V Series AC & AC/DC Inductive Proximity Sensors

M30 (30mm)

- Low cost/high performance
- LED status indicators are visible at a wide angle
- Axial cable and 1/2 in. micro AC quick-disconnect models
- Purchase cable separately (for quick-disconnect models)
- Lifetime warranty

NEED CABLES?

V Series M30 AC & AC/DC Inductive Proximity Sensors Selection Chart								
Part Number	Price	Sensing Range[1]	Mounting	Output State	Voltage	Connection	Wiring	Dimensions
Standard								
VT1-A0-1B	$45.00	10mm [0.394 in]	Flush	N.O.	20–253 VAC	2m [6.5 ft] axial cable	Diagram 2	Figure 1
VT1-A0-2B	$45.00	15mm [0.590 in]	Non-flush					
Extended								
V3T1-R0-3A8F	$48.00	12mm [0.472 in]	Flush	N.O. (VAC) or N.O./N.C. (VDC)	20–250 VAC/ VDC	2m [6.5 ft] axial cable	Diagram 1	Figure 2
V3T1-S0-3A8F	$48.00			N.C. (VAC) or N.O./N.C. (VDC)			Diagram 3	Figure 2
V3T1-R0-3Q	$48.00			N.O. (VAC) or N.O./N.C. (VDC)		1/2"-20 UNF, micro AC quick-disconnect	Diagram 4	Figure 3
V3T1-S0-3Q	$48.00			N.C. (VAC) or N.O./N.C. (VDC)			Diagram 5	Figure 3
V3T1-R0-4A8F	$48.00	18mm [0.708 in]	Non-flush	N.O. (VAC) or N.O./N.C. (VDC)		2m [6.5 ft] axial cable	Diagram 1	Figure 2
V3T1-S0-4A8F	$48.00			N.C. (VAC) or N.O./N.C. (VDC)			Diagram 3	Figure 2
V3T1-R0-4Q	$48.00			N.O. (VAC) or N.O./N.C. (VDC)		1/2"-20 UNF, micro AC quick-disconnect	Diagram 4	Figure 3
V3T1-S0-4Q	$48.00			N.C. (VAC) or N.O./N.C. (VDC)			Diagram 5	Figure 3

[1]**With 30mm x 30mm Fe360 target**

Wiring Diagrams

Connectors

Diagram 1

Diagram 2

M12 connector
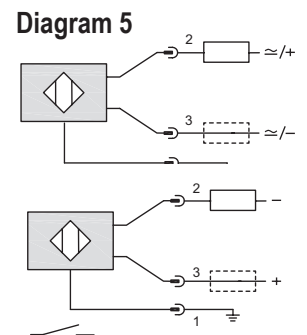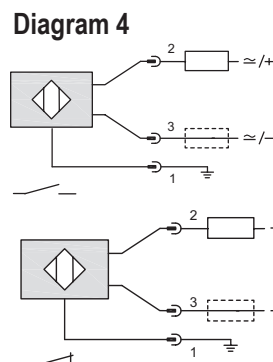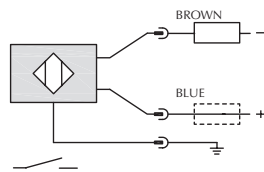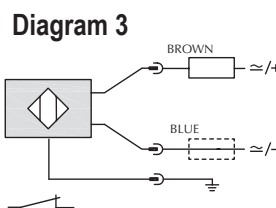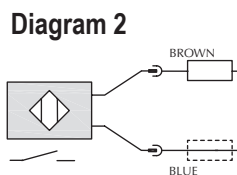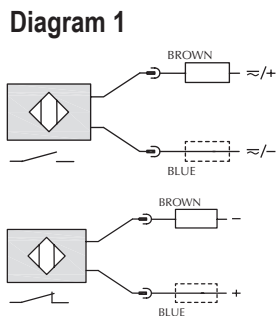
1/2 in. micro AC

Note: Pin 2 is not present on some models.

