

# RAD-ISM-900-SET-UD-ANT

## Wireless I/O Interface Transmitter/ Receiver Set



### INTERFACE Data Sheet

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#### Features

- 1 watt transmit power
- Wireless conduit for one 4-20 mA and two digital signals
- Interference-free, Frequency-Hopping spread spectrum technology
- License-free 902-928 MHz Industrial, Scientific and Medical (ISM) band
- Easy to use with wire in, wire out and no setup or programming
- Range: 180-300 m (600-1000 ft.) for in-plant, no line-of-sight usage to over 32 km (20 mi.) for line-of-sight usage with raised, directional antennas
- Class I, Division 2 approved for hazardous area installation (UL and cUL listed)

#### Frequency-Hopping Spread Spectrum Technology

The Phoenix Contact RAD-ISM-900-SET-UD-ANT is an integrated radio and I/O module designed to eliminate cable and conduit for one 4-20 mA current loop and two digital signals in harsh industrial environments. This unique addition to the Phoenix Contact signal conditioning line utilizes 902-928 MHz ISM band Frequency-Hopping spread spectrum technology to guarantee a license-free, interference-free link between remote devices and the control room. Costly cable and conduit runs on new projects, or retrofitting of existing systems, are eliminated and replaced with a maintenance-free, reliable and versatile wireless solution.

#### Applications

- SCADA systems
- PLC/RTU extensions
- Pump control
- Water/wastewater
- Oil and gas
- Petroleum/chemical
- Tank level
- Mills/quarries/factories
- Sensor monitoring
- Utilities
- Irrigation systems

#### Benefits

- Reduce cost of labor and installation
- Eliminate conduit and wiring
- Reliable and dependable operation

**Ordering Data**

Description	Type	Order No.	Pcs./Pck.
<b>Radio Set</b> , 900 MHz, includes transmitter and receiver, DIN rail-mount, two 3-¼ in. antennae for RG-174 cable, transmitter accepts 12-30 V DC power	RAD-ISM-900-SET-UD-ANT	2867102	1
<b>Receiver, Replacement</b> , 900 MHz, DIN rail-mount, requires 12-30 V DC power.	RAD-ISM-900-RX	2867047	1
<b>Transmitter, Replacement</b> , 900 MHz, DIN rail-mount, requires 12-30 V DC power	RAD-ISM-900-TX	2867076	1

**General Specifications**

Description	Specification
Temperature Range	-40 to 70°C (-40 to 158°F)
Humidity	0-95% non-condensing
Dimensions (L x H x W)	102 x 114 x 17.5 mm (4.0 x 4.5 x 0.7 in.)
Mounting	DIN rail
Environmental	NEMA 1
Approvals	UL and cUL listed (Class I, Div. 2, Groups A, B, C, D)

**Technical Specifications**

RAD-ISM-900-TX	
Transmit Power	1 W
Range: In-plant, no line of sight line of sight, flat terrain, raised antenna line of sight, flat terrain, directional antenna*	180-300 m (600-1000 ft.) 6.5-8.0 km (4-5 mi.) 32+ km (20+ mi.)
Frequency	902-928 MHz
Power Source	12-30 V DC regulated
Power Consumption	8.4 W peak (350 mA@24 V DC) 1.8 W average (75 mA @24 V DC)
Inputs	1 - 4-20 mA (250 Ω impedance) 2 - 5-30 V DC/AC†
RAD-ISM-900-RX	
Frequency	902-928 MHz
Power Source	12-30 V DC regulated
Power Consumption	3 W (125 mA@24 V DC)
Outputs	1 - 4-20 mA (12-bit resolution) 3 - 120 V AC, 0.5 A dry-contact
Loop Impedance, max.	450-1350 Ω for power supply voltages of 12-30 V DC
Repeatability	0.02%
Accuracy	0.2% full scale

\* Requires professional propagation study and installation.

† For 120 V AC discrete inputs, use relays to convert to specified voltage (consult factory for relay options).

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