

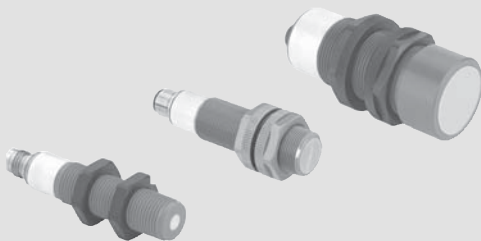
**Electronic Sensors and Machine Cabling**



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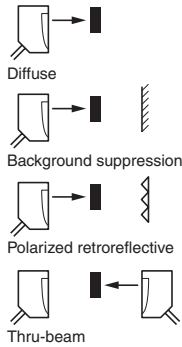
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**Table 20.1: XUB Tubular Sensors**



A single product that adapts to most environments.

For multi-mode models (XUM0, XUK0, XUX0, XUN0) programmable to function as Diffuse, Diffuse/Background Suppression, Polarized Retroreflective, or Thru-Beam Receivers, consult the factory.






XUB Tubular Sensors	XUB 18 plastic	XUB 18 metal
Usable Sensing Distance	Proximity diffuse 0.6 m (1.9 ft)	0.6 m (1.9 ft)
	Polarized retroreflective 2 m (6.6 ft)	2 m (6.6 ft)
	Retroreflective 4 m (13.1 ft)	4 m (13.1 ft)
	Thru-beam 15 m (49 ft)	15 m (49 ft)
Mounting (mm)	M 18 x 1	M 18 x 1
Enclosure: M (metal), P (plastic) / Dimensions (mm) Ø x L or W x H x D	P / M 18 x 46	P / M 18 x 46
Setup LEDs	—	—
Common characteristics	Temperature range: -25 to +55 °C (-13 to +131 °F) Degree of protection (conforming to IEC 60529): IP65, IP67 (XUK: IP65)	



**Sensors for DC Applications (Solid State Output: Transistor)**

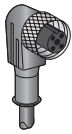

Connection	Pre-cabled, PvR, L + (2 m)		M12 connector		Pre-cabled, PvR, L + (2 m)		M12 connector		
	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	
Receiver or Transmitter/Receiver, 3-wire PNP ▲	Proximity diffuse, adjustable	N.O. XUB5APANL2	93.00	XUB5APANM12	105.00	XUB5BPANL2	93.00	XUB5BPANM12	117.00
		N.C. XUB5APBNL2	93.00	XUB5APBNM12	105.00	XUB5BPNL2	93.00	XUB5BPNM12	117.00
	Polarized retroreflective	N.O. XUB9APANL2	93.00	XUB9APANM12	105.00	XUB9BPANL2	103.50	XUB9BPANM12	117.00
		N.C. XUB9APBNL2	93.00	XUB9APBNM12	105.00	XUB9BPNL2	103.50	XUB9BPNM12	117.00
	Retroreflective	N.O. XUB1APANL2	78.00	XUB1APANM12	88.50	XUB1BPANL2	87.00	XUB1BPANM12	99.00
		N.C. XUB1APBNL2	78.00	XUB1APBNM12	88.50	XUB1BPNL2	87.00	XUB1BPNM12	99.00
Thru-beam	N.O. XUB2APANL2R	60.00	XUB2APANM12R	69.00	XUB2BPANL2R	67.50	XUB2BPANM12R	76.50	
	N.C. XUB2APBNL2R	60.00	XUB2APBNM12R	69.00	XUB2BPNL2R	67.50	XUB2BPNM12R	76.50	
Transmitter	XUB2AKSNL2T	54.00	XUB2AKSNM12T	61.50	XUB2AKSNL2T	54.00	XUB2AKSNM12T	61.50	
Supply voltage limits, min/max (V) including ripple	10–36		10–36		10–36		10–36		
Switching frequency (Hz)	500		500		500		500		
Common characteristics for DC versions	Switching capacity, max (mA): 100 / Overload and short-circuit protection / LED output state								

▲ For version with NPN output, change "P" to "N". For example: XUB1APANL2 would become XUB1ANANL2.

**Table 20.2: Accessories**

Reflectors	mm	Catalog No.	\$ Price
  	24 x 21	XUZC24	7.20
	Ø 80	XUZC80	21.60
	50 x 50	XUZC50	10.80

Mounting Brackets for XUB	Catalog No.	\$ Price
	Die Cast Zinc XUZA118	8.40
	Plastic XUZA218	12.45

Cables	90°	Straight		
Suitable plug-in female connectors, including pre-wired versions 2 m long without LED				
	Catalog No.	\$ Price	Catalog No.	\$ Price
M8	XSZCS151	25.50	XSZCS141	22.50
M12	XSZCD111Y	21.00	XSZCD101Y	21.00

**Table 20.3: XUBL 18 mm Laser Sensors**

*New!*



	Transmitter & Receiver		Transmitter		Receiver		Transmitter & Receiver		Transmitter		Receiver	
<b>Sensing Characteristics</b>												
Sensing Range	0 m to 100 m (0 m to 328 ft)											
Sensing Frequency	1500											
<b>Power Requirements</b>												
Supply Voltage	12 Vdc to 24 Vdc											
Max. Load	100 mA (10 to 30) / Reverse polarity overload, short circuit protection											
<b>Environmental</b>												
Operating Temperature Range	-10 to +45 °C (14 to +113 °F)											
Environmental Protection Ratings	IP67, NEMA 4X (indoor use only)											
<b>Construction</b>												
Barrel Dimensions (Ø x L)	18 mm x 66 mm, 18 mm x 72 mm		18 mm x 66 mm		18 mm x 72 mm		18 mm x 66 mm, 18 mm x 72 mm		18 mm x 66 mm		18 mm x 72 mm	
Housing Material	PBT Plastic						Nickel Plated Brass					
<b>Connection</b>												
Pre-cabled, PVC (2 m)												
<b>Output Type</b>	<b>Catalog No.</b>	<b>\$ Price</b>	<b>Catalog No.</b>	<b>\$ Price</b>	<b>Catalog No.</b>	<b>\$ Price</b>	<b>Catalog No.</b>	<b>\$ Price</b>	<b>Catalog No.</b>	<b>\$ Price</b>	<b>Catalog No.</b>	<b>\$ Price</b>
PNP Programmable N.O./N.C.	XUBLAPCNL2	330.00	—	—	—	—	XUBLBPCNL2	330.00	—	—	—	—
NPN Programmable N.O./N.C.	XUBLANCNL2	330.00	—	—	—	—	XUBLBNCNL2	330.00	—	—	—	—
Transmitter Only	—	—	XUBLAKCNL2T	330.00	—	—	—	—	XUBLBKCNL2T	200.00	—	—
PNP Receiver Only	—	—	—	—	XUBLAPCNL2R	200.00	—	—	—	—	XUBLBPCNL2R	200.00
NPN Receiver Only	—	—	—	—	XUBLANCNL2R	200.00	—	—	—	—	XUBLBNCNL2R	200.00
<b>Connection</b>												
M12												
PNP Programmable N.O./N.C.	XUBLAPCNM12	330.00	—	—	—	—	XUBLBPCNM12	330.00	—	—	—	—
NPN Programmable N.O./N.C.	XUBLANCM12	330.00	—	—	—	—	XUBLBNCNM12	330.00	—	—	—	—
Transmitter Only	—	—	XUBLAKCNM12T	200.00	—	—	—	—	XUBLBKCNM12T	200.00	—	—
PNP Receiver Only	—	—	—	—	XUBLAPCNM12R	200.00	—	—	—	—	XUBLBPCNM12R	200.00
NPN Receiver Only	—	—	—	—	XUBLANCM12R	200.00	—	—	—	—	XUBLBNCNM12R	200.00

