

## 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

### Product Features

- 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)	708.4 g
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
Width	17.5 mm

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### Technical data

#### Dimensions

Height	99 mm
Depth	114.5 mm

#### 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	$1 \times 10^7$

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### Technical data

#### Digital output (receiver)

Service life, electrical	8 x 10 <sup>5</sup> cycles at a switching current of 0.5 A
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#### Supply (receiver)

Supply voltage	24 V DC (at U <sub>B</sub> )
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
Conformance	FCC Directive, Part 15.247
	ISC Directive RSS 210
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D

### Connection data

Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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

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### Classifications

#### eCl@ss

eCl@ss 4.0	27250312
eCl@ss 4.1	27250312
eCl@ss 5.0	27242208
eCl@ss 5.1	27242208
eCl@ss 6.0	27242208
eCl@ss 7.0	27242208
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

#### UNSPSC

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

### Accessories

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##### Adapter cable

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

Adapter cable, pigtail 120 cm MCX(m) -> N(f)



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### Accessories

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



Adapter cable, pigtail 120 cm SMA(m) -> N(m)

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



Adapter cable, 30 cm, MCX(m) to MCX (m)

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



Adapter cable, pigtail 120 cm 90° MCX(m) -> N(m)

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



Barrier for antenna installation in Ex Class I, Div. 1 and 2; 76 cm; Type RSMA (male) to MCX (male); UL listing

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### Antenna

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



Omnidirectional antenna, IP65 protection, gain 7 dBi, connection N (female)

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### Accessories

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

Omnidirectional antenna, IP65 protection, gain 5 dBi, connection N (female)



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

Panel antenna, IP65 protection, gain 5 dBi, cable length 0.6 m, connection N (female)



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

Panel antenna, IP65 protection, gain 8.5 dBi, cable length 0.6 m, connection N (female)



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)



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### Accessories

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



Omnidirectional antenna, IP65 protection, cable length 2 m, connection MCX (male)

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



Omnidirectional antenna, IP65 protection, gain 8 dBi, connection N (female)

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### Coaxial adapter

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



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

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### Coaxial cable

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



Antenna extension cable, length: 10 ft

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



Antenna extension cable, length: 20 ft

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### Accessories

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



Antenna extension cable, length: 25 ft

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



Antenna extension cable, length: 40 ft

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



Antenna extension cable, length: 50 ft

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



Antenna extension cable, length: 60 ft

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



Antenna extension cable, length: 80 ft

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### Accessories

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



Antenna extension cable, length: 100 ft

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



Antenna extension cable, length: 125 ft

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



Antenna extension cable, length: 150 ft

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



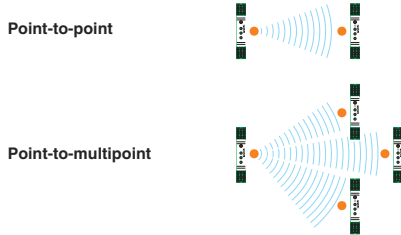
Antenna extension cable, length: 200 ft

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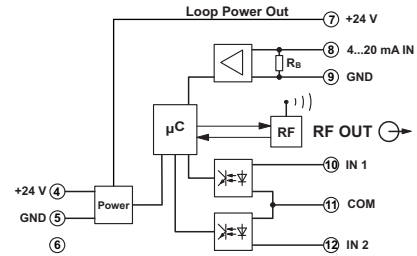
### Drawings

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

Application drawing

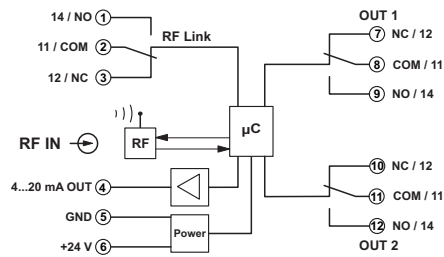


Block diagram



Transmitter module

Block diagram



Receiver module