

ARIS

WEB POSITION SENSOR

One sensor to roll them all.

The ARIS Web Position Sensor is supported by a patented sensor technology that eliminates the need for setup or re-calibration when material or process properties change. The web position sensor technology uses an infrared light source and optical fiber technology to accurately detect the position of the web. The sensing principle relies on light scattering and spatial filtering properties of fiber optics to accurately determine the web position. ARIS WPS is essentially an affordable vision based sensing system which can be used for edge, line, and contrast sensing.

KEY FEATURES

- Infrared LED light source
- Fiber Optic Technology
- One dimensional camera
- High speed intelligent digital signal processing
- Edge sensing, line sensing and contrast sensing with white LED light option



BENEFITS

- No setup or calibration
- Precise and absolute measurement at high speed enables waste reduction
- Increased reliability since the sensor is unaffected by ambient light, temperature, and sound vibrations
- Reliable measurement especially for nonwoven materials

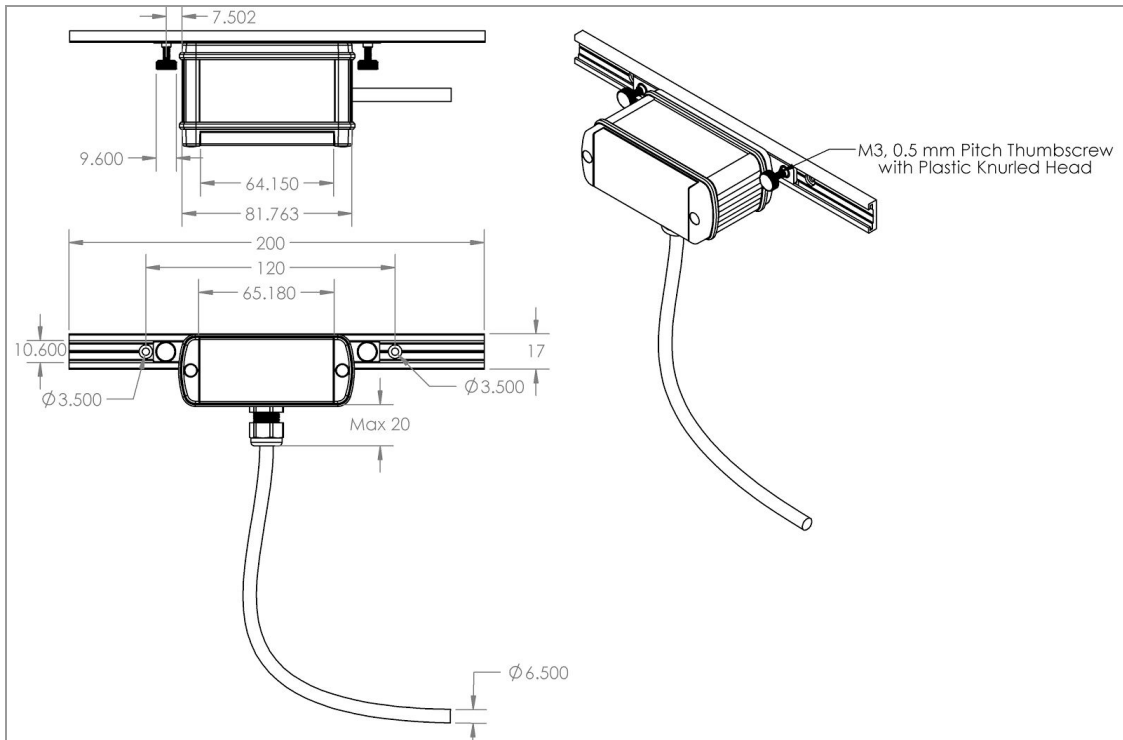
GENERAL SPECIFICATIONS

Sensor Type	Fiber optic
Sensor Resolution	0.0635 mm Material Independent
Accuracy	>99.2%
Sensor Range	16mm and 48mm
Input Supply	24 V DC