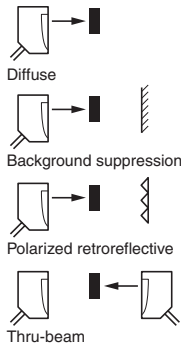
**Table 20.4: XUBT Sensors for Detection of Transparent Materials**

*New!*



<b>Sensing Characteristics</b>		Polarized retroreflective			
Sensing Range		0.0 mm to 1.4 mm (0 in. to 55.0 in.)	0.0 mm to 0.8 mm (0 in. to 31.5 in.)	0.0 mm to 1.4 mm (0 in. to 55.0 in.)	0.0 mm to 0.8 mm (0 in. to 31.5 in.)
Sensing Frequency		1000			
<b>Power Requirements</b>					
Supply Voltage		12 Vdc to 24 Vdc			
Max. Load		100 mA (10 to 30) / Reverse polarity, overload, short circuit protection			
<b>Environmental</b>					
Operating Temperature Range		0 to +55 °C (32 to +131 °F)			
Environmental Protection Ratings		IP67 (cabled), IP65 NEMA 4X (indoor use only)			
<b>Construction</b>					
Barrel Dimensions (Ø x L)		18 mm x 78 mm	18 mm x 92 mm	18 mm x 78 mm	18 mm x 92 mm
Housing Material		PBT Plastic		Stainless Steel	
<b>Connection</b>					
Pre-cabled, PVC (2 m)					
<b>Output Type</b>		Line of sight along case axis		Line of sight 90° to case axis	
		<b>Catalog No.</b>	<b>\$ Price</b>	<b>Catalog No.</b>	<b>\$ Price</b>
3-wire PNP Programmable N.O./N.C.		XUBTAPSNL2	189.00	XUBTAPSWL2	189.00
3-wire NPN Programmable N.O./N.C.		XUBTANSNL2	189.00	XUBTANSWL2	189.00
		XUBTSPSNL2	215.00	XUBTSPSWL2	215.00
		XUBTSNSNL2	215.00	XUBTSNSWL2	215.00
<b>Connection</b>					
M12					
3-wire PNP Programmable N.O./N.C.		XUBTAPSNM12	189.00	XUBTAPSWM12	189.00
3-wire NPN Programmable N.O./N.C.		XUBTANSNM12	189.00	XUBTANSWM12	189.00
		XUBTSPSNM12	215.00	XUBTSPSWM12	215.00
		XUBTSNSNM12	215.00	XUBTSNSWM12	215.00

Table 20.5: XUM Miniature, XUK and XUX Compact



A single product that adapts to most environments.  
 For multi-mode models (XUB0) programmable to function as Diffuse, Diffuse/Background Suppression, Polarized Retroreflective, or Thru-Beam Receivers, consult the factory.



Sensors	XUM Miniature Design	XUK Compact Design 50 x 50	XUX Compact Design	PhotoVirtu
Usable Sensing Distance	Proximity diffuse	0.4 m (1.3 ft)	1 m (3.2 ft) DC or AC	2.1 m (6.8 ft)
	Polarized retroreflective	2 m (6.5 ft)	5 m (16.4 ft) DC or 4 m (13.1 ft) AC	11 m (36 ft)
	Retroreflective	4 m (13.1 ft)	9 m (29.5 ft) DC or 17 M (55.7 ft) AC	14 m (46 ft)
	Thru-beam	8 m (26.2 ft)	30 m (98 ft) DC or 20 m (65.6 ft) AC	40 m (131.2 ft)
Mounting (mm)	direct: mounting centers 25.5, M3 screws	direct: mounting centers 40 x 40, M4 screws	direct: mounting centers 30/36 to 40/50/74, M5 screws	M18 x 1 or direct centers 24.1, M3 screws
Enclosure: M (metal) P (plastic) / Dimensions (mm) Ø x L or W x H x D	P / 12 x 34 x 27	P / 18 x 50 x 50	P / 30 x 92 x 71	P / 65 x 44 x 18
Setup LEDs	⊗	⊗	⊗	⊗
Common Characteristics	LED output state indicator and power on LED (⊗): yes			

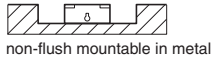
Sensors for DC Applications (Solid State Output: Transistor)		Catalog No. \$ Price						
Connection		Pre-cabled, PvR, L=2 m	M8 connector	Pre-cabled, PvR, L=2 m	M12 connector	Screw trmls, ISO 16 chi.gland	M12 connector	M12 connector
Transmitter		XUM2AKSNL2T 96.75	XUM2AKSNM8T 110.25	XUK2AKSNL2T 78.75	XUK2AKSNM12T 90.00	XUX0AKSAT16T 92.25	XUX0AKSAM12T 110.25	XUN0AKSNM12T 200.25
Proximity diffuse, adjustable ■	N.O.	XUM5APANL2 180.00	XUM5APANM8 202.50	XUK5APANL2 157.50	XUK5APANM12 180.00	XUX5APANL16 225.00	XUX5APANM12 200.25	XUN4APANM12 ♦ 177.75
	N.C.	XUM5APBNL2 180.00	XUM5APBNM8 202.50	XUK5APBNL2 157.50	XUK5APBNM12 180.00	XUX5APBNT16 225.00	XUX5APBNM12 200.25	—
Polarized retroreflective	N.O.	XUM9APANL2 180.00	XUM9APANM8 202.50	XUK9APANL2 168.75	XUK9APANM12 191.25	XUX9APANL16 240.75	XUX9APANM12 213.75	XUN9APANM12 177.75
	N.C.	XUM9APBNL2 180.00	XUM9APBNM8 202.50	XUK9APBNL2 168.75	XUK9APBNM12 191.25	XUX9APBNT16 240.75	XUX9APBNM12 213.75	—
Receiver or Transmitter/ Receiver, 3-wire PNP ▲	N.O.	XUM1APANL2 150.75	XUM1APANM8 173.25	XUK1APANL2 141.75	XUK1APANM12 162.00	XUX1APANL16 202.50	XUX1APANM12 182.25	—
	N.C.	XUM1APBNL2 150.75	XUM1APBNM8 173.25	XUK1APBNL2 141.75	XUK1APBNM12 162.00	XUX1APBNT16 202.50	XUX1APBNM12 182.25	—
Retroreflective	N.O.	XUM2APANL2R 114.75	XUM2APANM8R 130.50	XUK2APANL2R 121.50	XUK2APANM12R 137.25	XUX2APANL16R 168.75	XUX2APANM12R 153.00	XUN0APSNM12 200.25
	N.C.	XUM2APBNL2R 114.75	XUM2APBNM8R 130.50	XUK2APBNL2R 121.50	XUK2APBNM12R 137.25	XUX2APBNT16R 168.75	XUX2APBNM12R 153.00	XUN0ANSNM12 200.25
Supply voltage limits, min/max (V) including ripple		10–30	10–30	10–30	10–30	10–36	10–36	10–36
Switching frequency (Hz)		500	500	500	500	500	500	500
Common characteristics for DC versions		indicator (⊗): yes / power on LED (⊗): yes						

Multi-current/multi-voltage sensors for AC/DC applications, 10–36 Vdc / 20–264 Vac including ripple on DC (relay output, 1 C/O, 3 A)		Catalog No. \$ Price						
Connection		—	—	Pre-cabled, L=2 m	—	Screw trmls, ISO 16 chi.gland	—	—
Transmitter		—	—	XUK2ARCNTL2T 96.75	—	XUX0ARCTT16T 153.00	—	—
Diffuse	N.O. + N.C.	—	—	XUK5ARCNTL2 186.75	—	XUX5ARCNT16 216.00	—	—
	N.O. + N.C.	—	—	XUK9ARCNTL2 202.50	—	XUX9ARCNT16 234.00	—	—
Receiver or T/R, Transmitter/ Receiver	N.O. + N.C.	—	—	XUK1ARCNTL2 168.75	—	XUX1ARCNT16 195.75	—	—
	N.O. + N.C.	—	—	XUK2ARCNTL2R 144.00	—	XUX2ARCNT16R 162.00	—	—
Switching frequency (Hz)		—	—	20	—	20	—	—
LED output state indicator (⊗) / power on LED (⊗)		—	—	⊗ / ⊗	—	⊗ / ⊗	—	—

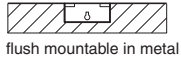
- ▲ For version with NPN output, change "P" to "N". For example: XUB1APANL2 would become XUB1ANANL2.
- XUN models are not adjustable.
- ♦ For versions with 0.6 m (2 ft) sensing distance, change "4" to "5". For example: XUN4APANM123 would become XUN5APANM12.

