

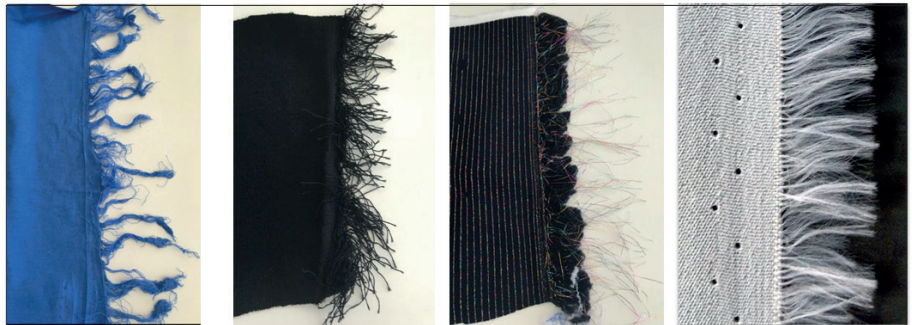
Warp thread sensor ELWARP SI 2001

- A unique sensor in the market for optical detection of the outermost warp thread, regardless of the length of protruding weft threads
- New approaches based on artificial intelligence and use of state-of-the-art technology allow detection of the outermost warp thread for the first time at the level of human perception
- For clear, unambiguous detection of the outermost warp thread in the downstream cutting process, it is necessary to bring the protruding weft threads into the same plane. This can be done with a mechanical or pneumatic spreader.
- Integrated WLAN card for reliable communication with mobile terminal devices such as smartphones or tablets
- E+L app for Android and iOS so that – if required – model optimizations can be uploaded to the sensor
- Remote access using TeamViewer via RJ45 Ethernet interface and external computer (for service use only)
- HDMI and USB connection for monitor and mouse (for service use only)



Function

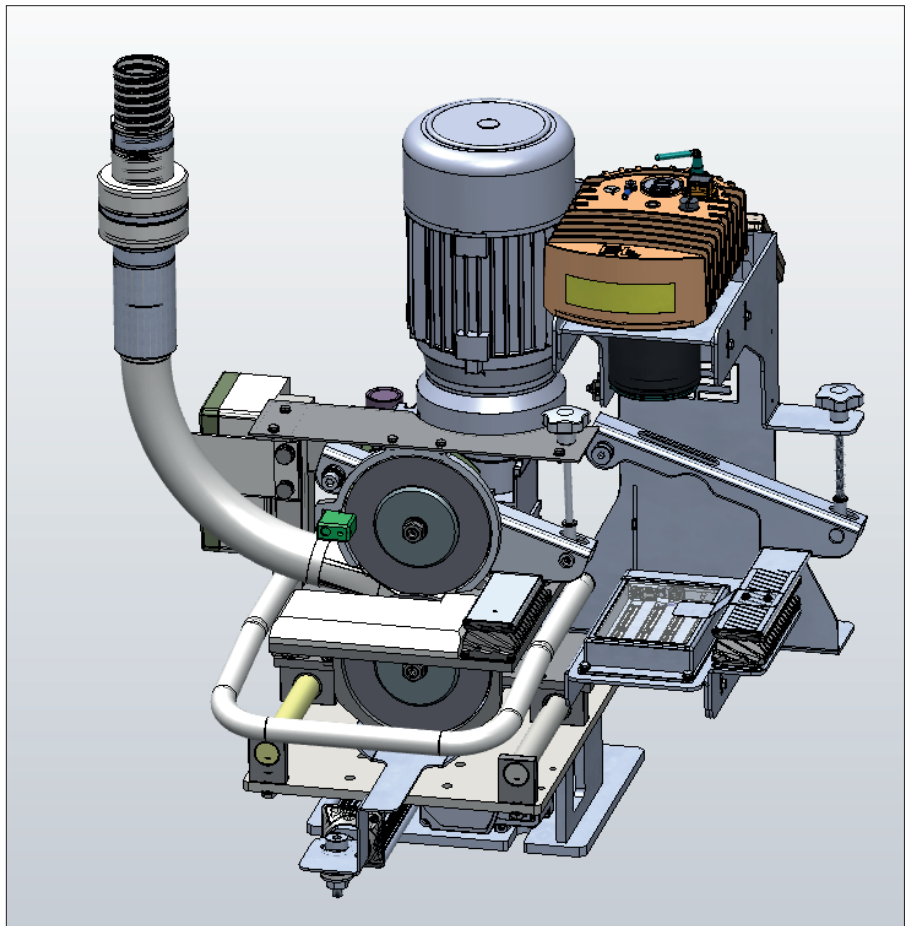
The warp thread sensor SI 2001 contains a matrix camera with lens, a WLAN card, an evaluation unit, and a ring-shaped light transmitter required for the incident light method. In addition, the SI 2001 also operates using the transmitted light method with an external, uncontrolled light transmitter. The outermost warp thread is detected and the edge position is transmitted to a controller.



