



# **Industrial Data Communication Applications Interfacing with Schneider Electric Equipment**



## **Industrial Data Communication Applications Interfacing with GE Fanuc Equipment**

- Modicon Modconnect Partner
- Supports Modicon, Square D and Telemecanique
- Seamless interface with Schneider Automation PLCs, including Modicon Quantum, Micro, Compact and Rack Mount 984, and other X84 processors; NW-BM85 Bridge MAX (multiplexers) Systems, Square D SY/MAX, SY/LINK and Remote I/O applications for SY/NET
- Stand-alone and chassis mount modems available—including license-free, wireless spread spectrum frequency hopping modems
- Factory preconfigured for easy installation
- Reliable, worry-free data communication—even in harsh environments

### **Introduction**

Data-Linc Group designs and manufactures industrial data communication devices. Data-Linc Group is dedicated to providing the broadest line of superior quality, high performance modems, data communications peripherals and systems for any industrial application—including harsh environments that require extended operating temperatures.

### **Industries**

Data-Linc Group products have been successful in providing continuous data communication in water/wastewater, utility/power, oil/petrochemical, mining/quarrying, transportation, stone/aggregate, cement/concrete, pulp/paper, food, material handling and bio-pharmaceutical industries and other markets.

### **Application Engineering**

Data-Linc Group provides unsurpassed application engineering and customer service. Data-Linc Group application engineers provide comprehensive requirements analysis to recommend the best data communication solution possible. Because of this in-depth analysis, Data-Linc Group can custom preconfigure each modem and cable to ensure fast and convenient installation.

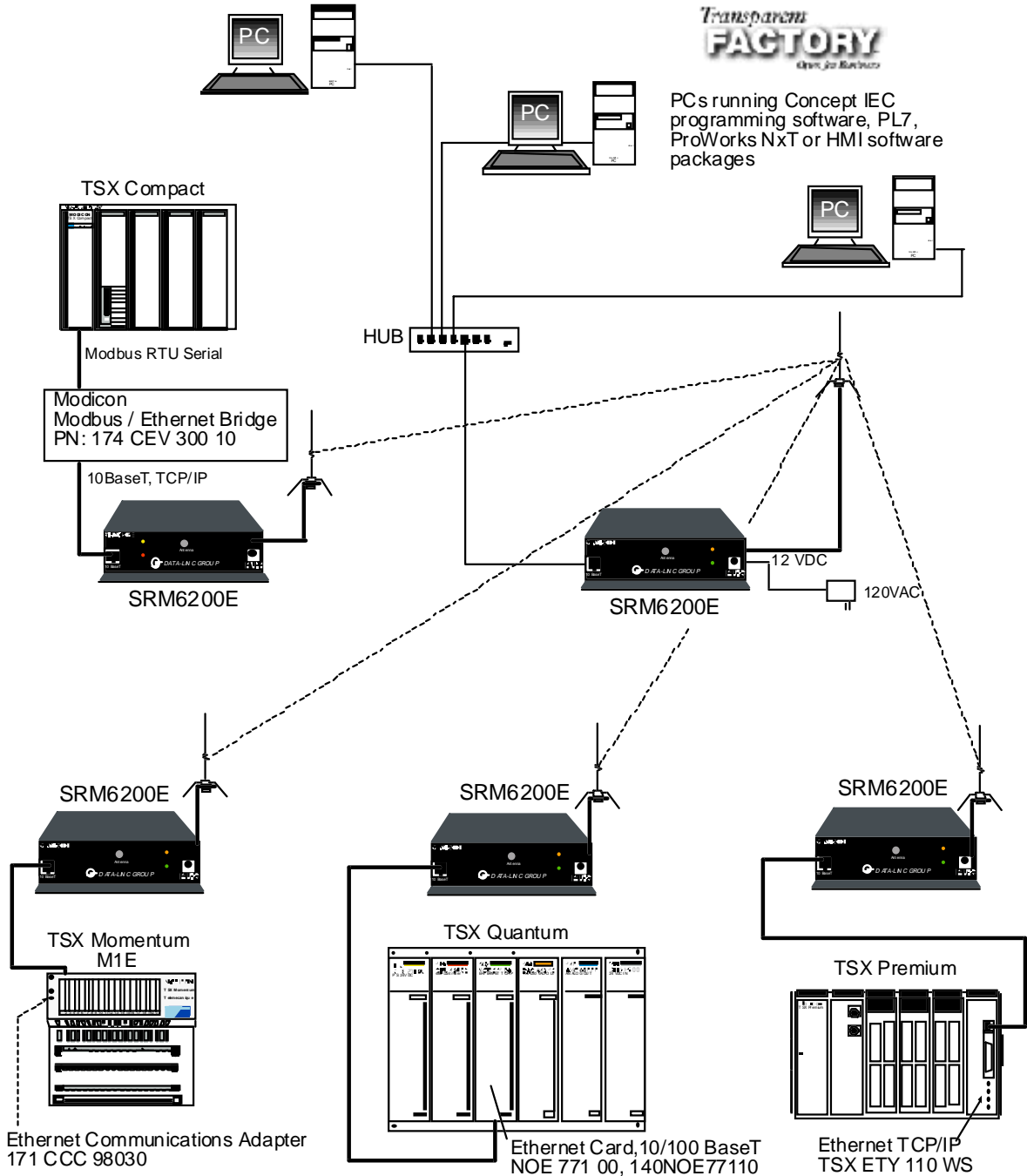
Data-Linc Group technical services staff provide unlimited support to ensure complete customer satisfaction. Data-Linc Group can often simulate PLC communication anomalies in their fully equipped support lab to provide fast and easy answers to data communication problems.

