

## 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
GTIN	 4 017918 929558
GTIN	4017918929558

### 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

#### Ambient conditions

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

#### Wireless set

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

## Technical data

### 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 $\Omega$

### 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 $\Omega$ (at $U_B = 24$ V, $R_B = [U_B - 10$ V] / 20 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	$1 \times 10^7$
Service life, electrical	$8 \times 10^5$ cycles at a switching current of 0.5 A

### Supply (receiver)

Supply voltage	24 V DC (at $U_B$ )
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

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### Technical data

#### Supply (sender)

Max. current consumption	350 mA
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#### 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 <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

#### Environmental Product Compliance

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

### Drawings

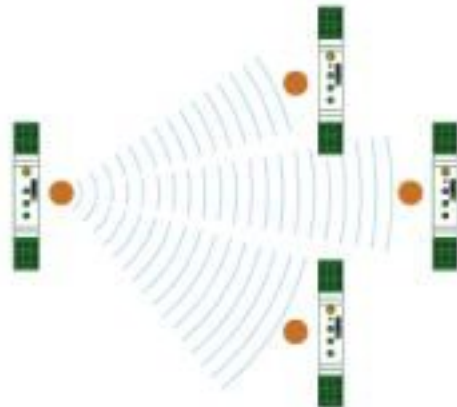
## Wireless module - RAD-ISM-900-SET-UD-ANT - 2867102

Application drawing

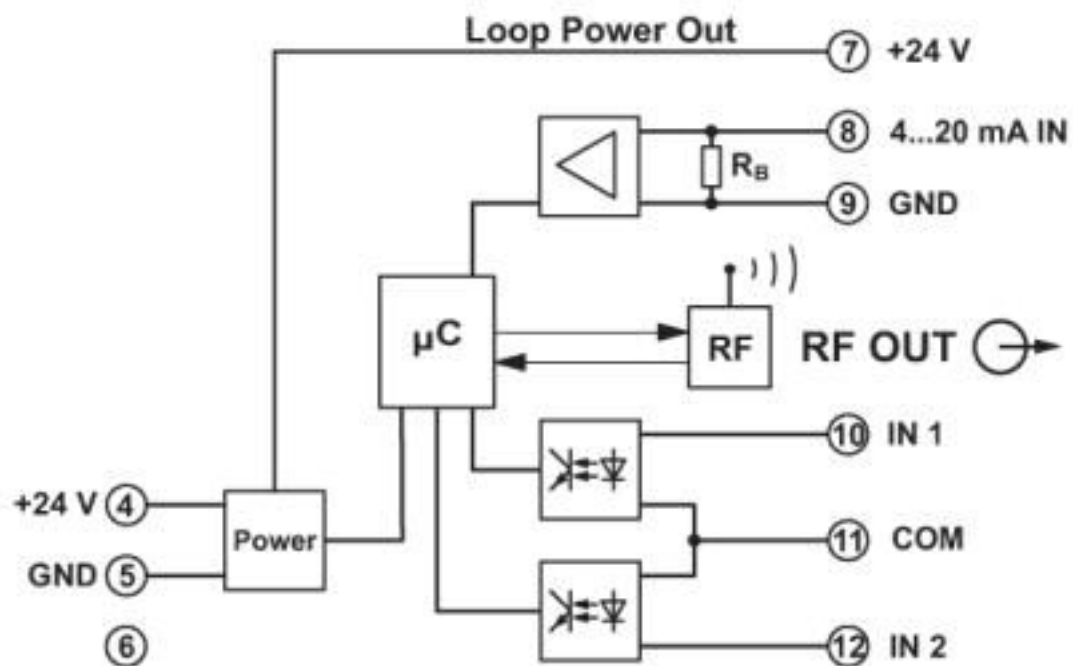
**Point-to-point**



**Point-to-multipoint**



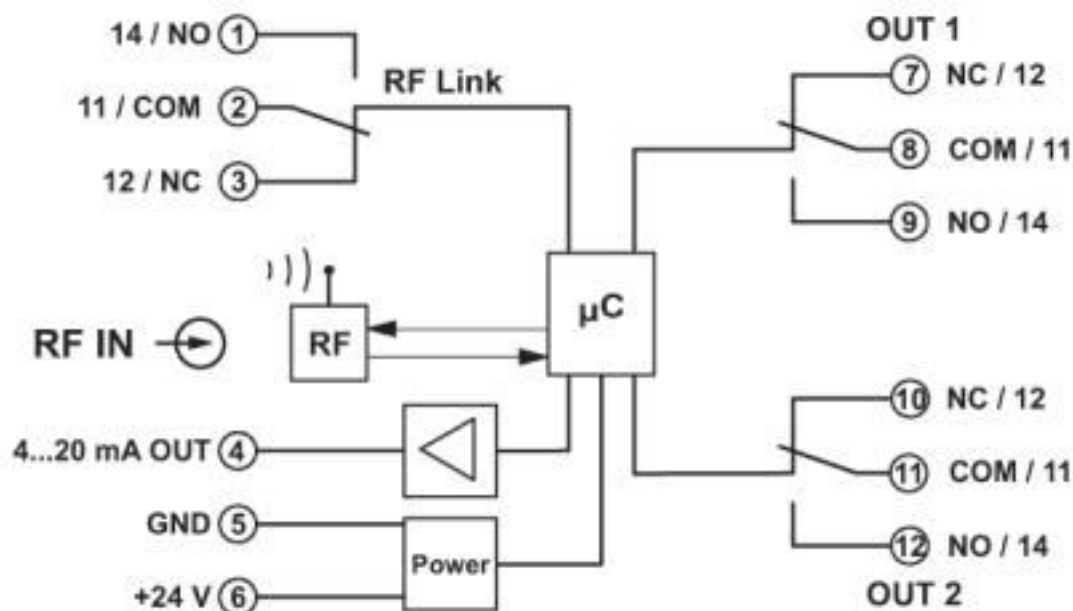
Block diagram



Transmitter module

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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

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	43223108
UNSPSC 11	39121008

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### Classifications

#### UNSPSC

UNSPSC 12.01	43223108
UNSPSC 13.2	43222604
UNSPSC 19.0	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.)

##### 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.)

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

### Accessories

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

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### 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

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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

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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

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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

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### Accessories

#### 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)

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#### 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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#### 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

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#### 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

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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



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

### Accessories

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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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 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.)

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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.)

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

### Accessories

#### 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.)

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#### 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.)

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#### 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.)

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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 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.)

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

### Accessories

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



Antenna extension cable, length: 200 ft

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