

# LUMP 2000

2-axis and 3-axis lump and neckdown detectors for extrusion and rewinding lines  
- with unique double sensor technology



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With the LUMP 2000 devices, SIKORA offers outstanding technology for the detection of lumps and neckdowns on the surface of wires and cables. By using two or three measuring planes, the systems detect the smallest non-conformities at any line speed.

## Unique double sensor technology

Impressive is the intelligent double sensor technology, which distinguishes the LUMP 2000 devices in their performance. By using two sensors, so-called "ghost faults" are avoided. These faults are caused by light fluctuations from the outside, and

therefore, are no real faults. The double sensor technology, where the difference between both sensors is evaluated, thus allows the reliable detection of "real" faults. A powerful signal processor evaluates the number, height, depth and length of the fault location. The combination of the double sensor technology (differential measuring principle) with infrared light sources assures a fault detection with highest reliability, even under difficult conditions such as dirt, dust or extreme vibration. The lump detector is robust and can easily be installed in every extrusion line or rewinding machine lines due to its small dimensions.



2-axis lump detector LUMP 2010 XY

3-axis lump detector LUMP 2035 T

## Innovative answer for all applications

The XY gauge heads LUMP 2010 XY and LUMP 2025 XY are suitable for product diameters from 0.5 to 10 mm and 0.5 to 25 mm, respectively.

The LUMP 2000 XY models are perfect for the detection of larger faults and bamboo rings.

## T for Triple: Fault detection with highest reliability

The triple-axis measuring principle of the LUMP 2000 T devices is focused on the detection of punctual faults with consistently high detection probability, and thus, sets new technological standards. The LUMP 2010 T and LUMP 2035 T are applicable for product diameters from 0.25 to 10 mm and 0.5 to 35 mm, respectively.

## Special model for demanding applications

For the detection of lumps and neckdowns down to a size of 5  $\mu\text{m}$  at product dimensions from 0.1 to 0.5 mm, a special model is available. Please refer to our catalog for optical fiber measurement.

### Triple-axis lump detector for transparent products

A special edition of the LUMP 2010 T offers the additional future-oriented technology for the detection of lumps and neck-downs on transparent materials. The gauge head is available for product diameters from 0.25 to 10 mm.

### Intelligent and functional design

Another striking feature of the triple-axis devices is the sophisticated design. The gauge heads are open at the bottom to prevent dirt or water from contaminating the measuring plane and allowing for the easy movement of the gauge head, up and out of the extrusion line.

### Display solutions

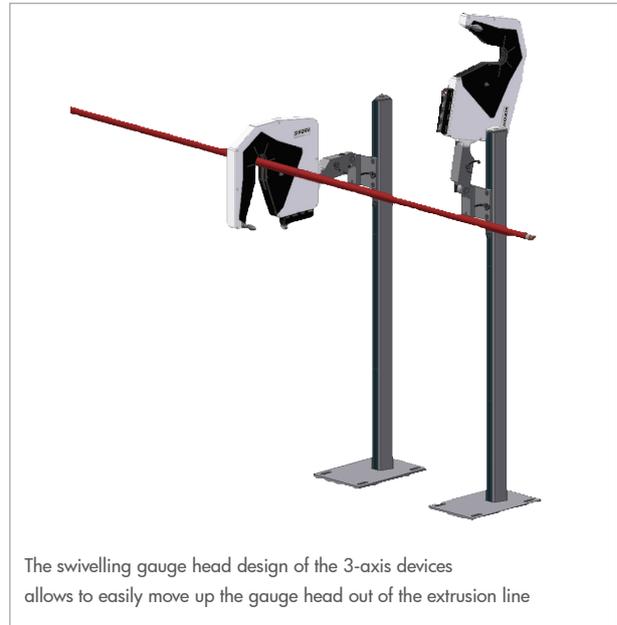
The setting of tolerances and the numeric display of lumps and neck-downs is realized with the REMOTE 2000 or a processor system of the ECOCONTROL series. Alternatively, the LUMP 2000 devices can be directly integrated into the line control via a universal interface module.

### Interfaces

The LUMP 2000 devices offer diverse interfaces such as RS485 or a RS232 diagnosis interface for direct connection to a PC or the display and control device REMOTE 2000. Optionally, a Profibus-DP interface or an industrial fieldbus such as Profinet IO, EtherNet/IP, CANopen or DeviceNet are available.

### Reporting

In combination with the REMOTE 2000 or any of the processor systems of the ECOCONTROL series, the LUMP 2000 devices provide length related recordings of lumps/neck-downs.



### Outstanding features

- 2-axis and 3-axis lump and neckdown detection
- 3-axis lump and neckdown detection for transparent products
- Highest reliability due to double sensor technology
- Fault analysis regarding type, dimension, length, number and position
- Easy to integrate into existing lines
- Elimination of "ghost faults"

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Certified according to  
DIN EN ISO 9001

## Technical data LUMP 2000 T

	LUMP 2010 T *	LUMP 2035 T
Product Diameter**	0.25 - 10 mm	0.5 - 35 mm
Min. Detectable Size (Lump/Neckdown)	0.02 mm	0.02 mm
Min. Fault Length	0.5 mm	0.5 mm
Speed Range	1 to 3,000 m/min	1 to 3,000 m/min
Dimension	250 x 150 x 62.5 mm	360 x 290 x 38.5 mm
Power Supply	100 - 240 V AC $\pm$ 10 %, 50/60 Hz	100 - 240 V AC $\pm$ 10 %, 50/60 Hz
Temperature Range	+ 5 to + 50 °C	+ 5 to + 50 °C
Interfaces	Serial interface RS485, setup and diagnosis interface RS232, fault contact Optional: analog input for lump/neckdown tolerance or alternatively industrial fieldbus (e.g. Profinet IO, EtherNet/IP, Profibus-DP, CANopen, DeviceNet)	

\* Specifications of LUMP 2010 T for transparent materials are identical

\*\* For lump detection of diameters from 0.1 to 0.5 mm, please refer to our catalog for optical fiber measurement.

## Technical data LUMP 2000 XY

	LUMP 2010 XY	LUMP 2025 XY
Product Diameter	0.5 - 10 mm	0.5 - 25 mm
Min. Detectable Size (Lump/Neckdown)	0.01 mm	0.01 mm
Min. Fault Length	0.5 mm	0.5 mm
Speed Range	1 to 3,000 m/min	1 to 3,000 m/min
Dimension	140 x 140 x 54 mm	260 x 240 x 70 mm
Power Supply	1100 - 240 V AC $\pm$ 10 %, 50/60 Hz	100 - 240 V AC $\pm$ 10 %, 50/60 Hz
Temperature Range	+ 5 to + 50 °C	+ 5 to + 50 °C
Interfaces	Serial interface RS485, setup and diagnosis interface RS232, fault contact Optional: analog input for lump/neckdown tolerance or alternatively industrial fieldbus (e.g. Profinet IO, EtherNet/IP, Profibus-DP, CANopen, DeviceNet)	

Technical data is subject to change

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