

PMW Series Inductive Proximity Sensors

M12 (12 mm) stainless steel – DC



- Twelve models available
- Low cost/high performance
- LED status indicators are visible at a wide angle.
- Axial cable or M12 quick-disconnect models
- Purchase cable separately (for quick-disconnect models).
- Lifetime warranty



PMW Series M12 DC Inductive Prox Selection Chart									
Part Number	Price	Sensing Range	Housing	Output State	Logic	Connection	Wiring	Dimensions	
Standard Distance									
PMW-ON-1H	\$38.50	2 mm (0.08 in)	Shielded	NO/N.C	NPN	M12 (12 mm) connector	Diagram 3	Figure 1	
PMW-OP-1H	\$38.50				PNP		Diagram 4		
PMW-ON-2H	\$38.50	4 mm (0.157 in)	Unshielded	NO/N.C	NPN	M12 (12 mm) connector	Diagram 3	Figure 1	
PMW-OP-2H	\$38.50				PNP		Diagram 4		
Extended Distance									
PMW-AN-1H	\$45.00	3 mm (0.118 in)	Shielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 4	
PMW-AP-1H	\$47.00				PNP		Diagram 2		
PMW-AN-2H	\$49.00	6 mm (0.236 in)	Unshielded	NO	NPN	M12 (12 mm) connector	Diagram 1	Figure 5	
PMW-AP-2H	\$49.00				PNP		Diagram 2		
Triple Distance									
PMW-AN-5A	\$84.00	6 mm (0.236 in)	Shielded	NO	NPN	2 m (6.5') axial cable	Diagram 1	Figure 2	
PMW-AP-5A	\$84.00				PNP	2 m (6.5') axial cable	Diagram 2		
PMW-AN-5H	\$84.00				NPN	M12 (12 mm) connector	Diagram 1		Figure 3
PMW-AP-5H	\$84.00				PNP	M12 (12 mm) connector	Diagram 2		Figure 3

Wiring diagrams

Diagram 1

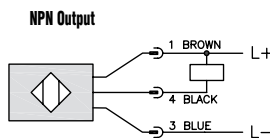


Diagram 2

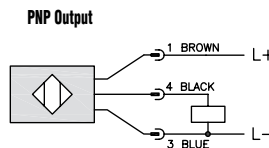


Diagram 3

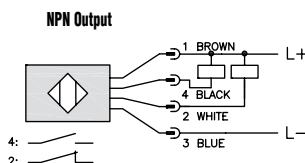
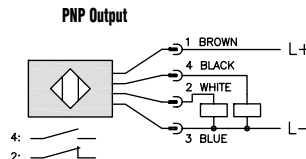


Diagram 4



Connector

M12 connector



Note: Pin 2 is not present on some models.

PMW Series Inductive Proximity Sensors

Specifications	Standard Distance Models	Extended Distance Models	Triple Distance Models	PMW-A*-1H	PMW-A*-2H	
Mounting Type	Shielded	Unshielded	Shielded	Shielded	Unshielded	
Nominal Sensing Distance	2 mm (0.08 in) ¹	4 mm (0.157 in) ¹	6 mm (0.236 in)	3 mm (0.118 in)	6 mm (0.236 in)	
Operating Distance	NA			0 to 2.4 mm (0.09 in)	0 to 4.9 mm (0.19 in)	
Material Correction Factors	See the Material influence table					
Output Type	NPN or PNP and NO/NC complementary		NPN or PNP, NO only	NPN or PNP, NO only		
Operating Voltage	10 to 30 VDC			10 to 36 VDC		
No-load Supply Current	≤15 mA		≤10 mA	≤20 mA	≤25 mA	
Operating (Load) Current	≤100 mA		≤200 mA	≤100 mA	≤100 mA	
Off-state (Leakage) Current	≤10μA			≤100μA		
Voltage Drop	≤1.2 V		≤2.0 V	<2.5 V		
Switching Frequency	2k Hz		400 Hz	100 Hz	500 Hz	
Differential Travel (% of Nominal Distance)	2 to 10%		≤15%	≤20%		
Repeat Accuracy	≤5%			Not available		
Ripple	≤10%		≤20%	Not available		
Time Delay Before Availability (tv)	100 ms		≤10 ms	negligible		
Reverse Polarity Protection	Yes					
Short-circuit Protection	Yes					
Operating Temperature / Temperature Drift	-25° to 70°C (-13° to 158°F) / 10%/Sr			-25° to 70°C (-13° to 158°F) / 20%/Sr	0° to 100°C (32° to 212°F)	
Protection Degree (DIN 40050)	IEC IP67/68		IEC IP67 ² (connector/IP68 ² (cable))	IEC IP67/68	IEC IP65/67/68/69K	
Indication/Switch Status	Yellow (NO output energized)					
Housing Material	Stainless steel		Stainless steel	Stainless steel. 2 lock nuts included.		
Sensing Face Material	PPS		Stainless steel	Stainless steel		
Shock/Vibration	See Proximity Sensor Terminology					
Tightening Torque	10 Nm (7.25 lb-in)			20 Nm (14.5 lb-in)		
Weight	35 g (1.23 oz)		89 g (3.14 oz)	29 g (1.023 oz.)	30 g (1.058 oz.)	
Connections	M12 connector with gold-plated contacts					
Agency Approvals	NA		UL file E328811, RoHS	cULus file E328811, CE, RoHS		

Notes: ¹With 12 x 12mm FE360 target ²Fully submersible to 290 psi.

