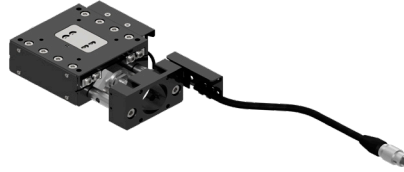


KGB06050MV-LP28



KGB06050TV-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	4 of M4×10		
Sensor cable		○(HR10AP-S-SB-6-□)		

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

KGB06050 T V- 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	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

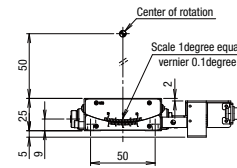
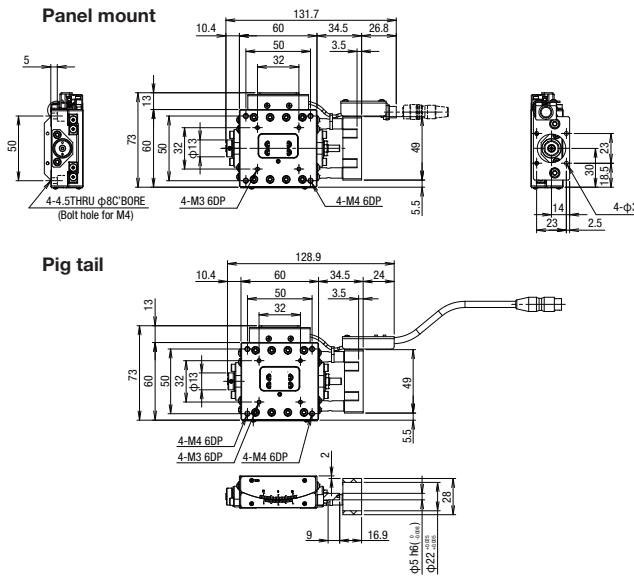
SPEC				
Model	KGB06050□V-LP28	KGB06075□V-LP28	KGB06100□V-LP28	KGB06125□V-LP28
Opposite hand	KGB06050□V-RP28	KGB06075□V-RP28	KGB06100□V-RP28	KGB06125□V-RP28
Mechanical specification	Travel distance	±8.5°	±5.5°	±5°
	Stage surface size	60×60mm		
	Travel mechanism (Reduction ratio)	Ball screw φ6 Lead 1		
	Guide	Cross roller guide		
	Main material—Surface finishing	Aluminum—Black alumite processing		
Dimensional tolerance	Weight	0.41kg		
	Height of stage	25±0.2mm		
	Height of center rotation	50±0.2mm	75±0.2mm	100±0.2mm
	Center of rotation precision	0.01mm		
	Resolution(Pulse) Full	≒0.0021°	≒0.0014°	≒0.0011°
Accuracy specification	MAX speed	31.4°/sec[15kHz]	21.5°/sec[15kHz]	16.4°/sec[15kHz]
	Repeatability positioning accuracy	±0.001°		
	Load capacity	5kgf[49N]		
	Moment stiffness	Pitch 0.30/yaw 0.10/roll 0.11[°/N・cm]		
	Lost motion	0.03°		
Sensor	Limit sensor	Available		
	Origin sensor	Available		
	Slit origin sensor	—		

※ □ is the value of the standard motor.

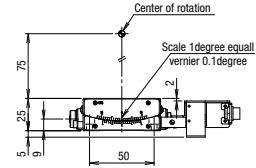
* When the applicable motor code [S38/S40] is selected, the weight is 0.44kg.

Dimensions

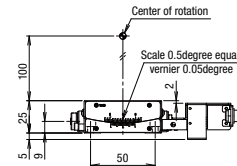
KGB06-**- LP28 series



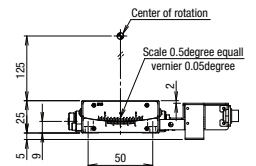
KGB06050**- LP28



KGB06075**- LP28

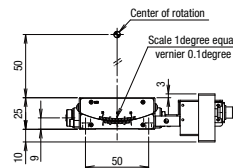
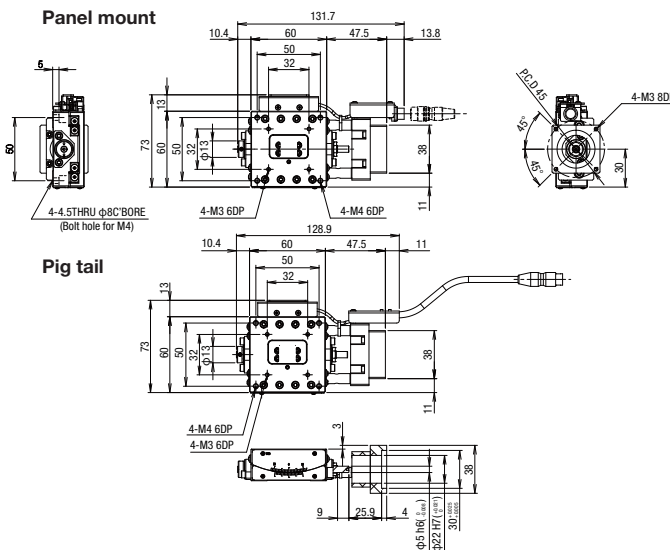


KGB06100**- LP28

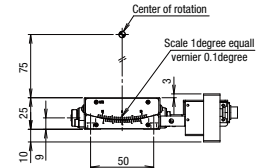


KGB06125**- LP28

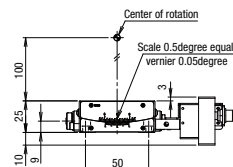
KGB06-**- LS38 series



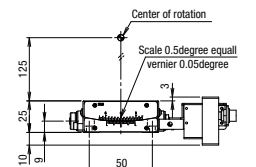
KGB06050**- LS38



KGB06075**- LS38

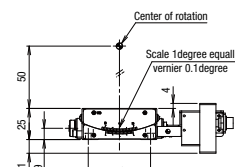
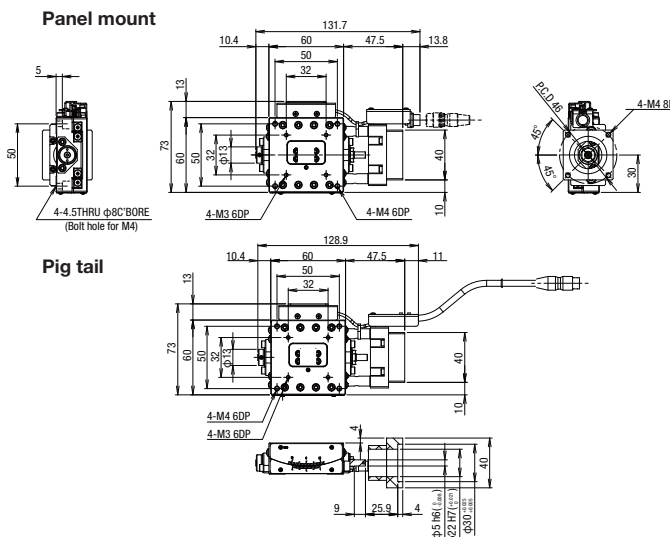


