

## **CAPACITANCE MEASUREMENT**



# InteliSENS™ CG Series Capacitance Gauges

Proton InteliSENS™ CG Series capacitance gauges are for continuous measurement of insulation capacitance on cable extrusion lines. The CG Series enables manufacturers to control the stability of the capacitive characteristics of their cable insulation. The rugged, compact and durable design, multiple communications options, and easy integration with other systems make the CG Series an excellent, economical choice. The cable runs through the CG capacitance gauge head which is connected to the InteliSENS™ signal processor unit which analyses the capacitance measurement through an advanced auto balancing bridge system, with sophisticated FPGA processing to ensure drift-free capacitance measurement. Integral fixing holes provide versatile mounting options, and the CG gauge head can be used either submerged in a cooling trough or within spray-water area cooling troughs. For high-speed lines, the gauge head can be connected to a high-pressure water supply. The CG Series gauge head is supplied with an IP65 rated InteliSENS™ signal processing unit (CG-i4 interface box) and a 2 metre-long industrial interconnection cable. On PLC controlled or computerised lines the CG-i4 interface box can communicate directly via i-BUS (ProfiBus/ ProfiNet/ Industrial Ethernet TCP/IP) or Standard communication RS232/485. CANBUS, Ethernet TCP/IP). For more conventional set-ups, we supply a Sidi-CDi4 indicator and control unit with LCD Touch displays, and a range of operator presets complementary outputs. The Sidi-CDi4 interfaces with the InteliSENS™ CAP interface box through CANbus. Various lengths of interconnection cables can be supplied.



## **CHARACTERISTICS**



LOWDRIFT





RS232/485 ProfiBus/ProfiNet/Ethernet

LOW-WEAR END CAPS

#### Sidi-CDi4 DISPLAY

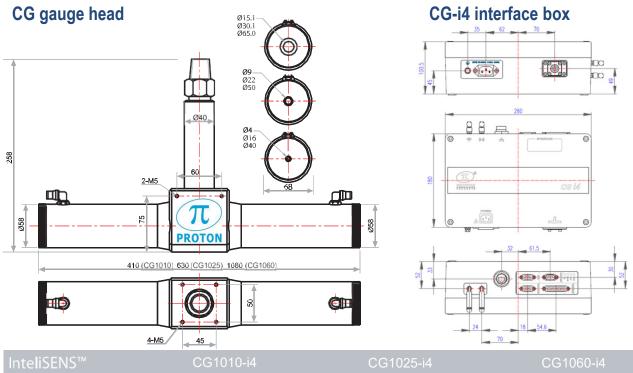


**FFT DISPLAY** 



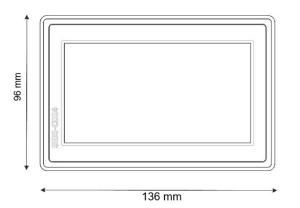
### **BENEFITS**

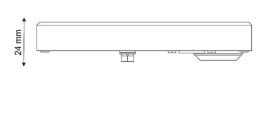
- High accuracy, from low to high speeds
- Low drift
- Zero correction function
- Rapid installation
- Unaffected by air bubbles, water temperature, resistivity or pH values
- Range of interfaces for PLC & computers
- Maintenance free system
- IP65 protection
- Direct replacement for old, worn and cumbersome capacitance measuring equipment.



InteliSENS™	CG1010-i4	CG1025-i4	CG1060-i4
Maximum Cable diameter	10 mm (0.39")	25 mm (0.98")	60 mm (2.36")
Gauge Head bore diameter	15.1 mm (0.59")	30.1 mm (1.18")	75 mm (2.95")
Overall Gauge head length	430 mm (16.92")	630 mm (24.80")	1080 mm (42.51")
Capacitance range	0 to 1000 pF/m		
Accuracy	+/- 0.2% of measured Capacitance		
Connection cable	2 m fixed length (from guage head to CG-i4 interface box)		
Interface	2x Logic inputs, 4x relay outputs, Line speed inputs, Analogue input RS232/485, CANBUS, Ethernet i-BUS (Profinet/ Profibus/ Industrial Ethernet TCP/IP)		
Power Supply	100 ~ 240 Vac		
Weight	5.8 kg (Gauge head); 2.5 kg (CG-i4 interface box)		

#### Sidi CDi4: Connected to CG-i4 interface box via CANbus





The NEXiSTM CG-i4 is a production line control system for use with the CG Series capacitance gauges. The CG-i4 outputs control data to production equipment, ensuring preset limits are not exceeded. The system is ideal for cable insulation jacketing, tubing and many other applications. The CG-i4 has an LCD touch screen display.

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