

V Series AC Inductive Proximity Sensors



M12 (12 mm), M18 (18 mm), M30 (30 mm) metal – AC

- Multi-voltage: 20 to 253VAC
- 2-wire
- Metal housing
- Axial cable with tang or Quick-disconnect models
- IP67 rated
- LED status indicator

Dimensions

Figure 1

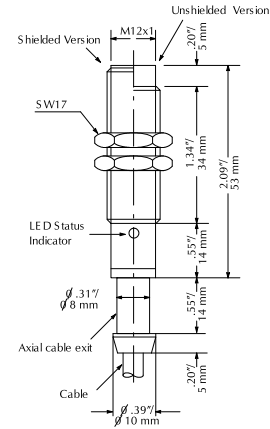


Figure 2

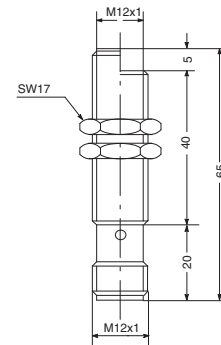
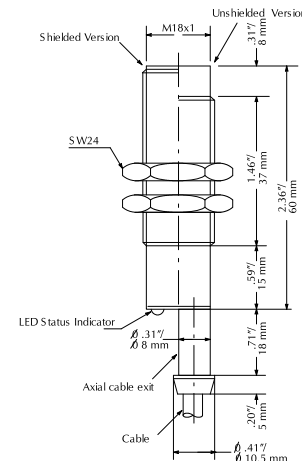


Figure 3



V Series M12/18/30 AC Inductive Prox Selection Chart						
Part Number	Price	Sensing Range	Housing	Output State	Connection	Dimensions
M12 Models						
VM1-A0-1B	<-->	2mm (0.079in) ¹	Shielded	N.O.	2m (6.5') axial cable	Figure 1
VM1-A0-2B	<-->	4mm (0.157in) ¹	Unshielded		2m (6.5') axial cable	Figure 1
VM1-A0-1H	<-->	2mm (0.079in) ¹	Shielded		M12 (12mm)	Figure 2
VM1-A0-2H	<-->	4mm (0.157in) ¹	Unshielded		M12 (12mm)	Figure 2
M18 Models						
VK1-A0-1B	<-->	5mm (.197in) ²	Shielded	N.O.	2m (6.5') axial cable	Figure 3
VK1-A0-2B	<-->	8mm (0.315in) ²	Unshielded		2m (6.5') axial cable	Figure 3
VK1-A0-1H	<-->	5mm (.197in) ²	Shielded		M12 (12mm)	Figure 4
VK1-A0-2H	<-->	8mm (0.315in) ²	Unshielded		M12 (12mm)	Figure 4
M30 Models						
VT1-A0-1B	<-->	10mm (.394in) ³	Shielded	N.O.	2m (6.5') axial cable	Figure 5
VT1-A0-2B	<-->	15mm (0.591in) ³	Unshielded		2m (6.5') axial cable	Figure 5

¹With 12x12 Fe360 target ²With 18x18 Fe360 target ³With 30x30 Fe360 target

Specifications	M12 Models	M18 Models	M30 Models
Differential Travel	2 to 10%		
Repeat Accuracy	5%		
Material Correction Factors	*See Material Influence table #1		
Operating Voltage	20–253VAC, 50/60Hz		
Inrush Current	7A for up to 10ms		
Load Current	5 to 300mA (RMS)		
Leakage Current	1.0mA max. (RMS)		
Output Type	Triac/N.O./2-wire		
Switching Frequency	25Hz		
(tv) Time Delay Before Availability	200ms		
Temperature Range/Temperature Drift	-25° to +70° C (-13° to 158° F) / 10% Sr		
Protection Degree (DIN 40 050)	IEC IP67		
LED Indicators	Yellow (output energized)		
Housing Material	Nickel-plated brass		
Sensing Face Material	PBT	PBT	PBT
Tightening Torque	15Nm (11lb./ft.)	40Nm (29lb./ft.)	100Nm (73lb./ft.)
Weight	70g (2.47oz)	120g (4.23oz)	300g (10.6oz)

*See Material Influence table #1 on page 17–53

Use only 2M or 7M cables for AC sensors with M12 connectors,

Cables and Accessories

Cables and accessories can be found starting on page 17–48.

