
PRIORITY:	Normal
DATE:	January 20, 1998
TITLE:	RS485 networking tips
ECO REFERENCE:	None
PRODUCT(S) AFFECTED:	Signs with RS485 Capability
SUMMARY:	This document contains recommendations for RS485 sign networks: cable length, number of network drops, and end-of-line termination.

Care must be exercised when networking signs, especially as the length or complexity of the network increases. Check the information below for specifics:

AMS-supplied shielded cable

Use AMS-supplied shielded cable, pn 1088-8000 (1000-foot spool) or 7122-0282 (cable cut to length.)

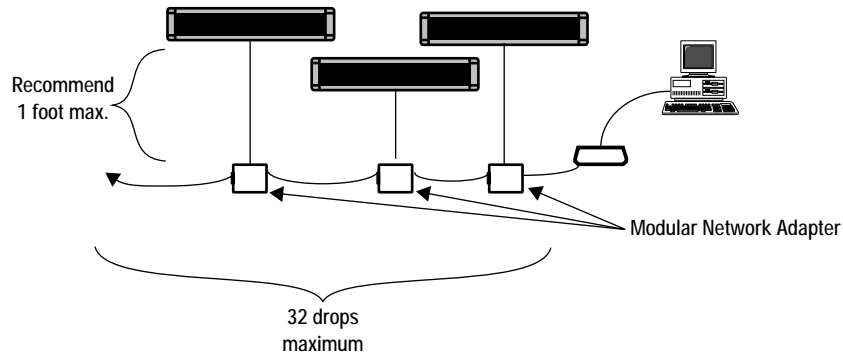
Maximum length of AMS shielded cable, per network

Baud rate	Maximum feet
9600	4,000
4800	8,000
2400	10,000
1200	10,000

NOTE: The use of an RS485 repeater box is recommended if exceeding one of the above lengths at the designated baud rate. One source for purchasing an RS485 repeater box is Black Box, at phone number 412-746-5500.

Maximum number of network drops: 32

NOTE: If a greater number of drops is required, an RS485 repeater box must be used. The repeater box itself counts as one of the 32 drops. See the diagram on the next page.



Recommended cable drop length to use with Modular Network Adapters: 1 foot.

NOTE: The 1-foot length is recommended for optimum reliability of the interface hardware and integrity of data transmissions. The 8-foot length will work for most installations and can still be used if needed.

EOL termination

End-of-line (EOL) termination is recommended in network installations. The EOL termination will help provide stable communication across the RS485 network, thus improving reliability and data integrity.

For more information

For additional information about networking signs, please refer to the **Network Configurations** manual (pn 9708-8046).