KGB06100**- LS38

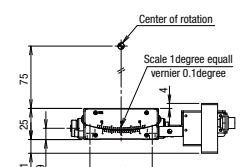


KGB06125**- LS38

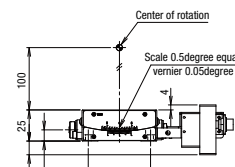
KGB06-**- LS40 series



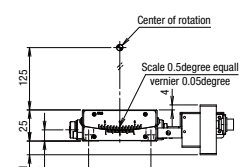
KGB06050**- LS40



KGB06075**- LS40

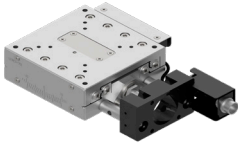


KGB06100**- LS40

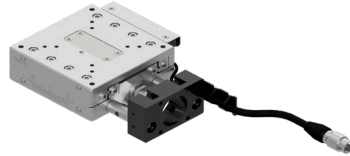


KGB06125**- LS40

KGB07070MV-LP28



KGB07070TV-LP28



Accessory		P28	S38	S40
Motor bracket changed		bracket		
Coupling (with screws)		○		
Mounting screw	For Motor	2 of M2.5×6	4 of M3×12	2 of M4×12
	For Main Body	4 of M4×8		
Sensor cable 2m		○(HR10AP-S-SB-6-□)		

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

KGB07070 A T V- LP28-□

1 2 3 4 5 6

1 Height of center rotation (W.D.)

070	70mm
096	96mm
122	122mm

2 Sensor logic

Code	CWLS	ORG	CCWLS
A	NC	NC	NC
B	NO	NO	NO
C	NC	NO	NC

3 Connector specifications

T	Pig tail	
M	Panel mount	

4 Sensor cover location specification

L	Lposition	
R	Opposite hand	

5 Application Motor

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

6 Cable option

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

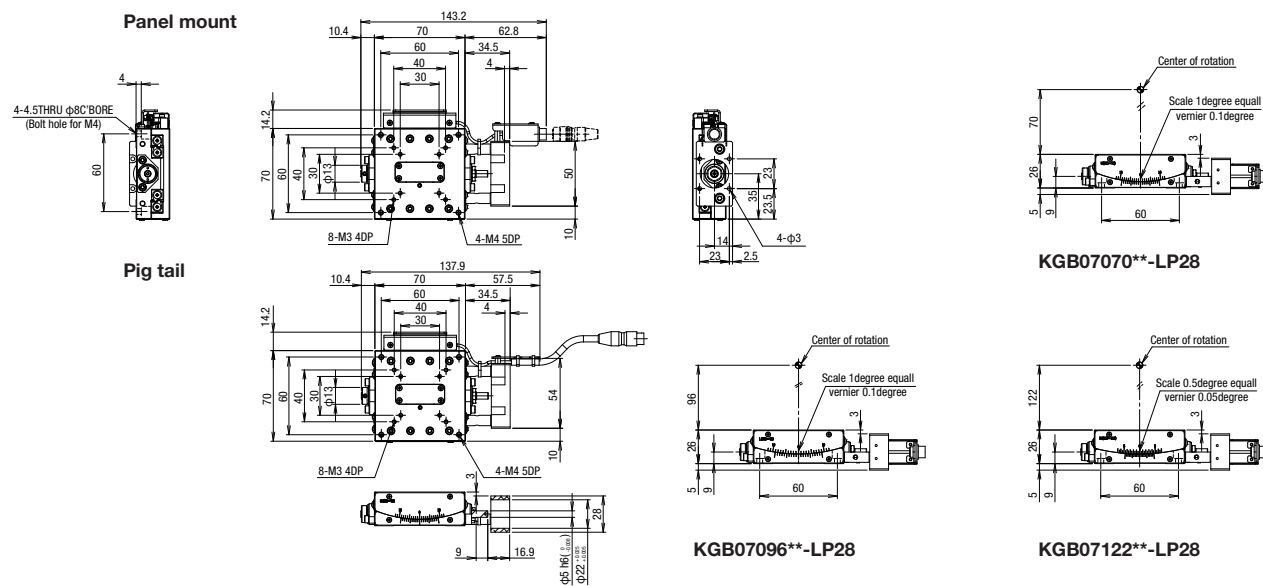
SPEC				
Model	KGB07070A□V-LP28	KGB07096A□V-LP28	KGB07122A□V-LP28	
Opposite hand	KGB07070A□V-RP28	KGB07096A□V-RP28	KGB07122A□V-RP28	
Mechanical specification	Travel distance	±5°	±4°	±3°
	Stage surface size	70×70mm		
	Travel mechanism (Reduction ratio)	Ball screw φ6 Lead 1		
	Guide	Cross roller guide		
	Main material—Surface finishing	Aluminum—White alumite processing		
Dimensional tolerance	Weight(※)	0.56kg		
	Height of stage	26± 0.2mm		
	Height of center rotation	70± 0.2mm	96± 0.2mm	122± 0.2mm
	Center of rotation precision	0.01mm		
Accuracy specification	Resolution (Pulse) Full	≒0.0015°	≒0.0011°	≒0.0009°
	MAX speed	22.6°/sec [15kHz]	16.9°/sec [15kHz]	13.4°/sec [15kHz]
	Repeatability positioning accuracy	±0.003°		
	Load capacity	5.0kgf [49N]		
	Moment stiffness	Pitch 0.28/yaw 0.06/roll 0.06[°/N・cm]		
Sensor	Lost motion	0.03°		
	Limit sensor	Available		
	Origin sensor	Available		
	Slit origin sensor	—		

* is the value of the standard motor.

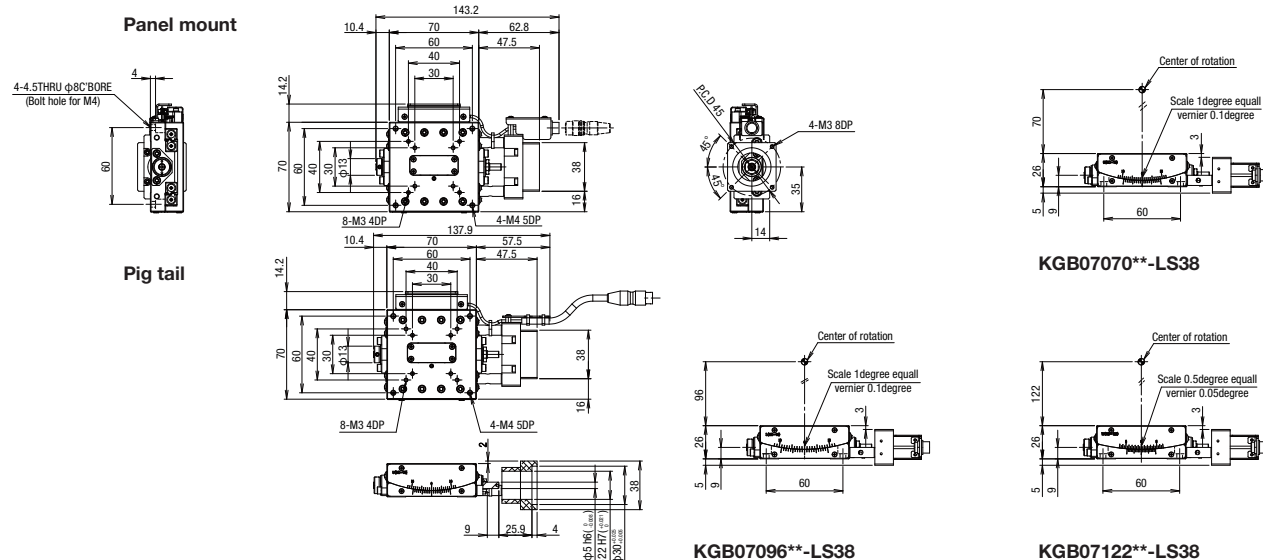
* When the applicable motor code [S38/S40] is selected, the weight is 0.59kg.

