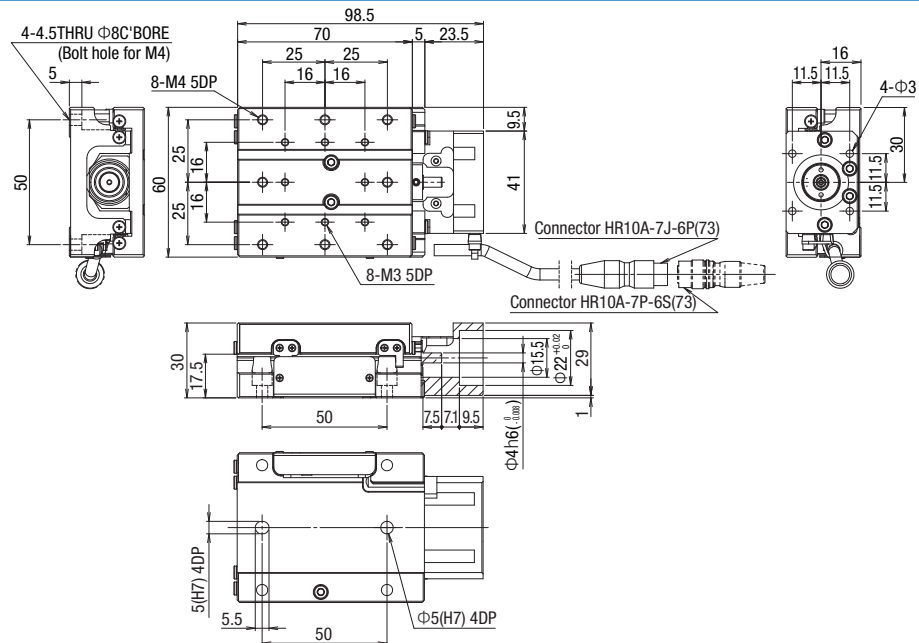
SPEC			
Model		KXG06030TV-P28	KXG06030MV-P28
Mechanical specification	Travel distance	30mm	
	Stage surface size	60×70mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating	
	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.

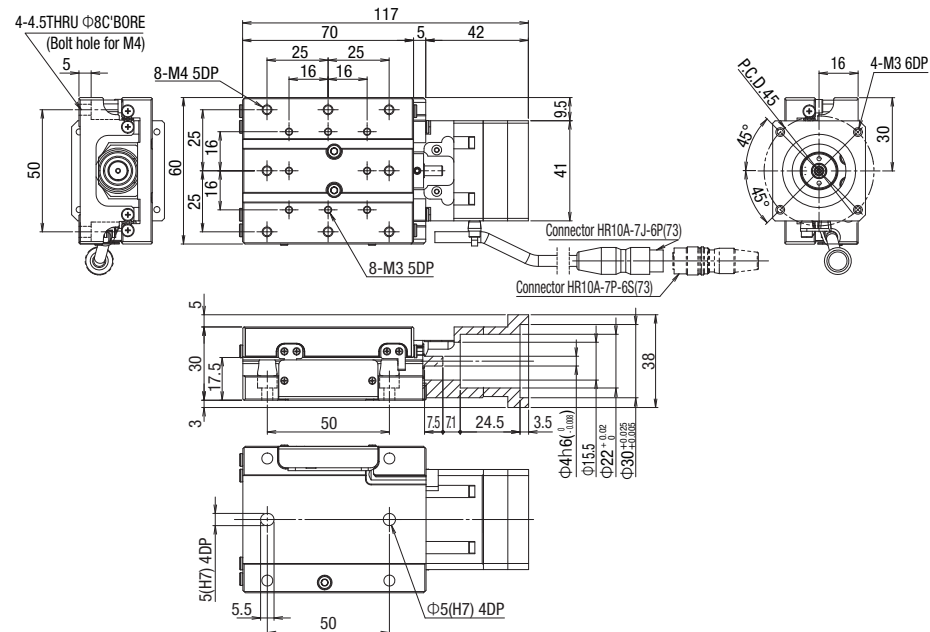
* When the applicable motor code [S38/S40] is selected, the weight is 0.74kg.

Dimensions

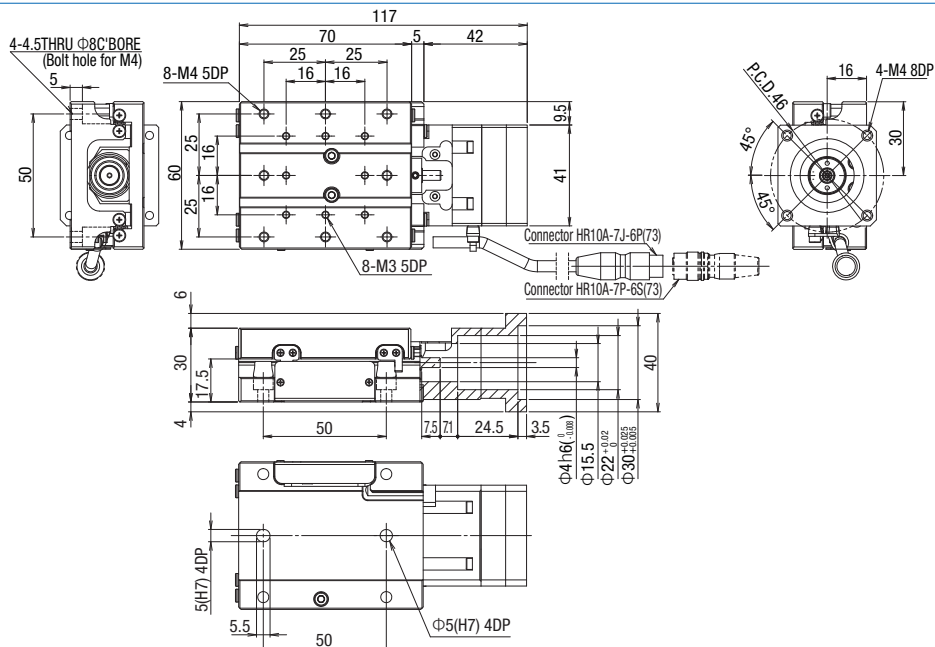
KXG06030TV-P28



KXG06030TV-S38



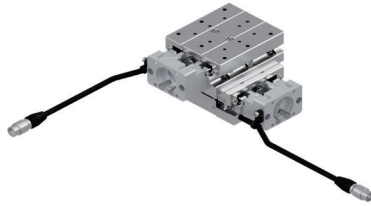
KXG06030TV-S40



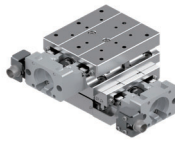
XY-axis Linear Ball Guide: KYG06030V

RoHS

KYG06030TV-P28



KYG06030MV-P28



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

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

KYG06030TV-P28-□

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

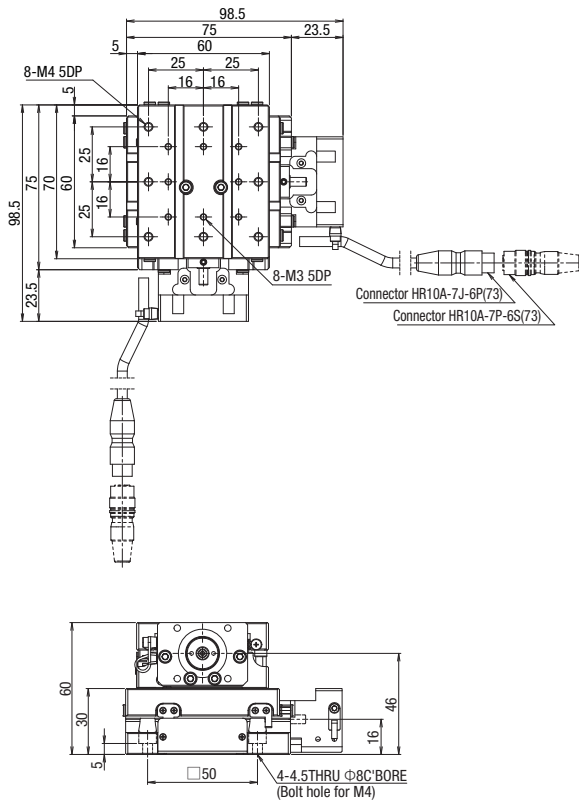
SPEC			
Model		KYG06030TV-P28	KYG06030MV-P28
Mechanical specification	Travel distance	30mm	
	Stage surface size	60×70mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	1.40kg	
	Resolution/ Pulse	2μm/1μm	
	Full/Half Micro step	0.1μm(1/20 On resolution)	
	MAX speed	20mm/sec	
Sensor	Load capacity	9kgf [88.2N]	
	Squareness	15μm/Full stroke	
	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.

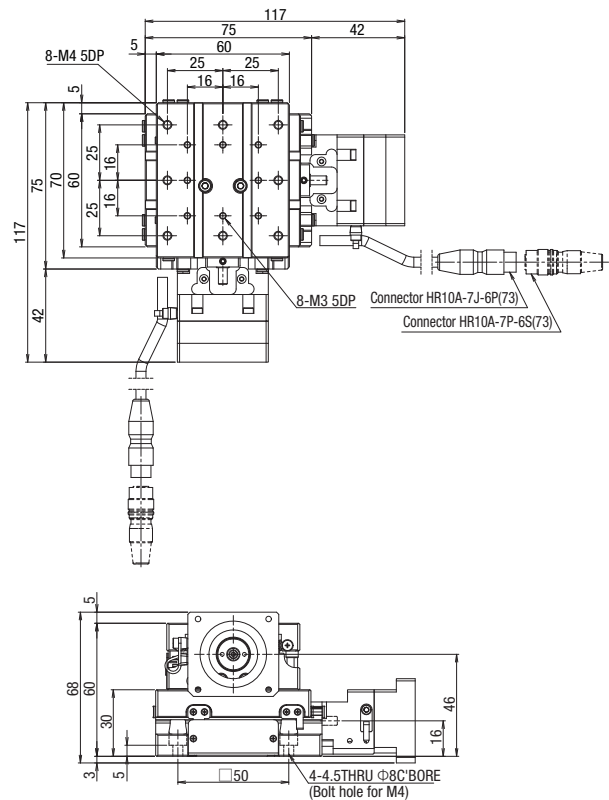
* When the applicable motor code [S38/S40] is selected, the weight is 1.48kg.

