

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

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Unidirectional, wireless, 900 MHz transmission system (America), made up of a transmitter (Tx) and a receiver (Rx) and two antennas with connecting cable



Your advantages

- Two pre-programmed transceivers that automatically communicate with each other
- The transmitter can be installed on a DIN rail or outdoors (IP65)
- Operates in the license-free 902 - 928 MHz ISM band
- The receiver for DIN rail mounting is supplied with 24 V DC
- Two omnidirectional antennas
- Conducted transmitters can either be supplied with 24 V DC or 120/240 V AC
- Frequency hopping spread spectrum



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	708.400 g
Custom tariff number	85176990
Country of origin	Canada

Technical data

Note

Trade restriction	The products are offered exclusively for export outside the EU and the European Economic Area.
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Dimensions

Width	17.5 mm
Height	99 mm
Depth	114.5 mm

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

Wireless set

Set contents	Transmitter, receiver, 2 aerials
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Wireless path

Direction	Uni-directional
Frequency range	902 MHz ... 928 MHz
Number of channel groups	4
Number of channels per group	63
Transmission power	1 W

Analog input (sender)

Description of the input	Current input (analog input)
Current input signal	4 mA ... 20 mA
Input resistance current input	< 150 Ω

Digital input (sender)

Input voltage range	5 V AC/DC ... 30 V AC/DC
Switching threshold "0" signal, voltage	max. 1.5 V DC
Switching threshold "1" signal voltage	min. 5 V DC

Analog output (receiver)

Output name	Current output
Current output signal	4 mA ... 20 mA
Load/output load current output	700 Ω (at $U_B = 24 \text{ V}$, $R_B = [U_B - 10 \text{ V}] / 20 \text{ mA}$)

Digital output (receiver)

Output name	2 x relay output + 1 x RF link
Contact type	3 floating PDT contacts
Contact material	Ag, gold-plated
Maximum switching voltage	30 V DC
	120 V AC
Limiting continuous current	0.5 A
Mechanical service life	1×10^7
Service life, electrical	8×10^5 cycles at a switching current of 0.5 A

Supply (receiver)

Supply voltage	24 V DC (at U_B)
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Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Technical data

Supply (receiver)

Supply voltage range	12 V DC ... 30 V DC
Typical current consumption	85 mA
Max. current consumption	125 mA

Supply (sender)

Supply voltage	24 V DC
Supply voltage range	12 V DC ... 30 V DC
Typical current consumption	75 mA
Max. current consumption	350 mA

General

Mounting position	any
Assembly instructions	on standard DIN rail NS 35 in accordance with EN 60715

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	FCC Part 15.247 / ISC RSS 210
Conformance	FCC Directive, Part 15.247
	ISC Directive RSS 210
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

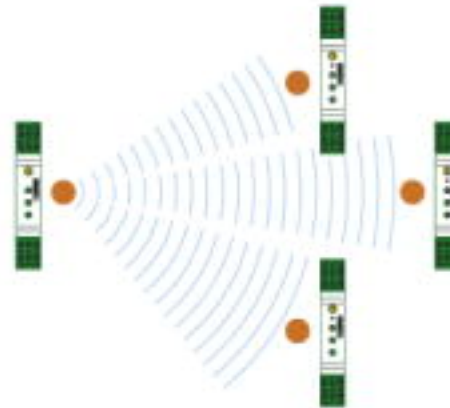
Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Application drawing

