



Installation Instructions

LonTalk Termination Kit

Ordering Number: 6400-2483-01

LonTalk wiring guidelines

Follow these guidelines for LonTalk® wiring:

- Use 22 AWG unshielded Level 4 communication wire for most LonTalk installations.
- Use shielded Level 4 wire for LonTalk VariTrac™ central control panel (CCP) installations.
- Always use termination resistors.
- Use 105 Ω , ½ W, 1% resistors at each end for Level 4 wire
- Use 82.5 Ω , ¼ W, 1% resistors at each end for Trane purple wire.
- Use the daisy chain topology for LonTalk links.
- Limit the LonTalk link to 4,500 ft or use one repeater for an additional 4,500 ft.
- Limit the link to 60 devices or use one repeater for an additional 60 devices.
- Limit zone sensor communication stubs to 8 per link, 50 ft each (maximum) or use one repeater for an additional 8 communication stubs.

Termination resistors

All LonTalk links must be properly terminated. For daisy chain configurations, you must install a termination resistor at each end of the daisy chain. The resistance value of the termination resistor varies with type of wire used. For Level 4 wire, install the larger, 105 Ω resistor at each end of the link. For Trane purple wire, install an 82.5 Ω resistor at each end of the link.

Level 4 wire

Although Trane purple wire is still supported for LonTalk installations, we now recommend the use of unshielded Level 4 wire (22 AWG) for most LonTalk installations. Do not mix wire types on the LonTalk link.

4,500 ft maximum, 60 devices

Limit the distance of LonTalk links to 4,500 ft on either side of a repeater. In addition, limit LonTalk links to 60 devices on either side of a repeater. The system panel, repeater, and Rover™ service tool do not count toward this total.

Daisy chain

Although other topologies have been used in the past, we recommend using only the daisy chain topology on your LonTalk® installations. The likelihood of communication problems increases with other configurations.

Zone sensor comm stubs

For the most reliable communications, limit the number of zone sensor communication stubs to eight per LonTalk link. Each stub should not exceed 50 ft. Exceeding these limits increases the likelihood of communication problems.

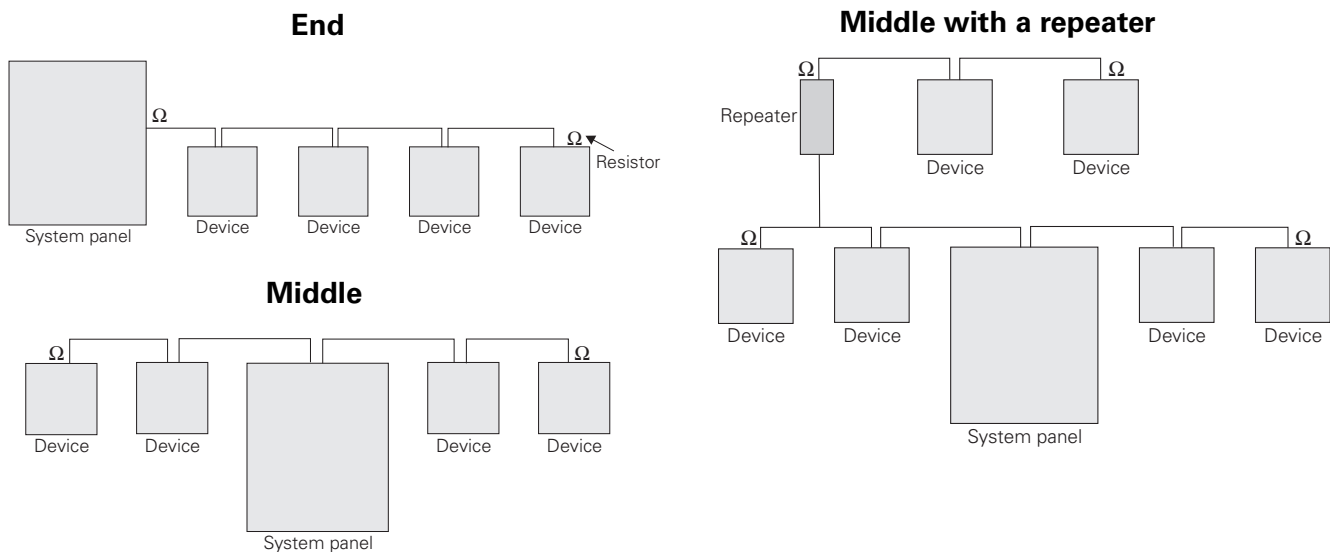
Repeater

Use a repeater (4950 0457) to extend a link an additional 4,500 ft. A repeater also expands the total device count by 60 (to 120 total) and expands the number of zone sensor communication stubs by 8 (to 16 total). Do not use more than one repeater on a LonTalk link.

Installing the terminating resistors

Figure 1 illustrates valid daisy chain configurations and terminating resistor locations. First, identify which of the figures matches your installation. Then install the appropriate terminating resistors across the communication link terminals at the locations shown in the figure.

Figure 1. System panel locations



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