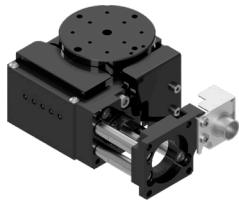


## Motorized Rotary Stage $\phi 40$ : KRB04017MV

RoHS

KRB04017MV-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 M3×25		
Sensor cable 2m		○ (HR10AP-S-SB-6-□)		
Hexagonal wrench (for mounting the motor)		○	—	—

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

## KRB04017MV-LP28-□

1

2

### 1 Application 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 specifications

### 2 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

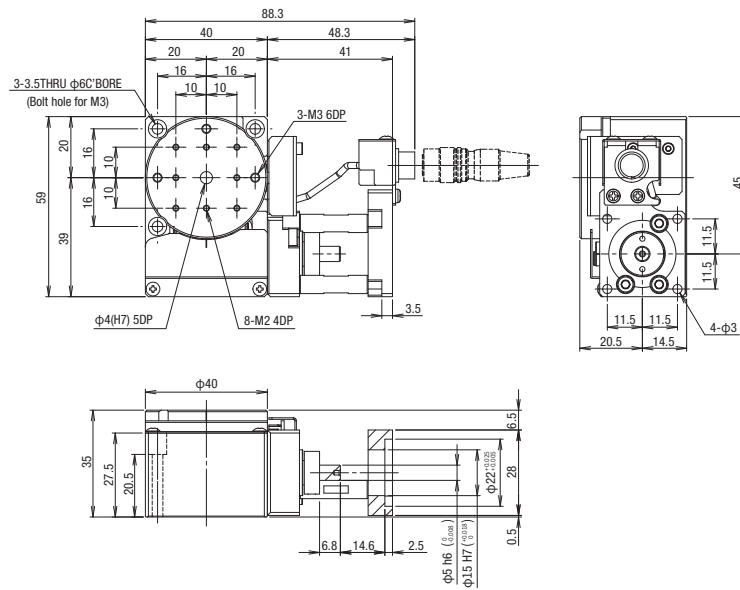
SPEC		
Model	KRB04017MV-LP28	
Mechanical specification	Travel distance	$\pm 8.5^\circ$
	Stage surface size	$\phi 40\text{mm}$
	Travel mechanism (Reduction ratio)	Ball screw $\phi 6$ lead 1
	Guide	Combination angular ball bearing
	Main materials-Finishing	Aluminum-Black alumite processing
Accuracy specification	Weight	0.29kg
	Resolution※ ( Pulse) Full	$\approx 0.0068^\circ$
	MAX speed	101.5°/sec [15kHz]
	Repeatability positioning accuracy	$\pm 0.003^\circ$ 以内
	Load capacity	4.0kgf [39.2N]
	Moment stiffness	0.52"/N · cm
	Lost motion	0.003°
	Backlash	0.01°
Sensor	Parallelism	50 $\mu\text{m}$
	Limit sensor	Available
	Origin sensor	Available
	Slit origin sensor	—

\*      is the value of the standard motor.

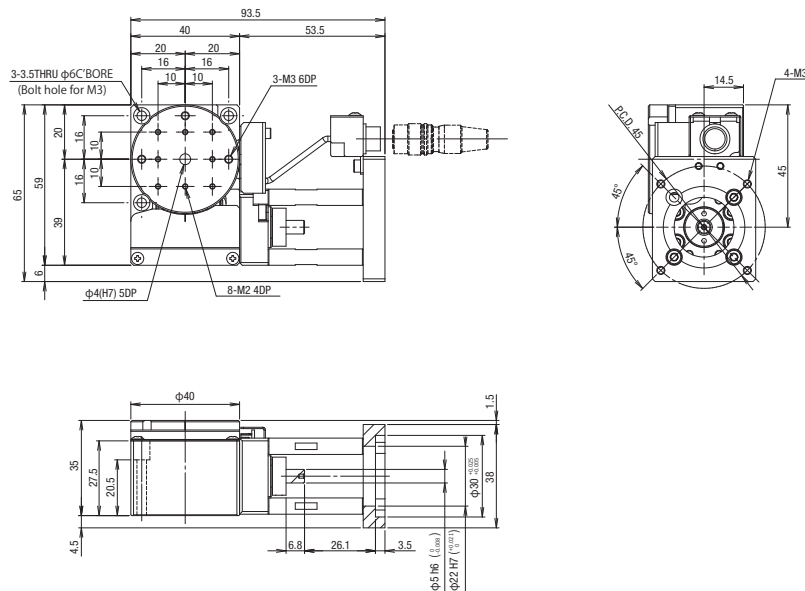
\* When the applicable motor code [S38/S40] is selected, the weight is 0.30kg.

