

### High Frequency and Accuracy, Advanced Signal Filtering and Built for Hostile Environments

- High speed PSD-based triangulation sensor family
- Extremely fast automatic light control for varying surfaces
- Resolutions to 0.15 microns
- Analog and digital outputs
- Rugged industrial packaging
- Internal processor for application software e.g. Seam Finding, Radial Runout, Wane Detection
- Ideal for general purpose applications

#### Options & Accessories

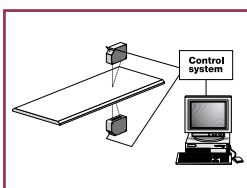
- Onboard processor for application software
- Heat protection unit
- +24 V DC power supply unit
- Air purge adapter

### Technical Specification

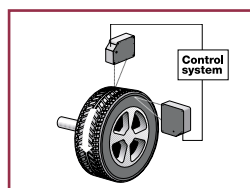
Model Number	Measurement Range (MR)	Stand Off (SO)	Offset Distance (OD)	Resolution (Worst Case)	Resolution (Typical)	Linearity	Triangulation Angle at SO	Spot Size at SO
SLS 5006/50	mm	6	50	0.0015	0.00015	0.003	36 deg.	0.07
	in.	0.24	1.97	0.00006	0.000006	0.00012		
SLS 5020/50	mm	20	50	0.005	0.0005	0.010	36 deg.	0.07
	in.	0.79	1.97	0.0002	0.00002	0.00039		
SLS 5010/100	mm	10	100	0.0025	0.00025	0.005	27 deg.	0.12
	in.	0.39	3.94	0.0001	0.00001	0.0002		
SLS 5020/100	mm	20	100	0.005	0.0005	0.010	27 deg.	0.12
	in.	0.79	3.94	0.0002	0.00002	0.0004		
SLS 5035/100	mm	35	100	0.0088	0.00088	0.018	27 deg.	0.12
	in.	1.38	3.94	0.00034	0.000034	0.0007		
SLS 5035/200	mm	35	200	0.0088	0.00088	0.018	18 deg.	0.25
	in.	1.38	7.87	0.00034	0.000034	0.0007		
SLS 5070/200	mm	70	200	0.0175	0.00175	0.035	18 deg.	0.25
	in.	2.76	7.87	0.0007	0.00007	0.0014		
SLS 5100/200	mm	100	200	0.025	0.0025	0.050	18 deg.	0.25
	in.	3.94	7.87	0.001	0.0001	0.002		
SLS 5070/300	mm	70	300	0.02	0.002	0.035	13 deg.	0.3
	in.	2.76	11.81	0.001	0.0001	0.0014		
SLS 5150/300	mm	150	300	0.04	0.004	0.075	13 deg.	0.3
	in.	5.91	11.81	0.001	0.0001	0.003		
SLS 5200/300	mm	200	300	0.05	0.005	0.100	13 deg.	0.3
	in.	7.87	11.81	0.002	0.0002	0.0039		
SLS 5325/400	mm	325	400	0.08	0.008	0.163	10 deg.	0.5
	in.	12.8	15.75	0.0032	0.00032	0.0064		
SLS 5400/450	mm	400	450	0.10	0.010	0.200	9 deg.	0.6
	in.	15.7	17.72	0.0039	0.00039	0.0075		
SLS 5750/600	mm	750	600	0.19	0.019	0.375	7 deg.	0.8
	in.	29.5	23.62	0.0074	0.00074	0.0148		
SLS 51000/1250	mm	1000	1250	0.25	0.025	0.500	3 deg.	1.0
	in.	39.4	49.21	0.0098	0.00098	0.0197		

Note 1: Worst Case Resolution - at full bandwidth.

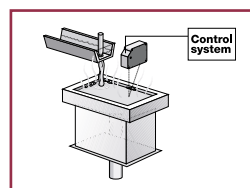
Note 2: Typical Resolution - at 128 sample averaging.