Dimensions

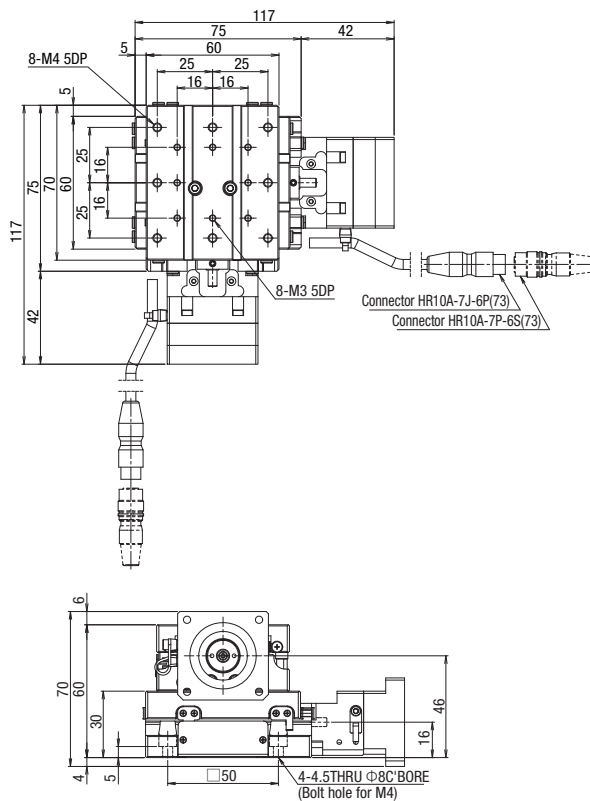
KYG06030TV-P28



KYG06030TV-S38



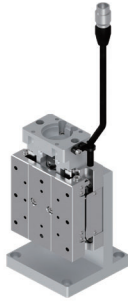
KYG06030TV-S40



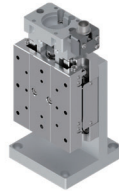
Z-axis Linear Ball Guide:KZG06030V

RoHS

KZG06030TV-P28



KZG06030MV-P28



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

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

KZG06030TV-P28-□

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

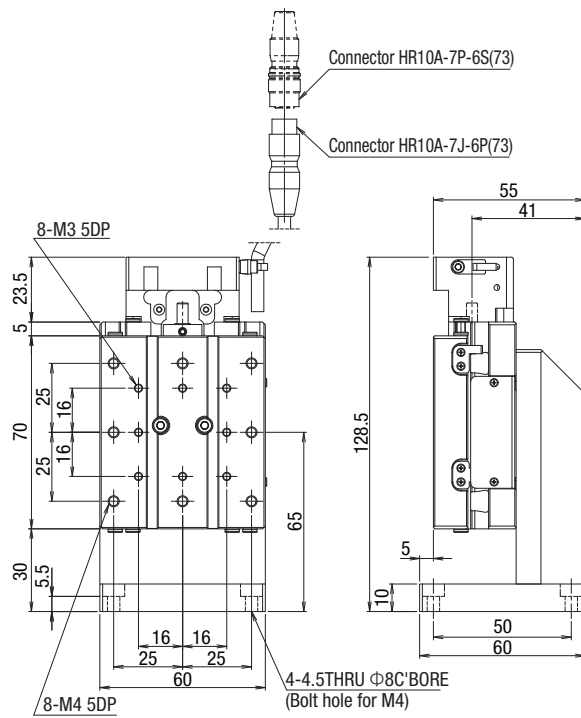
SPEC			
Model		KZG06030TV-P28	KZG06030MV-P28
Mechanical specification	Travel distance	30mm	
	Stage surface size	60×70mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating	
	Weight	1.06kg	
	分解能 (パルス)	Full/Half	2μm/1μm
		Micro step	0.1μm(1/20 On resolution)
	MAX speed	20mm/sec	
Sensor	Load capacity	3kgf [29.4N]	
	Perpendicularity	15μm/Full stroke	
	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.

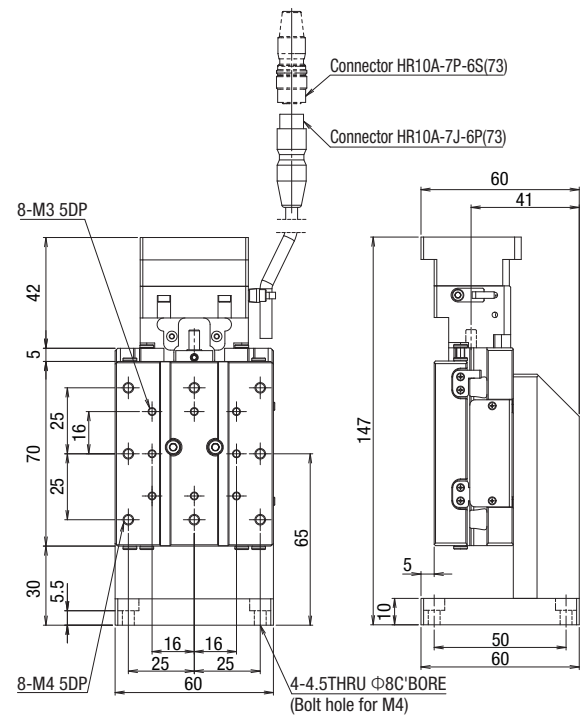
* When the applicable motor code [S38/S40] is selected, the weight is 1.10kg.

Dimensions

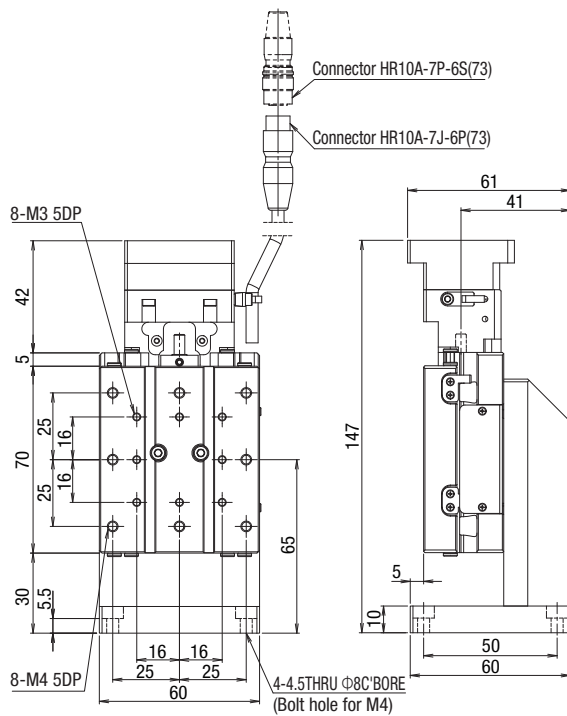
KZG06030TV-P28



KZG06030TV-S38



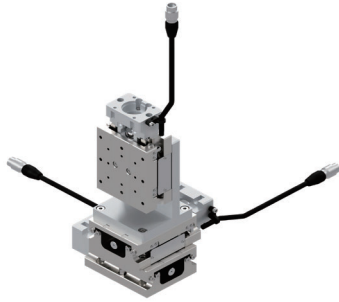
KZG06030TV-S40



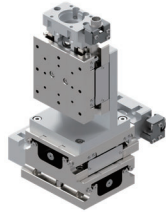
XYZ-axis Linear Ball Guide:KWG06030V

RoHS

KWG06030TV-P28



KWG06030MV-P28



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

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

KWG06030TV-P28-□

1

2

3

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

3 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

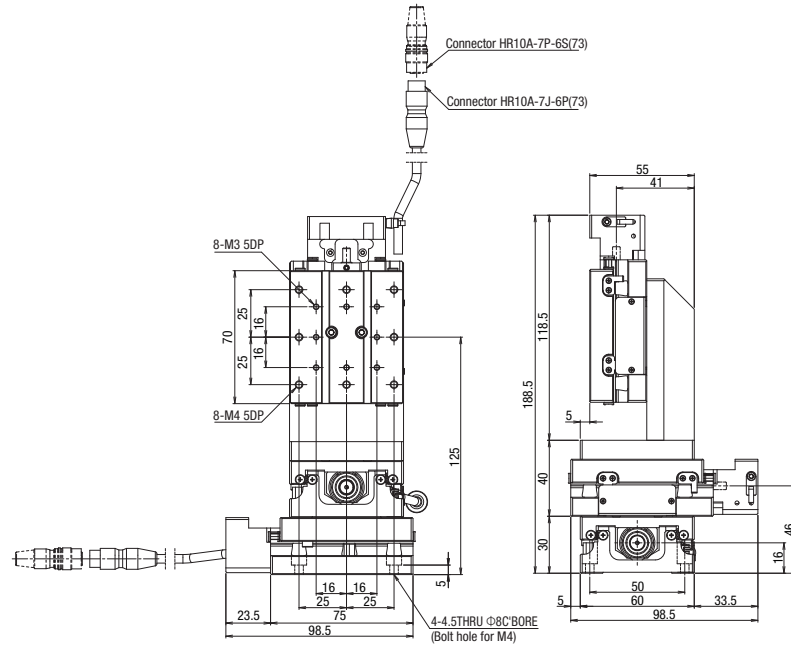
SPEC			
Model	KWG06030TV-P28		KWG06030MV-P28
Mechanical specification	Travel distance	30mm	
	Stage surface size	60×70mm	
	Connector type	Pigtail	Panel Mount
	Feed screw (Ball screw)	φ8 Lead 1	
	Guide	Linear Ball Guide	
Accuracy specification	Main materials-Finishing	Special Steel—Electroless nickel plating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

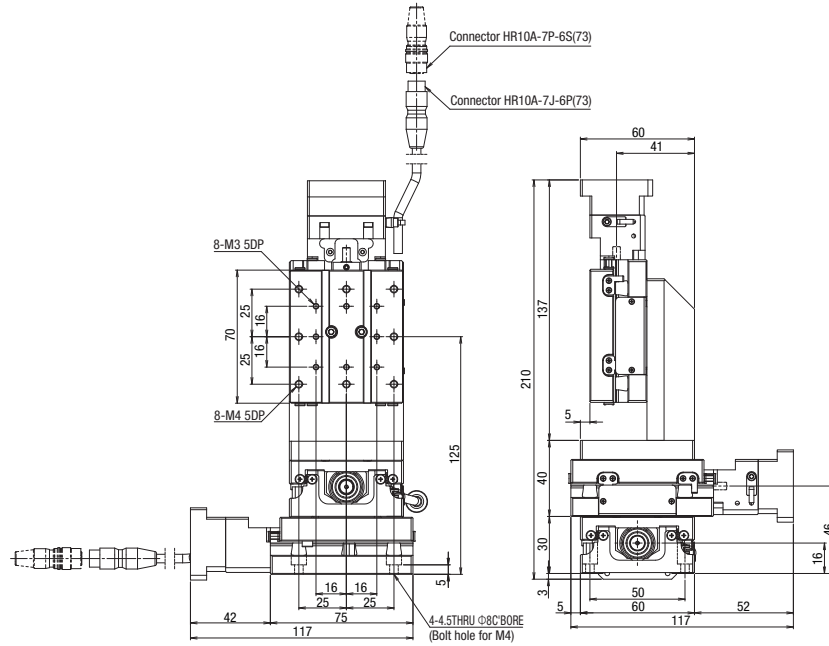
* When the applicable motor code [S38/S40] is selected, the weight is 2.58kg.

