

## ODC 48



Eliminate Recalibration. Detect Any Material.

### Key Features

- **Zero recalibration** – sensor adapts automatically to any material (clear, opaque, metallic, nonwoven, mesh)
- **High resolution** – hardware resolution independent of sensing range
- **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

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<b>Sensor Type</b>	Fiber Optic (diffuse-reflective)	<b>Sensing Range</b>	48 mm (1.9 in)
<b>Resolution</b>	0.0635 mm (0.0025 in)	<b>Repeatability</b>	>99.9%
<b>Linearity Error</b>	<0.25%	<b>Response Time</b>	20 ms standard, 2 ms with special firmware
<b>Camera Type</b>	CMOS line scan camera	<b>Light Source</b>	Infrared (880 nm), UV (385 nm), White light
<b>Working Distance</b>	15-25 mm (0.6-1 in)	<b>Cable Length</b>	Up to 10 m (33 ft)
<b>Connector</b>	M12 12-pin male A Coded	<b>Housing</b>	PA 12 Nylon
<b>IP Rating</b>	IP54 (IP64 on request)	<b>Operating Temp</b>	-10°C to 65°C (14°F to 150°F)
<b>Controller Required</b>	Yes (SCU5 or SCU6x)	<b>Vacuum Compatible</b>	Yes

## Applications

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- 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

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### SUPPORTED LINE SPEEDS

500-1000 fpm

### SUPPORTED MATERIAL TYPES

Clear Film, Nonwoven

### SUPPORTED WEB WIDTHS

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

## Available Configurations

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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 Sensors
7-020004	1.5" Mounting Bracket for WPS and ODC Sensors
7-020005	Mounting Bracket for 1" or 25 mm Extrusion for WPS, ODC and 1DC Sensors
7-020006	Mounting Bracket for 1.5" or 40 mm Extrusion for WPS, ODC and 1DC Sensors

## Supporting Documentation

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### Manuals (1)

- Sensor Installation Recommendations: Inspection Applications

### 2D Drawings (3)

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

### 3D Models (9)

- 1.5in Mounting Bracket for WPS and ODC Sensors
- 1in Mounting Bracket for WPS and ODC Sensors
- Mounting Bracket for 1.5in or 40mm Extrusion for WPS, ODC and 1DC Sensors
- Mounting Bracket for 1in or 25mm Extrusion for WPS, ODC and 1DC Sensors
- 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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