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RINGLINE 4 - CHANNEL ANALOG TRANSMITTER

P/N- RLTX4AN_120MA

RINGLINE LINE POWERED FOUR CHANNEL ANALOGUE TRANSMITTER

DESCRIPTION:

This Ringline Transmitter is designed for slow-change analogue monitoring over distance. Examples of suitable signals include temperature, pressure and gas levels. It will transmit up to four, 4 to 20mA signals over the Ringline system with 12-bit resolution. Each analogue input signal is multiplexed over a single Ringline channel (192 channels available); addressed using the Ringline programmer. Any input signal addressed above the maximum channel value (96B) is disabled.

FEATURES:

- Allows reading analogue readings into a PLC or SCADA over the same two wires as a Ringline Safety function
- Easy configuration – only needs addressing, programmable with RLPROG2.
- Only consumes one Ringline channel per signal to maximize channel use efficiency.
- No external power required. Ringline and sensor loop power is all that's needed. Perfect for battery backed sensors.
- Built in surge / lightning protection.
- Monitoring distances up to 8km in any direction over two-wires.
- Isolation is provided from Ringline to each individual input allowing for flexible sensor connections to a single unit.
- Increased filtering over the previous model.
- Designed to allow almost drop-in replacement of the Ringline RLTX4AN_020MA.
- Signal derived from down-sampled 16-bit sigma-delta ADCs for high accuracy.

APPLICATIONS:

The transmitter is intended for remote sensor monitoring. It has advantages where monitoring points are spread over wide areas or in small groups over several locations. It also offers a low-cost alternative to distributed PLC monitoring.
For users of the Ringline emergency stop system, unused channels may be used for analogue monitoring without compromising emergency stop functional safety.
The main application is for wide area condition monitoring of slow-moving process variables. Transmitters can be installed anywhere on the Ringline bus up to 7km from the Ringline Synchroniser (up to 12km on 666Hz system). Any transducer that produces a 4 to 20mA signal may be monitored via the two-wire network (Ringline). The method of decoding the analogue signal/s (from Ringline) will be dependent on the users' requirements. The standard Ringline serial interface is Modbus RTU Slave, but other protocols are available depending on the Ringline system being used. The assignment of Ringline addresses to the 4 input signals can be nominated on ordering or may be set / reset using a Ringline Programmer – see following page.

BRIEF TECHNICAL SPECIFICATIONS:

Power Supply:	Ringline-Line Powered, Line powered analogues.
Dimensions:	25mm (W), 115mm (H), 100mm (D).
Isolation from Ringline::	Capacitive coupling, 3,000 volt.
Resolution:	12 bit - 0 to 4096 decimal.
Analog Inputs:	4 @ 0.5 – 20mA.
Minimum Signal Voltage	4 volt
Input Burden:	850 Ohms (@ 4mA) 190 Ohms (@ 20mA)
Output:	Via Ringline field bus connection
Analog Update Rate Ringline 128:	6.1 seconds (8.3 for 192ch) on 1kHz system
Start-up time Ringline 128:	6.9 seconds (9.5 for 192ch) on 1kHz system

INSTALLATION:

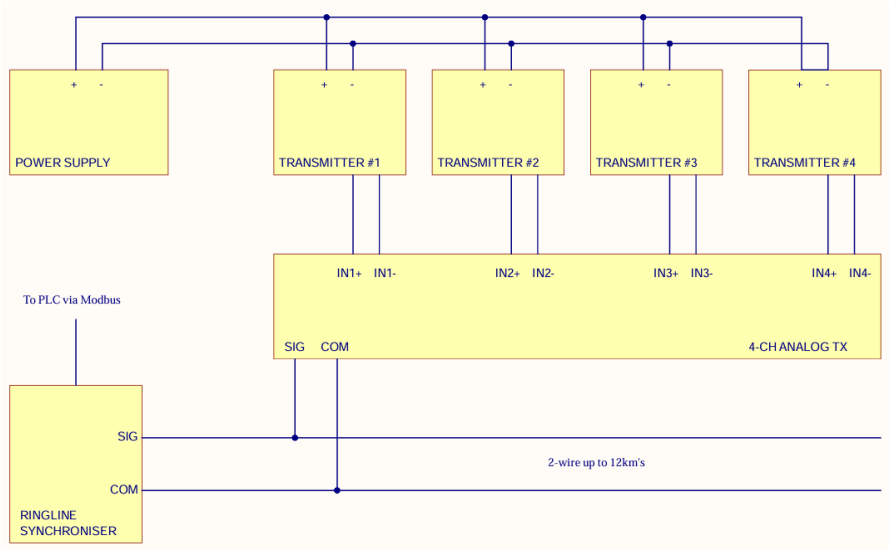

Figure 1- TYPICAL INSTALLATION DIAGRAM

SIMPLIFIED ADDRESS PROGRAMMING:

To check or change allocated Ringline channels:

1) Disconnected 3-way female harness from Ringline network.

2) Connect 3 way connected to compatible Ringline address programmer.

3) Read product and adjust addresses if required.