Dimensions

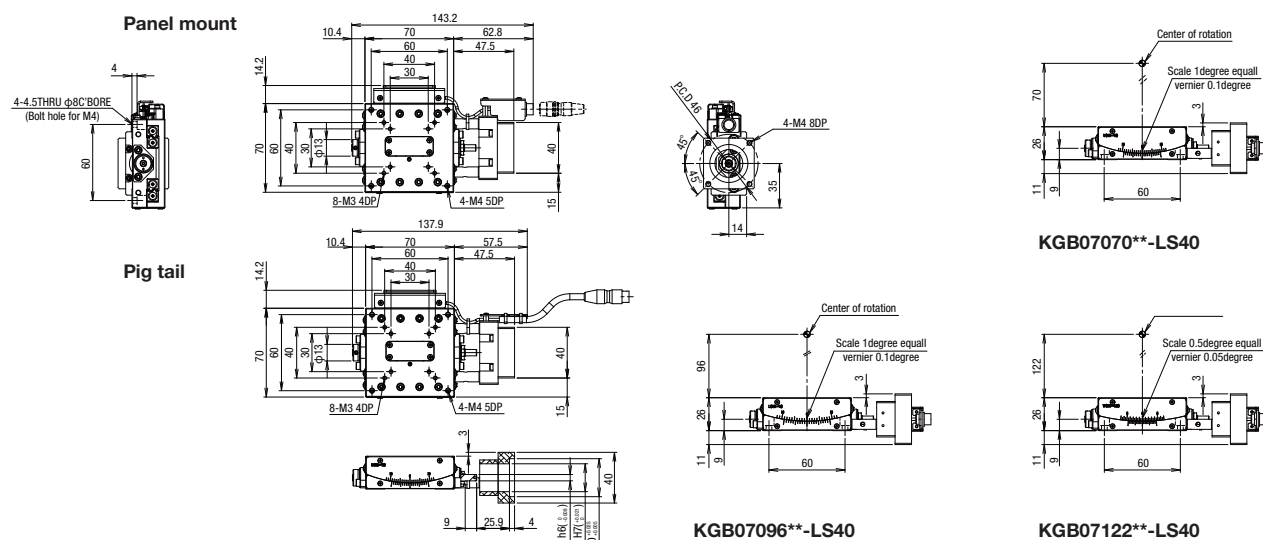
KGB07-**-LP28 series



KGB07-**-LS38 series



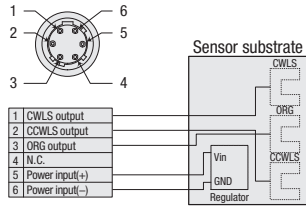
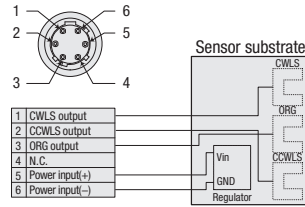
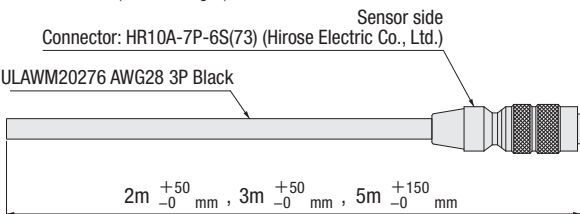
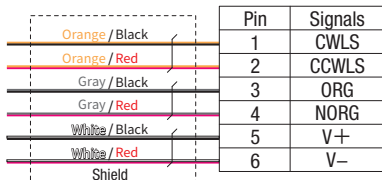
KGB07-**-LS40 series



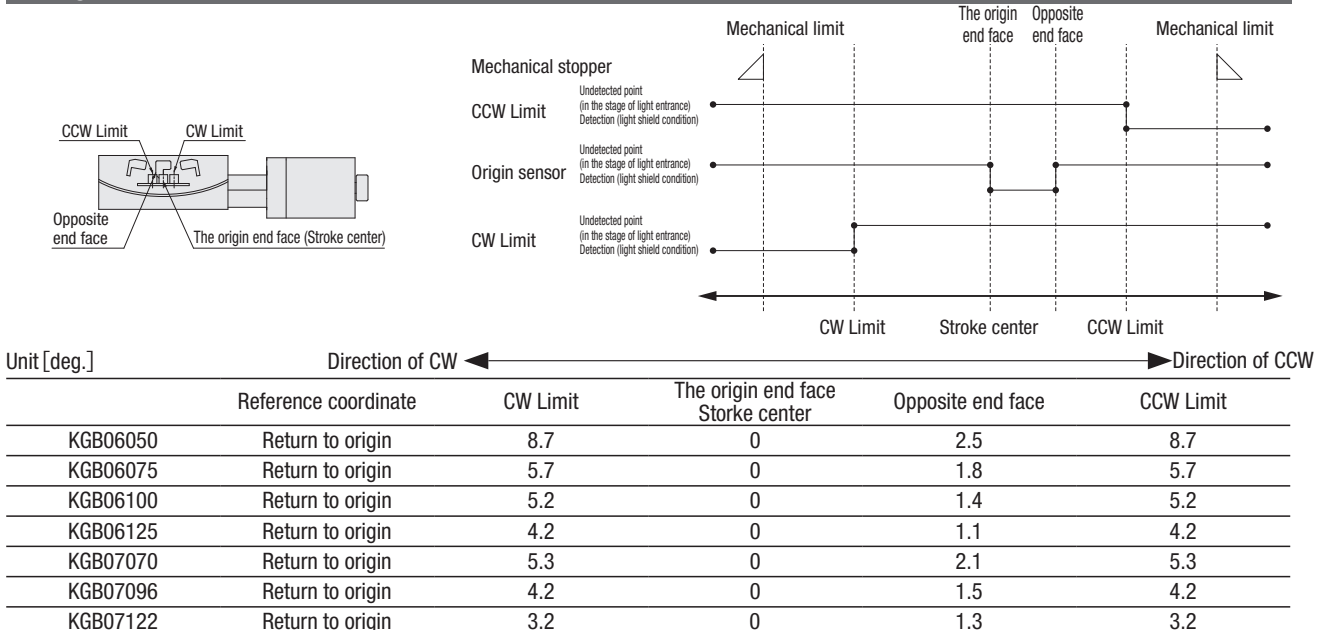
Specification

Motor code		P28	S38	S40
Feature		For □28mm Stepping motor	For □38mm AC Servo motor	For □40mm AC Servo motor
Model		KGB06V/KGB07V		
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	KGB06V	On detection (light shield condition): Output transistor OFF (Non-continuity)	
		KGB07V	Sensor logic option A	On detection : Output transistor OFF (Non-continuity)
			Sensor logic option B	On detection : Output transistor ON (Continuity)
			Sensor logic option C	When limit is detected: Output transistor OFF (Non-continuity) When returning to origin: Output transistor ON (Continuity)

Pin allocation · Connection diagram

Motor code	KGB Series	
P28 · S38 · S40	【KGB06】 Pig tail Connector specifications : HR10A-7J-6P(73)(HRS) Panel mount specification Connector model : HR10A-7R-6P(73) (HRS) 	
	【KGB07】 Pig tail Connector specifications : HR10A-7J-6P(73)(HRS) Panel mount specification 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.) 	
	 ※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.

