

APPLICATIONS BULLETIN #9

Subject: RS-232/RS-422 Converters for

Extended Cable Runs

RS-232/RS-422 Converters for Extended Cable Runs

Secura Key ENTRACOMP® 27SA and 28SA readers use RS-232 communications for compatibility with PC's, Smart Switches, Modems, and Serial Printers. When readers and other system components must be located over 300 cable feet apart, use of RS232 communications can result in data errors due to induced electrical noise. By using RS-232-to-RS-422 Converters, noise-free data transfer can be achieved at distances up to 4000 feet. Converters must be used in pairs; one at each end of an extended cable run.

Selecting the Correct Converter

Secura Key has two models of Converters for various applications:

Use PC30-CONV-P (two channel) when connecting:

Extended cable between the PC and 27/28SA

Extended cable between Printer and 27/28SA

Printer to Smart Switch to 27/28; where the extended run is between Printer and Smart Switch PC to Smart Switch to 27/28: where the extended run is between Smart Switch and 27/28

Use CONVH-P (four channel) when connecting:

PC to Smart Switch to 27/28, where the extended run is between PC and Smart Switch Printer to Smart Switch to 27/28; where the extended run is between Smart Switch and 27/28

Power Requirements

Each converter includes a plug-in type 12 VDC Power Supply, which requires a 120 VAC outlet at each end of the cable run.

Cable Requirements

RS-422 communications requires twisted pair, low-capacitance cable, with an overall shield, and a nominal impedance of 100W. Other cable types will not work.

For PC30-CONV-P, use the following cable type/manufacturer:

2 Twisted Pair, shielded, w/ground wire Belden 9829, 8102 or equivalent

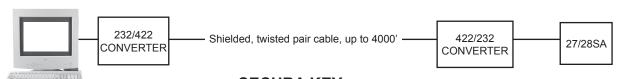
For CONVH-P, use the following cable type/manufacturer:

4 Twisted Pair, shielded, w/ground wire Belden 9831, 8104 or equivalent

You must pair the proper conductors when wiring RS-422 cable. Carefully follow the wiring chart supplied with the converters.

Connector Requirements

When connecting cable to the converter, terminate cable on the RS-232 Side with a DB-25 Female connector, and terminate cable on the RS-422 Side with a DB-25 Male connector. The RS-232 side of a converter can plug directly into a Smart Switch.



SECURA KEY

DATE: 12/5/97 REV.: 4761 20301 Nordhoff St. • Chatsworth, CA 91311 phone 818-882-0020 • fax 818-882-7052 Toll Free - 800-891-0020

PAGE 1 OF 1