

PDC-F Series

In-Line Pinhole Detectors for Sheet and Film

- >> Pinhole detection for continuous sheet and film
- >> Reliable at virtually any production line speed
- >> Non-contact fault sensor
- >> Digital voltage display



PDC-20A Low Current Control Unit

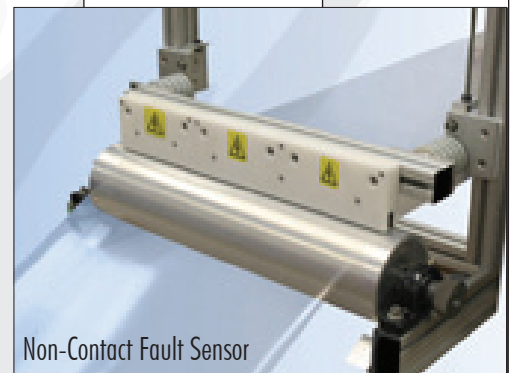
Manufacturers of continuous plastic film and sheet have long sought an economical method of locating pinholes and flaws during the production process. In-line optical and laser systems are costly and complicated, and manual inspections after the fact are time-consuming, sometimes yielding high scrap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

Clinton Instrument Company introduces the PDC-F Series of In-Line Pinhole Detectors: low-cost, non-destructive electronic systems that instantly locate defects in dielectric materials on the production line. The PDC-F consists of a non-contact fault sensor and a control unit. The fault sensor, which is a charged electrode, is suspended over the test product, which in turn runs over a grounded electrode, typically a metal surface such as an uncoated conveyor roller.

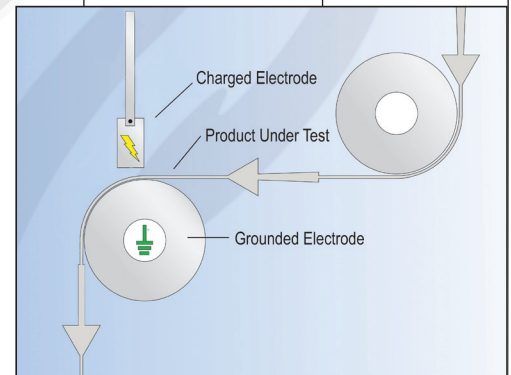
Defect-free product insulates these electrodes from one another. However, when a pinhole passes between the electrodes, a discharge through the hole will occur that is instantly detected and reported by the system.

A PDC-F system is equipped with a low- or high-current control unit, depending on the capacitive properties of the test product. 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 product is tested before the edges are trimmed, as the product cannot be tested to the edge.



Non-Contact Fault Sensor



PDC-20HC High Current Control Unit

Clinton
INSTRUMENT COMPANY

PDC-F SPECIFICATIONS

Voltage Test Range 500v to 20KV (minimum voltage varies on electrode design).

Output Current:

PDC-20A..... 0.75 milliamperes maximum.

PDC-20HC 6 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.

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

Detection Sensitivity.....Selectable by product capacitance.

Electrode/Sensor..... Consult factory.

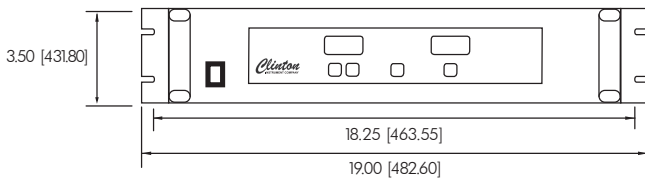
Process Control.....Relay, form "C" contacts rated 1 amp max @ 240VAC, 2 amps
max @ 120VAC, for both NO and NC circuits.

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

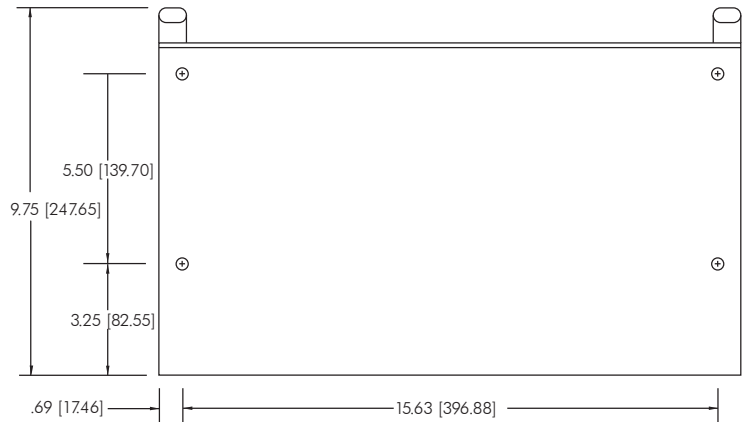
Communications.....RS-485 Serial Interface; Analog (optional); Ethernet (optional);
Profibus (optional).

Safety..... CE approved.

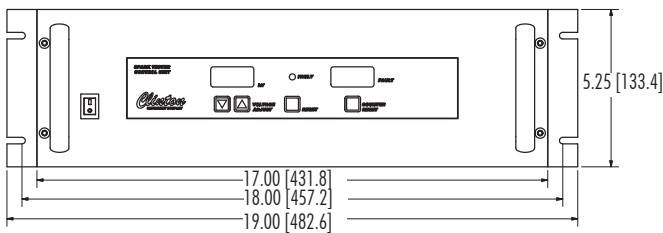
PDC-20A Control Unit



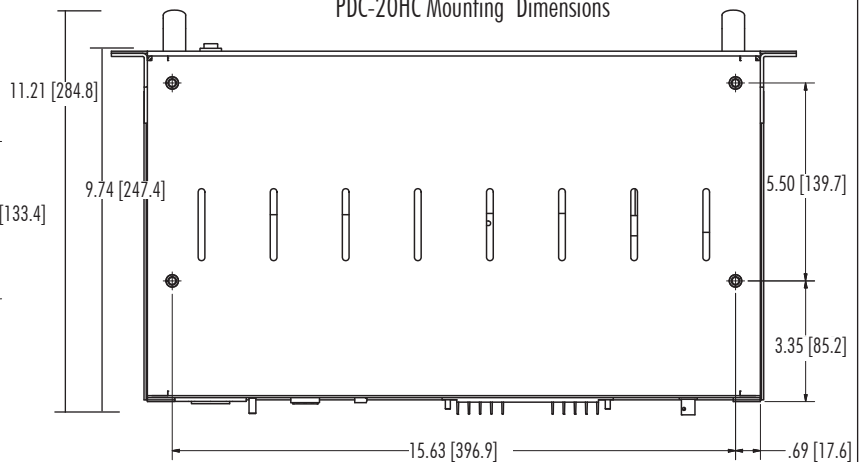
PDC-20A Mounting Dimensions



PDC-20HC Control Unit



PDC-20HC Mounting Dimensions



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Specifications subject to change without notice. 12/10 EN