# Wireless Accessories

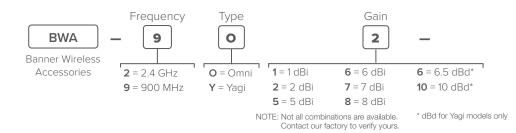


Antennaspage 2
Antenna Cablespage 4
Batteries page 5
Bracketspage 6
Communications Cables page 8
Enclosures and Panelspage 9
Hardware Packetspage 10
I-O Expansionpage 11
Power Cordsets page 12
Power Supplies page 17
Sensors page 18
Solar Panels page 21

### **Antennas**

Select your antenna based on your specific application needs. There are three basic antenna solutions:

- Use the supplied rubber duck antenna inside the enclosure. DX80 products come with a 2 dBi rubber duck antenna. Often simply attaching the supplied antenna to the radio provides enough radio range to meet your needs.
- · Mount a dome antenna to the enclosure. The -D antennas can be mounted directly on the enclosure.
- Use an N-type pole-mounted antenna, with surge suppressor. The -A and -AS antennas can be mounted remotely from the
  enclosure and require the BWC-LFNBMN-DC surge suppressor.



#### **Omni-Directional**



Omni-Directional			
BWA-201-001	2.4 GHz	1 dBi, Rubber, 1 in tall, RP-SMA connection	
BWA-202-C	2.4 GHz	2 dBi, Rubber swivel, 3 1/4 in (ships with 2.4 GHz radios), RP-SMA connection	
BWA-205-C	2.4 GHz	5 dBi, Rubber swivel, 6 1/2 in, RP-SMA connection	
BWA-207-C	2.4 GHz	7 dBi, Rubber swivel, 9 1/4 in, RP-SMA connection	
BWA-902-C	900 MHz	2 dBi, Rubber swivel (ships with 900 MHz radios), RP-SMA connection	
BWA-905-C	900 MHz	5 dBi, Rubber swivel, RP-SMA connection	
BWA-902-RA	900 MHz	2 dBi, Rubber fixed right-angle, RP-SMA connection	
BWA-902-RA2	900 MHz	2 dBi 1/2 wave, Rubber fixed right-angle, 160 mm tall, RP-SMA connection	
BWA-202-001	2.4 GHz	2 dBi, 18 inch cable, 1/2" SS NPT Port	
BWA-202-002	2.4 GHz	2 dBi, 18 inch cable, 3/4" SS NPT Port	
BWA-202-D	2.4 GHz	2 dBi, 18 inch cable, RP-SMA Box Mount	
BWA-902-001	900 MHz	2 dBi, 18 inch cable, 1/2" SS NPT Port	
BWA-902-002	900 MHz	2 dBi, 18 inch cable, 3/4" SS NPT Port	
BWA-902-D	900 MHz	2 dBi, 18 inch cable, RP-SMA Box Mount	



BWA-206-A	2.4 GHz	6 dBi, Fiberglass, 16 in (shown), N-Type connection
BWA-208-A	2.4 GHz	8.5 dBi, Fiberglass, 24 in, N-Type connection
BWA-906-A	900 MHz	6 dBi, Fiberglass, N-Type connection
BWA-906-AS	900 MHz	6 dBi, Fiberglass, 1/4 Wave, 23.6 in (1.3 inch diameter), N-Type connection
BWA-908-AS	900 MHz	8 dBi, Fiberglass, 3/4 Wave, 63 in (1.5 inch diameter), N-Type connection



#### Yagi

BWA-9Y6-A	900 MHz	6.5 dBd, 6.8 × 13 inches Outdoor, N-Type connection
2111101011	000 12	c.o aba, c.o is maneo cataco, it is po comiconal.

