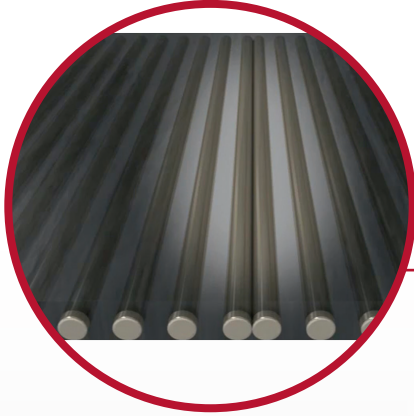
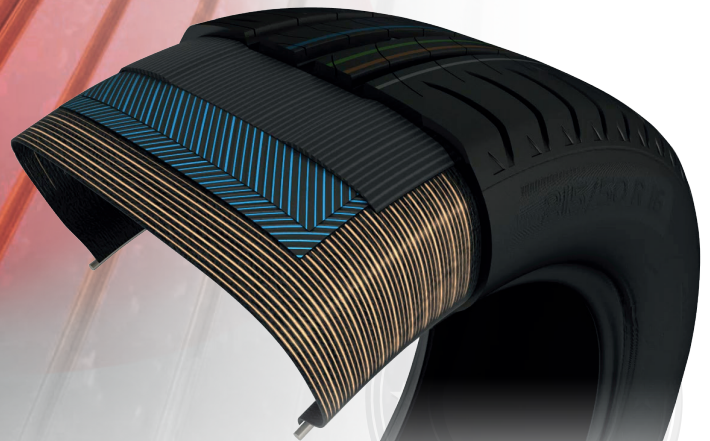
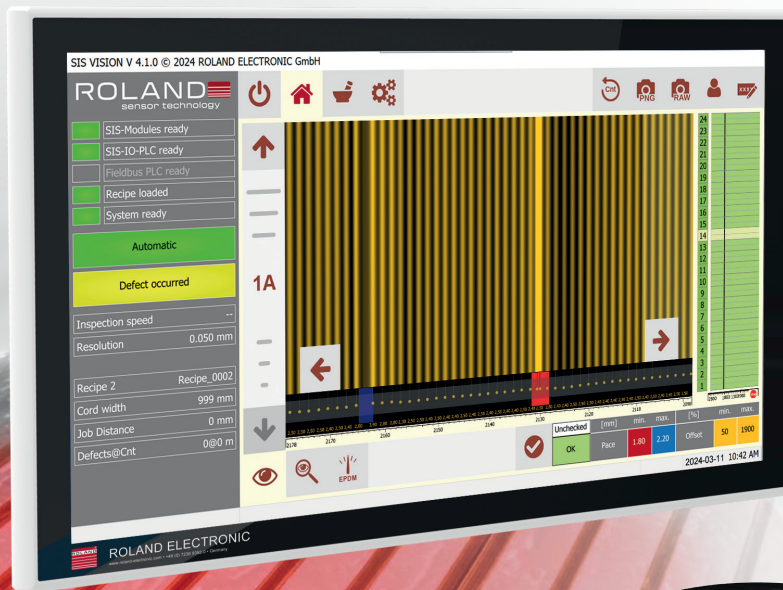




