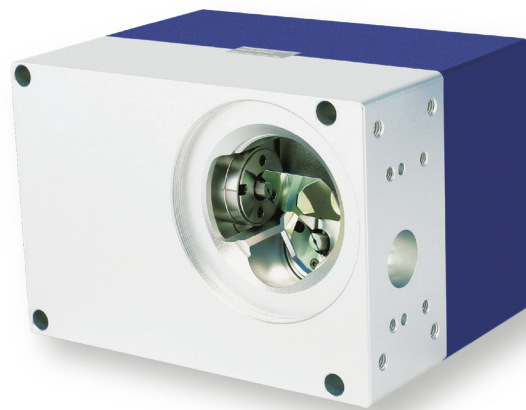


# PSH14 Scan Head

Focusing on high-end industrial laser applications



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## Typical Applications:

The PSH14 scan head is a versatile product suitable for a wide range of laser processing applications. It excels in scenarios that require higher performance index, such as precise marking, cladding, laser engraving, materials processing in the semiconductor industry, micro-structuring, processing-on-the-fly, additive manufacturing(3D printing), laser cutting, etc.

The PSH14 features a compact and lightweight design, offering excellent price/performance ratio. Moreover, it is characterized with low temperature drift value, high precision and high dynamic performance.

Specifications are subject to change without notice.  
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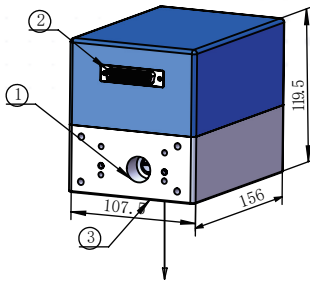
[www.precisionscan.ca](http://www.precisionscan.ca)

# PSH14 Scan Head

Focusing on high-end industrial laser applications

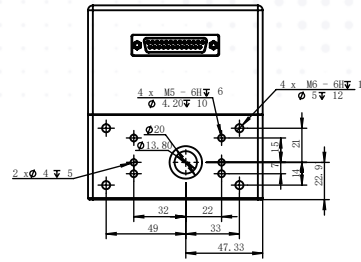


## Mechanical Drawings (Dimensions in mm)

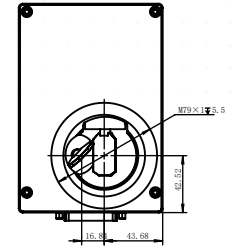


PSH14 Scan Head

- Legend :**
- 1.Beam in
  - 2.Electrical interface (XY2-100, power in)
  - 3.Beam out



Beam In & Mounting Bracket



Beam Exit Side

## Specifications

Specifications	PSH14
Maximum allowed average laser power <sup>(1)</sup>	500 W
Aperture	14 mm
Typical scan angle <sup>(2)</sup>	± 10°
Tracking error	≤ 0.16 ms
Step response time (1% of full scale )	≤ 0.36 ms
<b>Speed</b>	
Positioning / Jump <sup>(3)</sup>	< 15 m/s
Line scan <sup>(3)</sup>	< 15 m/s
Vector scan <sup>(4)</sup>	< 3 m/s
Good writing quality <sup>(3)(5)</sup>	750 cps
<b>Precision</b>	
Linearity	99.9 %
Repeatability	2 µrad
<b>Temperature drift</b>	
Offset	20 µrad/°C
Gain	20 µrad/°C
<b>Long-term drift (at constant ambient temperature around 25 °C )</b>	
Over 8 hours long-term offset drift (after 30 mins warm-up)	40 µrad
Over 8 hours long-term gain drift (after 30 mins warm-up)	80 µrad
Operating Temperature Range	25 °C ± 10 °C
Signal interface	Analog: ± 10 V or ± 5 V Digital: XY <sub>2</sub> - 100, PRS422 protocol
Input power requirement (DC)	± 15 V @ 5 A Max RMS

**Note:**

- (1) For laser wavelength 1030-1090 nm.
- (2) All angles are in mechanical degrees.
- (3) With F-Theta objective f = 163 mm. Speed value varies correspondingly with different focal lengths.
- (4) Repeatability and temperature drift are measured within this speed.
- (5) Single-stroke font with 1 mm height.