**BWA-9Y10-A** 900 MHz 10 dBd, 6.8 × 24 inches Outdoor, N-Type connection



# Cellular (CDMA multi band)

ı	BWA-CELLA-002	2 dBi, 6.3 in blade style, RP-SMA male connection
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### **Antenna Cables**





BWC-1MRSFRSB0.2	RG58, RP-SMA Male to RP-SMA Female Bulkhead, 0.2 m
BWC-1MRSFRSB1	RG58, RP-SMA Male to RP-SMA Female Bulkhead, 1 m
BWC-1MRSFRSB2	RG58, RP-SMA Male to RP-SMA Female Bulkhead, 2 m
BWC-1MRSFRSB4	RG58, RP-SMA Male to RP-SMA Female Bulkhead, 4 m
BWC-2MRSFRS3	LMR200, RP-SMA Male to RP-SMA Female, 3 m
BWC-2MRSFRS6	LMR200, RP-SMA Male to RP-SMA Female, 6 m
BWC-2MRSFRS9	LMR200, RP-SMA Male to RP-SMA Female, 9 m
BWC-2MRSFRS12	LMR200, RP-SMA Male to RP-SMA Female, 12 m



#### Antenna Cables: RP-SMA to N-Type

BWC-1MRSMN05	LMR100 RP-SMA to N-Type Male, 0.5 m
BWC-1MRSMN2	LMR100 RP-SMA to N-Type Male, 2 m



#### Antenna Cables: N-Type

BWC-4MNFN3	LMR400 N-Type Male to N-Type Female, 3 m
BWC-4MNFN6	LMR400 N-Type Male to N-Type Female, 6 m
BWC-4MNFN15	LMR400 N-Type Male to N-Type Female, 15 m
BWC-4MNFN30	LMR400 N-Type Male to N-Type Female, 30 m



#### **Surge Suppressors**

BWC-LFNBMN-DC	Surge Suppressor, bulkhead, N-Type Female, N-Type Male, dc Blocking
BWC-LMRSFRPB	Surge Suppressor, bulkhead, RPSMA to RP-SMA





BWA-HW-016	Antenna Feedthrough, Stainless Steel, 1/2" NPT
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BWA-HW-017 Antenna Feedthrough, Stainless Steel 3/4" NPT

# **Batteries**

KENO	BWA-BATT-001	3.6 V Lithium D cell for hazardous or nonhazardous locations, one battery
DATE OF BALLEY B	BWA-BATT-006	3.6 V Lithium AA cell, two batteries
D SIZE ERZUSIS BOBBIN TYPE	BWA-BATT-011	3.6 V Lithium D cell for non-hazardous locations only, one battery
D ERZGSOO O	BWA-BATT-013	3.6 V Lithium C cell, one battery
Sure	DX81-LITH	Battery Supply Module with mounting hardware
	DX81P6	Battery Supply Module, six "D" cells, with mounting hardware

### **Brackets**



	BWA-BK-019	<ul> <li>Magnet mount for curved surfaces</li> <li>30 mm × 30 mm, 14.4 mm thick</li> <li>Includes four M2.5 × 16 mm socket head cap screws</li> </ul>
(Tb)	BWA-BK-022	<ul> <li>Use when measuring high frequency vibrations or when mounting the sensor to curved surfaces</li> <li>Includes SMBQM30 aluminum bracket, four mounting screws, one ¼-28 × 1/2 screw mount, and one piece of 3M™ thermally conductive adhesive transfer tape</li> <li>30 mm × 30 mm</li> <li>Refer to the Bracket Assembly Quick Start Guide for installation instructions (p/n 213323)</li> </ul>
	BWA-BK-023	<ul> <li>Use when measuring high frequency vibrations or when mounting the sensor to curved surfaces</li> <li>Includes SMBQM30 stainless steel bracket, four mounting screws, and one ¼-28 × 1/2 screw mount</li> <li>30 mm × 30 mm</li> <li>Refer to the Bracket Assembly Quick Start Guide for installation instructions (p/n 213323)</li> </ul>
	BWA-BK-024	<ul><li>Disk Vibration Mount</li><li>10-32 thread 25 mm diameter</li><li>Stainless steel</li></ul>
	BWA-BK-025	<ul> <li>Includes a magnetic mounting bracket and four mounting screws</li> <li>For use on flat or curved surfaces</li> <li>SmCo magnet with a 40 lb pull strength</li> <li>44.5 mm × 54 mm; 15.6 mm thick</li> </ul>
	BWA-BK-026	<ul> <li>Includes a base plate, two screw retainers, four mounting screws, a set screw, and a mounting disc</li> <li>Mounts the device to a surface using two-part epoxy</li> <li>Alignment mark indicates the front of device</li> <li>44.5 mm × 54 mm</li> </ul>
O CO	SMBAMS18RA	<ul> <li>Right-angle SMBAMS series bracket with 18 mm hole</li> <li>Articulation slots for 90+° rotation</li> <li>12-ga. (2.6 mm) cold-rolled steel</li> </ul>

