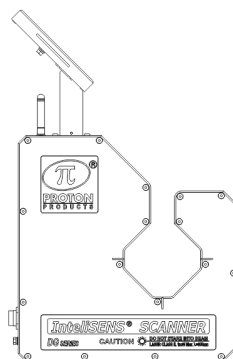


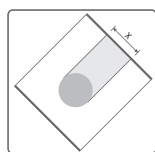


DG2006 / DG2030 MKII

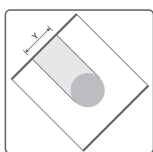


The InteliSENS® DG i4 Series of laser scanning diameter gauges provides fast, accurate and repeatable measurements for products manufactured within critical tolerance limits. Robust industrial design ensures reliable operation in the most challenging of production environments. The compact design and use of advanced Digital Signal Processing electronics make these gauges extremely easy to integrate. The gauge head features RS232, RS422, RS485, Ethernet and CANbus as standard; Profibus, Profinet, Ethernet/IP and Wifi are an available option. 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.

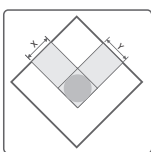
MEASUREMENT MODES AND FEATURES



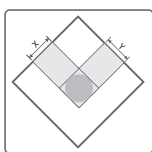
X - DIAMETER



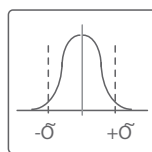
Y - DIAMETER



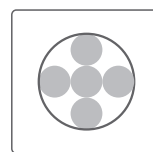
XY - AVERAGE



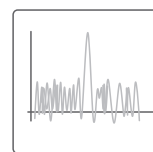
OVALITY



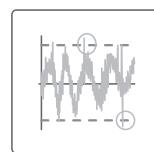
SPC



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

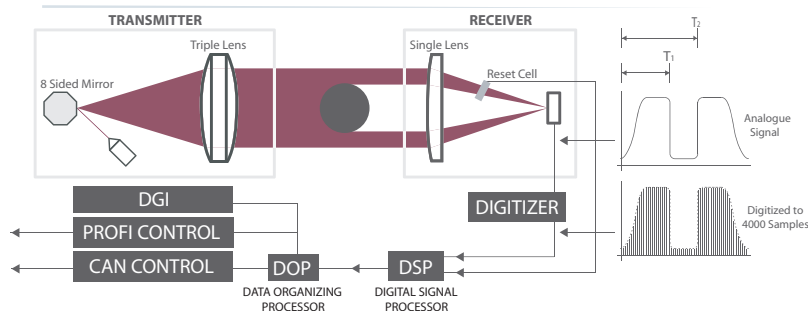
$$EP1 = SV \times T1$$

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

$$EP2 = SV \times T2$$

- Product Dimension

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

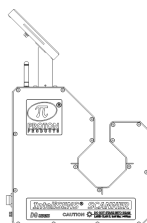


SINGLE AXIS SHOWN FOR CLARITY

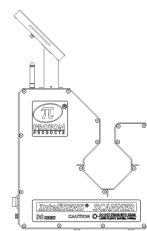
BENEFITS

- 1200 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



DG2006 i4



DG2030 i4

Model	DG2006 i4	DG2030 i4
Gate Size	30mm (1.181inch)	30mm (1.181inch)
Minimum Size	0.1mm (0.004inch)	0.1mm (0.004inch)
Maximum Size	6.5354 mm (1.063inch)	27mm (1.063inch)
Accuracy : 0.008%	1um (0.039 mil)	1um (0.039 mil)
Resolution	0.1um (0.004mil)	1um (0.039 mil)
Gauge Dimensions	290 x 58 x 300mm	290 x 58 x 300mm
Gauge Weight	7.5kg (16.5lbs)	7.5kg (16.5lbs)
Measurement Rate	1200 scans / second	
Units of Measurement	mm, inch	
Gauge Power	24 Vdc 1 Amp	
Temperature Range	5°C - 45°C (41°F - 113°F)	
Relative Humidity	90% 38°C (105°F)	
Degree of Protection	IP65, NEMA4	
Gauge Head Serial I/O	Standard: RS232, RS422, RS485, CAN-bus, Ethernet, (Profibus/ Profinet/EtherNet/IP) settable, Options: Wifi	
Digital Inputs	Reset, Print Activation (User Configurable)	
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



Option: in DG Gauge Head



DeviceNet

ACCESSORIES



KAL 30, KAL 60
Calibration Kits



GRS 30
Guide Rollers



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



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