

# PKW Series Inductive Proximity Sensors



## M18 (18mm) stainless steel - DC

- Nine 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

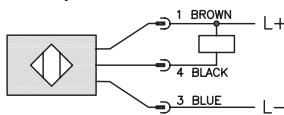


PKW Series M18 DC Inductive Prox Selection Chart								
Part Number	Price	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Dimensions
<b>Standard Distance</b>								
<b>PKW-ON-1H</b>		5 mm (0.197 in)	Flush	N.O./N.C.	NPN	M12 (12mm) connector	Diagram 3	Figure 1
<b>PKW-OP-1H</b>					PNP	M12 (12mm) connector	Diagram 4	Figure 1
<b>PKW-ON-2H</b>		8 mm (0.315 in)	Non-flush	N.O./N.C.	NPN	M12 (12mm) connector	Diagram 3	Figure 1
<b>PKW-OP-2H</b>					PNP	M12 (12mm) connector	Diagram 4	Figure 1
<b>Extended Distance</b>								
<b>PKW-AN-2H</b>		12 mm (0.472 in)	Non-flush	N.O.	NPN	M12 (12mm) connector	Diagram 1	Figure 4
<b>Triple Distance</b>								
<b>PKW-AN-5A</b>		10 mm (0.394 in)	Flush	N.O.	NPN	2m [6.56 ft] axial cable	Diagram 1	Figure 2
<b>PKW-AP-5A</b>					PNP	2m [6.56 ft] axial cable	Diagram 2	Figure 2
<b>PKW-AN-5H</b>					NPN	M12 (12mm) connector	Diagram 1	Figure 3
<b>PKW-AP-5H</b>					PNP	M12 (12mm) connector	Diagram 2	Figure 3

## Wiring diagrams

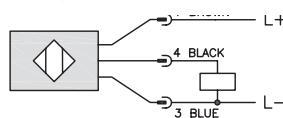
**Diagram 1**

NPN Output



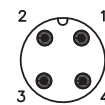
**Diagram 2**

PNP Output



**Connector**

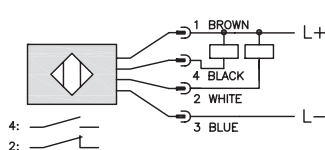
M12 connector



Note: Pin 2 is not present on some models.

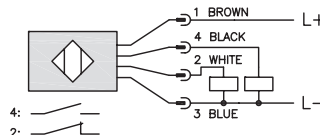
**Diagram 3**

NPN Output



**Diagram 4**

PNP Output



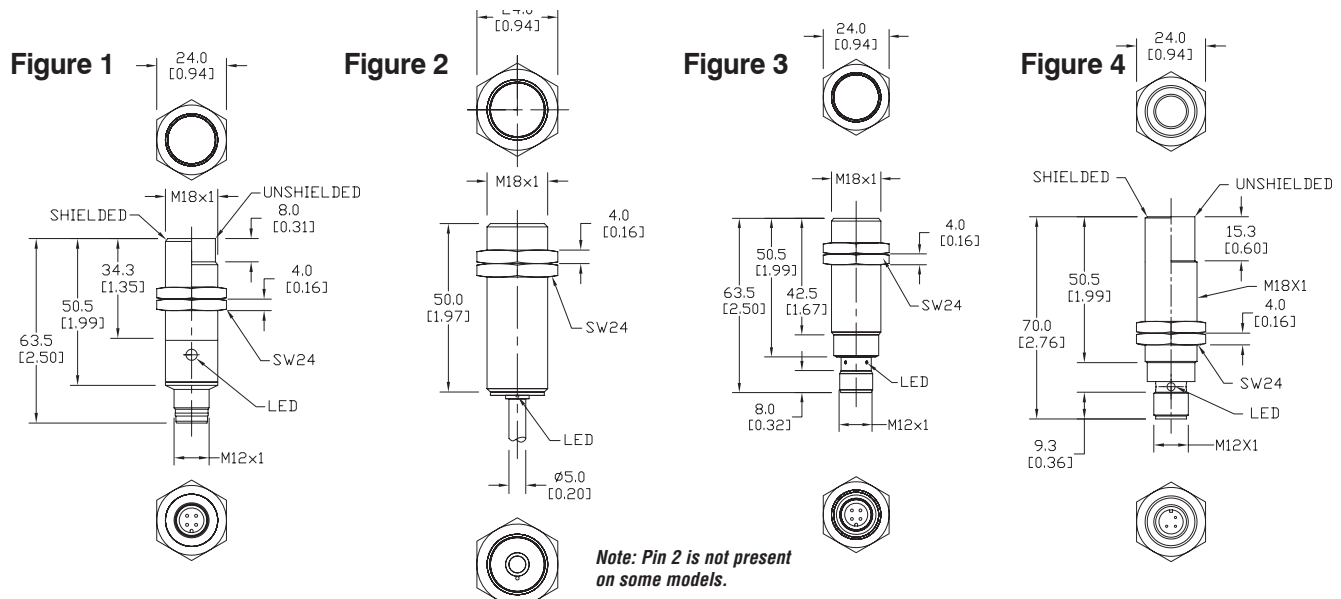
# PKW Series Inductive Proximity Sensors

