



## Non-Contact, Eccentricity Measurement System

# CenterScan 2010

### for Wire & Cable Production

- Non-contact gauge
- Multi-function: eccentricity, diameter and flaw detection
- Ultra accurate, low-drift measurements
- High-speed signal processing for precise measurements on stranded products
- Compact design for wider range of gauge installation on production line
- Robust electronics with superior noise immunity allows closer placement to line devices
- Factory calibrated for fast, easy setup and simple recompensation
- Accurate product positioning with minimal alignment
- Rugged construction for reliable operation under the harshest conditions
- Flexible communication for easy integration, data management
- Optional ultra-bright integrated display and operator interface for ease of use

### Wire and cable manufacturers now have better quality control

When the core of insulated wire and cable moves off-center, your product quality suffers. And with the increasingly tighter tolerances demanded by users, unchecked wire or cable eccentricity can leave you with reels of unusable product. There's now a proven solution to help you dramatically control and improve the quality of your product while reducing material consumption and scrap, increasing productivity, and maximizing your profits.

**The CenterScan 2010 measurement system from Beta LaserMike** accurately and reliably monitors the diameter of insulated wire and cable and eccentricity of conductors during extrusion and insulation processes. This intelligent gauge never touches your product and can measure diameters from 0.1–10 mm (0.004 – .40 in) and determine eccentricity and diameter with  $\pm 0.0005$  mm ( $\pm 0.000020$  in) accuracy. Also, CenterScan's high-speed measurement capabilities enable you to run higher line speeds and produce more finished wire and cable in less time while maintaining the highest level of product quality.

# BETA LaserMike

Measured by Commitment

# Intelligent technology that's engineered for the highest accuracy, performance, and return on value

CenterScan 2010 is designed for easy installation and operation, as well as reliability and long life. This means your new measurement system will be up and running in no time. And, you'll have the peace of mind that it will continue to operate at the highest level of performance for the long term with minimal maintenance. In a matter of months, you'll realize dramatic cost savings in production, and you'll continue to realize these savings year after year.

**See for yourself what makes CenterScan 2010 the measurement system of choice for wire and cable manufacturers:**

## Compact design meets broader installation requirements

Unlike competitive systems, CenterScan has a compact footprint and is designed with robust electronics that possess superior immunity to noise. This means not only can you install the gauge at a wider range of locations on the extrusion line, but you can locate it closer to other devices on the line with the assurance of still delivering the most accurate measurements.

## Faster, easier setup

Competitive gauges require product to be centered and leveled within a very narrow target window to ensure measurement accuracy. They also require elaborate and difficult calibration routines to zero any eccentricity offsets due to environmental factors. Since the CenterScan 2010 system is factory calibrated, no special adjustments or setups are needed to get your product properly centered and ready to run. If adjustments are required, CenterScan is easy to recompensate. CenterScan 2010 does not require a servo or mechanical tracking system or special guide rollers to keep the product centered. And, it is less sensitive to wire or cable position and allows the product to be positioned within a 6 mm (.24 in) window.

## Simpler to operate and maintain

CenterScan 2010 is easy to learn and use, eliminating the need to hire and train highly specialized staff. It is also built to IP65 rating, providing environmental protection against dust particles, debris, and low-pressure water. An integrated air purge feature keeps the gauge optics free from airborne contaminants.

## Applications

The CenterScan 2010 gauge is designed to effectively measure all round, single conductor wire and cable with solid or stranded conductors. Wire and cable applications include:

- LAN
- RF
- Coaxial
- Mini coaxial
- Telephone
- Automotive
- Installation
- And more...

*CenterScan 2010 is compact,  
easy to calibrate and  
simple to use!*



## CenterScan 2010 measurement system includes:

- Inductor Driver
- Gauge head with high-frequency laser scanning technology and sensing coils
- Optional controller

## Optical and inductive measurement technology detects the center of your wire with the highest accuracy

CenterScan 2010 combines optical and inductive technology to precisely measure the insulation diameter and conductor eccentricity. The optical measurement system is based on Beta LaserMike's *legendary AccuScan* technology. This high-frequency laser scanning engine measures the outer diameter and position of insulation in two axes. The orientation of the conductor is measured inductively. A driver induces an alternating current into the conductor to produce a magnetic field along the wire. This field is detected by four sets of highly sensitive coils strategically located around the wire to determine the precise location of the conductor.

