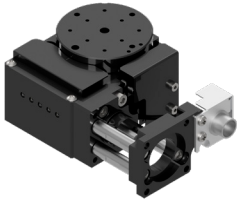


Motorless Specification

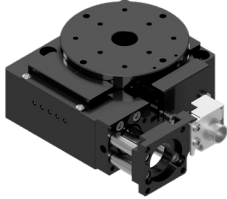
Rotary Stage Ball screw $\phi 40/\phi 60/\square 60$:KRB04/06V

RoHS

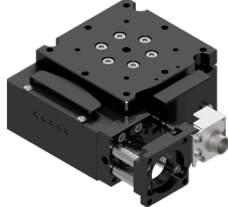
KRB04017MV-LP28



KRB06011MV-LP28



KRB06011MSV-LP28



* All image is for illustrative purposes only.

Accessory		P28	S38	S40
Motor bracket		Installed on main body		
Coupling (screws included)		○		
Mounting screw	For Motor	8 of M2.5×6	8 of M3×12	4 of M4×12
	For Main Body	KRB04 KRB06	3 of M3×25 3 of M4×25	
Sensor cable		○(HR10AP-S-SB-6-□) *		
Hexagonal Wrench (for motor mounting)		○	—	—

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

Weight	P28	S38	S40
KRB04017MV	0.29kg	0.30kg	0.30kg
KRB06011MV	0.51kg	0.52kg	0.52kg
KRB06011MSV	0.52kg	0.53kg	0.53kg

KRB04017MV-LP28-□

1

3

4

KRB06011M□V-LP28-□

1

2

3

4

1 Table size/Travel distance

Code	Table size	Travel distance
04017	$\phi 40$ mm	$\pm 8.5^\circ$
06011	$\phi 60/\square 60$ mm	$\pm 5.5^\circ$

2 Table shape

Blank	Circular
S	Square

* Table shape selection is not applicable to KRB04.

