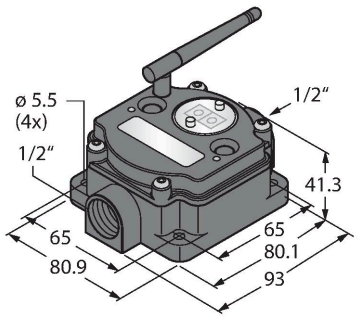
DX80G2M6S-PM8
Radio Transmission System – Point-to-point Gateway



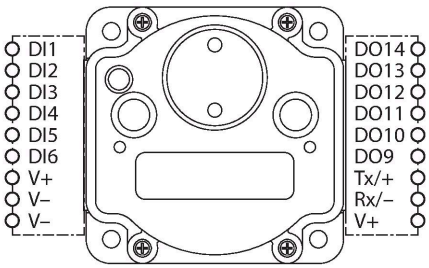
Features

- External antenna (RG58 RP-SMA connection)
- Integrated signal strength indicator
- Configuration via DIP switch
- Modbus RTU communication, RS485 interface
- Deterministic data transmission
- Frequency hopping FHSS
- Time Division Multiplex Access TDMA
- Transmission power: 63 mW, 18 dBm conducted, ≤ 20 dBm EIRP
- Inputs: 6 x PNP
- Outputs: 6 x PNP
- Power consumption: < 60 mA at 24 VDC

Technical data

Type	DX80G2M6S-PM8
ID	3087099
Wireless data	
Type of radio	short-range
Installation	stationary
Topology	Point-to-point Point-to-point with repeater
Function	Point-to-point
Device type	Gateway
Frequency band	2.4-GHz ISM band
Frequency range	2.402 - 2.483 GHz
Number of radio channels	50
Channel width	1 MHz
Spread spectrum technology	FHSS (Frequency Hopping Spread Spectrum)
Single-Carrier Residence Time	7.8 ms
Response time typical	< 62.5 ms
Output power ERP	18 dB/65 mW
Output power EIRP	20 dB/100 mW
Range	3200000 mm
I/O data	
Number of channels	6
Input type	PNP
Number of channels	6
Output type	PNP
Communication protocol	Modbus RTU

Wiring diagram



Functional principle

The DX80-PM system forms a radio-based point-to-point link for the transmission of sensor signals, consisting of a gateway and a node. Up to 12 sensors/actuators can be connected per device and the system transfers both switching and analog signals bidirectionally. The IO image is selected via the gateway menu. If required, a second node can be added and the gateway can be used as a repeater. The connection quality can be checked via the menu.
Directives:
FCC-ID UE300DX80-2400- This device complies with FCC para. 15, subpara. C, 15.247
ETSI/EN: In compliance with EN 300 328: V2.2.2 (2019-02)
IC: 7044A-DX8024
Radiation protection 10 V/m for 80–2700 MHz acc. to EN 61000-6-2
Shock and vibration resistance: IEC 68-2-6 and IEC 68-2-7

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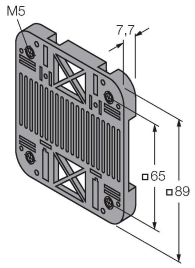
Technical data

	RS485
Electrical data	
Runs with battery	No
Operating voltage U_B	10…30 VDC
DC rated operating current I_e	≤ 60 mA
Mechanical data	
Design	Rectangular, DX80-PM
Housing material	Plastic, PC
Antenna connection	RP-SMA female connector
Ambient temperature	-40…+85 °C
Relative humidity	0…95 %
Protection class	IP67
Tests/approvals	

Accessories

SMBDX80DIN	3077161



Mounting panel for DIN rail, suited for CP80, DX80, K80, Q80, operating temperature: -20…90 °C

