

# ProSeries PS1 Scan Heads

## For 7, 10 & 14mm Clear Apertures

- TECHNOLOGY
- PERFORMANCE
- QUALITY
- VALUE
- RANGE OF PRODUCTS
- APPLICATIONS EXPERTISE

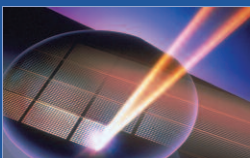
### Key Specifications

- **ProSeries Analog Technology**
  - 62xx Low Drift Galvanometer Technology
  - MicroMax Analog Servo Driver Technology
  - Factory Tuned
- **Family of Sizes**
  - Clear Aperture Sizes of 7mm, 10mm, 14mm
  - Broad Range of Supported Lenses
- **Plug & Play**
  - Analog or Digital XY2-100 Communication Protocol
  - Standard Power and Communication Pinouts
  - Standard Mechanical 4-Bolt Interface
  - Standard and Custom Lens Grid Correction Files



Cambridge Scanning Solutions brings you a new family of high performance, low noise scan heads for the fastest scan rates and for low drift. The **ProSeries PS1 Scan Heads** offer high performance galvanometers and the latest analog servo technology with lower noise and better thermal stability than other systems and the highest marking speed performance in a compact rugged scan head design. These core components are offered with industry standard mechanical bolt patterns, industry standard power and communication pinouts as well as a range of popular apertures, mirror

coatings and lenses. These scan heads are ideal for easy OEM design integration or as drop in replacements to improve total system performance and are suited for applications such as high accuracy marking, scribing, photovoltaic, coding, rapid manufacturing, trimming, engraving, perforating and more. **ProSeries PS1 Scan Heads** give the highest marking rates, good accuracy, low dither and high stability beam steering for superior performance and quality for your most demanding precision driven material processing applications.

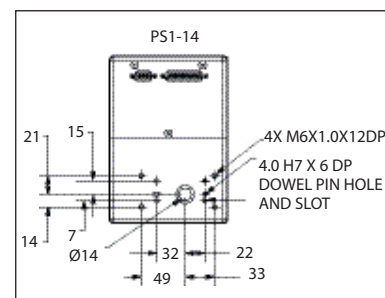
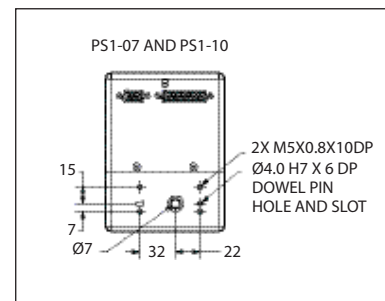
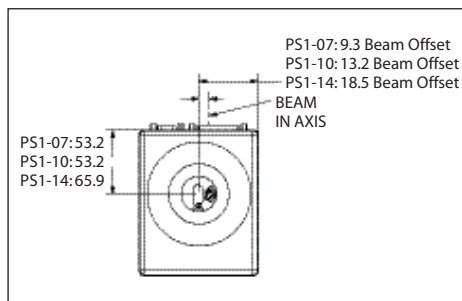
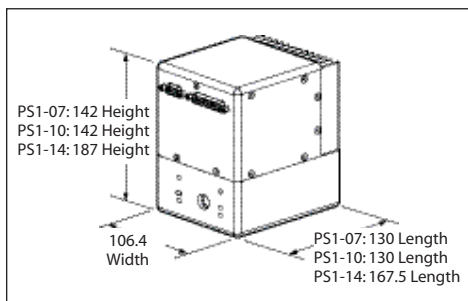


# Technical Specifications and Dimensions: ProSeries Scan Heads



Product Specific Specifications	PS1-07	PSI-10	PS1-14
Aperture Size	7 mm	10 mm	14 mm
Beam Displacement	9.3 mm	13.2 mm	18.5 mm
Step Response (1% Full Scale) <sup>1</sup>	160 μs	220 μs	360 μs
Typical Mark Speed <sup>2</sup>	4.5 m/s	3.0 m/s	2.5 m/s
Typical Jump Speed <sup>2</sup>	18.0 m/s	12.0 m/s	9.5 m/s
Typical Writing Speed <sup>2</sup>	1300 cps	900 cps	700 cps
Resolution	12 μrad	12 μrad	12 μrad
Long Term Offset Drift <sup>3</sup> (24 hours)	300 μrad	100 μrad	100 μrad
Long Term Scale Drift <sup>3</sup> (24 hours)	400 ppm	200 ppm	200 ppm
Temperature Offset Drift <sup>3</sup>	30 μrad/°C	30 μrad/°C	30 μrad/°C
Temperature Scale Drift <sup>3</sup>	50 ppm/°C	50 ppm/°C	50 ppm/°C
Nonlinearity (Max. % over ± 20° optical)	0.1%		
Shared Specifications			
Repeatability <sup>3</sup>	20 μrad	16 μrad	12 μrad
Typical Scan Angle	± 20°	± 22°	± 22°
Gain Error	< 5 mrad	< 5 mrad	< 5 mrad
Zero Offset	< 5 mrad	< 5 mrad	< 5 mrad
Skew	< 1.5 mrad	< 1.5 mrad	< 1.5 mrad
Power Requirements	±15 V DC to ±28 V	±15 V DC to ±28 V	±15 V DC to ±28 V
Digital Communication	XY2-100	XY2-100	XY2-100
Analog Communication	± 10 V +/- 10 mA	± 10 V +/- 10 mA	± 10 V +/- 10 mA
Weight	2.7kg	2.7kg	2.7kg
Operating Temp	25° ± 10° C	25° ± 10° C	25° ± 10° C
Mirror Coatings	YAG, CO2, Silver	YAG, DYH, TYH, Silver	YAG, DYH, TYH, Silver
F-theta Lenses	YAG - 100, 160, 163, 254, 330, 420 CO2 - 100, 200, 300	YAG - 100, 163, 170, 255, 347, 420 DYAG - 100, 170, 255	YAG - 100, 163, 170, 255, 347, 420 DYAG - 100, 170, 255

<sup>1</sup> Settling to within 1% of position   <sup>2</sup> Single stroke 1 mm characters with f-160 lens   <sup>3</sup> 3 Sigma from mean position   <sup>4</sup> All angles are in optical degrees



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