

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 the 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 us at sales@comtrancorp.com to schedule a webinar or on-site training.

2) Where do I need to use circuit integrity cables?

A. Typical locations

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

B. Common applications:

- VITALink® CI/CIC
 - Emergency voice-alarm communications (EVAC)
 - Area of Refuge and Fireman’s Telephone systems
 - Fan/Damper pressurization systems
 - Mass notification devices
- VITALink® Ethernet
 - Emergency VoIP communications
 - IP Area of Refuge communication devices
 - Addressable Class N fire alarm devices
- VITALink® Armored
 - Low voltage critical circuits in enclosed spaces or harsh environments

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

VITALink® CI/CIC 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 System 40A or FHIT7 System 40A. Please consult your local AHJ for local code enforcement.

The dual rating does not apply to VITALink® Ethernet or VITALink® Armored cables.

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

5) Where can I access a specification?

Please visit our website at www.comtrancorp.com

6) Where can I purchase this product?

All VITALink® products are sold through our distribution partners. Please contact us at 800-842-7809 or email sales@comtrancorp.com

7) Why choose VITALink® over other UL-approved 2 Hour Fire Rated cables?

VITALink® is the most versatile and comprehensive circuit integrity product offering, consisting of dual rated CI/CIC cables, the only circuit integrity ethernet cables for Cat 3 channel requirements, and the only armored circuit integrity cables. Each of these products were firsts in the industry and lead the market in 2 hour fire rated protection.

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 available in long lengths
- Lower installed costs
- Readily available with no lead time; stocked at partner locations throughout North America

II. INSTALLATION & TECHNICAL QUESTIONS

1) Where can I find the manufacturer's installation instructions?

Please visit our website at www.comtrancorp.com

2) What are the installation instructions when the dual rated CI/CIC 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 typical cable installation tools.

4) Are there specific branded components that need to be utilized with the system? Why?

- Hardware requirements can be found in the FHIT document and the manufacturer's installation instructions.
- Specific components that are utilized to pass the UL 2196 test become part of the assembly listing, which ensures control and compatibility of materials required to maintain the listing.
- 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 galvanized rigid conduit?

VITALink® cables are not currently certified for use in rigid conduit, but they are approved with both EMT and IMC conduit.

7) Tell me about the approved pull boxes for VITALink® CI/CIC and VITALink® Ethernet cables

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

8) Tell me about conduit fill for VITALink® CI/CIC and VITALink® Ethernet cables

- The conduit fill charts can be found on the FHIT document and manufacturer's installation instructions.
- The different VITALink® CI/CIC constructions (e.g. shielded, unshielded, stranded, solid) may be installed in the same conduit. The limitation defaults to the cable with the most stringent conduit fill.
- VITALink® CI/CIC cables and VITALink® Ethernet cables cannot be installed in the same conduit.
- Conduit fill is the same for both vertical and horizontal constructions.
- Conduit fill takes into account max NEC fill ratios of 40%.
- VITALink® Armored cables are not installed in conduit.

9) Can I install other types of cables in the same conduit as VITALink® cables?

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 VITALink® cable to operate in case of a fire, which would jeopardize the 2 hour rating.

10) Can I use condulets for installation?

No, condulets are not recommended.

11) Can VITALink® cables be spliced?

Yes, the dual rated CI/CIC cables can be installed with a pig tail crimp taped splice. We have an approved splicing procedure which can be accessed on our website at www.comtrancorp.com. Splice kits are also available upon request.

Neither VITALink® Ethernet nor VITALink® Armored products are approved for splicing.

III. APPROVAL & RATING QUESTIONS

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

Our FHIT sheets are #40A (VITALink® CI/CIC and Ethernet) and #40B (VITALink® Armored). They can be accessed through the UL Directory or by visiting our website at www.comtrancorp.com.

2) Is VITALink® approved for use in Canada?

Yes, see approvals below.

- CAN/ULC-S139 Certified with Hose Stream Test for use in FHIT7 Systems 40A or 40B
- CEC and CSA listed FAS 105
- VITALink® CI/CIC cables must be installed in conduit per the Canadian Electric Code, no free air installations.

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 for VITALink® dual rated CI/CIC cables. Comtran is currently pursuing approval for VITALink® Ethernet and VITALink® Armored cables.

4) Is VITALink® approved for use in California?

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

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

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

All VITALink® cables are FPLR rated. The dual rated CI/CIC cables satisfy a plenum rating when installed in conduit.

6) Is VITALink® wet rated?

Yes, all VITALink® cables may be installed in damp locations, such as basements and tunnels, but they are not designed for prolonged submerged use.

VITALink® FAQs



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 (VITALink® CI/CIC & Ethernet)
- UL FHIT.40B and FHIT7.40B (VITALink® Armored)
- Manufacturer's installation instructions
- Splicing guide