3 Applicable Motor

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

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Ball Screw

Worm Gear

$\phi 39$

$\phi 40$

$\square 40$

$\phi 59$

$\phi 60$

$\square 60$

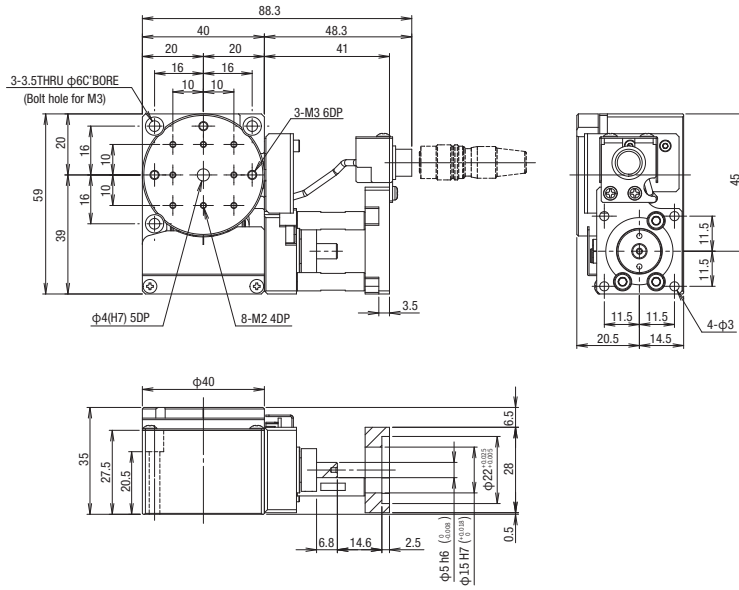
ML
061

SPEC			
Model	KRB04017MV-LP28	KRB06011MV-LP28	KRB06011MSV-LP28
Mechanical Specs	Travel distance	$\pm 8.5^\circ$	$\pm 5.5^\circ$
	Table size	$\phi 40$ mm	$\phi 60$ mm $\square 60$ mm
	Travel mechanism	Ball screw $\phi 6$ lead 1	Ball screw $\phi 6$ lead 1
	Guide	Combination angular ball bearing	Combination angular ball bearing
	Main materials-Finishing	Aluminum-Black alumite processing	Aluminum-Black alumite processing
Accuracy Specs	Weight	0.29 kg	0.51 kg 0.52 kg
	Resolution/Pulse (Full) *	$\approx 0.0068^\circ$	$\approx 0.0043^\circ$
	MAX speed*	101.5"/sec [15kHz]	63.8"/sec [15kHz]
	Repeatability positioning accuracy	$\pm 0.003^\circ$	$\pm 0.003^\circ$
	Load capacity	4.0 kgf [39.2N]	6.0 kgf [58.8N]
	Moment stiffness	0.52"/N · cm	0.25"/N · cm
	Lost motion	0.003°	0.003°
	Backlash	0.01°	0.01°
	Parallelism	50 μ m	50 μ m
	Sensor	Limit sensor	Available
Origin sensor		Available	Available
Slit origin sensor		—	—

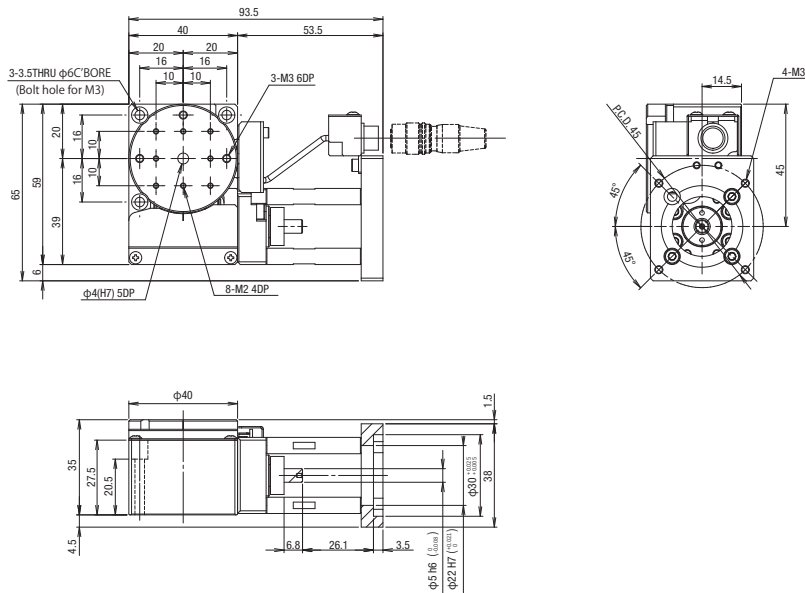
* SPEC is the value of the standard motor.

