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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