



System No. 120

FHIT.120

Electrical Circuit Integrity Systems

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
 - Authorities Having Jurisdiction should be consulted before construction.
 - Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
 - When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
 - Only products which bear UL's Mark are considered Certified.
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FHIT - Electrical Circuit Integrity Systems

[See General Information for Electrical Circuit Integrity Systems](#)

System No. 120

December 30, 2016

Fire Rating - 1 Hr., 2 Hr.**

[RESERVED]

Fig. 1

Two-hole Steel Strap

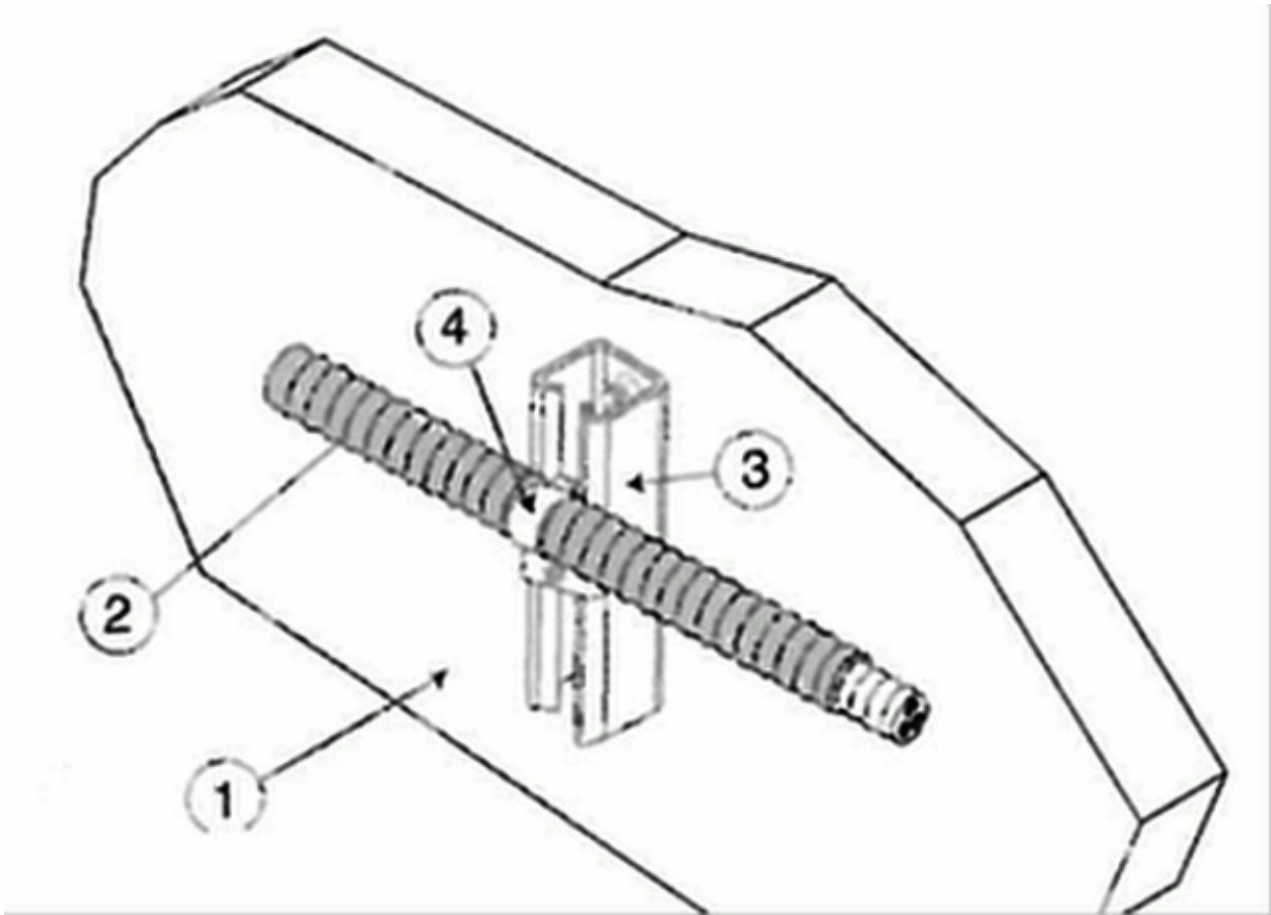


Fig.2
Kindorf J-800 Series Interlocking Strap

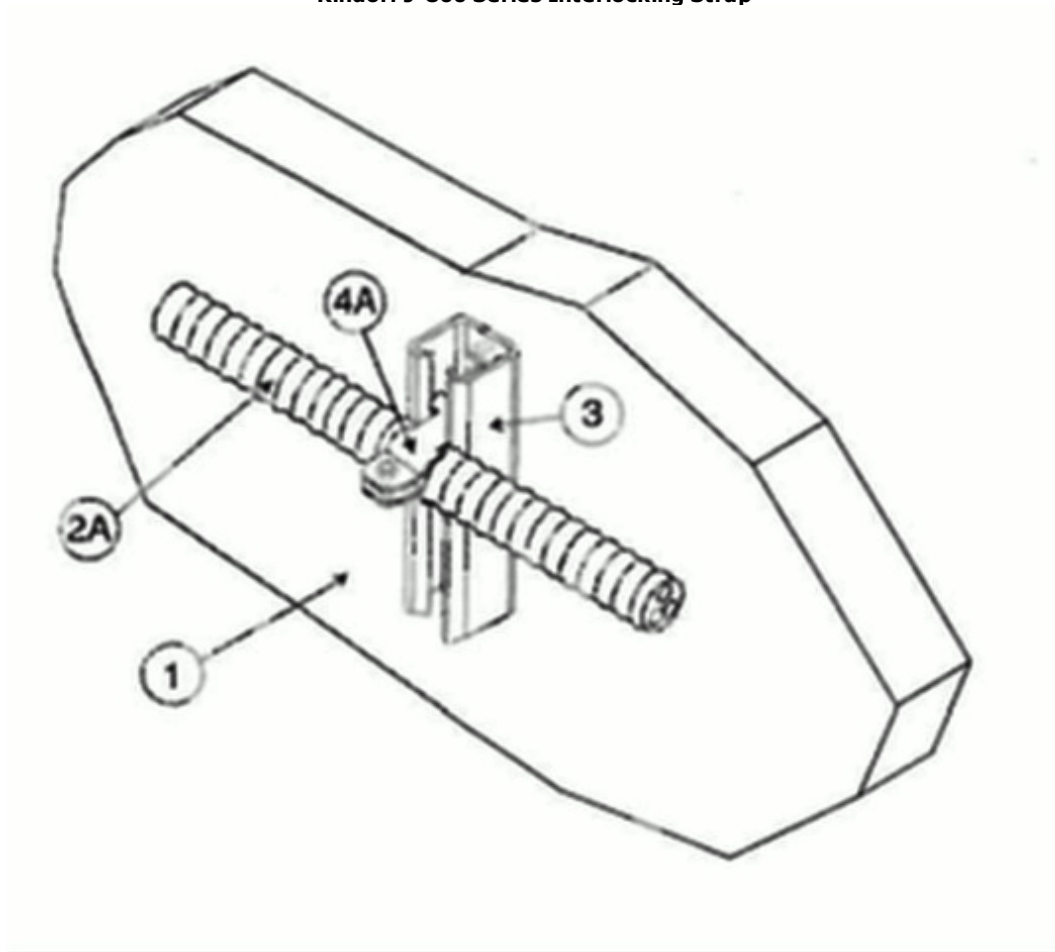


Fig.3
Two-piece Single-bolt Pipe Clamp

[RESERVED]
 Fig. 4
 Steel Strut Trapeze

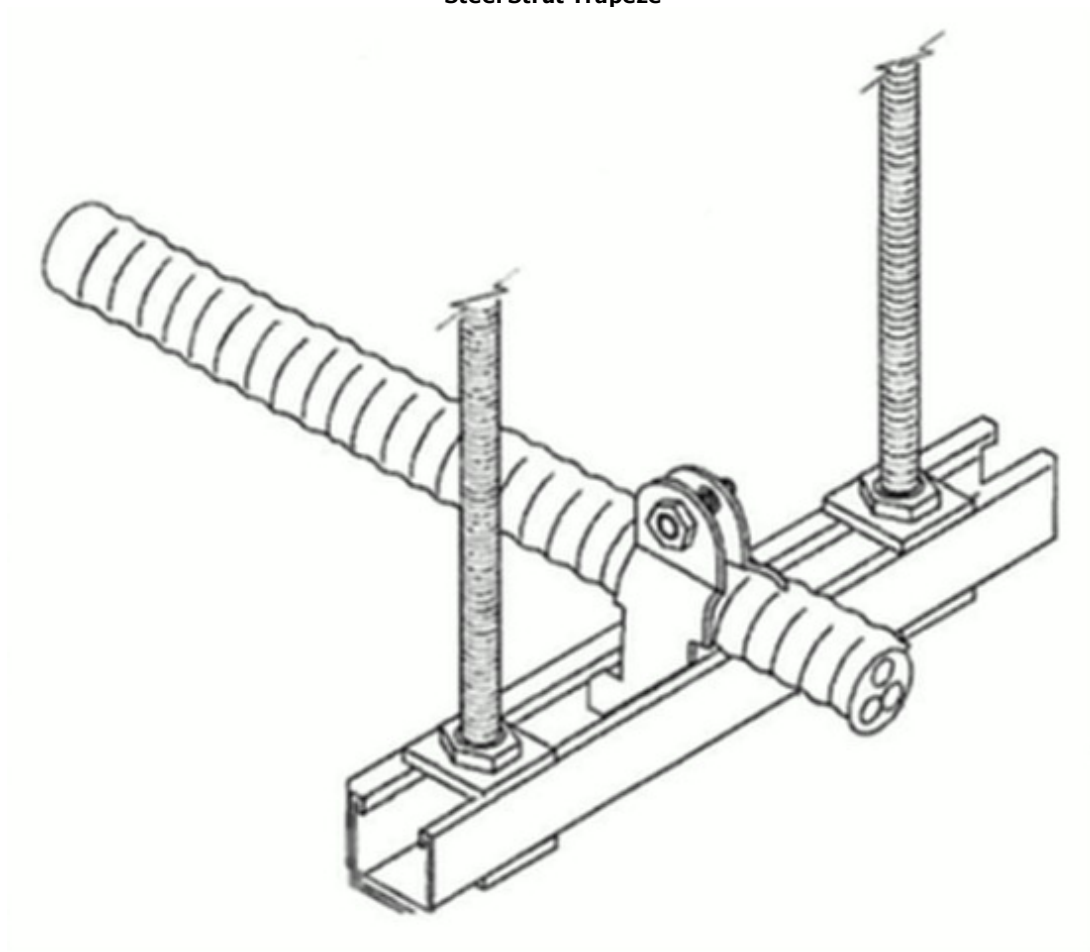


Fig. 5
 Steel Strut Trapeze

[RESERVED]
 Fig. 6
 Cable Tray

