

## Paper Checker - PC210

The Paper Checker System detects web breaks and splices on web-fed machinery. It also detects double sheet feeding on sheet-fed machines. When the system senses a splice, break or double sheet feed, an alarm indicator lights and a relay changes state (normally open or normally closed).



### MAIN APPLICATIONS

Web splice and break detection on rotary presses, slitters, laminators, coaters, winders and other machines running a web

Double feed detection on sheet-fed presses, bag machines and laminators

### FEATURES

- Non-contact sensing
- Wide range of web (sheet) thicknesses
- Senses all materials including paper, cellophane and poly laminates
- Ultrasonic sensing eliminates false triggering caused by printed characters or patterns
- Simultaneous detection of web splice and web break
- Color and material of splicing tape, and use of a butt splice or overlap splice do not affect splice detection
- Synchronous signal can be used to eliminate false triggering caused by web sag during web stop

### HOW THE SYSTEM WORKS

The Paper Checker System has two parts - the PC210 Paper Checker Control and the UH200 or UH215 Ultrasonic Sensor. The PC210 provides an excitation signal to the sensor and reads the return signal. The PC210 indicates machine-feed conditions through the front panel LEDs and contact closures. There are two sets of contacts: one for web splice or double feed and one for web break.

The sensor is an ultrasonic device including a transmitter, receiver, mounting bracket and 16-foot interface cable. The ultrasonic signal enables the sensor to "see through" clear and opaque film, papers and laminates without false triggering that patterns or printing can cause when other types of sensors are used.

# SPECIFICATIONS

PC210 WITH UH200, PRODUCT NUMBER 913071  
PC210 WITH UH215, PRODUCT NUMBER 913072

## WEB SPLICE DETECTION

Web Thickness	0.00004 in. to 0.031 (1 µm to 0.8 mm)
Splice Width	0.787 in. or more (20 mm or more)
Line Speed	3300 ft./min. (1000 m/min. or less)

## WEB BREAK DETECTION

Web Thickness	0.0019 to 0.031 in. (50 µm to 0.8 mm)
Line Speed	3300 ft./min. (1000 m/min. or less)

## TWO-SHEET FEED DETECTION

Sheet Thickness	0.0019 to 0.031 in. (50 µm to 0.8 mm)
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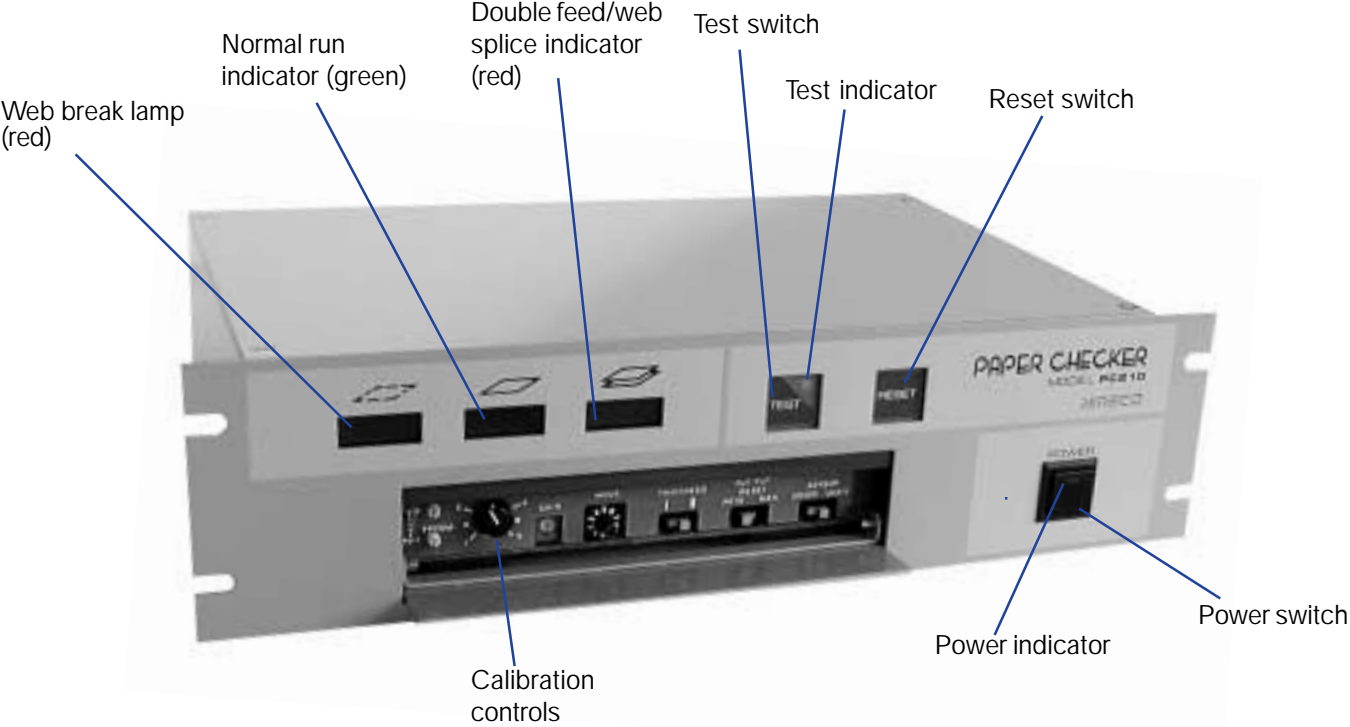
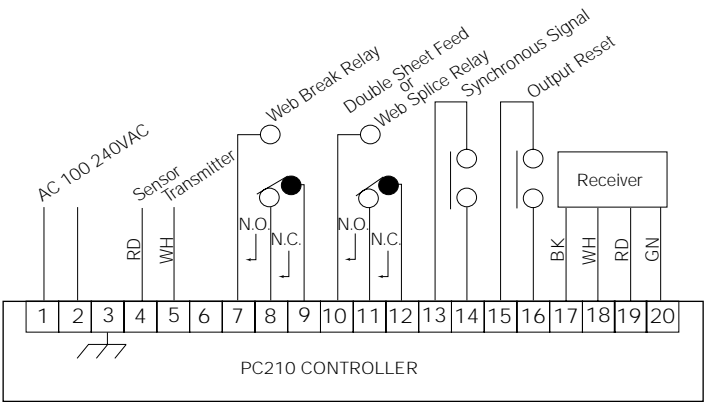
## SENSOR SPECIFICATION