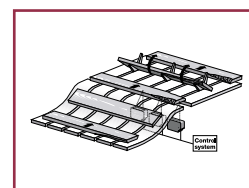
Thickness Profiling



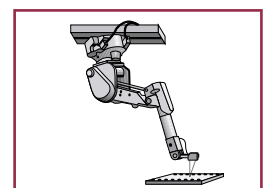
Tire Measurement



Level Control



Wane Detection



Seam Finding

# Selcom - SLS 5000

## LASER SOURCE

Laser Class	2, 3B, 3R (IEC)	Enclosure	IP-65 / NEMA 4	
	II, IIIa, IIIb (FDA)	Temperature - operating	°C	0-50
			°F	32-122
Wavelength	Visible Red, Near IR	Temp. stability	% of MR / °C	0.01
Lifetime expectancy	hr	100 000	Relative humidity	%
				<95 non-condensing

## ENVIRONMENTAL

## ELECTRICAL

Power supply voltage	V DC	+18 to +32	Dimensions	mm	135 x 105 x 51
Current draw	mA	<350		in.	5.31 x 4.13 x 2.01
In rush current	A	1 during 50ms	Weight	kg	1.1
Sampling rate	Hz	16 000		lbs.	2.4
Frequency response	Hz	2 000	Cable length	m	2
Detector type		PSD		ft.	6.6

## PHYSICAL

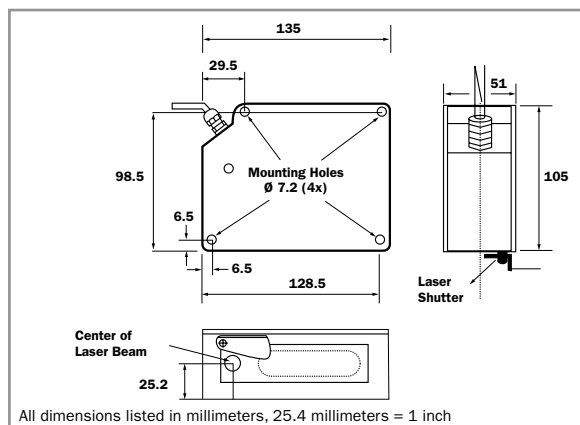
## OUTPUT INTERFACES

Interface analog / digital	0-20mA	4-20mA	RS-232	RS-422	Selcom (Digital)
Data update rate	16 kHz	16 kHz	≤100 Hz	≤1 kHz	16 kHz
Max. cable length	m	100	15	100	100
	ft.	328	49	328	328

## CONNECTION WIRING

DSUB 15-pin outputs / IP 65 connector

- 1 Receive Data, RS-232
- 3 Clock, Selcom or RS-422
- 4 Clock-inv, Selcom or RS-422
- 5 Data, Selcom or RS-422
- 6 Data-inv, Selcom or RS-422
- 8 Invalid out-
- 9 Transmit Data, RS-232
- 11 Ground
- 12 Invalid out+
- 13 Analog out (0-20mA, 4-20mA)
- 14 Laser ON (+18 to +32V)
- 15 Power (+18 to +32V)
- 2, 7, 10 NC



### 1- YEAR LIMITED WARRANTY

The company will replace or, at the company's option, repair any system or parts of a system which are found defective in material or workmanship within one year from the date of shipment. Our obligation with respect to such system or parts shall be limited to repair and replacement, F.O.B: our facilities, and in no event shall the company be liable for incidental, consequential or special damages, or for transportation, installation, adjustment or other expenses which may arise in connection with such system or parts. This warranty is expressly made in lieu of any and all other warranties, expressed or implied, including warranties of merchantability and fitness. No waiver, alteration, or modification of the foregoing warranty shall be valid unless made in writing and signed by an executive of the company.

LMI vision sensors are manufactured under one or more of the following U.S. patents: 4,305,661; 4,373,804; 4,375,921; 4,394,683; 4,576,482; 4,667,231; 4,875,776; 5,056,922; 5,114,230; 5,164,579; 5,362,970; 5,510,625; 5,670,787; 5,684,292; 5,691,545; 5,734,172; 5,811,827; 5,854,491; 5,877,491; 5,880,459; 5,940,302; 5,981,965. Other US and foreign patents pending.

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