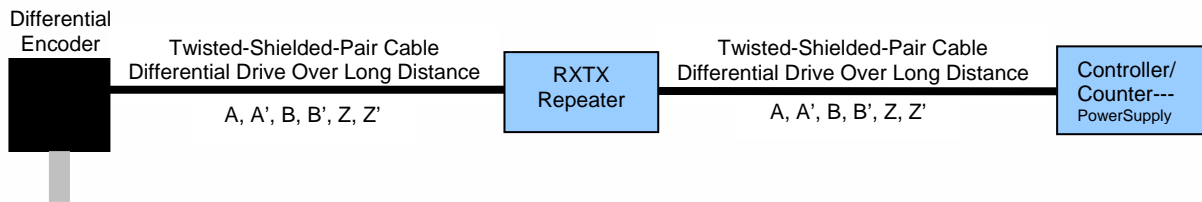


## RXTX Repeater- Differential Encoder to Differential Receiver



### Applications Guide

The illustration above utilizes one RXTX Repeater to “repeat” the encoder’s complimentary-differential signals for purpose of boosting the signal drive capacity, removing noise and distortion from the signals, and transmitting the signals over longer distances.

Note: Refer to the RXTX Repeater connection diagram for the correct signal, power, and shield wiring to the terminal blocks (P1 and P2).

#### Suggestions:

- Ensure that RXTX Repeater signals at the Controller/Counter are properly terminated (refer to Tech Bulletin TB116 for information on proper termination). The RXTX Repeater is already designed to properly terminate the encoder signals.
- Whenever transmitting encoder signals a long distance, use LOW CAPACITANCE, TWISTED-SHIELDED PAIR CABLE.
- Terminate cable shields/drain wires to the RXTX Converter input/output (P1-2/P2-2) case terminals. The case terminals are connected to the RXTX housing. If, for some reason, it is not desirable to connect the shields to the housing, then connect the input and output shield/drain wires together.

**CAUTION:** The bare shield conductors and drain wires must be electrically insulated from the circuit board and components by a non-conductive sleeve (such as heat-shrink tubing used in cable termination assemblies).

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