

# PS Series Fork Sensors

## 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 / Dark operation 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
<b>PSUR-0P-1F</b>		5mm (0.2 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 1
<b>PSUR-0N-1F</b>		5mm (0.2 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 1
<b>PSUR-0P-2F</b>		10mm (0.39 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 2
<b>PSUR-0N-2F</b>		10mm (0.39 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 2
<b>PSUR-0P-3F</b>		20mm (0.79 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 3
<b>PSUR-0N-3F</b>		20mm (0.79 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 3
<b>PSUR-0P-4F</b>		30mm (1.18 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 4
<b>PSUR-0N-4F</b>		30mm (1.18 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 4
<b>PSUR-0P-5F</b>		50mm (1.97 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 5
<b>PSUR-0N-5F</b>		50mm (1.97 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 5
<b>PSUR-0P-6F</b>		80mm (3.15 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 6
<b>PSUR-0N-6F</b>		80mm (3.15 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 6
<b>PSUR-0P-7F</b>		120mm (4.72 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 7
<b>PSUR-0N-7F</b>		120mm (4.72 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 7
<b>PSUR-0P-8F</b>		180mm (7.09 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 8
<b>PSUR-0N-8F</b>		180mm (7.09 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 8
<b>PSUR-0P-9F</b>		220mm (8.66 in)	Light On/Dark On Selectable	PNP	M8 connector	Diagram 2	Figure 9
<b>PSUR-0N-9F</b>		220mm (8.66 in)	Light On/Dark On Selectable	NPN	M8 connector	Diagram 1	Figure 9

## Wiring diagrams

Diagram 1

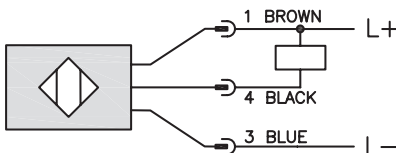
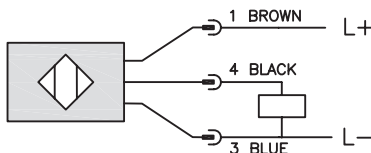
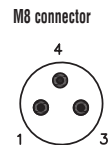


Diagram 2



Connectors



NOTE: CLASS 2 POWER SUPPLY REQUIRED

# PS Series Fork Sensors

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>	≤ 35 mA	
<b>Operating (Load) Current</b>	200 mA	
<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 3 kHz PSUR 3F-9F 1.5 kHz	PSUI 1F-2F 3 kHz PSUI 3F-4F-5F-6F-8F-9F 2 kHz 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°C to +60°C (14°F 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 Terminology at the end of this section for more details)	
<b>Vibration</b>	Meets IEC 68-2-6 (See Photoelectric Sensor Terminology 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.

# PS Series Fork Sensors

## Dimensions

mm

[inch]