Dimensions

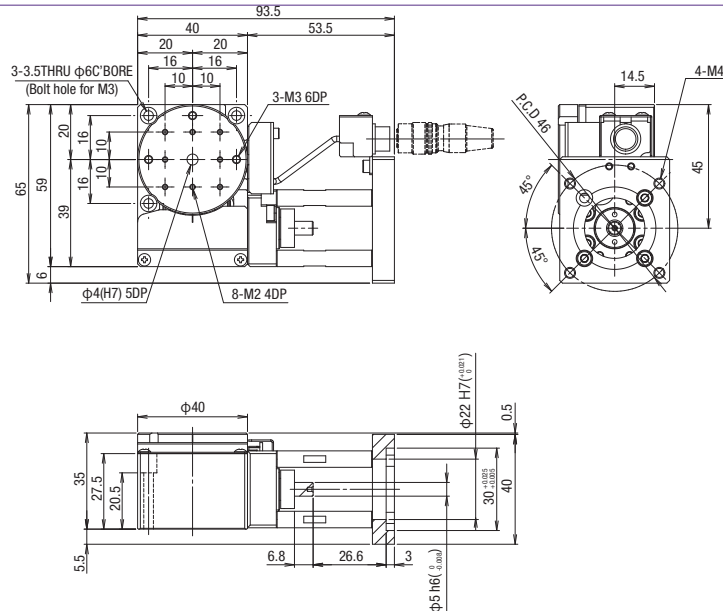
KRB04017MV-LP28



KRB04017MV-LS38



KRB04017MV-LS40



Motorless

X

XY

Z

Horizontal

Z

XYZ

Goniometer

Rotary

Ball
Screw

Worm
Gear

$\phi 39$

$\phi 40$

$\square 40$

$\phi 59$

$\phi 60$

$\square 60$

ML
062

Motorless Specification

Electrical specification: KRB04 / KRB06

Motorless

Electrical 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

【KRB04】Connector model: HR10A-7R-6P(73)(HRS)

【KRB06】Connector model: HR10A-7R-6P(73)(HRS)

【Receiver cable】
Model: HR10AP-S-SB-6-□ (□ is the length.)
* Fixed

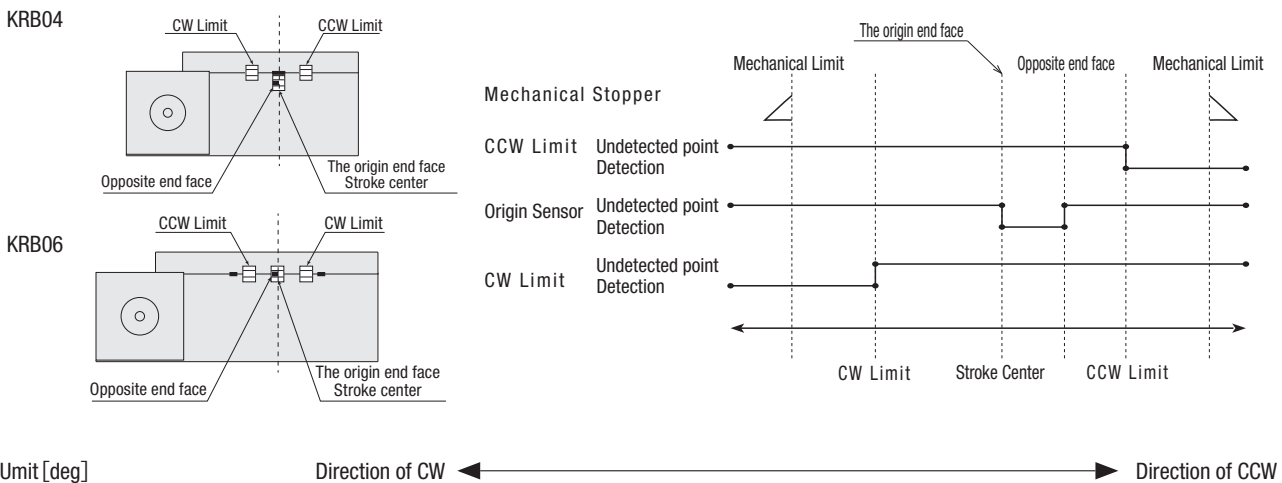
Connector: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)

ULAWM20276 AWG28 3P Black

Pin	Signals
Orange / Black	1 CWLS
Orange / Red	2 CCWLS
Gray / Black	3 ORG
Gray / Red	4 NORG
White / Black	5 V+
White / Red	6 V-
Shield	

※The shields are connected with the connector shell.

