

# Fork Sensors PS Series

## Fork Sensor U-frame - Visible Red Light



- Rugged metal one-piece housing - always in alignment
- Easy installation
- Visible red light - easy setup
- Glass optics
- High resolution
- Light-on/Dark-on Selectable
- Adjustable sensitivity
- High switching frequency
- M8 connector with 360° LED



PS Series Fork Sensor U-frame Selection Chart - Visible Red Light							
Part Number	Price	Sensing Range	Output State	Logic	Connection	Wiring	Dimensions
<a href="#">PSUR-0P-1F</a>	\$128.00	5mm [0.2 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 1
<a href="#">PSUR-0N-1F</a>	\$128.00	5mm [0.2 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 1
<a href="#">PSUR-0P-2F</a>	\$128.00	10mm [0.39 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 2
<a href="#">PSUR-0N-2F</a>	\$128.00	10mm [0.39 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 2
<a href="#">PSUR-0P-3F</a>	\$128.00	20mm [0.79 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 3
<a href="#">PSUR-0N-3F</a>	\$128.00	20mm [0.79 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 3
<a href="#">PSUR-0P-4F</a>	\$146.00	30mm [1.18 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 4
<a href="#">PSUR-0N-4F</a>	\$146.00	30mm [1.18 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 4
<a href="#">PSUR-0P-5F</a>	\$155.00	50mm [1.97 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 5
<a href="#">PSUR-0N-5F</a>	\$155.00	50mm [1.97 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 5
<a href="#">PSUR-0P-6F</a>	\$163.00	80mm [3.15 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 6
<a href="#">PSUR-0N-6F</a>	\$163.00	80mm [3.15 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 6
<a href="#">PSUR-0P-7F</a>	\$170.00	120mm [4.72 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 7
<a href="#">PSUR-0P-8F</a>	\$196.00	180mm [7.09 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 8
<a href="#">PSUR-0P-9F</a>	\$204.00	220mm [8.66 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 9

## Wiring Diagrams

Diagram 1

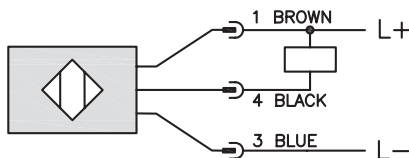
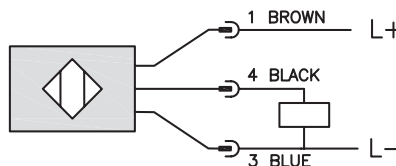
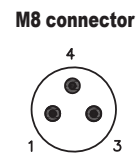


Diagram 2



## Connectors



Note: Class 2 power supply required

# Fork Sensors PS Series

Specifications		
	U-frame - Visible Red Light	U-frame Frame - Infrared Light
<b>Mounting Type</b>	Slot	
<b>Sensing Distance</b>	5.0 mm [0.20 in] to 220mm [8.66 in]	
<b>Smallest Detectable Object</b>	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 0.8 mm [0.032 in] PSUI 5F 1.0 mm [0.040 in] PSUI 6F 1.2 mm [0.047 in] PSUI 7F-8F-9F 1.5 mm [0.059 in]
<b>Emission</b>	Visible Red Light	Infrared Light
<b>Sensitivity</b>	Adjustable Potentiometer (0 to 270°)	
<b>Output Type</b>	NPN or PNP/ Light-on/Dark-on/ 3-wire	
<b>Operating Voltage</b>	10 to 30 VDC	
<b>No-load Supply Current</b>	≤ 35mA	
<b>Operating (Load) Current</b>	200mA	
<b>Off-state (Leakage) Current</b>	N/A	
<b>Voltage Drop</b>	≤ 3.0V (PNP); ≤2.5 (NPN)	
<b>Switching Frequency</b>	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
<b>Differential Travel</b>	N/A	
<b>Repeat Accuracy</b>	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]
<b>Ripple</b>	N/A	
<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 60°C [14 to 140°F]	
<b>Protection Degree (DIN 40050)</b>	IP67	
<b>Indication/Switch Status</b>	On Yellow LED	
<b>Housing Material</b>	GD Zn (Gadolinium-Zinc)	
<b>Sensing Face Material</b>	Glass	
<b>Shock</b>	Meets IEC 68-2-27 (See Photoelectric Sensor at the end of this section for more details)	
<b>Vibration</b>	Meets IEC 68-2-6 (See Photoelectric Sensor at the end of this section for more details)	
<b>Tightening Torque</b>	N/A	
<b>Weight</b>	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]	
<b>Connection</b>	M8 connector	
<b>Agency Approvals</b>	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.

