



Wireless I/O Made Simple™

Simple, One-way Communications That Provides Powerful, Encrypted Performance

- Intelligent wireless protocol, peer-to-peer communications and immediate exception reporting.
- Secure data encryption and high scan updates.
- Approved for Class I, Div 2 hazardous area .
- Cost effective cable/conduit replacement for (1) 4-20mA channel and/or (2) Discrete Signals.



Specifications

Transmitter/Receiver Models

BU-905L-T Input Transmitter unit

- Powerful 900MHz frequency-hopping 1W transmitter.
- External inputs – two digital/pulse inputs, one analog input (0-20mA, 4-20mA), and one thermocouple mV input.
- Internally calculated values – analog and thermocouple setpoint status, pulse count, power supply voltage.
- Local output for setpoint status: generated by comparing analog input to high and low setpoints.
- RS232 Configuration and diagnostics port.

BU-905L-R Output Receiver unit

- Three digital contact outputs and one analog output (0-20mA, 4-20mA).
- Communications failure indication and configurable output.
- Outputs can be configured as retained or reset (fail-safe) on communications failure.
- LED indication of radio signal strength

Standards Compliance

- Radio: EN 300 220, Part 15.247, RSS-210, AS4295, AS4768.1
- EMC compliant 89/336 EEC, AS3548, FCC Part 15, EN301489
- Hazardous rating: Class I Div 2 (USA/Canada)
- Electrical: EN60950
- UL Listed Pending

General Specifications

Environmental

-40 to 60°C / -40 to 140°F, 0–99% RH (non-condensing)

Housing

- DIN-rail thermo-plastic enclosure
- 100 x 22 x 120 mm / 3.9 x 0.9 x 4.7"

SMA

connector for antenna or coaxial cable connection

Power Supply

9 – 30 VDC

Power consumption

@12VDC – Receiver 100mA

Transmitter

- 40mA quiescent, during radio transmission (30 msec) 300mA
- Periodically scans AI to save power
- Analog loop supply internally generated, 24VDC 30mA
- Internal monitoring of supply voltage – may be transmitted as an “input” (Transmitter unit only)

Hazardous rating

Class I Div 2 (USA/Canada) pending

Transmitter Inputs

Digital/Pulse Input,

- Two inputs, suitable for voltage free contacts / NPN, or voltage input 0-1 VDC on / >3 VDC off.
- Pulse input max rate 10 Hz, 50 msec on time, pulse input counted as 2 x 16 bit register

Analog input,

0-20 mA, 4-20mA, span and zero configurable (default 4-20mA), “floating” differential input, resolution 16 bit, accuracy < 0.1 %

Thermocouple input,

-20mV to +100mV, J, K or T type linearization with on-board cold-junction compensation, accuracy better than 1°C

Analog & thermocouple setpoint status,

setpoint status sets (on) when input value < low setpoint and resets (off) when input value > high setpoint, status transmitted as per digital input, setpoint values are settable via front-panel rotary switch or configuration software

Receiver Outputs

Digital Output,

three relay contact outputs, 260VAC, 1A rating

Analog Output,

0-20mA, 4-20mA, configurable span and zero (default 4-20mA), source output, 12-bit resolution, 0.1% accuracy

Comms-Fail,

internal status based on configurable time-out value. Comms-fail output. ok output, FET, 30VDC, 500mA

Fail-safe,

on “comms-fail”, outputs user-configurable as retained (last correct value) or reset (fail-safe).

Wireless

- Frequency hopping spread spectrum 902-928MHz, sub-bands available, 1W Approved to FCC Part 15.247, RSS210
- Line of sight range 20 miles (4W ERP), 15km (1W ERP); 3000 ft / 1000 m in obstructed industrial environments
- Each transmission may be configured to be sent one to five times

Communications

- Wireless protocol, enabling peer-to-peer communications. Input values are transmitted on immediate change plus timed updates (maximum rate five times per second)
- Wireless messages are data encrypted for security protection

Serial Port

- RS232 RJ45 female DCE, used for configuration and diagnostics.

LED Indication

Transmitter unit

- Power/OK, Radio TX, DIN1, DIN2, analog setpoint status

Receiver unit

- Power/OK, Radio RX, DO1, DO2, DO3, communications fail
- LEDs also used to provide radio signal strength indication

Configuration and Diagnostics

- Factory configuration transmitter/receiver matched pair
- User configuration via serial port

Diagnostics features

- read input values
- write output values
- radio signal strength
- monitor communication messages

Specifications subject to change without notice