

LASER PRO

New standards in diameter measurement

With the new LASER PRO, SIKORA sets new standards in the field of diameter measurement. The model family comprises 3 innovative devices with 5 extended advantages for the user for product dimensions from 0.1 to 51 mm.

5 unique advantages in the extrusion line

1 Precise and repeatable measured values The diffraction analysis in combination with pulse-controlled laser diodes results in an impressive 500,000 measuring points per second per measuring axis in the entire measuring field. This results in 5,000 accurately measured values per second per measuring axis. This ensures that the values supplied are both accurate and repeatable. **2 Precise measured values despite vibrations** Thanks to the extremely short exposure time of less than 1/1,000,000 seconds, the individual precisely measured values per second per axis are captured with maximum image sharpness. This ensures absolute measuring accuracy, even at high line speeds with product vibrations. Each individually measured value achieves an extraordinarily high single value accuracy. **3 Robust technology and high availability** The non-contact measuring technology of the LASER PRO works entirely without moving parts and is therefore maintenance and wear-free. A single calibration before delivery is sufficient to guarantee precision for the lifetime of the device. The availability of the laser measuring heads is 99.8 %. **4 Slim design with swivel concept** The measuring heads of the LASER PRO family provide the ultimate functionality with their compact and slim design. The optical components are located in protected areas. The diffraction analysis detects unavoidable, gradually occurring contamination in real time and reports it. All models are designed to be open at the bottom so that neither water nor dirt can fall into the measuring head. The swiveling measuring head concept allows the device to be swiveled out of the working area if required. **5 FFT analysis for detecting irregularities during extrusion – Wire & Cable** The LASER PRO offers the option of FFT analysis to detect periodically recurring variations in cable parameters as well as predict the expected return loss (SRL). These are important tools for producing high-quality cables and detecting irregularities during cable extrusion.

Spécifications

	LASER 13 XY	LASER 32 XY	LASER 51 XY
Measuring range	0,1-13 mm	0,5-32 mm	0,5-51 mm
Visible range	20 mm	35 mm	60 mm
Accuracy	± 0,5 µm	± 1,0 µm	± 1,0 µm
Repeatability	± 0,1 µm	± 0,2 µm	± 0,5 µm
Exposure time	< 1/1.000.000 Sek	< 1/1.000.000 Sek	< 1/1.000.000 Sek
Measuring rate	500,000 measuring points, 5,000 high-precision measured values (per sec/per measuring axis)	500,000 measuring points, 5,000 high-precision measured values (per sec/per measuring axis)	400,000 measuring points, 4,000 high-precision measured values (per sec/per measuring axis)
Power supply	100-240 V AC	100-240 V AC	100-240 V AC
Interfaces	USB, Ethernet Optional: Profibus-DP, Profinet IO, EtherNet/IP, DeviceNet, analog outputs, digital inputs and outputs	USB, Ethernet Optional: Profibus-DP, Profinet IO, EtherNet/IP, DeviceNet, analog outputs, digital inputs and outputs	USB, Ethernet Optional: Profibus-DP, Profinet IO, EtherNet/IP, DeviceNet, analog outputs, digital inputs and outputs
Dimensions (LxWxH; housing only without interfaces)	392 x 51 x 202 mm	486 x 51 x 257 mm	497 x 51 x 282 mm

Clear visualization and control of the diameter

The measured values of the LASER PRO are displayed on the ECOCONTROL. Trend data, statistical functions, FFT and SRL analyses can also be viewed. The SET POINT control module can be used to control the diameter to

the setpoint or minimum value.