**NOTE:** M8 is not Snap-C compatible.  
 See page 20-2 for suitable plug-in cables with female connectors.

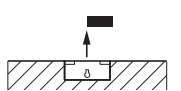
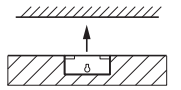
**Table 20.6: Auto-Adaptable**



non-flush mountable in metal



flush mountable in metal



A single product that automatically adapts to most environments.

Accurate position detection via teach mode.



Sensors	Type E (26 x 26 mm)		Type C (40 x 40 mm)		Type D (80 x 80 mm)	
	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
Nominal Sensing Distance	15 mm		25 mm		60 mm	
Usable sensing distance S (mm) shielded/non-shielded	0-10 / 0-15		0-15 / 0-25		0-40 / 0-60	
Precision adjustment range (mm) shielded/non-shielded	5-10 / 5-15		8-15 / 8-25		20-40 / 20-60	
Mounting in metal	Shielded or non-shielded via Osisense teach mode					
Enclosure: M (metal) P (plastic)	P		P		P	
Temperature range	-25 to 70 °C (-13 to 158 °F)					
Degree of protection (conforming to IEC 60529)	Pre-cabled: IP68 (with connector: IP67)					

**Sensors for DC applications (3-wire)**

Dimensions (mm) H x W x L			Connection: pre-cabled PVR (2 m)					
			26 x 26 x 13		40 x 40 x 15		80 x 80 x 26	
3-wire	PNP	N.O.	XS8E1A1PAL2	120.00	XS8C1A1PAL2	135.00	XS8D1A1PAL2	180.00
	PNP	N.C.	XS8E1A1PBL2	120.00	XS8C1A1PBL2	135.00	XS8D1A1PBL2	180.00
	NPN	N.O.	XS8E1A1NAL2	120.00	XS8C1A1NAL2	135.00	XS8D1A1NAL2	180.00
	NPN	N.C.	XS8E1A1NBL2	120.00	XS8C1A1NBL2	135.00	XS8D1A1NBL2	180.00
			Connection: M8 or M12 connector					
3-wire	PNP	N.O.	XS8E1A1PAM8	136.50	XS8C1A1PAM8	154.50	XS8D1A1PAM12	207.00
	PNP	N.C.	XS8E1A1PBM8	136.50	XS8C1A1PBM8	135.00	XS8D1A1PBM12	207.00
	NPN	N.O.	XS8E1A1NAM8	136.50	XS8C1A1NAM8	154.50	XS8D1A1NAM12	207.00
	NPN	N.C.	XS8E1A1NBM8	136.50	XS8C1A1NBM8	154.50	XS8D1A1NBM12	207.00
Supply voltage limits min/max (V) including ripple			10-36		10-36		10-36	
Switching capacity, max (mA)			100		200		200	
Reverse overload, short circuit protection			200 Vdc / 300 Vac		200 Vdc / 300 Vac		200 Vdc / 300 Vac	
LED output state indication / power on LED			yes / yes		yes / yes		yes / yes	
Voltage drop, closed state (V) at I nominal			≤ 2		≤ 2		≤ 2	
Switching frequency (Hz)			200		1000		150	

**Sensors for AC or DC applications (2-wire)**

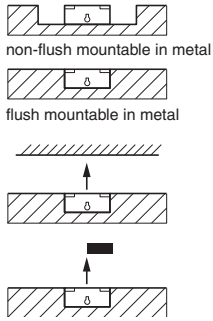
Dimensions (mm) H x W x L			Connection: pre-cabled PVR (2 m)					
			26 x 26 x 13		40 x 40 x 15		80 x 80 x 26	
2-wire	AC/DC without short-circuit protection ▲	N.O.	XS8E1A1MAL2	132.00	XS8C1A1MAL2	147.00	XS8D1A1MAL2	223.50
		N.C.	XS8E1A1MBL2	132.00	XS8C1A1MBL2	147.00	XS8D1A1MBL2	223.50
			Connection: 1/2" 20 UNF connector					
2-wire	AC/DC without short-circuit protection ▲	N.O.	XS8E1A1MAL01U20	151.50	XS8C1A1MAL01U20	168.00	XS8D1A1MAU20	223.50
		N.C.	XS8E1A1MBL01U20	151.50	XS8C1A1MBL01U20	168.00	XS8D1A1MBU20	223.50
Supply voltage limits min/max (V), including ripple on DC			20-264		20-264		20-264	
Switching capacity, max (mA)			200 Vdc, 300 Vac		200 Vdc, 300 Vac		200 Vdc, 300 Vac	
LED output state indication / power on LED			yes / yes		yes / yes		yes / yes	
Residual current, open state (mA)			≤ 1.5		≤ 1.5		≤ 1.5	
Voltage drop, closed state (V) at I nominal			≤ 5.5		≤ 5.5		≤ 5.5	
Switching frequency (Hz), AC / DC			50 / 1000		50 / 1000		50 / 1000	

▲ Requires a 0.4 A quick-blow fuse in series with the load.

**Table 20.7: Accessories**

For flat sensors, Forms E, C, and D	Straight		90°		Adapter plate for block-type sensors XS•E / XS•C / XS•D		
	Type	Cat. No.	\$ Price	Cat. No.	\$ Price	Cat. No.	\$ Price
	E	XSZBE00	12.00	XSZBE90	12.00	XSZBE10	12.50
	C	XSZBC00	12.00	XSZBC90	12.00	XSZBC10	15.00
	D	—	—	—	—	XSZBD10	16.50

**Table 20.8: Auto-Adaptable**



A single product that automatically adapts to most environments.

Accurate position detection via teach mode.



