

# S8 Series Contrast Sensors



## Contrast Sensor

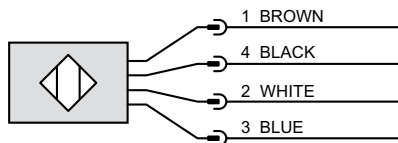
- Datalogic® print mark contrast sensor
- RGB light emission
- Horizontal spot orientation
- 6 – 12mm sensing distance
- 12 to 30VDC operating voltage
- Selectable Light On/Dark On
- NPN or PNP
- 25 kHz switching frequency
- 316L stainless steel or plastic housing
- Teach-in sensitivity adjustment
- 4-pin M8 quick-disconnect or 150mm cable with M12 quick-disconnect
- IP67/IP69K
- Purchase cable separately
- Mounting brackets also available



| S8 Series Contrast Sensors Selection Chart |         |                         |                  |                     |                             |       |                                       |           |            |
|--|---------|-------------------------|------------------|---------------------|-----------------------------|-------|---------------------------------------|-----------|------------|
| Part Number                                | Price   | Sensing Range           | Spot Orientation | Switching Frequency | Output State                | Logic | Connection                            | Wiring    | Dimensions |
| <b>Stainless Steel</b>                     |         |                         |                  |                     |                             |       |                                       |           |            |
| <b>S8-MR-5-W13-NN</b>                      | \$97.00 | 6–12 mm<br>[0.2–0.5 in] | Horizontal       | 25kHz               | Light On/Dark On Selectable | NPN   | 4-pin M8 quick-disconnect             | Diagram 1 | Figure 1   |
| <b>S8-MR-5-W13-PP</b>                      | \$97.00 |                         |                  |                     |                             | PNP   |                                       |           |            |
| <b>Plastic</b>                             |         |                         |                  |                     |                             |       |                                       |           |            |
| <b>S8-PR-3-W13-NN</b>                      | \$71.00 | 6–12 mm<br>[0.2–0.5 in] | Horizontal       | 25kHz               | Light On/Dark On Selectable | NPN   | 150mm cable with M12 quick-disconnect | Diagram 1 | Figure 2   |
| <b>S8-PR-3-W13-PP</b>                      | \$71.00 |                         |                  |                     |                             | PNP   |                                       |           |            |
| <b>S8-PR-5-W13-NN</b>                      | \$69.00 |                         |                  |                     |                             | NPN   | 4-pin M8 quick-disconnect             |           | Figure 3   |
| <b>S8-PR-5-W13-PP</b>                      | \$69.00 |                         |                  |                     |                             | PNP   |                                       |           |            |

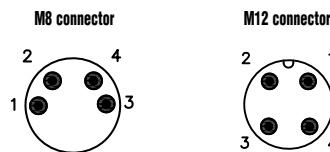
## Wiring diagrams

Diagram 1



- Pin 1 – Supply Voltage
- Pin 4 – NPN/PNP Output
- Pin 2 – Remote Input
- Pin 3 – 0 VDC

## Connectors



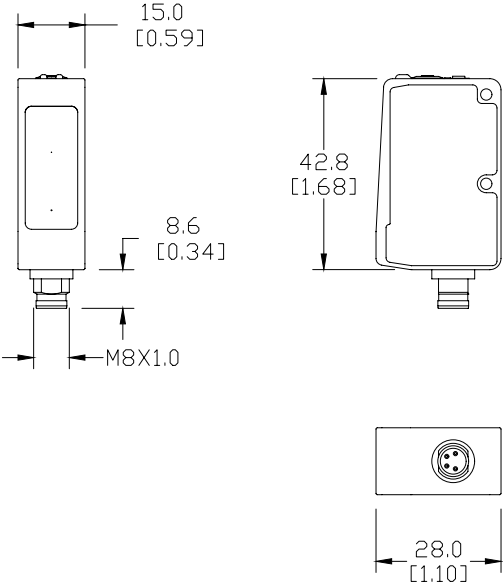
*NOTE: WIRING COLORS ARE BASED ON AUTOMATIONDIRECT 4-POLE CABLE ASSEMBLIES. CLASS 2 POWER SUPPLY REQUIRED.*