### **Compatibility**

Data-Linc stand-alone and chassis mount modems are ideal for all Schneider Automation PLC Processors, including Modicon Quantum and Square D.



# Transparent Factory SRM6200E Wireless Ethernet PLC Communications Network

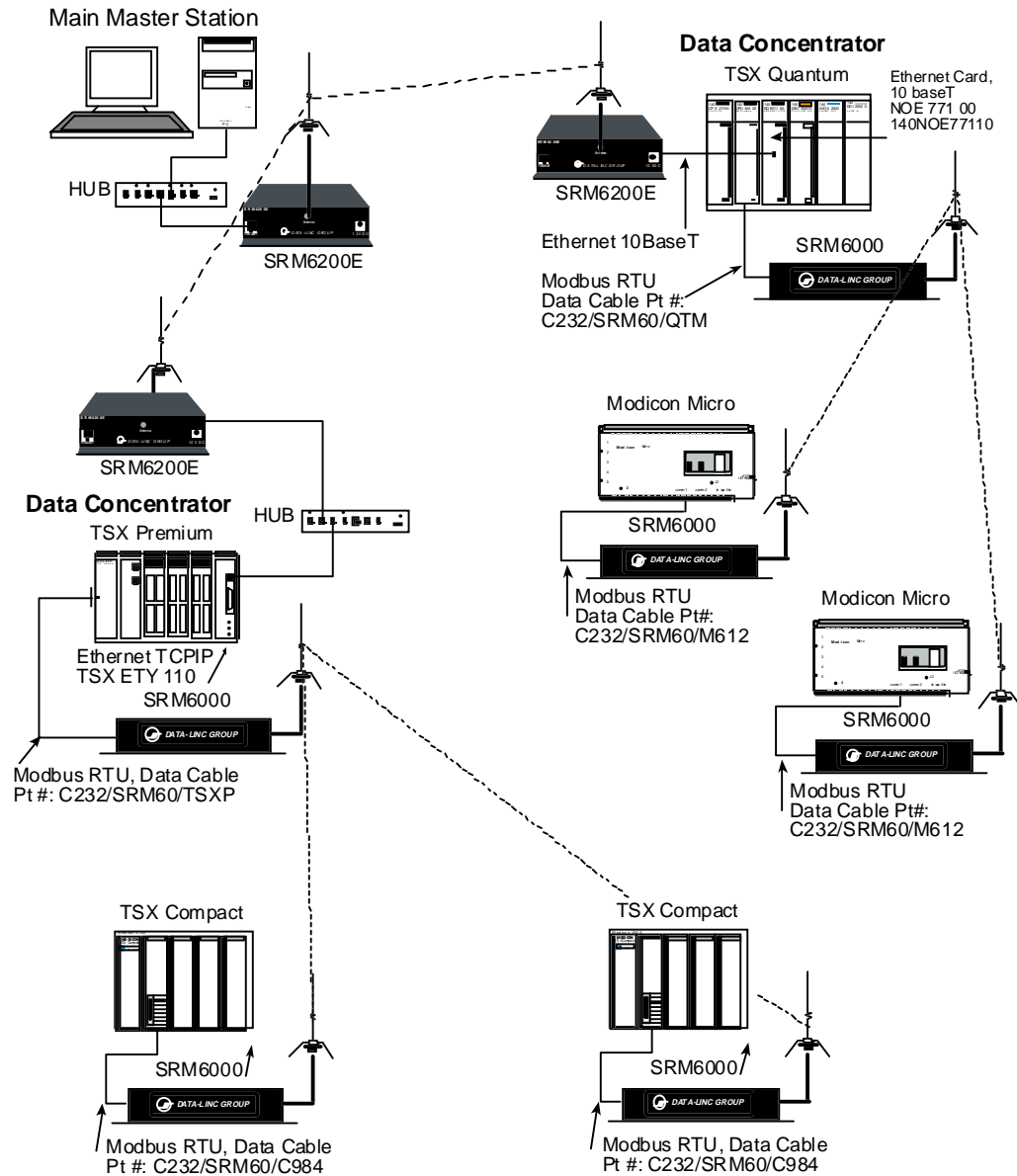




