



brightline

## DALI Busmaster and Wall Station Installation Instructions

The Digital Addressable Lighting Interface system is the primary lighting control digital protocol used by Brightline. The bus consists of a digital signal AND a low-voltage backbone, so rules for both apply. The maximum device count on a single DALI bus is 64, and care should be taken on the bus length (300 meters maximum), as voltage drop can also be a factor. The Busmaster provides 12.5-15VDC to the bus along with the signal path.

The Busmaster is the communication port for programming the system, providing power to the bus, and operating it via A/V system commands. It **must** be placed in an appropriate location for floor access by both the programmer and permanent connection to the A/V processor and requires connection to an AC source (a 120v-18v Wall-wart style transformer is provided). **It should never be installed in a ceiling or other hard to reach location.** The Busmaster has status and error indicators that must be readily viewable for troubleshooting, and a null-modem serial port for programming and external control system connection. As standard, Brightline provides a primary wire run of 100' from the Busmaster to the first fixture, so location in the equipment room or even the A/V equipment rack is most desirable. The Busmaster is small and light, and can be installed easily in the back of a rack by various methods.

DALI topology is very forgiving, so devices can be installed anywhere along the bus, and bare-end connections can be "T'd" (wired in parallel) and spliced for ease of wire pulls (for the Busmaster and CD-250). All wiring provided by Brightline is 16/2 Stranded, unshielded and plenum rated with 3-pin XLR connectors installed. If your installation requires conduit, please advise Brightline, and bare wire leads with the appropriate fixture terminations will be provided.



For connection, the bus is non-polarized, so the data and voltage on both wires is identical. The Busmaster is provided with a two-wire Phoenix connector for the DALI bus output. Wire trim should be ½" and care should be taken not to short the wires at the connector. All connections should be made with the Busmaster NOT ENERGIZED. This applies especially to the CD-250 (wall station) connection.

While this device is essentially "dumb", it contains a sensitive communication chip that is susceptible to arcs and current that can render it unusable, and will take down the bus. When connecting and installing the CD-250, special care should be taken to isolating the device from grounding against the single-gang back box. If you connect the station, and you have an "error" indicator on the Busmaster, please contact Brightline Tech Support Immediately at 412-206-0106 x 211.

Once installed and energized, all fixtures should come to "full on". If your installation includes a CD-250, some basic "test" presets may be included (try preset 1 and preset 8 (off). All presets in Brightline Systems are set up as "scenes" and not "groups".

At Brightline, we make every effort to deliver your system "Install-ready"; and spend hours pre-testing individual systems prior to shipping. If you have included factory commissioning in your project, your job is done. If you are commissioning the system locally, support documents can be found at

<https://brightlines.com/guides-manuals-downloads/>