Dimensions

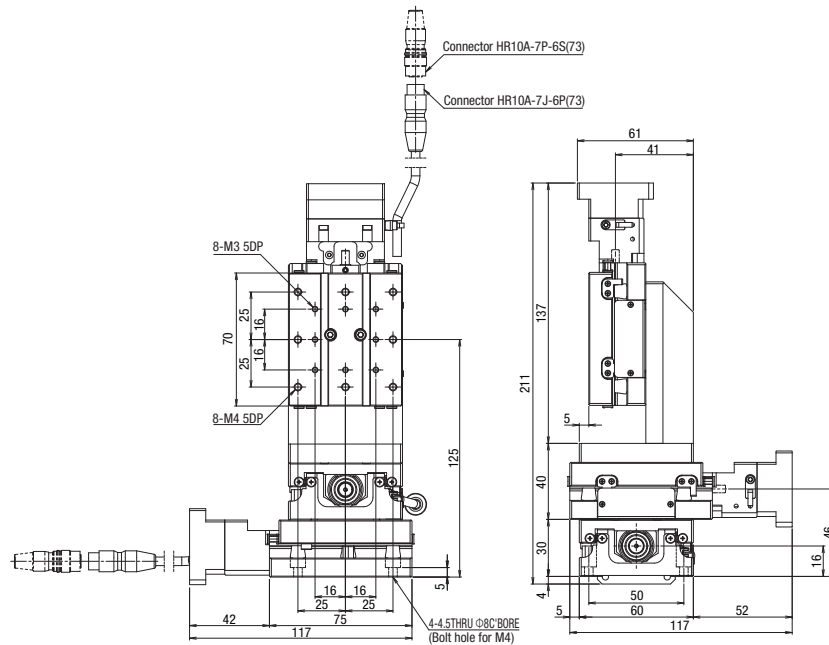
KWG06030TV-P28



KWG06030TV-S38



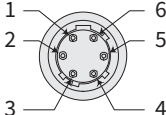
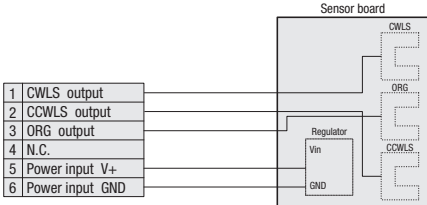
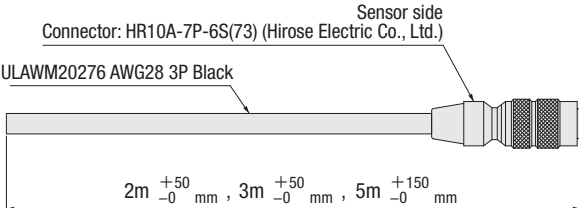
KWG06030TV-S40



Electrical specification

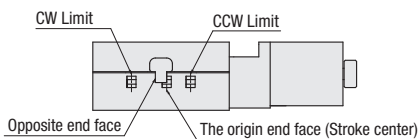
Applicable motor code		P28	S38	S40
Feature		For □28 Stepping motor	For □38 AC Servo motor	For □40 AC Servo motor
Model			KXG06020/KXG06030	
Connector	Pig tail		Sensor: HR10A-7J-6P(73) (Hirose Electric Co., Ltd.)	
	Panel mount		Sensor: HR10A-7R-6P(73) (Hirose Electric Co., Ltd.)	
	Receiving connector		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

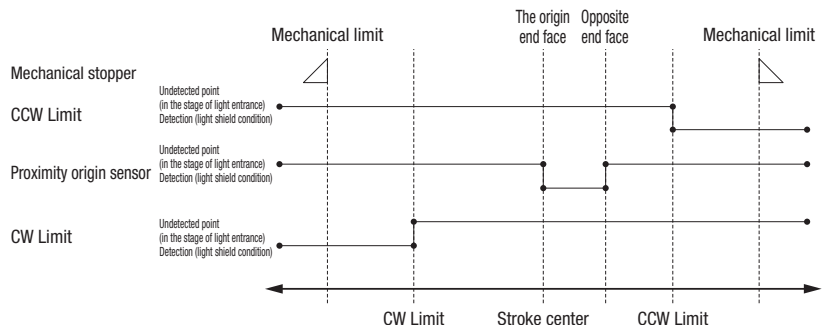
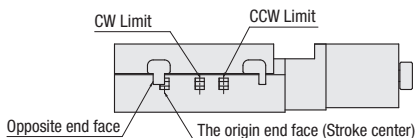
Motor code		KXG Series													
P28 • S38 • S40	Sensor	【Pin allocation】 Pigtail specification : Connector model : HR10A-7J-6P(73) (Hirose Electric Co., Ltd.) Panel mount specification : Connector model : HR10A-7R-6P(73) (Hirose Electric Co., Ltd.) 	【Connection diagram】  <table><tr><td>1</td><td>CWLS output</td></tr><tr><td>2</td><td>CCWLS output</td></tr><tr><td>3</td><td>ORG output</td></tr><tr><td>4</td><td>N.C.</td></tr><tr><td>5</td><td>Power input V+</td></tr><tr><td>6</td><td>Power input GND</td></tr></table>	1	CWLS output	2	CCWLS output	3	ORG output	4	N.C.	5	Power input V+	6	Power input GND
		1	CWLS output												
		2	CCWLS output												
3	ORG output														
4	N.C.														
5	Power input V+														
6	Power input GND														
【Cable model】 Model:HR10AP-S-SB-6-□ (□ is the length.) * Fixed Connector: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.) ULAWM20276 AWG28 3P Black Sensor side  <table><tr><th>Pin</th><th>Signals</th></tr><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></table> ※The shields are connected with the connector shell.	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



Unit [mm]

Direction of CW ←

→ Direction of CCW

	Reference coordinate	Mechanical limit	CW Limit	The origin end face (Stroke center)	Opposite end face	CCW Limit	Mechanical limit
KXG06020T(M)	Return to origin	11.5	10.5	0	5	10.5	11.5
KXG06030T(M)	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)

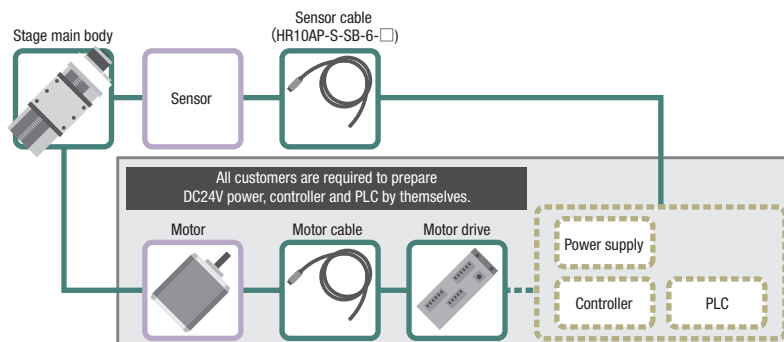
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

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** ☐ **28mm**
For Stepping motor
- S38** ☐ **38mm**
For AC servo motor
- S40** ☐ **40mm**
For AC servo motor



【Precautions for handling motorless products】

【important】

Unlike normal products, this is a motorless product with no drive source.

Please be sure to read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchasing.

◆ Warranty range

The following items are not covered by the warranty.

- Faults and troubles related to motor mounting adjustment
- Accuracy after motor assembly by customer

* Accuracy inspection is performed on the inspection motor to confirm that it is within the standard value.

◆ Precautions and restrictions on use

1. Specs: load capacity and maximum speed

Since it depends on the configuration of the main body of the motorized stage, please use it within the specifications of this product regardless of the performance of the motor. The distance between the limit sensor and the mechanical limit is short, and an overrun may cause collision with the mechanical limit. Please note that collisions with mechanical limits may adversely affect product accuracy and durability.

2. Torque limit

Using a high-torque motor may give a load that exceeds the product's allowable limit. If the motor torque exceeds $0.25 \text{ N} \cdot \text{m}$, please apply the torque limit.

3. Mounting the motor

Align the body, motor, and coupling before mounting.

Operation in a misalignment situation may lead to early product damage and deterioration. Please refer to the attached assembly procedure manual and adjust the assembly.

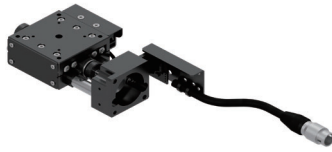
4. Fixing the connector

There are products that require the customer to fix the connector. Before fixing, the connector part and the main body are connected only by the lead wire, which may cause disconnection, so please handle with care.

Goniometer Stage□40:KGW04V (1-axis)

RoHS

KGW04040TV-LP28



KGW04040TV-RP28



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

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

KGW04040TV-LP28-□

1 Height of center rotation (W.D.)

040	40mm
060	60mm

2 Connector specifications

T	Pig tail	
M	Panel mount	

3 Sensor cover location specification

L	L position
R	Opposite hand

4 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

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

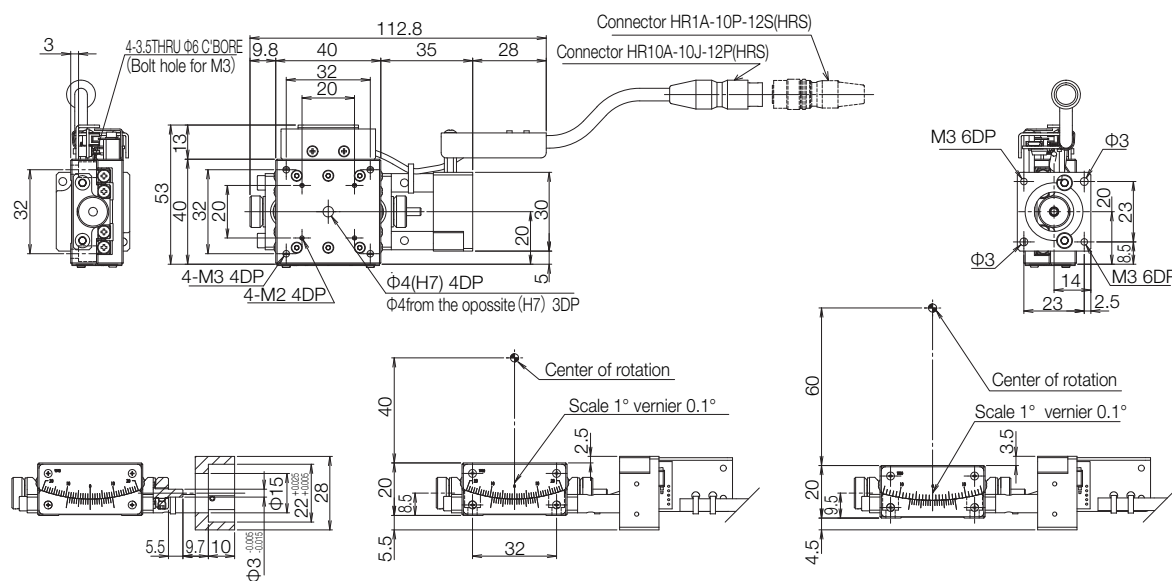
SPEC				
Model	KGW04040TV-LP28	KGW04060TV-LP28	KGW04040MV-LP28	KGW04060MV-LP28
(Opposite hand)	KGW04040TV-RP28	KGW04060TV-RP28	KGW04040MV-RP28	KGW04060MV-RP28
Mechanical specification	Travel distance	±8°	±6°	±8°
	Stage surface size	40×40mm		
	Connector type	Pigtail		Panel Mount
	Travel mechanism (Reduction ratio)	Worm gear(1/240)		
	Guide	Cross Roller Guide		
Dimensional tolerance	Main materials-Finishing	Aluminum - Black alumite finishing, Phosphor bronze - Black paint		
	Weight	0.28kg		0.27kg
	Height of stage	20±0.2mm		
	Height of center rotation	40±0.2mm	60±0.2mm	40±0.2mm
	Runout accuracy of center rotation	60±0.2mm		
Accuracy	Resolution/Pulse	0.01mm		
	MAX speed	0.003°(Full)		
	Repeatability positioning accuracy	15°/sec[5kHz]		
	Load capacity	±0.005°		
	Moment stiffness	3kgf[29.4N]		
Sensor	Lost motion	Pitch 1.30/Yaw 1.16/Roll 0.27[°/N・cm]		
	Limit sensor	0.01°		
	Origin sensor	Available		
	Slit origin sensor	Available		
		—		

* SPEC is the value of the standard motor.