SIS VISION

THE MAGIC EYES IN STEEL CORD INSPECTION

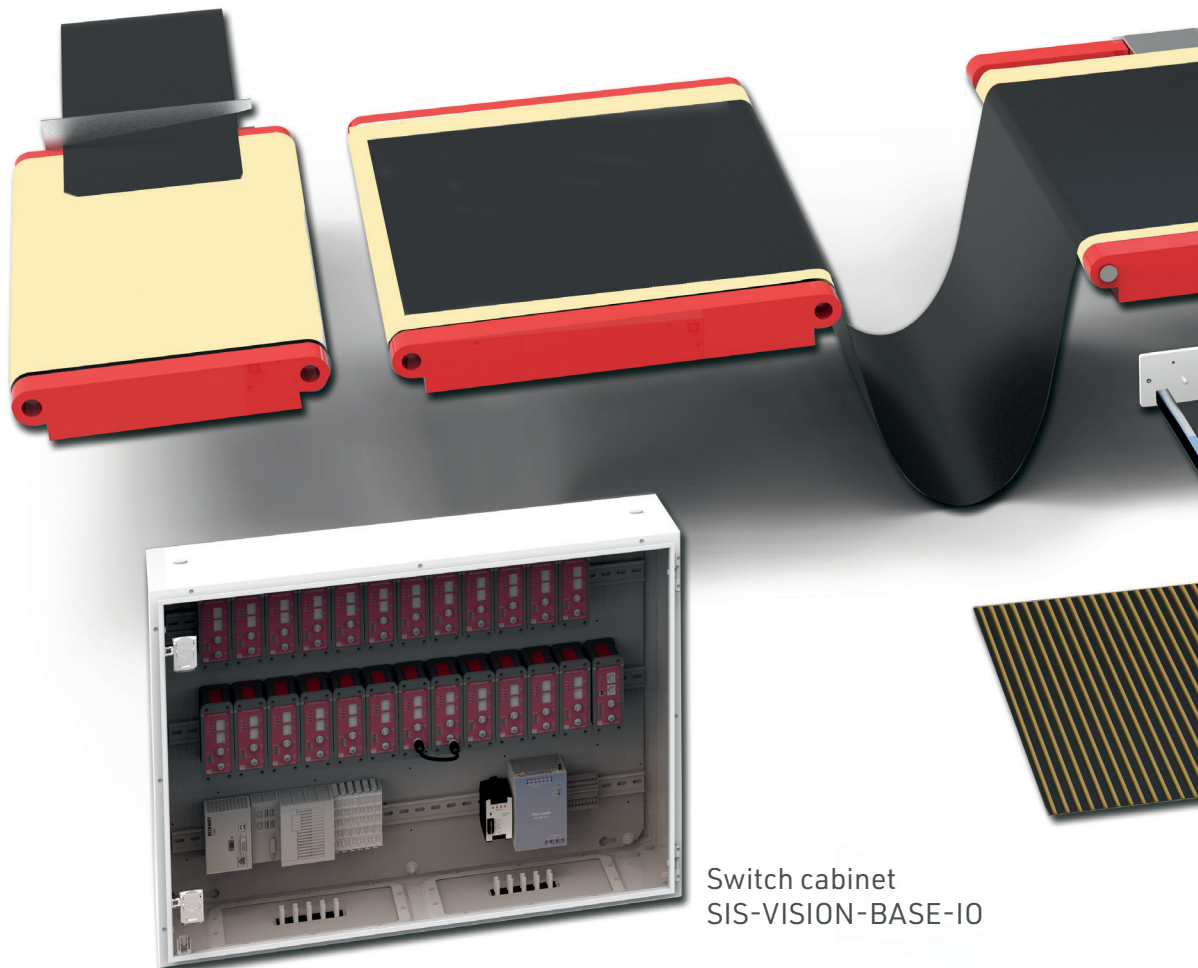
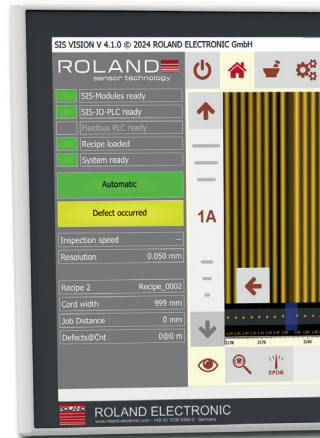
- Non-destructive online monitoring of wire distance and wire position in the steel cord at full production speed.
- New high resolution sensor technology enables process-reliable quality monitoring incl. live EPDM / EPI display.
- Easy integration into breaker lines with the angle adjustable sensor bracket - ACU.



SIS VISION

- Online quality monitoring of wire distance and wire position in steel cord at full production speed, at body ply and breaker material
- New high resolution sensor technology enables a live EPDM / EPI display
- Easy integration into new and existing production lines
- For LTR, TBR, PCR und OTR

The SIS VISION system consists of sensors, corresponding hardware and software and a touch control panel. Due to the variable number of sensors, the customer-specific material width can be optimal covered and reliably monitored at full production speed. The new technology evaluates the wire distance as well as the wire position and wire density (EPDM = „Ends Per DeciMeter“).

