

Digital
Radios for
Automated
Monitor &
Control of
Equipment
and
Processes



Superior
Range

Superior
Reliability



Plug & Play
Simplicity



RADIO

- 900 MHz, Frequency-Hopping, Spread-Spectrum, Digital Radio...
- Redundant Transmission and Diversity Reception...
- Unique Transmitter I.D. Codes in a...
- Proprietary Communications Protocol...

...All Combine to Create a Robust, Reliable, Virtually Interference-Immune Wireless Control System

- with No FCC License Required

OPERATIONAL

- Superior Range: 2+ miles (Standard System), 5+ miles (Enhanced System)
- Fully Supervised Operation Including Dedicated Fault Alarm Relay Output
- Long-Life, Lithium Battery-Powered Transmitters Ideal for Off-Grid Applications
- AC and DC Line-Powered Transmitter Options Available
- Low Power Consumption Ideal for Solar Power

PHYSICAL

- Lightweight, Conduit-Ready, Weatherproof Enclosure
- Integrated, Internal Antennas – No Separate Installation Required
- Quick, Easy Installation

OPTIONS

- SmartRepeater™ Available for Sites with Major Obstacles or Extreme Range
- Compact, Handheld Transmitters Create Push-Button Remote Control for Any Equipment or Process

800 SERIES SPECIFICATIONS

Radio: 902 - 928 MHz; frequency-hopping, spread-spectrum.

Power Requirements: Transmitter, line-powered: 11 - 14 VDC; 40 mA (Standard) or 110 mA (Enhanced). Transmitter, battery-powered: 3 V, 2/3A lithium battery (Panasonic CR123A, Duracell 123A, or equivalent); 3 - 5 yr typical battery life (Standard) or 1 - 2 yr typical battery life (Enhanced).

Transmitter, handheld: 3 V lithium battery (Panasonic CR2 or equivalent); 3 - 5 yr typical battery life.

Receiver: 11 - 14 VDC; 180 mA typical, 400 mA maximum. Repeater: 12 - 16.5 VDC or VAC; 100 mA.

Transmitter Input: 1 set of NO or NC dry contacts (Single), 2 sets of NO/NC dry contacts (Standard Dual), or 2 sets of NC or 1 set ea NO/NC dry contacts (Enhanced Dual). Handheld: push-button contacts (NO).

Typical Range (line of sight): 2+ mi (3+ km) (Standard), 5+ mi (8+ km) (Enhanced), or 2,000+ ft (600+ m) (Handheld).

Site environmental conditions unique to each installation including temperature, mounting height, obstructing terrain, foliage, or structures, and local 900 MHz noise may affect achievable range.

Receiver Outputs: SPDT (Form C) relays (0.5 A @ 12 VDC). Actuation: 1 ea (RD810), 4 ea (RD811), or 5 ea (RD812). Fault: 1 ea.

Maximum Transmitters per Receiver: 1 ea (RD810), 4 ea (RD811), or 16 ea (RD812).

Enclosure: Weatherproof, PPG Delfleet® Evolution-coated PVC with integrated 1 in FNPT fitting.

Handheld Transmitter: NEMA 1 molded plastic. Repeater: Weatherproof molded plastic.

Operating Environment: 90 % relative humidity, non-condensing. Transmitter and Repeater: -4 °F to 140 °F (-20 °C to 60 °C). Handheld Transmitter and Receiver: 32 °F to 140 °F (0 °C to 60 °C).

Weight: Transmitter: 2.2 lb (1.0 kg). Receiver: 2.9 lb (1.4 kg). Handheld Transmitter: 2 oz (57 g). Repeater: 1.7 lb (770 g).

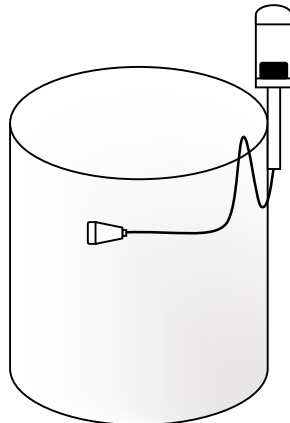
Dimensions: Transmitter and Receiver: 4.8 in diam x 10.6 in (122 mm x 270 mm). Handheld Transmitter: 3.0 in x 1.6 in x 1.0 in (77 mm x 41 mm x 26 mm). Repeater: 7.0 in x 7.0 in x 3.0 in (178 mm x 178 mm x 77 mm).

Smart Wireless SOLUTIONS

This guide highlights how Isaacs SmartSwitch™ systems integrate various applications. Isaacs SmartSwitch™ systems send and receive radio signals in order to control systems over long distances. These systems are used in a wide variety of applications including industrial, agricultural, and municipal. Each system involves at least one transmitter to monitor and one receiver to control.

Let's take a look at a typical **SmartSwitch™ Transmitter**

Transmitters can connect to:
Float Switch
Pivot Safety Circuit
Irrigation controller
Pressure switch
Interface relay
Any dry-contact circuit

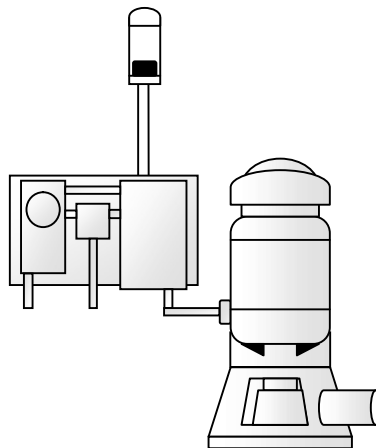


One Input Transmitter Key Specs	
Range	TD810: Up to 2 miles TD811: Up to 5 miles
Radio Freq.	900 MHz Frequency Hopping, Spread Spectrum
Dimensions	4.8" diameter, 10.6" Height, 2.2 lbs
Mount	1" FNPT
Cable	2-cond. 22 AWG (up to 75')
Battery	CR123A <i>line-powered options available</i>

When the transmitter senses a change in its dry-contact circuit, it sends a signal to the receiver. When the receiver gets this signal, it changes the state of the control relay.

Let's take a look at our most basic **SmartSwitch™ RD810 Receiver**

Receivers can connect to:
Pump Controls
Lights
Motors
Solenoids
PLC
Interface relay
Any power switch circuit



RD810 Receiver Key Specs	
Outputs	1 control relay 1 fault relay
Onboard Relays	Form C relay .5A @ 12VDC
Dimensions	4.8" diameter, 10.6" Height, 2.9 lbs
Mount	1" FNPT
Cable	8 Leads of 18 AWG
Input power	12VDC
Indicators	LED

To order this system, pick a transmitter and a receiver/kit

Part Number	Description	Selection
Transmitters		
TD810	Transmitter, Standard Power, 1 Input, Battery	
TD811	Transmitter, Enhanced Power, 1 input, Battery	
Receiver/kits		
RD810	Receiver, 1 Control Output	
KR800	Receiver Kit, 1 Control Output Includes 120V Power Supply, Surge Suppressor, 1 SPDT Interface Relay	

For pricing or more product information, contact your Isaacs SmartSwitch™ dealer