

ProSense Basic M30 Inductive Proximity Sensors



Basic Series Inductive Proxes M30 (30mm)

- Operating distance 10 to 15mm
- Nickel-plated brass housing
- LCP (Liquid Crystal Polymer) active face
- Normal range operating distance
- Cable or M12 connector
- PNP or NPN, N.O. or N.C.
- IP67 protection



Basic M30 Inductive Proximity Sensor Selection Chart

Part Number	Price	Sensing Range	Mounting	Output State	Logic	Connection	Wiring	Drawing Link
Standard Distance								
PBT6-AP-1A	\$16.00	10mm [0.39 in]	Flush	N.O.	PNP	Cable, 3 pole, 2m [6.5 ft]	Diagram 1	PDF
PBT6-AP-1H	\$18.50	10mm [0.39 in]	Flush	N.O.	PNP	4-pin M12 connector	Diagram 3	PDF
PBT6-CP-1H	\$18.50	10mm [0.39 in]	Flush	N.C.	PNP	4-pin M12 connector	Diagram 3	PDF
PBT6-AN-1H	\$18.50	10mm [0.39 in]	Flush	N.O.	NPN	4-pin M12 connector	Diagram 4	PDF
PBT6-AP-2A	\$16.00	15mm [0.59 in]	Non-flush	N.O.	PNP	Cable, 3 pole, 2m [6.5 ft]	Diagram 1	PDF
PBT6-AP-2H	\$18.50	15mm [0.59 in]	Non-flush	N.O.	PNP	4-pin M12 connector	Diagram 3	PDF
PBT6-CP-2H	\$18.50	15mm [0.59 in]	Non-flush	N.C.	PNP	4-pin M12 connector	Diagram 3	PDF
PBT6-AN-2H	\$18.50	15mm [0.59 in]	Non-flush	N.O.	NPN	4-pin M12 connector	Diagram 4	PDF

Wiring Diagrams

Diagram 1

PNP Cable Version

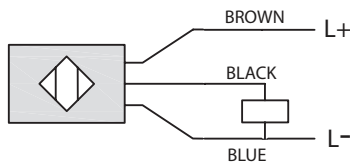
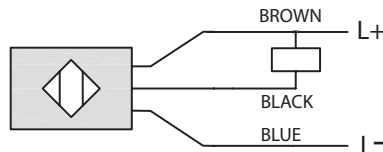


Diagram 2

NPN Cable Version



Connector

M12 connector

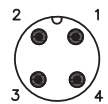


Diagram 3

PNP M12 Connector

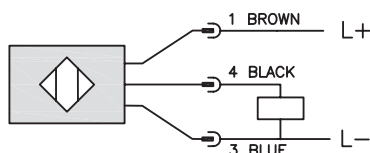
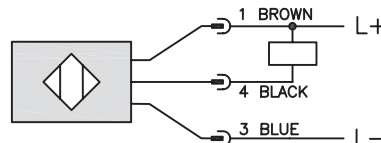


Diagram 4

NPN M12 Connector



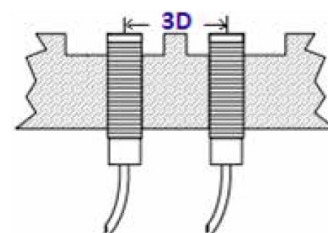
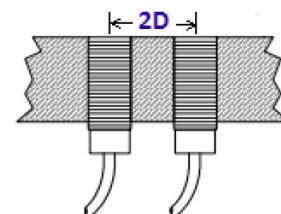
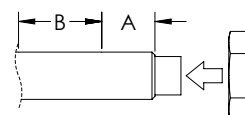
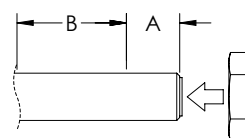
Prosense Basic M30 Inductive Proximity Sensors