Dimensions

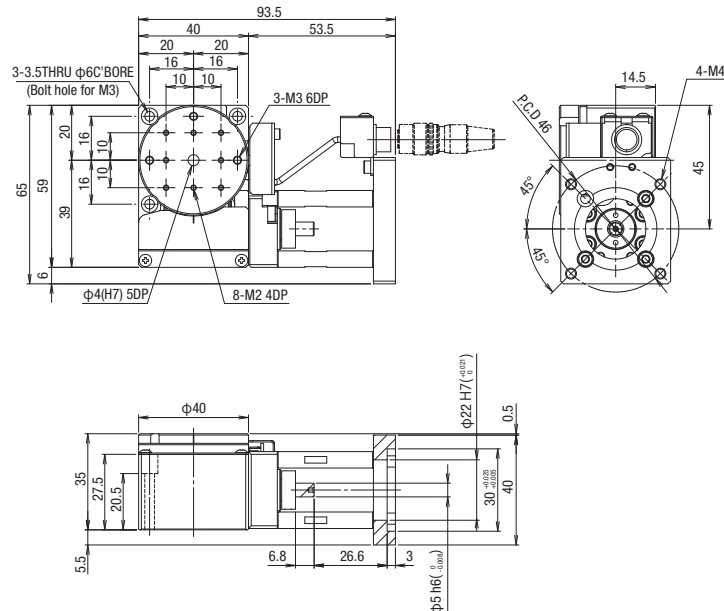
KRB04017MV-LP28



KRB04017MV-LS38



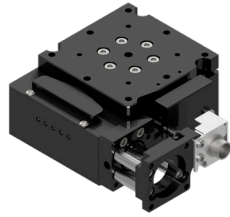
KRB04017MV-LS40



KRB06011MV-LP28



KRB06011MSV-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 2m		○ (HR10AP-S-SB-6-□)		
Hexagonal wrench (for mounting the motor)		○	—	—

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

## KRB06011 M □ V- LP28 - □

### 1 Table shape

Blank	Circular
S	Square

### 2 Application Motor

Code	Specification
P28	<span style="border: 1px solid black; padding: 2px;">□</span> 28 Stepping motor specification
S38	<span style="border: 1px solid black; padding: 2px;">□</span> 38 Servo motor specification
S40	<span style="border: 1px solid black; padding: 2px;">□</span> 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

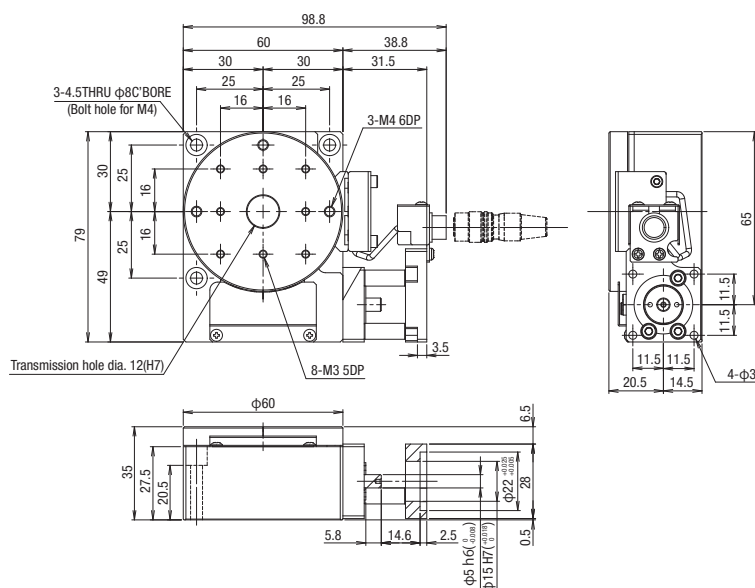
SPEC		
Model	KRB06011MV-LP28	KRB06011MSV-LP28
Travel distance	$\pm 5.5^\circ$	
Stage surface size	$\phi 60\text{mm}$	$\square 60\text{mm}$
Travel mechanism (Reduction ratio)	Ball screw $\phi 6$ lead 1	
Guide	Combination angular ball bearing	
Main materials-Finishing	Aluminum-Black alumite processing	
Weight	$\phi 60$ : 0.51kg, $\square 60\text{mm}$ : 0.52kg	
Resolution* ( Pulse) Full	$\approx 0.0043^\circ$	
MAX speed	63.8°/sec [15kHz]	
Repeatability positioning accuracy	0.003°	
Load capacity	6.0kgf [58.8N]	
Moment stiffness	0.25"/N · cm	
Lost motion	0.003°	
Backlash	0.01°	
Parallelism	50 $\mu\text{m}$	
Limit sensor	Available	
Origin sensor	Available	
Slit origin sensor	—	

