

Quick Reference Guide for Lifeline® FHIT.25E System

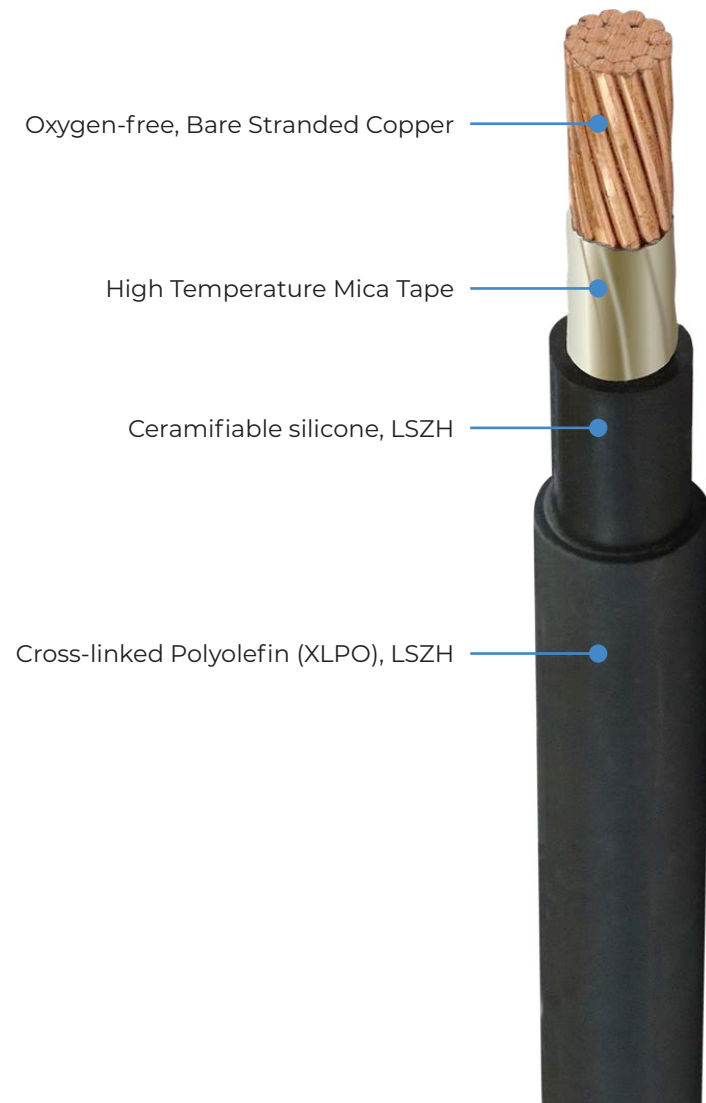


Lifeline® RHW-2 Two-Hour Fire Resistive Cables in EMT Conduit
Fire-Rated Cable System for Critical & Life Safety Applications

Lifeline® RHW-2 Fire Resistive Cable Overview

Lifeline® RHW-2 Power Cables are UL 2196 certified and listed for two-hour fire resistance. They offer a cost-effective alternative to MI cables and concrete encasement for critical and life safety systems.

Consult AHJ for approval before installation.



Compliance

- Classified to UL 2196, Standard for Tests for Fire Resistive Cables, for two-hours.
- Listed to UL 44, Thermoset Insulated Wires and Cables, as the following type: RHW-2, 600 Volt, Rated 90°C Dry/Wet
- Electrical Circuit Integrity System (FHIT) No. 25E of the UL Fire Resistance Directory.
- FT4-ST1 (limited smoke) 12AWG and larger
- NFPA 70, NFPA 72, NFPA 101, NFPA 130, NFPA 502



Applications

Critical life safety and emergency systems.
Conformant to NEC articles 517, 695, 700, 708, 728, and 760.

Commercial

- Healthcare Facilities
- High-Rise / Commercial / Public Buildings
- Educational Institutions / Dormitories
- Auditoriums / Stadiums / Museums

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Technical Support

Design and Installation Reviews for UL, NFPA 70, and FHIT standards.

Letters of Compliance are available upon request to assist inspectors and AHJs without requiring on-site presence.