SMBDX80DIN

 $\bullet$  Black reinforced thermoplastic bracket for mounting on a 35 mm DIN rail

# **Communication Cables**

	BWA-DRSPLITTER	DB9 Splitter Cable, Splitter cable, DB9 Female (RS232) trunk to 5-pin M12 male and female - 11.8 inch branches and trunk
	BWA-E2M	Ethernet cable, RSCD RJ45 440, 2 m
	BWA-E8M	Ethernet cable, RSCD RJ45 440, 8 m
	BWA-EX2M	Ethernet cable, crossover, RSCD RJ45CR 440, 2 m
	BWA-HW-006	Adapter cable, USB to RS-485, for use with the User Configuration Tool software (UCT)
	BWA-UCT-900	Adapter cable with power, USB to RS-485, for use with the User Configuration Tool software (UCT), supplies power to 1 Watt radios
	BWA-USB1WIRE-001	PC USB to 1-wire Serial Interface converter. Use with the Sensor Configuration Tool software to communicate directly with 1-wire Serial Interface sensors
	BWA-HW-026	Splitter cable with a wall plug to supply external power to a MultiHop Radio operating at 1 Watt while it is connected to a computer
	BWA-RIBBON-001	Ribbon cable, 20-pin DBL socket

### **Enclosures and Panels**









BWA-PANEL108

Panel, 10 × 8 in





BWA-AH66SPK	Swing Panel Kit, 6 × 6 in, Includes Mounts, Screws, and Panel
BWA-AH86SPK	Swing Panel Kit, 8 × 6 in, Includes Mounts, Screws, and Panel
BWA-AH108SPK	Swing Panel Kit, 8 × 10 in, Includes Mounts, Screws, and Panel
BWA-AH1210SPK	Swing Panel Kit, 12 $\times$ 10 in, Includes Mounts, Screws, and Panel
BWA-AH1412SPK	Swing Panel Kit, 14 × 12 in, Includes Mounts, Screws, and Panel
BWA-AH1614SPK	Swing Panel Kit, 16 $\times$ 14 in, Includes Mounts, Screws, and Panel
BWA-AH1816SPK	Swing Panel Kit, 18 $\times$ 16 in, Includes Mounts, Screws, and Panel
BWA-BP66A	Back Panel, aluminum, 6 × 6 in
BWA-BP86A	Back Panel, aluminum, 6 × 6 in
BWA-BP108A	Back Panel, aluminum, 8 × 10 in
BWA-BP1210A	Back Panel, aluminum, 12 × 10 in
BWA-BP1412A	Back Panel, aluminum, 14 × 12 in
BWA-BP1614A	Back Panel, aluminum, 16 × 14 in
BWA-BP1816A	Back Panel, aluminum, 18 × 16 in
BWA-EF866	Enclosure Fiberglass Hinged 8 × 6 × 6 in
BWA-EF1086	Enclosure Fiberglass Hinged 10 $\times$ 8 $\times$ 6 in
BWA-PANEL86	Panel, 8 × 6 in

