



Inductive Proximity Sensors

PAK Series

Tubular M18 (18mm) – DC

Features

- Nickel-plated brass construction
- Axial cable or M12 quick-disconnect models
- Complete overload protection
- IP67 rated
- LED status indicator
- Mounting hardware included
- Lifetime warranty



PAK-AP-1A



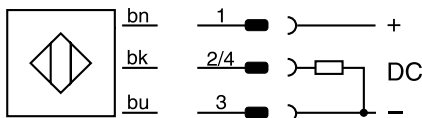
PAK-AP-2H

Tubular M18 DC Inductive Proximity Sensors PAK Series Selection Chart

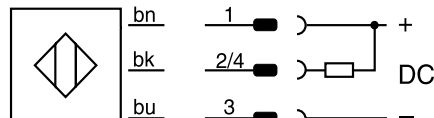
Part Number	Price	Sensing Distance mm [in]	Mounting	Output State	Logic	Connection	Weight g [oz]	Body Size mm [in]	Drawing Link
PAK-AP-1A	\$12.50	5mm [0.19]	Flush	N.O.	PNP	PVC, 3-wire pigtail 2m [6.5 ft], 22AWG	116 [4.09]	50 [1.96]	PDF
PAK-AP-1H	\$12.50					4-pin M12 quick-disconnect [purchase cable separately]	51 [1.79]	63.5 [2.5]	PDF
PAK-AN-1H	\$12.50				NPN				PDF
PAK-AP-2A	\$12.50	8mm [0.31]	Non-flush	N.O.	PNP	PVC, 3-wire pigtail 2m [6.5 ft], 22AWG	112 [3.95]	50 [1.96]	PDF
PAK-AP-2H	\$12.50			N.O.		4-pin M12 quick-disconnect [purchase cable separately]	49 [1.72]	63.5 [2.5]	PDF
PAK-AN-2H	\$12.50			N.O.	NPN				PDF

Wiring Diagrams

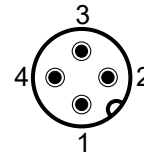
PNP Cable



NPN Cable



M12 Connector





Inductive Proximity Sensors

PAK Series Specifications

Tubular M18 DC Inductive Proximity Sensors PAK Series Specifications		
Mounting Type	Flush	Non-Flush
Rated Operating Distance	5mm [0.19 in]	8mm [0.31 in]
Assured Operating Distance	$\leq (0.81 \times S_n)$ mm	
Repeat Accuracy	0.25 mm	0.4 mm
Hysteresis	$\leq 20\% S_r$	
Temperature Drift	$\leq 10\% S_r$	
Material Correction Factors	See the Material Influence Table	
Output Type	PNP or NPN, N.O.	
Operating Voltage	10 to 30 VDC	
Residual Ripple	$\leq 20\% U_B$	
Output Current	$\leq 200\text{mA}$	
Output Voltage Drop	$\leq 2.0\text{ V @ }200\text{mA}$	
Power Consumption (no-load)	$\leq 10\text{ mA}$	
Residual Current	$\leq 0.1\text{ mA}$	
Switching Frequency	2kHz	2kHz
Short-Circuit Protection	Yes	
Reverse Polarity Protection	Yes	
Operating Temperature	-25 to 70°C [-13 to 158°F]	
Protection Degree (DIN 40050)	IP67	
Indication/Switch Status	LED, Yellow Sensing state ($0 \leq s \leq S_r$)	
Mounting	Embeddable	Non-embeddable
Housing Material	Nickel-plated brass	
Sensing Face Material	PBTP (polybutylene terephthalate)	
Shock/Vibration	IEC 60947-5-2	
Agency Approvals	cULus File E328811, CE	

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

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]
OPT2104	\$10.50	Wenglor mounting bracket, right-angle, fixed insertion stop adjustment, plastic. For use with 18mm sensors.	PDF	0.06 [27.2]
OPT2105	\$10.50	Wenglor mounting bracket, right-angle, plastic. For use with 18mm sensors.	PDF	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]
OPT2116	\$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	PDF	0.15 [68.0]
OPT2117	\$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	PDF	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).