

# PKW Series Inductive Proximity Sensors



## M18 (18mm) stainless steel - DC

- 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

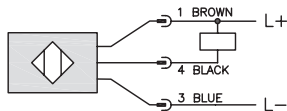


### PKW Series M18 DC Inductive Proximity Selection Chart

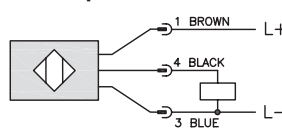
Part Number	Price	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
Standard Distance								
<a href="#"><u>PKW-0N-1H</u></a>	\$50.00	5mm [0.197 in]	Flush	N.O./N.C.	NPN	M12 [12mm] connector	Diagram 3	Figure 1
<a href="#"><u>PKW-0P-1H</u></a>	\$50.00				PNP	M12 [12mm] connector	Diagram 4	Figure 1
<a href="#"><u>PKW-0N-2H</u></a>	\$50.00	8mm [0.315 in]	Non-flush	N.O./N.C.	NPN	M12 [12mm] connector	Diagram 3	Figure 1
<a href="#"><u>PKW-0P-2H</u></a>	\$50.00				PNP	M12 [12mm] connector	Diagram 4	Figure 1
Triple Distance								
<a href="#"><u>PKW-AN-5A</u></a>	\$114.00	10mm [0.394 in]	Flush	N.O.	NPN	2m [6.5 ft] axial cable	Diagram 1	Figure 2
<a href="#"><u>PKW-AP-5A</u></a>	\$114.00				PNP	2m [6.5 ft] axial cable	Diagram 2	Figure 2
<a href="#"><u>PKW-AN-5H</u></a>	\$114.00				NPN	M12 [12mm] connector	Diagram 1	Figure 3
<a href="#"><u>PKW-AP-5H</u></a>	\$114.00				PNP	M12 [12mm] connector	Diagram 2	Figure 3

## Wiring Diagrams

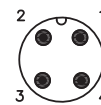
**Diagram 1**  
NPN Output



**Diagram 2**  
PNP Output

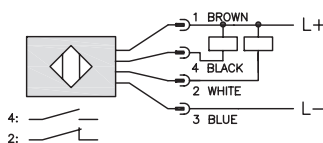


**Connector**  
M12 connector

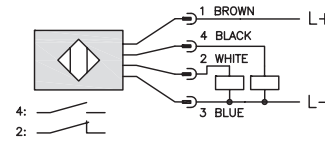


Note: Pin 2 is not present on some models.

**Diagram 3**  
NPN Output



**Diagram 4**  
PNP Output



# PKW Series Inductive Proximity Sensors

## PKW Series M18 DC Inductive Proximity Specifications

Models	Standard Distance	Triple Distance	PKW-A-1H	PKW-A*-2H
Mounting Type	Flush	Flush	Flush	Non-flush
Nominal Sensing Distance	5 mm [0.197 in] <sup>1</sup>	10 mm [0.394 in]	5 mm [0.197 in]	12 mm (0.472 in)
Operating Distance	NA	NA	0 to 4 mm	0 to 9.7 mm (0.38in)
Material Correction Factors	See the <a href="#">Material influence table</a>			
Output Type	NPN or PNP and N.O./N.C. complementary	NPN or PNP, N.O. only	NPN or PNP, N.O. only	
Operating Voltage	10 to 30 VDC	10 to 30 VDC	10 to 36 VDC	10 to 30 VDC
No-load Supply Current	15mA	10mA	20mA	25mA
Operating (Load) Current	≤ 400 mA	≤ 200 mA	100 mA	
Off-state (Leakage) Current	≤ 10μA	≤ 100μA	<0.1 mA	
Voltage Drop	≤ 0.8 V	≤ 2.0 V	< 2.5 V	
Switching Frequency	1kHz	200Hz	100Hz	500Hz
Differential Travel (% of Nominal Distance)	2 to 10%	≤ 15%	≤ 20%	
Repeat Accuracy	≤ 5%	NA	NA	
Ripple	≤ 10%	≤ 20%	NA	
Time Delay Before Availability (tv)	100ms	≤ 10ms	negligible	
Reverse Polarity Protection	Not available		Yes	
Short-circuit Protection	Not available		Yes [non-latching]	
Operating Temperature	-25 to 70°C [-13 to 158°F]	-25 to 70°C [-13 to 158°F]	-25 to 70°C [-13 to 158°F]	0 to 100°C [32 to 212°F]
Protection Degree (DIN 40050)	IEC IP67/68	IEC IP67 <sup>2</sup> [connector] IP68 <sup>2</sup> [cable]	IEC IP67, IP68	IEC IP65/67/68/69K
Indication/Switch Status	Yellow [N.O. output energized]			
Housing Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Sensing Face Material	Polyphenylene Sulfide [PPS]	Stainless steel	Stainless steel	Stainless steel
Shock Resistance / Vibration Resistance	See <a href="#">Proximity Sensor Terminology</a>			
Tightening Torque	40Nm [29 lb-ft]	50Nm [37 lb-ft]	50Nm [37 lb-ft]	
Weight	70g [2.47 oz]	114g [4.02 oz] 50g [1.76 oz]	56g [1.98 oz]	
Connection	M12 connector	2m [6.5 ft] axial cable or M12 connector	M12 connector. 2 lock nuts included	
Agency Approvals	NA	UL file E328811, RoHS	cULus file E328811, CE, RoHS	