BWA-AH6DR	Din Rail Kit 6 in (Includes 2 Tribolar Screws and DIN Rail)
BWA-AH8DR	Din Rail Kit 8 in (Includes 2 Tribolar Screws and DIN Rail)
BWA-AH10DR	Din Rail Kit 10 in (Includes 2 Tribolar Screws and DIN Rail)
BWA-AH12DR	Din Rail Kit 12 in (Includes 2 Tribolar Screws and DIN Rail)
BWA-AH14DR	Din Rail Kit 14 in (Includes 2 Tribolar Screws and DIN Rail)
BWA-AH16DR	Din Rail Kit 16 in (Includes 2 Tribolar Screws and DIN Rail)
BWA-AH18DR	Din Rail Kit 18 in (Includes 2 Tribolar Screws and DIN Rail)
DIN-35-70	35 mm DIN Rail Track, 70 mm length track
DIN-35-105	35 mm DIN Rail Track, 105 mm length track
DIN-35-140	35 mm DIN Rail Track, 140 mm length track
DIN-35-180	35 mm DIN Rail Track, 180 mm length track
DIN-35-220	35 mm DIN Rail Track, 220 mm length track
BWA-AHTBS	DIN Rail Kit, Trilobular/self-threading screws, #10-32 × 0.375 PHL PH ZINC, 10 pack

### **Hardware Packets**

10	BWA-CG.5-2X2.5-10	Cable Glands, 1/2-in NPT, Cordgrip for 2 holes of 1.2 to 2.5 mm diameter, 10 Pack
76	BWA-CG.5-10	Cable Glands, 1/2-in NPT, Cordgrip for 3 holes of 2.8 to 5.6 mm diameter, 10 Pack
6	BWA-CG.5-3X5.6-10	Cable Glands, 1/2-in NPT, Cordgrip for 3 holes of 2.8 to 5.6 mm diam, 10 Pack
10	BWA-CG.5-6X3.0-10	Cable Glands, 1/2-in NPT, Cordgrip for 6 holes of 1.5 to 3 mm diameter, 10 Pack
	BWA-CG.5-6X4.0-10	Cable Glands, 1/2-in NPT, Cordgrip for 6 holes of 2 to 4 mm diameter, 10 Pack
	BWA-HW-052	Cable Gland Pack: 1/2-in NPT gland, 1/2-inch NPT multi-cable gland, and 1/2-inch NPT vent plug
	BWA-HW-053	Plug Conduit, Plastic Hex, 1/2-14 NPT, for 1.2 to 2.5 mm dia
	BWA-HW-031	Vent Plug, 1/2-in NPT, IP67
	BWA-HW-032	Access hardware for the E housing, one 1/2-inch plug, one 1/2-inch gland
	BWA-HW-034	DIN rail clip, black plastic     Used with the M-HBx MultiHop and -PBx Performance board modules
	BWA-AHAK	Vent Plug, Plastic, 1/2-in NPT, Strain-relief fitting, with o-ring, for 0.2 to 0.35 dia cable

# **I-O Expansion**

	DX85M0P0M4M4	DX85 Modbus RTU Remote I/O, 4 Analog IN, 4 Analog OUT (0 to 20 mA)
	DX85M4P4M2M2	DX85 Modbus RTU Remote I/O, 4 Discrete IN, 4 Discrete OUT, 2 Analog IN, 2 Analog OUT (0 to 20 mA)
*RUN	DX85M-P8	DX85 Modbus RTU Remote I/O, Up to 12 sourcing inputs or up to 12 sourcing outputs (for a total of 12 I/O)
Language Control of Co	BWA-RELAY-12V	Relay, Blade Style with Base, 12 V
TOPE OF	BWA-RELAY-24V	Relay, Blade Style with Base, 24 V
MELGOR	BWA-RH1B-UDC12V	Relay, Blade Style, No Base, 12 V (replacement part)
CONTRACTOR OF THE CONTRACTOR O	BWA-RH1B-UDC24V	Relay, Blade Style, No Base, 24 V (replacement part)
	BWA-SH1B-05	Relay Base Only (replacement part)
	IB6RP	Interface Relay Box, 18 to 26 V dc inputs, isolated relay outputs (not shown)

NOTE: Add a "C" to the end of any DX85 model to order that I/O mix with an IP20 housing. The IP20 models are Class I, Division 2 certified when installed in a suitable enclosure.

