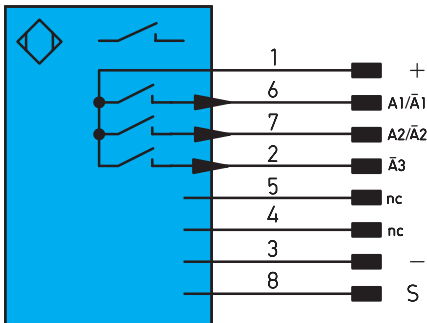


# OPT Series Color Sensors



- Capable of evaluating up to 3 colors simultaneously
- Single lens optics allows this sensor to have a small spot diameter and large working range
- Reflex mode operation
- 3 switching outputs
- IP68

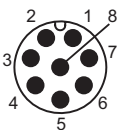
## Wiring Diagram



| Legend |   |
|--------|---|
| +      | Supply Voltage +                                  |
| -      | Supply Voltage 0V                                 |
| A1/Ā1  | Switching output 1 (N.O./N.C.)                    |
| A2/Ā2  | Switching output 2 (N.O./N.C.)                    |
| Ā3     | Input (analog or digital)/switching output (N.C.) |
| S      | Shielding   |

## Connectors

### 8-Pin M12 connector



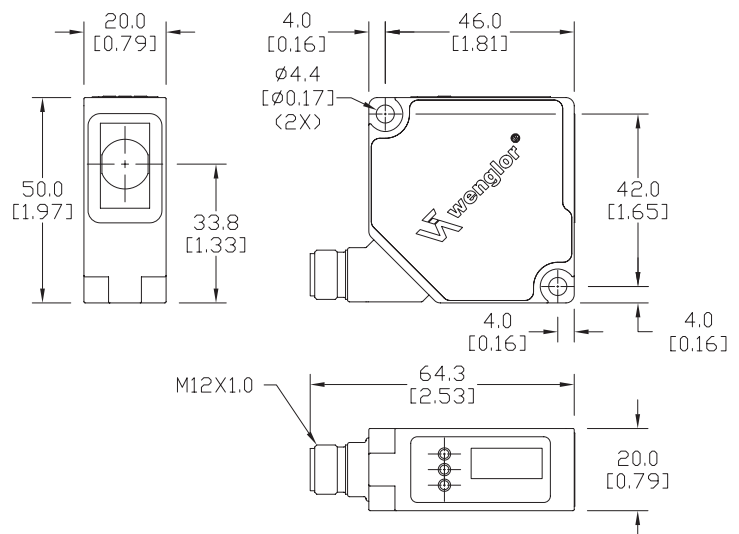
## OPT2023 Specifications

|                               |                             |
|-------------------------------|-----------------------------|
| Part Number                   | OPT2023                     |
| Price                         | \$372.00                    |
| Working range                 | 30 to 40mm                  |
| Working distance              | 35mm                        |
| Light source                  | White light                 |
| Service Life (T = +25°C)      | 100,000h                    |
| Max. ambient light            | 10,000 Lux                  |
| Spot diameter                 | 3mm                         |
| Operating voltage             | 10 to 30VDC                 |
| No load supply current        | < 80mA                      |
| Switching frequency           | 1.8 kHz                     |
| Response time                 | ~ (1000/1.8) μs x filter    |
| Temperature range             | -25 to 60°C [-13 to 140°F]  |
| Switching outputs             | 3 NPN/PNP                   |
| Switching output voltage drop | 1.5 V                       |
| Operating (load) current      | 100mA                       |
| Short circuit protection      | yes                         |
| Reverse polarity protection   | yes                         |
| Overload protection           | yes                         |
| Digital inputs                | 2                           |
| Protection class              | III                         |
| Setting method                | Teach-In                    |
| Housing material              | Plastic                     |
| Degree of protection          | IP68                        |
| Connection                    | 8-pin M12                   |
| Operating mode                | Selectable light-on/dark-on |
| Approvals                     | CE, RoHs, cULus,            |

Note: To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.

## Dimensions

mm [inches]



See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.

# Accessories for OPT Series 50x50mm Photoelectric Sensors

## Right-angle Brackets

Mounting bracket, right-angle, nickel-plated steel or 304 stainless steel.  
For use with OPT series 50x50mm photoelectric sensors.

| Accessories for OPT Series 50x50mm Photoelectric Sensors |         |  |                            |             |
|--|---------|--|----------------------------|-------------|
| Part Number  | Price   | Description  | Drawing Link               | Weight [lb] |
| <a href="#"><u>OPT2031</u></a>                           | \$7.00  | Wenglor mounting bracket, right-angle, nickel-plated brass. For use with OPT series 50x50mm photoelectric sensors.                                     | <a href="#"><u>PDF</u></a> | 0.24        |
| <a href="#"><u>OPT2038</u></a>                           | \$11.00 | Wenglor mounting bracket, right-angle, vertical and horizontal adjustment, 304 stainless steel. For use with OPT series 50x50mm photoelectric sensors. | <a href="#"><u>PDF</u></a> | 0.19        |



[OPT2031](#)



[OPT2038](#)

# Accessories for OPT Series 50x50mm Photoelectric Sensors

## Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with OPT series 50x50mm photoelectric sensors. Available in all stainless steel or with an aluminum head with a stainless steel mounting plate.

| Accessories for OPT Series 50x50mm Photoelectric Sensors |         |  |                     |                     |                            |             |
|--|---------|--|---------------------|---------------------|----------------------------|-------------|
| Part Number  | Price   | Description  | Mounting Head       | Mounting Plate      | Drawing Link               | Weight [lb] |
| <a href="#"><u>OPT2122</u></a>                           | \$11.50 | Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with OPT series 50x50mm photoelectric sensors.            | Aluminum            | 304 Stainless Steel | <a href="#"><u>PDF</u></a> | 0.19        |
| <a href="#"><u>OPT2123</u></a>                           | \$21.00 | Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with OPT series 50x50mm photoelectric sensors. | 304 Stainless Steel | 304 Stainless Steel | <a href="#"><u>PDF</u></a> | 0.31        |

**NOTE:**

304 Stainless steel mounting rods sold separately: [OPT2109](#) (200mm length), [OPT2110](#) (300mm length), and [OPT2111](#) [500mm length].



[OPT2122,](#)  
[OPT2123](#)

# Mounting Rods and Brackets

## Mounting Rods

304 Stainless steel rods for mounting swivel brackets [OPT2112](#) - [OPT2127](#). Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

| Mounting Rods for OPT2112-2127 Swivel Mounting Brackets |         |   |                     |                  |
|---|---------|---|---------------------|------------------|
| Part Number   | Price   | Description   | Drawing Link        | Weight lb (g)    |
| <a href="#">OPT2109</a>                                 | \$13.00 | Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel. | <a href="#">PDF</a> | 0.41<br>[185.97] |
| <a href="#">OPT2110</a>                                 | \$16.00 | Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel. | <a href="#">PDF</a> | 0.60<br>[272.16] |
| <a href="#">OPT2111</a>                                 | \$21.00 | Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel. | <a href="#">PDF</a> | 0.98<br>[444.52] |



## Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods [OPT2109](#), [OPT2110](#) & [OPT2111](#).

| Right-angle Mounting Brackets for 12mm Sensors |         |   |                     |                |
|--|---------|---|---------------------|----------------|
| Part Number                                    | Price   | Description   | Drawing Link        | Weight lb [g]  |
| <a href="#">OPT2108</a>                        | \$16.00 | Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111. | <a href="#">PDF</a> | 0.07<br>[31.8] |

