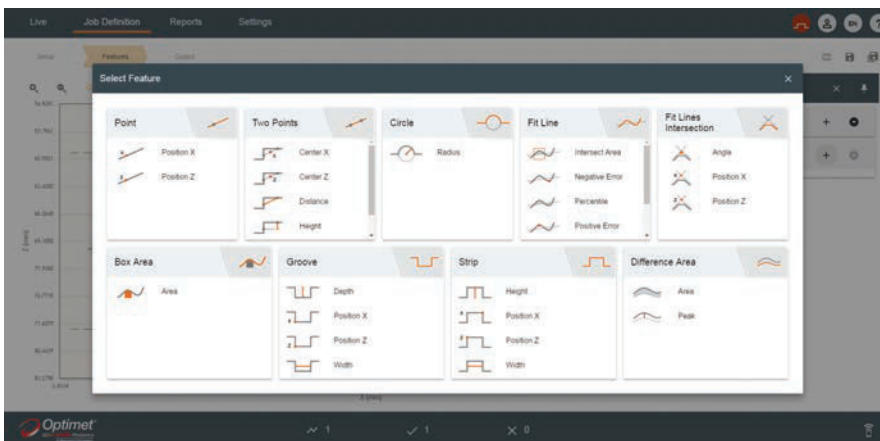


ConoPoint-10 **NEW** SMART Sensor

Laser displacement sensor with SMART technology inside

The ConoPoint-10 Smart sensor is the first sensor in a new family of Optimet's Non-Contact Laser Displacement Sensors. The new Smart technology contains a rich set of algorithms which makes integration easy and provides pass/fail results rather than a simple displacement value.

The ConoPoint-10 Smart sensor measures 10,000 points/sec and retains all of Optimet advantages. This new sensor allows fast 2D profile measurement, analysis and feature evaluation. The built in Smart technology also provide a standalone sensor using Web based interface without the need of installing software on customer host.



Features:

- Measurement of Complex Geometries & Steep angles with up to +/-85° angular coverage
- Profile analysis using built-in feature library such as: distance, height, angle, radius, and many more
- Go/NoGO output results
- Web based, no software installation required
- External triggers, digital input & digital output
- Built-in filters for smooth point array
- Configurable encoder input and pulse to position conversion
- Collinear technology for measuring inside holes
- Automatically compensates for material variations using auto-exposure
- Interchangeable objective lenses from 16 to 250 mm
- Measures up to 10000 points/second

Technical specification

Standard lenses

Objective lens type		16	25	25G	40	50	75	100	150	200	250
P/N		3Z83016	3Z83025	3Z81030	3Z83040	3Z81050	3Z81075	3Z81100	3Z82006	3Z82007	3Z82008
Measurement range ⁽¹⁾	mm	0.6	1.8	1.8	4	8	18	35	70	125	180
Standoff ⁽²⁾	mm	9.5	14	18	43.5	44	70	95	145	200	250
Accuracy ⁽³⁾	µm	2	3	3	4	6	10	15	35	70	100
Linearity ⁽⁴⁾	±%	0.33	0.17	0.17	0.1	0.08	0.06	0.05	0.05	0.06	0.06
Reproducibility (dynamic) ⁽⁵⁾	µm	0.15	0.4	0.4	0.6	1	2	4	15	25	35
X laser spot size ⁽⁷⁾	µm	20	27	27	34	37	47	63	85	105	126
Angular coverage ⁽⁸⁾	°	150	150	150	150	170	170	170	170	170	170

Smart Sensor Functionality

User Interface		Web based, doesn't require software installation
Supported platform		Windows\iOS\Android with Google Chrome Web Browser (version 55.x.x.x or higher)
Profile Triggers		External Trigger\Position\Direction\Time
Encoders		Configurable encoder input and pulse to position conversion
Analysis		Profile Analysis with Go\No Go result
Maximum profile size	Points	90,000
Supported Anchors		14
Supported Features		27
Maximum features in profile		8
Digital Output	TTL\VTTL	Multiple digital outputs over single wire with configurable pulse length
Maximum Job Storage		1000 jobs
Reports		Evaluation results, filtering by date and by job
Job management		Import\Export Jobs
Units		Metric\Imperial units, Degrees\Radians

Sensor General Specifications

Measurement frequency	Hz	Up to 10,000
Dimensions (without lens)	mm	140 x 79 x 57
Weight	gr	700

Interface

Communication		Ethernet 10/100 UDP with SDK, HTTP with Google Chrome
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 21 CFR 1040.10 and 1040.11 Laser Notice No.50

Electrical specification

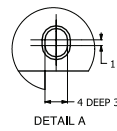
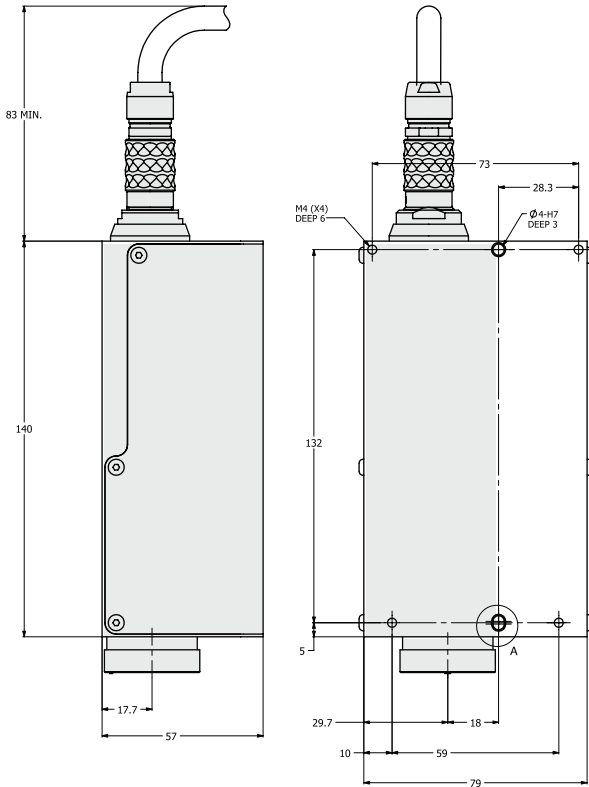
Power supply voltage		12 VDC±10% 110-220 VAC 50/60Hz
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Synchronization

Trigger input	TTL\VTTL	5\3.3V
Encoders		Up to 2 differential quadrature encoders

Environmental resistance

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



Smart sensor GUI:







Live screen: up to 8 features on one profile.




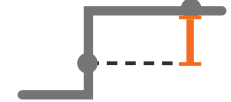

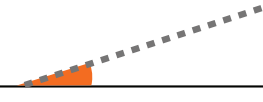





Anchors and Features

Anchors are calculated reference point of a feature used in order to evaluate measurement result.

Anchors examples

	Top
	Bottom
	Average
	Right Corner
	Rising edge
	Circle center

Features examples

	Distance	Determines the Euclidean distance between two anchors
	Height	Difference along the Z axis between two anchors
	Width	Difference along the X axis between two anchors
	Angle X	Determines the angle between a fit line and the X axis
	Intersect Angle	Finds the angle subtended by two fitted lines
	Area	Measures the difference in cross-sectional area between live profile and the template.
	Radius	Finds the best-fitted circle and measures the circle radius
	Groove Width	Measures the width of a groove
	Groove Depth	Measures the depth of a groove as the maximum perpendicular distance from a line connecting the edge points of the groove