Specifications	Standard Distance Models	Extended Distance Models	Triple Distance Models	PKW-A*-1H	PKW-A*-2H
<b>Mounting Type</b>	Flush	Non-flush	Flush	Flush	Non-flush
<b>Nominal Sensing Distance</b>	5 mm (0.197 in) <sup>1</sup>	8 mm (0.315 in) <sup>1</sup>	10 mm (0.394 in)	5 mm (0.197 in)	12 mm (0.472 in)
<b>Operating Distance</b>	NA			0 to 4 mm	0 to 9.7 mm (0.38in)
<b>Material Correction Factors</b>	See the <a href="#">Material influence table</a>				
<b>Output Type</b>	NPN or PNP and N.O./N.C. complementary		NPN or PNP, N.O. only		NPN or PNP, N.O. only
<b>Operating Voltage</b>	10 to 30 VDC			10 to 36 VDC	10 to 30 VDC
<b>No-load Supply Current</b>	15mA		10mA	20mA	25mA
<b>Operating (Load) Current</b>	≤ 400 mA		≤ 200 mA	100 mA	
<b>Off-state (Leakage) Current</b>	≤ 10µA		≤ 100µA	<0.1 mA	
<b>Voltage Drop</b>	≤ 0.8 V		≤ 2.0 V	< 2.5 V	
<b>Switching Frequency</b>	1kHz		200Hz	100Hz	500Hz
<b>Differential Travel (% of Nominal Distance)</b>	2 to 10%		≤ 15%	≤ 20%	
<b>Repeat Accuracy</b>	≤ 5%		NA	NA	
<b>Ripple</b>	≤ 10%		≤ 20%	NA	
<b>Time Delay Before Availability (tv)</b>	100ms		≤ 10ms	negligible	
<b>Reverse Polarity Protection</b>	Not available			Yes	
<b>Short-circuit Protection</b>	Not available			Yes (non-latching)	
<b>Operating Temperature</b>	-25° to 70°C (-13° to 158°F)				0° to 100°C (32° to 212°F)
<b>Protection Degree (DIN 40050)</b>	IEC IP67/68		IEC IP67 <sup>2</sup> (connector) IP68 <sup>2</sup> (cable)	IEC IP67, IP68	IEC IP65/67/68/69K
<b>Indication/Switch Status</b>	Yellow (N.O. output energized)				
<b>Housing Material</b>	Stainless steel				
<b>Sensing Face Material</b>	Polyphenylene Sulfide (PPS)		Stainless steel	Stainless steel	Stainless steel
<b>Shock Resistance / Vibration Resistance</b>	See <a href="#">Proximity Sensor Terminology</a>				
<b>Tightening Torque</b>	40 Nm (29 lb-ft)		50 Nm (37 lb-ft)	50 Nm (37 lb-ft)	
<b>Weight</b>	70 g (2.47 oz)		114 g (4.02 oz) 50g (1.76 oz)	56 g (1.98 oz)	
<b>Connection</b>	M12 connector		2 m (6.5') axial cable or M12 connector	M12 connector. 2 lock nuts included	
<b>Agency Approvals</b>	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.