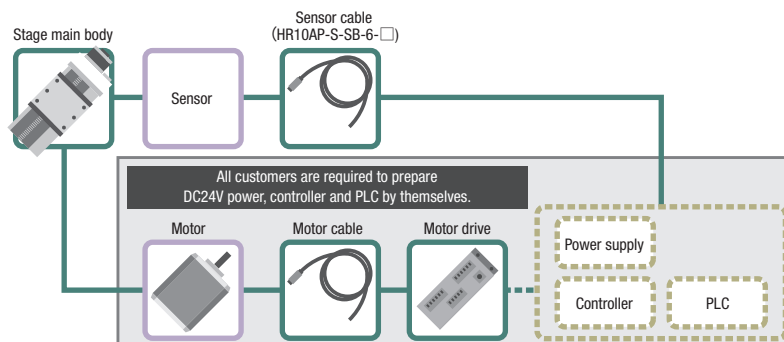
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 mm.

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** ☐ **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. High-torque

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.

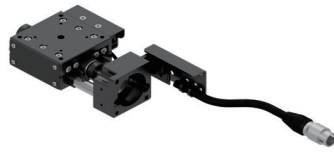
Operation in a misalignment situation may lead to early product damage and deterioration.

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.

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

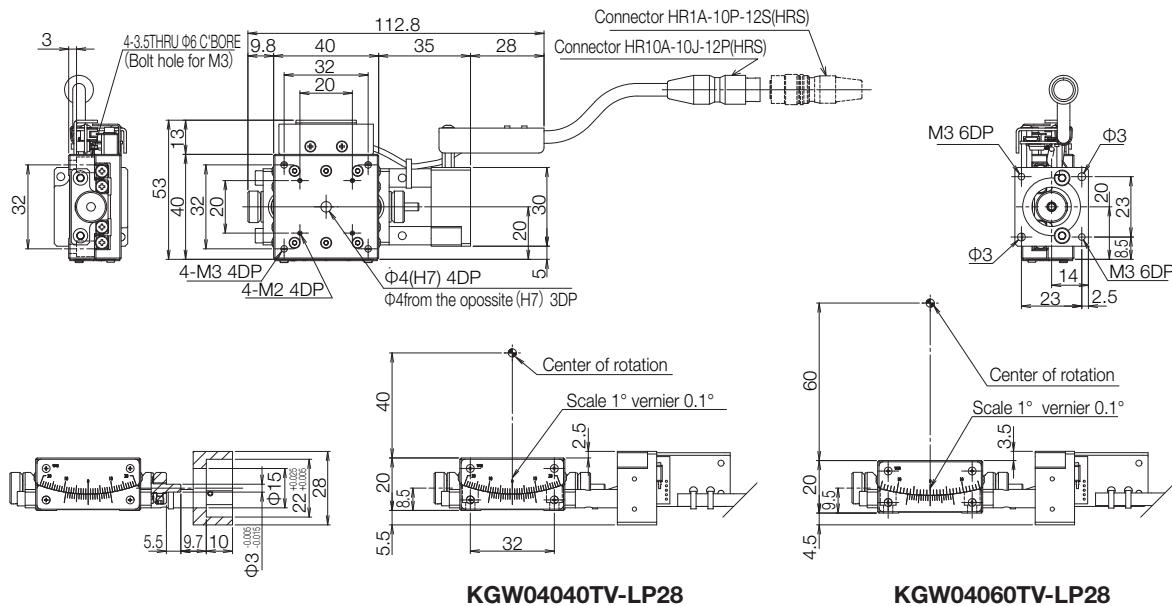
SPEC				
Model	KGW04040TV-LP28	KGW04060TV-LP28	KGW04040MV-LP28	KGW04060MV-LP28
(Opposite hand)	KGW04040TV-RP28	KGW04060TV-RP28	KGW04040MV-RP28	KGW04060MV-RP28
Mechanical specification	Travel distance	±8°	±6°	±8°
	Stage surface size	40×40mm		
	Connector type	Pigtail		Panel Mount
	Travel mechanism (Reduction 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 specification	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.

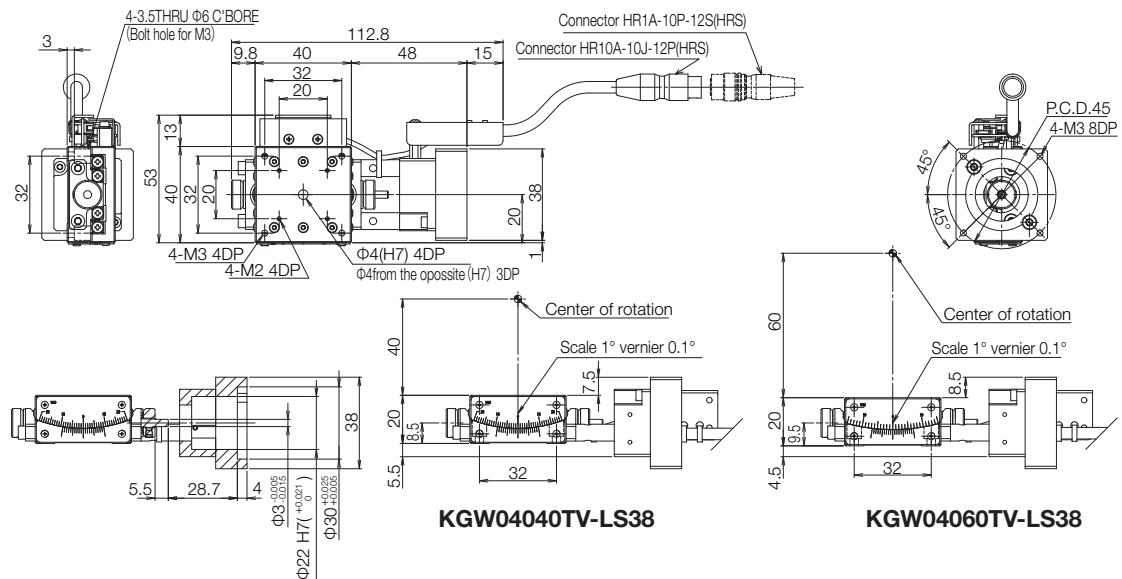
* When the applicable motor code [S38/S40] is selected, the weight is 0.32kg for the pigtail specification and 0.31kg for the panel mount specification.