Specifications	Ø 12 mm	Ø 18 mm	Ø 30 mm
Nominal Sensing Distance	5 mm	9 mm	18 mm
Usable sensing distance S (mm), shielded/non-shielded	0-3.4 / 0-5	0-6 / 0-9	0-11 / 0-18
Precision adjustment range (mm), shielded/non-shielded	1.7-3.4 / 1.7-5	3-6 / 3-9	6-11 / 6-18
Mounting in metal	Shielded or non-shielded via Osisense teach mode		
Enclosure: M (metal), P (plastic)	M	M	M
Temperature range	-25 to 70 °C (-13 to 158 °F)	-25 to 70 °C (-13 to 158 °F)	-25 to 70 °C (-13 to 158 °F)
Degree of protection (conforming to IEC 60529)	IP67		

**Sensors for DC applications (3-wire)**

Connection: M8 or M12 connector			Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
3-wire	PNP	N.O.	<a href="#">XS612B2PAL01M12 ▲</a>	130.50	<a href="#">XS618B2PAL01M12 ▲</a>	157.50	<a href="#">XS630B2PAL01M12 ▲</a>	171.00
	PNP	N.C.	<a href="#">XS612B2PBL01M12 ▲</a>	130.50	<a href="#">XS618B2PBL01M12 ▲</a>	157.50	<a href="#">XS630B2PBL01M12 ▲</a>	171.00
	NPN	N.O.	<a href="#">XS612B2NAL01M12 ▲</a>	130.50	<a href="#">XS618B2NAL01M12 ▲</a>	157.50	<a href="#">XS630B2NAL01M12 ▲</a>	171.00
	NPN	N.C.	<a href="#">XS612B2NBL01M12 ▲</a>	130.50	<a href="#">XS618B2NBL01M12 ▲</a>	157.50	<a href="#">XS630B2NBL01M12 ▲</a>	171.00
Supply voltage limits min/max (V), including ripple			10-36		10-36		10-36	
Switching capacity max (mA)			100		100		100	
Reverse polarity, overload, and short circuit protection			yes		yes		yes	
LED output state indication / power on LED			yes / yes		yes / yes		yes / yes	
Voltage drop, closed state (V) at I nominal			≤ 2		≤ 2		≤ 2	
Switching frequency (Hz)			1000		1000		1000	

▲ Pigtail cable (L + 0.25 m) with end-mounted remote control and M12 connector.

**Table 20.9: Accessories**

For Osisense XS6 Remote Control	Catalog No.	\$ Price
	<a href="#">XSZBPM12</a>	7.50

Mounting Bracket with Indexing Pin for Cylindrical Sensors	Catalog No.	\$ Price
	M12	<a href="#">XSZB112</a> 6.00
	M18	<a href="#">XSZB118</a> 7.05
	M30	<a href="#">XSZB130</a> 7.05

Cables	90°	Straight		
Plug-in female connectors, including pre-wired versions 2 m long, without LED				
	Catalog No.	\$ Price	Catalog No.	\$ Price
	M8	<a href="#">XSZCS111</a> 21.45	<a href="#">XSZCS101</a> 20.25	
	M12	<a href="#">XSZCD111Y</a> 20.25	<a href="#">XSZCD101Y</a> 20.25	
	<a href="#">XSZCK101Y</a> 22.50	<a href="#">XSZCK111Y</a> 22.50		

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**Table 20.10: Basic Series**

Cylindrical, Stainless Steel  
Flush and Non-Flush Mountable  
Three-Wire, DC Supply,  
Solid-State Output



Sensing Characteristics		Ø 6.5 Plain Flush Mountable		Ø M8 Flush Mountable		Ø M8 Non-Flush Mountable		Ø M12 Flush Mountable		Ø M12 Non-Flush Mountable			
Sensing Range		1.5 mm (0-0.06 in.)		1.5 mm (0-0.06 in.)		2.5 mm (0-0.10 in.)		2.0 mm (0-0.08 in.)		4.0 mm (0-0.16 in.)			
Switching Frequency		3000 Hz		3000 Hz		3000 Hz		2000 Hz		1000 Hz			
Shock Resistance		50 gn, duration 11 ms		50 gn, duration 11 ms		50 gn, duration 11 ms		50 gn, duration 11 ms		50 gn, duration 11 ms			
Vibration Resistance		25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)			
<b>Power Requirements</b>													
Supply Voltage		12-24 (10-36) Vdc w/reverse polarity, overload, and short circuit protection				12-24 (10-36) Vdc w/reverse polarity, overload, and short circuit protection				12-24 (10-36) Vdc w/reverse polarity, overload, and short circuit protection			
Max. Load		50 mA				50 mA				100 mA			
<b>Environmental</b>													
Operating Temperature Range		-25 to 70 °C (-13 to 158 °F)				-25 to 70 °C (-13 to 158 °F)				-25 to 70 °C (-13 to 158 °F)			
Environmental Protection Ratings		IP67				IP67				IP67			
<b>Construction</b> Housing Material		Nickel Plated Brass				Nickel Plated Brass				Nickel Plated Brass			
<b>Output Type</b>		Catalog No.		\$ Price		Catalog No.		\$ Price		Catalog No.		\$ Price	
N.O. PNP	Pre-cabled (2 m)	XS106BLPAL2		73.50		XS108BLPAL2		82.50		XS208BLPAL2		82.50	
	M8 connector	—		—		XS108BLPAM8		88.50		XS208BLPAM8		88.50	
	M12 connector	—		—		XS108BLPAM12		88.50		XS208BLPAM12		88.50	
N.O. NPN	Pre-cabled (2 m)	XS106BLNAL2		73.50		XS108BLNAL2		82.50		XS208BLNAL2		82.50	
	M8 connector	—		—		XS108BLNAM8		88.50		XS208BLNAM8		88.50	
	M12 connector	—		—		XS108BLNAM12		88.50		XS208BLNAM12		88.50	
N.C. PNP	Pre-cabled (2 m)	XS106BLPBL2		73.50		XS108BLPBL2		82.50		XS208BLPBL2		82.50	
	M8 connector	—		—		XS108BLPBM8		88.50		XS208BLPBM8		88.50	
	M12 connector	—		—		XS108BLPBM12		88.50		XS208BLPBM12		88.50	
N.C. NPN	Pre-cabled (2 m)	XS106BLNBL2		73.50		XS108BLNBL2		82.50		XS208BLNBL2		82.50	
	M8 connector	—		—		XS108BLNBM8		88.50		XS208BLNBM8		88.50	
	M12 connector	—		—		XS108BLNBM12		88.50		XS208BLNBM12		88.50	




Sensing Characteristics		Ø M18 Flush Mountable		Ø M18 Non-Flush Mountable		Ø M30 Flush Mountable		Ø M30 Non-Flush Mountable	
Sensing Range		5.0 mm (0-0.20 in.)		8 mm (0-0.31 in.)		10 mm (0-0.39 in.)		15 mm (0-0.59 in.)	
Switching Frequency		2000 Hz		250 Hz		200 Hz		60 Hz	
Shock Resistance		50 gn, duration 11 ms				50 gn, duration 11 ms			
Vibration Resistance		25 gn, amplitude ± 2 mm (10-55 Hz)				26 gn, amplitude ± 2 mm (10-55 Hz)			
<b>Power Requirements</b>									
Supply Voltage		12-24 (10-36) Vdc w/reverse polarity, overload, and short circuit protection				12-24 (10-36) Vdc w/reverse polarity, overload, and short circuit protection			
Max. Load		100 mA				100 mA			
<b>Environmental</b>									
Operating Temperature Range		-25 to 70 °C (-13 to 158 °F)				-25 to 70 °C (-13 to 158 °F)			
Environmental Protection Ratings		IP67				IP67			
<b>Construction</b> Housing Material		Nickel Plated Brass				Nickel Plated Brass			
<b>Output Type</b>		Catalog No.		\$ Price		Catalog No.		\$ Price	
N.O. PNP	Pre-cabled (2 m)	XS118BLPAL2		67.50		XS218BLPAL2		45.00	
	M8 connector	XS118BLPAM8		67.50		XS218BLPAM8		67.50	
	M12 connector	XS118BLPAM12		67.50		XS218BLPAM12		67.50	
N.O. NPN	Pre-cabled (2 m)	XS118BLNAL2		67.50		XS218BLNAL2		67.50	
	M8 connector	XS118BLNAM8		67.50		XS218BLNAM8		67.50	
	M12 connector	XS118BLNAM12		67.50		XS218BLNAM12		67.50	
N.C. PNP	Pre-cabled (2 m)	XS118BLPBL2		67.50		XS218BLPBL2		67.50	
	M8 connector	XS118BLPBM8		67.50		XS218BLPBM8		67.50	
	M12 connector	XS118BLPBM12		67.50		XS218BLPBM12		67.50	
N.O. NPN	Pre-cabled (2 m)	XS118BLNBL2		67.50		XS218BLNBL2		67.50	
	M8 connector	XS118BLNBM8		67.50		XS218BLNBM8		67.50	
	M12 connector	XS118BLNBM12		67.50		XS218BLNBM12		67.50	

