

Two Axis Motorized Extended Guide Goniometer

Stage Size 40 × 40 mm / 60 × 60 mm

OSMS-B

RoHS

High precision motorized goniometers with integrated bearing ways for superior stiffness, accuracy and durability. Their smooth motion makes them ideal for frequent angle adjustment.



- Extended Contact bearing ways are machined directly into the main body reduce the number of parts and assembly time, making these very durable and cost effective.
- Attachment pins (accessories) are ideal for positioning when assembling into $\alpha\beta$ axis or mounting on various instruments or devices.

Guide

- ▶ Contact our Sales Division if you desire to assemble into an $\alpha\beta$ axis stage.
- ▶ Manual type $\alpha\beta$ axis (GOHT-40,60) is also available.

Reference E176 – E179

WEB References Catalog Code W7104, W7105



GOHT-**B**B

| Specifications | | | | | |
|--|------------------------------------|----------------------------|--|--|-----------------------------|
| Part Number | | OSMS-40B60 | OSMS-60B60 | OSMS-60B85 | |
| (Opposite Model) | | OSMS-40B60R | OSMS-60B60R | OSMS-60B85R | |
| Mechanical Specifications | Travel [°] | Upper β axis | ±5 | ±14 | ±9 |
| | | Lower α axis | ±4 | ±9 | ±7 |
| | Stage Size [mm] | | 40×40 | 60×60 | 60×60 |
| | Travel Mechanism (reduction ratio) | Upper β axis | Worm gear (1: 332) | Worm gear (1: 246) | Worm gear (1: 314) |
| | | Lower α axis | Worm gear (1: 406) | Worm gear (1: 314) | Worm gear (1: 380) |
| | Positioning Slide | | Extended Contact Ball Guide | Extended Contact Ball Guide | Extended Contact Ball Guide |
| | Stage Material | | SUS440C quench hardened | SUS440C quench hardened | SUS440C quench hardened |
| | Finish | | Super black chrome | Super black chrome | Super black chrome |
| | Weight [kg] | | 0.8 | 1.6 | 1.5 |
| | Size Tolerance | Stage Height [mm] | | 30 | 45 |
| Rotation Center Height [mm] | | 60±0.2 | 60±0.2 | 85±0.2 | |
| Rotation Center Deflection Accuracy [mm] | | Within ϕ 0.01 | Within ϕ 0.01 | Within ϕ 0.01 | |
| Accuracy Specifications | Resolution [°/pulse] | (Full) Upper β axis | about 0.00217 | about 0.00293 | about 0.00229 |
| | | (Full) Lower α axis | about 0.00177 | about 0.00229 | about 0.00198 |
| | | (Half) Upper β axis | about 0.00108 | about 0.00146 | about 0.00115 |
| | | (Half) Lower α axis | about 0.00089 | about 0.00115 | about 0.00095 |
| | MAX Speed [°/sec] | | 8 | 8 | 6 |
| | Load Capacity [N] | | 14.7 (1.5kgf) | 19.6 (2.0kgf) | 19.6 (2.0kgf) |
| Sensor | Sensor Part Number | | Micro photo sensor: GP1S092HCPIF (Sharp Corporation) | Micro photo sensor: GP1S097HCZ (Sharp Corporation) | |
| | Limit Sensor | | Equipped (NORMAL CLOSE) | Equipped (NORMAL CLOSE) | Equipped (NORMAL CLOSE) |
| | Origin Sensor | | None | Equipped (NORMAL OPEN) | Equipped (NORMAL OPEN) |
| | Proximity Origin Sensor | | None | None | None |

Motor / Sensor Specifications

| | | | | |
|--------|---------------------|---|--|--|
| Motor | Type | 5-phase stepping motor 0.75A/phase (Oriental Motor Co., Ltd.) | | |
| | Motor Part Number | PK523HPB-C12 (□28mm) | | |
| | Step Angle | 0.72° | | |
| Sensor | Power Voltage | DC5 – 24V±10% | | |
| | Current Consumption | 80mA or lower (40mA or lower a per axis 20mA or lower per a sensor) | 120mA or lower (60mA or lower a per axis 20mA or lower per a sensor) | |
| | Control Output | NPN open collector output DC30V or lower, 50mA or lower | | |
| | Output Logic | When shaded: Output transistor OFF (no conduction): Limit sensor When shaded: Output transistor ON (conduction): Origin sensor | | |

Compatible Cable

| | | |
|-------|--------------|--|
| Cable | Driver Cable | D15RP-CA (Controller), MINI-SG-CA (Driver) |
|-------|--------------|--|

Compatible Driver / Controller

| | | |
|----------------|-----------------------|--|
| Control System | Compatible Driver | SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL |
| | Compatible Controller | GSC-02, HSC-103, SHOT-702, SHOT-302GS, SHOT-304GS, HIT-M-HIT-S, PGC-04-U |

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Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