V Series AC Inductive Proximity Sensors

Figure 4

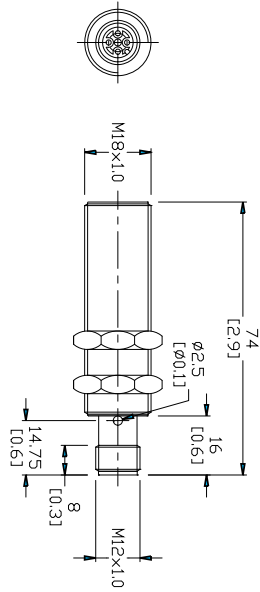
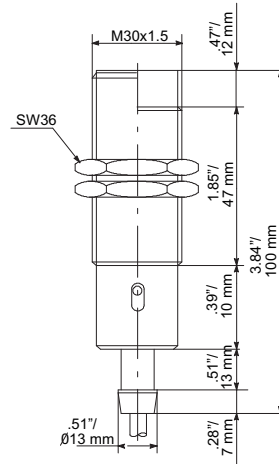
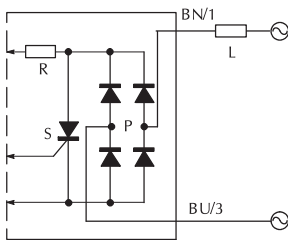


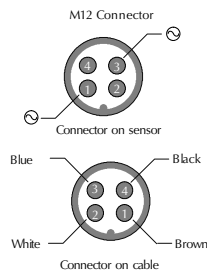
Figure 5



Wiring diagram



Connector Pinouts



Proximity Sensors Accessories: Cables

Cables with quick-disconnect plugs



- Industry standard M8 and M12 screw-lock connectors
- Axial cable and right-angle connector models available
- Available in 2 meter, 5 meter, and 7 meter cable lengths
- PVC (polyvinyl chloride) jacket available for typical industrial applications
- PUR (polyurethane) jacket available for oily and direct sunlight applications
- IP67 rated

Dimensions

Figure 1

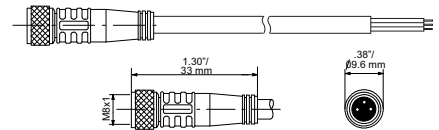


Figure 2

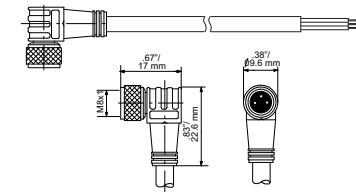


Figure 3

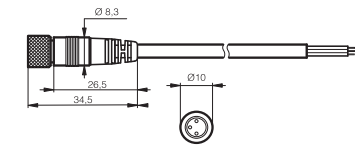


Figure 4

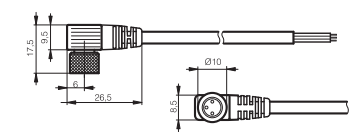


Figure 5

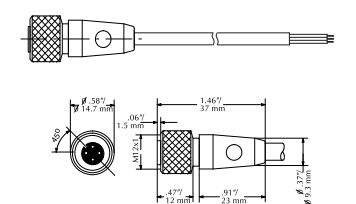


Figure 6

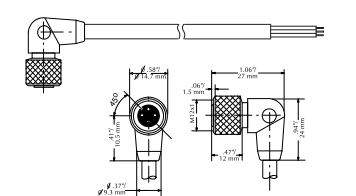


Figure 7

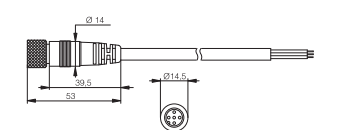
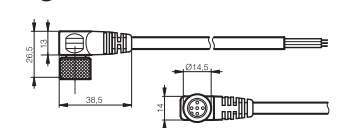


Figure 8



M8 Quick-Disconnect Cables						
Part Number	Price	Length	Poles	Connector	Jacket	Dimensions
M8 Quick-Disconnects						
CD08-0A-020-A1	<--->	2m (6.5ft.)	3	Axial	PVC	Figure 1
CD08-0A-020-C1	<--->	2m (6.5ft.)	3	Right-angle	PVC	Figure 2
CD08-0A-050-A1	<--->	5m (16.4ft.)	3	Axial	PVC	Figure 3
CD08-0C-050-A1	<--->	5m (16.4ft.)	3	Axial	PUR	Figure 3
CD08-0A-050-C1	<--->	5m (16.4ft.)	3	Right-angle	PVC	Figure 4
CD08-0C-050-C1	<--->	5m (16.4ft.)	3	Right-angle	PUR	Figure 4
CD08-0A-070-A1	<--->	7m (23ft.)	3	Axial	PVC	Figure 1
CD08-0A-070-C1	<--->	7m (23ft.)	3	Right-angle	PVC	Figure 2