▲ Consult the factory for current pricing

**Table 20.11: Accessories**

Mounting Bracket W / Indexing Pin for Cylindrical Sensors

	Sensor Body		Catalog No.	\$ Price
	M8		9006PA08	3.30
	M12		9006PA12	4.80
	M18		9006PA18	4.80
	M30		9006PA30	6.30

**Cables**

Plug-in female connectors, including pre-wired versions, 2 m long, without LED	Connector	90°		Straight	
		Catalog No.	\$ Price	Catalog No.	\$ Price
	M8	XSZCS111	21.45	XSZCS101	20.25
M12	XSZCD111Y	20.25	XSZCD101Y	21.00	

Table 20.12: Food, Beverage, and Pharmaceutical Offering

Cylindrical, Stainless Steel, Non-flush Mountable  
Three-Wire DC Supply, Solid-State Output



Sensing Characteristics	Ø M12 threaded M12 x 1		Ø M18 threaded M18 x 1		Ø M18 plain		Ø M30 threaded M30 x 1.5	
Sensing Range	7 mm (0-0.28 in.)		12 mm (0-0.47 in.)		12 mm (0-0.47 in.)		22 mm (0-0.87 in.)	
Switching Frequency	2500 Hz		1000 Hz		1000 Hz		500 Hz	
Shock Resistance	50 gn, duration 11 ms		50 gn, duration 11 ms		50 gn, duration 11 ms		50 gn, duration 11 ms	
Vibration Resistance	25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)		25 gn, amplitude ± 2 mm (10-55 Hz)	
<b>Power Requirements</b>								
Supply Voltage (w/protection against reverse polarity)	12-24 (10-36) Vdc		12-48 (10-58) Vdc		12-24 (10-36) Vdc		12-48 (10-58) Vdc	
Max. Load	200 mA		200 mA		200 mA		200 mA	
<b>Environmental</b>								
Operating Temperature	-25 to 85 °C (-13 to 185 °F)		-25 to 85 °C (-13 to 185 °F)		-25 to 85 °C (-13 to 185 °F)		-25 to 85 °C (-13 to 185 °F)	
Environmental Protection	IP67 (M12), IP68 (L2)		IP67 (M12), IP68 (L2)		IP67 (M12), IP68 (L2)		IP67 (M12), IP68 (L2)	
<b>Construction</b>								
Housing Material	Stainless Steel	PPS	Stainless Steel	PPS	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
<b>Output Type</b>								
N.O., PNP					Catalog No. \$ Price			
Pre-cabled (2 m)	XS212SAPAL2 77.70	XS212AAPAL2 49.95	XS218SAPAL2 77.70	XS218AAPAL2 49.95	XS2L2SAPAL2 83.70	XS230SAPAL2 86.55		
M12 connector	XS212SAPAM12 77.70	XS212AAPAM12 49.95	XS218SAPAM12 77.70	XS218AAPAM12 49.95	XS2L2SAPAM12 83.70	XS230SAPAM12 86.55		
<b>N.O., NPN</b>								
Pre-cabled (2 m)	XS212SANAL2 77.70	XS212AANAL2 49.95	XS218SANAL2 77.70	XS218AANAL2 49.95	XS2L2SANAL2 83.70	XS230SANAL2 86.55		
M12 connector	XS212SANAM12 77.70	XS212SANAM12 49.95	XS218SANAM12 77.70	XS218AANAM12 49.95	XS2L2SANAM12 83.70	XS230SANAM12 86.55		

Table 20.13: Two-wire AC or DC Supply, Solid State Output

Sensing Characteristics	Ø M18 threaded M18 x 1				Ø M30 threaded M30 x 1.5			
Sensing Range	12 mm (0.47 in.)				22 mm (0.87 in.)			
Switching Frequency	300 Hz				200 Hz			
Shock Resistance	50 gn, duration 11 ms				50 gn, duration 11 ms			
Vibration Resistance	25 gn, amplitude ± 2 mm (10-55 Hz)				25 gn, amplitude ± 2 mm (10-55 Hz)			
<b>Power Requirements</b>								
Supply Voltage (w/protection against reverse polarity)	20-264 Vac/Vdc				20-264 Vac/Vdc			
Max. Load	200 mA Vdc / 300 mA Vac				200 mA Vdc / 300 mA Vac			
<b>Environmental</b>								
Operating Temperature	-25 to +85 °C (-13 to +185 °F)				-25 to +85 °C (-13 to +185 °F)			
Environmental Protection	IP68 (AL2), IP67 (U20)				IP68 (AL2), IP67 (U20)			
<b>Construction</b>								
Housing Material	Stainless Steel		PPS		Stainless Steel		PPS	
<b>Output Type</b>								
N.O.	Catalog No.		\$ Price		Catalog No.		\$ Price	
Pre-cabled (2 m), non-flush mountable	XS218SAMAL2		108.75		XS218AAMAL2		69.90	
1/2"-20 UNF connector, non-flush mountable	XS218SAMAU20		108.75		XS218AAMAU20		69.90	
	XS230SAMAL2		110.70		XS230AAMAL2		76.95	
	XS230SAMAU20		119.70		XS230AAMAU20		76.95	

Osense Capacitive Proximity Sensors

Table 20.14: Cylindrical Stainless Steel



Sensing Characteristics	Ø M12 threaded M12 x 1		Ø M18 threaded M18 x 1		Ø M30 threaded M30 x 1.5			
Sensing Range	2 mm (0.078 in.)		5 mm (0.197 in.)		10 mm (0.394 in.)			
Switching Frequency	300		200		150			
Shock Resistance	Conforming to IEC 60068-2-27: 30 gn, 11 ms							
Vibration Resistance	Conforming to IEC 60068-2-6 10 gn, +/- 1 mm (f= 10-55 Hz)							
<b>Power Requirements</b>								
Supply Voltage	24 Vdc (10-30 Vac)							
Max. Load	200 mA							
<b>Environmental</b>								
Operating Temperature Range	-25 +70 °C (-13 +158 °F)							
Environmental Protection Ratings	IP67, NEMA 4x (Indoor Use Only), IP65 (Ø M12 and Ø18 PCM)							
Connection	Pre-cabled, PvC (2 m)							
<b>Construction</b>								
Housing Material	Stainless Steel			Nickel Plated Brass				
Cable	Catalog No.		\$ Price		Catalog No.		\$ Price	
3-wire / PNP / N.O. function / flush mountable	XT112S1PAL2		178.50		XT118B1PAL2		186.00	
3-wire / NPN / N.O. flush mountable	XT112S1NAL2		178.50		XT118B1NAL2		186.00	
4-wire / PNP / N.O./N.C. function / flush mountable	XT112S1PCL2		178.50		XT118B1PCL2		186.00	
4-wire / NPN / N.O./N.C. function / flush mountable	XT112S1PCM12		178.50		XT118B1PCM12		186.00	
<b>Connector</b>								
M12								
4-wire / PNP / N.O./N.C. function / flush mountable	XT112S1PCM12		178.50		XT118B1PCM12		186.00	
	XT112S1PAL2		178.50		XT118B1PAL2		186.00	
	XT112S1NAL2		178.50		XT118B1NAL2		186.00	
	XT112S1PCL2		178.50		XT118B1PCL2		186.00	