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# Wireless Data Communication with Various Modicon PLCs

**Data-Linc wireless SRM6200E Ethernet and SRM6000 wireless Radio Modems**

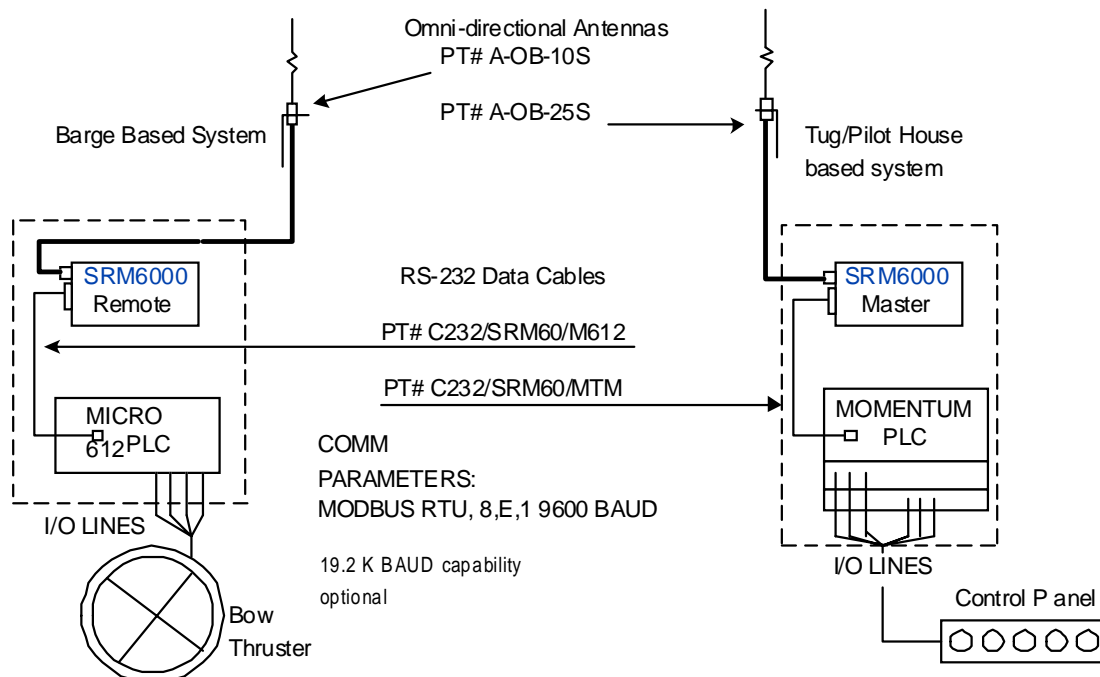
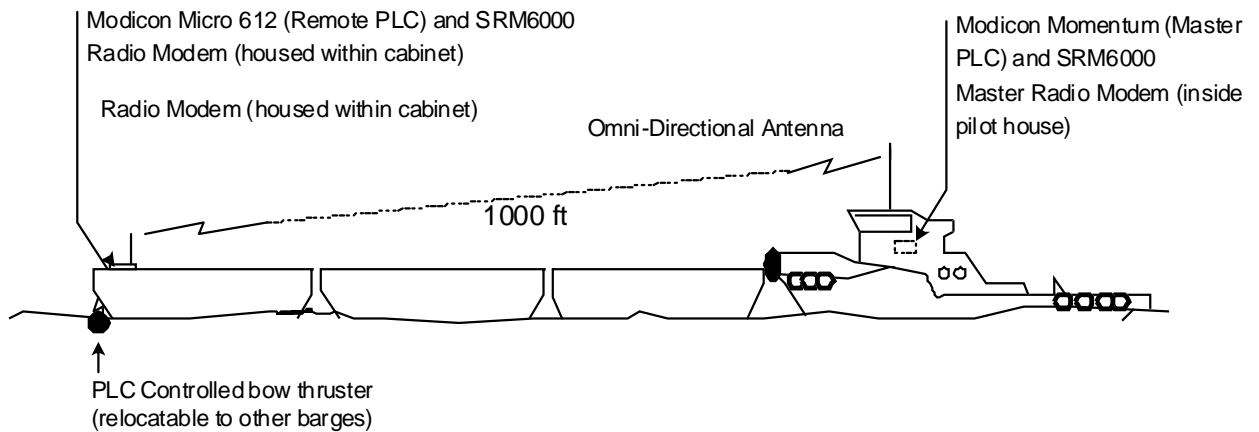




