

MODEL PDC-20A (SHEET AND FILM)

In-Line Pinhole Detector for Sheet and Film

- >> Dielectric flaw detector for continuous sheet and film
- >> Reliable pinhole detection at virtually any speed
- >> Wide range of products may be detected
- >> Regulated test voltage
- >> Digital voltage display



Manufacturers of continuous plastic film and sheet have long sought an economical method of locating pinholes and flaws during the production process. In-line optical and laser systems are costly and complicated, and manual inspections after the fact are time-consuming, sometimes yielding high scrap levels.

Clinton Instrument Company introduces the Model PDC-20A In-Line Pinhole Detector, a low-cost, non-destructive electronic system that instantly locates defects in dielectric materials on the production line. The PDC-20A consists of a curtain sensor and a control unit. The charged curtain sensor drapes across the test product, which in turn runs over a grounded metal surface.

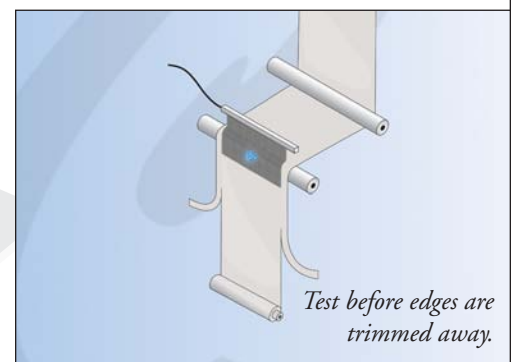
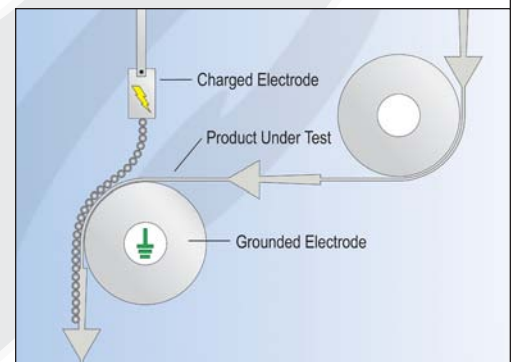
Defect-free product will insulate these electrodes from each other. However, when a pinhole passes between the electrodes, a discharge through the

hole will occur that is instantly detected and reported by the system.

The control unit regulates and displays the applied test voltage on a digital voltmeter, reports faults on a digital counter and fault light, and provides various process control outputs that can activate external lights, alarms, and auxiliary machinery when a fault is found. Typical test products are sheet, film and bags made of polyethylene, polyurethane, TFE, and PVC, with thicknesses from .001" to .100" and widths to 144". Please contact the factory regarding your specific application.

The PDC-20A In-Line Pinhole Detector is easy to use and current limited for safe operation. Its advanced circuitry delivers optimum fault detection at virtually any production line speed.

The system is easy to install on an existing winder. Select a location for the curtain sensor. An uncoated grounded conveyor roller is ideal for the grounded electrode. The product should travel over this roller as shown at the right. Test the product before trimming edges, as the product cannot be tested to the edge.



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PDC-20A SPECIFICATIONS

Voltage Test Range

PDC-20A 500v to 20KV (minimum voltage varies on electrode design.)

Output Current:

PDC-20A 0.75 milliamperes maximum.

Fault Indication red 3-digit 14.2mm high LED display; amber indicating light.

Fault Response Less than 1 millisecond.

Fault Resolution 1.5 milliseconds.

Detection Sensitivity 600 μ a. at 5KV.

Operating Modes.....Continuous HV/Remove HV on Fault. Momentary Process Control/
Latch until Reset.

Electrode/Sensor Consult Factory

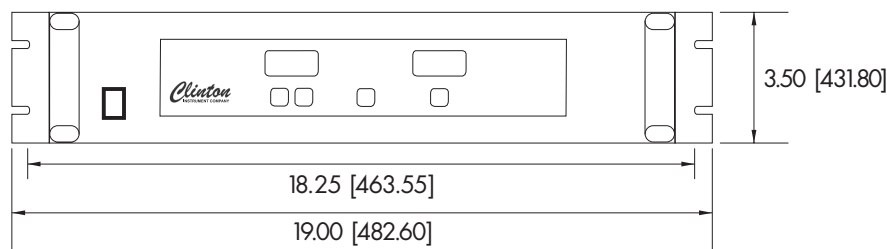
Process Control.....Relay, form "C" contacts rated 1 amp max @ 240VAC, 2 amps
max @ 120VAC, for both NO and NC circuits.

Power Requirements.....100 to 240V AC 1 amp, 49-61 Hz. Power supply is self adjusting.

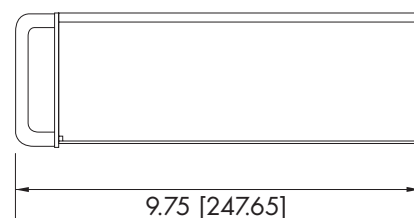
CommunicationsRS-485 Serial Interface; Analog (optional); Ethernet (optional);
Profibus (optional).

Safety Designed to IEC-1010.

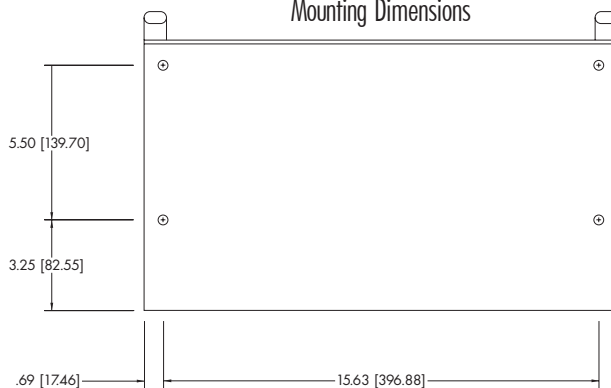
Front View



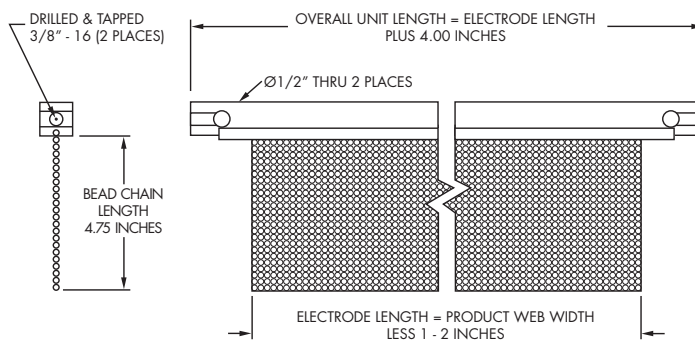
Side View



Mounting Dimensions



DIMENSIONS IN INCHES [MILLIMETERS]



HIGH VOLTAGE INTERCONNECT NOT SHOW. MOUNTING HARDWARE NOT INCLUDED.

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295 East Main St. • Clinton, CT 06413 USA • Tel: 860.669.7548 • Fax: 860.669.3825 • www.clintoninstrument.com

Specifications subject to change without notice. 01/07 EN