

## Motorized Goniometers - 5 Phase Stepping Motor

MG-A

Stage size □60mm

RoHS

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### Stepping motor driven motorized goniometer stages fitted with crossed roller guide.



- High stiffness goniometer stages fitted with excellent abrasion-resistant crossed roller guide.
- Rotation center height from the table face is selectable according to the usage from 75mm, 100mm or 130mm.

#### Guide

- ▶ After purchasing two  $\alpha$  axis stages, to assemble them into an  $\alpha\beta$  axis stage, assembly adjustment cost and performance inspection cost will be charged separately (10,000JP Yen).

| Specifications            |  | MG-60A75  | MG-60A100               | MG-60A130               |              |
|---------------------------|--|---|-------------------------|-------------------------|--------------|
| Part Number               |  |   |                         |                         |              |
| Mechanical Specifications | Angle Range [°]                          | ±7  | ±5                      | ±4                      |              |
|                           | Table Size [mm]                          | 60×60   | 60×60                   | 60×60                   |              |
|                           | Positioning Slide                        | Crossed roller                                      | Crossed roller          | Crossed roller          |              |
|                           | Travel Mechanism                         | Worm and worm wheel                                 | Worm and worm wheel     | Worm and worm wheel     |              |
|                           | Stage Material                           | Aluminum  | Aluminum                | Aluminum                |              |
|                           | Finish                                   | Black anodized                                      | Black anodized          | Black anodized          |              |
|                           | Weight [kg]                              | 0.65  | 0.55                    | 0.65                    |              |
| Size Tolerance            | Stage Height [mm]                        | 35  | 30                      | 35                      |              |
|                           | Rotation Center Height [mm]              | 75  | 100                     | 130                     |              |
|                           | Rotation Center Deflection Accuracy [mm] | φ0.05   | φ0.05                   | φ0.05                   |              |
| Accuracy Specifications   | Resolution                               | (Full) [°/pulse]                                    | about 0.002             | about 0.001             | about 0.001  |
|                           |  | (Half) [°/pulse]                                    | about 0.001             | about 0.0005            | about 0.0005 |
|                           | MAX Speed [°/sec]                        | 6   | 6                       | 6                       |              |
|                           | Positional Repeatability [°]             | ±0.004  | ±0.004                  | ±0.004                  |              |
|                           | Load Capacity [N]                        | 24.5 (2.5kgf)                                       | 24.5 (2.5kgf)           | 24.5 (2.5kgf)           |              |
|                           | Moment Stiffness [°/N·cm]                | 1   | 1                       | 1                       |              |
| Lost Motion [°]           | 0.02                                     | 0.02  | 0.02                    |                         |              |
| Sensor                    | Sensor Part Number                       | Micro photo sensor: GP1S092HCPI (Sharp Corporation) |                         |                         |              |
|                           | Limit Sensor                             | Equipped (NORMAL CLOSE)                             | Equipped (NORMAL CLOSE) | Equipped (NORMAL CLOSE) |              |
|                           | Origin Sensor                            | None  | None                    | None                    |              |
|                           | 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   | C9863-90215P  |
|                               | Step Angle          | 0.72°   |
| Sensor                        | Power Voltage       | DC5 - 24V   |
|                               | Current Consumption | 40mA or lower (20mA per sensor)                               |
|                               | Control Output      | NPN open collector output 50mA                                |
|                               | Output Logic        | When shaded: Output transistor OFF (no conduction)            |

| Compatible Driver / Controller |                       |   |
|--------------------------------|-----------------------|---|
| Control System                 | Compatible Driver     | SD-5M, SD-55M, SD-514MSC, SD-5151, SD-525M  |
|                                | Compatible Controller | ASC-PS,ASC-01, ASC-102,ASC-02, ASC-702, ASCG-101, ASC-302GS, ASC-304GS, ESC-M/ESC-S |

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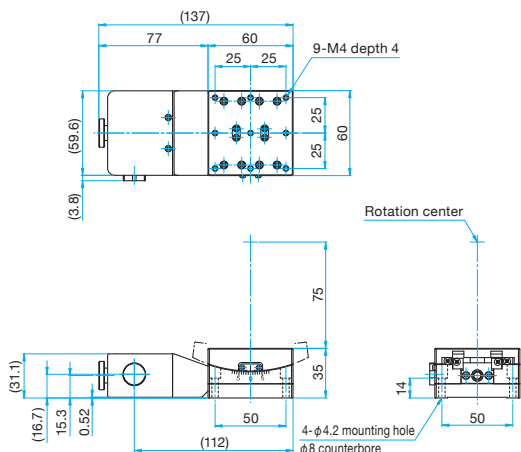
Stage size □60mm