\*      is the value of the standard motor.

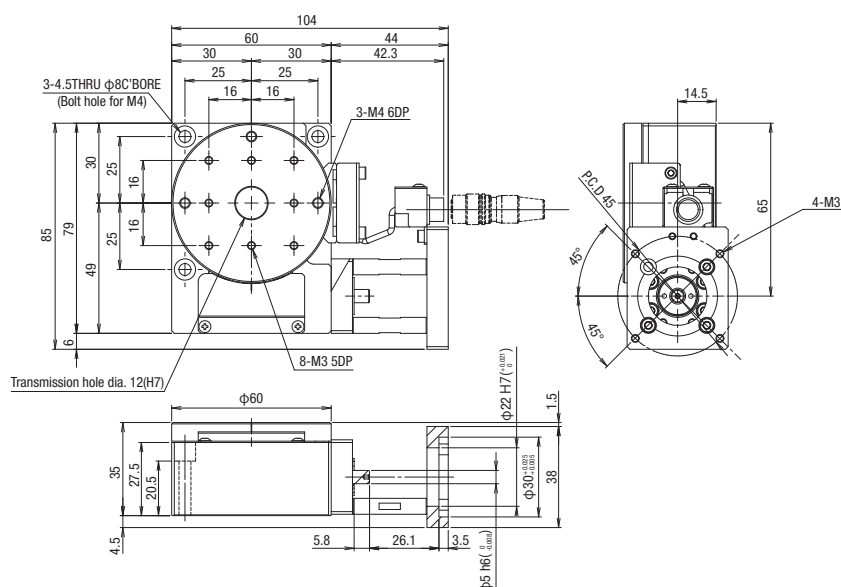
\* When the applicable motor code [S38/S40] is selected, the weight is 0.53kg.