Figure 1

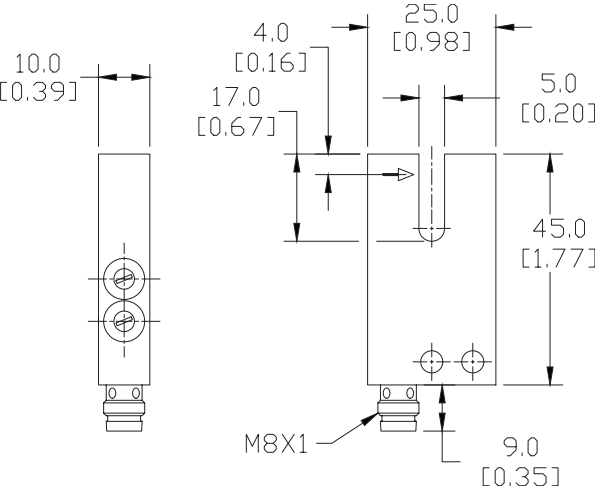


Figure 2

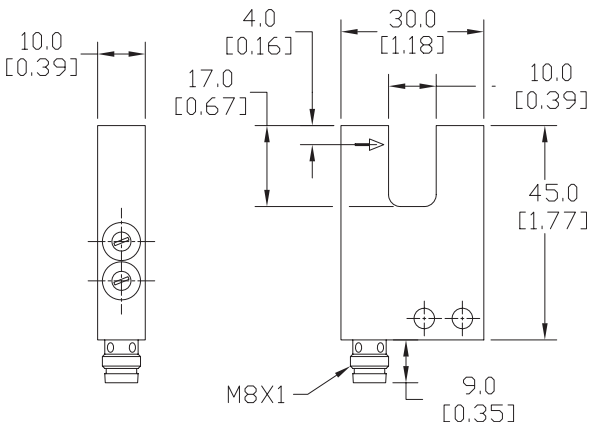


Figure 3

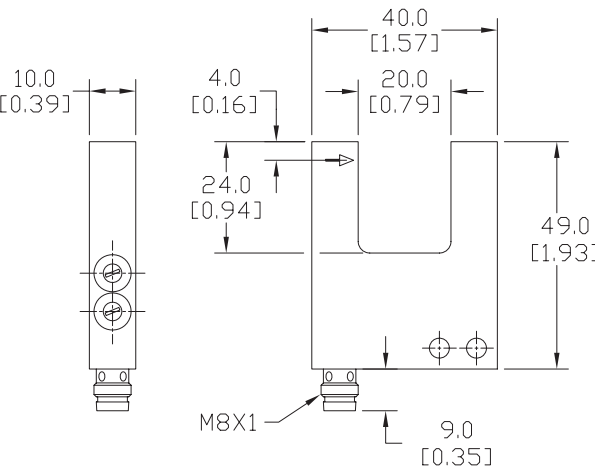
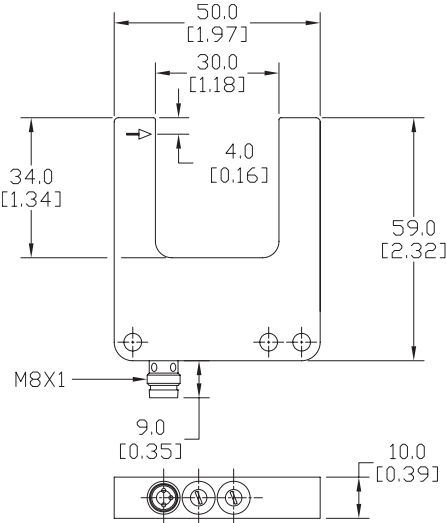


Figure 4



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# PS Series Fork Sensors

## Dimensions

mm

[inch]

Figure 5

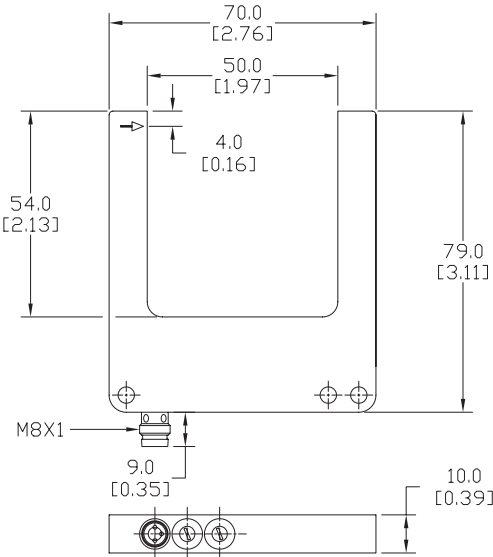


Figure 6

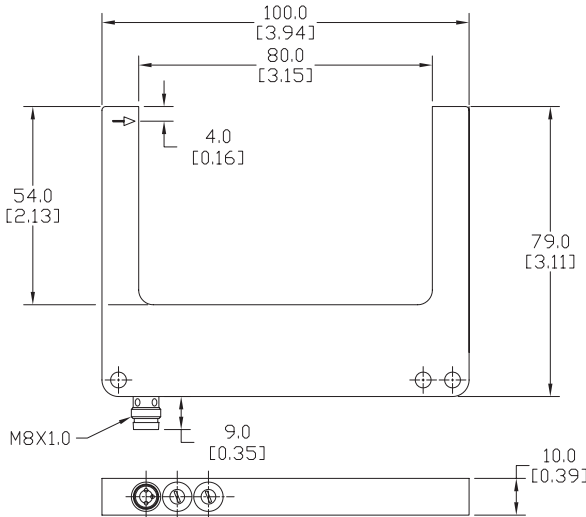
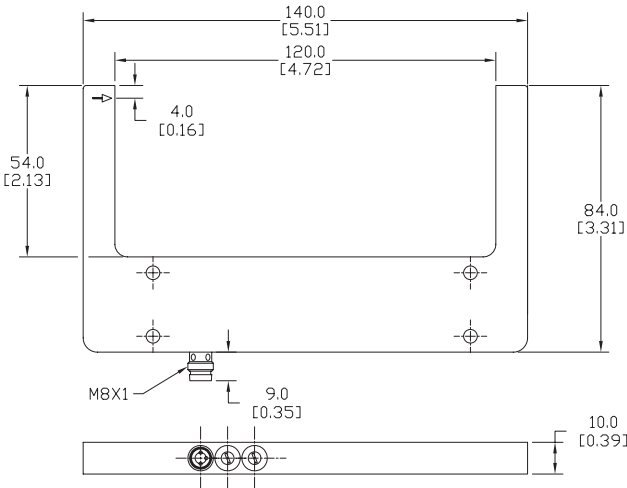