Diagram 3

Diagram 4

Diagram 5
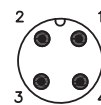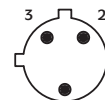
V Series AC & AC/DC Inductive Proximity Sensors

Specifications	VT1 Models		V3T1 Models	
Mounting Type	Flush	Non-flush	Flush	Non-flush
Nominal Sensing Distance (mm)	5	8	12	18
Operating Distance	NA		0–9.7 mm	0–14.6 mm
Material Correction Factors	See Material Influence Table			
Output Type	Triac/N.O./2-wire		N.O. or N.C. (VAC) N.O./N.C. (VDC)	
Operating Voltage	20–253 VAC, 50/60 Hz		20–250 VAC/VDC	
No-load Supply Current	NA			
Operating (Load) Current DC	NA		200mA	
AC	5–300 mA (RMS)		140mA	
Off-state Leakage Current DC	NA		0.70 mA	
AC	1.0 mA max. (RMS)		1mA	
Voltage Drop	≤ 8.8 VAC		≤ 7.5 VAC / ≤ 8VDC	
Switching Frequency	25Hz		250Hz	190Hz
Differential Travel (% of Nominal Distance)	2–10%		1–20%	
Repeat Accuracy	5%		≤ 5%	
Peak Current	NA		600mA/150ms Max.	
Time Delay Before Availability (tv)	200ms		100ms	
Reverse Polarity Protection	NA		Yes	
Short Circuit Protection: Overload	No		Yes	
Overvoltage			Yes	
Operating Temperature	-25 to +70°C [-13 to 158°F]		-25 to +70°C [-13 to 158°F]	
Protection Degree (DIN 40050)	IEC IP67		IP67	
LED Indicators	Yellow (output energized)			
Housing Material	Nickel-plated brass			
Sensing Face Material	Polybutylene Terephthalate (PBT)		PA4T	
Shock/Vibration	IEC 60947-5-2			
Tightening Torque	25 N·m [18.44 lb·ft]		50 N·m [37 lb·ft]	
Weight	120g [4.23 oz]		120g Plug; 170g Cable	
Connection	2m [6.5 ft] axial cable		2m [6.5 ft] axial cable or 1/2"-20 UNF, micro AC quick-disconnect	
Agency Approvals	CE, UL Recognized file E130644		CE, UL E187310	

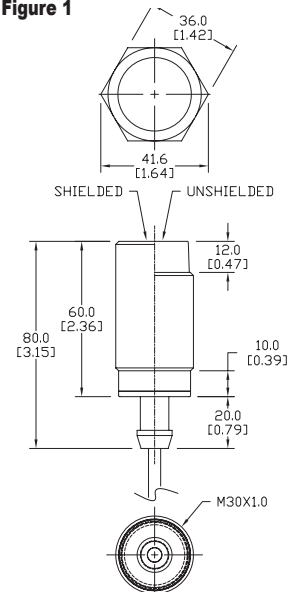## Dimensions

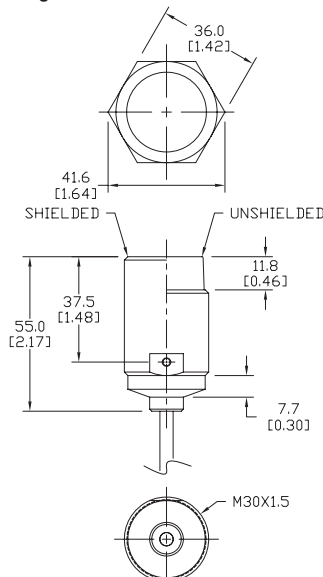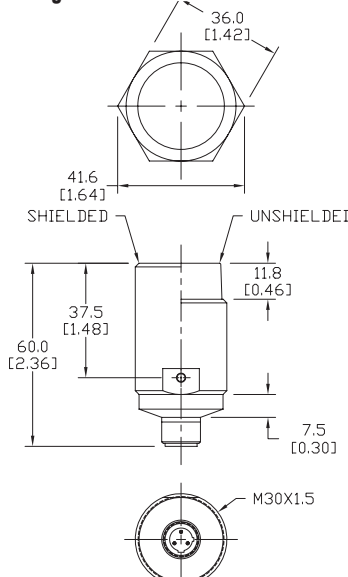mm [inches]

Figure 1

Figure 2

Figure 3

NOTE: Each sensor ships with jam nuts.
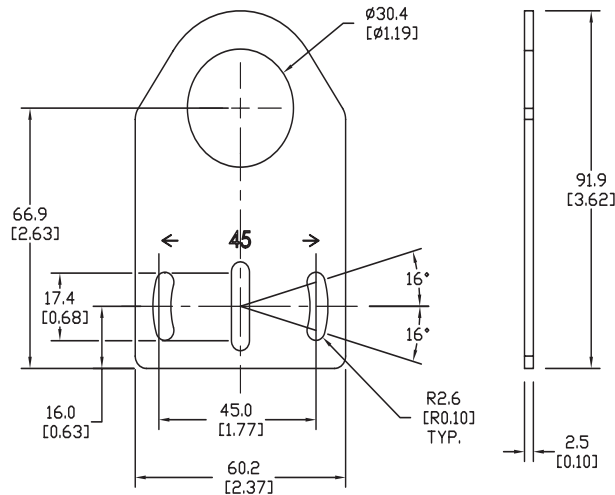
Accessories for 30mm Sensors

Axial Mounting Bracket

Mounting bracket, axial, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for right-beam-angle-adapter sensors. Hexagonal nuts not included.

