Roll-2-Roll Technologies

PRODUCT BROCHURE

ODC 48



Eliminate Recalibration. Detect Any Material.

Key Features

- **Zero recalibration** – sensor adapts automatically to any material (clear, opaque, metallic, nonwoven, mesh)
- **High resolution** – 0.0635 mm hardware resolution
- **Material-agnostic detection** – fiber-optic technology based on light scattering and spatial filtering
- **Temperature immune** – unlike ultrasonic sensors, performance unaffected by temperature changes
- **One sensor, multiple applications** – edge guiding, width measurement, centerline detection, and more

Benefits

- **Stop losing hours** to sensor recalibration when switching between materials
- **Eliminate changeover delays** – no manual sensor adjustments between product runs
- **End quality escapes** caused by undetected sensor drift between changeovers
- **Remove safety risks** from operators accessing sensors in awkward positions
- **Prevent hidden scrap** from temperature-related inaccuracies that plague ultrasonic sensors

Specifications

Sensor Type	Fiber-optic (diffuse-reflective)	**Sensing Range**	48 mm (1.9 in)
Resolution	0.0635 mm (0.0025 in)	**Repeatability**	±0.127 mm (±0.005 in)
Linearity Error	<0.25%	**Response Time**	20 ms standard; 1 ms with special firmware
Camera Type	CMOS line scan camera	**Light Source**	Infrared (880 nm), UV (385 nm), White light
Working Distance	15-25 mm (0.6-1 in)	**Cable Length**	Up to 10 m (33 ft)
Connector	M12 12-pin male A Coded	**Housing**	PA 12 Nylon
IP Rating	IP54 (IP64 on request)	**Operating Temp**	-10°C to 65°C (14°F to 150°F)
Controller Required	Yes (SCU5 or SCU6x)	**Vacuum Compatible**	Yes

Applications

- Edge sensing, measurement and guiding
- Centerline web position sensing, measurement and guiding
- Web width measurement and monitoring
- Thread/ribbon inspection
- Flag detection
- Registration mark detection
- Defect detection

Compatibility

SUPPORTED LINE SPEEDS

500-1000 fpm

SUPPORTED MATERIAL TYPES

Clear Film, Nonwoven

SUPPORTED WEB WIDTHS

Wide (48"-72"), Extra Wide (>72")

Available Configurations

Part Number	Configuration
3-410012	ODC 48-IR QD (1" Mounting)
3-410022	ODC 48-WL QD (1" Mounting)
3-410032	ODC 48-UV QD (1" Mounting)
3-410112	ODC 48-IR QD (1" Mounting w/Left Side Connector)
3-410122	ODC 48-WL QD (1" Mounting w/Left Side Connector)
3-410132	ODC 48-UV QD (1" Mounting w/Left Side Connector)
3-410212	ODC 48-IR QD (1" Mounting w/Right Side Connector)
3-410222	ODC 48-WL QD (1" Mounting w/Right Side Connector)
3-410232	ODC 48-UV QD (1" Mounting w/Right Side Connector)
3-411012	ODC 48-IR QD (NW 17 Rail)
3-411022	ODC 48-WL QD (NW 17 Rail)
3-411032	ODC 48-UV QD (NW 17 Rail)
3-412012	ODC 48-IR QD (No Mounting)
3-412022	ODC 48-WL QD (No Mounting)
3-412032	ODC 48-UV QD (No Mounting)
7-020001	1" Mounting Bracket for WPS and ODC Family
7-020004	1.5" Mounting Bracket for WPS and ODC Family
7-020005	Mounting Bracket for 1" or 25 mm Extrusion for WPS, ODC Family and 1DC Series
7-020006	Mounting Bracket for 1.5" or 40 mm Extrusion for WPS, ODC Family and 1DC Series

Supporting Documentation

Manuals (1)

- Sensor Installation Recommendations: Inspection Applications

2D Drawings (3)

- New Mounting Brackets for WPS, ODC Family and 1DC Series - 1.5 in or 40 mm extrusion
- New Mounting Brackets for WPS, ODC Family and 1DC Series - 1in or 25 mm extrusion
- ODC 48 xx-QD: 2D Drawing

3D Models (9)

- 1.5in Mounting Bracket for WPS and ODC Family
- 1in Mounting Bracket for WPS and ODC Family
- Mounting Bracket for 1.5in or 40mm Extrusion for WPS, ODC Family and 1DC Series
- Mounting Bracket for 1in or 25mm Extrusion for WPS, ODC Family and 1DC Series
- ODC 48-xx QD (1" Mounting w/Left Side Connector)
- ODC 48-xx QD (1" Mounting w/Right Side Connector)
- ODC 48-xx QD (No Mounting)
- ODC 48-xx QD (NW 17 Rail)
- ODC 48-xx QD w/1in Mounting Bracket

Wiring Diagrams (4)

- SCU5 C(x)D Wiring with ODC (Industrial Ethernet)
- SCU5 D Wiring with ODC (Analog Output)
- SCU5 DD Wiring with ODC (Digital Output)
- SCU5 DI Wiring with ODC (Digital Input and Output)

Scan for datasheets, 3D models & full documentation
https://r2r.tech/products/sensors/odc-48

Ready to Get Started?

Contact our experts to discuss how this product fits your application.
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