



DR9021

WIRELESS POINT-TO-POINT RECEIVER

FEATURES

- Dual 4/20 mADC Outputs
- Four Digital Open Collector NPN Transistor Outputs
- Reverse Polarity Screw-On SMA Antenna Connector
- 915MHz ISM* Band - 2 Versions, 14 Hop Sequences
- 2.4GHz Unlicensed Band - 1 Version, 7 Hop Sequences
- Spread Spectrum, Frequency Hopping Technology*
- Ranges to 20 Miles With 915MHz Band Radio
- Ranges to 10 Miles With 2.4GHz Band Radio
- DIN Rail Mount - Steel Clip
- 5 Year Warranty (1 Year on Radio Module)
- UL/cUL Recognized

DESCRIPTION

The DR9021 RF Receiver receives RF signals from the DR9011 Transmitter and reconstructs the analog signals as 4/20 mA outputs.

When the transmitter has a dual channel input, the DR9021 has a 4/20 mA output for each channel. If the transmitter has a single channel analog input, the DR9021 provides two 4/20 mA outputs proportional to the single input.

Switch outputs are provided as discrete Open Collector NPN transistors. A DIP Switch on the PC board allows selection of

Normal Acting or Reverse Acting (Failsafe) outputs.

Three radio modules are available for the DR9021, two 915MHz band versions with 7 Hop sequences each and a 2.4GHz band version with 7 Hop sequences. They use spread spectrum, frequency hopping* technology. These choices provide 21 different Hop sequences that allow 21 systems to work in the same locale without interfering with each other.

A DIP Switch on the PC board is used to set the hopping sequence.

With proper antenna and cable selection and a 915MHz band version radio, the DR9021 can receive from a DR9011 up to 20 miles away.

The DR9021 provides isolation between the output and the power source.

Screw terminal blocks that plug into the case allow easy wiring and removal of products.

All of the DR Series of products provide transient protection to help eliminate damage from lightning and from other transients created on the power and signal leads.

SPECIFICATIONS

RADIO

Frequency
 915 MHz Band
 908 or 922 MHz
 2.4 GHz Band
 2.4000 - 2.4835 GHz

Spread Spectrum Type
 Frequency Hopping, Direct FM

I/O Data Rate Tx to Rx:
 9600 bps

Update Rate
 10/S

Range / Line of Sight
 915 MHz Band - Up to 20 Mi.
 2.4 GHz Band - Up to 10 Mi.

Receiver Sensitivity:
 915 MHz Band
 -110 dBm @ 9600 baud
 2.4 GHz Band
 -105 dBm @ 9600 baud

Transmitter Power:
 915 MHz Band
 100 mW (20 dBm)
 2.4GHz Band
 50 mW (17dBm)

Connector:
 Reverse Polarity SMA Female

OUTPUT

Analog
 Dual 4/20 mADC
 12 VDC Compliance

Digital
 Four Optically Isolated
 Open Collector NPN Transistors
 30 VDC Max Voltage,
 30 mA Max Current
 Operates in Saturated Mode

CERTIFICATIONS

RF Module
 FCC Part 15.247
 DR9021
 UL/cUL Recognized

OPERATING TEMPERATURE

-13°F to 167°F
 -25°C to 75°C

POWER

85/230 VAC
 2.0 VA Max
 12 or 24 VDC
 1.5 Watt Max

* See page 56 for a comprehensive definition.

ORDERING INFORMATION

RADIO

- 908 MHz - Standard
- 922 MHz - Optional
- 2.4 GHz

NOTE: Radio used must match DR9011

POWER

- 85/230 VAC
- 24 VDC
- 12 VDC

*** NOTE: This unit must be used with a DR9011 wireless transmitter.**

ACCESSORIES

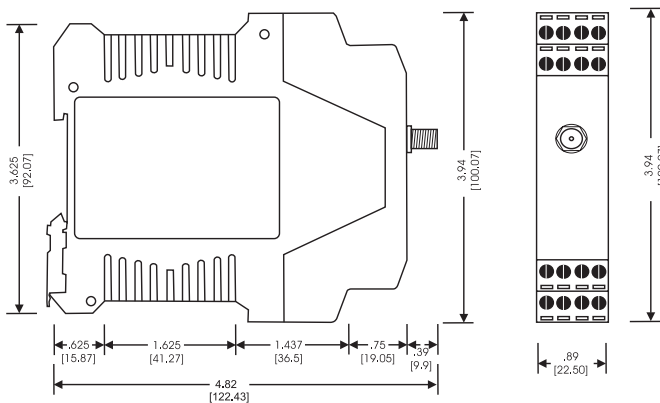
RP = Reverse Polarity

4073	Two Antenna Coupler, Transmit and Receive, 2-Port 900 MHz	QTY _____
4051	Receive Only, 2 to 4 Antenna Coupler 4-Port 900 MHz	QTY _____
4061	Receive Only, 2 to 4 Antenna Coupler 4-Port 2.4 GHz	QTY _____
4062	50 Ohm Termination, For Unused Ports On P/N 4051,4061	QTY _____
4022	PSP24-024S, 24 VDC 1 Amp Power Supply	QTY _____
4026	Bulkhead Connector Type N Female to Type N Female	QTY _____
4011	Bulkhead Surge Protector Type N Male to Type N Female	QTY _____
4035	Bulkhead Surge Protector Type N Female to Type N Female	QTY _____
CBH2	2 Ft WBC195 Cable w/ RP-SMA Male & RP-SMA Female Bulkhead Connector	QTY _____
CBH6	6 Ft WBC195 Cable w/ RP-SMA Male & RP-SMA Female Bulkhead Connector	QTY _____
CBH10	10 Ft WBC195 Cable w/ RP-SMA Male & RP-SMA Female Bulkhead Connector	QTY _____
CBH-X	Custom Length WBC195 Cable w/ RP-SMA Male & RP-SMA Female Bulkhead Connector	QTY _____
CPT2	2 Ft WBC195 Cable w/ RP-SMA Male & Type N Male Connector	QTY _____
CPT6	6 Ft WBC195 Cable w/ RP-SMA Male & Type N Male Connector	QTY _____
CPT10	10 Ft WBC195 Cable w/ RP-SMA Male & Type N Male Connector	QTY _____
CPT-X	Custom Length WBC195 Cable w/ RP-SMA Male & Type N Male Connector	QTY _____

For more accessories and cables, see the ACCESSORIES section of this catalog (Page 51).

DIMENSIONS

Inches [mm]



CONNECTIONS

TERMINAL	CONNECTION
1	4/20 mADC Output 1 +
2	4/20 mADC Output 1 -
3	4/20 mADC Output 2 +
4	4/20 mADC Output 2 -
5	Switch 1 +
6	Switch 1 -
7	Switch 2 +
8	Switch 2 -
9	Switch 3 +
10	Switch 3 -
11	Switch 4 +
12	Switch 4 -
13	No Connection
14	No Connection
15	Power +
16	Power -