**Table 20.15: XUV Label Sensor**

*New!*



Sensing Characteristics	
Nominal Sensing Distance	3 mm (0.12 in.)
Sensing Frequency	480 kHz
Power Requirements	
Supply Voltage	10 Vdc to 30 Vdc
Max. Load	100 mA
Environmental	
Operating Temperature Range	+5 to +55 °C (+41 to +131 °F)
Environmental Protection Ratings	IP65, NEMA 4X (indoor use only), 5, 12, 12k, 13
Construction	
Flat Profile Dimensions (W x H x D)	92.5 mm (3.64 in.) x 47.3 mm (1.86 in.) x 16.0 mm (0.63 in.)
Housing Material	Aluminium
Transducer	Glass Epoxy
Connection	
	<b>Catalog No.</b> <b>\$ Price</b>
M8 Connector	XUVU06M3KCNM8      825.00
Pre-cabled (2 m)	XUVU06M3KCNL2      825.00

**Table 20.16: XXV 18 mm Ultrasonic Sensor**

*New!*



**Available December 2009**

Sensing Characteristics			
Nominal Sensing Distance	2 mm to 50.8 mm (0.08 in. to 2.0 in.)		
Sensing Frequency	360 kHz		
Power Requirements			
Supply Voltage	10 to 36 Vdc		
Max. Load	200 mA		
Environmental			
Operating Temperature Range	-40 to +80 °C (-40 to +176 °F)		
Environmental Protection Ratings	IP65, NEMA 4X (indoor use only)		
Construction			
Barrel Dimensions (Ø x L)	18 x 1 x 43.2 mm (0.709 x 0.039 x 1.70 in.)		
Housing Material	Nickel Plated Brass		
Transducer	Glass Epoxy		
Connection			
	<b>Pre-cabled, PVC (2 m)</b>		
Cable			
	<b>Catalog No.</b> <b>\$ Price</b>		
PNP N.O.	XXV18B1PAL2	75.00	
	N.C.		XXV18B1PBL2
	NPN N.O.		XXV18B1NAL2
			N.C.
Connection			
	<b>M12</b>		
PNP N.O.	XXV18B1PAM12		
	N.C.		XXV18B1PBM12
	NPN N.O.	XXV18B1NAM12	
		N.C.	XXV18B1NBM12

**Table 20.17: Sensor Accessories**

Teachable Pushbutton Accessory for Virtu Series	
Catalog No.	\$ Price
XXZPB100	43.50
Python AC/DC Power Converter	
Catalog No.	\$ Price
XXZPM100M12	148.50

**Table 20.18: Mounting Brackets**

Body Type	Catalog No.	\$ Price
M12	9006PA12	4.80
M18	9006PA18	4.80
M30	9006PA30	6.30

**Table 20.19: Connector Cables**

Type	Sensor Suffix	Connector Style	Catalog No.	\$ Price
NANO 6.6 ft (2 m) Cable, PVC Material				
Non-Locking				
DC 3 Pin—without LED	S, M8	Straight	XSZCS901	19.20
DC 3 Pin—without LED	S, M8	90°	XSZCS911	19.20
Locking				
DC 3 Pin—without LED	S, M8	Straight	XSZCS101	20.25
DC 3 Pin—without LED	S, M8	90°	XSZCS111	21.45
DC 4 Pin—without LED	S, M8	Straight	XSZCS141	21.45
DC 4 Pin—without LED	S, M8	90°	XSZCS151	24.75
Self-assembled Connector				
Snap-C connector	—	Straight	XZCC12FDM40V	13.50

Type	Sensor Suffix	Connector Style	Catalog No.	\$ Price
Micro 6.6 ft (2 m) Cable, PVC Material				
DC 4 Pin—without LED	D, M12	Straight	XSZCD101Y	20.25
DC 4 Pin—without LED	D, M12	90°	XSZCD111Y	20.25
DC 5 Pin—without LED	D, M12	Straight	XSZCD1501Y	33.75
DC 5 Pin—without LED	D, M12	90°	XSZCD1511Y	33.75
AC/DC 3 Pin—without LED	K, U20	Straight	XSZCK111Y	22.50
AC/DC 3 Pin—without LED	K, U20	90°	XSZCK101Y	22.50
Mini 6.6 ft (2 m) Cable, PVC Material				
DC 3 Pin—without LED	A, R3	Straight	XSZCA101Y	27.00
DC 3 Pin—without LED	A, R3	90°	XSZCA111Y	27.00
AC/DC 3 Pin—without LED	A, R3	Straight	XSZCA901Y	24.75
AC/DC 3 Pin—without LED	A, R3	90°	XSZCA911Y	24.75

Table 20.20: Specifications and Catalog Numbers

New!