# S8 Series Contrast Sensors

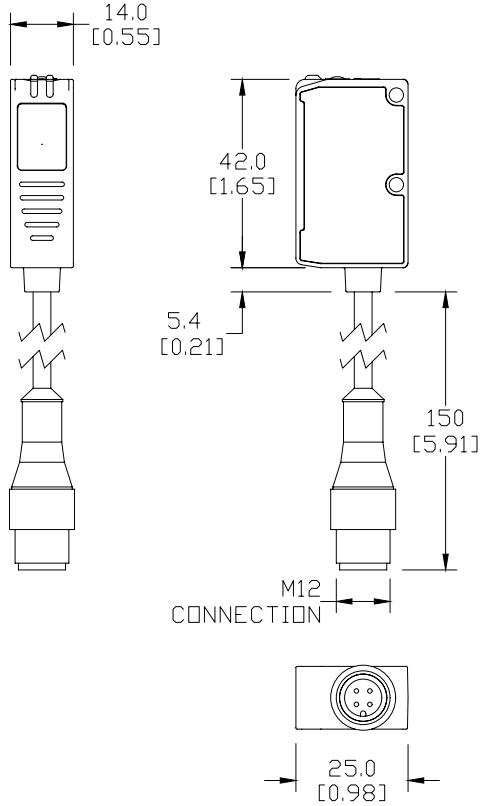
## Dimensions

mm [inch]

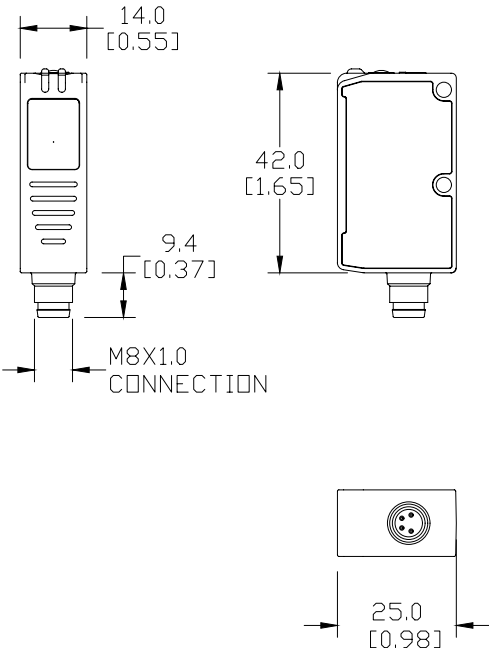
**Figure 1**



**Figure 2**



**Figure 3**



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# S8 Series Contrast Sensors

| Specifications                             |   |
|--|---|
| <b>Sensing Distance</b>                    | 6–12 mm [0.2–0.5 in]  |
| <b>Spot Dimension</b>                      | 3x1 mm <sup>2</sup>   |
| <b>Spot Orientation</b>                    | Horizontal  |
| <b>Emission</b>                            | RGB LEDs: Blue [465nm]/ Green [520nm]/Red [630nm] with automatic selection  |
| <b>Sensitivity</b>                         | Yes via teach-in button/remote signal   |
| <b>Output Type</b>                         | NPN or PNP; Light On/Dark On selectable   |
| <b>Operating Voltage</b>                   | 12 to 30 VDC  |
| <b>No-load Supply Current</b>              | ≤ 30 mA   |
| <b>Operating (Load) Current</b>            | ≤ 100 mA  |
| <b>Off-state (Leakage) Current</b>         | Max source current: 40 µA<br>Max sink current: 200 µA   |
| <b>Voltage Drop</b>                        | ≤ 2 V   |
| <b>Switching Frequency</b>                 | 25 kHz  |
| <b>Response Time</b>                       | 20 µs   |
| <b>Differential Travel</b>                 | <20 mV  |
| <b>Jitter</b>                              | 10µS  |
| <b>Ripple</b>                              | ≤2 Vpp  |
| <b>Time Delay Before Availability (tv)</b> | N/A   |
| <b>Reverse Polarity Protection</b>         | Yes   |
| <b>Short-Circuit Protection</b>            | Yes   |
| <b>Operating Temperature</b>               | -10–55 °C (14–131 °F)   |
| <b>Protection Degree (DIN 40050)</b>       | IP67 (S8-PR) / IP69K (S8-MR)  |
| <b>Indication/Switch Status</b>            | Output LED (Yellow) / Ready LED (Green)   |
| <b>Housing Material</b>                    | ABS (S8-PR) / INOX AISI 316L (S8-MR)  |
| <b>Sensing Face Material</b>               | Glass window; PC (S8-PR) lens / PMMA (S8-MR) window   |
| <b>Shock</b>                               | EN60068-2-27  |
| <b>Vibration</b>                           | EN60068-2-6   |
| <b>Weight</b>                              | 12g (0.42 oz) max. (S8-PR connector)<br>50 g (1.76 oz) max pig-tail (S8-PR pig-tail)<br>70 g (2.5 oz) max (S8-MR connector) |
| <b>Connectors</b>                          | M8 4-pole connector / 150mm cable with M12 4-pole connector (S8-PR pigtail)   |
| <b>Agency Approvals</b>                    | CE cULus E227487  |