Dimensions

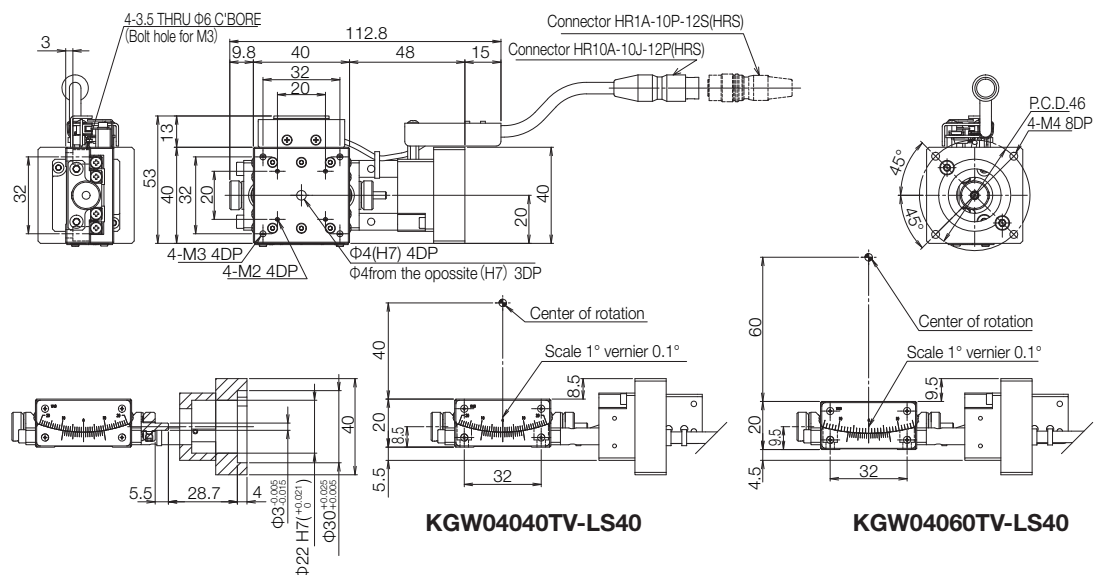
KGW04-TV-LP28 Series



KGW04-TV-LS38 Series



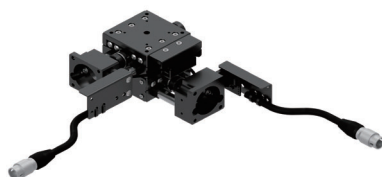
KGW04-TV-LS40 Series



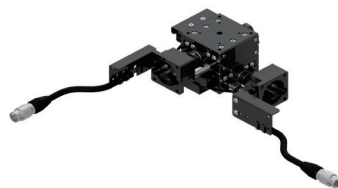
Goniometer Stage□40:KAW04V (2-axis)

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

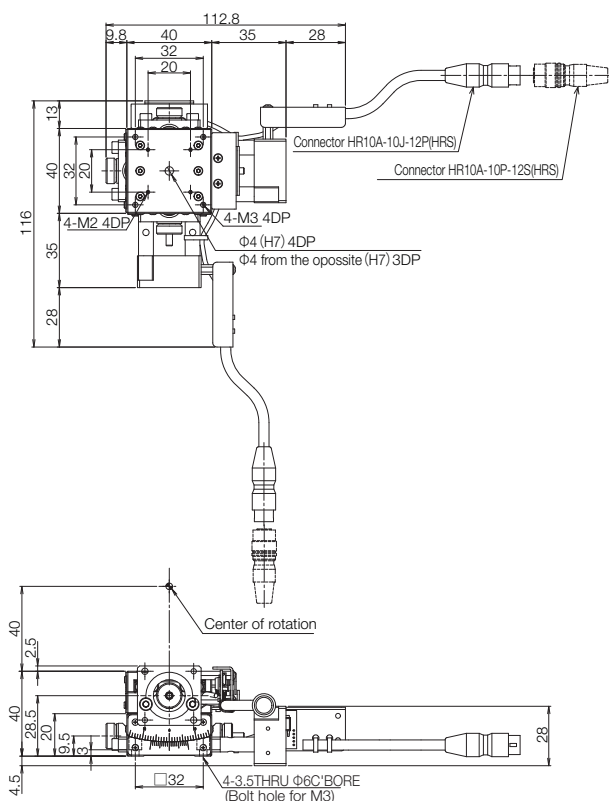
SPEC			
Model		KAW04040TV-LP28	KAW04040MV-LP28
(Opposite hand)		KAW04040TV-RP28	KAW04040MV-RP28
Mechanical specification	Travel distance Upper/Lower axis	±8°/±6°	
	Stage surface size	40×40mm	
	Connector type	Pigtail	Panel Mount
	Travel mechanism (Reduction ratio)	Worm gear(1/240)	
	Guide	Cross Roller 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	Upper	15°/sec[5kHz]
		Lower	15°/sec[5kHz]
	Repeatability positioning accuracy	±0.005°	
	Load capacity	2.5kgf [24.5N]	
Sensor	Moment stiffness	Pitch 1.57/Yaw 2.32/Roll 1.57["/N • cm]	
	Lost motion	0.01°	
	Limit sensor	Available	
	Origin sensor	Available	
	Slit origin sensor	—	

* SPEC is the value of the standard motor.

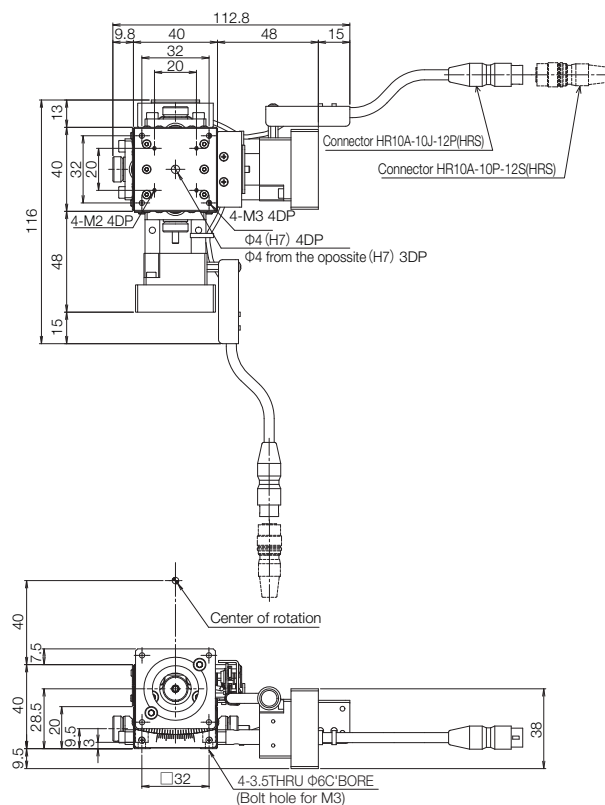
* When the applicable motor code [S38/S40] is selected, the weight is 0.64kg for the pigtail specification and 0.62kg for the panel mount specification.