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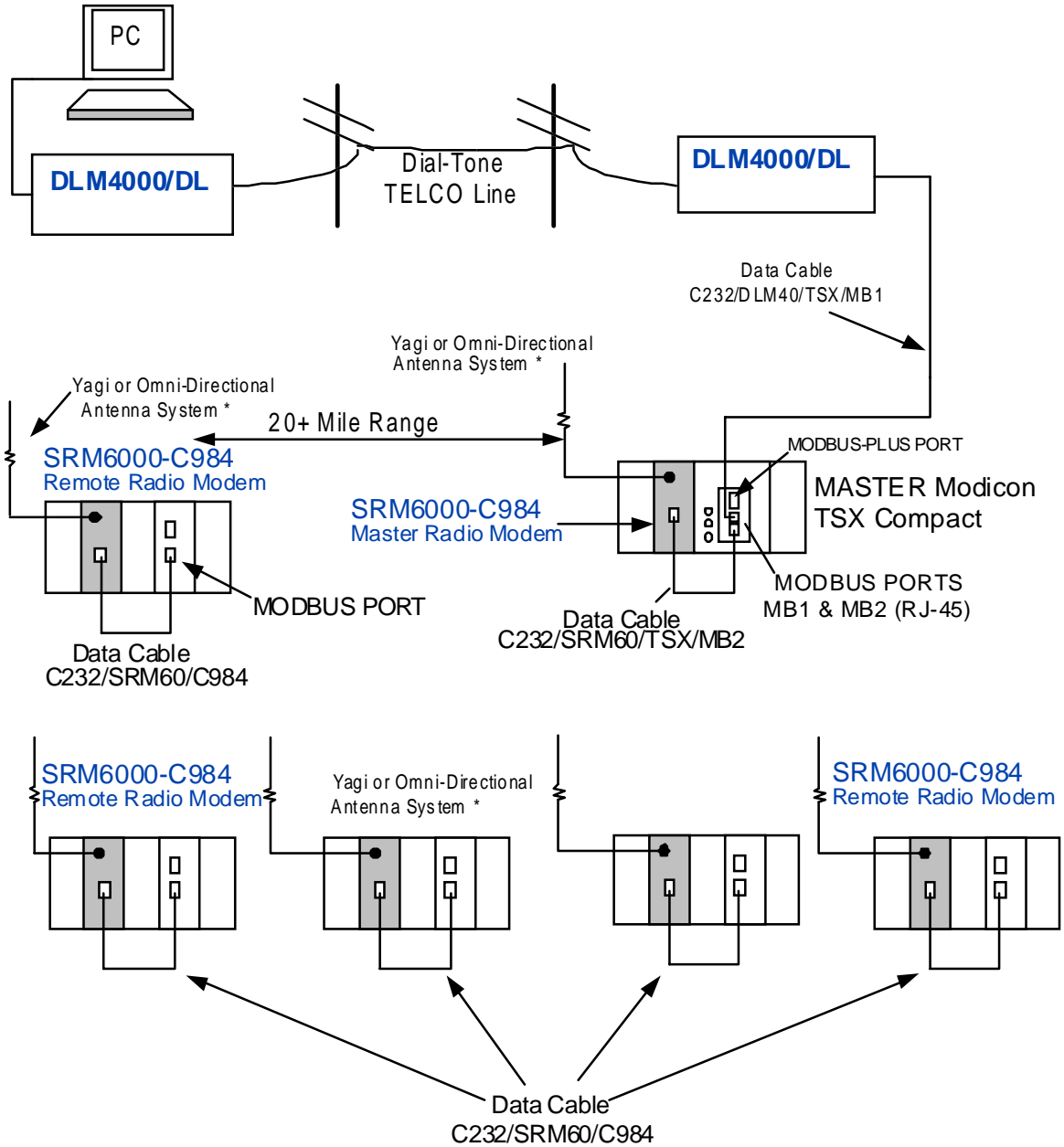
# Maritime/Shipping/Barge Control Wireless Radio Modems with Modicon Momentum and Micro PLCs

