V Series AC & AC/DC Inductive Proximity Sensors

M30 (30mm)

- Ten models available
- 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 Prox Selection Chart								
Part Number	**Price**	**Sensing Range[1]**	**Mounting**	**Output State**	**Voltage**	**Connection**	**Wiring**	**Dimensions**
Standard								
VT1-A0-1B		10mm (0.394 in)	Flush	N.O.	20–253 VAC	2m (6.5 ft) axial cable	Diagram 2	Figure 1
VT1-A0-2B		15mm (0.590 in)	Non-flush					
Extended								
V3T1-R0-3A8F		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				N.C. (VAC) or N.O./N.C. (VDC)			Diagram 3	Figure 2
V3T1-R0-3Q				N.O. (VAC) or N.O./N.C. (VDC)		1/2"-20 UNF, micro AC quick-disconnect	Diagram 4	Figure 3
V3T1-S0-3Q				N.C. (VAC) or N.O./N.C. (VDC)			Diagram 5	Figure 3
V3T1-R0-4A8F		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				N.C. (VAC) or N.O./N.C. (VDC)			Diagram 3	Figure 2
V3T1-R0-4Q				N.O. (VAC) or N.O./N.C. (VDC)		1/2"-20 UNF, micro AC quick-disconnect	Diagram 4	Figure 3
V3T1-S0-4Q				N.C. (VAC) or N.O./N.C. (VDC)			Diagram 5	Figure 3

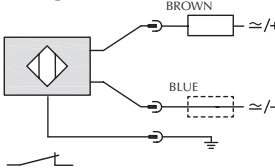[1] With 30mm x 30mm Fe360 target

Wiring Diagrams

Diagram 1

BROWN ≈/+
BLUE ≈/–

BROWN –
BLUE +

Diagram 2

BROWN
BLUE

Diagram 3

BROWN ≈/+
BLUE ≈/–

BROWN –
BLUE +
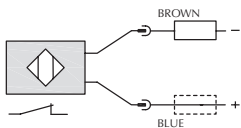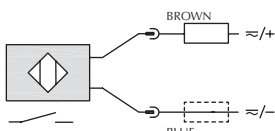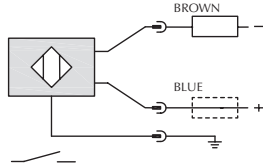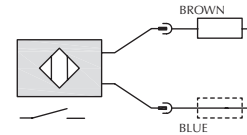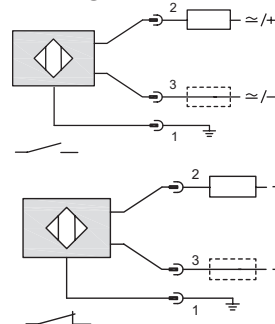
Connectors

M12 connector
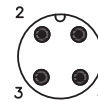
1/2 in. micro AC
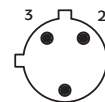
Note: Pin 2 is not present on some models.

Diagram 4

2 ≈/+
3 ≈/–
1

2 –
3 +
1

Diagram 5

2 ≈/+
3 ≈/–

2 –
3 +
1

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 40 050)		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	

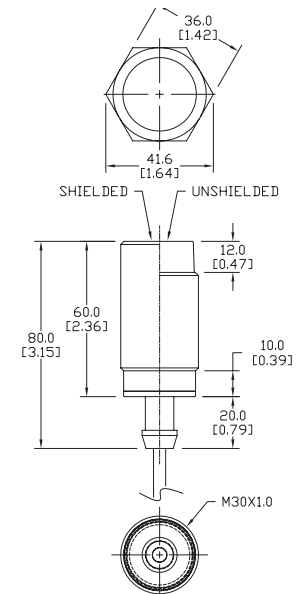## Dimensions

mm [inches]
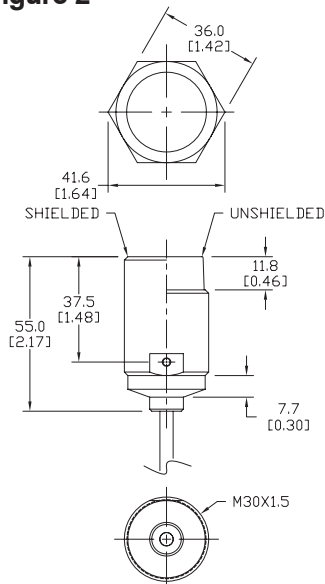
Figure 1

Figure 2

Figure 3
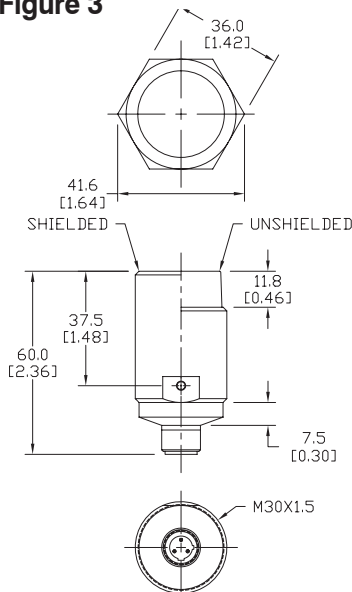
NOTE: Each sensor ships with jam nuts.

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		Mounting bracket, axial, zinc plated steel. For use with 30mm sensors.	0.18 (81.7)

Dimensions

mm [inches]
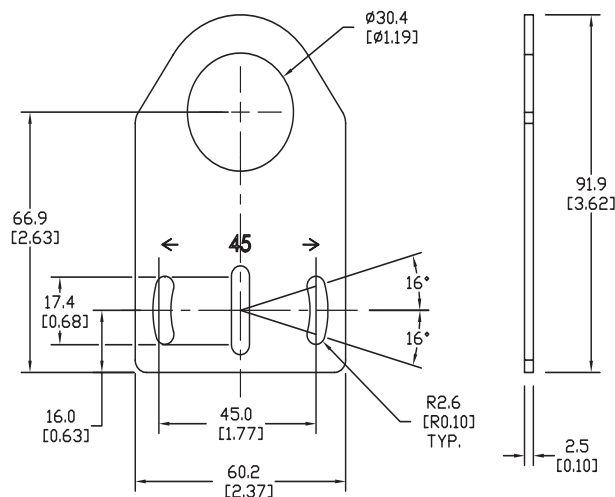
ST30A

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		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		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		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		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