



ESTRAC 1000 INFRARED SHEET BREAK DETECTOR

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ESTRAC 1000 DATASHEET



COMPLETE TURN-KEY SOLUTION

No missed breaks

APPLICATIONS

- The detector can be installed as a stand-alone system or it can be connected to a machine control system to give continuous trending of break data and possible head contamination.
- The control device is equipped with a mA output along with alarm relay contacts.

FEATURES

- One-sided detection with a short detection distance of 4-6"
- Small sensor head for tight installations,
- No electrical components in process area.
- Fast measuring frequency 5kHz based on IR reflection.

SPECIFICATIONS

MODEL	ESTRAC 1000
MATERIAL	SS316
Measurement type	Modulated infrared light, frequency 5 Hz
Detector distance	4 inches to 6 inches from sheet surface
Maximum cable length	31 feet
Power supply	24 VDC
Output signal	4 .. 20 mA DC / 1-10 VDC, discrete relay outputs of 120 VAC, 24 VDC, dry contact
Maximum operating temperature	Measuring head: 320°F (160°C) Control cabinet: 122°F (50°C)
Components	System includes: sensor, shielded glass fiber-optic cable and control device.

BENEFITS

- Easy to install and use.
- Continuous and precise monitoring of web through analog output to your control room ensures no missed breaks
- Can be installed below and above felts, rolls and open draws.
- Does not require daily cleaning and maintenance.

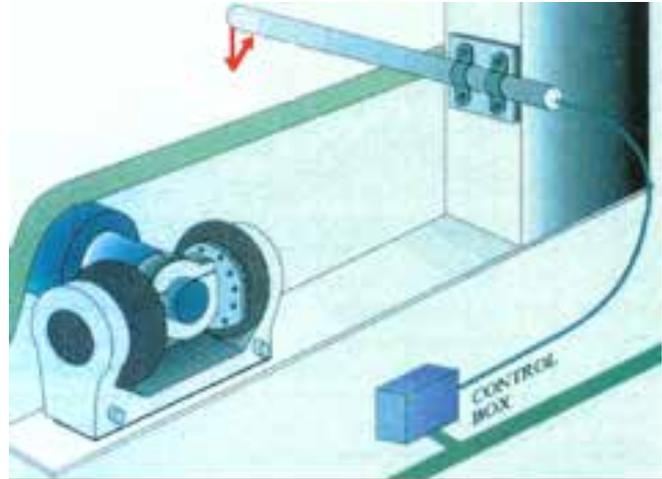
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SYSTEM COMPONENTS

The detection system consists of a measuring head and extension pipe connected by a pair of identical fibre-optic cables to an infrared amplifier housed in a Nema-4X stainless steel enclosure.

The control cabinet is located outside of the machine hood so that no electronic components reside in the heat of the machine. The measuring sensor head is clamped to the machine frame by a specially designed clamp.

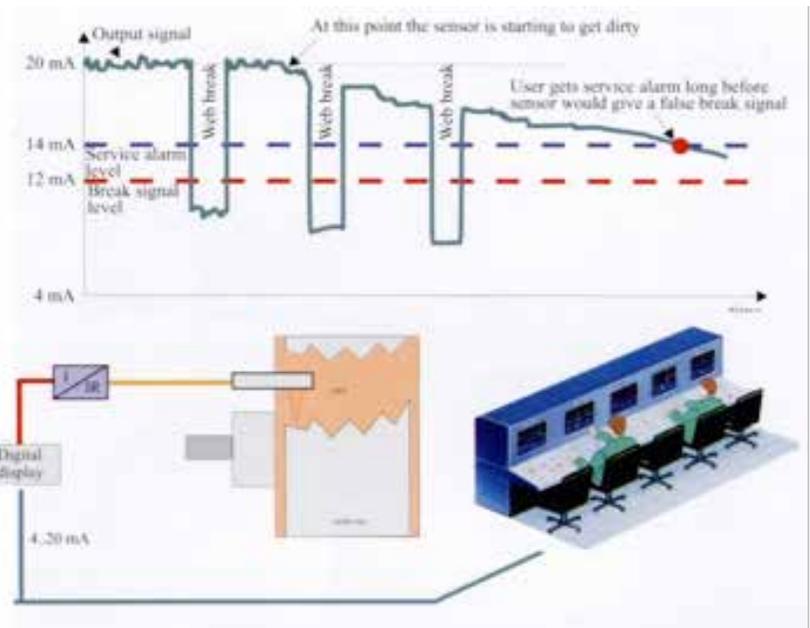
The fibre cables are protected by a 1" SS316 clad Teflon flex hose. This hose is air purged from the control cabinet to the two eyes on the sensor pipe to keep them clean. Three cable lengths are available: 10 feet, 23 feet, and 31 feet.



OPERATING PRINCIPLE

The basic principle of operation is quite simple. Light generated by the infrared amplifier is directed by one cable to the sheet surface. Due to the difference between sheet surface texture and the felt, roll surface or open air, the return light scatter from the second eye and cable determines the output. A 4.20 mA DC signal is developed proportional to the light scatter.

An isolated signal to a PLC and or DCS is supplied as well as discrete relay outputs of 120 VAC, 24 VDC or dry contact. Signal output is viewed on a local panel meter and a sensor alarm and break alarm light are also provided.



FIBER OPTIC CABLE

The two fiber-optic cables are protected by a Teflon flex hose encased in a 1" braided stainless steel sheath. The hose and two sensor eyes on the sensor head are kept clean with purge air from the control cabinet.