Protruding weft threads (examples)

Application

The warp thread sensor SI 2001 can be used to implement a blade follow-up (BT 8xxx) for the purpose of cutting protruding weft threads at the tenter exit. Web guiding based on the outermost warp thread is also possible.



Example application: blade follow-up with cutting unit BT 8xxx

Technical data – sensor

Measuring range	45 x 45 mm
Distance A *	260 mm
Distance B **	296 mm
Resolution	0.175 mm / pixel
Cycle time	8.3 ms
Web speed	Max. 100 m/min (120 fps)
Operating voltage	24 V DC
Current consumption	2 A
Installation altitude	Max. 2000 m above sea level
Ambient temperature	0°C to +60°C
Storage temperature	-25°C to +90°C
Humidity	15 to 95% (non-condensing)
Protection class	IP 54
Weight	1.90 kg
Dimensions (L x W x H)	198 x 135 x 171 mm

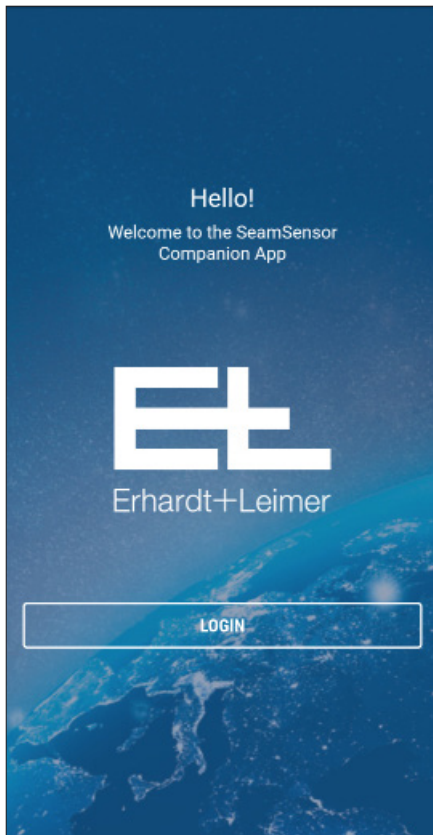
* Distance between sensor holder and web

** Distance between sensor housing and web

Technical data – light transmitter

Operating voltage	24 V DC
Current consumption	2 A
Dimensions (L x W x H)	160 x 90 x 25 mm

Subject to technical change without notice



Start screen

"E+L AI Manager" app for Android and iOS

Functions

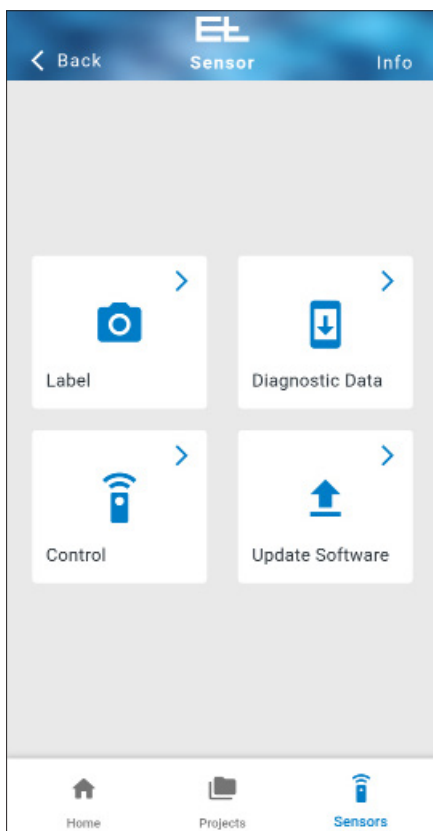
- Authenticated login for secure connections
- Automatic notification and download option for software updates
- Installation of new software on the sensor via WLAN
- Live test of the new software via the integrated scanner (comparable with a QR code scanner)
- Access to log files
- Control of the sensors
- Transfer of log and image files from the sensor to the mobile device and, if necessary, on to the E+L server in order to improve detection rates



Android



iOS



Sensor overview