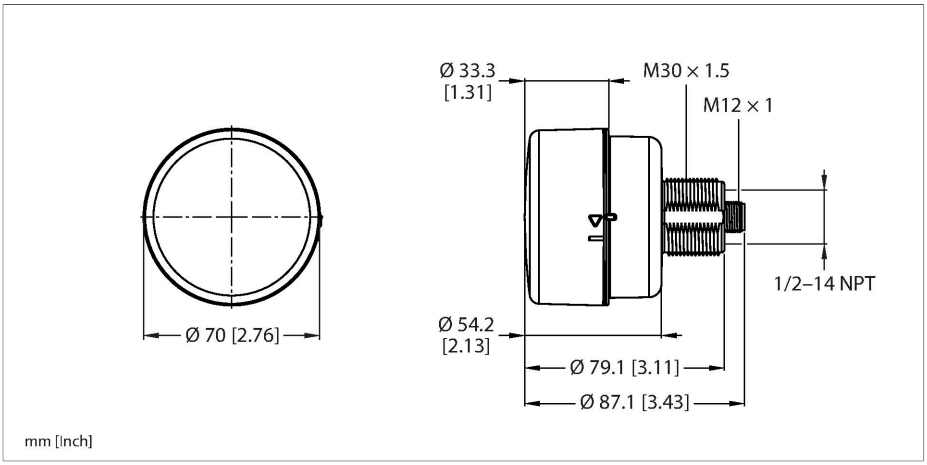
R70SR2MQ
Radio Transmission System – Serial Data Transmission Serial Radio



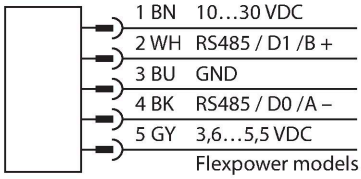
Technical data

Type	R70SR2MQ
ID	3812526
Wireless data	
Type of radio	short-range
Installation	stationary
Topology	Tree topology Star topology Point-to-point with repeater Point-to-point
Function	Tree topology
Device type	Node
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
Output power ERP	18 dB/65 mW
Output power EIRP	20 dB/100 mW
Range	1000000 mm
I/O data	
Communication protocol	RS485 Modbus RTU
Electrical data	
Runs with battery	No
Operating voltage U_B	10…30 VDC

Features

- Protection class IP65
- M30 × 1 mech. screw-in thread
- Connection via M12 × 1 male connector, 5-pin
- Radio range of 1 km
- Max. package size of 1500 bytes
- Transfer rate of 250 kbps
- RS485 interface: Half-duplex, 9.6 kBd/19.2 kBd, 8 data bits, 1 stop bit, parity none
- Operating voltage: 10…30 VDC

Wiring diagram



Functional principle

The R70 serial radios transmit serial data via the RS485 interface over distances of up to 1 km. The following topology options can be selected: Point-to-point, star or tree. Each network consists of a master and at least one slave. Repeaters extend the radio range. The device type is determined via internal DIP switches. There is no software required to connect and adjust the devices.
Directives:
FCC ID: UESX243 This device complies with FCC para. 15, subpara. C, 15.:
IC: 7044A-SX243
ETSI/EN: In compliance with EN 300 328: V1.7.1 (2006-05)
IC: 7044A-DX8024

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Technical data

DC rated operating current I_e	≤ 20 mA
Power-on indication	LED, Green
Mechanical data	
Design	Rectangular, R70SR
Dimensions	Ø 70 x 87.1 mm
Housing material	Plastic, PC, Black
Electrical connection	Connector, M12 × 1
Antenna connection	Internal (wire loop)
Ambient temperature	-40…+85 °C
Relative humidity	0…95 %
Protection class	IP65
Tests/approvals	
Approvals	CE CSA ATEX

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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