UH 200	40 kHz frequency
UH 215	33.3 kHz frequency

## COMMON SPECIFICATIONS

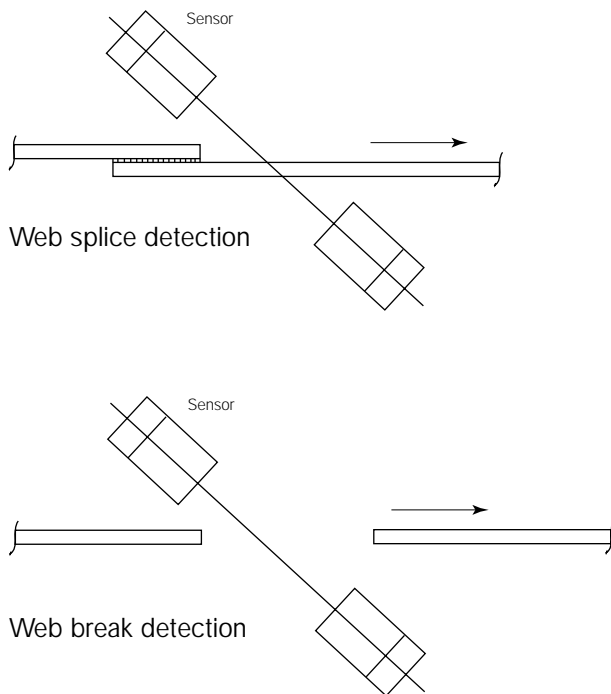
Power Supply	100 to 240 VAC, 50/60 Hz
Power Consumption	10 VAC
Output Contacts, Web Break and Web Spliced Double Feed	Rating: 240 VAC, 01 A 24 VDC, 0.1 A
Reset Time, Web Splice Double Sheet Contact	0.2 - 6 seconds
Weight	Controller: 0.91 lb. (2 kg) Sensor: 0.23 lb. (0.5 kg) (one pair)
Cable Length	16 ft. (5 meters)

