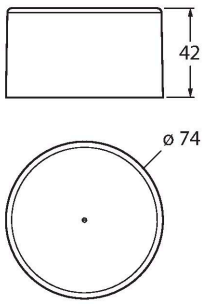
DX80DR2M-HMD
Radio Transmission System – Tree Topology
Data Radio Slave (FlexPower) with Integrated Magnetic Field Sensor



Technical data

Type	DX80DR2M-HMD
ID	3092947
Wireless data	
Type of radio	short-range
Installation	stationary
Topology	Star topology
Function	Tree topology
Device type	Wireless sensor
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	< 1000 ms
Output power ERP	18 dB/65 mW
Output power EIRP	20 dB/100 mW
Range	3200000 mm
I/O data	
Number of channels	1
Input type	Magnetic field sensor
Communication protocol	RS485 Modbus RTU

Features

- Internal antenna
- Configuration via software or infrared interface
- Self-organizing tree structure
- Repeater for extension of network
- Deterministic data transmission
- Frequency hopping FHSS
- Time Division Multiplex Access (TDMA)
- Transmission power: 63 mW, 18 dBm conducted, ≤ 20 dBm EIRP
- Inputs: 1 × integrated magnetic field sensor
- Internal battery, 3.6 V Li-ion D cell

Functional principle

The DX80 Data Radios are self-organizing. They create a network in tree topology. They transfer Modbus RTU telegrams or other data from other bus systems. The telegrams are routed through the network and lost radio communication is compensated via alternative routes. Further sensors can be added to the network and their data is accessible via internal registers. Each network consists of a master and an unlimited number of repeaters or slaves. The device type is adjusted via DIP switch. This system can be combined with several DX80 networks to transfer data from the DX80 gateway via Modbus RTU to the control system.
Directives:
FCC-ID UE300DX80-2400. This device complies with FCC para. 15, subpara. C, 15.247
ETSI/EN: In compliance with EN 300 328: V1.8.1 (2014-04)
IC: 7044A-DX8024
Radiation protection 10 V/m for 80-2700 MHz acc. to EN 61000-6-2
Shock and vibration resistant: IEC 68-2-6 and IEC 68-2-7

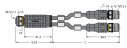
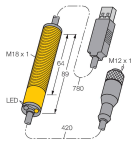
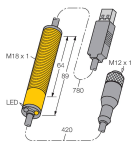
Technical data

Electrical data	
runs with battery	ja
Operating voltage	3.6…5.5 VDC
Power-on indication	LED, Green
Mechanical data	
Design	Cylindrical/Smooth, DX80DR
Dimensions	Ø 74 x 42 mm
Housing material	Plastic, ABS
Antenna connection	Internal (wire loop)
Ambient temperature	-40…+85 °C
Relative humidity	0…95 %
Protection class	IP67
Tests/approvals	

Accessories

BWA-MGFOB-001	3018965	
	Optical commissioning LED for wireless magnetic field sensors for starting the connection procedure	

Accessories

Dimension drawing	Type	ID	
	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
	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
	BWA-UCT-900	3019970	Converter cable with DC power supply for parameterizing DX80 networks via PC, 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