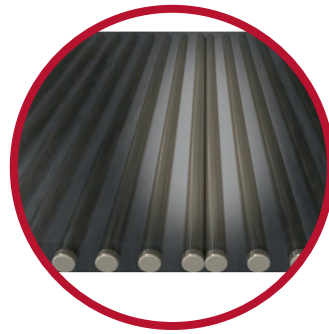
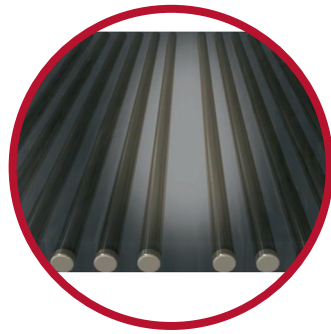
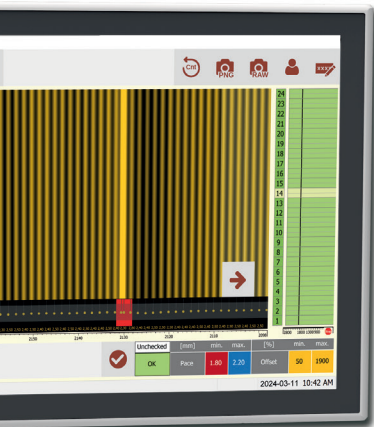


Switch cabinet
SIS-VISION-BASE-IO

An integration is quite simple - the easy-to-install parts can be put into operation in just a few steps. Thanks to the simple and intuitive user interface, the user can look non-destructively into the material and quickly get an idea of the quality, position and arrangement of the wires in the steel cord. Thanks to the industrial communication between SIS VISION and line control, the material defect is positioned to a predefined location for direct repair. A fully integrated into production process is guaranteed.



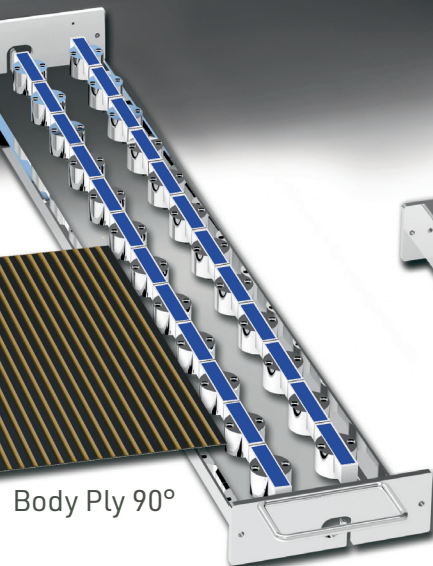
THE MAGIC EYES IN STEEL CORD INSPECTION



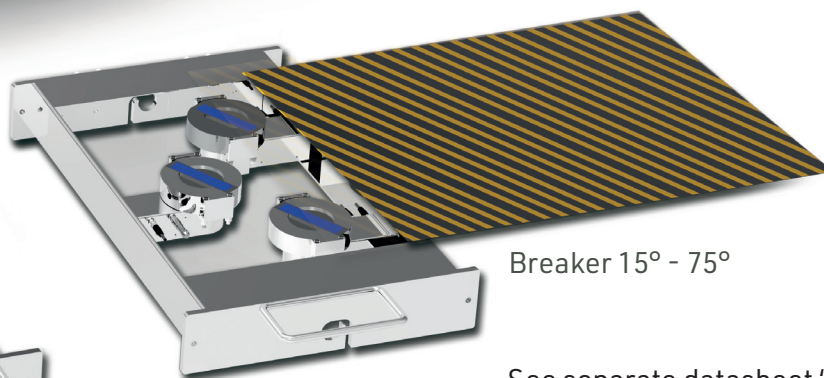
Reliable detection of material faults in steel cord: *open splice or missing wire* (left) *double or narrow wires* (middle) and *local defects, such as crossed, loose or jumped wires* (right).



As key-turn-solution for breaker liners (steel cord with angled wires), ROLAND ELECTRONIC provides the angle adjustable sensor bracket ACU.