Note: To obtain the most current agency approval information— see the Agency Approval Checklist section on the specific part number's web page.

# Accessories for S8 Series Contrast Photoelectric Sensors

## Mounting Brackets

| Accessories for S8 Series Contrast Photoelectric Sensors |         |  |             |
|--|---------|--|-------------|
| Part Number  | Price   | Description  | Weight [lb] |
| <b>ST-S8-FRM</b>   | \$8.25  | Datalogic mounting bracket, vertical, 304 stainless steel. For use with S8 series contrast sensors.    | 0.48        |
| <b>ST-5072</b>   | \$10.50 | Datalogic mounting bracket, right-angle, 304 stainless steel. For use with S8 series contrast sensors. | 0.10        |

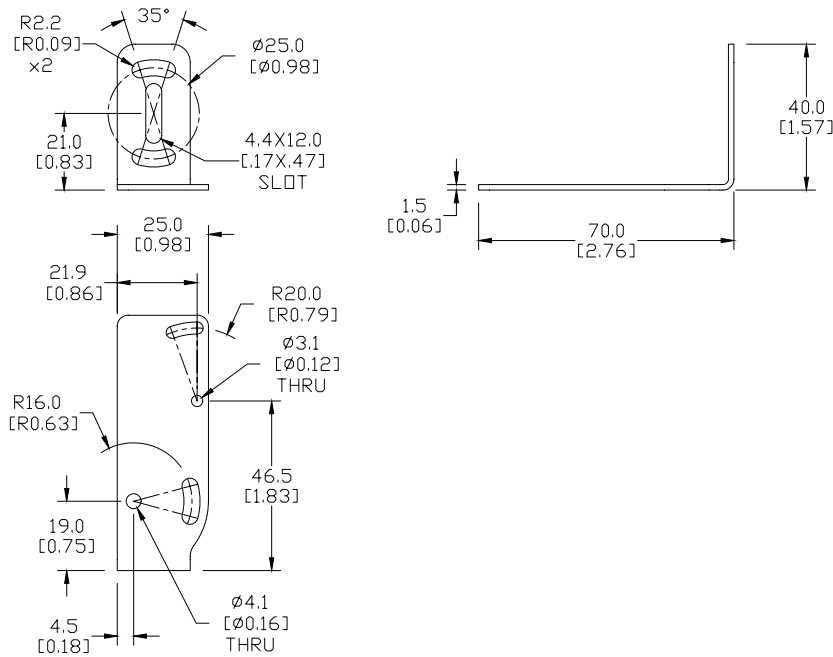


**ST-S8-FRM**

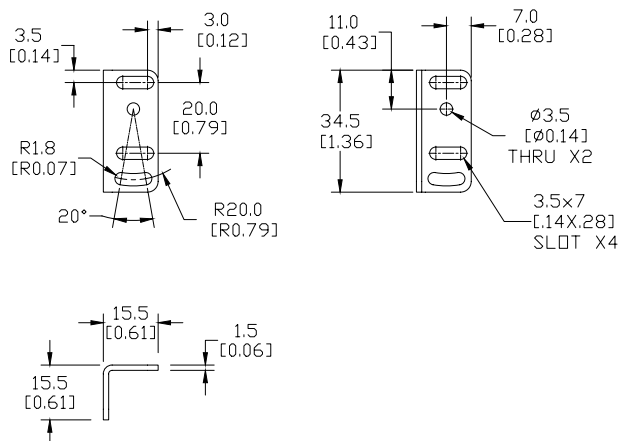
## Dimensions

mm [inches]

### ST-S8-FRM



### ST-5072



**ST-5072**

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