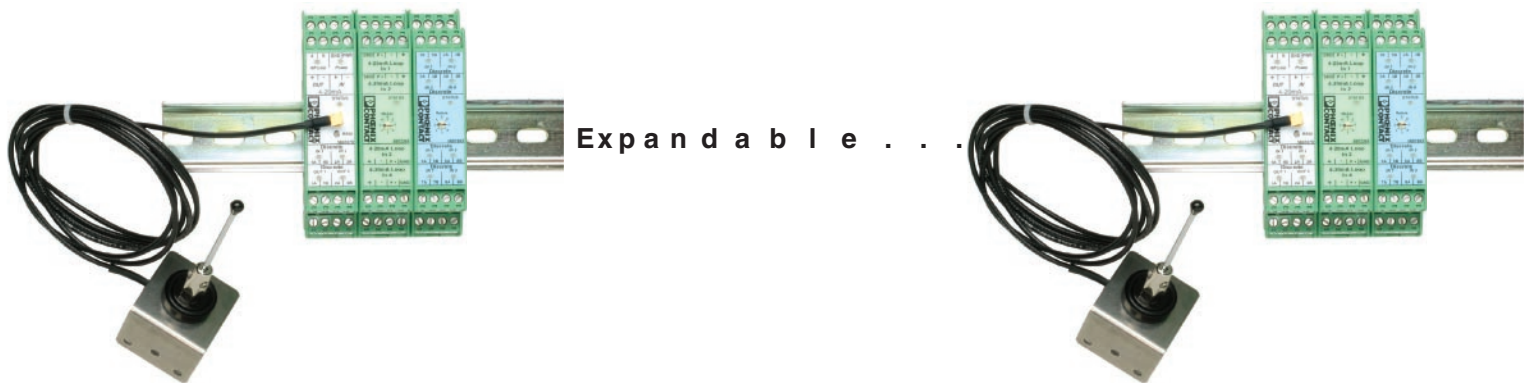


# Wireless Interface RAD-ISM-900-SET-BD...

Two-way (Point-to-Point) Monitoring  
and Control with Expandable I/O Options

Data Sheet 1655B

February 2003



## Features

- Modular DIN-rail mount transceiver and I/O
- No programming required
- Class I, Div. 2 approved
- Up to eight (8) expandable I/O modules per transceiver on common power and communications bus with multiple combinations
- Maximum thirty-three (33) analog or sixty-six (66) discrete signals in one direction
- Dry contact LINK diagnostic output

## Typical Applications

- SCADA systems
- PLC/RTU extensions
- Pump controls
- Tank level/pressure/temperature monitoring
- Water/wastewater
- Petro-chem

## Description

The Phoenix Contact RAD-ISM-900-BD is an integrated radio & I/O module designed for bi-directional interfacing of a 4-20mA current loop and two digital signals in harsh industrial environments. This unique design also allows the user the flexibility to add on multiple channels of I/O to the paired transceivers in combinations. The Frequency Hopping Spread Spectrum (FHSS) utilizes 902-928MHz ISM band to guarantee a license free, interference free link between remote devices and the control room. The design is ideal for moving numerous signals within high interference environments without costly cable and conduit runs.

# Wireless Interface RAD-ISM-900-BD...

## Two-way (Point-to-Point) Monitoring and Control with Expandable I/O Options

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### Engineering Specifications

<b>Range</b> .....	600 to 1000 feet (180 to 305 m) in-plant [obstructed]; 4 to 5 miles ( 6 to 8 km) line-of-sight with Omni antenna; 20+ miles (32+ km) line-of-sight with Yagi antenna
<b>Inputs</b> .....	One (1) 4-20 mA analog (16-bit resolution; 125 ohms impedance) Two (2) discrete (5 to 36 V dc)
<b>Outputs</b> .....	One (1) 4-20 mA analog (16-bit resolution; short-circuit protected) Two (2) discrete (dry contact, Normally Open (NO), contact rating: 250 V ac/5 A)
<b>I/O Expansion</b> .....	Eight (8) analog and/or discrete I/O modules per transceiver station
<b>Accuracy</b> .....	Current loop: 0.2% of full-scale @ 77°F (25°C)
<b>Repeatability</b> .....	Current loop: 0.02%
<b>Wiring Connections</b> .....	12-24 AWG screw-type terminals; removable terminal blocks
<b>Mounting</b> .....	DIN-rail mount
<b>Power (Input voltage)</b> .....	9 to 30 V dc
<b>Power Consumption</b> .....	75 mA at 24 V (average) 200 mA at 24 V (peak)
<b>Reverse Polarity Protection</b> .....	Yes
<b>Surge Protection</b> .....	Yes
<b>Temperature Rating</b> .....	-40°F to 158°F (-40°C to 70°C)
<b>Humidity</b> .....	20% to 90% (non-condensing)
<b>Dimensions</b> .....	4.5" x 3.9" x 0.9" (114 mm x 99 mm x 22.5 mm)
<b>LED Indicators</b> .....	External (Power, RF Link, I/O Status)
<b>Unit ID</b> .....	Factory configured (unique); 16-bit coding of each transceiver pair allows multiple units to be used in the same area (easy configuration of spares with HopKey)
<b>Frequency</b> .....	902 to 928 MHz - license-free ISM band
<b>Transmit Power</b> .....	1 Watt (30dBm)
<b>Antenna Connector</b> .....	MCX (female)
<b>Environmental Rating</b> .....	NEMA 1 (equivalent to IP30)
<b>Approvals</b> .....	USA - FCC Part 15.247 Canada - ISC RSS 210
<b>Certifications</b> .....	CSA/C & US UL - Class I, Div. 2 (Groups A, B, C ,D - pending)

*Specifications subject to change without notice*

### RAD-ISM-900-SET-BD Components

The RAD-ISM-900-SET-BD base system includes the following items:

- Two RAD-ISM-900-BD transceiver modules
- Two 3" ¼ wave whip antennas, each with 6' of RG174 cable. The antennas can be mounted on an "L" bracket (also supplied) inside or outside a cabinet.

### Ordering Information

<u>Part Description</u>	<u>Part Number</u>
RAD-ISM-900-SET-BD-ANT Transceiver set	2867270
RAD-ISM-900-BD	2867092
spare transceiver (can be used as repeater or in simplex mode for expansion)	

### Expandable I/O options

<u>Part Description</u>	<u>Part Number</u>
RAD-IN-4A-I	2867115
RAD-OUT-4A-I	2867128
RAD-IN-8D	2867144
RAD-OUT-8D-REL	2867157