

## I. GENERAL QUESTIONS

### 1) Why do I need to use Circuit Integrity cables?

Circuit Integrity cables are utilized to protect critical emergency circuits and maintain operability of fire alarm systems in order to ensure adequate egress time and first responder safety during fire conditions. Pathway survivability is necessitated both by code and engineering risk analysis and varies according to each location circumstance. Typically, it is used in large and/or high occupancy structures that require partial evacuation or relocation in the event of a fire. To learn more about the “What, Where, When, and Why of CI”, please contact [sales@comtrancorp.com](mailto:sales@comtrancorp.com) to schedule a webinar or on-site training.

### 2) Where do I need to use Circuit Integrity Cables?

#### A. Typical locations

- a. High-rise buildings
- b. High occupancy buildings (places of assembly, i.e. stadiums, casinos, airports, etc.)
- c. Hospitals and health care facilities
- d. Hotels, universities, government buildings
- e. Tunnels and subways

#### B. Common applications:

- a. EVAC – Emergency voice-alarm communications, smoke & fire alarm systems
- b. Area of Refuge and Fireman’s Telephone
- c. Fan/Damper pressurization systems
- d. Command center critical operations
- e. Mass notification
- f. Elevator occupant evacuation operation

### 3) What’s the difference between CI and CIC?

VITALink® cables are dual rated CI and CIC – one cable qualified to UL 2196 for two different installation scenarios. CI for free air installation is a conduit-free solution for riser and horizontal (non-plenum) installations per NEC Code 760.24. CIC is a circuit integrity system that includes the physical protection of conduit and is installed per UL FHIT 40A. Please consult your local AHJ for local code enforcement.

### 4) What are the NFPA code applications?

- NFPA 70 - National Electrical Code
- NFPA 72 - Fire Alarm & Signaling Code
- NFPA 130 – Fixed Guideway for Transit and Passenger Railway Systems
- NFPA 502 - Road Tunnels, Bridges, and Other Limited Access Highways

## VITALink® FAQs



### 5) Where can I access a specification?

Please visit our website at [www.comtrancorp.com](http://www.comtrancorp.com)

### 6) Where can I purchase this product?

Product is sold through our distribution partners. Please contact us at 800-842-7809 or email [sales@comtrancorp.com](mailto:sales@comtrancorp.com)

### 7) What are the benefits of VITALink® over other 2-Hour Fire Rated cables?

VITALink® features:

- The MOST versatile choice – one cable, dual CI/CIC listing
- The BEST conduit fill in the industry
- The LONGEST vertical distance
- The BEST product spectrum
- The MOST comprehensive listings and BEST ratings

### 8) What are the benefits of VITALink® over alternative 2-Hour Fire Rated methods?

- Requires no special tools, connectors, or certification for installation
- Ease of installation – installs like standard cable; product is flexible and comes in long lengths
- Lower installed costs
- Readily available – no lead time; stocked at partner locations throughout North America

## II. INSTALLATION & TECHNICAL QUESTIONS

### 1) Where can I find the manufacturer's installation instructions when cables are being installed in conduit (CIC)?

Please visit our website at [www.comtrancorp.com](http://www.comtrancorp.com)

### 2) What are the installation instructions when cables are being installed as CI for free air?

Installation is per the NEC code Article 760.

### 3) Do installers need special tools, training, or certification?

No, any licensed contractor/integrator can install our cable with normal cable installation tools.

**4) Are there specific branded components that need to be utilized with the system when installed as CIC? Why?**

- Hardware requirements can be found in the FHIT document and the manufacturer's installation instructions
- Specific components utilized to pass the UL 2196 qualifying become part of the assembly listing to ensure control and compatibility of materials required to maintain the listing
- VITALink® has the most versatile conduit selection, with both EMT and IMC certified EMT brands include Allied Tube & Conduit Corp., Wheatland/Western Tube Co. and Columbia-MBF. IMC brands include Allied Tube & Conduit Corp. and Wheatland/Western Tube Co.
- Using non-approved hardware will nullify the circuit integrity rating; always check with the AHJ for exceptions

**5) Why not get approvals for alternate brands of components?**

Any product or changes/additions in the assembly components or procedures requires extensive re-testing at UL.

**6) Can cables be installed in rigid conduit?**

No, see above.

**7) Tell me about approved pull boxes**

- System is approved with Wiegmann brand NEMA rated boxes. Wiegmann is manufactured by Hubbell.
- Recommendations for box sizes can be found in the manufacturer's installation instructions

**8) Tell me about conduit fill**

- The conduit fill chart can be found on the FHIT document and manufacturer's installation instructions.
- VITALink® has the best conduit fill in the industry. All constructions allow up to 10 cables in a 2" conduit with exception of 18 AWG which is 7 cables in a 2" conduit. 18 AWG is less because it is more difficult to pass the test with a smaller AWG size.
- When combining 18 AWG with other constructions, limitation defaults to the most stringent.
- Conduit fill is the same for both vertical and horizontal constructions.
- Conduit fill takes into account max NEC fill ratios of 40%.

**9) Can I put shielded and non-shielded in same conduit?**

Yes

**10) Can I install other types of cables in the same conduit?**

No, only cables and components tested and approved through the UL 2196 test may be utilized. Adding additional building wire or communication cables will have an unpredictable effect on the ability of the fire rated cable to operate in case of a fire, which would jeopardize the 2-hour rating.

**11) Can I use condulets for installation?**

No, condulets are not recommended unless allowed by the AHJ.

**12) Can VITALink® cables be spliced?**

Yes, we have an approved splicing procedure which can be accessed on our website at [www.comtrancorp.com](http://www.comtrancorp.com)

### III. APPROVAL & RATING QUESTIONS

**1) Where can I find the UL 2196 FHIT sheet?**

Our FHIT sheet is #40A. It can be accessed through the UL Directory at:

<http://www.ul.com/code-authorities/fire-code/fire-resistive-and-circuit-integrity-cables/> or by visiting our website at [www.comtrancorp.com](http://www.comtrancorp.com)

**2) Is VITALink® approved for use in Canada?**

Yes, however it must be installed in conduit per the Canadian Electric Code

- CAN/ULC-S139 Certified with Hose Stream Test for use in FHIT7 system 40A
- CEC and CSA listed FAS 90 to C22.2 No. 208-14

**3) Is VITALink® approved for use in New York City?**

Yes, Comtran has obtained formal approval #54502 from the NYC Electrical Advisory Board authorizing use in New York City.

**4) Is VITALink® approved for use in California?**

Yes, VITALink® is approved by the California State Fire Marshal listings numbers:

- 7161-1295-0100
- 7160-1295-0101
- 7160-1295-0102

**5) Is VITALink® Riser and/or Plenum Rated?**

VITALink® cable is FPLR rated and achieves a plenum rating when installed in conduit.

## VITALink® FAQs



### 6) Is VITALink® wet rated?

Yes, all VITALink® cables may be installed in damp locations (such as basements and tunnels), however it is not designed for prolonged submerged use.

### 7) Is VITALink® sunlight resistant?

Yes

### 8) What is the temperature rating?

The temperature rating of 105°C is the best polymeric two hour fire rated cable in the industry.

### 9) Is VITALink® Low Smoke, Zero Halogen?

Yes, the outer jacket is a LSZH polyolefin compound.

## IV. OTHER RESOURCES

Contact us or visit our website for additional assistance and resources:

- UL FHIT.40A and FHIT7.40A
- Manufacturer's installation instructions
- Splicing guide