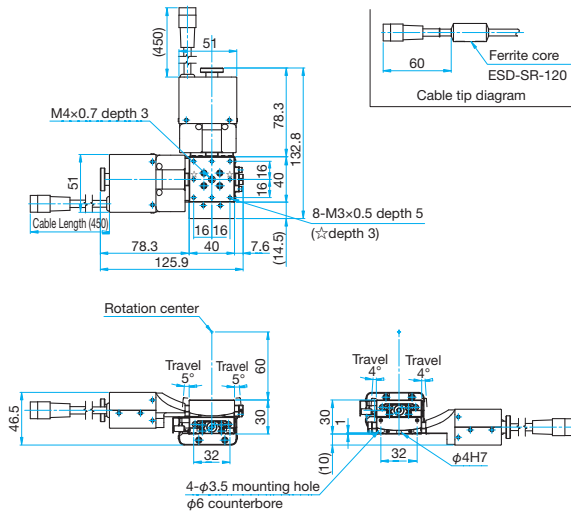
120 × 120 mm

Others

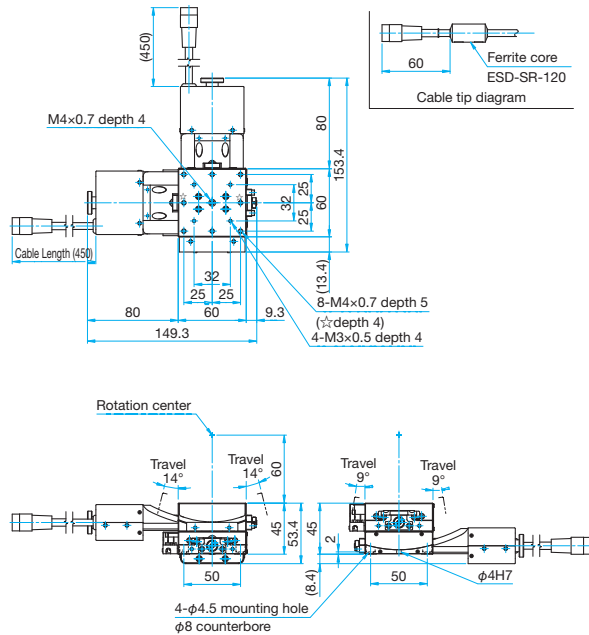


Outline Drawing

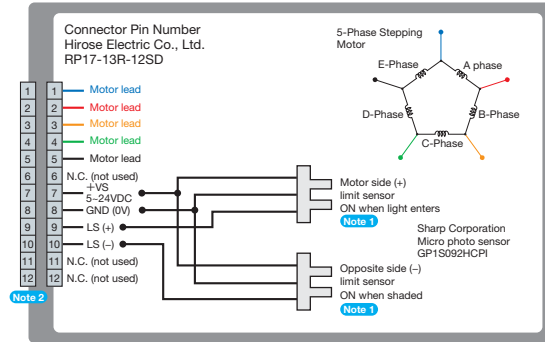
OSMS-40B60 Hexagon socket head cap screw M3x6...4 screws, Attachment pins



OSMS-60B60 Hexagon socket head cap screw M4x8...4 screws, Attachment pins

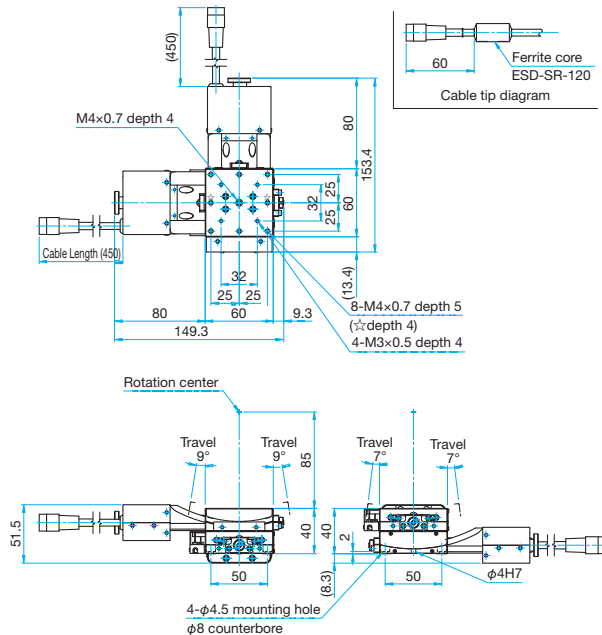


Connection Diagram

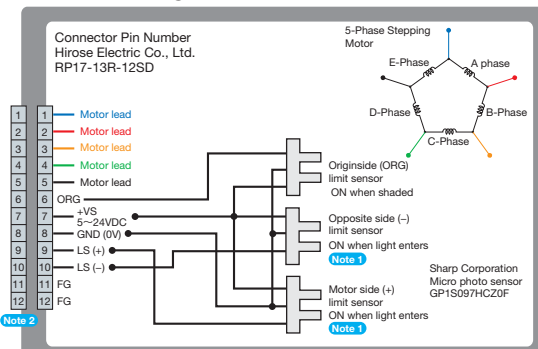


Note 1 The motor side limit sensor is the + direction limit sensor. Motorized stages are not fitted with origin and proximity origin sensors. Limit sensors are used as origin detection sensors.
Note 2 Compatible cable connector: Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122

OSMS-60B85 Hexagon socket head cap screw M4x8...4 screws, Attachment pins

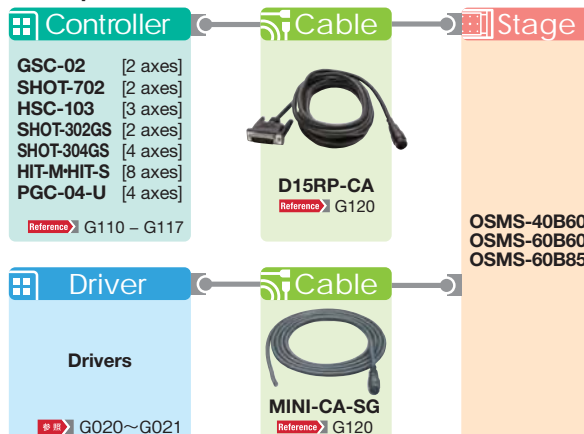


Connection Diagram



Note 1 The motor side limit sensor is the + direction limit sensor. Motorized stages are not fitted with proximity origin sensors.
Note 2 Compatible cable connector: Hirose Electric Co., Ltd. RP17-13PA-12PC/RP17-PC-122

Compatible Controllers / Drivers and Cables



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