M12 Quick-Disconnect Cables						
Part Number	Price	Length	Poles	Connector	Jacket	Dimensions
M12 Quick-Disconnects						
CD12L-0B-020-A0	<--->	2m (6.5ft.)	4	Axial	PVC	Figure 5
CD12L-0B-020-C0	<--->	2m (6.5ft.)	4	Right-angle	PVC	Figure 6
CD12M-0B-050-A1*	<--->	5m (16.4ft.)	3	Axial	PVC	Figure 7
CD12M-0D-050-A1*	<--->	5m (16.4ft.)	3	Axial	PUR	Figure 7
CD12M-0B-050-C1*	<--->	5m (16.4ft.)	3	Right-angle	PVC	Figure 8
CD12M-0D-050-C1*	<--->	5m (16.4ft.)	3	Right-angle	PUR	Figure 8
CD12M-0B-070-A1	<--->	7m (23ft.)	4	Axial	PVC	Figure 5
CD12M-0B-070-C1	<--->	7m (23ft.)	4	Right-angle	PVC	Figure 5

* Note: Do not use the SU, TU, VM and VK series with the 5 meter cable.

Cable Specifications	M8		M12	
Length	2m (6.5ft.) 7m (23ft.)	5m (16.4ft.)	2m (6.5ft.) 7m (23ft.)	5m (16.4ft.)
Nominal Voltage	50VAC/75VDC	60VAC/75VDC	300VAC	60VAC/75VDC
Nominal Current	4A	1.5A	4A	1.5A
Protection Degree	IEC IP67		IEC IP67	
Contact Body Material	ABS	PUR	ABS	PUR
Housing Material	PUR		PUR	
Contacts Material	CuSn	CuZn	CuSn	CuZn
Conductors Section	0.34mm ²		0.34mm ²	
Ø Outer Cable	5mm		5mm	
Temperature Range	-25° to +70°C (-13° to 158°F)		-25° to +70°C (-13° to 158°F)	

Proximity Sensors Accessories: Extension Cables



Extension cables with quick-disconnect plugs on each end

Available extension cables include:

- Industry standard M8 and M12 screw-lock connectors
- Axial and right-angle connector models
- Available in 1 meter and 3 meter cable lengths
- PVC (polyvinyl chloride) jacket for typical industrial applications
- IP67 rated

Dimensions

Figure 1

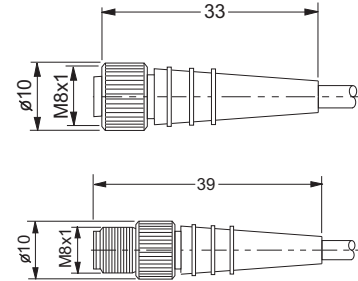


Figure 2

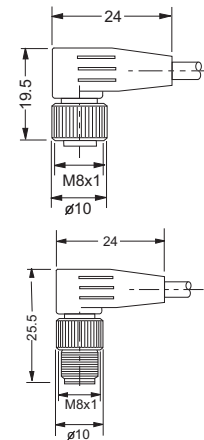


Figure 3

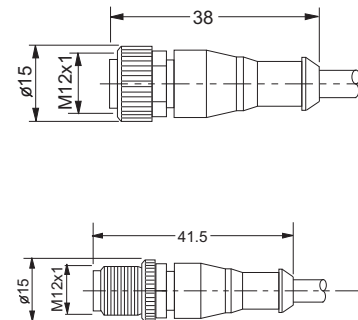
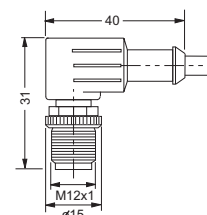
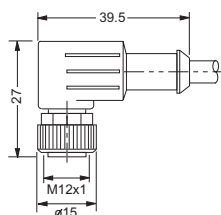


Figure 4



M8 Extension Cables with Quick-Disconnect on each end						
Part Number	Price	Length	Poles	Connectors	Jacket	Dimensions
M8 Quick-Disconnect Extension Cables						
CDP08-0A-010-AA	<--->	1m (3.28ft.)	3	2 Axial	PVC	Figure 1
CDP08-0A-010-BB	<--->	1m (3.28ft.)	3	2 Right-angle	PVC	Figure 2
CDP08-0A-030-AA	<--->	3m (9.84ft.)	3	2 Axial	PVC	Figure 1
CDP08-0A-030-BB	<--->	3m (9.84ft.)	3	2 Right-angle	PVC	Figure 2