Email: na.lifeline@prysmian.com

Website: na.prysmian.com

Recommended Tools

No specialized tools are required for the installation of this system. Recommended tools are listed below:

Essential:

- Cable cutter
- Gloves
- Safety glasses
- Scissors
- Utility knife
- Wire stripping tool

Optional (as needed)

- Capable hole saw
- Channel lock pliers
- EMT bushing kit
- Hammer
- Large flat head screwdriver

Installation Documentation

The UL 2196 fire-resistive system (FHIT 25E) includes approved, brand-specific fireresistive cables, conductors, and components that form a complete system. **Substitutions are not allowed.**

[1] Ampacities, dimensions, and conduit sizing, bend radius:



[2] Manufacturer's Instructions
TIS 301K-May 2025 (FHIT.25E
2 h. EMT + Phenolic):



Illustrative Pull Box Installation with EMT Conduit



Fig. 1: Wiegmann NEMA 3R series RSC pull box with RACO steel conduit connectors installed.



Fig. 2: Lifeline® RHW-2 pulled through connectors with flexible silica insulative bushing inserted.

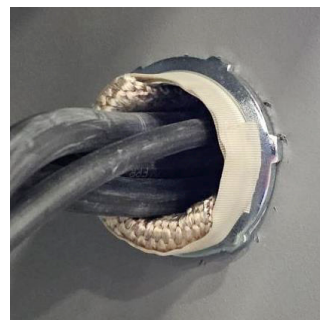


Fig. 3: Insulating bushing folded over connector threads and secured with three or five tight layers of 3M 69 Glass Cloth tape.

Pre-Submission Design Checklist for Fire-Rated Cable System (FHIT.25E)



Lifeline® RHW-2 Two-Hour Fire Resistive Cables in EMT Conduit
Based on Technical Information Sheet #301K

1) Conduit

- ☐ EMT: Allied EZ-Pull®.
- ☐ Cables installed in dedicated raceways.

2) Connectors & Couplings

- ☐ Raco All-steel connectors & couplers.
 - ☐ All sizes: set screw type.
 - ☐ >2": compression type.

3) Fire Resistive Cables

- ☐ Lifeline® RHW-2.

4) Conduit Sizing & Bends

- ☐ Conduit sizes per TIS 301K Tables 3a (EMT).
- ☐ Bends meet/exceed Table 4 minimum radii^[2].

5) Pull Boxes & Enclosures

- ☐ EMT: Wiegmann NEMA 3R steel.
 - ☐ Boxes ≤12": RSC (screw cover) or RHC (hinged).
 - ☐ Boxes ≥16": RHC only.
- ☐ Enclosure size matches conduit trade size and fire rating.

6) Vertical Conductor Support

- ☐ Max vertical spacing:
 - ☐ ≤350MCM: 59 ft.
 - ☐ 400–500MCM: 50 ft.
 - ☐ 600–750MCM: 40 ft.
- ☐ NEC Table 300.19(A) not to be exceeded.

7) Pulling Lubricant

- ☐ Polywater LZ.

8) Mounting & Support

- ☐ Conduits secured to 2-hr fire-rated structure.
- ☐ Steel 2-piece single-bolt clamps (1¼" wide, 14-gauge min).
- ☐ Support spacing: EMT: 5 ft (H/V).
- ☐ Clamps within 1 ft of enclosures.
- ☐ Trapeze supports max 5 ft OC, floor-ceiling secured.
- ☐ Slotted steel channels (12-gauge, 1½–1⅝" wide):
 - ☐ ≤5 ft: 2 anchors (ends).
 - ☐ 5 ft: 3 anchors (ends + center).

9) Connector Insulating Bushings

- ☐ Required in EMT connectors:
 - ☐ All horizontal runs.
 - ☐ Vertical runs ≥250MCM.
- ☐ 3" long, width per Table 1.
- ☐ Inserted 2" into connector, secured with:
 - ☐ 3 layers 3M 69 tape (horizontal).
 - ☐ 5 layers 3M 69 tape (vertical).

10) Raceway Transitions

- ☐ Enclosure ≥8× largest raceway trade size.
- ☐ EMT bushings installed at transitions.

11) Penetrations & Firestop

- ☐ Openings closely sized to raceway.
- ☐ Firestopped with UL-listed XHEZ system.

12) Terminations Beyond Fire Zone

- ☐ Cables extend ≥12" beyond fire-rated wall/floor.