

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
<u>PSUR-0P-1F</u>	\$128.00	5mm [0.2 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 1
<u>PSUR-0N-1F</u>	\$128.00	5mm [0.2 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 1
<u>PSUR-0P-2F</u>	\$128.00	10mm [0.39 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 2
<u>PSUR-0N-2F</u>	\$128.00	10mm [0.39 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 2
<u>PSUR-0P-3F</u>	\$128.00	20mm [0.79 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 3
<u>PSUR-0N-3F</u>	\$128.00	20mm [0.79 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 3
<u>PSUR-0P-4F</u>	\$146.00	30mm [1.18 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 4
<u>PSUR-0N-4F</u>	\$146.00	30mm [1.18 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 4
<u>PSUR-0P-5F</u>	\$155.00	50mm [1.97 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 5
<u>PSUR-0N-5F</u>	\$155.00	50mm [1.97 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 5
<u>PSUR-0P-6F</u>	\$163.00	80mm [3.15 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 6
<u>PSUR-0N-6F</u>	\$163.00	80mm [3.15 in]	Light-on/Dark-on Selectable	NPN	M8 connector	Diagram 1	Figure 6
<u>PSUR-0P-7F</u>	\$170.00	120mm [4.72 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 7
<u>PSUR-0P-8F</u>	\$196.00	180mm [7.09 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 8
<u>PSUR-0P-9F</u>	\$204.00	220mm [8.66 in]	Light-on/Dark-on Selectable	PNP	M8 connector	Diagram 2	Figure 9

Wiring Diagrams

Diagram 1

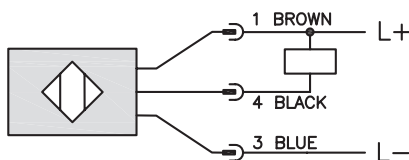
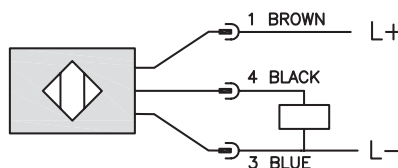
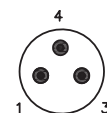


Diagram 2



Connectors

M8 connector



Note: Class 2 power supply required

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Specifications		
	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 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]
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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Dimensions

mm [inches]

