

GP

THE GENERAL PURPOSE SENSOR

Designed for easy application on a wide range of processes providing contactless detection of ballooning or traversing yarns ranging from $_8$ dtex to carpet yarns.

The moving yarns 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 GP sensor is a complete detection unit with its amplifier/signal processor and optics integrated into a single unit and sealed against spin finish, oil and water by means of high quality epoxy resin encapsulation.

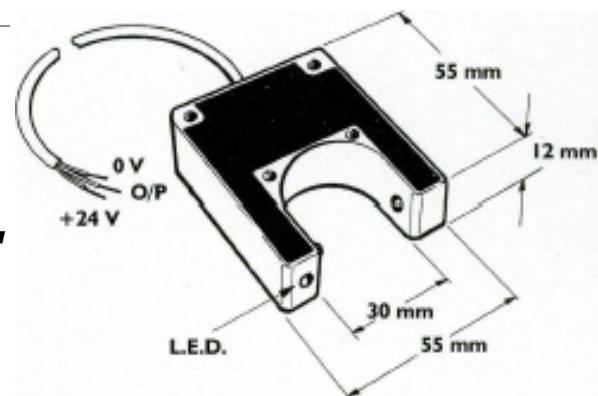
Reliable detection is possible for a wide range of natural or synthetic yarns as well as blends and filaments such as nylon, glass and carbon fibre. Sensitivity is not affected by colour, material, spin finish or conductivity.

Applications include creels, draw twist machines, staple fibre spinning and twisting machines etc.

OPERATING PARAMETERS

Balloon/traverse frequency	3 Hz to > 300 Hz
Linear yarn speed	3 m/min to > 8,000 m/min
Yarn count	8 dtex > 5,000 dtex
Start-up delay	50 mS to 2 S
Reaction times	500 mS to 2 S

Dent
Custom-made
textile sensors



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, sliver clamps, 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

GP 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.