### **Power Cordsets**

#### Pre-wired



Model	Style
BWA-QD5.5	Prewired 5-pin M12 quick disconnect (QD), 1/2-14 NBSM
BWA-QD8.5	Prewired 8-pin M12 quick disconnect (QD), 1/2-14 NBSM
BWA-QD12.56	Prewired 12-pin M12 quick disconnect (QD), 1/2-14 NBSM

#### M12 — Single-Ended

Right-angle cordsets are not compatible with the DX70 devices. When facing the Node or Gateway toward you and the quick-disconnect connection is facing down, the right-angle cables exit to the right.

When using the FlexPower® Node with integrated battery, use a double-ended cordset. When using a FlexPower Node with external power supply, use a single-ended cordset. If using the communication lines, the cable length cannot exceed 3 meters (10 ft).



Model	Length	Style	Dimensions	Pinout
MQDC1-501.5	0.50 m (1.5 ft)			
MQDC1-506	1.83 m (6 ft)	Straight	44 Typ. ——	Female
MQDC1-515	4.57 m (15 ft)	Straight	M12 x 1	
MQDC1-530	9.14 m (30 ft)			1 = Brown 2 = White
MQDC1-506RA	1.83 m (6 ft)		32 Typ	3 = Blue 4 = Black
MQDC1-515RA	4.57 m (15 ft)	Right-Angle	30 typ. [1.187]	5 = Gray
MQDC1-530RA	9.14 m (30 ft)		M12 x 1	

#### M12 — Double-Ended

Right-angle cordsets are not compatible with the DX70 devices. When facing the Node or Gateway toward you and the quick-disconnect connection is facing down, the right-angle cables exit to the right.

When using the FlexPower® Node with integrated battery, use a double-ended cordset. When using a FlexPower Node with external power supply, use a single-ended cordset. If using the communication lines, the cable length cannot exceed 3 meters (10 ft).