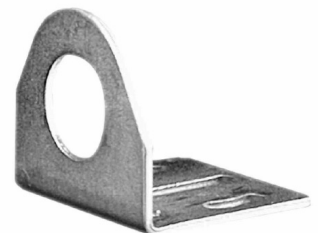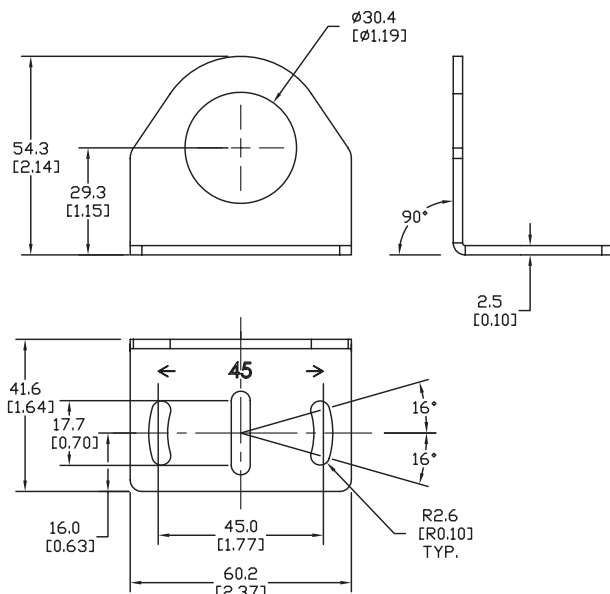| Accessories for 30mm Sensors			
Part Number	Price	Description	Weight lb [g]
ST30A	$2.25	Micro Detectors mounting bracket, axial, zinc plated steel. For use with 30mm sensors.	0.18 [81.7]

Dimensions
mm [inches]

ST30A

Right-angle Mounting Bracket

Mounting bracket, right-angle, zinc-plated steel. For use with 30mm sensors. Has two mounting holes (use 5mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.

Accessories for 30mm Sensors			
Part Number	Price	Description	Weight lb [g]
ST30C	$2.25	Micro Detectors mounting bracket, right-angle, zinc plated steel. For use with 30mm sensors.	0.18 [81.7]

Dimensions
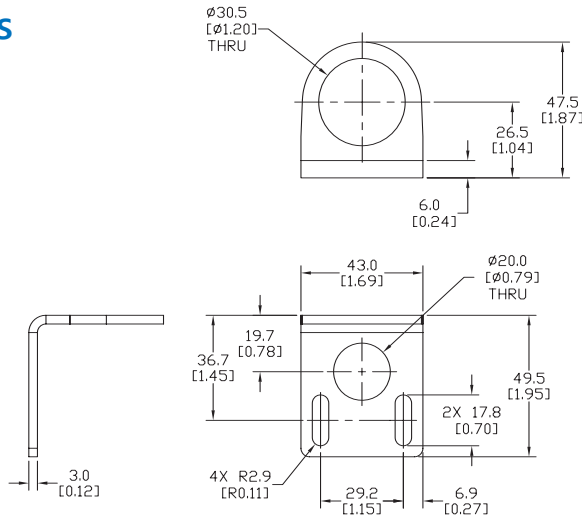mm [inches]

ST30C

Accessories for 30mm Sensors

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]
ST30C6W	$5.50	AutomationDirect mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.	0.15 (68.0)

Dimensions

mm [inches]

Ø30.5 [Ø1.20] THRU
47.5 [1.87]
26.5 [1.04]
6.0 [0.24]

43.0 [1.69]
Ø20.0 [Ø0.79] THRU
19.7 [0.78]
36.7 [1.45]
49.5 [1.95]
2X 17.8 [0.70]
3.0 [0.12]
4X R2.9 [R0.11]
29.2 [1.15]
6.9 [0.27]

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