* When the applicable motor code [S38/S40] is selected, the weight is 0.32kg for the pigtail specification and 0.31kg for the panel mount specification.

Dimensions

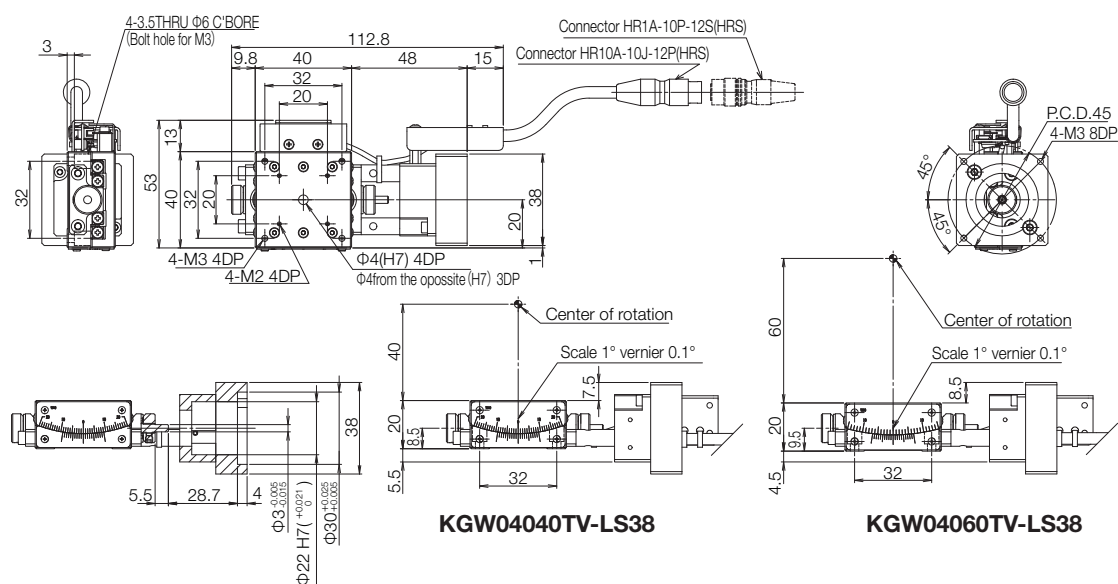
KGW04-TV-LP28 Series



KGW04040TV-LP28

KGW04060TV-LP28

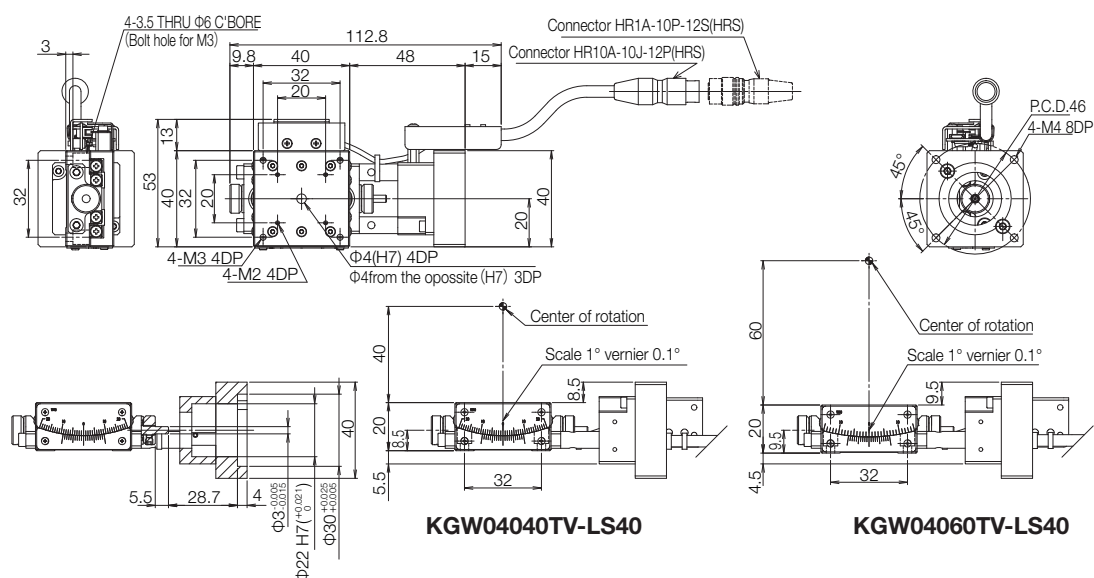
KGW04-TV-LS38 Series



KGW04040TV-LS38

KGW04060TV-LS38

KGW04-TV-LS40 Series



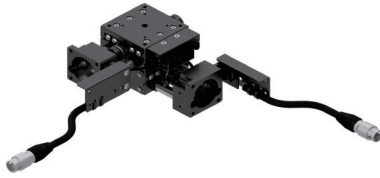
KGW04040TV-LS40

KGW04060TV-LS40

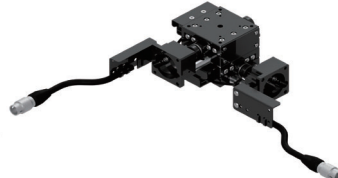
Goniometer Stage□40:KAW04V (2-axis)

RoHS

KAW04040TV-LP28



KAW04040TV-RP28



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

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

KAW04040TV-LP28-□

1

2

3

4

5

1 Height of center rotation (W.D.)

040	40mm
-----	------

2 Connector specifications

T	Pig tail	
M	Panel mount	

3 Sensor cover location specification

L	L position
R	Opposite hand

4 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

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

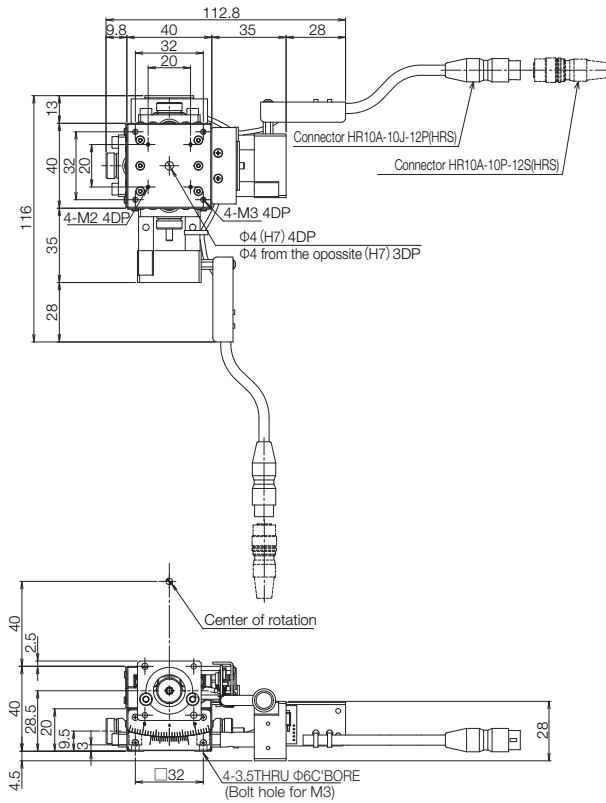
SPEC			
Model		KAW04040TV-LP28	KAW04040MV-LP28
(Opposite hand)		KAW04040TV-RP28	KAW04040MV-RP28
Mechanical specification	Travel distance Upper/Lower axis	±8°/±6°	
	Stage surface size	40×40mm	
	Connector type	Pigtail	Panel Mount
	Travel mechanism (Reduction ratio)	Worm gear(1/240)	
	Guide	Cross Roller Guide	
Dimensional tolerance	Main materials-Finishing	Aluminum - Black alumite finishing, Phosphor bronze - Black paint	
	Weight	0.56kg	0.54kg
	Height of stage	40±0.4mm	
	Height of center rotation	40±0.4mm	
	Runout accuracy of center rotation	—	
Accuracy specification	Resolution/Pulse	0.003°(Full)	
	MAX speed	15°/sec[5kHz]	
	Repeatability positioning accuracy	±0.005°	
	Load capacity	2.5kgf [24.5N]	
	Moment stiffness	Pitch 1.57/Yaw 2.32/Roll 1.57["/N · cm]	
Sensor	Lost motion	0.01°	
	Limit sensor	Available	
	Origin sensor	Available	
	Slit origin sensor	—	

* SPEC is the value of the standard motor.

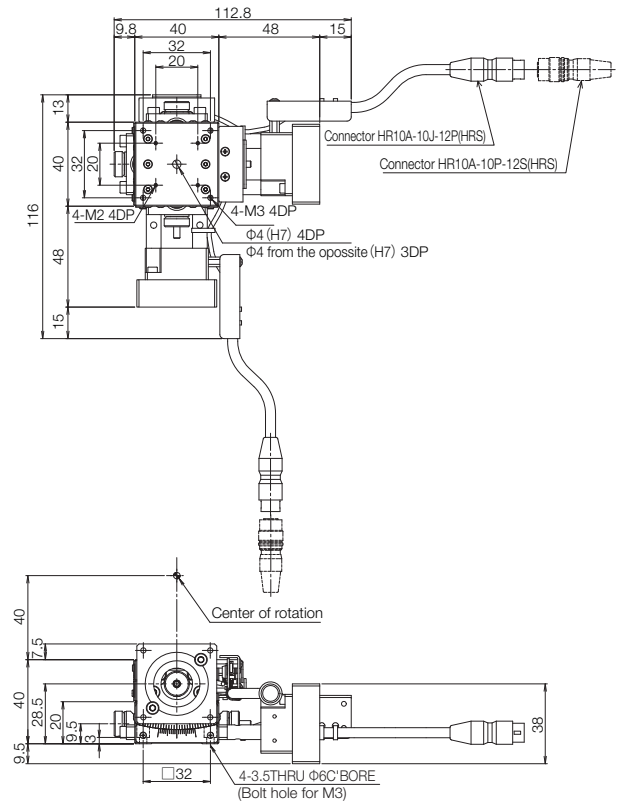
* When the applicable motor code [S38/S40] is selected, the weight is 0.64kg for the pigtail specification and 0.62kg for the panel mount specification.