Dimensions

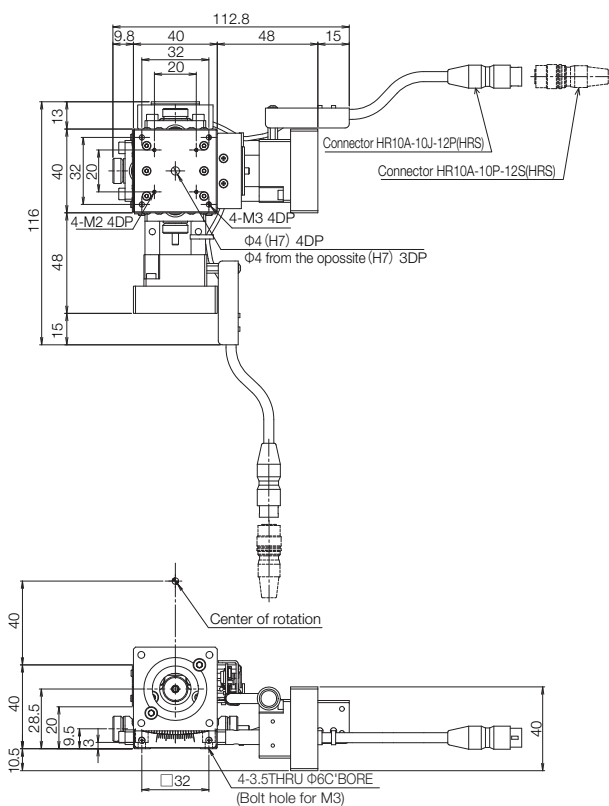
KAW04040TV-LP28



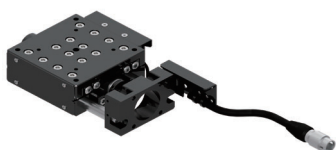
KAW04040TV-LS38



KAW04040TV-LS40



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

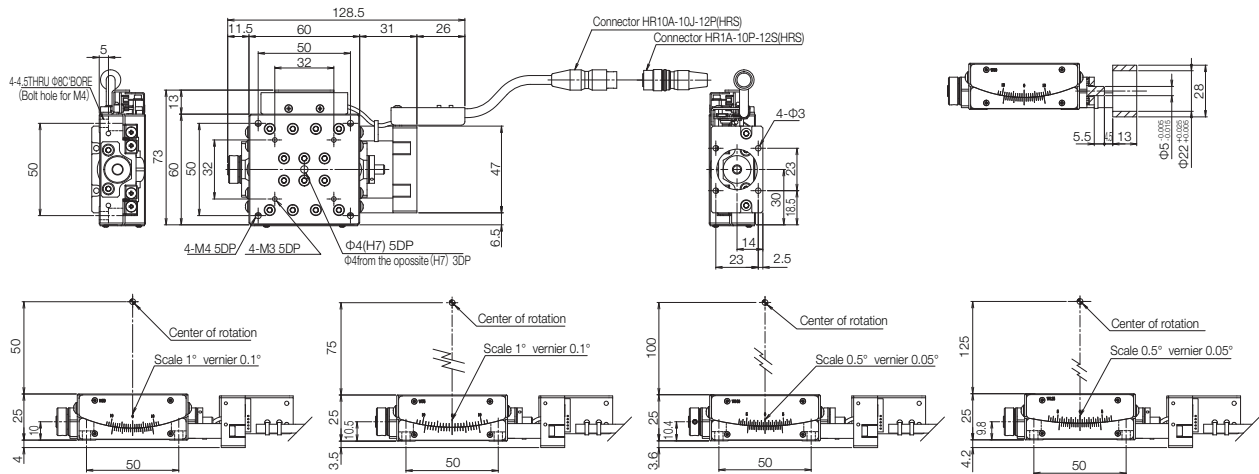
SPEC								
Model	KGW06050TV-LP28	KGW06075TV-LP28	KGW06100TV-LP28	KGW06125TV-LP28	KGW06050MV-LP28	KGW06075MV-LP28	KGW06100MV-LP28	KGW06125MV-LP28
(Opposite hand)	KGW06050TV-RP28	KGW06075TV-RP28	KGW06100TV-RP28	KGW06125TV-RP28	KGW06050MV-RP28	KGW06075MV-RP28	KGW06100MV-RP28	KGW06125MV-RP28
Travel distance	±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