Figure 1

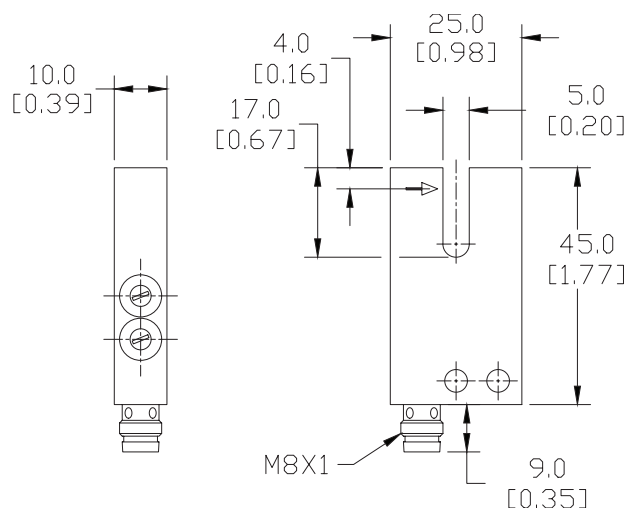


Figure 2

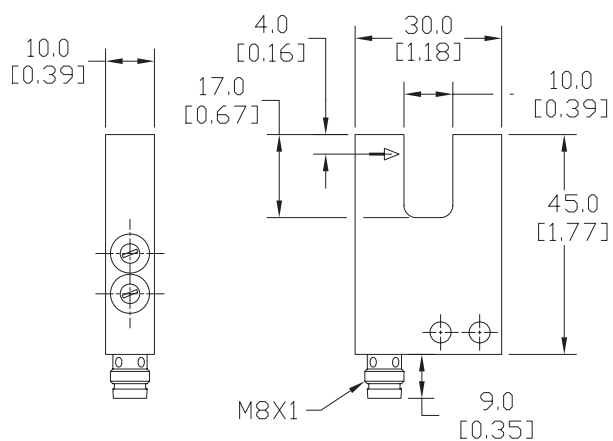


Figure 3

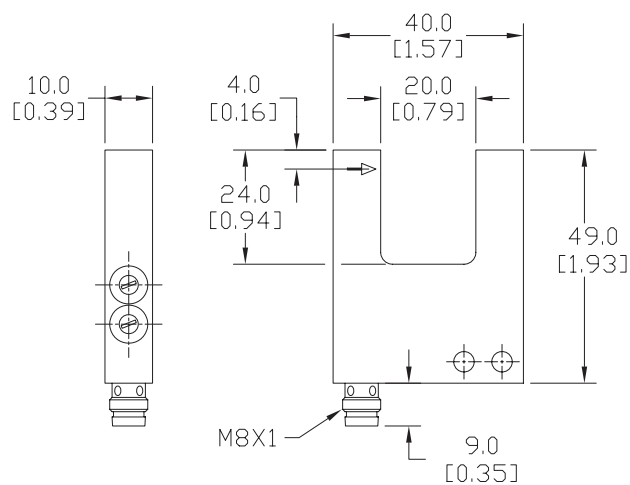
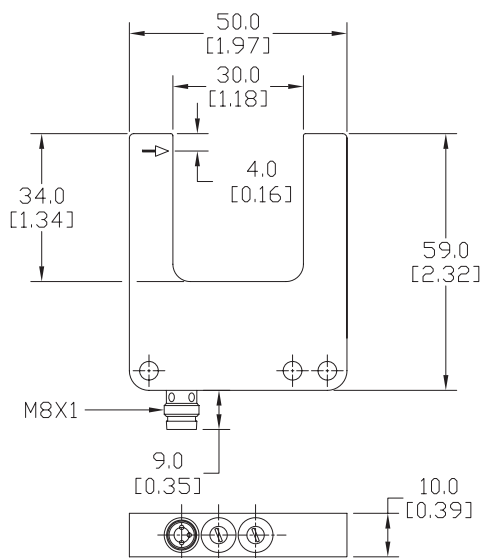


Figure 4



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

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Dimensions

mm [inches]

Figure 5

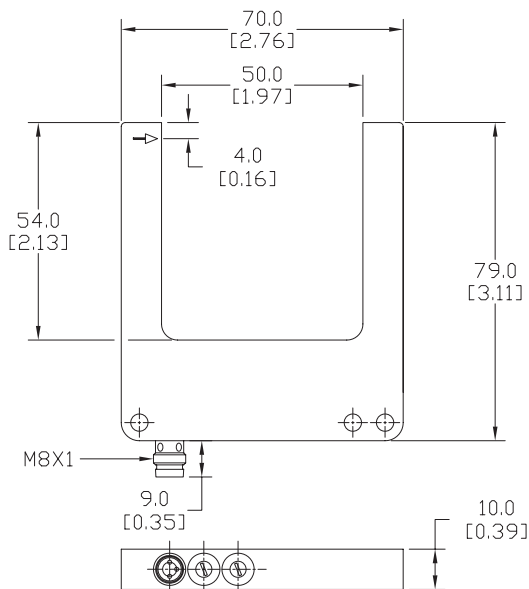


Figure 6

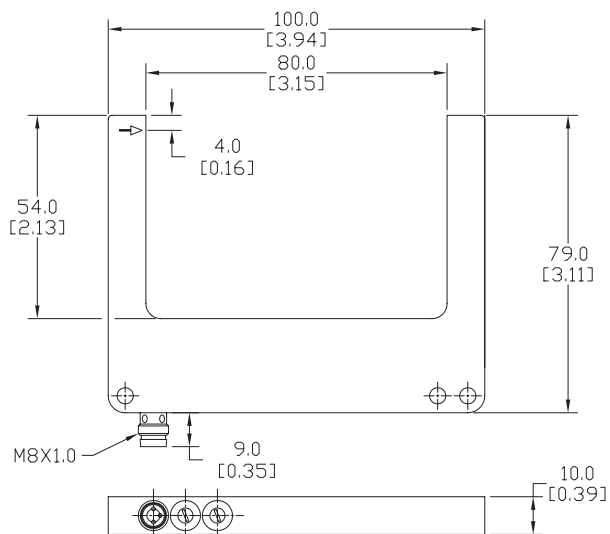
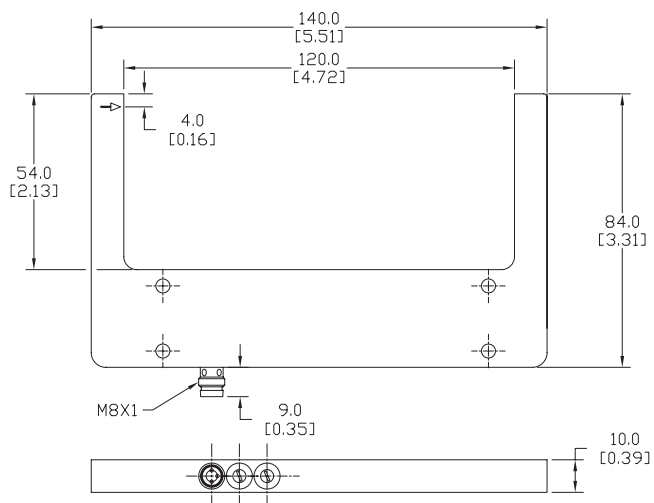


