

Manufacturer's Instructions for Lifeline® MC and MC LSZH Jacketed: One Hour and Two-Hour Fire-Resistive Cables – UL 2196 Technical Information Sheet #400

This Technical Information Sheet (TIS) covers Lifeline® MC and MC LSZH Jacketed Single and Multi-Conductor: UL Certified and Listed One-Hour and Two-Hour Fire-Resistive Power Cables.

Applications

Lifeline® MC Cables have been qualified and listed to the demanding requirements of UL 2196, *Tests for Fire-Resistive Cables*, and are UL Listed Type MC.

Lifeline® MC Cables meet various industry code requirements of NFPA 70, NFPA 101, and NFPA 72 for fire resistance according to UL 2196 standard when selected and installed per applicable codes including federal, state, local and municipal rules, laws and regulations as well as Electrical Circuit Integrity Systems 50 and 51 (FHIT.50, FHIT.50A, and FHIT.51) and TIS #400 Manufacturer's Instructions. Note that Authorities Having Jurisdiction (AHJ) should be consulted for approval prior to cable purchase and installation.

Requirements

1) Codes / Laws / Regulations

Selection and installation compliance is dependent on the applicable issue of any code or addendum that covers the use of Lifeline® MC, Fire-Resistive Cables.

2) UL Electrical Circuit Integrity System #50 and #51 (FHIT.50, FHIT.50A, and FHIT.51)

The most current listing details and supporting information applicable to Lifeline® MC Cables' fire-resistive rating (FRR) classification can be obtained from UL's UL Product IQ website by searching for keywords: "FHIT.50, FHIT.50A, or FHIT.51.

Where:

FHIT.50 covers multi-conductor cables with 2-hour FRR at 480 volts utilization and includes optional taped splice for conductor sizes 2AWG and larger. Refer to TIS 403 for splice installation instructions.

FHIT.51 covers single-conductor cables with 2-hour FRR at 600 volts utilization.

FHIT.50A covers multi-conductor cable constructions 4 conductor 2AWG with segmented ground conductors and 3 conductor 14 AWG and optional ceramic stand-off splice for use with conductor sizes 14AWG to 350MCM. Refer to TIS 402 for splice installation instruction.

3) Manufacturer's Instructions – TIS #400

All Lifeline® MC Cable products are covered by specific datasheets and supporting Technical Information Sheets that provide the user with information to properly select and install Lifeline® MC Cables in a reliable and trouble-free manner. Do not hesitate to contact your Lifeline® MC Cable representative should you have any questions.

Installation Parameters

1) Cable: Lifeline® MC

Code compliant cable classified as one-hour or two-hour fire-resistive according to UL 2196 when installed in accordance with FHIT.50, or FHIT.51, the National Electric Code (NEC), and all applicable federal, state, and municipal regulations.

2) Securing and Supporting Spacing

Code compliant fire-resistive installation in both horizontal and vertical orientations requires the cable be secured and supported at intervals not exceeding four feet (48 inches), at each side cable bends, and within one foot (12 inches) of cable connector terminations. Noted exception: support spacing described above is in lieu of support spacing allowed in the NEC and CEC, and is required for compliant two-hour fire-resistive installation.

3) Supports and Fasteners

Cables shall be secured to supports using steel two-piece single-bolt pipe clamps such as T&B 703 series. Supports shall be steel components or other fire rated components (described in FHIT.50, FHIT.50A, and FHIT.51) proven to meet the required fire resistance ratings. No substitute components are allowed.

4) Cable Bending

The installed bend radius of cables shall not be less than seven times the armor external diameter.

5) Cable Pulling and Handling

Proper cable pulling and handling techniques are essential to ensure a damage free installation. The Lifeline® MC Installation Manual (TIS #401) describes the recommended best practices.

Additional Features Available

1) Optional Outer Jacket

A corrosion resistant outer jacket is available over copper armor for applications with destructive corrosive conditions.

2) Splices

A splice is available. See FHIT.50 and FHIT.50A and contact your Lifeline® MC Cable representative for additional instructions.