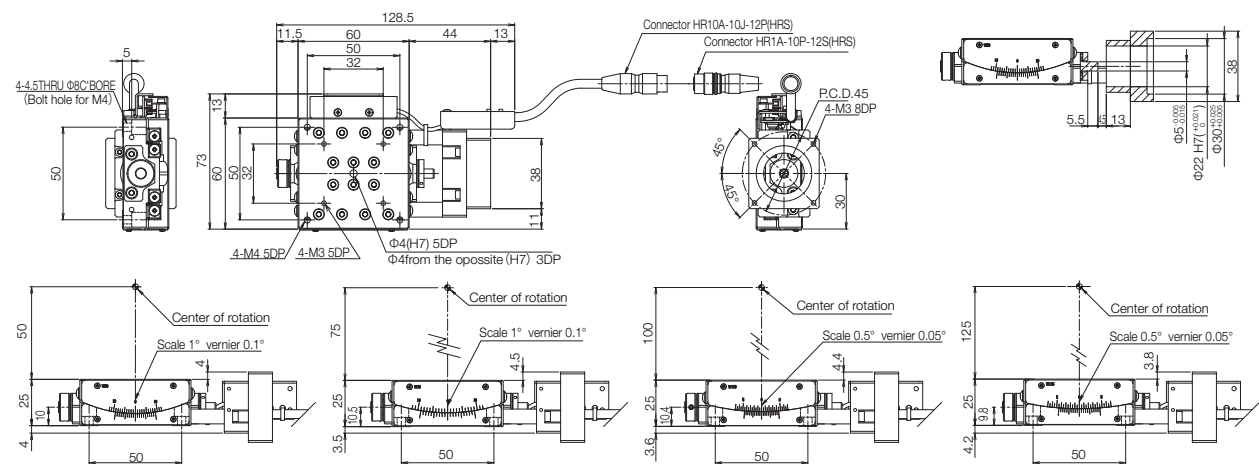
KGW06050TV-LP28

KGW06075TV-LP28

KGW06100TV-LP28

KGW06125TV-LP28

KGW06-TV-LS38 Series



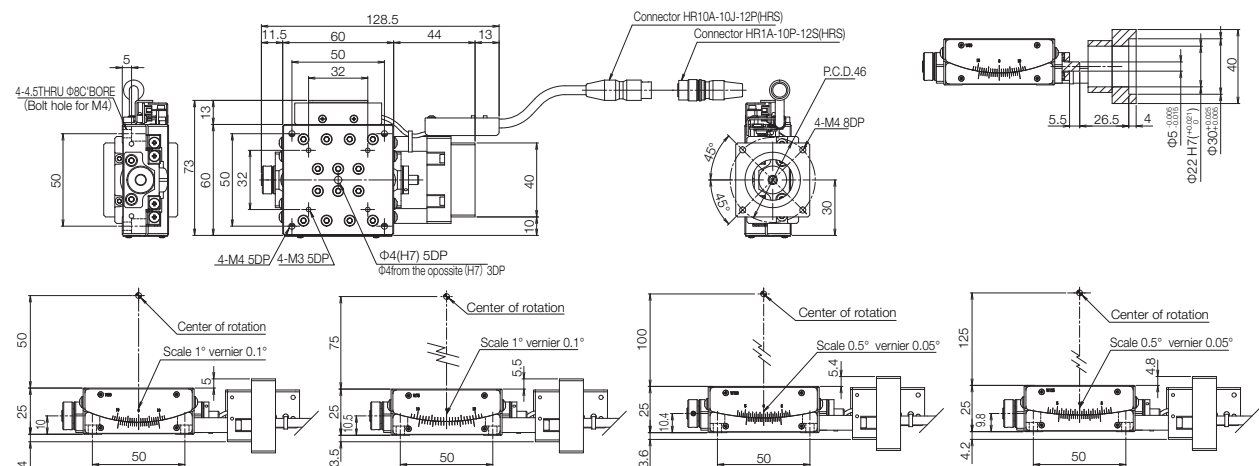
KGW06050TV-LS38

KGW06075TV-LS38

KGW06100TV-LS38

KGW06125TV-LS38

KGW06-TV-LS40 Series



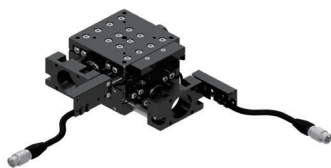
KGW06050TV-LS40

KGW06075TV-LS40

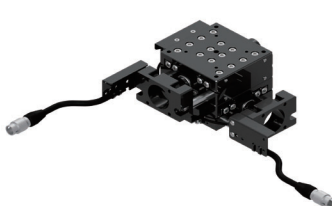
KGW06100TV-LS40

KGW06125TV-LS40

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

KAW06 050 TV- L P28 - □

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

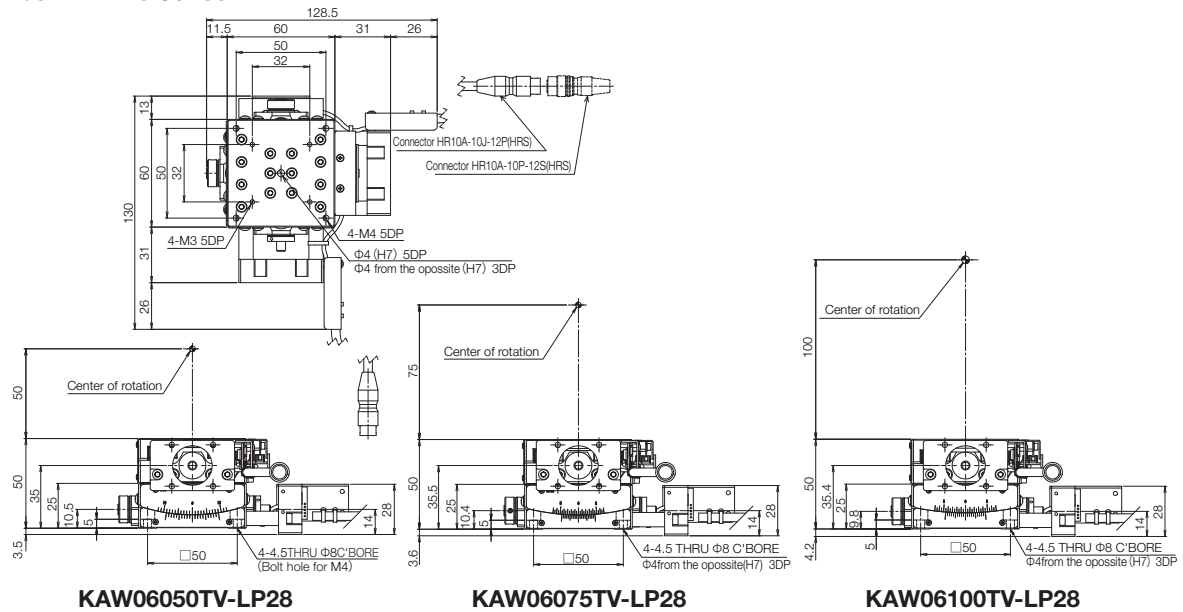
SPEC							
Model	KAW06050TV-LP28	KAW06075TV-LP28	KAW06100TV-LP28	KAW06050MV-LP28	KAW06075MV-LP28	KAW06100MV-LP28	
(Opposite hand)	KAW06050TV-RP28	KAW06075TV-RP28	KAW06100TV-RP28	KAW06050MV-RP28	KAW06075MV-RP28	KAW06100MV-RP28	
Mechanical specification	Travel distance Upper/Lower axis	±10°/±8°	±8°/±6°	±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)	Worm gear(1/225)	Worm gear(1/292)	Worm gear(1/160)	Worm gear(1/225)	Worm gear(1/292)
		Lower Worm gear(1/225)	Worm gear(1/292)	Worm gear(1/360)	Worm gear(1/225)	Worm gear(1/292)	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)	0.0032°(Full)	0.002466°(Full)	0.0045°(Full)	0.0032°(Full)	0.002466°(Full)
		Lower 0.0032°(Full)	0.002466°(Full)	0.002°(Full)	0.0032°(Full)	0.002466°(Full)	0.002°(Full)
	MAX speed	Upper 22.5°/sec[5kHz]	16°/sec[5kHz]	12.5°/sec[5kHz]	22.5°/sec[5kHz]	16°/sec[5kHz]	12.5°/sec[5kHz]
		Lower 16°/sec[5kHz]	12.5°/sec[5kHz]	10°/sec[5kHz]	16°/sec[5kHz]	12.5°/sec[5kHz]	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.

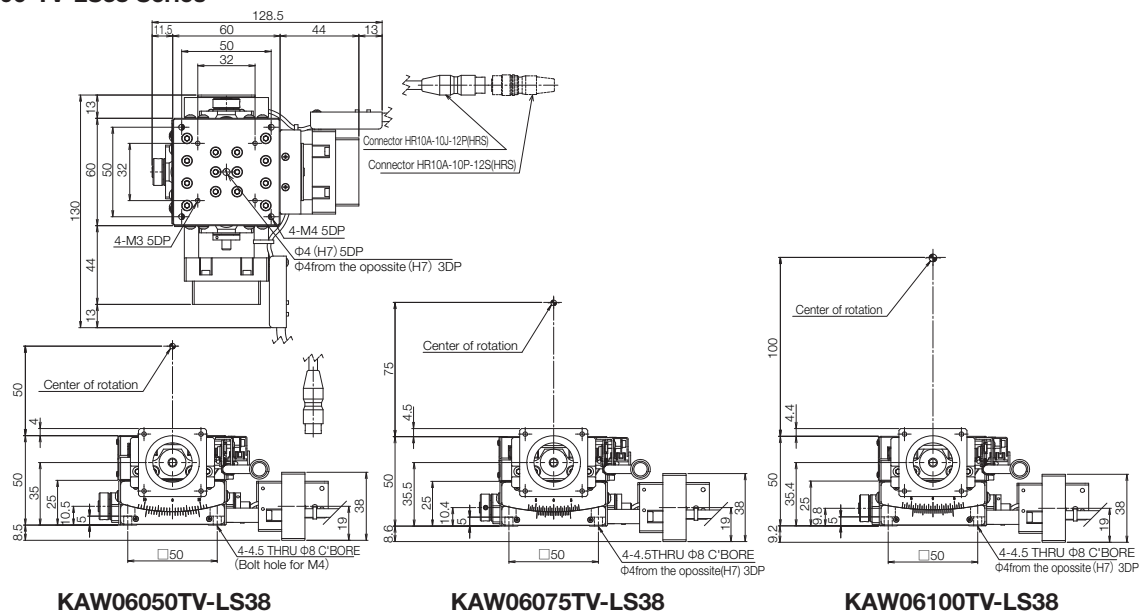
* When the applicable motor code [S38/S40] is selected, the weight is 0.88kg for the pigtail specification and 0.86kg for the panel mount specification.

