# eye

Eltex Yarn Expert
Yarn Break Detection System for Multiaxial Machines

The EYE system from Eltex is capable of monitoring both the weft yarn and also any chopper yarns on a Multiaxial Warp Knitting Machine. It is designed to improve the efficiency and the quality and is essential to achieve a first quality product.

When a new design is introduced on the machine the Eltex EYE system will learn, during fractions of a second, in which sensor position yarns are moving. The yarn in these positions will be monitored and if any fault occurs, the machine will be stopped immediately. As soon as the system has learned the amount of yarns in operation, it is displayed on the operator terminal.

0°   -45°   45°   90°   Fiber mat
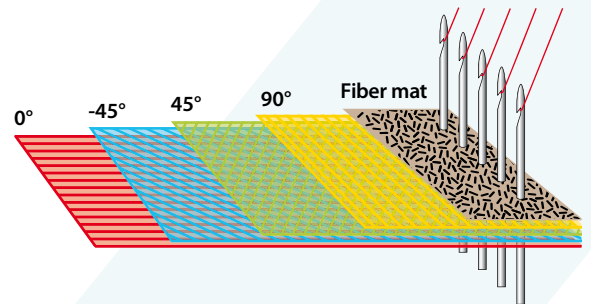
■ Yarn break sensors
The sensors use the well proven piezoelectric principle. They are robust and can work with strong yarns and are not influenced by dust, dirt, humidity or ambient light. Multi-eyelet sensors are used for the weft yarns and single end sensors for the chopper yarns.

■ Operator Terminal
The touch screen operator terminal has a very user-friendly interface. Information about amount of yarns in operation and positions of yarn faults are clearly displayed. Once the settings have been made the operator only has to enter learn mode when a new design is started.

■ Master control unit
The master control unit is communicating with the sensors and the operator terminal. It is processing all the data and makes stop and lamp indication signals in case of a yarn fault.

All the components are wired together with a smart and proven bus system. The control unit is able to monitor the yarns of each weft carrier and chopper individually. Different settings and indications can be used for the sensors of each weft carrier and of the chopper.

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Advantages

- Fast learning of positions in use (no ON/OFF switches on the sensors)

- Simple installation, service friendly, self diagnostic

- Automatic addressing of all the system parts

- Easy to change system configuration

- Simple connections with modular connectors

- Robust sensors in metal housings

- Sensor parameters can be set for different groups of yarn, ex. different for weft yarn and chopper yarns

- The sensing of the yarns is synchronised with the weft carriers using the enable inputs

- I/O for one to six independent groups. The same control unit can be used for the weft and for the chopper yarns

- All events are logged in real time and can be used for statistics and diagnostics (For full benefit, optional EYE-Analyzer must be used)

- The stop position is showed both on the terminal and on the sensor

- CAN Bus (available for OEM interface)

- Networkable

■ Features and data

The operator terminal has a user friendly colour touch screen.

Sensors are available with 1, 8, 10 and 12 eyelets.

Each eyelet has a LED to indicate yarn fault position. The LED can also show learned positions, etc.

The master control unit has six sensor bus connections.

Up to 16 single end sensors or 12 multi eyelet sensors can be connected to each sensor bus.

The system can be extended with slave control units when necessary.

Typical application on a Multiaxial machine

Multieyelet sensors are used for the yarns in the weft carriers and individual sensors for the chopper yarns. The settings are different for each place. Indicator LEDs will show where a yarn fault has occurred.

Multieyelet sensors (for weft carriers)

Individual sensors (for Chopper)

Operator terminal

Control unit

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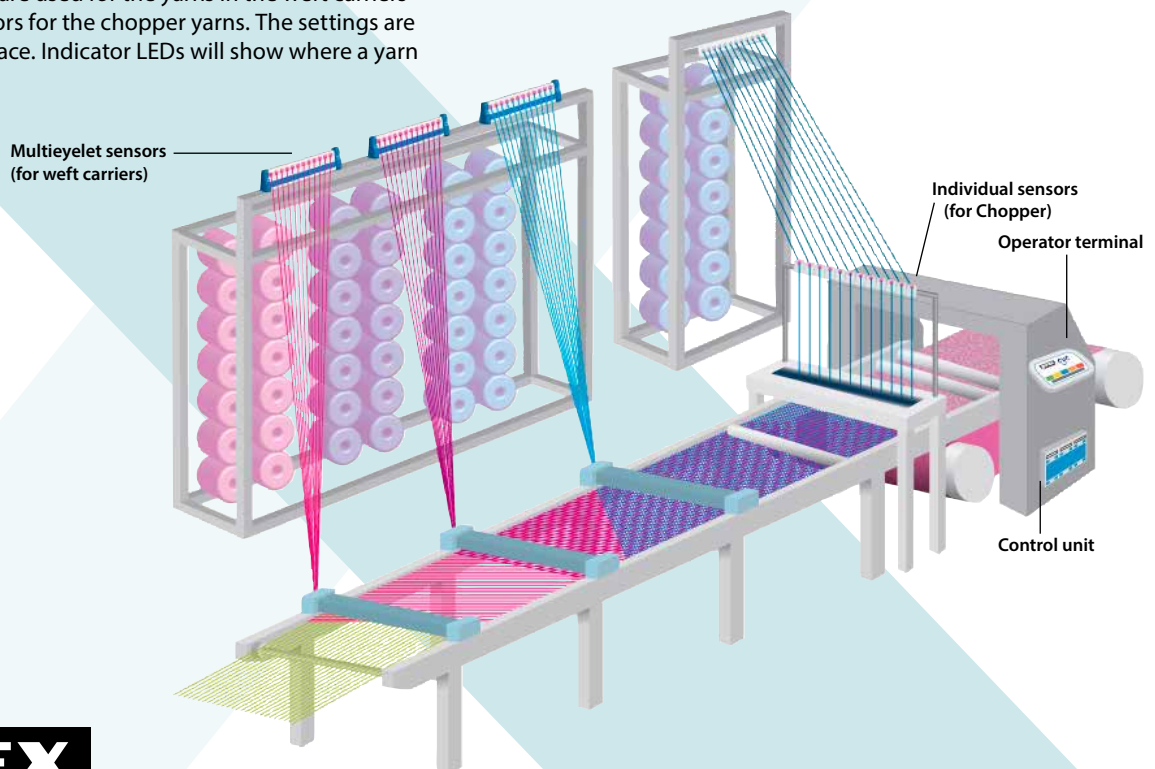
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