Dimensions mm[inches]

Figure 1

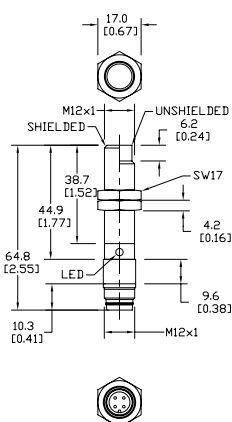


Figure 2

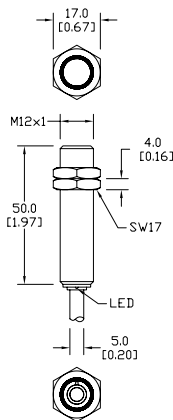


Figure 3

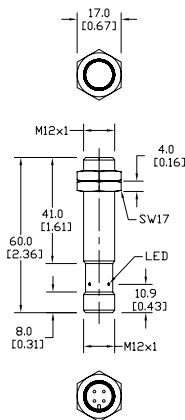


Figure 4

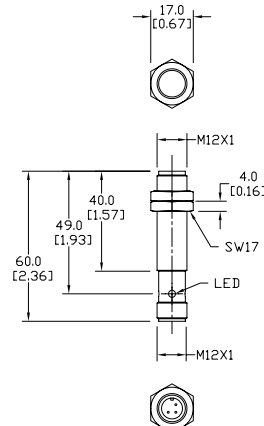
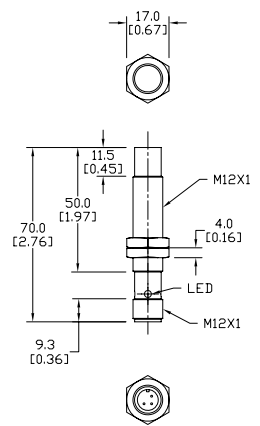


Figure 5



Note: Pin 2 is not present on some models.

Accessories for 12mm Sensors

Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 12mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for right-angle adapter sensors. Hexagonal nuts not included.

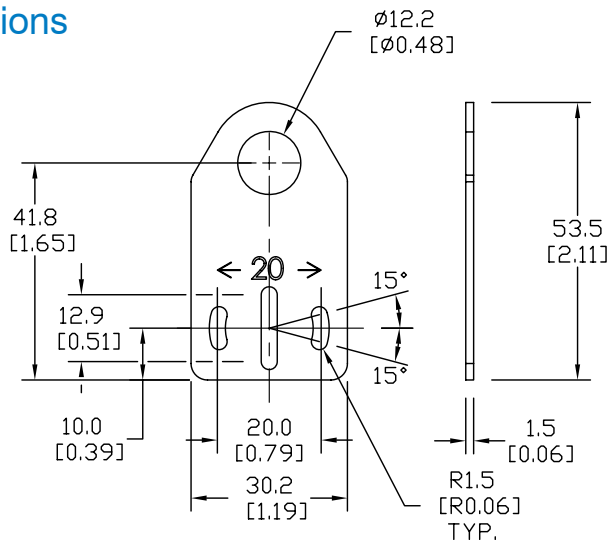
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight (lb)
ST12A	\$2.00	Mounting bracket, axial, zinc-plated steel. For use with 12mm sensors. 1/pk.	0.03
ST12A7W	\$6.00	Mounting bracket, axial, 316L stainless steel. For use with 12mm sensors. 1/pk.	0.03



ST12A

Dimensions

mm [inches]



Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel or 316L stainless steel. For use with 12mm sensors. Has two mounting holes (use 3mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal screws not included.

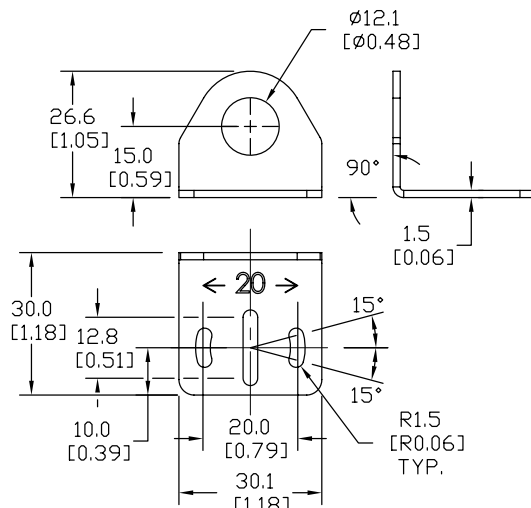
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight (lb)
ST12C	\$2.00	Mounting bracket, right angle, zinc-plated steel. For use with 12mm sensors. 1/pk.	0.03
ST12C7W	\$6.00	Mounting bracket, right angle, 316L stainless steel. For use with 12mm sensors. 1/pk.	0.03



ST12C

Dimensions

mm [inches]



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

Accessories for 12mm Sensors

Right-angle Mounting Brackets

Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors. Available with or without fixed insertion stop.

