

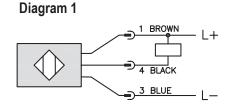
Fork Sensor U-frame - Infrared Light

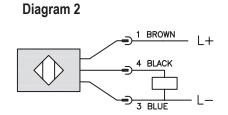
- Rugged metal one-piece housing always in alignment
- Easy installation
- Infrared light easy setup
- Glass optics
- High resolution
- Light-on/Dark-on Selectable
- Adjustable sensitivity
- High switching frequency
- M8 connector, 3-pole



| PS Series Fork Sensor U-frame Selection Chart - Infrared Light | | | | | | | |
|--|----------|-----------------|--------------------------------|-------|--------------|-----------|------------|
| Part Number | Price | Sensing Range | Output State | Logic | Connection | Wiring | Dimensions |
| PSUI-0P-1F | \$141.00 | 5mm [0.2 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 1 |
| PSUI-0N-1F | \$141.00 | 5mm [0.2 in] | Light-on/Dark-on Selectable | NPN | M8 connector | Diagram 1 | Figure 1 |
| PSUI-0P-2F | \$146.00 | 10mm [0.39 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 2 |
| PSUI-0N-2F | \$146.00 | 10mm [0.39 in] | Light-on/Dark-on Selectable | NPN | M8 connector | Diagram 1 | Figure 2 |
| PSUI-0P-3F | \$160.00 | 20mm [0.79 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 3 |
| PSUI-0N-3F | \$160.00 | 20mm [0.79 in] | Light-on/Dark-on Selectable | NPN | M8 connector | Diagram 1 | Figure 3 |
| PSUI-0P-4F | \$169.00 | 30mm [1.18 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 4 |
| PSUI-0N-4F | \$169.00 | 30mm [1.18 in] | Light-on/Dark-on Selectable | NPN | M8 connector | Diagram 1 | Figure 4 |
| PSUI-0P-5F | \$186.00 | 50mm [1.97 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 5 |
| PSUI-0N-5F | \$186.00 | 50mm [1.97 in] | Light-on/Dark-on Selectable | NPN | M8 connector | Diagram 1 | Figure 5 |
| PSUI-0P-6F | \$204.00 | 80mm [3.15 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 6 |
| PSUI-0N-6F | \$204.00 | 80mm [3.15 in] | Light-on/Dark-on Selectable | NPN | M8 connector | Diagram 1 | Figure 6 |
| PSUI-0P-7F | \$221.00 | 120mm [4.72 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 7 |
| PSUI-0P-8F | \$323.00 | 180mm [7.09 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 8 |
| PSUI-0P-9F | \$323.00 | 220mm [8.66 in] | Light-on/Dark-on Selectable | PNP | M8 connector | Diagram 2 | Figure 9 |

Wiring Diagrams





M8 connector

Connectors

Note: Class 2 power supply required

| | Specifications Specification Speci | | | | | | |
|--|--|---|--|--|--|--|--|
| | U-frame - Visible Red Light | U-frame Frame - Infrared Light | | | | | |
| Mounting Type | Slot | | | | | | |
| Sensing Distance | 5.0 mm [0.20 in] to 220mm [8.66 in] | | | | | | |
| Smallest Detectable Object | PSUR 1F-2F-3F-4F 0.3 mm [0.012 in] PSUR 5F-6F 0.4 mm [0.016 in] PSUR 7F 0.5 mm [0.020 in] PSUR 8F-9F 0.6 mm [0.024 in] | PSUI 1F-2F-3F-4F | | | | | |
| Emission | Visible Red Light | Infrared Light | | | | | |
| Sensitivity | Adjustable Potentiometer (0 to 270°) | | | | | | |
| Output Type | NPN or PNP/ Light-on/Dark-on/ 3-wire | | | | | | |
| Operating Voltage | 10 to 30 VDC | | | | | | |
| No-load Supply Current | ≤ 35mA | | | | | | |
| Operating (Load) Current | 200mA | | | | | | |
| Off-state (Leakage) Current | N/A | | | | | | |
| Voltage Drop | ≤ 3.0V (PNP); ≤2.5 (NPN) | | | | | | |
| Switching Frequency | PSUR 1F-2F 3kHz PSUR 3F-9F 1.5 kHz | PSUI 1F–2F 3kHz PSUI 3F–4F– 5F–6F–8F–9F 2kHz PSUI 7F 1kHz | | | | | |
| Differential Travel | N/A | | | | | | |
| Repeat Accuracy | PSUR 1F-2F-3F-4F 0.02 mm [0.0008 in] PSUR 5F 0.04 mm [0.0016 in] PSUR 6F 0.06 mm [0.0024 in] PSUR 7F-8F-9F 0.08 mm [0.0031 in] | PSUI 1F-2F-3F-4F 0.1 mm [0.0039 in] PSUI 5F 0.12 mm [0.0047 in] PSUI 6F 0.15 mm [0.0059 in] PSUI 7F-8F-9F 0.2 mm [0.0079 in] | | | | | |
| Ripple | N/A | | | | | | |
| Time Delay Before Availability (tv) | N/A | | | | | | |
| Reverse Polarity Protection | Yes | | | | | | |
| Short-Circuit Protection | Yes | | | | | | |
| Operating Temperature | -10 to 60°C [14 to 140°F] | | | | | | |
| Protection Degree (DIN 40050) | IP67 | | | | | | |
| Indication/Switch Status | On Yellow LED | | | | | | |
| Housing Material | GD Zn (Gadolinium-Zinc) | | | | | | |
| Sensing Face Material | Glass | | | | | | |
| Shock | Meets IEC 68-2-27 (See Photoelectric Sensor at the end of this section for more details) | | | | | | |
| Vibration | Meets IEC 68-2-6 (See Photoelectric Sensor at the end of this section for more details) | | | | | | |
| Tightening Torque | N/A | | | | | | |
| Weight | PSUx 1F 20g [0.71 oz] PSUx 2F 23g [0.81 oz] PSUx 3F 28g [0.99 oz] PSUx 4F 36g [1.27 oz] PSUx 5F 54g [1.90 oz] PSUx 6F 77g [2.72 oz] PSUx 7F 118g [4.16 oz] PSUx 8F 190g [6.70 oz] PSUx 9F 220g [7.76 oz] | | | | | | |
| Connection | M8 connector | | | | | | |
| Agency Approvals | UL E328811- CE | | | | | | |
| Note: To obtain the most current agency approval information— see the Agency Approval Checklist section on the specific part number's web page | | | | | | | |