## Dimensions

mm [inches]



# Accessories for 18mm Sensors

## Axial Mounting Bracket

Axial mounting bracket available in zinc plated steel or 316L stainless steel. Has two mounting holes (use 4mm screws) and allows for rotation of an optical axis for right-beam-angle-adaptor sensors. Hexagonal nuts not included. For use with 18mm sensors.

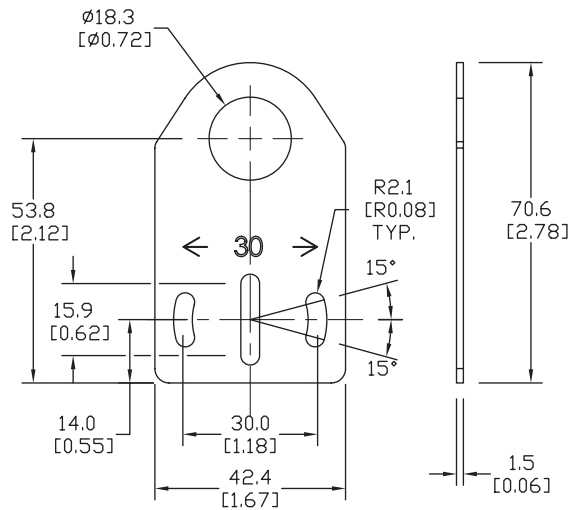


ST18A

Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
<b>ST18A</b>		Mounting bracket, axial, zinc plated steel. For use with 18mm sensors.	0.06 (27.2)
<b>ST18A7W</b>		Mounting bracket, axial, 316L stainless steel. For use with 18mm sensors.	0.06 (27.2)

## Dimensions

mm [inches]



## Right-angle Mounting Bracket

Right-angle mounting bracket for use with 18mm sensors. Has two mounting holes (use 4mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

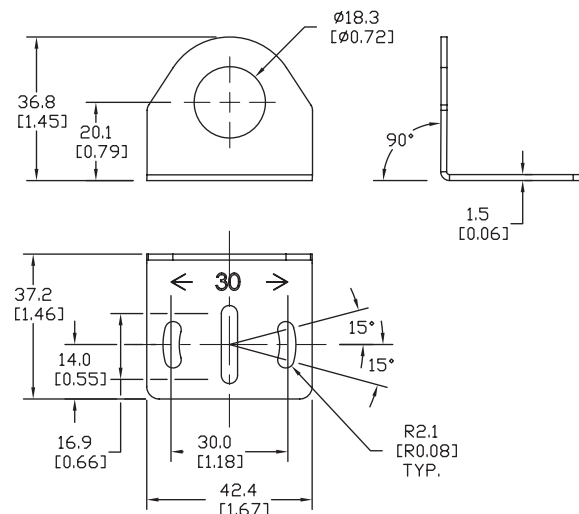


ST18C

Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb (g)
<b>ST18C</b>		Mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.	0.06 (27.2)
<b>ST18C7W</b>		Mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors.	0.06 (27.2)

## Dimensions

mm [inches]



# 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>		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>		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>		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>		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>		Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	<a href="#">PDF</a>	0.41 (185.97)
<a href="#">OPT2110</a>		Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	<a href="#">PDF</a>	0.60 (272.16)
<a href="#">OPT2111</a>		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>		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)