## Dimensions

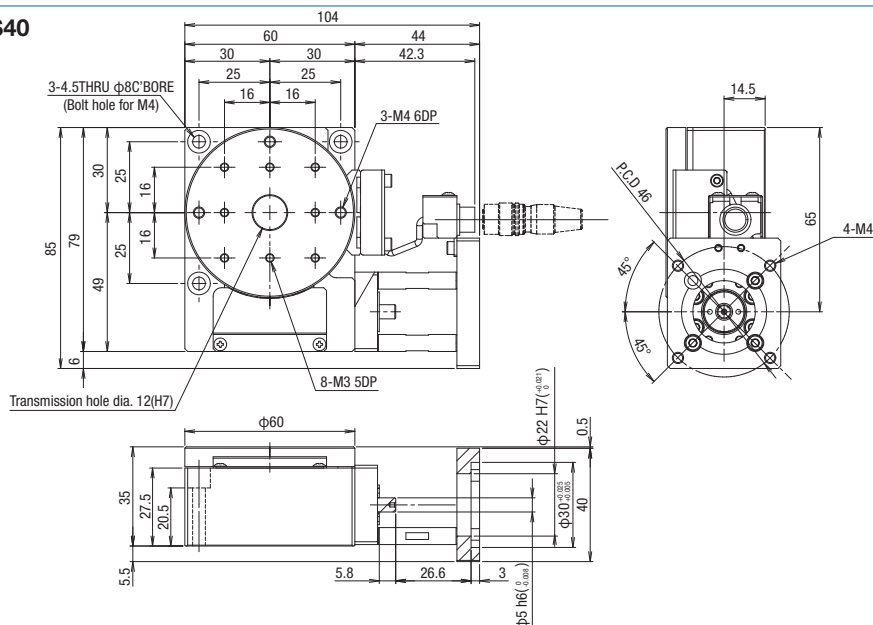
## KRB06011MV-LP28



## KRB06011MV-LS38



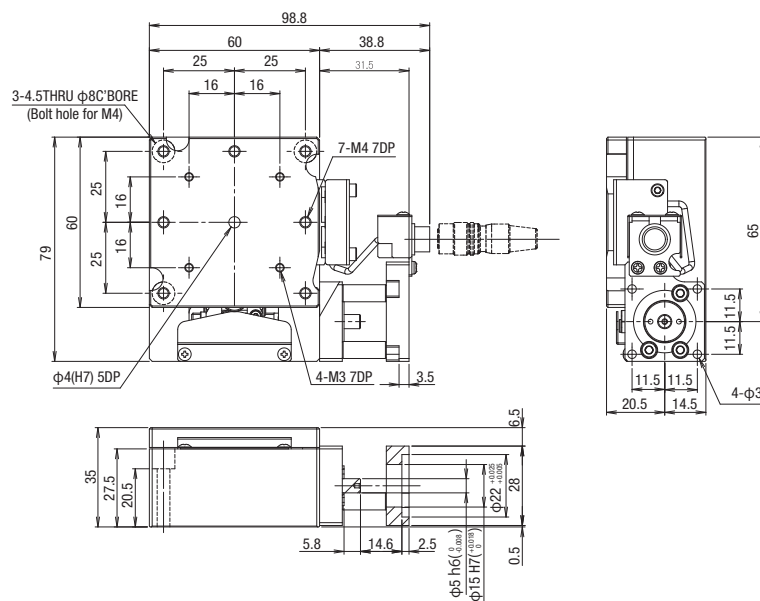
## KRB06011MV-LS40



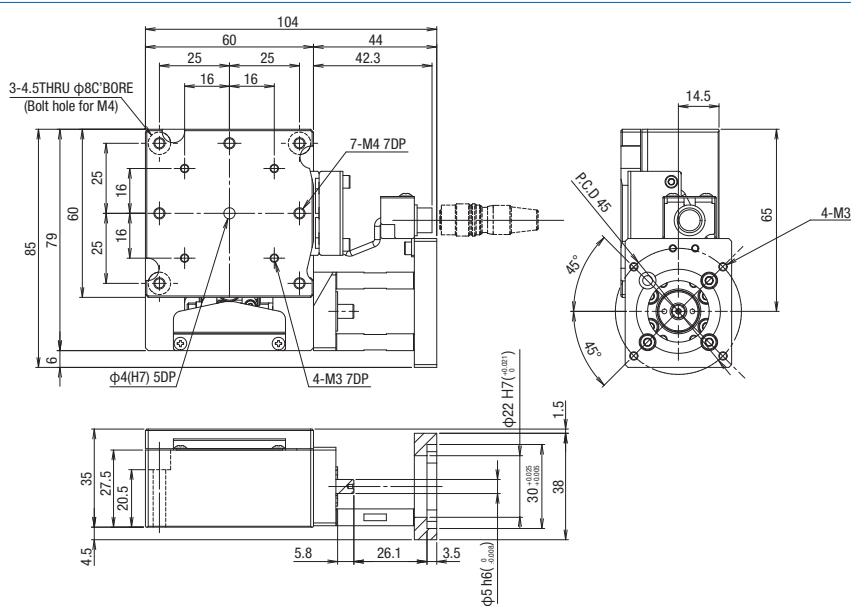
## Sinemotion Rotary SAtage $\phi 60/\square 60$ :KRB06V