Dimensions

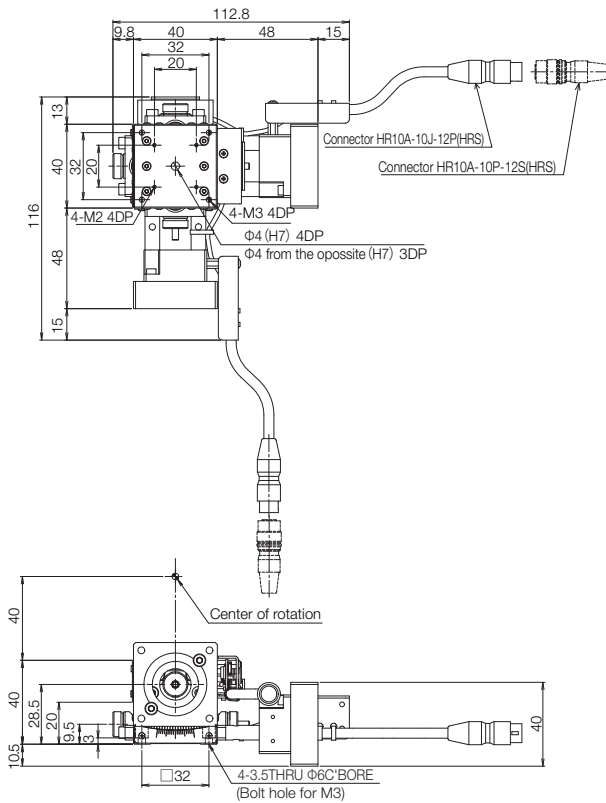
KAW04040TV-LP28



KAW04040TV-LS38



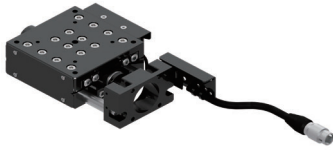
KAW04040TV-LS40



Goniometer Stage □60: KGW06V (1-axis)

RoHS

KGW06050TV-LP28



KGW06050TV-RP28



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

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

KGW06050TV-LP28-□

1 2 3 4 5

1 Height of center rotation (W.D.)

050	50mm
075	75mm
100	100mm
125	125mm

2 Connector specifications

T	Pig tail	
M	Panel mount	

3 Sensor cover location specification

L	L position
R	Opposite hand

4 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

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

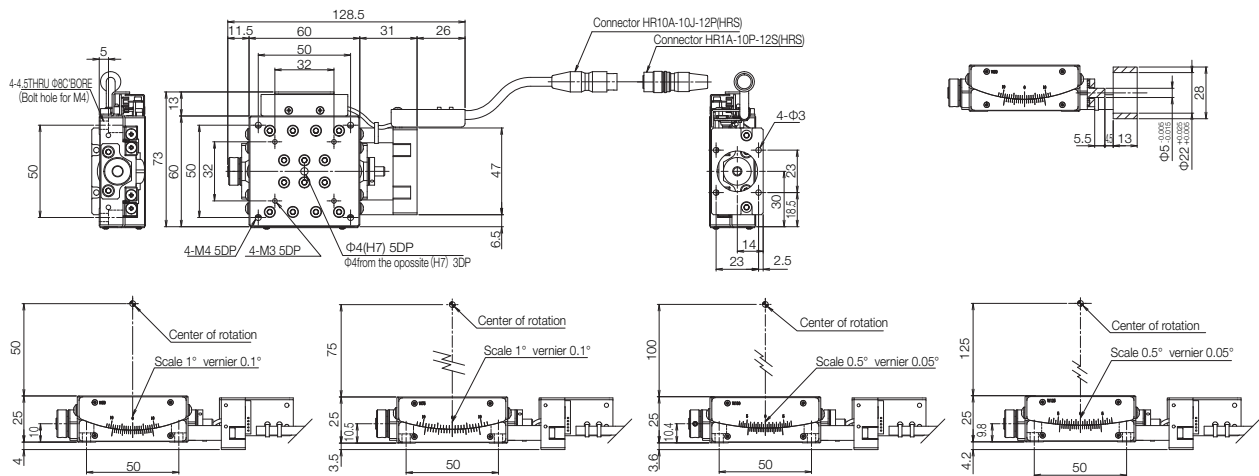
SPEC								
Model	KGW06050TV-LP28	KGW06075TV-LP28	KGW06100TV-LP28	KGW06125TV-LP28	KGW06050MV-LP28	KGW06075MV-LP28	KGW06100MV-LP28	KGW06125MV-LP28
(Opposite hand)	KGW06050TV-RP28	KGW06075TV-RP28	KGW06100TV-RP28	KGW06125TV-RP28	KGW06050MV-RP28	KGW06075MV-RP28	KGW06100MV-RP28	KGW06125MV-RP28
Travel distance	±10°	±8°	±6°	±5°	±10°	±8°	±6°	±5°
Stage surface size	60×60mm				60×60mm			
Connector type	Pigtail				Panel Mount			
Travel mechanism (Reduction ratio)	Worm gear (1/160)	Worm gear (1/225)	Worm gear (1/292)	Worm gear (1/360)	Worm gear (1/160)	Worm gear (1/225)	Worm gear (1/292)	Worm gear (1/360)
Guide	Cross Roller Guide				Cross Roller Guide			
Main materials-Finishing	Aluminum - Black alumite finishing				Aluminum - Black alumite finishing			
Weight	0.4kg				0.39kg			
Height of stage	25±0.2mm				25±0.2mm			
Height of center rotation	50±0.2mm	75±0.2mm	100±0.2mm	125±0.2mm	50±0.2mm	75±0.2mm	100±0.2mm	125±0.2mm
Runout accuracy of center rotation	0.01mm				0.01mm			
Resolution/Pulse	0.0045°(Full)	0.0032°(Full)	0.002466°(Full)	0.002°(Full)	0.0045°(Full)	0.0032°(Full)	0.002466°(Full)	0.002°(Full)
MAX speed	22.5°/sec[5kHz]	16°/sec[5kHz]	12.5°/sec[5kHz]	10°/sec[5kHz]	22.5°/sec[5kHz]	16°/sec[5kHz]	12.5°/sec[5kHz]	10°/sec[5kHz]
Repeatability positioning accuracy	±0.003°				±0.003°			
Load capacity	5kgf [49N]				5kgf [49N]			
Moment stiffness	Pitch 0.30/Yaw 0.10/Roll 0.11["/N • cm]				Pitch 0.30/Yaw 0.10/Roll 0.11["/N • cm]			
Lost motion	0.01°				0.01°			
Limit sensor	Available				Available			
Origin sensor	Available				Available			
Slit origin sensor	—				—			

* SPEC is the value of the standard motor.

* When the applicable motor code [S38/S40] is selected, the weight is 0.44kg for the pigtail specification and 0.43kg for the panel mount specification.

Dimensions

KGW06-TV-LP28 Series



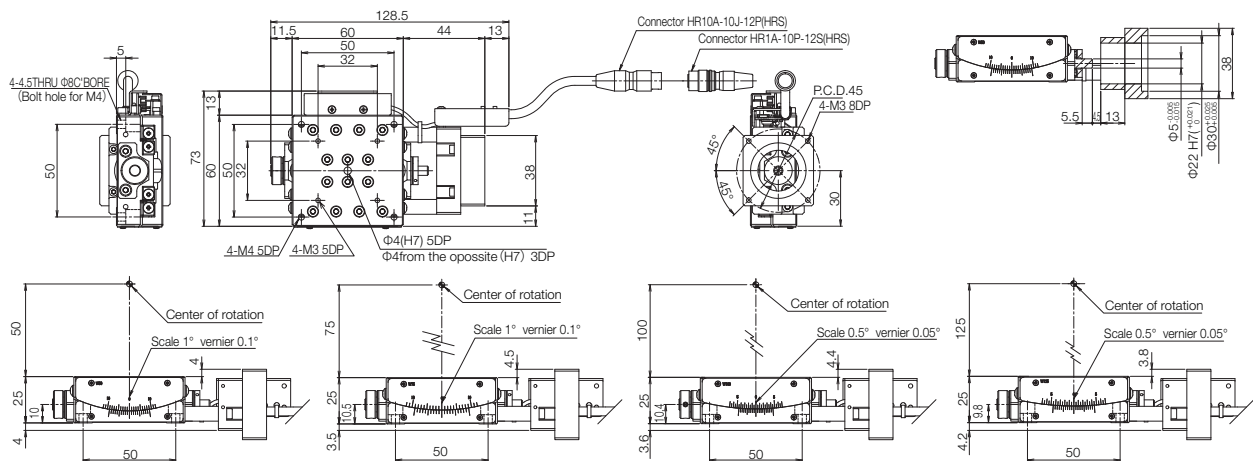
KGW06050TV-LP28

KGW06075TV-LP28

KGW06100TV-LP28

KGW06125TV-LP28

KGW06-TV-LS38 Series



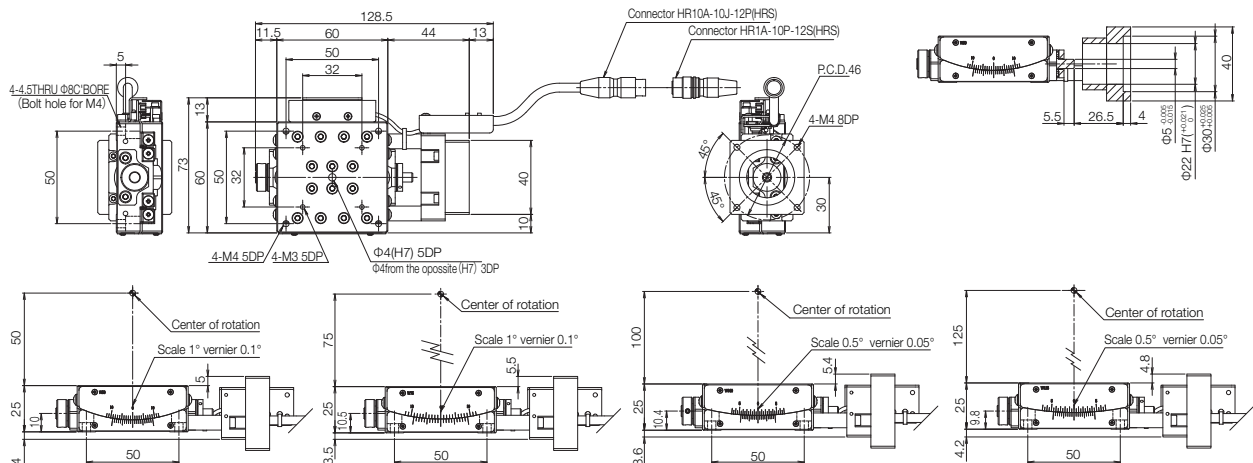
KGW06050TV-LS38

KGW06075TV-LS38

KGW06100TV-LS38

KGW06125TV-LS38

KGW06-TV-LS40 Series



KGW06050TV-LS40

KGW06075TV-LS40

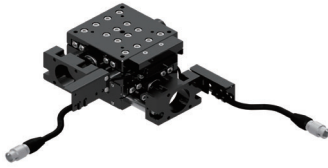
KGW06100TV-LS40

KGW06125TV-LS40

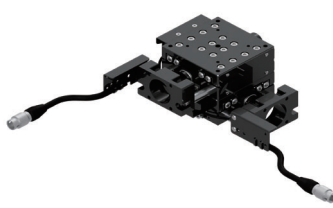
Goniometer Stage□60:KAW06V (2-axis)