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www.automationdirect.com Photoelectric Sensors tSEN-152

Dimensions

mm [inches]

Figure 1

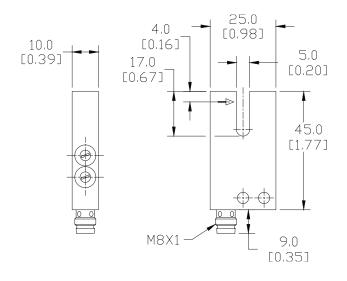


Figure 2

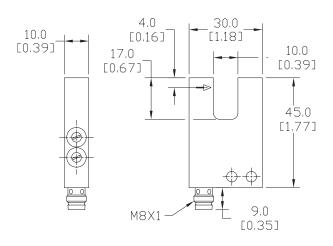


Figure 3

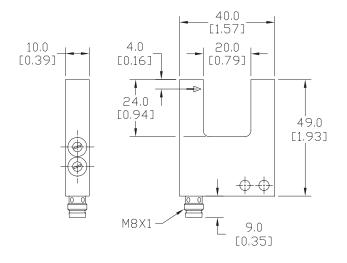
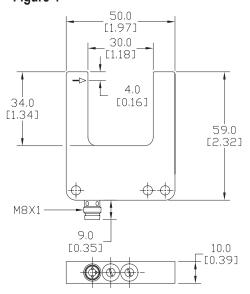


Figure 4



See our website: www.AutomationDirect.com for complete Engineering drawings.

Dimensions

mm [inches]

Figure 5

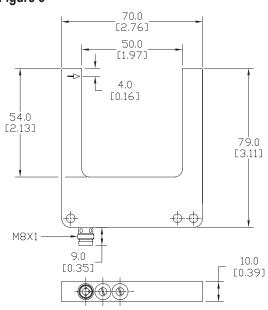


Figure 6

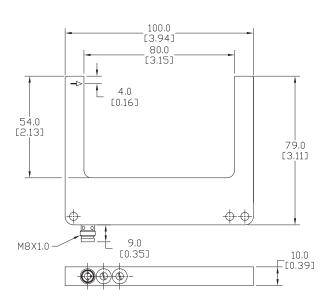
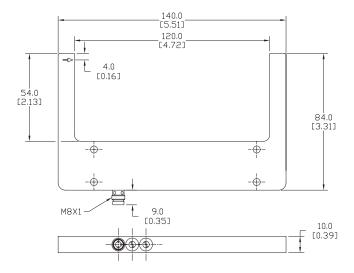


Figure 7



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Dimensions

mm [inches]

Figure 8

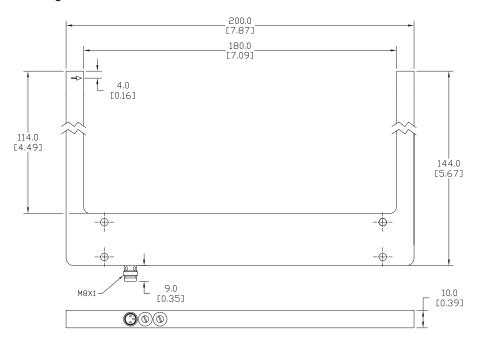
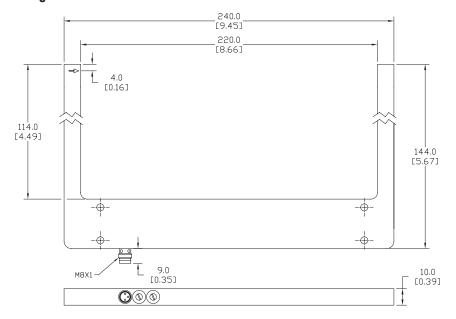


Figure 9



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