### Dimensions

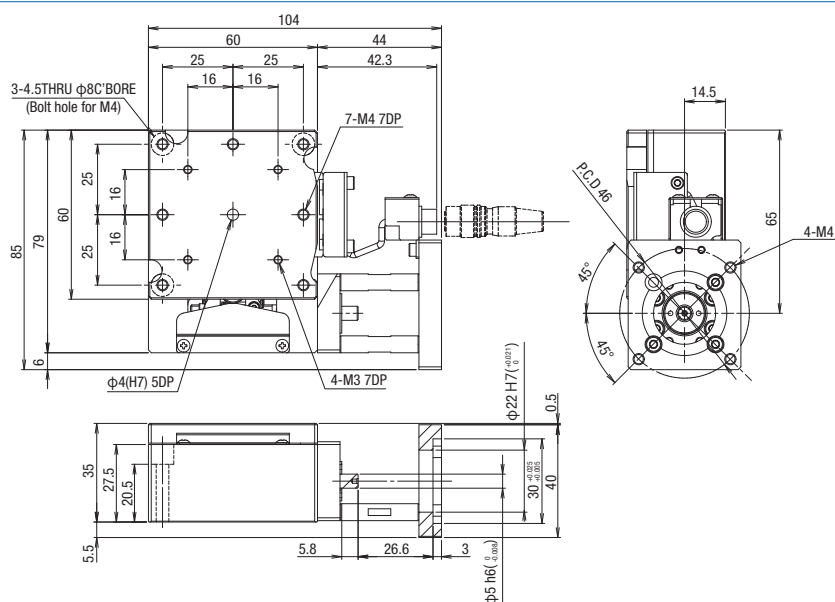
#### KRB06011MSV-LP28



#### KRB06011MSV-LS38



#### KRB06011MSV-LS40



# Electrical Specification: KRB Series

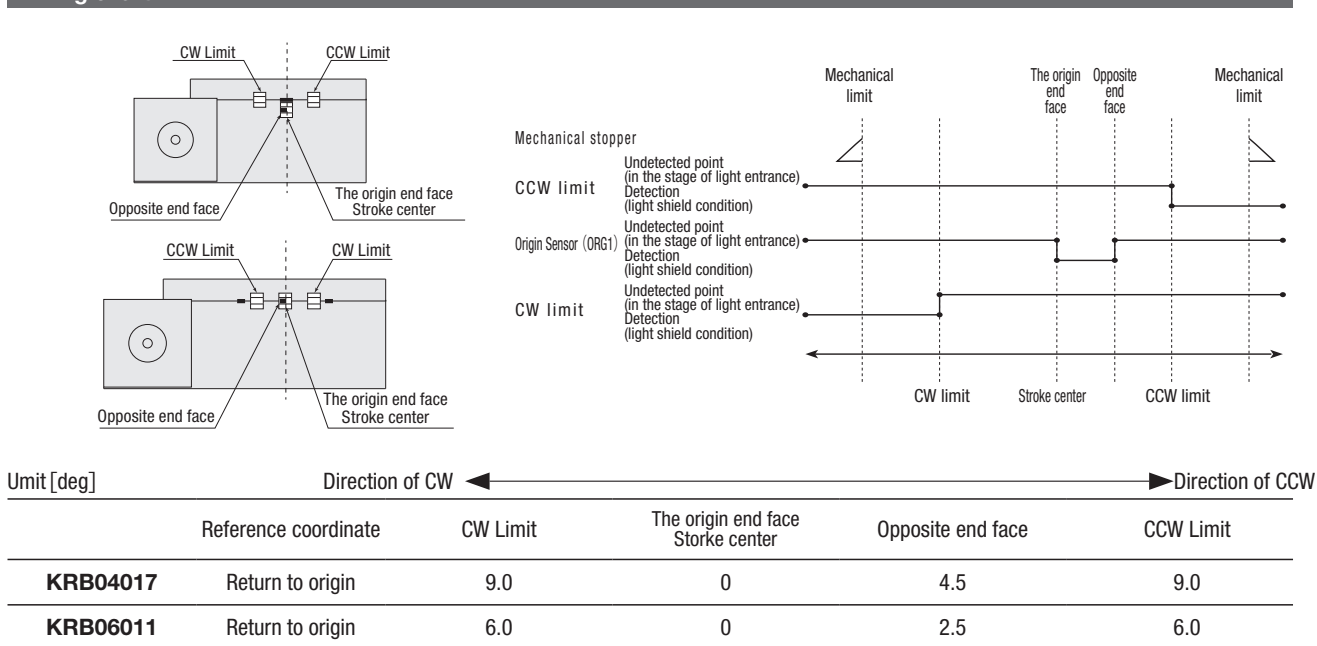
## Specification

Motor code		P28	S38	S40
Feature		For □28mm Stepping motor	For AC Servo motor	For □40mm AC Servo motor
Model			KRB04/KRB06	
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		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	KRB Series	
P28 • S38 • S40	<p>【KRB04】Connector model : HR10A-7R-6P(73)(HRS)</p>	
	<p>【KRB06】Connector model : HR10A-7R-6P(73)(HRS)</p>	
	<p>【Receiver cable】  Model: HR10AP-S-SB-6-□ (□ is the length.)  * Fixed</p>	