Figure 7



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# PS Series Fork Sensors

## Dimensions

mm

[inch]

Figure 8

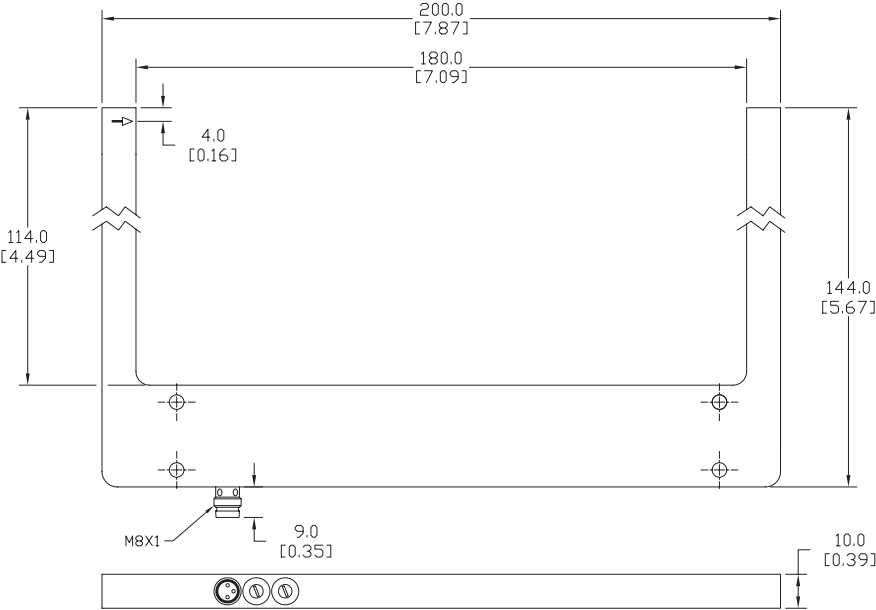
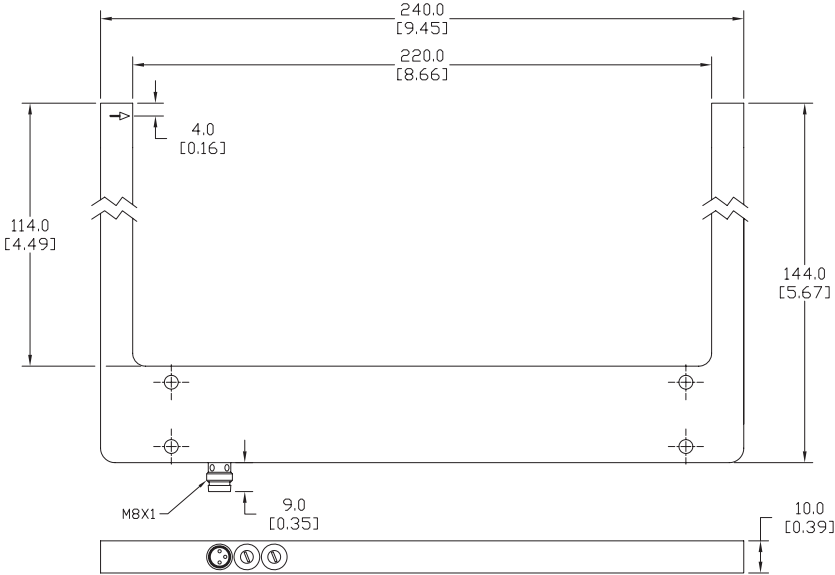


Figure 9



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