Barges operating in the shipping channels of the Texas Gulf Coast between Corpus Christi and Brownsville, Texas



# Multi-Drop Wireless Data Communications System

**Data-Linc Group SRM6000 Radio and DLM4000 Dial-Up Modems and Modicon TSX Compact PLCs Access a Network**



Qty. 5 Remote Compact 984 PLCs with Rack Mounted RF Modems: SRM6000-C984

\* Antenna System Coaxial Cable Lengths Available: 10', 20',  
25', 50', 100', 150', 200', 250'

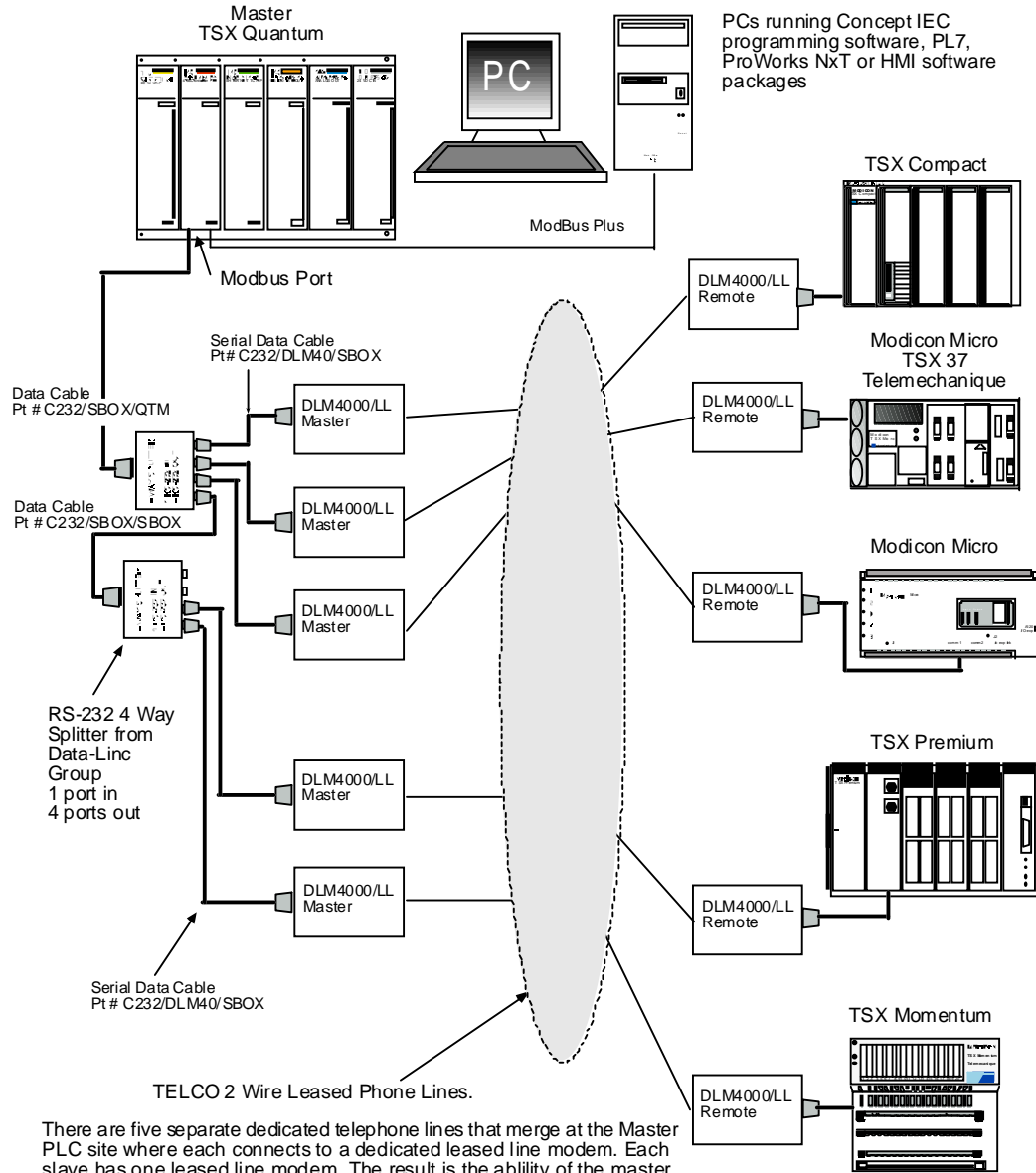


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# Multi-Drop Leased Line PLC Communications