M12 Extension Cables with Quick-Disconnect on each end						
Part Number	Price	Length	Poles	Connectors	Jacket	Dimensions
M12 Quick-disconnect Extension Cables						
CDP12-0B-010-AA	<--->	1m (3.28ft.)	4	2 Axial	PVC	Figure 3
CDP12-0B-010-BB	<--->	1m (3.28ft.)	4	2 Right-angle	PVC	Figure 4
CDP12-0B-030-AA	<--->	3m (9.84ft.)	4	2 Axial	PVC	Figure 3
CDP12-0B-030-BB	<--->	3m (9.84ft.)	4	2 Right-angle	PVC	Figure 4

Cable Specifications	M8 / M12
Length	1m (3.28ft.)/ 3m (9.84ft.)
Nominal Voltage	50VAC/75VDC
Nominal Current	4A
Protection Degree	IEC IP67
Contact Body Material	ABS
Housing Material	PUR
Contacts Material	CuSn
Conductors Section	0.34mm ²
Ø Outer Cable	5mm
Temperature Range	-25° to +70°C (-13° to 158°F)

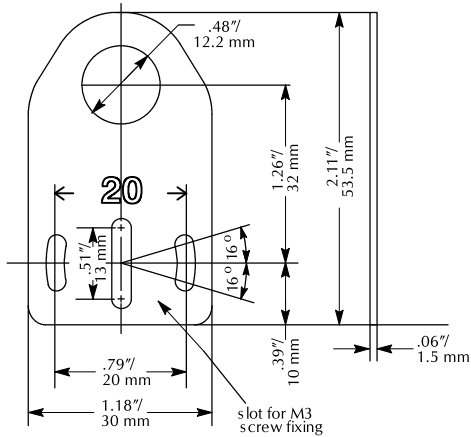
Accessories: Adapter, Mounting Brackets

ST12A metal axial bracket

For mounting M12 (12 mm) sensors. Has two mounting holes (use 3 mm screws) and allows the rotation of an optical axis for right-beam angle adapter sensors. Hexagonal nuts not included.



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(1 per pack)

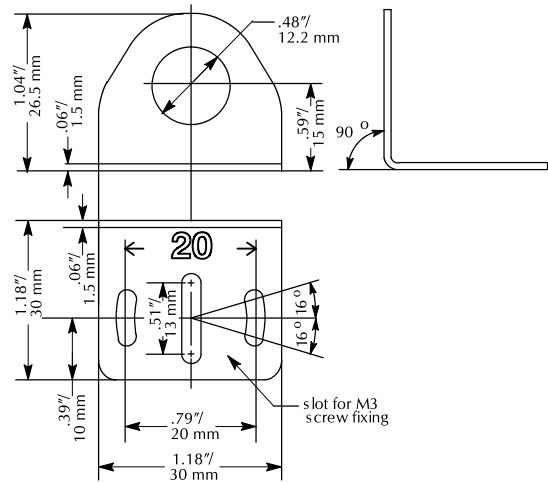


ST12C metal right-angle bracket

Metal angular mounting bracket for use with M12 (12 mm) sensors. Has two mounting holes (use 3 mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.



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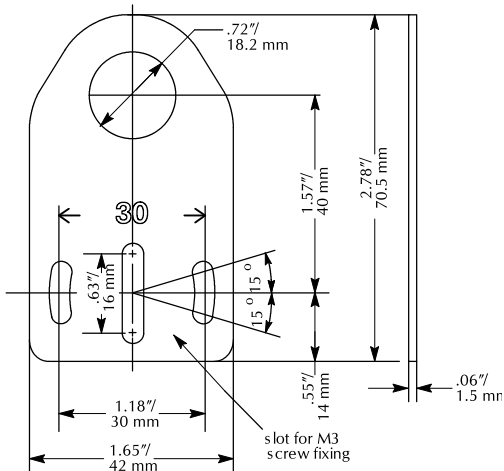


ST18A axial bracket

Metal mounting bracket for M18 (18 mm) sensors. Has two mounting holes (use 4 mm screws) and allows the rotation of an optical axis for right-beam-angle-adapter sensors. Hexagonal nuts not included.



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ST18C metal right-angle bracket

Metal angular mounting bracket for M18 (18 mm) sensors. Has two mounting holes (use 4 mm screws) and allows the rotation of an optical axis for axial sensors. Hexagonal nuts not included.



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