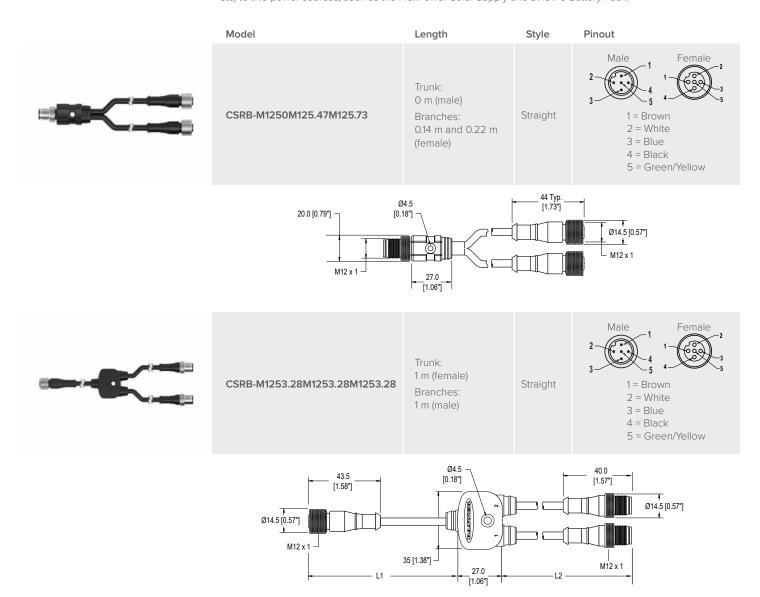


Model	Length	Style		Pinout
MQDEC-501SS	0.31 m (1.02 ft)	Straight	<del></del> 40 Тур <b>→</b>	Male 2 4
MQDEC-503SS	0.91 m (2.99 ft)		M12 x 1	Female
MQDEC-506SS	1.83 m (6 ft)		Straight	44 Typ.
MQDEC-512SS	3.66 m (12 ft)		e 14.5 J	3 = Blue 4 = Black 5 = Gray

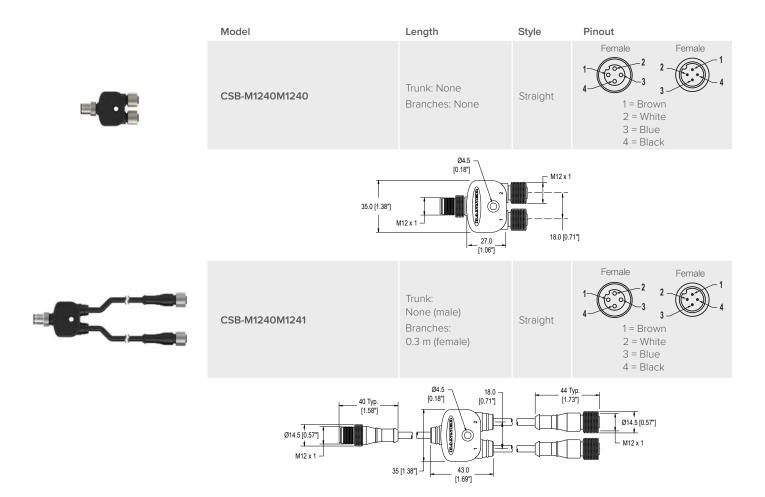
#### **Splitter Cables**

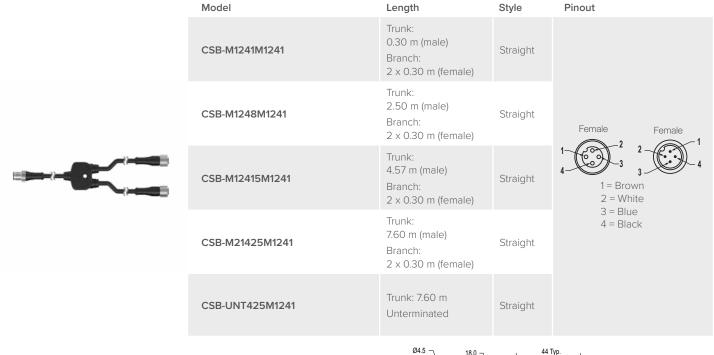
Use CSRB-M125.47M125.73 to split power between two FlexPower® or solar powered devices. DO NOT use this cable to connect a FlexPower devices to a 10 to 30 V dc powered device.

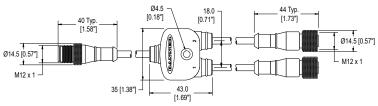
Use CSRB-M1253.28M1253.28M1253.28 to connect one FlexPower device (data radio, FlexPowered Gateway, etc) to two power sources, such as the FlexPower Solar Supply and DX81P6 Battery Pack.



# **Power Cordsets (continued)**

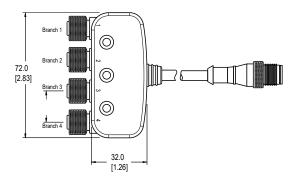








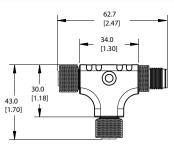
CSB4-M1251M1250  Branches: 0.0  Trunk: 0.3  No trunk  1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	−2 −3 ∼5
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# **Power Cordsets (continued)**