RoHS

KAW06050TV-LP28



KAW06050TV-RP28



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

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

KAW06050TV-LP28-□

1 2 3 4 5

1 Height of center rotation (W.D.)

050	50mm
075	75mm
100	100mm

2 Connector specifications

T	Pig tail	
M	Panel mount	

3 Sensor cover location specification

L	L position
R	Opposite hand

4 Application Motor

Code	Specification
P28	□28 Stepping motor specification
S38	□38 Servo motor specification
S40	□40 Servo motor specifications

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	KAW06050TV-LP28	KAW06075TV-LP28	KAW06100TV-LP28	KAW06050MV-LP28	KAW06075MV-LP28	KAW06100MV-LP28	
(Opposite hand)	KAW06050TV-RP28	KAW06075TV-RP28	KAW06100TV-RP28	KAW06050MV-RP28	KAW06075MV-RP28	KAW06100MV-RP28	
Mechanical specification	Travel distance Upper/Lower axis	±10°/±8°	±8°/±6°	±6°/±5°	±10°/±8°	±8°/±6°	±6°/±5°
	Stage surface size	60×60mm			60×60mm		
	Connector type	Pigtail			Panel Mount		
	Travel mechanism (Reduction ratio)	Upper Worm gear(1/160)	Upper Worm gear(1/225)	Upper Worm gear(1/292)	Upper Worm gear(1/160)	Upper Worm gear(1/225)	Upper Worm gear(1/292)
		Lower Worm gear(1/225)	Lower Worm gear(1/292)	Lower Worm gear(1/360)	Lower Worm gear(1/225)	Lower Worm gear(1/292)	Lower Worm gear(1/360)
Dimensional tolerance	Guide	Cross Roller Guide			Cross Roller Guide		
	Main materials-Finishing	Aluminum - Black alumite finishing			Aluminum - Black alumite finishing		
	Weight	0.80kg			0.78kg		
	Height of stage	50±0.4mm			50±0.4mm		
	Height of center rotation	50±0.4mm	75±0.4mm	100±0.4mm	50±0.4mm	75±0.4mm	100±0.4mm
Accuracy specification	Runout accuracy of center rotation	—			—		
	Resolution/ Pulse	Upper 0.0045°(Full)	Upper 0.0032°(Full)	Upper 0.002466°(Full)	Upper 0.0045°(Full)	Upper 0.0032°(Full)	Upper 0.002466°(Full)
		Lower 0.0032°(Full)	Lower 0.002466°(Full)	Lower 0.002°(Full)	Lower 0.0032°(Full)	Lower 0.002466°(Full)	Lower 0.002°(Full)
	MAX speed	Upper 22.5°/sec[5kHz]	Upper 16°/sec[5kHz]	Upper 12.5°/sec[5kHz]	Upper 22.5°/sec[5kHz]	Upper 16°/sec[5kHz]	Upper 12.5°/sec[5kHz]
		Lower 16°/sec[5kHz]	Lower 12.5°/sec[5kHz]	Lower 10°/sec[5kHz]	Lower 16°/sec[5kHz]	Lower 12.5°/sec[5kHz]	Lower 10°/sec[5kHz]
Sensor	Repeatability positioning accuracy	±0.003°			±0.003°		
	Load capacity	4.5kgf[44.1N]			4.5kgf[44.1N]		
	Moment stiffness	Pitch 0.41/Yaw 0.20/Roll 0.41[°/N・cm]			Pitch 0.41/Yaw 0.20/Roll 0.41[°/N・cm]		
	Lost motion	0.01°			0.01°		
	Limit sensor	Available			Available		
Sensor	Origin sensor	Available			Available		
	Slit origin sensor	—			—		

* SPEC is the value of the standard motor.

* When the applicable motor code [S38/S40] is selected, the weight is 0.88kg for the pigtail specification and 0.86kg for the panel mount specification.

KAW06-TV-LP28 Series



KAW06075TV-LP28

KAW06100TV-LP28

KAW06050TV-LS38

Top View Dimensions: 128.5, 60, 44, 13, 11.5, 50, 32, 13, 60, 50, 32, 44, 13, 130, 44, 13. Labels: 4-M3.5DP, 4-M4.5DP, $\phi 4$ (H7) 5DP, $\phi 4$ from the opposite (H7) 3DP. Connector HR10A-10J-12P(HRS), Connector HR10A-10P-12S(HRS).

Side View Dimensions: 50, 4, 35, 10.25, 15, 8.5, 50, 38, 19, 50. Labels: Center of rotation, 4-4.5 THRU $\phi 8$ C'BORE (Bolt hole for M4).

KAW06075TV-LS38

Top View Dimensions: 128.5, 60, 44, 13, 11.5, 50, 32, 13, 60, 50, 32, 44, 13, 130, 44, 13. Labels: 4-M3.5DP, 4-M4.5DP, $\phi 4$ (H7) 5DP, $\phi 4$ from the opposite (H7) 3DP. Connector HR10A-10J-12P(HRS), Connector HR10A-10P-12S(HRS).

Side View Dimensions: 75, 4.5, 50, 35.5, 25, 10.4, 15, 8.6, 50, 38, 19, 50. Labels: Center of rotation, 4-4.5 THRU $\phi 8$ C'BORE $\phi 4$ from the opposite (H7) 3DP.

KAW06100TV-LS38

Top View Dimensions: 128.5, 60, 44, 13, 11.5, 50, 32, 13, 60, 50, 32, 44, 13, 130, 44, 13. Labels: 4-M3.5DP, 4-M4.5DP, $\phi 4$ (H7) 5DP, $\phi 4$ from the opposite (H7) 3DP. Connector HR10A-10J-12P(HRS), Connector HR10A-10P-12S(HRS).

Side View Dimensions: 100, 4.4, 50, 35.4, 25, 9.2, 9.6, 15, 9.2, 50, 38, 19, 50. Labels: Center of rotation, 4-4.5 THRU $\phi 8$ C'BORE $\phi 4$ from the opposite (H7) 3DP.

KAW06050TV-LS38

KAW06075TV-LS38

KAW06100TV-LS38

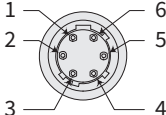
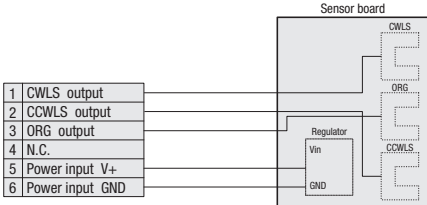
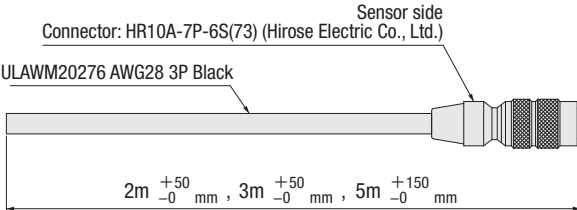
KAW06050TV-LS40**KAW06075TV-LS40**

KAW06100TV-LS40

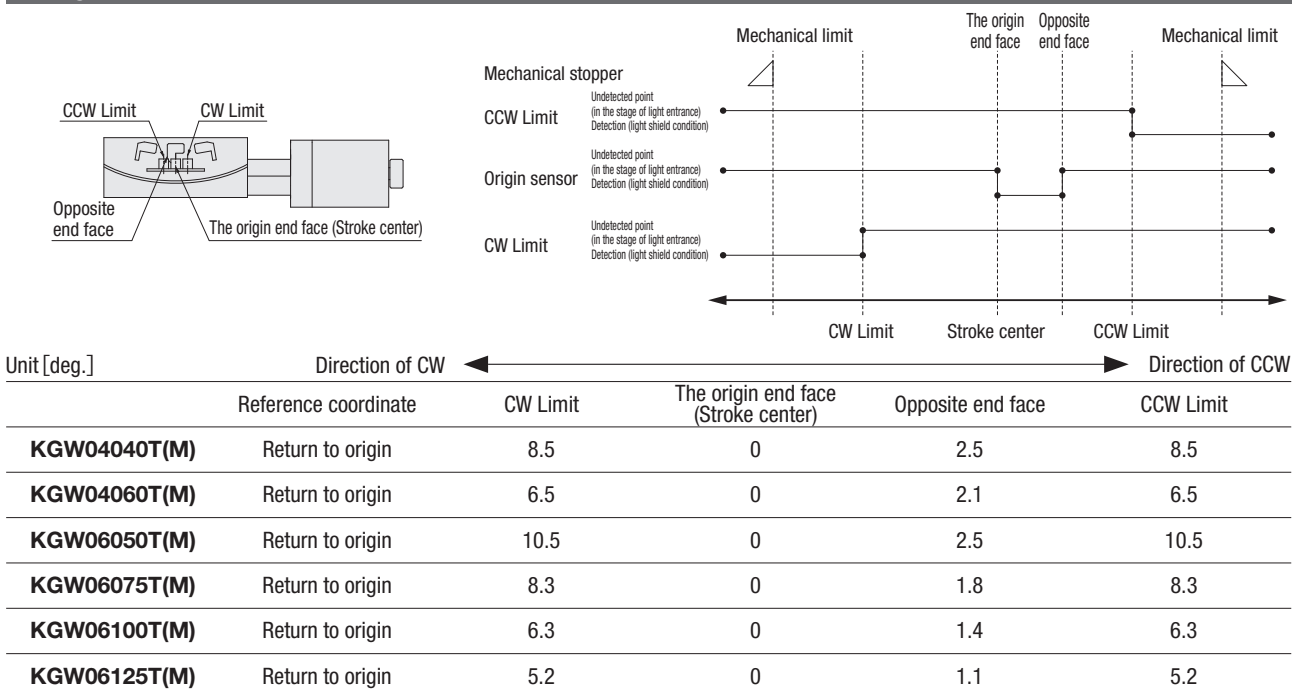
Electrical specification

Applicable motor code		P28	S38	S40
Feature		For □28 Stepping motor	For □38 AC Servo motor	For □40 AC Servo motor
Model		KGW04/KGW06		
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		KGW Series															
P28 • S38 • S40	Sensor	【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.) 	【Connection diagram】 														
		【Cable model】 Model:HR10AP-S-SB-6-□ (□ is the length.) * Fixed Connector: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.) 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> ※The shields are connected with the connector shell.	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



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

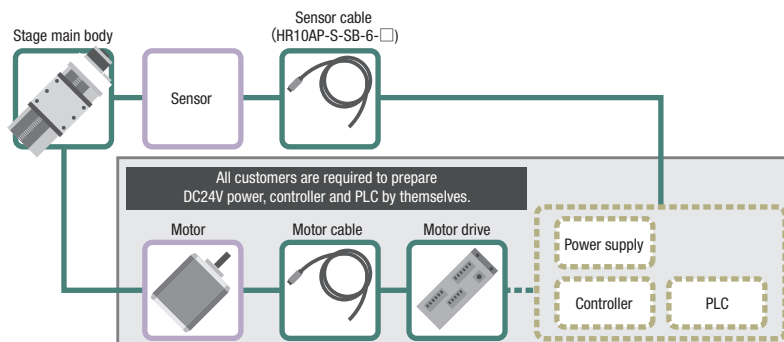
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 deg.