**RoHS**

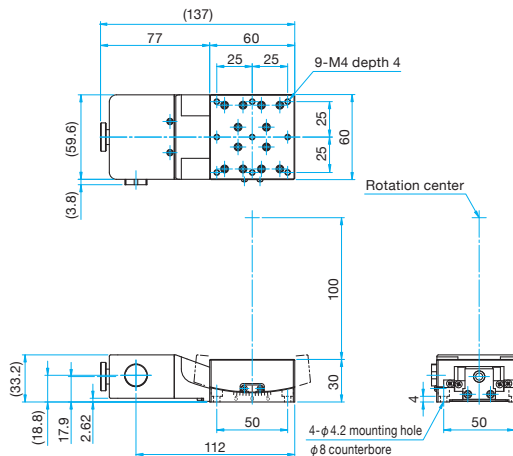


## Outline Drawing

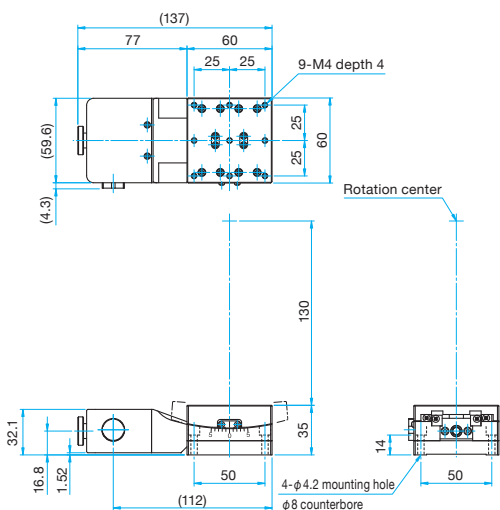
**MG-60A75** Hexagonal socket head cap screw M4×18...4 screws



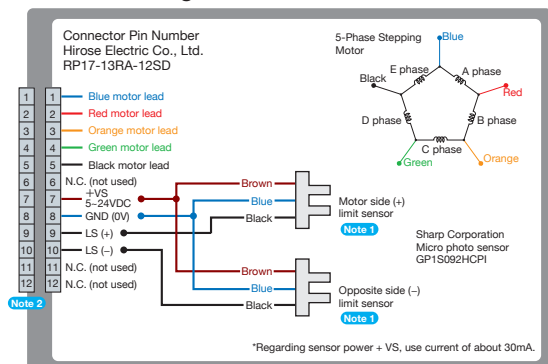
**MG-60A100** Hexagonal socket head cap screw M4×8...4 screws



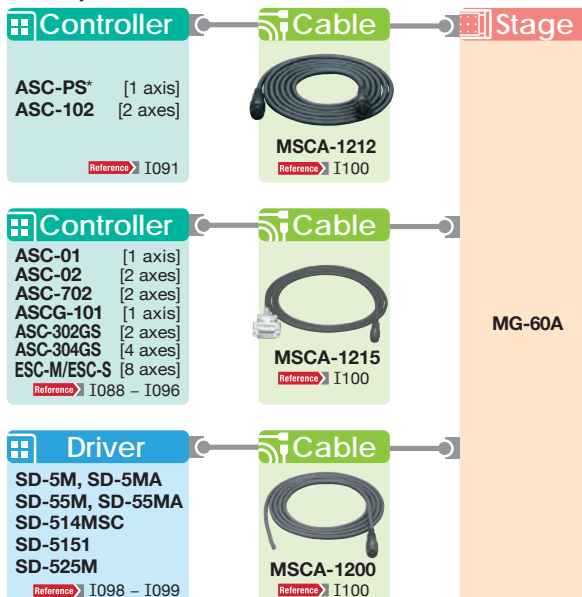
**MG-60A130** Hexagonal socket head cap screw M4×18...4 screws



## Connection Diagram



## Compatible Controllers / Drivers and Cables



\* PASC-PS will be discontinued in September 2012, and will be replaced by ASC-01.

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