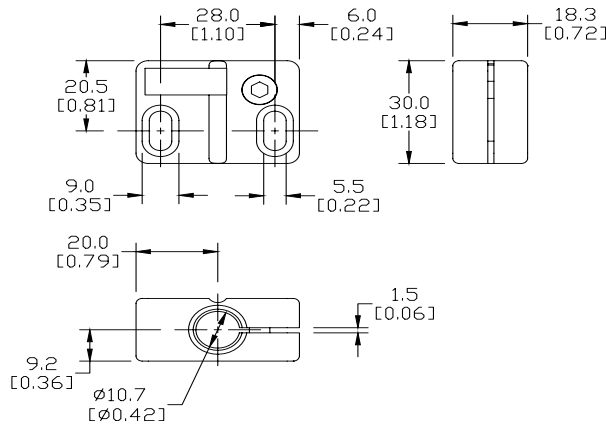
Accessories for 12mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2102	\$6.00	Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 12mm sensors.	Aluminum	Stainless Steel	0.14
OPT2103	\$6.00	Mounting bracket, right-angle, plastic. For use with 12mm sensors.	304 Stainless Steel	304 Stainless Steel	0.27



OPT2102, OPT2103

Dimensions

mm [inches]



Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 12mm sensors. Available in all stainless steel or with an aluminum head and stainless steel mounting plate.

Accessories for 12mm Sensors					
Part Number	Price	Description	Mounting Head	Mounting Plate	Weight [lb]
OPT2114	\$9.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 12mm sensors.	Aluminum	Stainless Steel	0.14
OPT2115	\$16.00	Mounting bracket, right-angle swivel, 360 vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 12mm sensors.	304 Stainless Steel	304 Stainless Steel	0.27

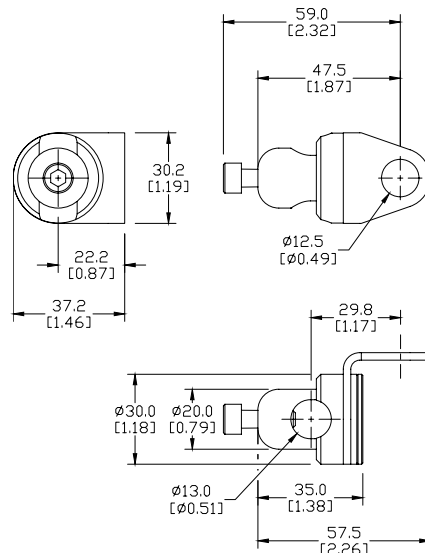
Note: 304 Stainless steel mounting rods sold separately: OPT2109 (200mm length), OPT2110 (300mm length), and OPT2111 (500mm length).



OPT2114, OPT2115

Dimensions

mm [inches]



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

Mounting Rods

Mounting Rods

304 Stainless steel rods for mounting swivel brackets OPT2112 - OPT2127. Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

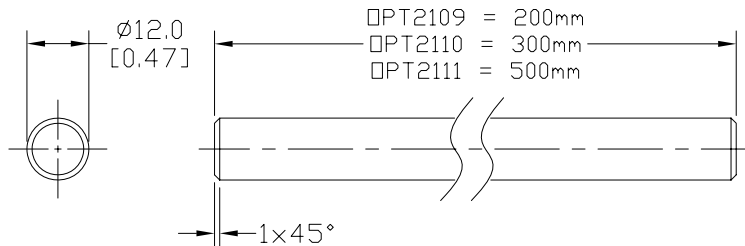
Mounting Rods for OPT2112-2127 Swivel Mounting Brackets			
Part Number	Price	Description	Weight [lb]
OPT2109	\$10.00	Mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	0.41
OPT2110	\$12.00	Mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	0.60
OPT2111	\$16.00	Mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	0.98



OPT2109, OPT2110, OPT2111

Dimensions

mm [inches]



Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.

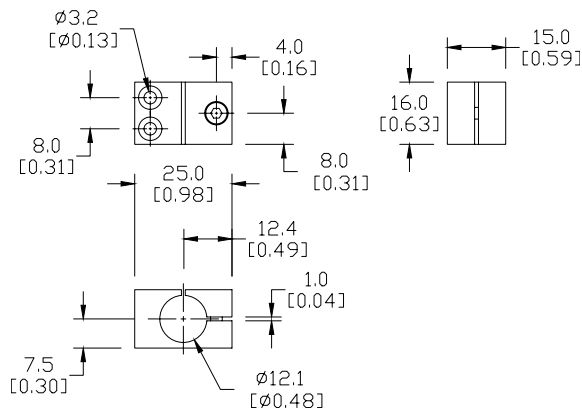
Accessories for 12mm Sensors			
Part Number	Price	Description	Weight [lb]
OPT2108	\$12.00	Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	0.07



OPT2108

Dimensions

mm [inches]



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