

# S8 Series Contrast Sensors



## Contrast Sensor

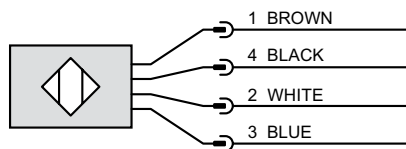
- Datalogic® print mark contrast sensor
- RGB light emission
- Horizontal spot orientation
- 6 – 12mm sensing distance
- 12 to 30VDC operating voltage
- Light-on/Dark-on Selectable
- NPN or PNP
- 25 kHz switching frequency
- 316L stainless steel or plastic housing
- Teach-in sensitivity adjustment
- 4-pin M8 quick-disconnect or 150mm cable with M12 quick-disconnect (Purchase cable separately)
- IP67/IP69K
- 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 |
| Stainless Steel                            |           |                         |                  |                     |                                |       |                                             |           |            |
| <a href="#">S8-MR-5-W13-NN</a>             | \$;012b]: | 6–12 mm<br>[0.2–0.5 in] | Horizontal       | 25kHz               | Light-on/Dark-on<br>Selectable | NPN   | 4-pin M8<br>quick-disconnect                | Diagram 1 | Figure 1   |
| <a href="#">S8-MR-5-W13-PP</a>             | \$;012b]: |                         |                  |                     |                                | PNP   |                                             |           |            |
| Plastic                                    |           |                         |                  |                     |                                |       |                                             |           |            |
| <a href="#">S8-PR-3-W13-NN</a>             | \$12b_:   | 6–12 mm<br>[0.2–0.5 in] | Horizontal       | 25kHz               | Light-on/Dark-on<br>Selectable | NPN   | 150mm cable<br>with M12<br>quick-disconnect | Diagram 1 | Figure 2   |
| <a href="#">S8-PR-3-W13-PP</a>             | \$12b#:   |                         |                  |                     |                                | PNP   |                                             |           |            |
| <a href="#">S8-PR-5-W13-NN</a>             | \$;12b!:  |                         |                  |                     |                                | NPN   | 4-pin M8<br>quick-disconnect                |           | Figure 3   |
| <a href="#">S8-PR-5-W13-PP</a>             | \$12b?:   |                         |                  |                     |                                | PNP   |                                             |           |            |

## Wiring Diagrams

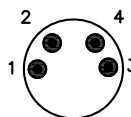
Diagram 1



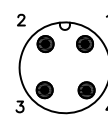
- Pin 1 – Supply Voltage  
Pin 4 – NPN/PNP Output  
Pin 2 – Remote Input  
Pin 3 – 0 VDC

## Connectors

M8 connector



M12 connector

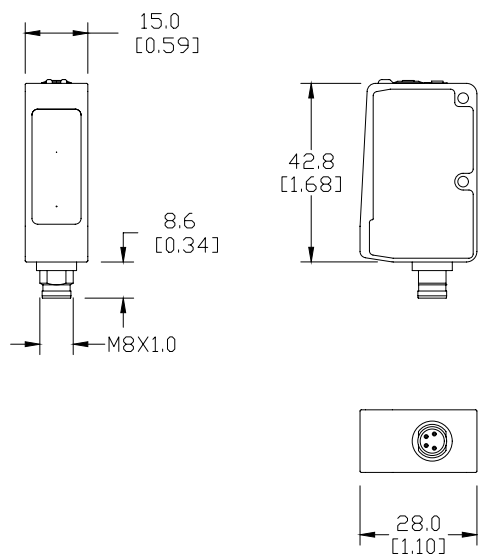
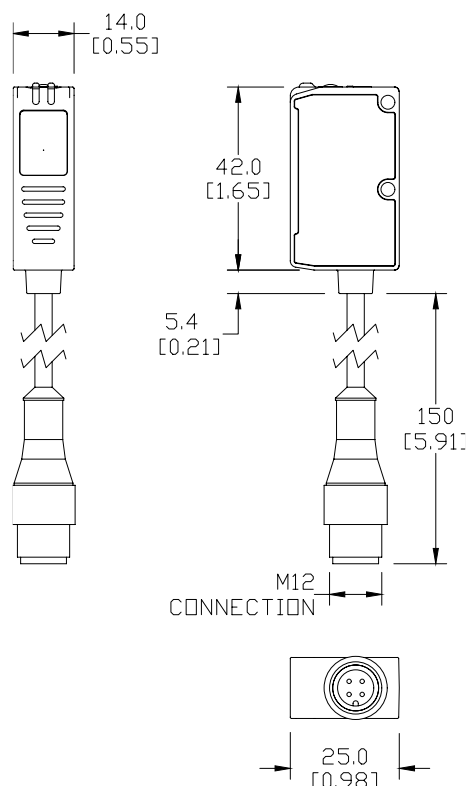
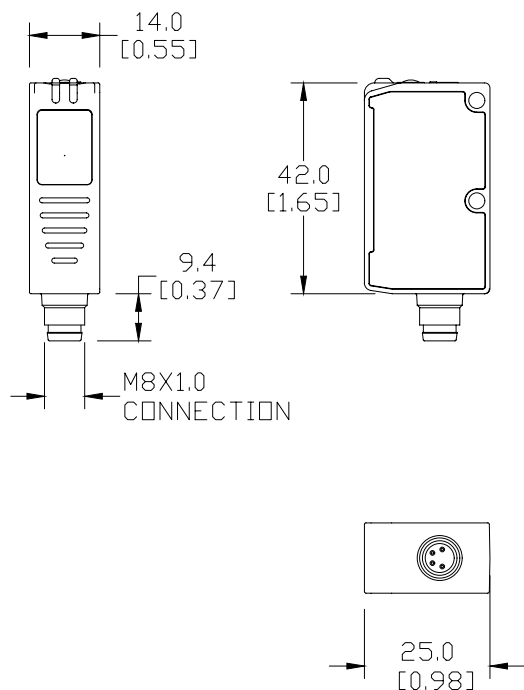


Note: Wiring colors are based on AutomationDirect 4-pole cable assemblies. Class 2 power supply required.

# S8 Series Contrast Sensors

## Dimensions

mm [inches]

**Figure 1****Figure 2****Figure 3**See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.

# 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>              | ≤ 30mA                                                                                                                    |
| <b>Operating (Load) Current</b>            | ≤ 100mA                                                                                                                   |
| <b>Off-state (Leakage) Current</b>         | Max source current: 40 µA<br>Max sink current: 200 µA                                                                     |
| <b>Voltage Drop</b>                        | ≤ 2V                                                                                                                      |
| <b>Switching Frequency</b>                 | 25 kHz                                                                                                                    |
| <b>Response Time</b>                       | 20µs                                                                                                                      |
| <b>Differential Travel</b>                 | <20mV                                                                                                                     |
| <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 to 55°C [14 to 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>50g [1.76 oz] max pig-tail (S8-PR pig-tail)<br>70g [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                                                                                            | Drawing Link        | Weight [lb] |
| <a href="#"><b>ST-S8-FRM</b></a>                         | \$12c5: | Datalogic mounting bracket, vertical, 304 stainless steel. For use with S8 series contrast sensors.    | <a href="#">PDF</a> | 0.48        |
| <a href="#"><b>ST-5072</b></a>                           | \$12c6: | Datalogic mounting bracket, right-angle, 304 stainless steel. For use with S8 series contrast sensors. | <a href="#">PDF</a> | 0.10        |



[\*\*ST-S8-FRM\*\*](#)



[\*\*ST-5072\*\*](#)