# Fork Sensors PS Series

## Dimensions

mm [inches]

Figure 1

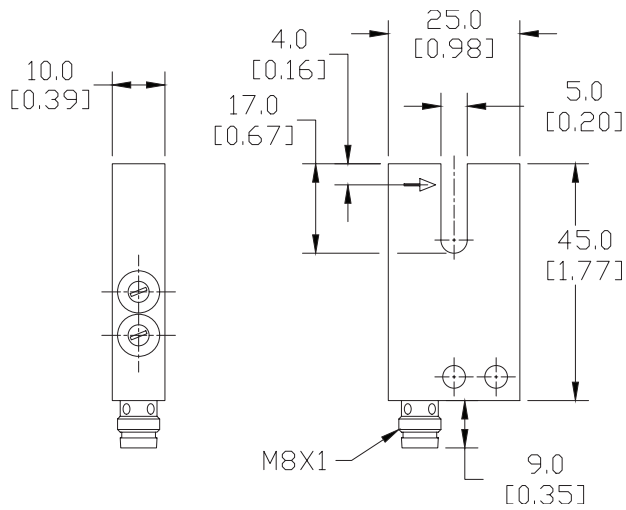


Figure 2

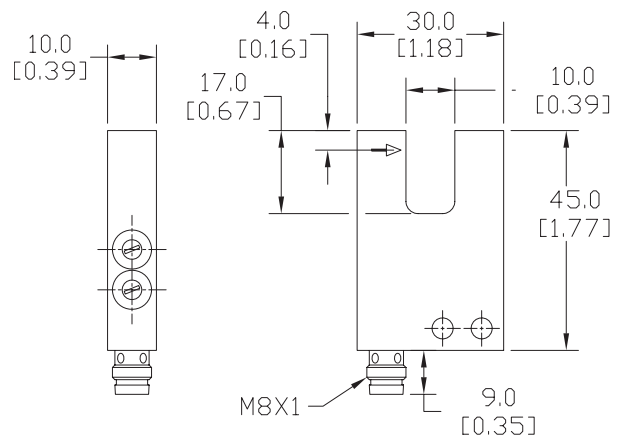


Figure 3

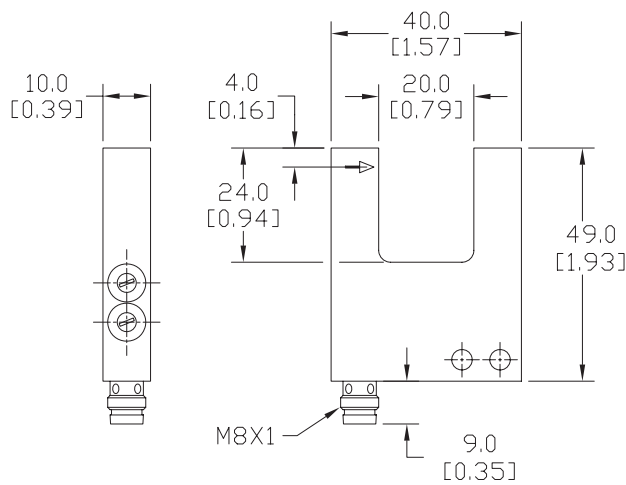
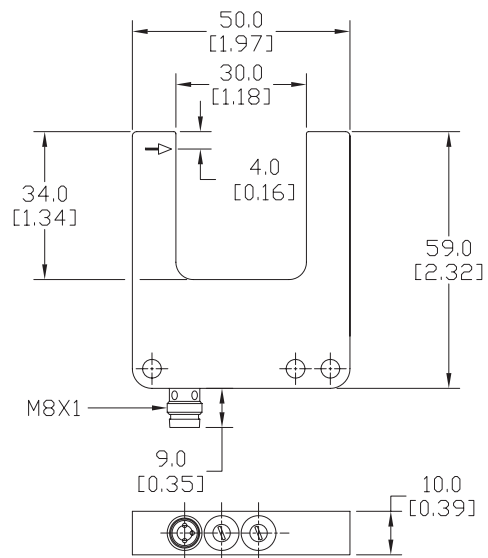


