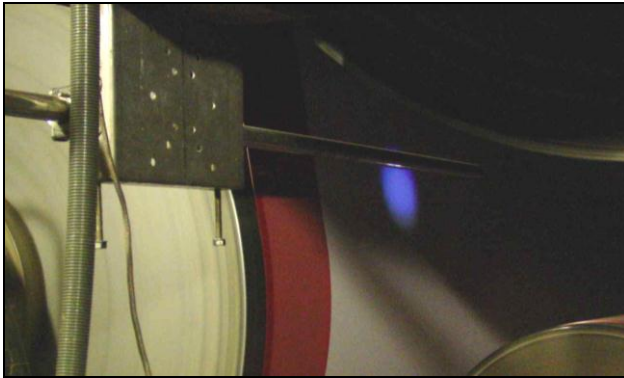


KB² FIBER-OPTIC SHEET BREAK DETECTOR



Non-contact optical measurement

The KB² fiber optic sheet break detection system is designed to monitor sheet breaks in harsh environments, it is proven with hundreds of installations around the world. The non-contact sensor is placed above or under the web to be monitored.

KB² is suitable for dirt, steam and high temperature installations or where space is limited. The air-purged sensor head stays clean and is not affected by dirt, steam or high temperatures.

RGB Color and IR measurement

The KB² has both, RGB or Infrared light sources to perform superiorly with all paper and board grades and applications regardless of colors. The RGB color measurement can handle all sheet, wire and felt colors providing reliable break detection. In addition to open-draw applications the breaks can be detected against felt, wire, or even against a cylinder.

Fast break detection

The KB²'s digital signal processing technology measures all signals at a thousand times per second. KB² is immune to ambient light changes by measuring the backlight intensity. The break detection delay is a minimum of 15ms - with digital filtration user can select how many measurement cycles are used for break alarm.

Easy to set up

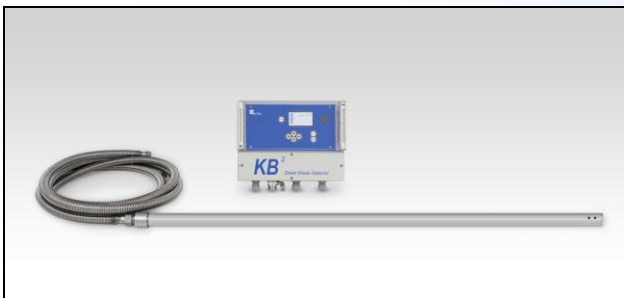
The KB² Display Unit's large display and logical user interface allows easy setup of the break detection by selecting the measurements which give the highest signal difference. Break and maintenance alarms are wired to the PLC or DCS.

KB² has optional color measurement PC software for monitoring and includes data collection feature.

4-20 mA current outputs for the signal levels are available as an option.

Electronics located outside harsh environment

KB² is very reliable even in a 100% humidity environment. While the sensor head is exposed to high temperatures, the electronics unit is mounted outside the machine hood to convenient location using fiber optic cable. Fiber optics is available in lengths of 6, 9 and 12 meters.



SPECIFICATIONS

AMBIENT TEMPERATURE	Sensor head and fiber optic cable: -10 to 180 °C (15 °F to 356 °F) Electronics unit: -10 to 60 °C (15 °F to 140 °F)
FIBER OPTIC CABLE	KB ² /6: 6 m (20'), KB ² /9: 9 m (30') or KB ² /12: 12m (40')
FIBER OPTIC CABLE CONDUIT	Requires flexible airtight conduit 19 mm (3/4") ID min, available as an option.
CONDUIT CONNECTION	19 mm (3/4") BSP
INSTALLATION	Sensor distance from the web 5...30 cm (2...12").
LED PULSE FREQUENCY	1 kHz
POWER SUPPLY	90 - 264 VAC, 50/60 Hz
POWER CONSUMPTION	15 W
ENCLOSURE CLASS	IP 66 (Nema 4X)
PURGE AIR CONNECTION	Dry instrument air, 6/4 mm (1/4") connector, normal consumption 80l/min
DIGITAL OUTPUTS	2 x Closing or opening contact max. 250 VAC, 2A; 220VDC, 2 A for Break signal and Maintenance alarm
ALARM OUTPUT DELAY	Min. 15 ms from the actual break
ANALOG OUTPUTS	Optional 3 pcs 4 - 20 mA max 600 ohm
PC CONNECTION	Optional KB ² -PC terminal program for set up and monitoring available. RS 485 connection to PC. Optional RS 485 / USB-converter available for PC
DIMENSIONS (L x H x D) AND WEIGHT	Electronics Unit 323 x 237 x 70 mm (12,7 x 9,3 x 2,8"), 3 kg (6,6lbs) Sensor head Ø 33 mm (1 ^{1/4} ") SS316, pipe 1500 mm (59") long, 4 kg (9lbs)

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