Timing chart

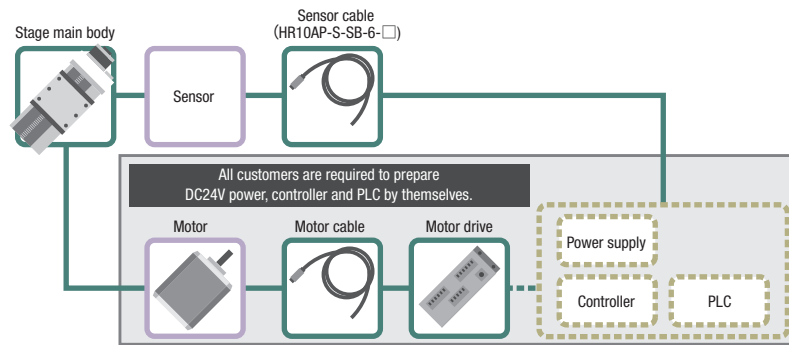


* Return to origin means that is performed return to origin type 4 using DS102/DS112 series.
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

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

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.

- KRB 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

Ball
ScrewWorm
Gear

φ39

φ40

□40

φ59

φ60

□60

ML
066

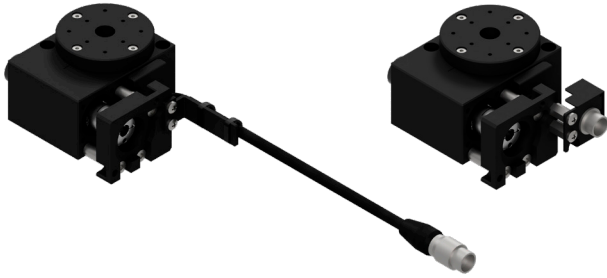
Motorless Specification

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

RoHS

KRW04360TV-LP28

KRW04360MV-LP28



Accessory	P28	S38	S40	
Motor bracket	Installed on main body			
Coupling (screws included)	○			
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-□) *			
Hexagonal Wrench (for motor mounting)	○	—	—	

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

Weight	P28	S38	S40
KRW04360T (Pigtail)	0.31kg	0.32kg	0.32kg
KRW04360M (Panel mount)	0.29kg	0.29kg	0.29kg

* All image is for illustrative purposes only.

KRW04360M □ V-LP28 - □

1 2 3 4 5

1 Connector Type

T	Pigtail	
M	Panel mount	

2 Stage surface shape

Blank	Circular
S	Square

3 Motor location

L	L position
R	Opposite hand

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	KRW04360TV-LP28	KRW04360MV-LP28	
(Opposite hand)	KRW04360TV-RP28	KRW04360MV-RP28	
Mechanical Specs	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 Specs	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	50 μm	
	Eccentricity	5 μm	
Sensor	Runout	30 μm	
	Limit sensor	—	
	Origin sensor	Installed	
Slit origin sensor	—		

* SPEC is the value of the standard motor.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Ball Screw

Worm Gear

$\phi 39$

$\phi 40$

$\square 40$

$\phi 59$

$\phi 60$

$\square 60$

ML
067

Motorless Specification

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

RoHS

KRW06360TV-LP28

KRW06360MV-LP28



* All image is for illustrative purposes only.

Accessory	P28	S38	S40	
Motor bracket	Installed on main body			
Coupling (screws included)	○			
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-□) *			
Hexagonal Wrench (for motor mounting)	○	—	—	

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

Weight	P28	S38	S40
KRW06360T (Pigtail)	0.51kg	0.52kg	0.52kg
KRW06360M (Panel mount)	0.48kg	0.49kg	0.49kg

KRW06360M □ V-LP28 - □

1 2 3 4 5

1 Connector Type

T	Pigtail	
M	Panel mount	

2 Stage surface shape

Blank	Circular
S	Square

3 Motor location

L	L position
R	Opposite hand

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	KRW06360TV-LP28	KRW06360MV-LP28
(Opposite hand)	KRW06360TV-RP28	KRW06360MV-RP28
Mechanical Specs	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
Accuracy Specs	Main materials-Finishing	Aluminum-Black almite finishing
	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°
Sensor	Parallelism	50 μm
	Eccentricity	5 μm
	Runout	30 μm
	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.

