

# VFK Series IP69K-rated Proximity Sensors



**VFK1-A0-1M**  
**VFK1-A0-2M**

## 18mm Stainless Steel - AC

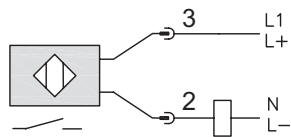
- 18mm diameter
- 316L stainless steel housing
- 1/2" micro AC quick-disconnect plug with gold-plated pins (purchase cable separately)
- Complete overload protection
- IP69K rated for food and beverage applications
- M18 mounting hex nuts included
- Lifetime warranty



VFK Series Food and Beverage AC Inductive Proximity Selection Chart							
Part Number	Price	Sensing Range	Mounting	Output State	Connection	Wiring	Dimensions
<b>VFK1-A0-1M</b>		0 to 5 mm [0 to 0.197 in]	Flush	N.O.	1/2" micro AC quick-disconnect plug	Diagram 1	Figure 1
<b>VFK1-A0-2M</b>		0 to 12 mm [0 to 0.472 in]	Non-flush		1/2" micro AC quick-disconnect plug	Diagram 1	Figure 1

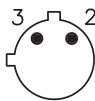
## Wiring Diagram

Diagram 1



Note: Class 2 power supply required

Connector



# VFK Series IP69K-rated Proximity Sensors

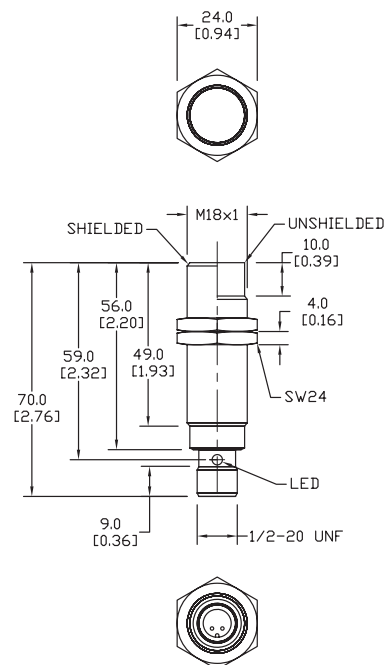
VFK Series Food and Beverage AC Inductive Proximity Specifications		
Mounting Type	Flush	Non-flush
Nominal Sensing Distance	0 to 5 mm [0 to 0.197 in]	0 to 12 mm [0 to 0.472 in]
Operating Distance	NA	
Material Correction Factors	See the <a href="#">Material influence table</a>	
Output Type	N.O. only	
Operating Voltage	20 to 140 VAC/VDC	
No-load Supply Current	NA	
Operating (Load) Current	5 - 200mA	
Off-state (Leakage) Current	< 1mA	
Voltage Drop	< 5.5 V	
Switching Frequency	25Hz VAC/400Hz VDC	25Hz VAC/300Hz VDC
Differential Travel (% of Nominal Distance)	1 - 20%	
Repeat Accuracy	10%	
Ripple	NA	
Time Delay Before Availability (tv)	1s	
Reverse Polarity Protection	yes	
Short-Circuit Protection	yes [non latching]	
Operating Temperature	0 to 100°C [32 to 212°F]	
Protection Degree (DIN 40050)	IEC IP68/IP69K, II	
Indication/Switch Status	Normally Open output energized - Yellow	
Housing Material	316L stainless steel	
Sensing Face Material	PEEK (Polyether Ether Ketone)	
Shock/Vibration	See <a href="#">Proximity Sensor Terminology</a>	
Tightening Torque	50 Nm [37 lb-ft]	
Weight	68g [2.39 oz]	59g [2.08 oz]
Connection	1/2" micro AC connector	
Agency Approvals	UL E328811, CE, ECOLAB, RoHS	

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



# 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.

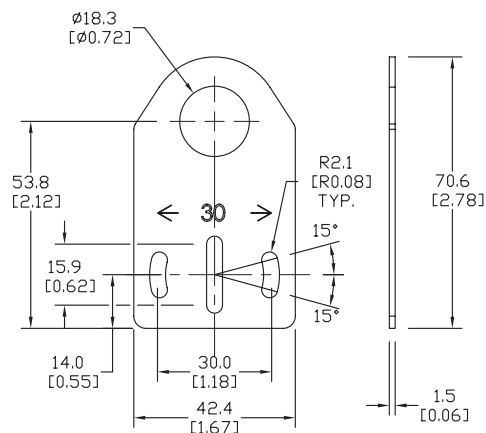
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb [g]
<a href="#"><u>ST18A</u></a>		Micro Detectors mounting bracket, axial, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]
<a href="#"><u>ST18A7W</u></a>		Micro Detectors mounting bracket, axial, 316L stainless steel. For use with 18mm sensors.	0.06 [27.2]



**ST18A**

## Dimensions

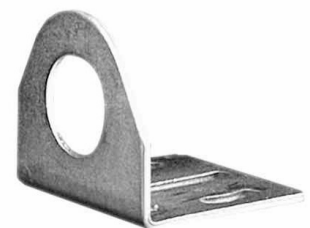
mm [inches]



## 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.

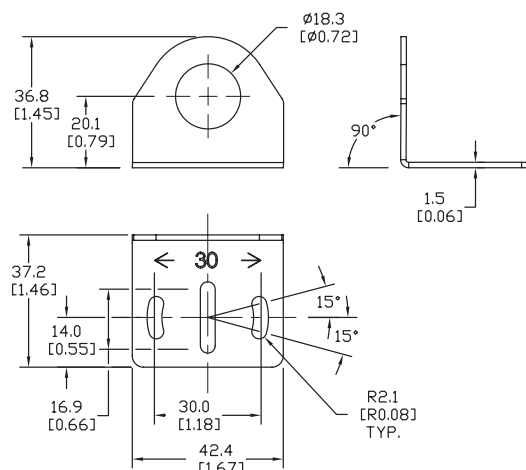
Accessories for 18mm Sensors			
Part Number	Price	Description	Weight lb [g]
<a href="#"><u>ST18C</u></a>		Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 18mm sensors.	0.06 [27.2]
<a href="#"><u>ST18C7W</u></a>		Micro Detectors mounting bracket, right-angle, 316L stainless steel. For use with 18mm sensors.	0.06 [27.2]



**ST18C**

## 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]