Roll-2-Roll Technologies LLC
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Stillwater, OK 74074
www.r2r-tech.com
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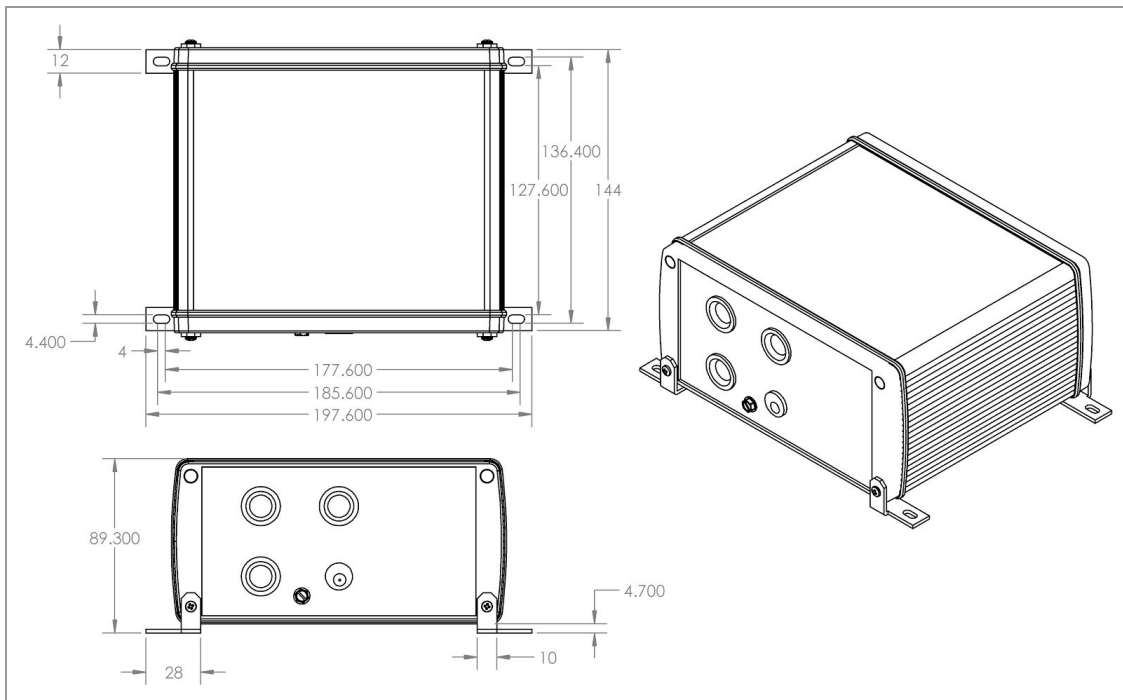


SENSOR HEAD



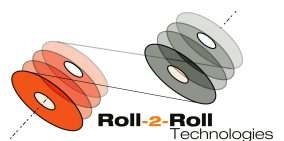
48mm Sensor Head Assembly Dimensions (All Dimensions are in mm)

SENSOR CONTROL UNIT



ARIS WPS Sensor Control Unit (All Dimensions are in mm)

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PRODUCT SPECIFICATIONS

General Specifications

- Operating Temperature - 0-60° C
- Operator Interface - Color touch screen
- Language - Language independent icons
- Input Supply - 24 V DC

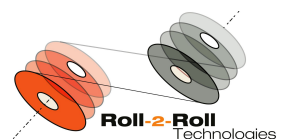
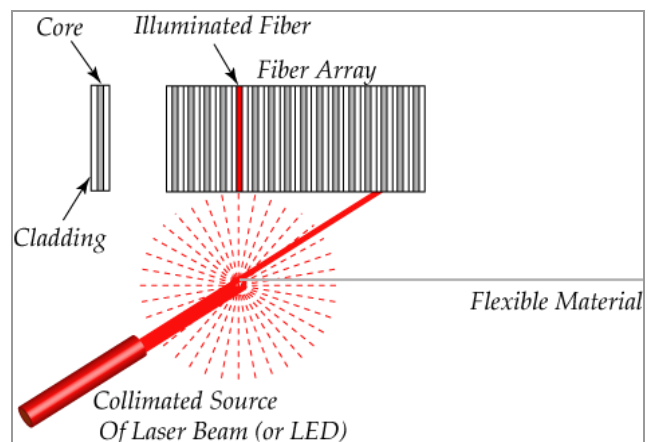
Sensor

- Sensor Type - Fiber optic
- Sensor Resolution - 0.0635 mm Material Independent
- Sensor Range - 16 mm and 48 mm
- Accuracy - >99.2%

HOW DOES THE SENSOR WORK?

The ARIS Web Position Sensor uses an infrared light source and fiber optic technology to accurately detect the position of the web. The sensing principle relies on light scattering and spatial filtering properties of fiber optics to accurately determine the web position. The spatially filtered light is projected onto a one dimensional line scan camera and the image recorded by the camera is processed using advanced digital signal processing algorithms to accurately detect the position of the material.

A light source, such as laser or LED is used to illuminate the area near the edge of the web. As the light falls on the web, the light is scattered in all directions. The scattering of light is then filtered using an array of optical fibers before it is projected onto a camera. Since the optical fibers are directionally sensitive, light is spatially filtered in a way that only fiber(s) directly inline with the scattered light are illuminated. All other fibers do not couple light since the scattered light falls on them at an angle. Any material, such as opaque, transparent, porous or nonporous, scatters (or reflects) light. Therefore, the sensor is not affected by the material properties. The intelligent digital signal processing automatically adapts to any changes to provide a true, absolute measurement.



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USA

To:



The power of vision without the hassle of calibration.



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