**BETA LaserMike**  
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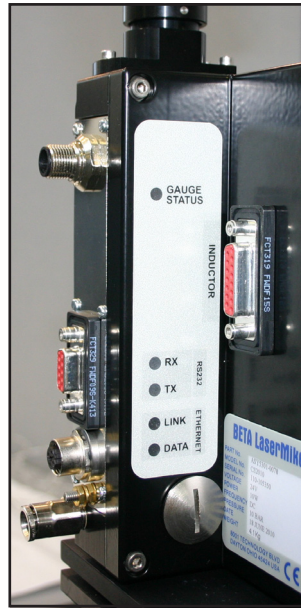
# Flexible communication for easy integration

## Wide range of interfacing options

The CenterScan 2010 measurement system includes a wide range of interfacing options for flexible communication and easy integration into your production environment. It comes standard with RS232 connection. Communication options include Profibus, Devicenet, Ethernet IP, and CANopen. Other options include analog outputs, relay outputs, in-head FFT, and single-scan flaw detection. A gauge status indicator displays the operating status of the CenterScan 2010. All connections are located in the gauge's side panel for easy access.

## Comprehensive control capabilities keep your production processes running smoothly

The CenterScan 2010 system transfers eccentricity and diameter measurements to either a Beta LaserMike controller, such as the DataPro 3100 or DataPro 5000, or third-party devices for integrated process control. Users are provided with detailed product information and process parameters, such as wire and cable dimensions, line speed (optional), and other status information to monitor every step of the manufacturing process to produce the highest quality product. CenterScan 2010 can also be supplied with **XVIEW**, a Windows®-based software tool that allows you to view trend and log measurement data on your desktop or laptop PC.



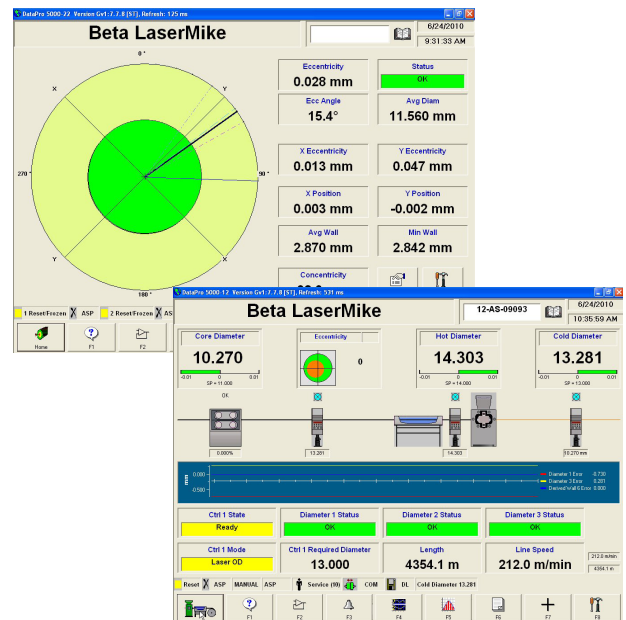
## Optional integrated display with operator interface

An ultra-bright fluorescent display with operator interface is available for the CenterScan 2010. This display can be mounted directly to the CenterScan 2010 system for easy readout and access by the operator. The gauge can be configured to operate as a local display or in stand-alone mode for continuous display of eccentricity and diameter measurements.



Go to Main menu  
Go to menu item above  
Select option above  
Increment value by one

Go to Main menu  
Go to menu item below  
Select option below  
Decrement value by one

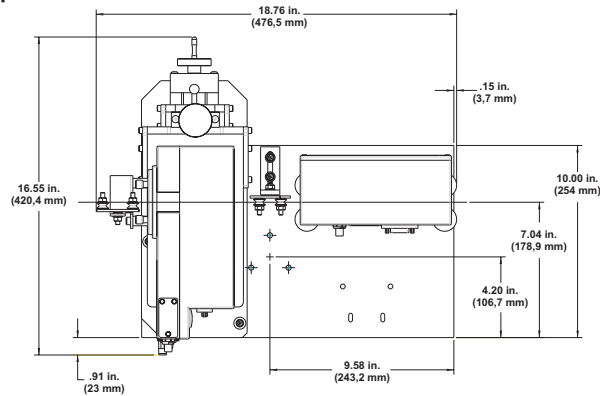


Beta LaserMike's controllers, such as the DataPro 5000, provides product and process-critical information including wire and cable position, diameter, eccentricity, ovality, and wall thickness, as well as line speed (optional), statistical data, alarms, and other details. You can also configure Beta LaserMike controllers to send input signals to PLCs to control external devices.