**Data-Linc Group DLM4000/LL Leased Line Modem and a Variety  
of Schneider Electric PLCs**

**Data Rate of 19.2K Baud over Analog Telco Lines**



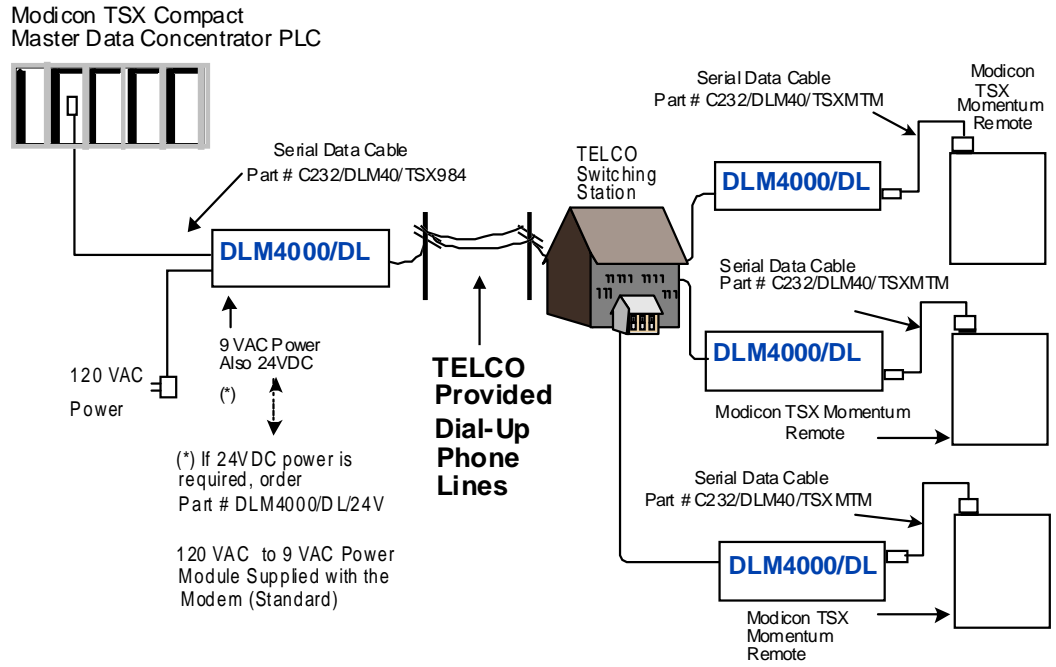
There are five separate dedicated telephone lines that merge at the Master PLC site where each connects to a dedicated leased line modem. Each slave has one leased line modem. The result is the ability of the master to have 1/2 duplex communications at 19.2 K Baud on analog leased telephone lines with out the need for RTS/CTS Control.



