

# PlantLinc™ 5000

## INDUSTRIAL WIRELESS SERIAL MODEM FOR 900 MHz BAND

INDUSTRIAL WIRELESS SERIAL MODEM



*PlantLinc™ 5000 Industrial Wireless Serial Modem (model PLR5000) is an industrial serial RS232 radio modem designed for cost-effective, short-range PLC communications up to 4 miles. It operates in the license free 902-928 MHz band and uses frequency hopping transmission techniques for excellent reliability in noisy plant environments. It is a cost effective alternative to cable installation, trenching and leasing expensive phone lines to remote locations.*

*PlantLinc 5000 may be used for in-plant applications including PLC networking, data collection, mobile systems (cranes, conveyor systems, warehouse automation) and outdoor SCADA communications for remote pump stations and sub-stations. It supports all common serial protocols including DF1, Modbus ASCII, Modbus RTU, DNP 3.0 and Optimux with data rates up to 38.4 Kbps.*

*PlantLinc 5000 is field configurable and supports a number of operating modes including Master, Remote, Store-and-Forward Repeater and Remote/Repeater mode for added flexibility. It can accommodate most plant wireless projects using easy to install omni directional antennas or yagi antennas when a stronger signal is required.*

*PlantLinc 5000 is housed in a small, rugged, DIN rail mountable metal enclosure. It is rated for operation at -20 to +75°C (-4 to +167°F).*

### PLR5000 FEATURES

- Cost effective alternative to cable installation and leased phone line
- Operates in the license-free 902 – 928 MHz band
- Rated range of 4 miles (6.5 km) with unobstructed line-of-sight
- Built-in Repeater mode for working around obstructions
- Excellent noise immunity using frequency hopping technology
- Supports data rates up to 38.4 Kbps
- Small, rugged DIN rail mountable metal enclosure
- Supports point-to-point and point-to-multipoint architectures

### APPLICATIONS

- Communications to PLCs on moving platforms
- In-plant SCADA network communications
- Remote pump station and sub-station communications
- Maintenance of remote PLCs
- Factory floor data collection

## PLR5000 SPECIFICATIONS

### Operating Frequency

**License-free, 902-928 MHz**

### Transmitter

**Range.** 4 miles (6.4 km), line-of-sight distance using omni directional antennas

**Output Power.** 200mW maximum (+23 dBm)

**Modulation.** Spread Spectrum, GFSK

**Spreading Code.** Frequency Hopping

**Hop Patterns.** 15 (user selectable)

**Occupied Bandwidth.** 230 KHz

### Receiver

**Sensitivity.** -106 dBm @  $10^{-6}$  raw BER

**Selectivity.** 20 dB @ fc +-115 KHz; 60 dB

**System Gain.** 129 dB

### RF Data Transmission

**Error Detection.** 32 Bit CRC

**Data Encryption.** Substitution Dynamic Key

**RF Data Rate.** 38.4 Kbps

### Interface

**RS232.** Asynchronous, 10 or 11 bit words

**Data Throughput** (uncompressed)

1200 Baud - 38.4 Kbaud

**Connector.** RS232, DB9 female

### Antenna

Standard thread SMA female

Supplied bench test antenna

Optional external omni directional or yagi antennas

### Power

**Supply Voltage.** 10.5 - 18.0 VDC; 12 VDC wall mounted transformer. Optional 24 VDC

**Transmit Current.** Peak transmit current of 550 mA @ 12 VDC

**Receive Current.** 200 mA @ 12 VDC

### Operating Modes

Point-to-point, Point-to-Multipoint, Store-and-Forward Repeater, Repeater/Remote

### Diagnostics

**Serial Data Port.** Stored signal strength, noise and disconnect information

### Operating Environment

**Temperature.** -4° to 167°F (-20° to 75°C)

**Humidity.** 0 to 95% non-condensing humidity

### Enclosure

**Standard.** NEMA 1; 18-gauge steel with mounting flanges; optional NEMA 4 available

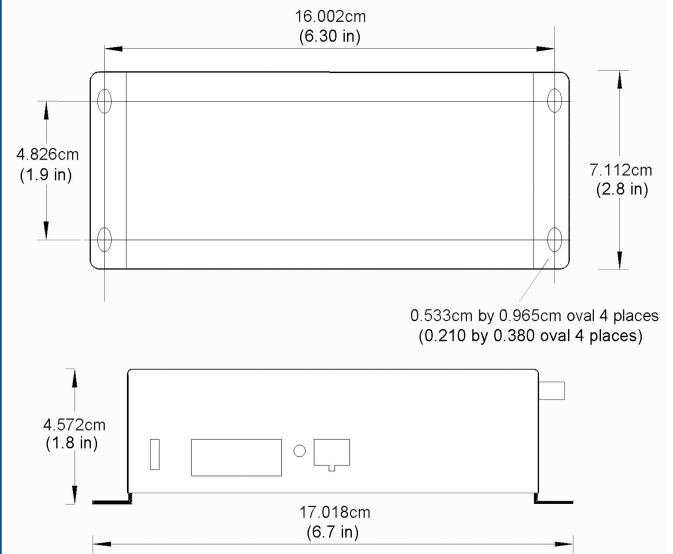
**Optional.** DIN rail clip

**Weight.** 1.25 lbs (.57 kg)

Specifications subject to change without notice.

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## PLR5000 DIMENSIONS



## ABOUT DATA-LINC GROUP

Since 1988, Data-Linc Group has provided reliable communication solutions for industrial automation systems. Data-Linc Group, an alliance partner with most major PLC manufacturers including Rockwell Automation, Siemens, Schneider Electric, GE Fanuc, and Omron, as well as others, provides expert technical support and communications consultation. Data-Linc's industry proven RF technology has been successfully implemented in all major industries including automotive plants, consumer goods manufacturing/packaging, steel mills, mines, oil/gas refineries, paper mills, utilities and transportation systems. Its products are available worldwide. Data-Linc recently expanded its market with a line of wireless modems for the European Union.

## ALLIANCE PARTNERS



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