

ConoPoint-10HD

Laser displacement sensor

The ConoPoint-10HD is one of Optimet's family of point sensors for high precision 2D profiles and 3D measurements, working at up to 10,000 Hz.

The ConoPoint-10HD includes an auto-exposure feature enabling real time adjustment for changing surface reflectivity (black, white, shiny and absorbent).

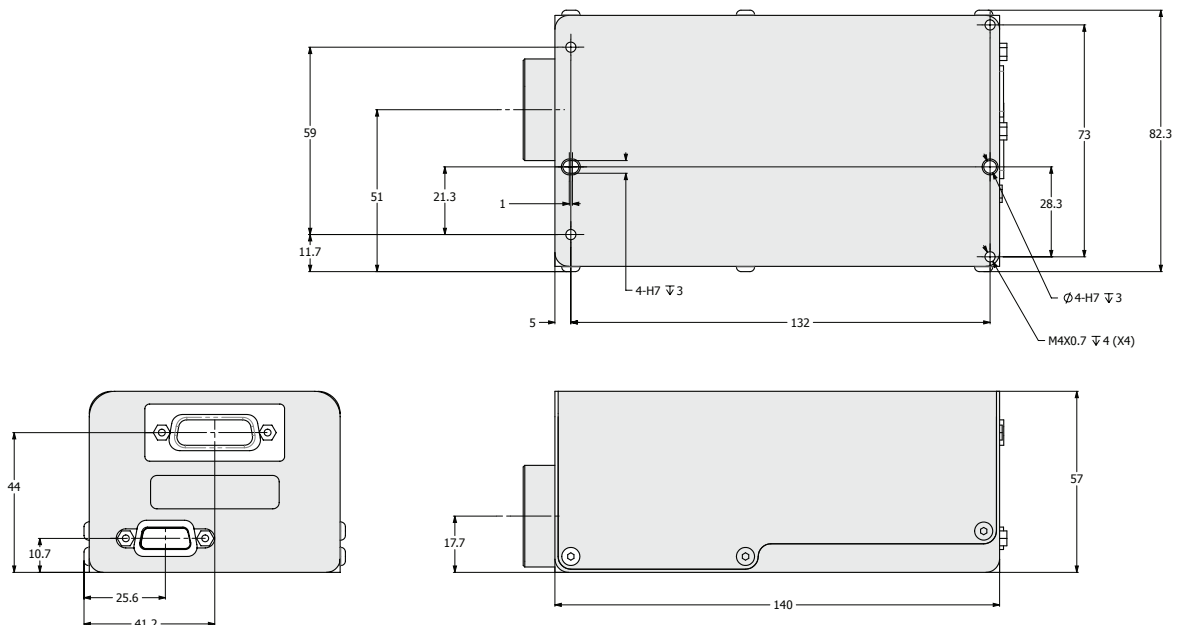


The ConoPoint-10HD is more suitable than the ConoPoint-10 in the following cases:

- When higher precision is needed. Note that while standoff is the same as ConoPoint-10, the higher precision comes at the expense of measurement range
- When measuring shiny metal surfaces
- When higher lateral resolution is needed

Features:

- Sub-micron precision measurement
- Measurement of complex geometries with angular coverage up to $\pm 75^\circ$
- Collinear technology for measuring blind holes
- Automatically compensates for material variations using auto-exposure
- Interchangeable objective lenses from 16 to 50 mm
- Measures at 10,000 points/second, no averaging needed



Technical specification

High definition lenses

Objective lens type		16H	25H	25GH	40H	50H
P/N		3Z84016	3Z81025	3Z81030	3Z83040	3Z81050T
Measurement range ⁽¹⁾	mm	0.2	0.6	0.6	1.4	2
Standoff ⁽²⁾	mm	9.7	14.5	18.25	44.5	42
Accuracy ⁽³⁾	μm	0.5	1	1	2	2.5
Linearity ⁽⁴⁾	±%	0.25	0.17	0.17	0.14	0.13
Reproducibility (dynamic) ⁽⁵⁾	μm	0.1	0.2	0.2	0.4	0.5
X laser spot size ⁽⁷⁾	μm	7	12	12	10	19
Angular coverage ⁽⁸⁾	°	150	150	150	150	150

Sensor general specifications

Measurement frequency	Hz	Up to 10,000
Dimensions (without lens)	mm	140x79x57
Weight	gr	700

Interface

Communication	Ethernet 10/100 UDP
Software development kit	C, C++, C#, Labview

Analog signal (optional)

Boundary ranging	V	±4.5 ± 0.004
Analog linearity ⁽⁹⁾	%	±0.1

Light source

Type	Red laser
Laser safety class	Class 2, IEC 60825-1:2007 complies with 21CFR 1040.10 and 1040.11 Laser Notice No.50

Electrical specification

Power supply voltage	12 VDC±10% 65-265 VAC 50/60Hz
----------------------	-------------------------------

Synchronization

Trigger input	TTL/LVTTL	5/3.3V
Strobe output	TTL	5V

Environmental resistance

Operational temperature	°C	18 to 45
Temperature dependency ⁽¹⁰⁾	F.S./°C	≤0.03%
Permissible ambient light ⁽¹¹⁾	lx	Up to 15,000

Measurement range