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# **Modicon Multi-Point Dial-Up Data Communications**

**Data-Linc Group DLM4000/DL Dial-Up Modems**

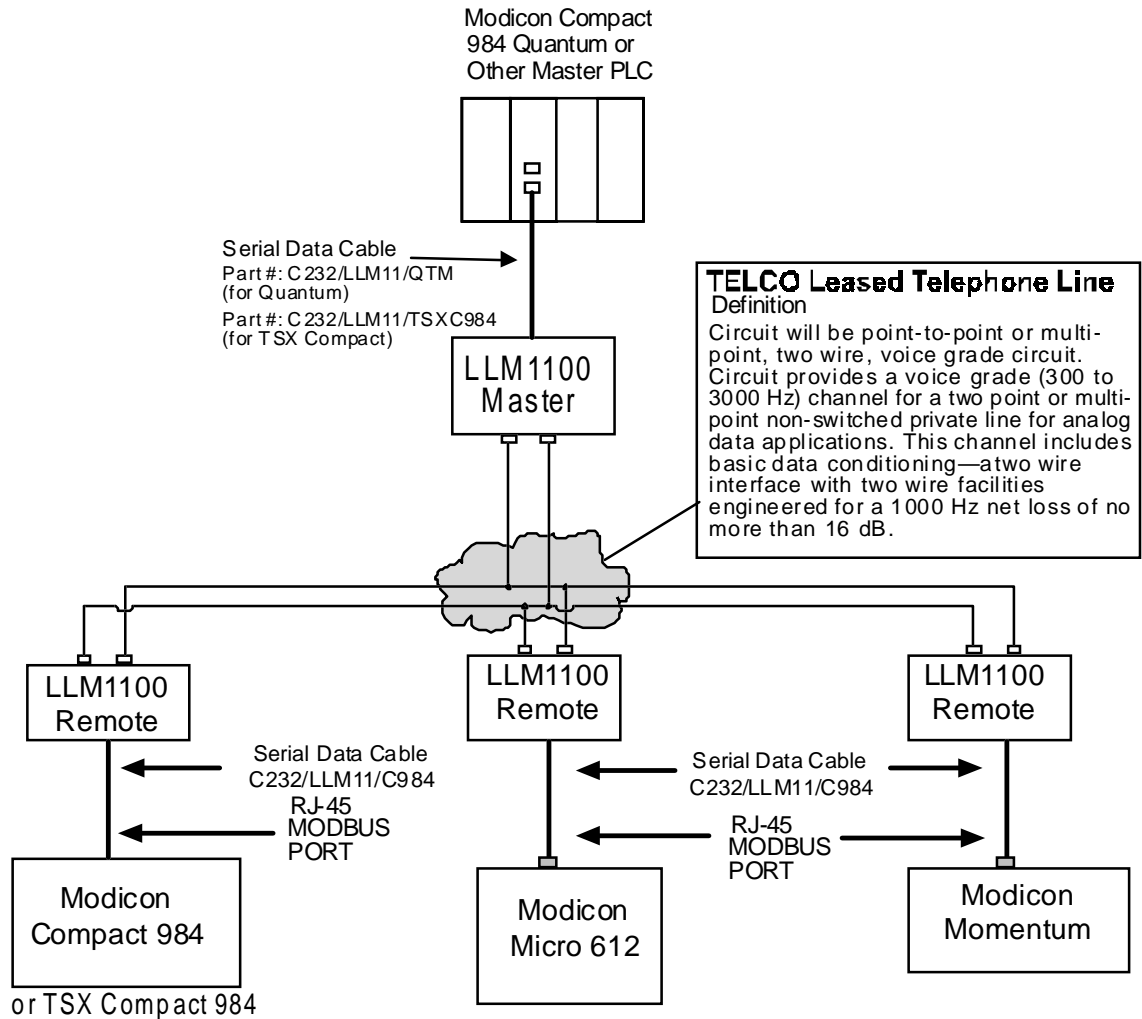




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# Leased or Private Line Communications

