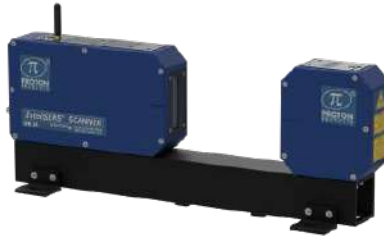




DG1030 i4



DG1060 i4



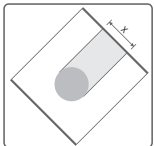
DG1130 i4



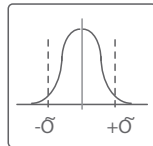
The InteliSENS® DG i4 Series of laser scanning diameter gauges provides fast, accurate and repeatable measurements for products manufactured within critical tolerance limits. Robust industrial design ensures reliable operation in the most challenging of production environments. The compact design and use of advanced Digital Signal Processing electronics make these gauges extremely easy to integrate. The gauge head features (RS232/RS422/RS485)selectable, Ethernet and CANbus, iBUS(Profibus/Profinet/ Ethernet/IP)selectable and Wifi are as standard. Analogue and contact closures are provided in the optional PSU-BOB-DG, and CS3G-C units. These NEXiS® series control systems enable cost effective and accurate process control for manufacturers of wire, cable, tubing, piping and many other continuously produced materials.

∴ Data Sheet ∴

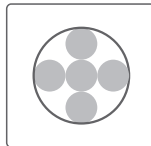
MEASUREMENT MODES AND FEATURES



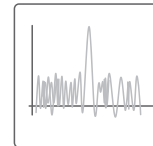
X - DIAMETER



SPC



HELIX



FFT



SSFD

TECHNOLOGY

- Scan Time (ST) is a function of the Scan Velocity (SV) and the Gate Size (GS).

$$ST = \frac{GS}{SV}$$

- Edge Position (EP1) is Scan Velocity (SV) x Time T1

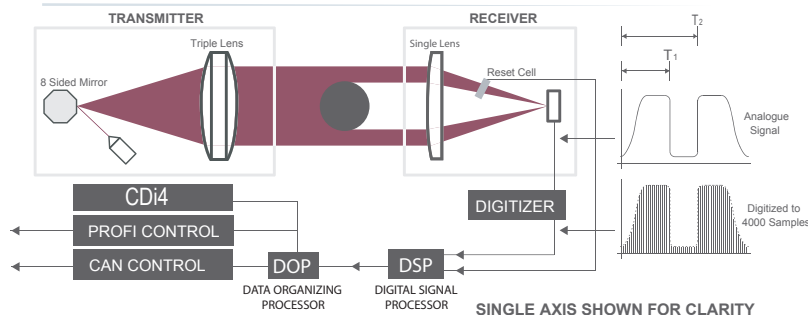
$$EP1 = SV \times T1$$

- Edge Position (EP2) is Scan Velocity (SV) x Time T2

$$EP2 = SV \times T2$$

- Product Dimension

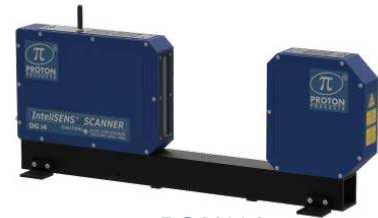
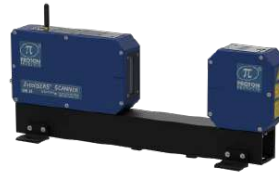
$$OD = EP2 - EP1 \text{ or } (T2-T1)$$



BENEFITS

- 600 Scan/sec
- Single Scan Analysis
- Non-Contact Measurement
- Multiple Measurement Modes
- Eliminates Operator Measurement Error
- 100% Quality Inspection
- Advance DSP Technology
- Unaffected by Speed and Vibration
- Excellent Resistance to Dust and Dirt
- Compact, Robust Design
- IP65, NEMA4 Protection
- Intelligent Sensor
- Ethernet in Gauge head as Standard

SPECIFICATIONS



Model	DG1030 i4	DG1060 i4	DG1130 i4
Gate Size	30mm (1.181inch)	60mm (2.362inch)	130mm (5.118inch)
Minimum Size	0.1mm (0.004inch)	0.2mm (0.007inch)	0.5mm (0.0197inch)
Maximum Size	27mm (1.063inch)	60mm (2.362inch)	120mm (4.724inch)
Accuracy : 0.008%	0.001mm (0.00004inch)	0.0015mm (0.00006inch)	0.003mm (0.000118inch)
Resolution	0.001mm (0.00004inch)	0.001mm (0.00004inch)	0.001mm (0.00004inch)
Gauge Dimensions	290 x 63 x 175mm	550 x 140 x 209mm	734 x 140 x 277mm
Gauge Weight	6kg (13.2lbs)	7kg (15.4lbs)	12kg (26.4lbs)
Measurement Rate	600 scans / second		
Units of Measurement	mm, inch		
Gauge Power	18 ~ 30Vdc 1 Amp		
Temperature Range	5°C ~ 45°C (41°F ~ 113°F)		
Relative Humidity	90% 38°C (105°F)		
Degree of Protection	IP65, NEM4A		
Gauge Head Serial I/O	Standard: RS232/RS422/RS485, CAN-bus, Ethernet IP, iBUS(Profibus/Profinet/Industrial EtherNet/IP),WiFi		
Digital Inputs	2x digital inputs - Reset, Print Activation (User Configurable)		
Relay Outputs	4x relay outputs - Gauge ok, Upper Tol, Lower Tol, SMFD (User Configurable)		
Line Speed Inputs	Analogue Input (0-10 Vdc user scalable), Speed pulse input (250Khz _{max} ,30V/50V _{max} pulse, user scalable)		
Optional			
Analogue Outputs	-/+10V _{dc} outputs of diameters or errors (User scalable)		
PI feedback Controller	Proportional Integral Feedback Controller		
Statistics	Maximum, minimum,mean,standard deviation, Cp, Cpk		
SPC	Statistics Process Control Automatic set point for PI feedback controller(requires PI feedback controller option)		
FFT	Fast Fourier Transform analysis for amplitude and frequency of periodic diameter variations		
SMFD	Single Measurement Flaw Detection (Lump and Neck detection)		

COMMUNICATIONS

Standard: in all DG gauge heads



ACCESSORIES



KAL 30, KAL 60
Calibration Kits



SiDi-CDi4
Gauge Head Indicator



PSU-BOB-DG
Power Supply Unit and
Break-out box



DB25 interface
DB25 pin cable between
Gauge to PSU-BOB-DG



HST-3



RJ45 to DB9
connector

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