Dimensions

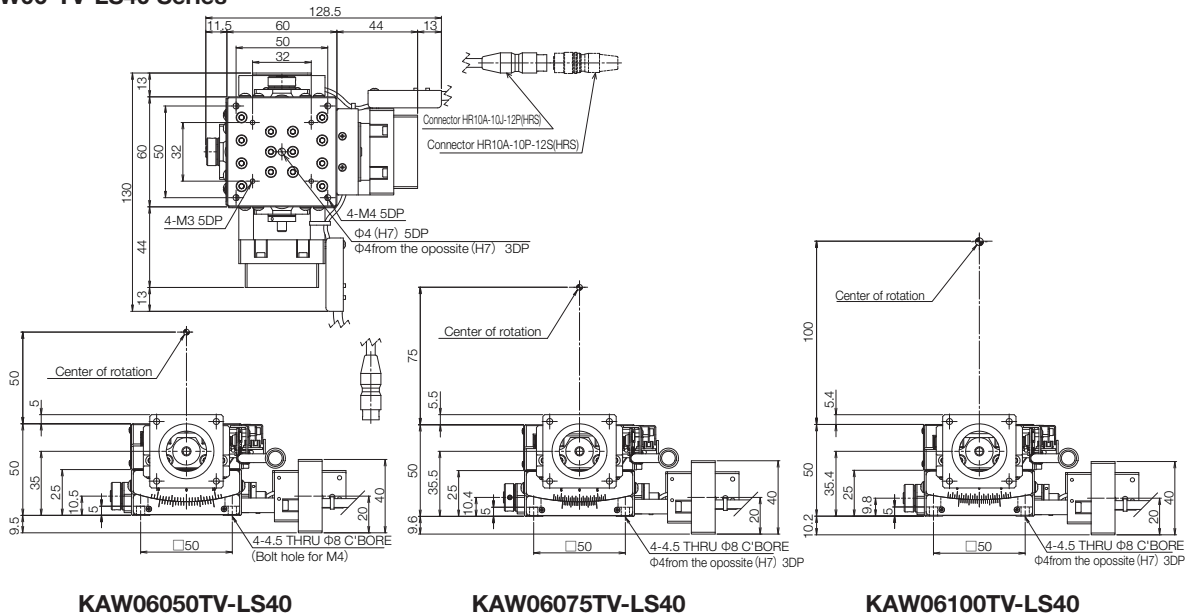
KAW06-TV-LP28 Series



KAW06-TV-LS38 Series



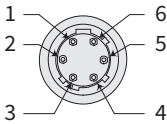
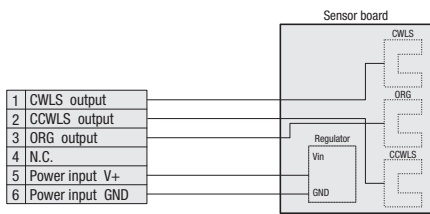
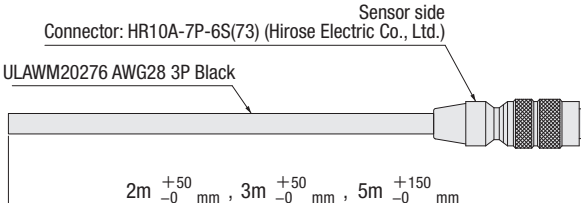
KAW06-TV-LS40 Series



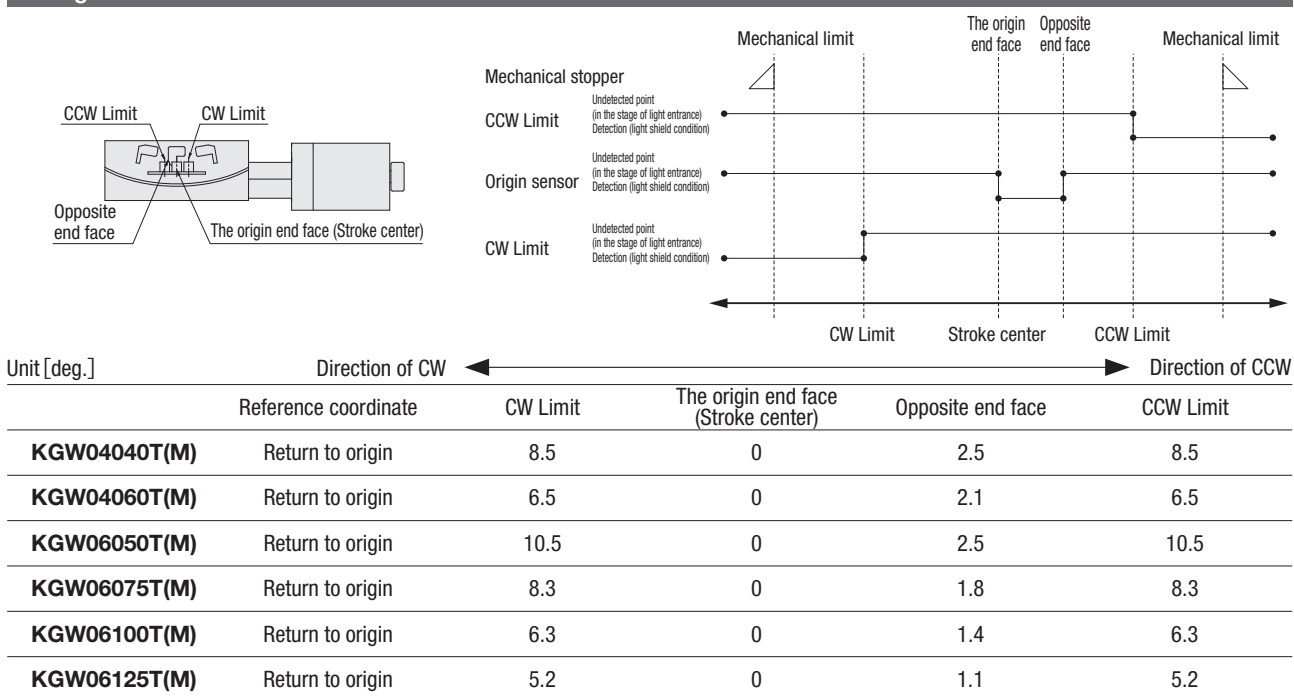
Electrical specification

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.) Sensor side ULAWM20276 AWG28 3P Black  <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



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

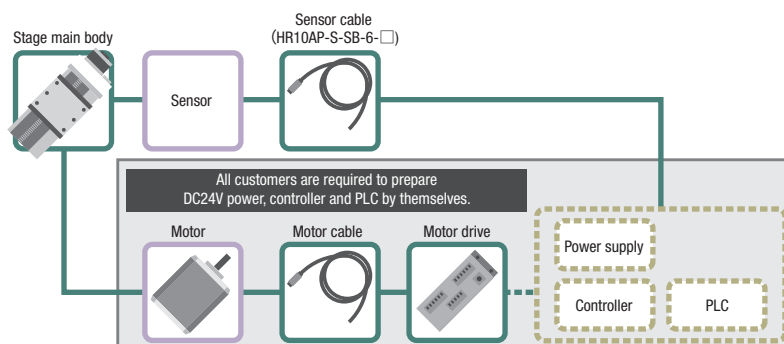
* The coordinate is a basis of design value. Dimension error may occur about plus or minus 0.5 deg.

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.