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** ☐ **28mm**
For Stepping motor
- S38** ☐ **38mm**
For AC servo motor
- S40** ☐ **40mm**
For AC servo motor



【Precautions for handling motorless products】

【important】

Unlike normal products, this is a motorless product with no drive source.

Please be sure to read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchasing.

◆ Warranty range

The following items are not covered by the warranty.

- Faults and troubles related to motor mounting adjustment
- Accuracy after motor assembly by customer

* Accuracy inspection is performed on the inspection motor to confirm that it is within the standard value.

◆ Precautions and restrictions on use

1. Specs: load capacity and maximum speed

Since it depends on the configuration of the main body of the motorized stage, please use it within the specifications of this product regardless of the performance of the motor. The distance between the limit sensor and the mechanical limit is short, and an overrun may cause collision with the mechanical limit. Please note that collisions with mechanical limits may adversely affect product accuracy and durability.

2. Torque limit

Using a high-torque motor may give a load that exceeds the product's allowable limit. If the motor torque exceeds $0.25 \text{ N} \cdot \text{m}$, please apply the torque limit.

3. Mounting the motor

Align the body, motor, and coupling before mounting.

Operation in a misalignment situation may lead to early product damage and deterioration. Please refer to the attached assembly procedure manual and adjust the assembly.

4. Fixing the connector

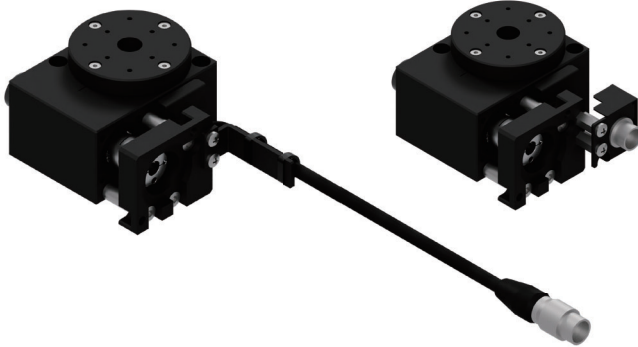
There are products that require the customer to fix the connector. Before fixing, the connector part and the main body are connected only by the lead wire, which may cause disconnection, so please handle with care.

Rotary Stage $\phi 39/\square 40$:KRW04360V

RoHS

KRW04360TV-LP28

KRW04360MV-LP28



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	3 of M3-30		
Sensor cable		○(HR10AP-S-SB-6-□)		
Hex wrench (for motor mounting)		○	-	-

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

KRW04360 V-L P28 -

1

2

3

4

5

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Stage surface shape

Blank	Circular
S	Square

3 Motor location specification

L	L position
R	Opposite hand

4 Application Motor

Code	Specification
P28	☐ 28 Stepping motor specification
S38	☐ 38 Servo motor specification
S40	☐ 40 Servo motor specifications

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	KRW04360TV-LP28	KRW04360MV-LP28	
(Opposite hand)	KRW04360TV-RP28	KRW04360MV-RP28	
Mechanical specification	Travel length	360°	
	Table size	$\phi 39\text{mm}$ (40×40mm)	
	Connector specifications	Pig tail	Panel mount
	Travel mechanism (Reduction ratio)	Worm gear (Reduction ratio 1/120)	
	Guide	Deep groove ball bearing	
	Main materials-Finishing	Aluminum-Black almite finishing	
	Weight	0.31kg	0.28kg
Accuracy specification	Resolution/Pulse	0.006°	
	MAX speed	30°/sec	
	Positioning accuracy	0.05°	
	Repeatability positioning accuracy	±0.01°	
	Load capacity	3kgf [29.4N]	
	Moment stiffness	0.74"/N · cm	
	Lost motion	0.05°	
	Backlash	0.1°	
	Parallelism	50μm	
Sensor	Eccentricity	5μm	
	Runout	30μm	
	Limit sensor	—	
	Origin sensor	Installed	
	Slit origin sensor	—	

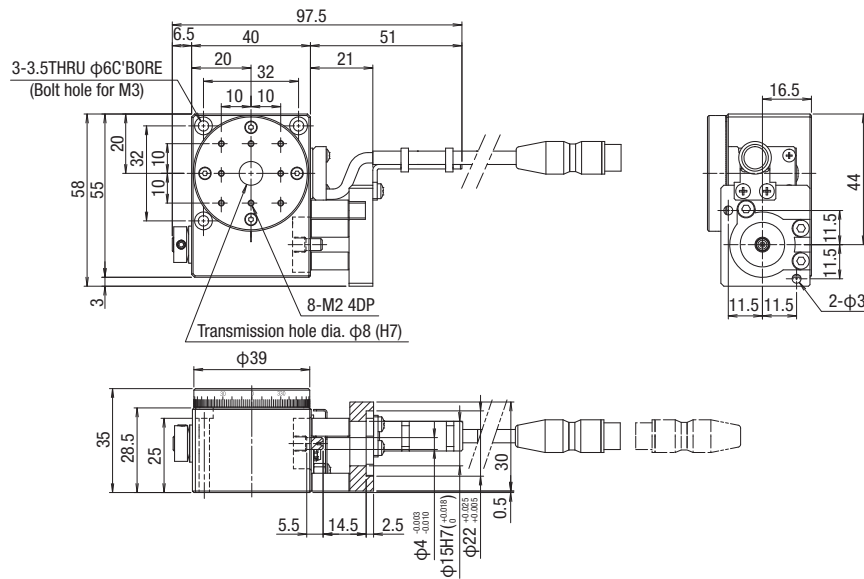
※ 1 The figure in parenthesis is the stage surface size when the Stage surface shape option: square (S) is selected.

※ SPEC is the value of the standard motor.

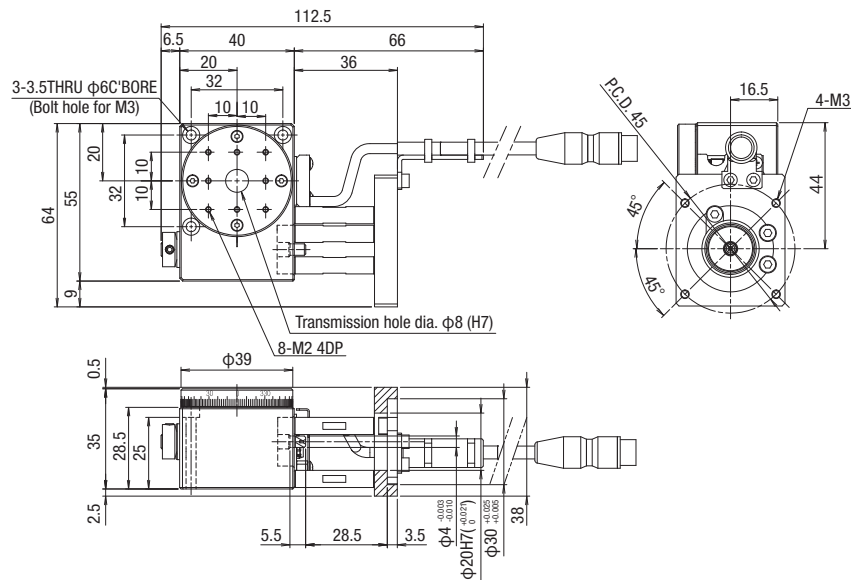
※ When the applicable motor code [S38/S40] is selected, the weight is 0.32kg for the pigtail specification and 0.29kg for the panel mount specification.

Dimensions

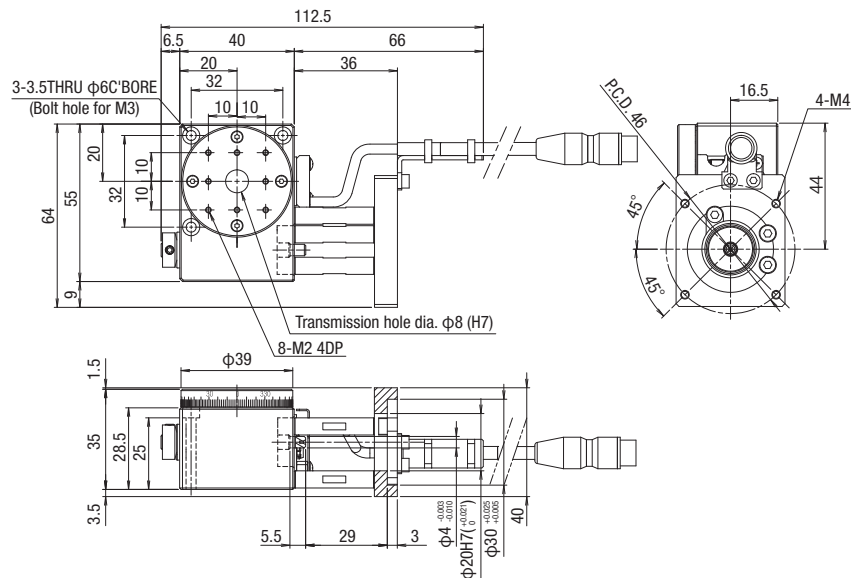
KRW04360TV-LP28



KRW04360TV-LS38



KRW04360TV-LS40

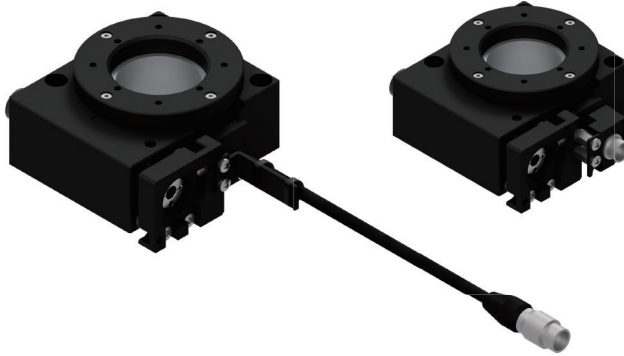


Rotary Stage $\phi 59/\square 60$: KRW06360V

RoHS

KRW06360TV-LP28

KRW06360MV-LP28



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	3 of M4-30		
Sensor cable		○(HR10AP-S-SB-6-□)		
Hex wrench (for motor mounting)		○	-	-

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

KRW06360 V-L P28-

1

2

3

4

5

1 Connector specifications

T	Pig tail	
M	Panel mount	

2 Stage surface shape

Blank	Circular
S	Square

3 Motor location specification

L	L position
R	Opposite hand

4 Application Motor

Code	Specification
P28	☐ 28 Stepping motor specification
S38	☐ 38 Servo motor specification
S40	☐ 40 Servo motor specifications