Motorless

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Ball Screw

Worm Gear

$\phi 39$

$\phi 40$

$\square 40$

$\phi 59$

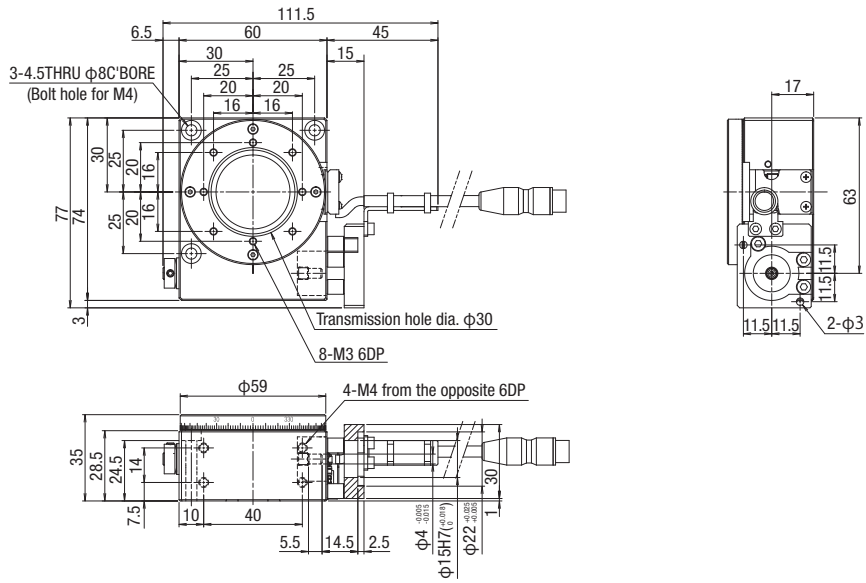
$\phi 60$

$\square 60$

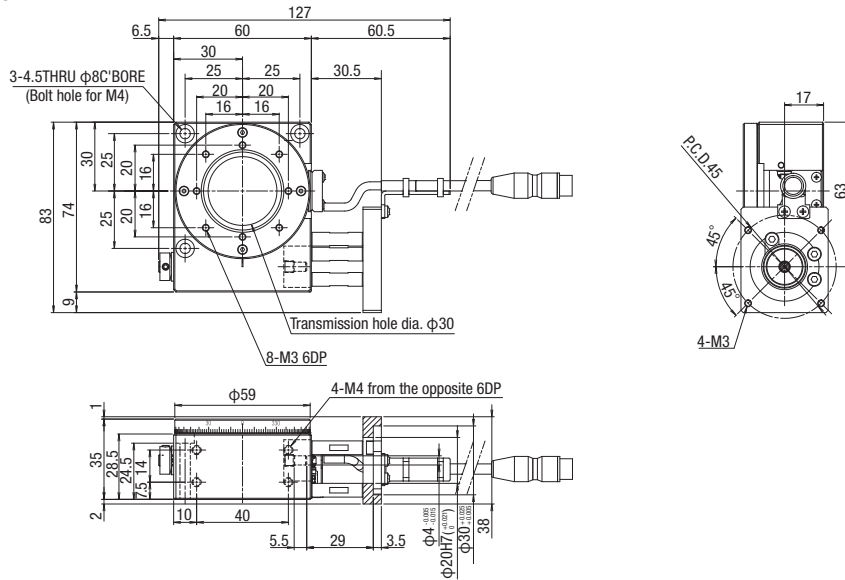
ML
069

Dimensions

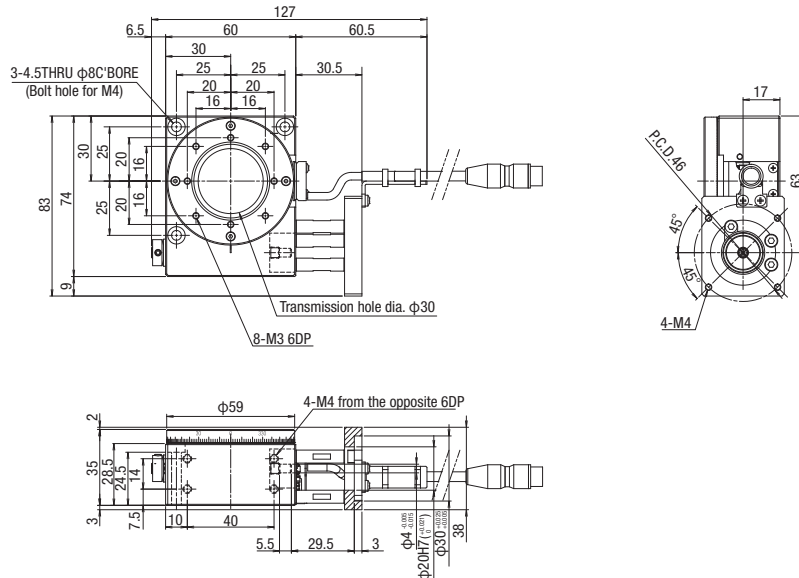
KRW06360TV-LP28



KRW06360TV-LS38



KRW06360TV-LS40



Motorless

X

XY

Z

Horizontal
Z

XYZ

Goniometer

Rotary

Ball
Screw

Worm
Gear

$\phi 39$

$\phi 40$

$\square 40$

$\phi 59$

$\phi 60$

$\square 60$

ML
070

Electrical specification

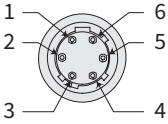
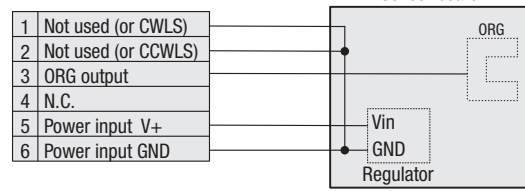
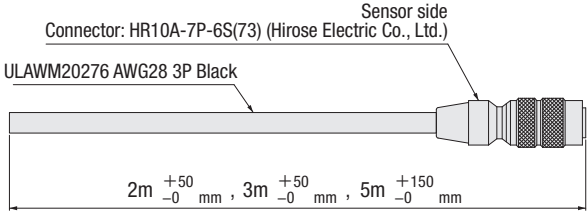
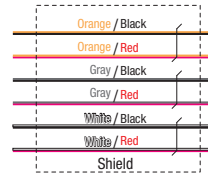
