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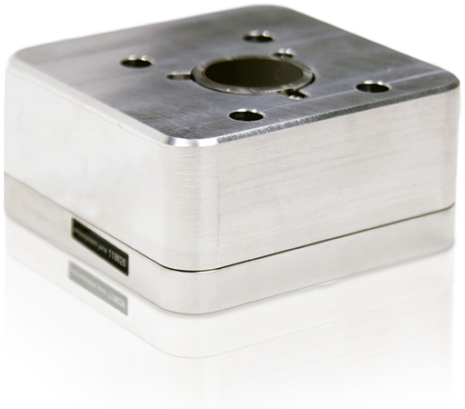
# PSH 40

## 2-Axis Mirror Tilting Platform



- ***For challenging environments***
- ***Tilting range up to ± 18 / ±15 mrad (ol/cl)***
- ***Sub-µrad resolution***
- ***400 Hz resonant frequency***

The PSH 40 SG was developed as a fine steering mirror and has completed a series of shock, sinusoidal and vibration tests. It is ready for use in applications in challenging environmental conditions, such as rocket launch conditions and external shocks. Typical applications include aerospace vehicles, as well as space to ground communication.

Mirror positioning is possible within a tilting range of up to ±18 mrad (open-loop), and ±15 mrad (closed-loop). The positioning is highly repeatable with 13 µrad accuracy. Due to the three piezo-stack design, tip-tilt motion is possible in two axes, while the pivot point can be moved to allow for highly adjustable beam guidance.

**Variants:**

- Standard
- With strain gauge (SG)

**Recommended Controller:**
NV200/D Net

### *Applications*

- Fine Steering Mirrors
- Point Ahead Mechanism
- Beam Guidance
- Optical Intersatellite Links

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## Technical Data

| | Unit | PSH 40 | PSH 40 SG |
|---|---|---|---|
| Part # | - | K-340-00 | K-340-01 (D/E) |
| Sensor | - | - | strain gauge |
| Axes | - | X Y | X Y |
| Tilting range open-loop | mrad | ±18 | |
| Tilting range closed-loop | mrad | - | ±15 |
| Resolution open loop* | µrad | 0.1 | |
| Repeatability | µrad/% | - | 3.5/0.018% |
| Max. non-linearity | µrad/% | - | 103.8/0.525 |
| Electrical capacitance | Nm/mrad | 1.7 (3x) | |
| Volatage | V | -20 … +130 | |
| Resonant frequency with Ø18 x 4mm mirror | Hz | 400 | |
| Material | - | Stainless Steel/ Aluminum | Stainless Steel/ Aluminum |
| Temperature range | °C | -40 to +70 °C (-140°F to 158F) | |
| Dimensions (LxWxH) | mm | 65 x 65 x 32 | |
| Mass | g | 230 (8.11 oz) / 140 OEM version | |

* the resolution is only limited by the noise of the power amplifier and metrology.

** typical value for small electrical field strength

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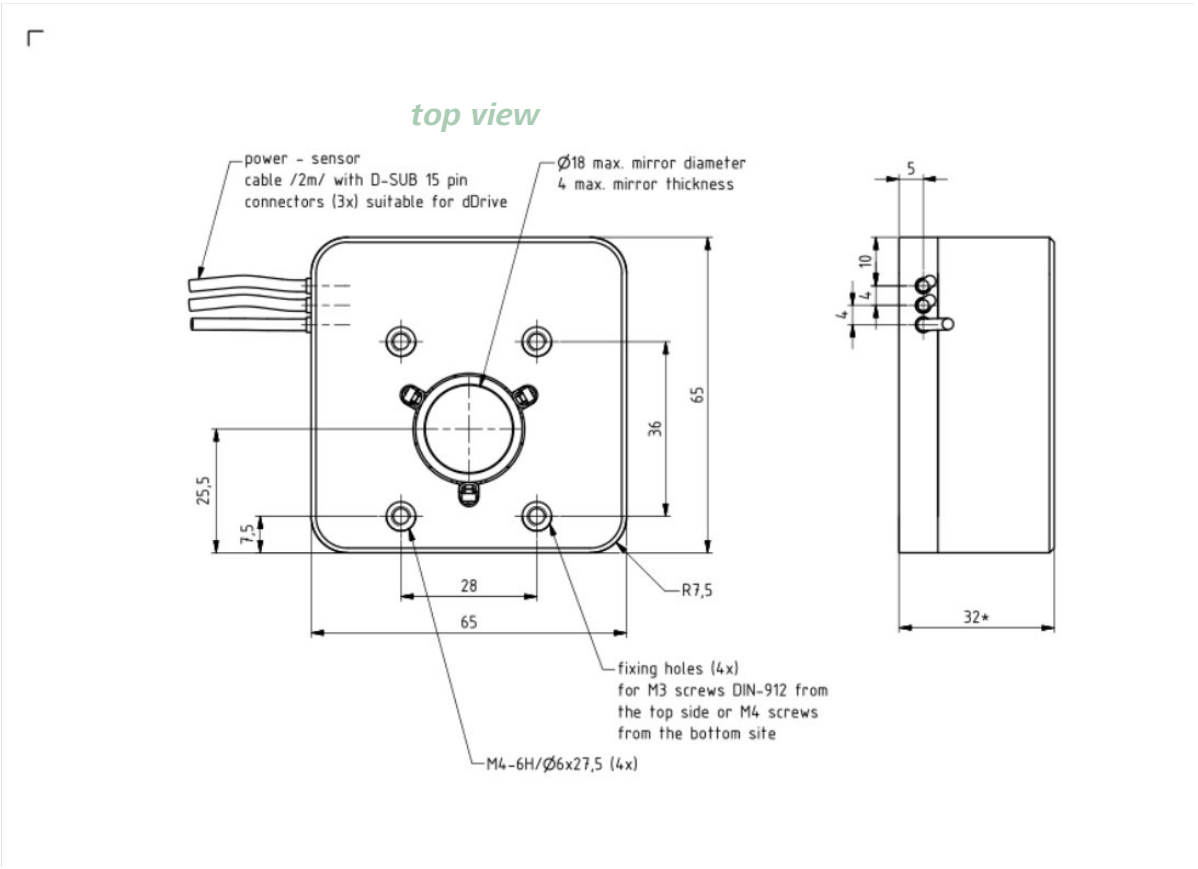
# PSH 40 SG

## Part Drawing




*Dimensions given in mm.*



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