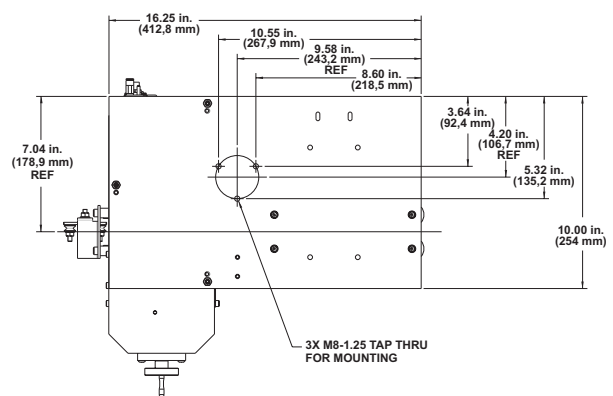


# Technical specifications

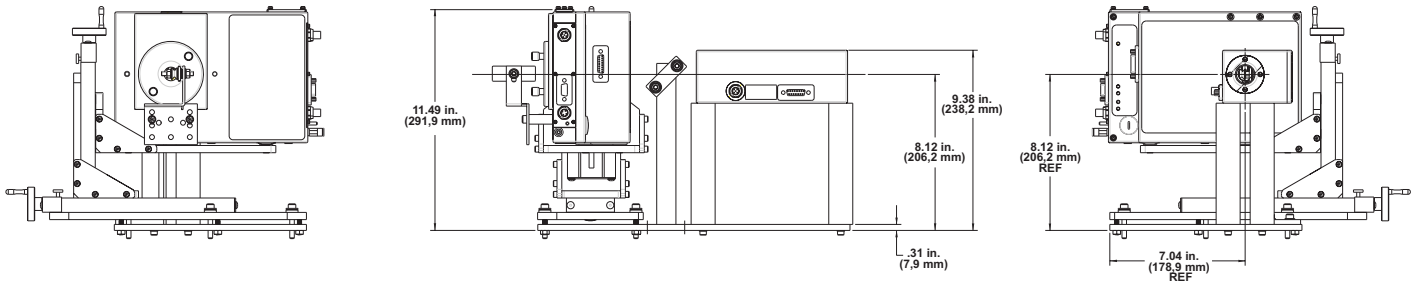
Top View



Bottom View



Side Views



## CenterScan 2010

Measurement range	0.1 – 10 mm (0.004 – 0.40 in)
Gate Size	14 mm (0.55 in)
Resolution	0.00001 mm (0.0000004 in)
Accuracy	±0.0005 mm <sup>1</sup> (±0.000020 in)
Measurement speed	1200 per axis per second
Dimensions (overall)	463 x 279 x 202 mm (18.25 x 11 x 7.96 in)
Weight	12.3 kg (27 lbs)
Environment:	
Ambient operating temperature	5 – 50°C (41 – 122°F)
Ambient storage temperature	-20 – 50°C (-4 – 122°F)
Power supply	24 VDC; 2.3AMP

<sup>1</sup>±0.02% of product size

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Beta LaserMike USA  
8001 Technology Blvd.  
Dayton, OH 45424 USA  
Ph: +1 937 233 9935  
Fax: +1 937 233 7284

Beta LaserMike Europe  
Unit 3, First Avenue  
Globe Park, Marlow  
Buckinghamshire, SL7 1YA  
United Kingdom  
Ph: +44 1628 401510  
Fax: +44 1628 401511

Beta LaserMike Germany  
Fallgatter 3  
44369 Dortmund  
Deutschland  
Ph: +49 231 758 930  
Fax: +49 231 758 9333

Beta LaserMike Asia  
Unit 302, XinAn Plaza, Building 13,  
No. 99 TianZhou Rd.  
Shanghai 200233, China  
Ph: +86 21 6113 3688  
Fax: +86 21 6113 3616

Visit our website at: [www.betalasermike.com](http://www.betalasermike.com)

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