## Data-Linc Group LLM1100 and Master PLC Polling Various Modicon PLCs



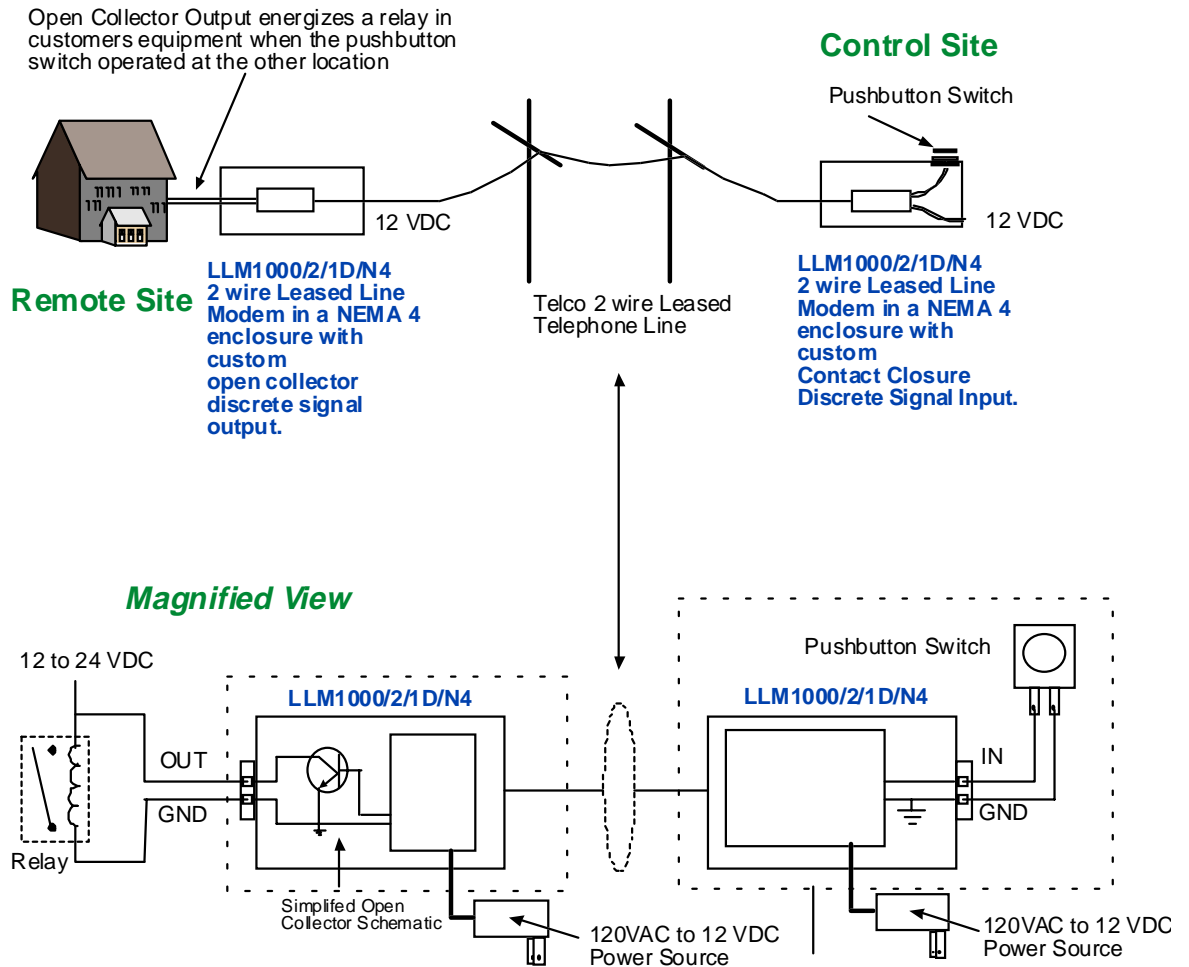
Additional remote sites can be added.

### Turn Around Delay

A turn around delay time of about 100 msec is required between the time at which a given PLC activates RTS and sends data to the LLM1100. Therefore, the minimum time for the master PLC to send its message and then receive a message back from a given remote PLC is about 200 msec. Message length is also a critical factor in determining turn around delay. Each byte (a single 10 bit word) at the 1200 baud rate of the LLM1100 adds approximately 10 msec to the turn around delay. For a round trip communication of 5 byte message sets between the master and a remote PLC would be about 300 msec. If the 1200 baud data rate seems slow, consider the approximate 5 second handshaking time requirement for Trellis encoding dial-up modems. For a minimum turn around delay of only 5 to 15 msec, consider the Data-Linc license-free SRM6000 radio modem.

# Single Discrete Signal

## Start/Stop Control over Two-Wire Leased Lines



The pair of LLM1000/2/1D/N4 Leased Line Modems with single channel discrete control allow the operator of a pushbutton switch to temporarily change the status of a relay at a distant site. The relay in this application turns on an instrument which collects a sample of the water that has been diverted by the operator at the control station.

## Contact Information

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