## Timing chart



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

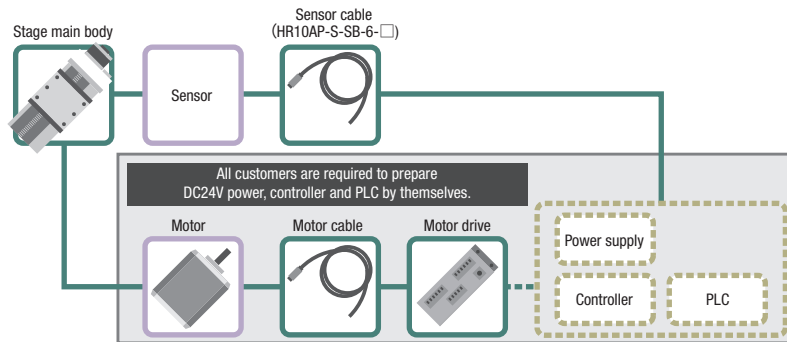
\* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

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

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

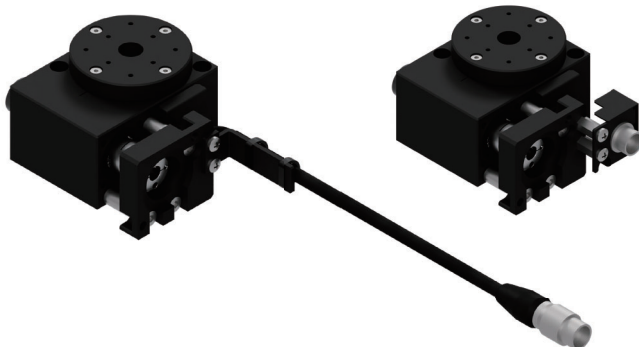
There are products that require the customer to fix the connector. Before fixing, the connector part and the main body are connected only by the lead wire, which may cause disconnection, so please handle with care.

## 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 M ☐ 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	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 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	
Accuracy specification	Weight	0.31kg	0.28kg
	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	—	

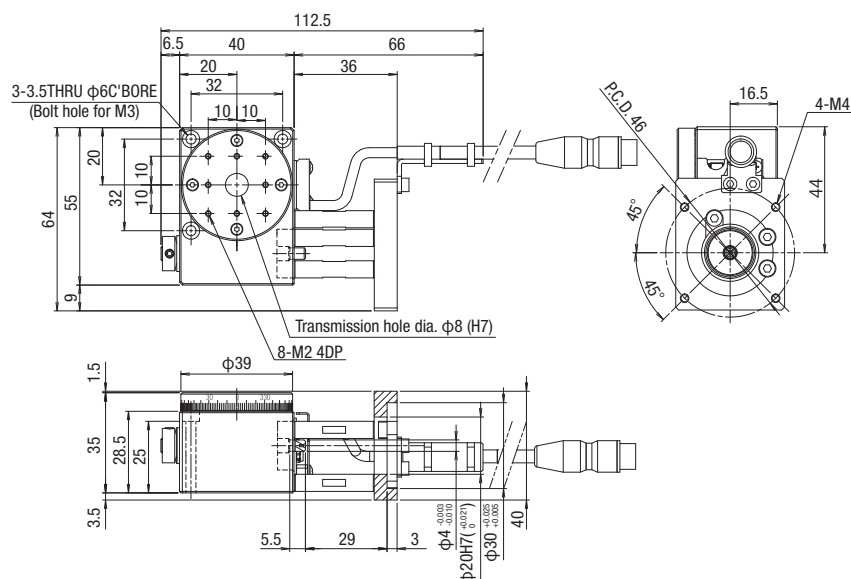
※ 1 The figure in parenthesis is the stage surface size when the Stage surface shape option: square (S) is selected.

※ 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.