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

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

## Dimensions

mm [inches]

Figure 1

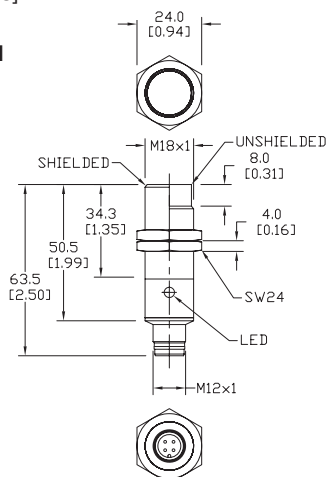


Figure 2

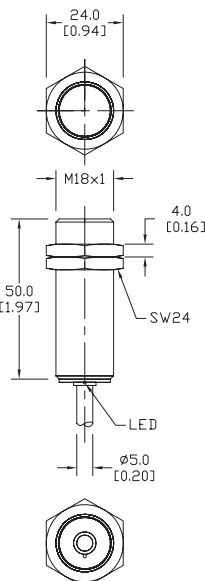
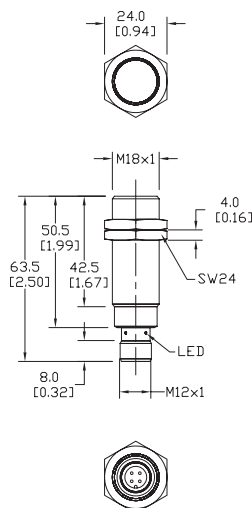


Figure 3



Note: Pin 2 is not present on some models.



# Accessories for 18mm Sensors

## Right-angle Mounting Brackets

Mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors. Available with or without fixed insertion stop.

Accessories for 18mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb [g]
<a href="#">OPT2104</a>	\$10.50	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	<a href="#">PDF</a>	0.06 [27.2]
<a href="#">OPT2105</a>	\$10.50	Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.	<a href="#">PDF</a>	0.06 [27.2]



[OPT2104](#), [OPT2105](#)

## Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 18mm sensors. Available in all 304 stainless steel or with an aluminum head and a stainless steel mounting plate.

Accessories for 18mm Sensors						
Part Number	Price	Description	Mounting Head	Mounting Plate	Drawing Link	Weight lb [g]
<a href="#">OPT2116</a>	\$11.50	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 18mm sensors.	Aluminum	304 Stainless steel	<a href="#">PDF</a>	0.15 [68.0]
<a href="#">OPT2117</a>	\$21.00	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 18mm sensors.	304 Stainless steel	304 Stainless steel	<a href="#">PDF</a>	0.28 [127.0]



[OPT2116](#), [OPT2117](#)

Note: 304 Stainless steel mounting rods sold separately: [OPT2109](#) (200mm [7.87 in] length), [OPT2110](#) (300mm [11.81 in] length), and [OPT2111](#) (500mm [19.69 in] length).

# Mounting Rods and Brackets

## 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	Drawing Link	Weight lb (g)
<a href="#">OPT2109</a>	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	<a href="#">PDF</a>	0.41 [185.97]
<a href="#">OPT2110</a>	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	<a href="#">PDF</a>	0.60 [272.16]
<a href="#">OPT2111</a>	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	<a href="#">PDF</a>	0.98 [444.52]



## Right-angle Mounting Bracket

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

Right-angle Mounting Brackets for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb [g]
<a href="#">OPT2108</a>	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	<a href="#">PDF</a>	0.07 [31.8]