Sensing Characteristics				12 mm / Flat profile M12				18 mm / Flat profile M18			
Sensing Range	51–508 mm (2–20 in.)			25–127 mm (1.0–5.0 in.)			25–254 mm (1.0–10.0 in.)				
Sensing Frequency	300 kHz			500 kHz			500 kHz				
Power Requirements				12 mm / Flat profile M12				18 mm / Flat profile M18			
Supply Voltage	12–24 Vdc			12–24 Vdc			12–24 Vdc				
Supply Current	40 mA (excluding load)			25 mA (excluding load)			50 mA (excluding load)				
Environmental Ratings				12 mm / Flat profile M12				18 mm / Flat profile M18			
Operating Temperature	-30 to 70 °C (-22 to 158 °F)			-30 to 70 °C (-22 to 158 °F)			0 to 60 °C (32 to 140 °F)				
Environment	NEMA 4X (indoor use only), IP67			NEMA 4X (indoor use only), IP67			NEMA 4X (indoor use only), IP67				
Construction				12 mm / Flat profile M12				18 mm / Flat profile M18			
Barrel, ØxL	18 x 1 x 77.62 mm (0.709 x 3.06 in.)			12 x 1 x 58 mm (0.47 x 2.3 in.)			18 x 1 x 79 mm (0.90 x 2.55 in.)				
Flat Profile, wxhxd	43.7 x 18 x 59.7 mm (1.72 x 0.70 x 2.35 in.)			7.62 x 33.0 x 19.05 mm (0.3 x 1.3 x 0.75 in.)			16.25 x 30 x 84.40 mm (1.182 x 0.640 x 3.322 in.)				
Housing Material	Valox®			ULTEM®			ULTEM				
Transducer	Glass Epoxy			Glass Epoxy			Silicon Rubber				
Output Type				Catalog Number				Catalog Number			
Proximity	Output		Cable	Quick Disconnect	\$ Price	Cable	Barrel ▲	\$ Price	Cable	Barrel ▲	\$ Price
	PNP Sourcing	N.O.	VM1/18PNO	VM1/18PNOQ	139.50	N.O. (PNP + NPN)	SM300A46000	238.50	N.O.	SM600A21600	487.50
	N.C.	VM1/18PNC	VM1/18PNCQ	N.C. (PNP + NPN)		SM300A46010	N.C.		SM600A21610		
NPN Sinking	N.O.	VM1/18NNO	VM1/18NNOQ	<b>Connector - M8</b>		<b>Connector - M12</b>					
	N.C.	VM1/18NNC	VM1/18NNCQ	N.O. (PNP + NPN)		SM350A46000	N.O.	SM650A21600			
PNP Sourcing	N.O.	VM1/VM18PTO	VM1/VM18PTOQ	N.C. (PNP + NPN)		SM350A46010	N.C.	SM650A21610			
	N.C.			<b>Connector - M12</b>							
NPN Sinking	N.O.	VM1/VM18NTO	VM1/VM18NTOQ	N.O. (PNP + NPN)	SM380A46000	253.50					
	N.C.			N.C. (PNP + NPN)	SM380A46010						
Dual-Level Pump In Normally Open	Output		Cable	Quick Disconnect	\$ Price	Cable	Barrel ▲	\$ Price	Cable	Barrel ▲	\$ Price
	Off at LOE and P	PNP	VM1/VM18PP10000	VM1/VM18PP10000Q	208.50	N.O., Pump-out, Off at LOE	SM302A42000	238.50	Pump-out latch	SM602A60400	502.50
	NPN	VM1/VM18NP10000	VM1/VM18NP10000Q	Pump-out latch, HLOE		SM602A60403					
On at LOE and P	PNP	VM1/VM18PPI1000	VM1/VM18PPI1000Q	N.O., Pump-in, Off at LOE		SM302A42010	Pump-in latch	SM602A60410			
	NPN	VM1/VM18PPI1000	VM1/VM18PPI1000Q	<b>Connector - M8</b>		<b>Connector - M12</b>					
HLOE, Off at P	PNP	VM1/VM18PPI2000	VM1/VM18PPI2000Q	N.O., Pump-out, Off at LOE		SM352A42000	169.00	Dual alarm, N.O.	SM602A60420		
	NPN	VM1/VM18PPI2000	VM1/VM18PPI2000Q	Dual alarm, N.O., HLOE		SM602A60430					
Dual-Level Pump Out Normally Open	Output		Cable	Quick Disconnect	\$ Price	Cable	Barrel ▲	\$ Price	Cable	Barrel ▲	\$ Price
	Off at LOE and P	PNP	VM1/VM18PPO0000	VM1/VM18PPO0000Q	208.50	N.O., Pump-in, Off at LOE	SM352A42010	169.00	Dual alarm, N.C.	SM602A60430	618.00
	NPN	VM1/VM18NPO0000	VM1/VM18NPO0000Q	<b>Connector - M12</b>		<b>Barrel ▲</b>					
On at LOE and P	PNP	VM1/VM18PPO1000	VM1/VM18PPO1000Q	N.O., Pump-out, Off at LOE		SM382A42000	169.00	Pump-out latch	SM652A60400		
	NPN	VM1/VM18PPO1000	VM1/VM18PPO1000Q	Pump-out latch, HLOE		SM652A60403					
HLOE, Off at P	PNP	VM1/VM18PPO2000	VM1/VM18PPO2000Q	Pump-in latch		SM652A60410	535.50	Pump-in latch, HLOE	SM652A60413		
	NPN	VM1/VM18PPO2000	VM1/VM18PPO2000Q	Dual alarm, N.O.		SM652A60420					
								Dual alarm, N.O., HLOE	SM652A60423		
								Dual alarm, N.C.	SM652A60430		
								Dual alarm, N.C., HLOE	SM652A60433		
Analog	Output		Cable	Quick Disconnect	\$ Price						
	<b>Voltage 0–10 Vdc with Temperature Compensation</b> For Direct/Inverse models, change VD or VI to VA.										
20 ELECTRONIC SENSORS AND MACHINE CABLING	Dir, 0 V, LOEP		VM1/18VD0000	VM1/18VD0000Q	208.50						
	Inv, 0 V, LOEP		VM1/18PNO	VM1/18VI0000Q							
	Dir, 10 V, LOEP		VM1/18VD1000	VM1/18VD1000Q							
	Inv, 10 V, LOEP		VM1/18VI1000	VM1/18VI1000Q							
	Dir, HLOE, 0 V, P		VM1/18VD2000	VM1/18VD2000Q							
	Inv, HLOE, 0 V, P		VM1/18VI2000	VM1/18VI2000Q							
Dir, HLOE, 10 V, P		VM1/18VD3000	VM1/18VD3000Q								
Inv, HLOE, 10 V, P		VM1/18VI3000	VM1/18VI3000Q								
<b>Current 4–20 mA with Temperature Compensation</b> For Direct/Inverse models, change CD or CI to CA											
20 ELECTRONIC SENSORS AND MACHINE CABLING	Dir, 4 mA, LOEP		VM1/18CD0000	VM1/18CD0000Q	208.50						
	Inv, 4 mA, LOEP		VM1/18CI0000	VM1/18CI0000Q							
	Dir, 20 mA, LOEP		VM1/18CD1000	VM1/18CD1000Q							
	Inv, 20 mA, LOEP		VM1/18CI1000	VM1/18CI1000Q							
	Dir, HLOE, 4 mA, P		VM1/18CD2000	VM1/18CD2000Q							
	Inv, HLOE, 4 mA, P		VM1/18CI2000	VM1/18CI2000Q							
Dir, HLOE, 20 mA, P		VM1/18CD3000	VM1/18CD3000Q								
Inv, HLOE, 20 mA, P		VM1/18CI3000	VM1/18CI3000Q								

▲ Flat profile models are available, add suffix "FP" to model. Consult the factory.

**NOTE:** LOE = at loss of echo, LOEP = at loss of echo and at power up, HLOE = hold on loss of echo, HLOEP = hold on loss of echo and at power up, Dir = direct, Inv = inverse, P = power up

**Table 20.21: Specifications and Catalog Numbers**

*New!*



Virtu® 30 mm



M30  
30 mm (1 or 2 m)



M30  
30 mm (8 m)

