

SPECIFICATIONS

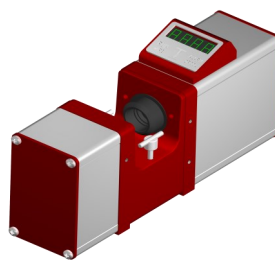
LDS Laser Diffraction Sensor

The LDS is designed to measure diameters of fine wires, with **high accuracy**.

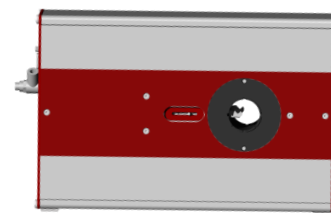
Its measurement principle is based on laser diffraction, position and vibration independent, **no averaging required**.

It can be used for:

- * **Laboratory** application (global solution for diameter, ovality measurements)
- * **On-line** measurement for continuous diameter monitoring (1 or 2 axes)



1 axis



2 axes

PRODUCT		LDS0200	LDS0650	LDS0800	LDS2000
Performances (traceable calibration to international standards - METAS)					
Measurement window	Disk diameter	3.0 mm			
OD measurement	Number of measurement axis	1 or 2			
	Diameter range	5 - 200 µm	15 - 650 µm	18 - 800 µm	50 - 2000 µm
	Uncertainty ^{*1}	+/-0.1 µm			
	Repeatability	+/-0.03% of OD			
	Minimum repeatability	0.01 µm	0.03 µm	0.04 µm	0.1 µm
	Measurement rate	400 measurements/sec			
Communications					
Serial RS232 (SUB-D 9 pins)	Baudrate	38400 to 115200 (user configurable)			
Digital I/O (option)	Digital output (open collectors)	2 (or 1 if length reset input is used)			
	Digital input (length counting and reset)	2			
Analogic output (option)	BNC	1 (for diameter control)			
	Type	Voltage (+/-4V) OR Current (0-20mA or 4-20mA)			
Display/keyboard (options)	Display	7 segments 4 digits LED display			
	Keyboard	3 buttons			
Environmental & general data					
Temperature	Ambient T°	10 - 40°C			
	Max internal T° ^{*2}	55°C			
	Storage T°	0 - 60°C			
Light source type	Laser type	Class 1M			
Power	Power supply	24Vdc 15W			
Dimensions	Dimensions (LxWxH)	240x100x60 mm (1 axis) or 333x203x62 mm (2 axes)			
	Weight	~1kg (1 axis) ; ~2.2kg (2 axes)			

Remarks:

¹ depends on standard wire uncertainty. Includes slow ambient temperature fluctuation within 10-40°C and includes wire moves within the measurement area

² for on-line application, provide air flow of 5 to 20l/min to clean the optics and cool down the electronic

Technical data are subject to change without notice