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	KRW06360TV-LP28		KRW06360MV-LP28
(Opposite hand)	KRW06360TV-RP28		KRW06360MV-RP28
Mechanical specification	Travel length	360°	
	Table size (※1)	φ59mm (60×60mm)	
	Connector specifications	Pig tail	Panel mount
	Travel mechanism (Reduction ratio)	Worm gear (Reduction ratio 1/180)	
	Guide	Deep groove ball bearing	
	Main materials-Finishing	Aluminum—Black almite finishing	
	Weight	0.51kg	0.48kg
Accuracy specification	Resolution/Pulse	0.004°	
	MAX speed	20°/sec	
	Positioning accuracy	0.05°	
	Repeatability positioning accuracy	±0.01°	
	Load capacity	3kgf【29.4N】	
	Moment stiffness	0.2″/N・cm	
	Lost motion	0.05°	
	Backlash	0.05°	
	Parallelism	50μm	
	Eccentricity	5μm	
Sensor	Runout	30μm	
	Limit sensor	—	
	Origin sensor	Installed	
	Slit origin sensor	—	

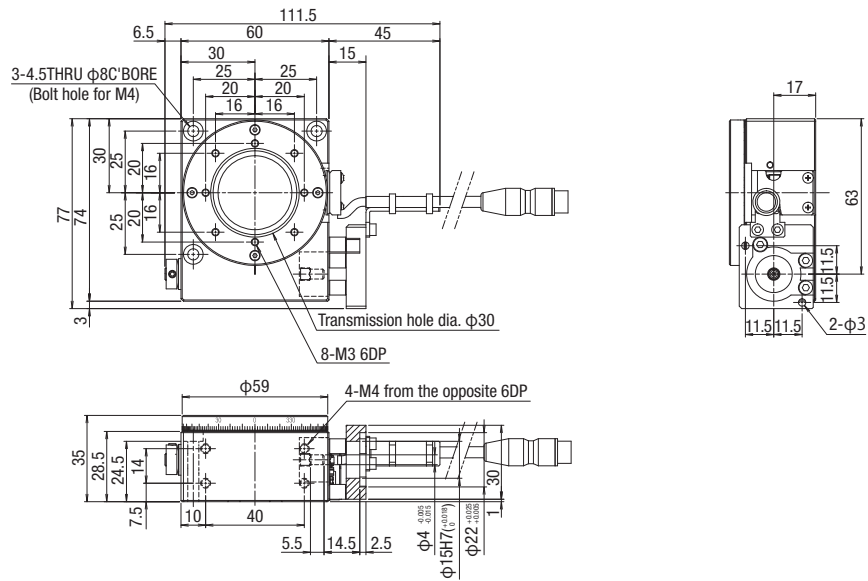
※1 The figure in parenthesis is the stage surface size when the Stage surface shape option: square (S) is selected.

※ SPEC is the value of the standard motor.

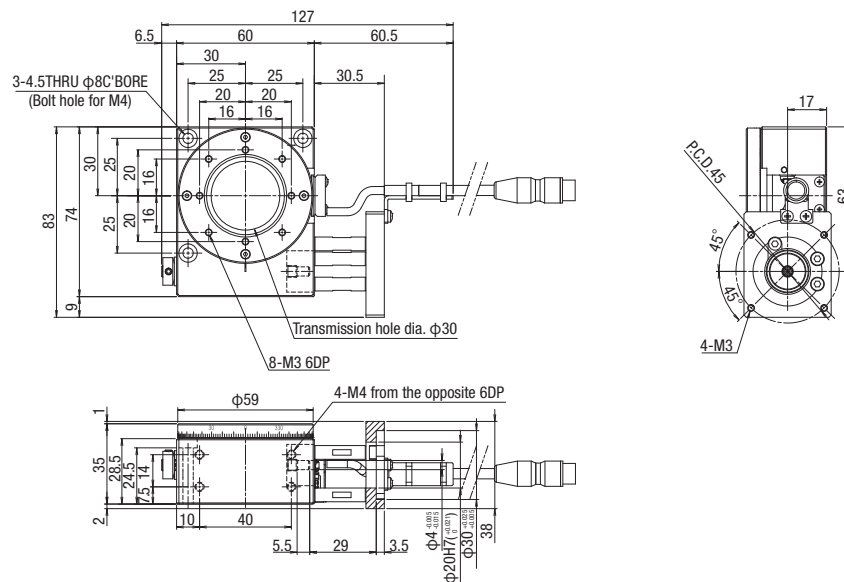
※ When the applicable motor code [S38/S40] is selected, the weight is 0.52kg for the pigtail specification and 0.49kg for the panel mount specification.

Dimensions

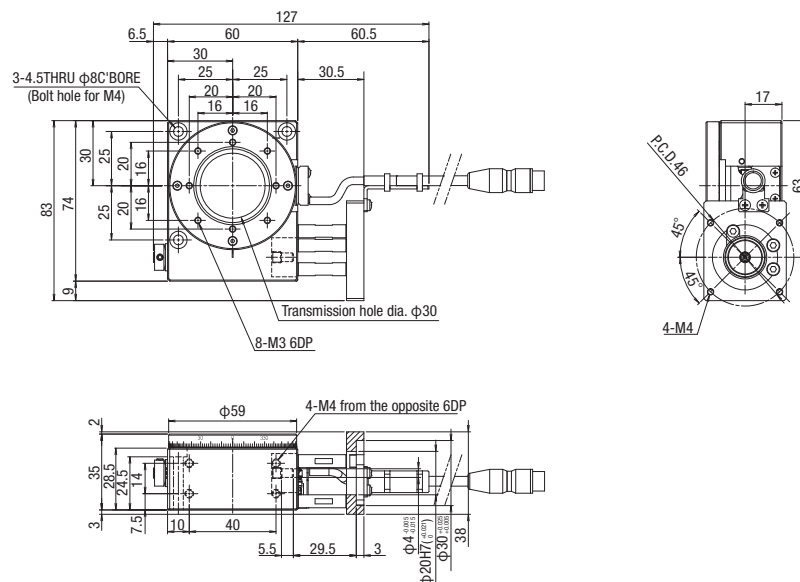
KRW06360TV-LP28



KRW06360TV-LS38



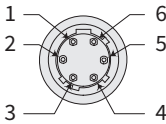
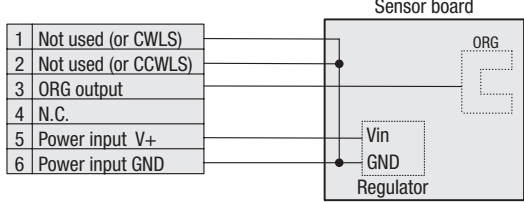
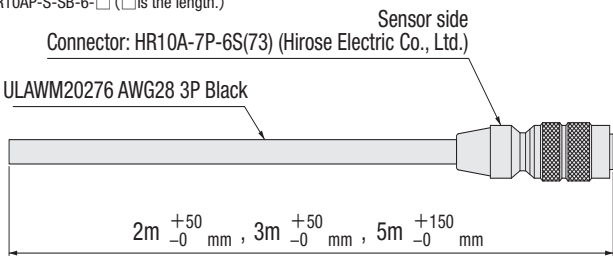
KRW06360TV-LS40



Electrical specification

Applicable motor code		P28	S38	S40
Feature		For □28 Stepping motor	For □38 AC Servo motor	For □40 AC Servo motor
Model			KRW04/KRW06	
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		-	
	Origin sensor		Available	
	Slit origin sensor		-	
	Sensor		Photo microsensor EE-SX4320 (Omron Co., Ltd.)	
	Power-supply voltage		DC5~24V±5%	
	Current consumption		Total 35mA 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		KRW Series															
P28 • S38 • S40	Sensor	【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.) 	【Connection diagram】 														
		【Cable model】 Model:HR10AP-S-SB-6-□ (□ is the length.) * Fixed Connector: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.) 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> ※The shields are connected with the connector shell.	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 [deg.]

Origin detected scale position	
KRW04360**V - L	0 (The end face of the origin: CCW side edge of shield plate) 8 (Opposite end face: CW side edge of shield plate)
KRW06360**V - L	0 (The end face of the origin: CCW side edge of shield plate) 8 (Opposite end face: CW side edge of shield plate)

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

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

Unit [deg.]

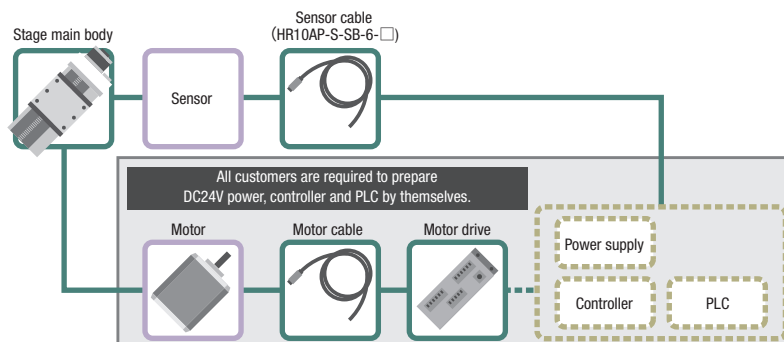
Origin detected scale position	
KRW04360**V - R	0 (The end face of the origin: CW side edge of shield plate) 8 (Opposite end face: CCW side edge of shield plate)
KRW06360V** - R	0 (The end face of the origin: CW side edge of shield plate) 8 (Opposite end face: CCW side edge of shield plate)

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

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

Applicable motor code

- P28** ☐ **28mm**
For Stepping motor
- S38** ☐ **38mm**
For AC servo motor
- S40** ☐ **40mm**
For AC servo motor



【Precautions for handling motorless products】

【important】

Unlike normal products, this is a motorless product with no drive source.

Please be sure to read and agree to the "Scope of Warranty" and "Precautions and Restrictions for Use" before purchasing.

◆ Warranty range

The following items are not covered by the warranty.

- Faults and troubles related to motor mounting adjustment
- Accuracy after motor assembly by customer

* Accuracy inspection is performed on the inspection motor to confirm that it is within the standard value.

◆ Precautions and restrictions on use

1. Specs: load capacity and maximum speed

Since it depends on the configuration of the main body of the motorized stage, please use it within the specifications of this product regardless of the performance of the motor. The distance between the limit sensor and the mechanical limit is short, and an overrun may cause collision with the mechanical limit. Please note that collisions with mechanical limits may adversely affect product accuracy and durability.

2. Torque limit

Using a high-torque motor may give a load that exceeds the product's allowable limit. If the motor torque exceeds $0.25 \text{ N} \cdot \text{m}$, please apply the torque limit.

3. Mounting the motor

Align the body, motor, and coupling before mounting.

Operation in a misalignment situation may lead to early product damage and deterioration. Please refer to the attached assembly procedure manual and adjust the assembly.

4. Fixing the connector

There are products that require the customer to fix the connector. Before fixing, the connector part and the main body are connected only by the lead wire, which may cause disconnection, so please handle with care.