Sensing Characteristics										
Sensing Range			102–1000 mm (4–39 in.)	51 mm to 1 m (2–39 in.); 119 mm to 2 m (4.7–79 in.)			203 mm to 8 m (8–315 in.)			
Sensing Frequency			180 kHz	200 kHz			75 kHz			
Power Requirements										
Supply Voltage			12–24 Vdc, 15–24 Vdc analog	12–24 Vdc discrete; 15–24 Vdc analog			12–24 Vdc discrete; 15–24 Vdc analog			
Supply Current			60 mA (excluding load)	100 mA (excluding load)			100 mA discrete; 80 mA analog (excluding load)			
Environmental Ratings										
Operating Temperature			0 to 70 °C (32 to 158 °F)	0 to 50 °C (32 to 122 °F) discrete -20 to 60 °C (-4 to 140 °F) analog			-20 to 60 °C (-4 to 140 °F)			
Environment			NEMA 4X (indoor use only), IP67	NEMA 4X (indoor use only), IP67			NEMA 4X (indoor use only), IP67			
Construction										
Barrel, ØxL			30 x 1 x 95.26 mm (1.18 x 3.75 in.)	30 x 1 x 95 mm (1.18 x 3.74 in.)			30 x 1 x 116 mm (9.18 x 4.58 in.)			
Housing Material			PBT Valox 553	ULTEM			ULTEM			
Transducer			Glass Epoxy	Silicon Rubber or Fluorosilicone			Glass Epoxy			
Output Type										
			1 m / 2 m			8 m				
Proximity Output	Description	Catalog No.	\$ Price	Description	Catalog No.	\$ Price	Description	Catalog No.	\$ Price	
	PNP Sourcing N.O.	XX6V3A1PAM12	253.50	Connector	SM950A100000	633.00	Cable	SM900A800000	972.00	
	PNP Sourcing N.C.	XX6V3A1PBM12		Cable	SM900A100000	616.50	Connector	SM950A800000	988.50	
	NPN Sinking N.O.	XX6V3A1NAM12								
NPN Sinking N.C.	XX6V3A1NBM12									
Dual-Level Pump In	Connector			Cable 1 m ▲			Cable 8 m			
	Normally Open			Pump-out latch	SM902A100000	616.50	Pump-out latch	SM902A800000	972.00	
	Hold on loss of echo; Off on power up			Pump-out latch w/alarm	SM902A150000		Pump-out latch w/alarm	SM902A850000		
	PNP	XX2V3A1PGM12		Pump-out latch, w/setpoint	SM902A170000		Pump-out latch, w/setpoint	SM902A870000		
	NPN	XX2V3A1NGM12		Pump-in latch	SM902A110000		Pump-in latch	SM902A810000		
	Off on loss of echo; Off on power up			Pump-in latch w/alarm	SM902A140000		Pump-in latch w/alarm	SM902A840000		
	PNP	XX2V3A1PFM12		Pump-in latch, w/setpoint	SM902A160000		Pump-in latch, w/setpoint	SM902A860000		
	NPN	XX2V3A1NFM12		Dual setpoint	SM902A120000		Dual setpoint	SM902A820000		
	Hold on loss of echo; Off on power up			Dual alarm	SM902A130000		Dual alarm	SM902A830000		
	PNP	XX2V3A1PJM12		Connector			Connector			
NPN	XX2V3A1NJM12		Pump-out latch	SM952A100000	633.00		Pump-out latch	SM952A800000		988.50
Off on loss of echo; Off on power up			Pump-out latch w/alarm	SM952A150000	880.50	Pump-out latch w/alarm	SM952A850000			
PNP	XX2V3A1PHM12		Pump-out latch, w/setpoint	SM952A170000	633.00	Pump-out latch, w/setpoint	SM952A870000			
NPN	XX2V3A1NHM12		Pump-in latch	SM952A110000		Pump-in latch	SM952A810000			
			Pump-in latch w/alarm	SM952A140000	633.00	Pump-in latch w/alarm	SM952A840000			
			Pump-in latch, w/setpoint	SM952A160000	985.50	Pump-in latch, w/setpoint	SM952A860000			
			Dual setpoint	SM952A120000	633.00	Dual setpoint	SM952A820000			
			Dual alarm	SM952A130000		Dual alarm	SM952A830000			
Analog	Quick Disconnect			Cable 1 m ▲			Cable 8 m			
	0–20 mA	Catalog No.	\$ Price	Voltage	Catalog No.	\$ Price	Voltage	Catalog No.	\$ Price	
	Direct/Inverse slope	XX9V3A1A4M12	358.50	Auto slope	SM906A180000	810.00	Auto slope	SM906A880000	1035.00	
	Direct output	XX9V3A1D4M12		Direct slope	SM906A110000	705.00	Direct slope	SM906A810000		
	Inverse output	XX9V3A1E4M12		Inverse slope	SM906A100000		Inverse slope	SM906A800000		
	4–20 mA			Current			Current			
	Direct/Inverse slope	XX9V3A1A2M12		Auto slope	SM906A190000	705.00	Auto slope	SM906A890000	1035.00	
	Direct output	XX9V3A1D2M12		Direct slope	SM906A130000		Direct slope	SM906A830000		
	Inverse output	XX9V3A1E2M12		Inverse slope	SM906A120000		Inverse slope	SM906A820000		
	0–5 VDC			Connector			Connector			
	Direct/Inverse slope	XX9V3A1F3M12		Voltage			Voltage			
	Direct output	XX9V3A1G3M12		Auto slope	SM956A180000	720.00	Auto slope	SM956A880000	1050.00	
	Inverse output	XX9V3A1H3M12		Direct slope	SM956A110000		Direct slope	SM956A810000		
				Inverse slope	SM956A100000		Inverse slope	SM956A800000		
	0–10 VDC			Current			Current			
	Direct/Inverse slope	XX9V3A1F1M12		Auto slope	SM956A190000	720.00	Auto slope	SM956A890000	1050.00	
	Direct output	XX9V3A1G1M12		Direct slope	SM956A130000		Direct slope	SM956A830000		
	Inverse output	XX9V3A1H1M12		Inverse slope	SM956A120000		Inverse slope	SM956A820000		

▲ For the 2 m version, change model from SMxxxA1xxxx to SMxxxA4xxxx.

**Table 20.22: Osisense RFID Products and Accessories**

*New!*



Electronic Tags	C Format		ISO Badge		Disc		E Format		Cylindrical	
<b>Nominal Sensing Distance</b>										
With Station XGCS49	33	30	70		48		40		18	
With Station XGCS89	48	40	100		65		55		20	
Dimensions (W x H x D)	40 x 40 x 15 mm		54 x 85.5 x 0.8 mm		Ø x 30 x 3 mm		26 x 26 x 13 mm		M18 x 1 x 12 mm	
Memory Capacity	3 408	13632	256		112		256		256	
Type of Memory	EEPROM		EEPROM		EEPROM		EEPROM		EEPROM	
<b>Time (ms)</b>										
Read ▲	9.25 + 375 x n		16.25 + 375 x n		12 + 0.825 x n		12 + 0.825 x n		12 + 0.825 x n	
Write ▲	13 + 0.8 x n		20 + 0.8 x n		20 + 11.8 x n		12 + 5.6 x n		20 + 11.8 x n	
Ordering Information	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
	XGHB444345	157.50	XGHB445345	195.00	XGHB90E340	15.00	XGHB320345	30.00	XGHB221346	67.50
			XGHB211345	52.50						



Compact Stations, 13.56 MHz	C Format		D Format	
Dimensions (W x H x D)	40 x 40 x 15		80 x 80 x 26	
Protocols	Modbus® TRU, Uni-Telway and CANopen ■			
Normal Sensing Distance (depending on associated tag)	18-70		20-100	
Ordering Information	Catalog Number	\$ Price	Catalog Number	\$ Price
	XGCS4901201	900.00	XGCS8901201	1185.00

M12 Ethernet switch	
Catalog Number	\$ Price
TCSEU051F0	◆



Connection boxes	Ethernet box		Tap-off box	
Protocols	Modbus TCP/IP		Modbus, Uni-Telway and CANopen ■	
Associated compact stations	XGCS49 and XGCS89		XGCS49 and XGCS89	
Supply Voltage	24 Vdc		24 Vdc	
Ordering Information	Catalog Number	\$ Price	Catalog Number	\$ Price
	XGSZ33ETH	1312.50	TCSAMT31FP	◆

Pre-Wired M12, 4-pin Female Connector, A Coding		
Size	Catalog No.	\$ Price
2 m	XGSZX08L2	15.00
5 m	XGSZX08L5	30.00
10 m	XGSZX08L10	22.50



Portable Terminal	For 13.56 MHz RFID diagnostics		
Function	Read/Write operations on electronic tags and diagnostics on compact stations		
Operating System	Microsoft Windows® CE.NET Professional version 4.2		
Ordering Information	Catalog Number	\$ Price	
	XGSTP401	9075.00	

Network T Connector	
M12, 1 Male/2 Female 5-pin, A Coding	
Catalog Number	\$ Price
TCSCTN011M11F	67.50

**Table 20.23: Osisense RFID Cables**

Ethernet Shielded Connecting Cable, ConneXium (2), M12 Male D Coding/RJ45, 4-pin			Modbus Shielded Connection Cable, M12/SUB-D15, A Coding			Modbus Shielded Connection Cable, M12/Mini-DIN 8-way, A Coding		
Length	Catalog No.	\$ Price	Length	Catalog No.	\$ Price	Length	Catalog No.	\$ Price
1 m	TCSECL1M3M1S2	186.00	2 m	TCSMCN1FQM2	75.00	2 m	TCSMCN1F9M2P	97.50
3 m	TCSECL1M3M3S2	240.00						
5 m	TCSECL1M3M5S2	◆						
10 m	TCSECL1M3M10S2	450.00						
40 m	TCSECL1M3M40S2	1140.00						

- ▲ n = number of 16-bit words
- Uni-Telway and CANopen protocols available soon.
- ◆ Call factory for current pricing.