



Patent pending.

ELECTRICIANS WIRELESS

AUTOMATION GROUP

EASIEST WAY FROM POINT A TO B, AND BACK



PRODUCT HIGHLIGHTS -

- Standalone Wireless I/O Mirroring System eliminates trenching and running conduit.
- Bi-directional, point-to-point communication: can place inputs and outputs on both sides.
- Easy to use: no programming or software needed.
- System attaches onto 35mm DIN rail with easy, clip-on mounting system.
- Rapid, reliable wireless connectivity.
- 1 second response time or faster - see specs.
- Factory paired, secure Radio System keeps network protected from intrusions.
- Digital, 4-20 mA, and 0-10 V I/O available (isolated).
- Expandable: add up to 16 I/O Modules per Radio Station in any combination.
- Reduced wire clutter: single power termination.
- Wiring label provided on each Module for quick reference.
- FailSafe Alarm Outputs at both Radio Stations.
- Digital Module provides various FailSafe output modes: on, off, last known value.
- Save money and time on installation and maintenance.

- RAPID WIRELESS
- BI-DIRECTIONAL
- ENCRYPTED
- AUTO CONFIG
- EXPANDABLE
- EZ INSTALL
- NO TRENCHING CONDUIT
- NO SOFTWARE
- DIGITAL 4-20 mA 0-10 V

TECHNICAL SPECIFICATIONS

HARDWARE & SYSTEM

Unique System Features	True Bi-Directional I/O Reflection System Direct Wire Replacement Solution No Software Required DataRail™ Technology Transfers Data and Distributes Power Between Modules
Maximum Network Capacity	Up to 16 I/O Modules Per Radio in Any Combination
DIN Rail Mounting Compatibility	35 mm x 7.5 mm DIN Rail
DataRail™ (Included with Radio Kit)	156 mm - Supports Up to Radio + 5 I/O Modules, Other Lengths Also Available
Daisy-Chainable	Yes, via DataRail Daisy-Chain Cable (TBD)
Module Slave ID Selection	16-Position Rotary Switch
Auto-Detection of Modules	Yes, via DataRail at Power-Up
DataRail Mounting Hardware	4-Claw Attachment to 35 mm DIN Rail with End Terminal Locking Clips
Built-In Mounting Hardware (Modules)	Spring-Loaded Clip-On System
Wire Gauge	Solid/Stranded (AWG) 28-12 Gauge
Module Dimensions - All Types (WxHxD)	17.5 x 99 x 114 (mm)
Temperature	CSA: -40 °C to 85 °C ATEX/IECEX: -20 °C to 85 °C
Humidity	0 to 99%, Non-condensing
Degree of Protection	IP20
Safety	Class I; Division 2 (Zone 2) Hazardous Locations
Certifications	FCC Part 15, TBD
Warranty	2-Year Limited

RADIO MODULE - 900 MHz (2.4 GHz and 868 MHz Also Available)

Frequency	902 to 928 MHz License-Free ISM Band
Antenna Connector Type	SMA (Female Connector)
Default Transmit Speed/Update	1 Second
Turbo Tx Speed Based on # of I/O Modules	1=100 ms, 2-3=200 ms, 4= 250 ms, 5-6=333 ms, 7-11=500 ms, 12-16=1 second
Indoor/Urban Range	Up to 1305 m
Outdoor / Line of Sight Range	Up to 6.4 Km w/ Dipole Antenna Up to 19.2 Km w/ High-Gain Dir. Antenna
Transmit Power	Up to 24 dBm (250 mW) Default, Software Selectable (5 to 250 mW)
Receiver Sensitivity	-101 dBm
Spread Spectrum	FHSS (Software Selectable Channels)
# of Channel (Hopping)	7
RF Security	128-bit AES, Cyber Attack Detection (NPN and PNP, Pulsed Digital Output)
FailSafe Alarm Output Types	10-Second RF Timeout Trigger (NPN and PNP, Solid Digital Output)
Green LED	RF Diagnostics
Red LED	I/O Diagnostics
Supply Voltage Range	9 - 30 VDC
Maximum Current	200 mA @ 12V

ORDERING INFORMATION

Radio Kit	2 x radio modules 2x DataRails™, 4x End Terminal Brackets, 2x DataRail Covers, USB to Mini USB Cable, Quick Start Guide
Modules	Sold Separately in Singles or Pairs



DIGITAL MODULE

Model	BM-D100-144
# of Inputs	4
# of Outputs	4
Isolation Voltage	2500 V r.m.s.
Input Voltage Range	3-30 VDC
Output Rating	1 A Sink Current for Open-Drain Outputs / NPN
FailSafe Modes	On, Off, or Last Known Value
Green LEDs	Input Indicators
Red LEDs	Output Indicators
Maximum Current	40 mA @ 12 VDC

ANALOG 4-20 mA MODULE

Model	BM-A420-122
# of Inputs	2
# of Outputs	2
Isolation Voltage	2500 V r.m.s.
Accuracy	< 0.28 % of Full Scale
Internal Loop Power	+13.5 VDC
Maximum Current	84 mA @ 12 VDC

ANALOG 0-10 V MODULE

Model	BM-A010-122
# of Inputs	2
# of Outputs	2
Isolation Voltage	2500 V r.m.s.
Accuracy	< 0.1 % of Full Scale
Maximum Current	50 mA @ 12VDC

1. Attach a DetailRail™ and End Terminal Bracket...



2. Attach a Radio Module and Connect Antenna...



3. Attach a I/O Module(s) and Dial-in IDs...



4. Cover Unused Data Rail Slots
5. Terminate I/O and Supply Power as Required...
6. Repeat Steps 1-5 to Setup Other Radio Station.

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