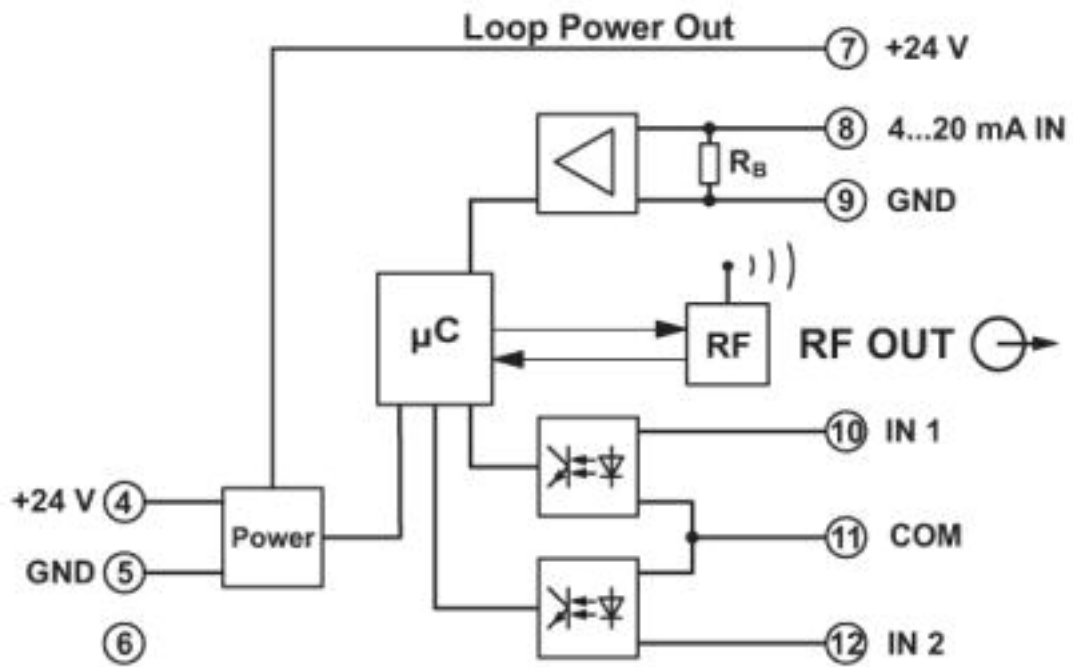
Point-to-point



Point-to-multipoint



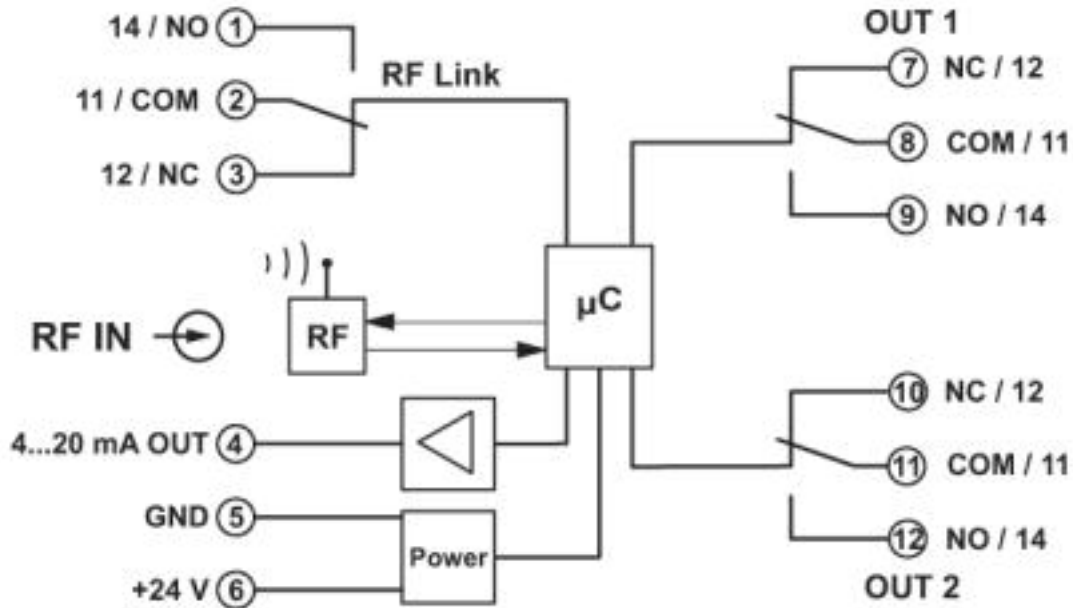
Block diagram



Transmitter module

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Block diagram



Receiver module

Classifications

eCl@ss

eCl@ss 4.0	27250312
eCl@ss 4.1	27250312
eCl@ss 5.0	27242208
eCl@ss 5.1	27242200
eCl@ss 6.0	19179200
eCl@ss 7.0	19179290
eCl@ss 8.0	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 2.0	EC000310
ETIM 3.0	EC000310
ETIM 4.0	EC000310
ETIM 5.0	EC000310
ETIM 6.0	EC000310
ETIM 7.0	EC000310

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Classifications

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	43223108
UNSPSC 11	39121008
UNSPSC 12.01	43223108
UNSPSC 13.2	43222604

Accessories

Accessories

Adapter cable

Antenna cable - RAD-CON-MCX-N-SB - 2867717



Antenna cable, outside diameter: 2.5 mm (0.1 in.), inner conductor: stranded, attenuation: 0.9 dB at 900 MHz, connection: MCX (male) -> N (female), cable length: 1.2 m (4 ft.)

Antenna cable - RAD-CON-SMA-N-SS - 2867403



Antenna cable, outside diameter: 2.5 mm (0.1 in.), inner conductor: stranded, attenuation: 0.9 dB at 900 MHz, connection: SMA (male) -> N (male), cable length: 1.2 m (4 ft.)

Antenna cable - RAD-CON-MCX-MCX-SS - 2867607



Antenna cable, outside diameter: 2.8 mm (0.11 in.), inner conductor: stranded, attenuation: 0.9 dB at 900 MHz, connection: MCX (male) -> MCX (male), cable length: 0.3 m (1 ft.)

