

COMPACT DETECTOR

A complete sensor unit, only 10 mm high which has been continually improved over many years to provide a cost effective, extremely reliable sensitive device. An ideal sensor for the contactless detection of straight line yarn tracks on any process, including the most demanding in spinning and texturing.

Detecting yarns from as low as 5 dtex to over 5,000 dtex and at higher speeds - up to 8,000 m/minute.

The moving yarn is monitored by an infra red beam. There is no contact with the yarn and clearances are such that any build-up of dirt, fly and spin finish on the detector are minimal.

The system responds to the signals produced by the yarn motion. A compensation circuit corrects for even extreme build up of dirt and fly, to ensure 100% accurate and reliable detection of breaks, without any spurious or missed detections.

The Compact is a complete sensor unit with its amplifier/signal processor and optics all integrated into a single, small sealed unit.

It is suited to a wide range of natural or synthetic yarns - as well as blends and filaments such as glass or carbon fibre. Sensitivity is not affected by yarn colour, material, spin finish, or conductivity. The Compact will detect over a very wide range of yarn counts.

OPERATING PARAMETERS

Balloon/traverse frequency	3 Hz to > 300 Hz
Linear yarn speed	3 m/min to > 8,000 m/min
Yarn count	S dtex to 5,000 dtex
Start-up delay	10 mS to 2 S
Reaction times	20 mS to 2 S

ELECTRICAL SUPPLY

Normally + 24 Vd.c. with up to 2 V ripple. Current consumption of each detector is between 5 mA and 25 mA @ 24 Vd.c. dependent on operating conditions.

OUTPUT

A wide range of devices can be directly controlled - including cutters, relays, solenoids and warning lamps. Direct inputs can be given to computer systems - such as Programmable Logic Controllers (PLCs). A red LED indicates that the unit has detected a break.

OUTPUT OPTIONS

Step: +ve or -ve. 24 Vd.c. to 36 Vd.c. @ 200 mA max.

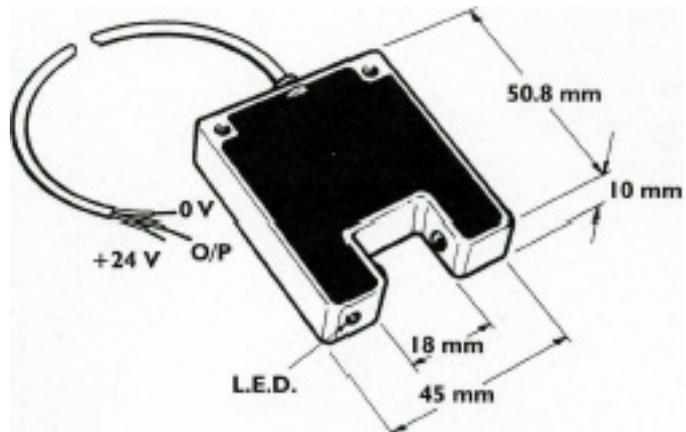
Pulse: +ve or -ve. 24 Vd.c. to 36 Vd.c. @ 1 Amp max.

OPERATING ENVIRONMENT

Compact detectors are housed in die cast enclosures and completely potted in epoxy resin. Operating from +3 ° C to +50 ° C they are waterproof, vibration proof and resistant to spin finish.

FLEXIBILITY

All of the operating parameters can be preset to suit particular applications.



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Custom-made
textile sensors