Model	Length	Style	Pinout
CSB-M1250M1250-T	2 x 0.30 m (1 ft)	0.30 m (1 ft)	Female  Female  1 Female  1 Semale  1 Semale



#### Receptacle



Model	Style	Dimensions	Pinout
BWA-HW-027	8-pin quick disconnect, female, 1/2-inch NPT (FK8-0.5/14.5/NPT)		

#### Connector



Model	Style	Dimensions	Pinout
FIC-M12F4	4-pin M12/Euro-style straight female field-wireable connector		

# Power Supplies

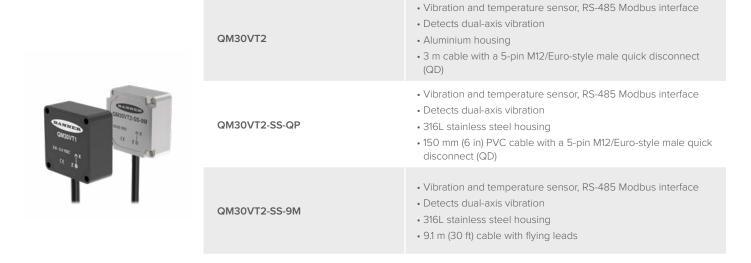
Oilo.	PSD-24-4	DC power supply with wall plug, 90-264 V AC 50/60 Hz input, 24 V DC output, US-style wall plug input, 4-pin M12/Euro-style output; 2 m (6 ft) cable, UL Listed Class 2
To the state of th	PSDINP-24-06	DC power supply, 0.63 Amps, 24 V DC, with DIN Rail Mount, Class I Division 2 (Groups A, B, C, D) Rated
	PSDINP-24-13	DC power supply, 1.3 Amps, 24 V DC, with DIN Rail Mount, Class I Division 2 (Groups A, B, C, D) Rated
	PSDINP-24-25	DC power supply, 2.5 Amps, 24 V DC, with DIN Rail Mount, Class I Division 2 (Groups A, B, C, D) Rated
	PSW-24-1	DC power supply with wall plug, 100-240 V AC 50/60 Hz input, 24 V DC 1 A output, UL Listed Class 2
	PSWB-24-1	DC power supply with multi-blade wall plug,100–240 V AC 50/60 Hz input, 24 V DC 1 A output, UL Listed Class 2, barrel jack connector

### **Sensors**

#### Sensors with a Serial Interface

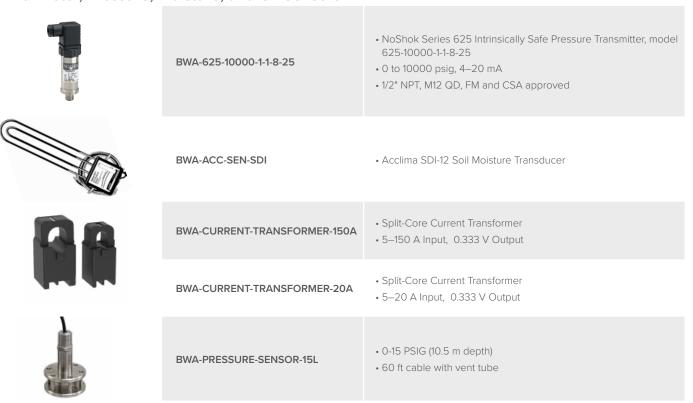
ONSOVIA  34-11-12-12-13-13-13-13-13-13-13-13-13-13-13-13-13-	QM30VT1	<ul> <li>Vibration and Temperature Sensor</li> <li>Aluminum housing</li> <li>2.09 m (6.85 ft) cable with a 5-pin M12 male quick disconnect (QD)</li> </ul>
	QM30VT1-QP	<ul> <li>Vibration and Temperature Sensor</li> <li>Aluminum housing</li> <li>150 mm (6 in) cable with a 5-pin M12 male quick disconnect (QD)</li> </ul>
	QM30VT1-SS	<ul> <li>Vibration and Temperature Sensor</li> <li>Stainless steel housing</li> <li>2.09 m (6.85 ft) cable with a 5-pin M12 male quick disconnect (QD)</li> </ul>
	K50UX1ARA	<ul> <li>1-wire serial interface ultrasonic sensor</li> <li>Range: 100 mm to 1 m (3.94 in to 39.4 in)</li> </ul>
	K50UX1CRA	<ul> <li>1-wire serial interface ultrasonic sensor</li> <li>Range: 300 mm to 3 m (11.8 in to 118 in)</li> </ul>
	M12FTH4Q	<ul> <li>Temperature and humidity sensor</li> <li>±2% Accuracy, 1-wire serial interface</li> <li>(Requires a 5-pin threaded M12 double-ended cordset less than 3 meters long, such as model DEE2R-5xD.)</li> </ul>
	M12FT4Q	<ul> <li>Temperature sensor</li> <li>1-wire serial interface</li> <li>(Requires a 5-pin threaded M12 double-ended cordset less than 3 meters long, such as model DEE2R-5xD.)</li> </ul>