## KRW04360TV-LP28

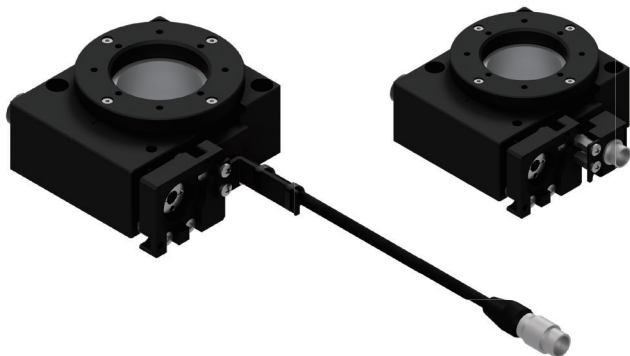


## Rotary Stage $\phi 59/\square 60$ : KRW06360V

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	<input type="checkbox"/> 28 Stepping motor specification
S38	<input type="checkbox"/> 38 Servo motor specification
S40	<input type="checkbox"/> 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)	$\phi 59\text{mm}$ (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	
Accuracy specification	Weight	0.51kg	0.48kg
	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	
Sensor	Eccentricity	5μm	
	Runout	30μm	
	Limit sensor	—	
	Origin sensor	Installed	
Sensor	Slit origin sensor	—	

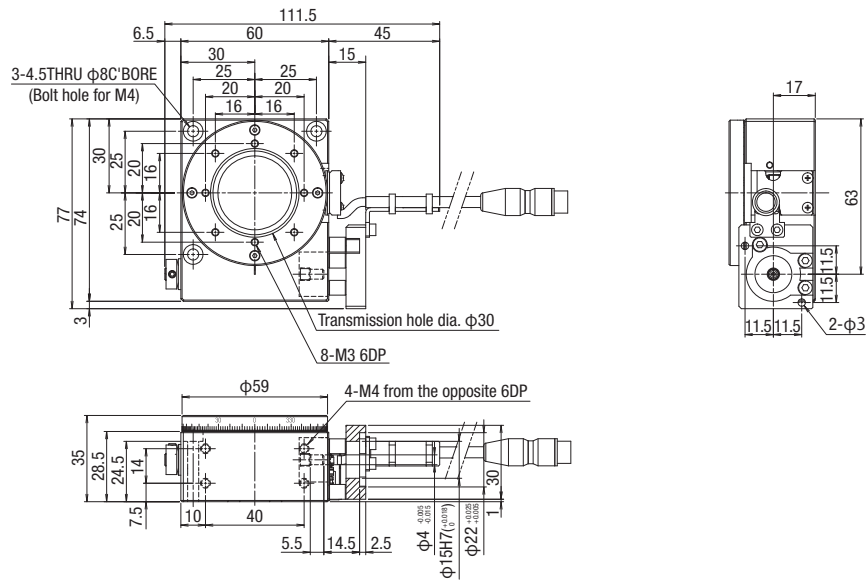
※1 The figure in parenthesis is the stage surface size when the Stage surface shape option: square (S) is selected.

※ SPEC is the value of the standard motor.

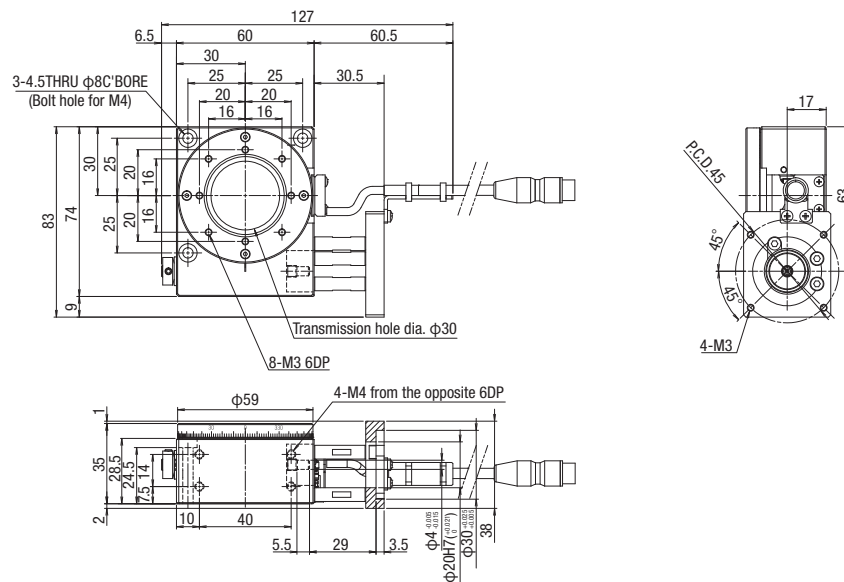
※ When the applicable motor code [S38/S40] is selected, the weight is 0.52kg for the pigtail specification and 0.49kg for the panel mount specification.