## WIRING DIAGRAM

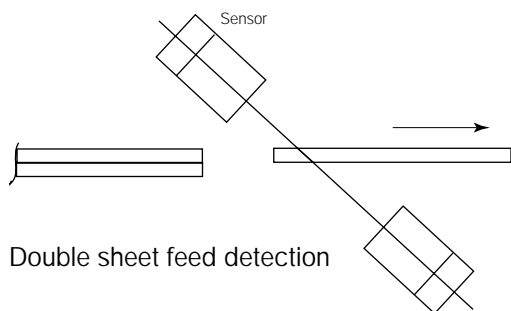


## INSTALLATION

### SENSOR INSTALLATION FOR WEB SPLICE AND BREAK DETECTION

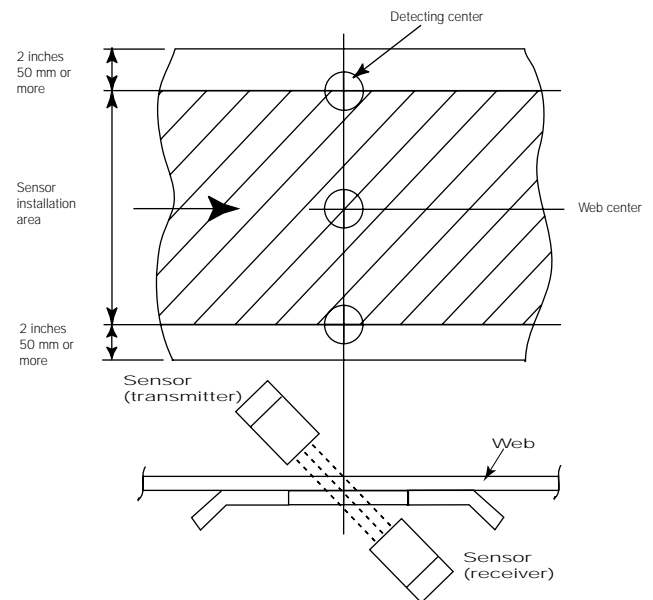


### SENSOR INSTALLATION FOR TWO-SHEET FEED DETECTION



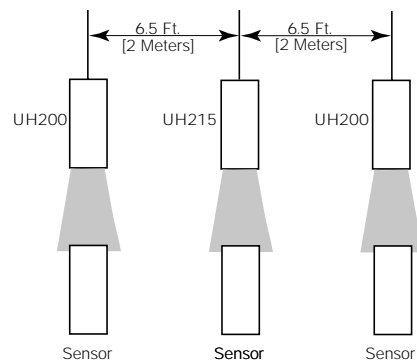
### INSTALLING THE SENSOR

1. Install the sensor where the web is stable and the path line does not change.
2. Set the detecting center at least 2 inches (50mm) from either edge of the web. The sensor detecting center can be anywhere within the "sensing installation area" shown below.
3. It is not necessary to move the sensor if the web width changes when the sensor is installed at the web center.
4. The transmitter and receiver may be installed perpendicular to the web, however, better sensitivity will be seen if installed approximately at a 45 degree angle as shown.



### SENSOR INSTALLATION FOR MULTIPLE APPLICATIONS

1. If dimension "x" is less than 80 inches (2 meters) Sensor models must be staggered UH200, UH215, UH200, etc.
2. Dimension "x" must be at least 8 inches (20 cm).

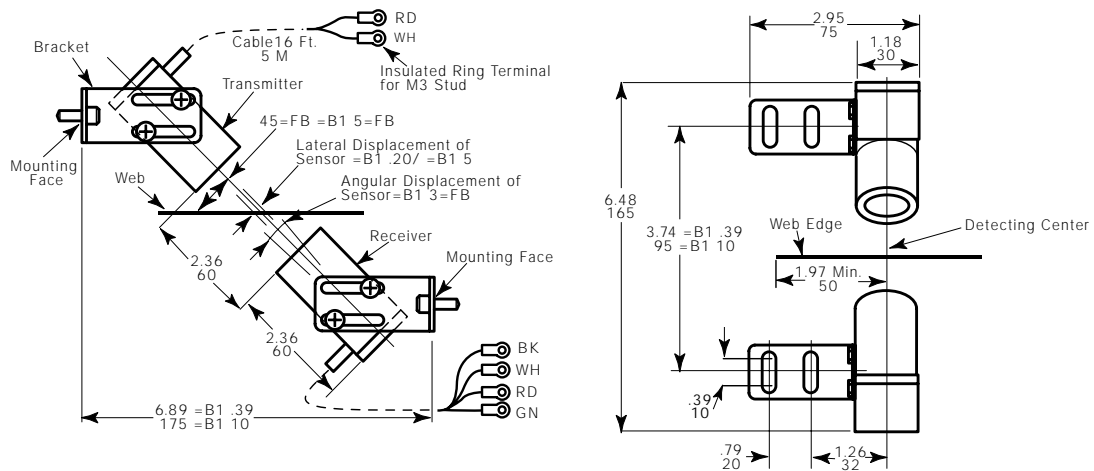


SENSOR SPACING

# PC210 DIMENSIONAL DRAWING

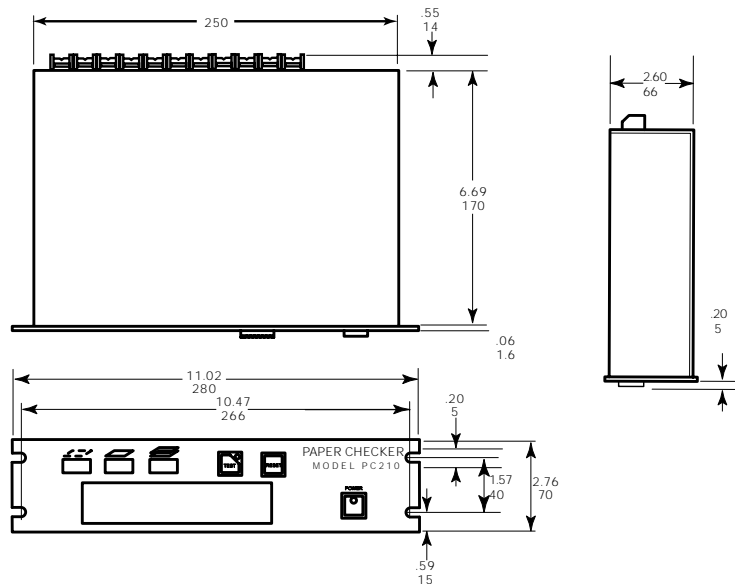
## SENSOR UH200/UH215

INCHES  
MM



## CONTROLLER PC210

INCHES  
MM



## FIND OUT MORE

For further information on Nexen tension control products, including the PC210 Paper Checker, visit our Web site at [www.nexengroup.com](http://www.nexengroup.com) or call 800-843-7445.

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