Accessories

Dimension drawing	Type	ID	
Keine Maßzeichnung vorhanden! No drawing available!	BWC-LMRSFRPB	3079296	Surge protection, bulkhead fitting, RP-SMA type
	BWC-1MRSFRSB0.2	3078544	Antenna extension, RP-SMA on RP-SMAF bulkhead fitting, 0.2m, RG58, loss 1.05 dB/m
	BWC-1MRSFRSB1	3078337	Antenna extension, RP-SMA on RP-SMAF bulkhead fitting, 1 m, RG58, loss 1.05 dB/m
	BWC-1MRSFRSB2	3078338	Antenna extension, RP-SMA on RP-SMAF bulkhead fitting, 2m, RG58, loss 1.05 dB/m

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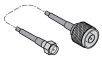
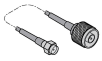
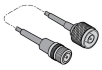
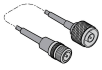
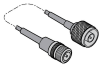
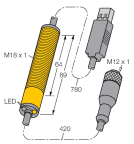
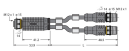
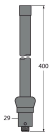
Dimension drawing	Type	ID	
	BWC-1MRSFRSB4	3077488	Antenna extension, RP-SMA on RP-SMAF bulkhead fitting, 4m, RG58, loss 1.05 dB/m
	BWC-1MRSMN05	3077486	Antenna extension, RP-SMA on N-male, 0.5 m, RG58, loss 0.56 dB/m
	BWC-1MRSMN2	3077820	Antenna extension, RP-SMA on N-male, 2m, RG58, loss 0.56 dB/m
	BWC-4MNFN3	3077489	Antenna extension, N male connector to N female connector, cable length: 3 m, LMR400, coaxial, loss: 0.22 dB/m
	BWC-4MNFN6	3077490	Antenna extension, N-male on N-female, 6m, LMR400, coaxial, loss 0.22 dB/m
	BWC-4MNFN15	3077821	Antenna extension, N-male on N-female, 15 m, LMR400, coaxial, loss 0.22 dB/m
	BWC-4MNFN30	3077822	Antenna extension, N-male on N-female, 30m, LMR400, coaxial, loss 0.22 dB/m
	BWA-QD5.5	3078382	Connector flange for 1/2-inch NPT thread, M12 x 1, 5-pin, PVC, black
	BWA-QD8.5	3078383	Connector flange for 1/2-inch NPT thread, M12 x 1, 8-pin, PVC, black
	BWA-QD12.5	3078384	Connector flange for 1/2-inch NPT thread, M12 x 1, 12-pin, PVC, black
	BWA-HW-006	3081325	Converter cable, RS485 to USB 2.0 converter, female connector, M12 × 1, 5-pin, male connector, USB type A, length 1 m; supplies the connected device with 10 V. An external power supply via a Y-splitter (6634679) is recommended for the connected device
	VBRK4.5-2RSC4.874T-0.15/0.15/TXL	6634679	Y-piece with cable, 1 × M12 × 1 female connector to 2 × M12 × 1 male connector; for separate supply of DX80 radio components when connected to the PC via USB adapter

Accessories

Dimension drawing	Type	ID	
	BWA-2O6-A	3081081	External antenna 6 dBi, N-female

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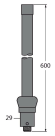
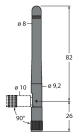
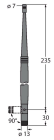
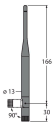
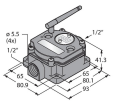
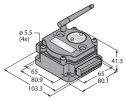
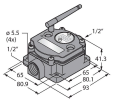
Dimension drawing	Type	ID	
	BWA-2O8-A	3081080	External antenna 8.5 dBi, N-female
	BWA-2O2-C	3077816	Internal antenna 2 dBi, RP-SMA male, standard
	BWA-2O5-C	3077817	Internal antenna 5 dBi, RP-SMA male
	BWA-2O7-C	3077818	Internal antenna 7 dBi, RP-SMA male
	DX80N2X6S-PM8	3087107	Point to point transmission, node, external antenna, digital signals
	DX80N2X6S-PM8C	3087111	Point to point transmission, node, external antenna, digital signals, IP20
	DX80N2X6S-PM8L	3087095	Point to point transmission, node, external antenna, digital signals, without display