Dimensions

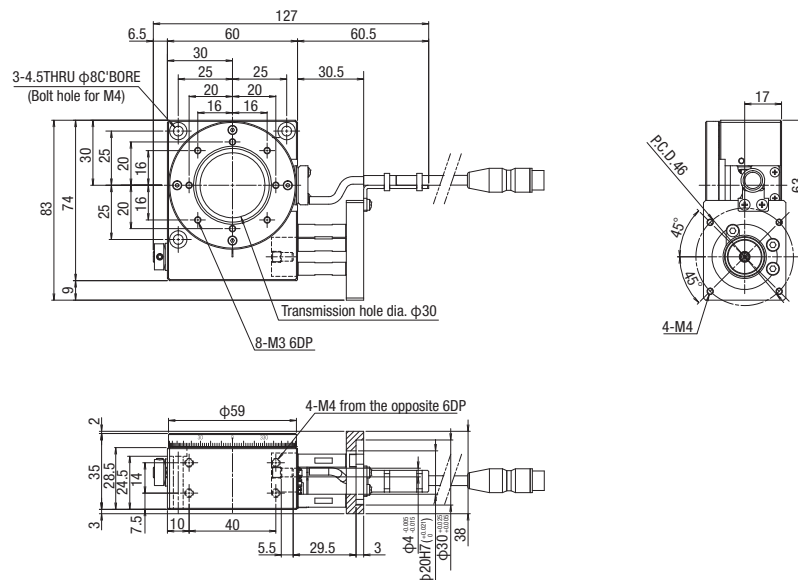
KRW06360TV-LP28



KRW06360TV-LS38



KRW06360TV-LS40

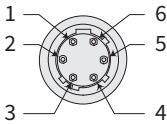
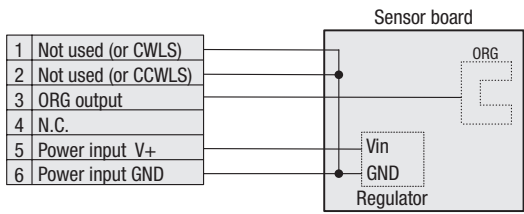
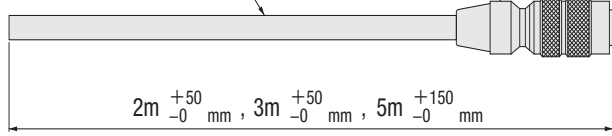



## Electrical Specification: KRW04V/KRW06V

### 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	<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> <div></div>	<p>【Connection diagram】</p> <div></div>														
		<p>【Cable model】 Model:HR10AP-S-SB-6-□ (□ is the length.) * Fixed</p> <p>Connector: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)</p> <p>ULAWM20276 AWG28 3P Black</p> <div></div>	<div></div> <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> <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

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.]

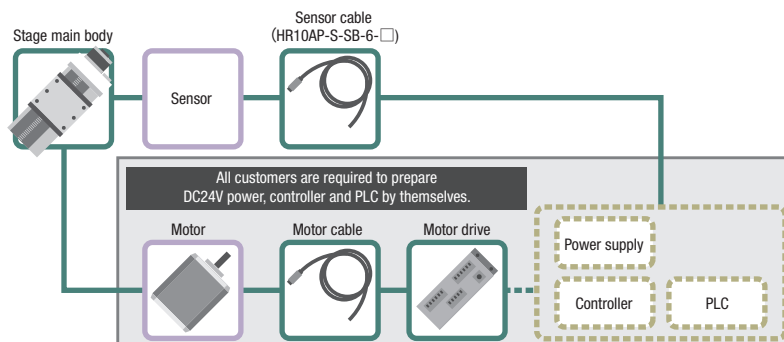
Origin detected scale position	
KRW04360**V - R	0 (The end face of the origin: CW side edge of shield plate) 8 (Opposite end face: CCW side edge of shield plate)
KRW06360V** - R	0 (The end face of the origin: CW side edge of shield plate) 8 (Opposite end face: CCW side edge of shield plate)

\* 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

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