










XS...B3 Basic Plus Sensors

Table 20.12: Basic Plus, XS...B3

Sensing Characteristics	Ø 6.5 Plain Flush Mountable	Ø M8 Flush Mountable	Ø M12 Flush Mountable	Ø M18 Flush Mountable	Ø M30 Flush Mountable
Basic, Tubular, Flush-Mountable, Increased Range, 3-Wire DC, Solid-State Output					
Sensing range	2 mm (0–0.08 in.)	2 mm (0–0.08 in.)	4.0 mm (0–0.15 in.)	8.0 mm (0.31 in.)	15.0 mm (0.59 in.)
Switching frequency	2500 Hz	2500 Hz	2500 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	50 gn, duration 11 ms
Vibration resistance (10–55 Hz)	25 gn, amplitude ± 2 mm	25 gn, amplitude ± 2 mm	25 gn, amplitude ± 2 mm	25 gn, amplitude ± 2 mm	25 gn, amplitude ± 2 mm
<b>Power Requirements</b>					
Supply voltage	12–24 (10–36 max) Vdc with protection against reverse polarity, overload, and short circuit				
<b>Specifications</b>					
Operating zone	XS1...B3...M8, XS1...B3...M12, XS1...B3...L2				
	Ø 6.5 and Ø 8	0–2.0 mm (0–0.07 in.)			
	Ø 12	0–4.0 mm (0–0.15 in.)			
	Ø 18	0–8.0 mm (0–0.31 in.)			
Degree of protection	Conforming to IEC 60529				
Operating temperature	IP65 and IP67				
Materials	Case	–25 to +70 °C (–13 to +158 °F)			
	Cable (XS1...B3...L only)	Nickel-plated brass			
Vibration resistance	Conforming to IEC 60068-2-6				
Shock resistance	Conforming to IEC 60068-2-27				
Rated supply voltage	12–24 Vdc with protection against reverse polarity				
Switching capacity	200 mA with overload and short-circuit protection				
Maximum switching frequency	Ø 6.5, Ø 8, and Ø 12	2500 Hz			
	Ø 18	1000 Hz			
	Ø 30	500 Hz			

Sensing Distance Sn, mm (in.)	Function	Output	Connection	Sold in lots of	Weight		Catalog Number
					kg	lb	
<b>Ø 8, threaded M8 x 1</b>							
<b>Three-wire 12–24 Vdc, flush mountable</b>							
 XS108B3...M8 2 (0.07)	NO	PNP	Precabled (2 m) [8]	1	0.070	0.15	XS108B3PAL2
			M8 connector	1	0.030	0.06	XS108B3PAM8
			M12 connector	1	0.060	0.13	XS108B3PAM12
		NPN	Precabled (2 m) [8]	1	0.070	0.15	XS108B3NAL2
			M8 connector	1	0.030	0.06	XS108B3NAM8
			M12 connector	1	0.060	0.13	XS108B3NAM12
	NC	PNP	Precabled (2 m) [8]	1	0.070	0.15	XS108B3PBL2
			M8 connector	1	0.030	0.06	XS108B3PBM8
			M12 connector	1	0.060	0.13	XS108B3PBM12
		NPN	Precabled (2 m) [8]	1	0.070	0.15	XS108B3NBL2
			M8 connector	1	0.030	0.06	XS108B3NBM8
			M12 connector	1	0.060	0.13	XS108B3NBM12
<b>Ø 12, threaded M12 x 1</b>							
<b>Three-wire 12–24 Vdc, flush mountable</b>							
 XS112B3...L2 4 (0.15)	NO	PNP	Precabled (2 m) [8]	1	0.090	0.19	XS112B3PAL2
			M12 connector	1	0.030	0.06	XS112B3PAM12
			Precabled (2 m) [8]	1	0.090	0.19	XS112B3NAL2
		NPN	M12 connector	1	0.030	0.06	XS112B3NAM12
			Precabled (2 m) [8]	1	0.090	0.19	XS112B3PBL2
			M12 connector	1	0.030	0.06	XS112B3PBM12
	NC	PNP	Precabled (2 m) [8]	1	0.090	0.19	XS112B3NBL2
			M12 connector	1	0.030	0.06	XS112B3NBM12
			Precabled (2 m) [8]	1	0.090	0.19	XS112B3PBL2
		NPN	M12 connector	1	0.030	0.06	XS112B3PBM12
			Precabled (2 m) [8]	1	0.090	0.19	XS112B3NBL2
			M12 connector	1	0.030	0.06	XS112B3NBM12
<b>Ø 18, threaded M18 x 1</b>							
<b>Three-wire 12–24 Vdc, flush mountable</b>							
 XS118B3...M12 8 (0.31)	NO	PNP	Precabled (2 m) [8]	1	0.110	0.24	XS118B3PAL2
			M12 connector	1	0.060	0.13	XS118B3PAM12
			Precabled (2 m) [8]	1	0.110	0.24	XS118B3NAL2
		NPN	M12 connector	1	0.060	0.13	XS118B3NAM12
			Precabled (2 m) [8]	1	0.110	0.24	XS118B3PBL2
			M12 connector	1	0.060	0.13	XS118B3PBM12
	NC	PNP	Precabled (2 m) [8]	1	0.110	0.24	XS118B3NBL2
			M12 connector	1	0.060	0.13	XS118B3NBM12
			Precabled (2 m) [8]	1	0.110	0.24	XS118B3PBL2
		NPN	M12 connector	1	0.060	0.13	XS118B3PBM12
			Precabled (2 m) [8]	1	0.110	0.24	XS118B3NBL2
			M12 connector	1	0.060	0.13	XS118B3NBM12
<b>Ø 30, threaded M30 x 1.5</b>							
<b>Three-wire 12–24 Vdc, flush mountable</b>							
 XS130B3...L2 15 (0.59)	NO	PNP	Precabled (2 m) [8]	1	0.180	0.39	XS130B3PAL2
			M12 connector	1	0.130	0.28	XS130B3PAM12
			Precabled (2 m) [8]	1	0.180	0.39	XS130B3NAL2
		NPN	M12 connector	1	0.130	0.28	XS130B3NAM12
			Precabled (2 m) [8]	1	0.180	0.39	XS130B3PBL2
			M12 connector	1	0.130	0.28	XS130B3PBM12
	NC	PNP	Precabled (2 m) [8]	1	0.180	0.39	XS130B3NBL2
			M12 connector	1	0.130	0.28	XS130B3NBM12
			Precabled (2 m) [8]	1	0.180	0.39	XS130B3PBL2
		NPN	M12 connector	1	0.130	0.28	XS130B3PBM12
			Precabled (2 m) [8]	1	0.180	0.39	XS130B3NBL2
			M12 connector	1	0.130	0.28	XS130B3NBM12

[8] For a 5 m cable replace L2 with L5; for a 10 m cable replace L2 with L10. Example: XS106B3PAL2 becomes XS106B3PAL5 with a 5 m cable.