Figure 4



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

# Fork Sensors PS Series

## Dimensions

mm [inches]

Figure 5

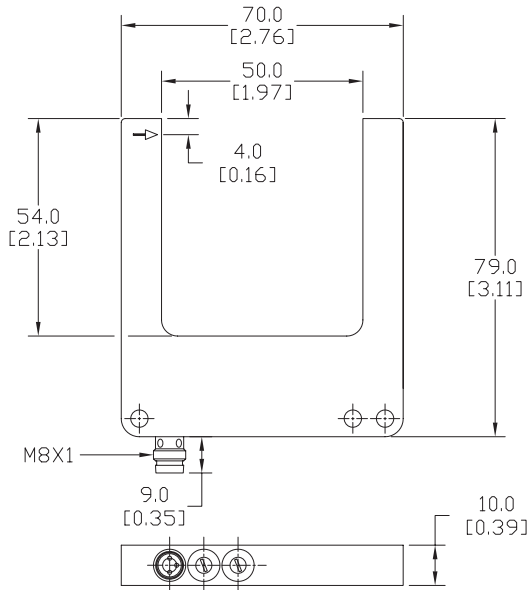


Figure 6

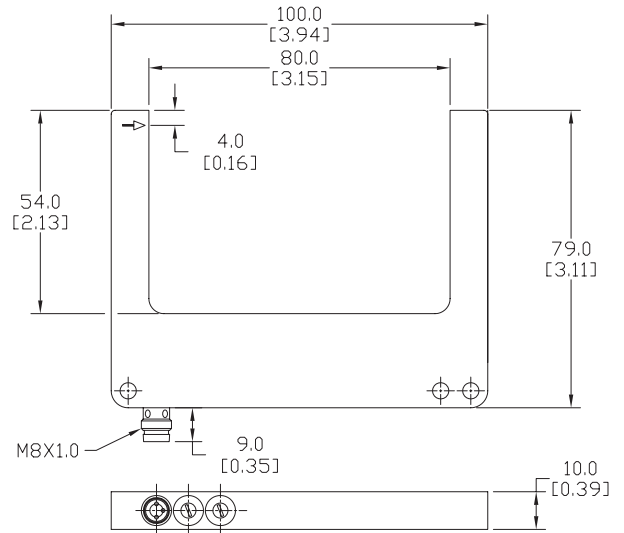
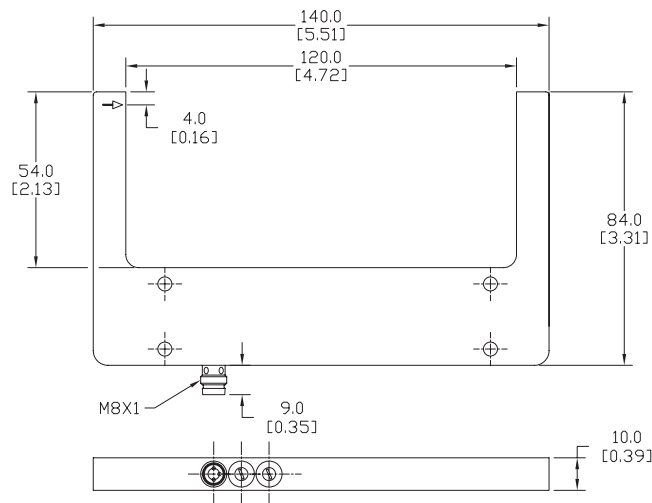