Electrical specification: KRW04V / KRW06V

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		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	<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> <p>Connector: HR10A-7P-6S(73) (Hirose Electric Co., Ltd.)</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

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.

X

XY

Z

Horizontal Z

XYZ

Goniometer

Rotary

Ball Screw

Worm Gear

φ39

φ40

□40

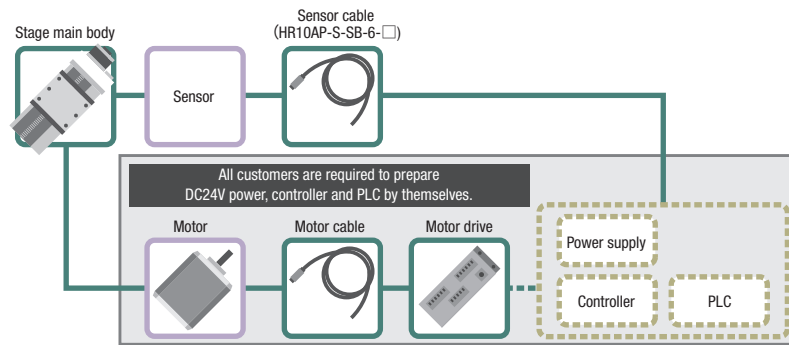
φ59

φ60

□60

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.

- KRW 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

Ball
ScrewWorm
Gear

φ39

φ40

□40

φ59

φ60

□60

ML
072