

Application Note: Fork Sensors for paper, packaging & pharmaceutical industries

Rhomberg RO4 fork sensors are ideal for high speed sensing applications in the paper and packaging, pharmaceutical and many other industries.

The sensor body is robust anodised aluminium with a 3.5mm slot through which the paper or plastic passes through. Mounting is simple via its 5mm mounting holes. The material passing through can do so at high speed as the RO4 sensor can switch at a frequency of up to 10kHz.



Application: Sensing Paper

The sensitivity is adjusted to perform one of the following functions:

1. To determine whether a single layer of paper is present or not
2. To determine if there is more than one layer of paper present

Application: Sensing Clear Plastic Film

The sensitivity is adjusted to perform one of the following functions:

1. To determine when the clear plastic film is present or not
2. To determine when a coloured marker on the film is present or not.

Application: Sensing Labels on Strips

The sensitivity is adjusted to detect the edge of the label on its backing

Description of Operation

The sensor monitors the infra-red signal transmitted across the sensor's slot. Once a valid signal is received, the PNP output is switched on and the LED illuminates. The sensitivity is easily set via the multiturn potentiometer on-board to allow the infra red light to pass through the paper or plastic but not through the label or marker, or alternatively to allow the infra red light to pass through air but not through the paper or plastic.

A unique feature is the availability of the sensor with remote potentiometer option. This allows the sensitivity to be adjusted from a remote location, which is very useful especially if the sensor is mounted in a confined space.

Specifications:

Supply voltage:	10-30VDC
Output:	PNP (normally open)
Maximum load:	400mA
Current limiting:	600mA (typically)
Switching frequency:	10kHz max
Infra red wavelength:	0.91µm

Part numbers:

RO4-2003B-NO-MBC	Sensitivity adjustment via Internal Potentiometer
RO4-2503B-NO-MBC	Sensitivity adjustment via Remote Potentiometer