Basic M30 Inductive Proximity Sensor Specifications

Mounting Type	Flush	Non-flush
Nominal Sensing Distance	10mm [0.39 in]	15mm [0.59 in]
Material Correction Factors	See the Material influence table	
Output Type	NPN or PNP/N.O. or N.C./3-wire	
Operating Voltage	10 to 30 VDC	
No-load Supply Current	≤ 10mA	
Operating (Load) Current	200mA	
Off-state (Leakage) Current	≤ 10mA	
Voltage Drop	≤ 1.8 V [I=100mA]	
Switching Frequency	300Hz	
Hysteresis	< 10%	
Repeat Accuracy	< 3%	
Ripple	< 10%	
Time Delay Before Availability (tv)	< 50 ms	
Reverse Polarity Protection	Yes	
Short-Circuit Protection	Yes (auto-reset)	
Operating Temperature	-25 to 60°C [-13 to 140°F]	
Protection Degree (DIN 40050)	IP67	
Indication/Switch Status	Yellow, on when detecting	
Housing Material	Nickel-plated brass	
Sensing Face Material	LCP (Liquid Crystal Polymer)	
Shock/Vibration	See Proximity Sensor Terminology	
Tightening Torque	See Torque Table below	
Weight	210g [7.41 oz] (cable version) – 170g [6.00 oz] (M12 connector)	
Connection	2m [6.5 ft] PUR Cable, 3 pole, 26AWG or M12 Connector	
Agency Approvals	CE cULus E328811	

Installation Tightening Torque

Mounting	Flush, non-flush mountable
Housing Material	Nickel plated brass
Diameter	30mm [1.18 in]
Tightening Torque for A (A = 11mm [0.43 in])	40 N•m [29.50 lb•ft]
Tightening Torque for B	60 N•m [44.25 lb•ft]



Flush Mounting

Flush models can be installed with their sensing faces flush to the metal. The distance from opposing metal surfaces must be $\geq 3sn$ (where sn =nominal switching distance), and the distance between two proximity switches (side by side) must be $\geq 2D$.

Non-Flush Mounting

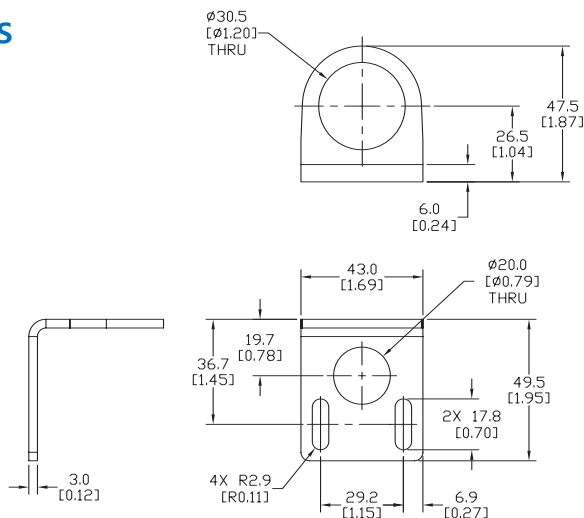
Non-flush models can be identified by their "caps," since they have no metal housing surrounding the area of the sensing face. The sensing face must extend $\geq 2sn$ (where sn =nominal switching distance) from the metallic installation medium. The distance from opposing metal surfaces must be $\geq 3sn$, and the distance between two adjacent proximity switches must be $\geq 3D$. The metal body leaves uncovered part of the sensing area, resulting in an increased sensing distance.

Right-angle Mounting Bracket

Mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.

Accessories for FW Series Sensors			
Part Number	Price	Description	Weight lb [g]
<u>ST30C6W</u>	\$5.50	AutomationDirect mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.	0.15 (68.0)

mm [inches]



ST30C6W

Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

Accessories for 30mm Sensors						
Part Number	Price	Description	Mounting Head	Mounting Plate	Drawing Link	Weight lb [g]
OPT2118	\$11.50	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 30mm sensors.	Aluminum	304 Stainless steel	PDF	0.18 [81.7]
OPT2119	\$21.00	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 30mm sensors.	304 Stainless Steel	304 Stainless steel	PDF	0.18 [81.7]

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).



OPT2118, OPT2119

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)
OPT2109	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 [185.97]
OPT2110	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 [272.16]
OPT2111	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	PDF	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]
OPT2108	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	PDF	0.07 [31.8]