Figure 7



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

# Fork Sensors PS Series

## Dimensions

mm [inches]

Figure 8

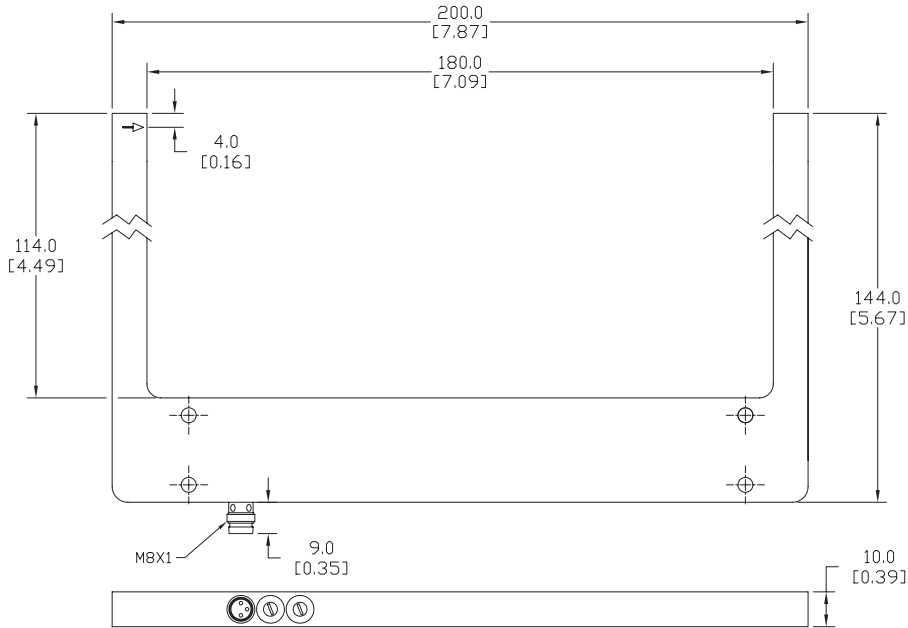
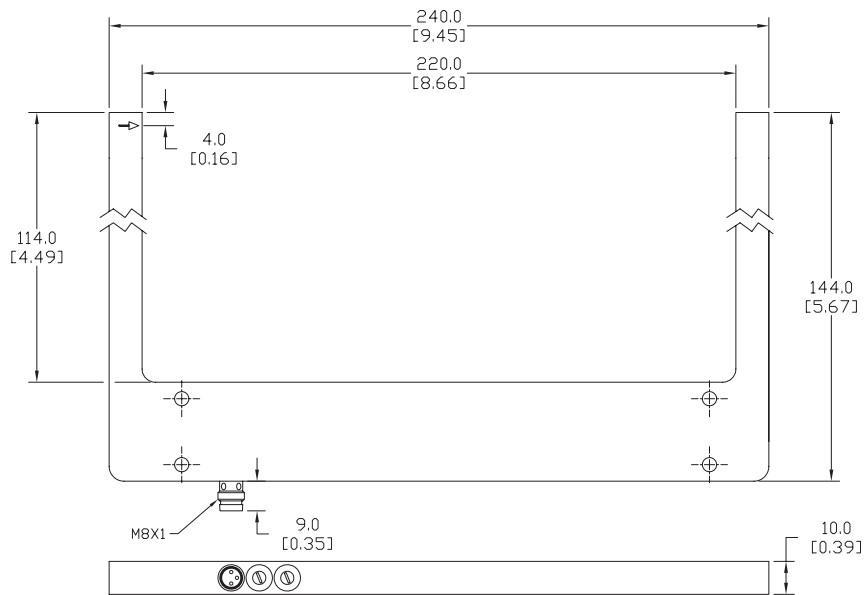


Figure 9



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