#### Sensors with Modbus Interface



	K50UX1CRA	<ul><li>Modbus Slave device via RS-485</li><li>Range: 100 mm to 1 m (3.94 in to 39.4 in)</li></ul>
	K50UX2CRA	<ul><li>Modbus Slave Device via RS-485</li><li>Range: 300 mm to 3 m (11.8 in to 118 in)</li></ul>
	M12FTH3Q	Temperature and humidity sensor with RS-485 Modbus interface
	M12FT3Q	Temperature sensor with RS-485 Modbus interface
	GPS50M	<ul><li>2.5 m positional accuracy</li><li>IP69K per DIN40050</li><li>5-30 V DC Supply Voltage</li></ul>

#### 1.5.3 Thermistor, Pressure, Moisture, and CT Sensors



# Sensors (continued)

	BWA-PRESSURE-SENSOR-50	<ul><li>0–50 PSIG</li><li>1 meter flying leads</li><li>1/4"-18 NPT port</li></ul>
	BWA-PRESSURE-SENSOR-500	• 0–500 PSIS • 1 meter flying leads
	BWA-PRESSURE-SENSOR-3000	• 0–3000 PSIS • 1 meter flying leads
	BWA-S612-15-100	<ul> <li>NoShok Series 612 Submersible Level Transmitter, model 612-15-1-1-N-100</li> <li>0 to 15 psig, 100 foot cable</li> </ul>
	BWA-THERMISTOR-001	<ul> <li>NTC Thermistor</li> <li>2.2 KOhms, +/-0.2%C, blue bead</li> <li>For models: DX80N9X2S2N2T/C, DX99N9X2S2N0T4X0A0, and DX99N9X1S2N0T4X0D0</li> </ul>
	BWA-THERMISTOR-002	<ul> <li>NTC Thermistor</li> <li>10 KOhms, +/-0.2%C, black bead</li> <li>For Performance models -P1/C/E, and MultiHop models MH1/C/E- 2 pack</li> </ul>
	BWA-THERMISTOR-PROBE-003	<ul> <li>Temperature sensor with thermistor PS103G2</li> <li>Beta Value(K) 0–50°C: 3575, Base thermistor accuracy of 0.2%</li> <li>Operating Temperature Range: -20 °C to +105 °C (-4 °F to +221 °F)</li> <li>Maximum Power Rating: 30 mW at 25 °C; derated to 1 mW at 125 °C</li> <li>Dissipation Constant: 1 mW/°C,</li> <li>Stainless steel finish; PVC insulation</li> </ul>
	FTH-FIL-001	Filter for Temperature/Humidity Sensor Aluminum grill filter cap default filter
	FTH-FIL-002	Filter for Temperature/Humidity Sensor stainless steel sintered to 10μm porosity for high dust environments

### **Solar Panels**