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Accessories

Antenna cable - RAD-CON-MCX90-N-SS - 2885207



Antenna cable, outside diameter: 2.5 mm (0.1 in.), inner conductor: stranded, attenuation: 0.9 dB at 900 MHz, connection: 90° MCX (male) -> N (male), cable length: 1.2 m (4 ft.)

Antenna cable - RAD-CON-MCX-RPSMA-EX - 2885621



Antenna barrier, installation: Class I, Div. 1, Grps. A, B, C, D; Class II, Div. 1, Grps. F, G, frequency range: 0.3G Hz ... 6 GHz, connection: RSMA (male) -> MCX (male), incl. 0.7 m / 2.3 ft. connection cable, UL HazLoc approval

Antenna

Antenna - RAD-ISM-900-ANT-OMNI-5 - 2867199



Omnidirectional antenna, 900 MHz, gain: 7 dBi, polarization: linear, opening angle: h/v 360°/30°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

Antenna - RAD-ISM-900-ANT-OMNI-FG-3-N - 2867791



Omnidirectional antenna, 900 MHz, gain: 5 dBi, polarization: linear, opening angle: h/v 360°/28°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

Antenna - RAD-ISM-900-ANT-YAGI-3-N - 2867801



Directional antenna, 868 MHz / 900 MHz, gain: 5 dBi, polarization: linear, opening angle: h/v 168°/78°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Accessories

Antenna - RAD-ISM-900-ANT-YAGI-6.5-N - 2867814



Directional antenna, 868 MHz / 900 MHz, gain: 8.5 dBi, polarization: linear, opening angle: h/v 100°/62°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips

Antenna - RAD-ISM-900-ANT-YAGI-6.5-25-AS - 2867827



Panel antenna with surge protection, adapter cable MCX->N and assembly material, IP65 protection, gain 8.5 dBi, cable length 7.6 m, connection N (female)

Antenna - RAD-ISM-900-ANT-YAGI-6.5-50-AS - 2867830



Panel antenna with surge protection, adapter cable MCX->N and assembly material, IP65 protection, gain 8.5 dBi, cable length 15.2 m, connection N (female)

Antenna - RAD-ISM-900-ANT-OMNI-0-6 - 2867160



Omnidirectional antenna, 900 MHz, gain: 2 dBi, polarization: linear, opening angle: h 360°, degree of protection: IP65, connection: MCX (male), incl. 2 m / 6.5 ft. connecting cable and mounting bracket for wall mounting

Antenna - RAD-ISM-900-ANT-OMNI-FG-6-N - 2885579

Omnidirectional antenna, 900 MHz, gain: 8 dBi, polarization: linear, opening angle: h/v 360°/15°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips



Coaxial adapter

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Accessories

Antenna splitter - RAD-ISM-900-ANT-4 - 2867050



4-way distributor for antenna signals (antenna splitter), MCX connection (female)

Coaxial cable

Antenna cable - RAD-CAB-RG58-10 - 2867364



Antenna extension cable, length: 10 ft

Antenna cable - RAD-CAB-RG58-20 - 2867212



Antenna extension cable, length: 20 ft

Antenna cable - RAD-CAB-RG213-25 - 2867597



Antenna extension cable, length: 25 ft

Antenna cable - RAD-CAB-RG213-40 - 2867377



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: solid, attenuation: 2.9 dB at 900 MHz, connection: 2 x N (male), cable length: 12 m (40 ft.)

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Accessories

Antenna cable - RAD-CAB-RG213-50 - 2867225



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: solid, attenuation: 3.5 dB at 900 MHz, connection: 2 x N (male), cable length: 15 m (50 ft.)

Antenna cable - RAD-CAB-PFP400-60 - 2867380



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: solid, attenuation: 2.5 / 4.2 / 6.3 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 18 m (60 ft.)

Antenna cable - RAD-CAB-PFP400-80 - 2867393



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: solid, attenuation: 3.3 / 5.6 / 8.4 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 24 m (80 ft.)

Antenna cable - RAD-CAB-PFP400-100 - 2867238



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: solid, attenuation: 4.1 / 6.9 / 10.4 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 30 m (100 ft.)

Antenna cable - RAD-CAB-LMR600-125 - 2885210



Antenna extension cable, length: 125 ft

Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Accessories

Antenna cable - RAD-CAB-PFP600-150 - 2885184



Antenna cable, outside diameter: 15 mm (0.6 in.), inner conductor: solid, attenuation: 3.9 / 6.8 / 10.4 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2x N (male), cable length: 45 m (150 ft.)

Antenna cable - RAD-CAB-PFP900-200 - 2885197



Antenna extension cable, length: 200 ft