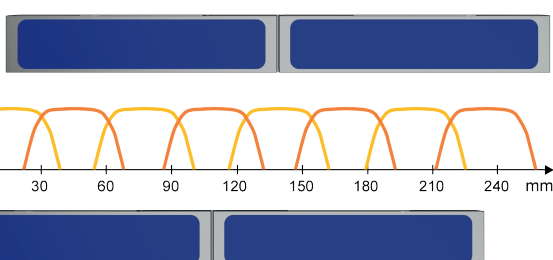


Body Ply 90°



Breaker 15° - 75°

See separate datasheet "SIS-VISION-ACU"



With the ACU it is possible to integrate the SIS VISION system into breaker lines. Depending on material type, angle settings are stored in the respective recipes. By selecting the recipe via PLC or operator, the sensors are automatically aligned to the desired angle.

The modern fieldbus interface not only enables the required data exchange with the higher-level PLC, but also enables the transfer of process information and data that fulfill industry standard 4.0 in the context of quality logging and storage.



Technical Data

SIS VISION Specifications	min	max
Steel cord width:	240 mm	4800 mm (larger on request)
Inspection width at 100 % coverage ratio:	1440 mm at 24 sensors	
Steel cord belt thickness:	1.0 mm	10 mm (larger on request)
Wire diameter:	0.6 mm at min. 4x 0.15 mm (smaller on request)	8.0 mm (larger on request)
Wire angle:	90° (for angle steel cord see separate datasheet "SIS-VISION-ACU")	
Conveyor belt thickness:	1.5 mm	2.5 mm (recommended)
Sensor carrier sheet thickness:	1.0 mm	1.5 mm (recommended)
Conveyor belt + sensor carrier sheet = typical thickness:	4.0 mm	
Transport velocity at 90° wire angle:	0.5 m/min	60 m/min (depending on resolution)
Detection width of 1 sensor:	2 x 30 mm	
Number of sensors:	1	24

	SIS-VISION-BASE-IO	SIS-VISION-SENSORS	SIS-VISION-DISPLAY
Operating voltage / External fuse:	100...240 VAC 50/60 Hz / 6.3 A slow		24 VDC (min. 23 VDC max. 28 VDC) / 6 A
Power consumption:	< 480 W		< 40 W
Class of protection:	IP 65		
Inrush current:	20 A		< 5 A
Weight:	< 40 kg (88.1 lbs), empty weight	0.5 kg (1.1 lbs)	< 8 kg (17.6 lbs)
Ambient temperature / Air humidity:	during operation: 0°C ... 50°C / max. 95% rel. air humidity		
Dimensions (LxWxH):	800 x 600 x 300 mm (31.5 x 23.6 x 11.8 in)	118 x 59 x 25 mm (4.6 x 2.3 x 0.9 in)	540 x 340 x 70 mm (without support arm) (21.2 x 13.3x 2.7 in)

Order Information

Part no.	Description
SIS-VISION-BASE-IO	Basic equipment of the steel cord inspection system „SIS VISION“ for integration into the customer's cutting and splicing line: • Compact switch cabinet with pre-assembled components (PC, power supply, etc.) and the possibility to integrate of up to 24 (16 when using the ACU) sensor modules of the type SIS-VISION-SENSOR-MODULE. • 8Bit I/O PLC interface to the higher level PLC • Multitouch industrial display (support arm or front panel version), 21.5 inch, up to 100 m cable length • Encoder unit for SIS VISION, consisting of encoder module, encoder, cable
Fieldbus module	
SIS-VISION-FIELDBUS-XX*	Extension of the classic 8Bit I/O PLC interface, *XX= ET (EtherCAT), PN (ProfiNet), EN (EtherNet/IP)
Sensor module (Number of sensor modules = Number of sensors)	
SIS-VISION-SENSOR-MODULE	Sensor module for the system „SIS VISION“, incl. the necessary cable sets.
Sensors	
SIS-VISION-SENSOR-120-I	Sensor for the „SIS VISION“ system with 2x30 mm sensitive area, default sensor.
SIS-VISION-SENSOR-120-X	Sensor with 2x30 mm sensitive area, special type, depends on the customer's specification and corresponding application.
SIS-VISION-END-MAGNET	End magnet with holding plate (passive component) for sensors type „SIS-VISION-SENSOR-120-I“
Angle Control – ACU see separate datasheet "SIS-VISION-ACU"	
Sensor drawer - optional	
SIS-VISION-SENSOR-DRAWER	Customized sensor drawer with sensor bracket, for the installation of the sensors or the sensors with angle control unit (ACU).

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