Figure 7

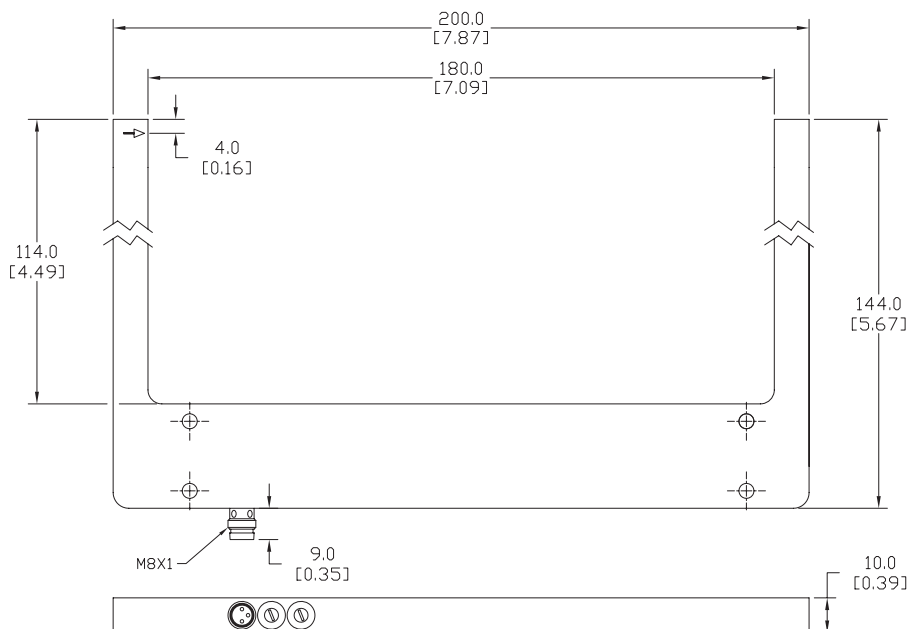
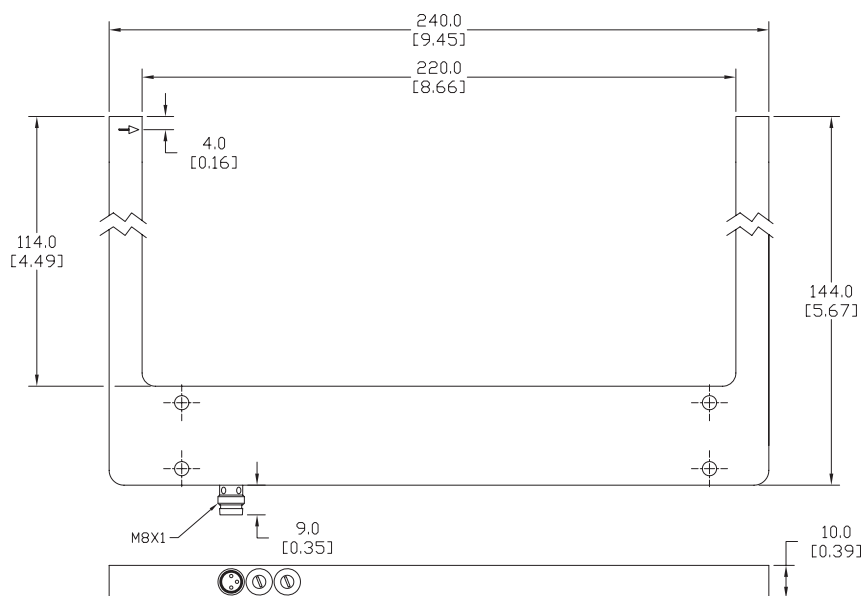


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mm [inches]

Figure 8**Figure 9**See our website: www.AutomationDirect.com for complete Engineering drawings.