1. **Wall or Floor Assembly*** — Minimum 2 hour fire rated concrete or masonry wall or concrete floor. Opening in wall or floor through which cable or cable tray passes is to be sized to closely follow the contour of the cable or cable tray. Through opening in wall or floor to be firestopped using a compatible firestop system. See **Through-Penetration Firestop Systems** (Guide XHEZ) category for presently Classified firestop systems.

2. **Fire Resistive Cables*** — The hourly fire rating applies to cable passing completely through a fire zone and terminating a minimum of 12 inches beyond the fire rated wall or floor bounding the fire zone. The cables as identified below may be installed in the horizontal or vertical orientations.

MARMON WIRE & CABLE INC — Type MC (metal clad) VITALink MC Brand. To be installed as described herein and in accordance with the manufacturer's installation instructions dated May 2015, File R15365.

MARMON WIRE & CABLE INC — Type MC-HL (metal clad hazardous locations) VITALink MC Brand. To be installed as described herein and in accordance with the manufacturer's installation instructions dated May 2015, File R15365.

3. **Strap/Clamp-type Supports** — (Figures 1, 2 and 3) The MC cable(s) installed horizontally shall be secured to the steel struts by (Figure 1) two-hole steel strap, (Figure 2) Kindorf J-800 Series interlock strap, and/or (Figure 3) two-piece single-bolt pipe clamps. The MC cable(s) installed vertically shall be secured to the steel struts by (Figure 3) two-piece single-bolt pipe clamps. The MC-HL cable(s) shall be secured to the surface of the wall or floor by (Figure 1) two-hole steel strap and/or (Figure 2) Kindorf J-800 Series interlock strap. Refer to the Manufacturer's Installation Instructions for additional details.

3A. **Trapeze-type Supports** — (Figures 4 and 5) The MC and MC-HL cable(s) shall be installed on/from trapeze-type supports. The trapeze-type supports shall be secured from the surface of the floor. Refer to the Manufacturer's Installation Instructions for additional details.

3B. **Cable Tray-type Supports** — (Figure 6) The MC and MC-HL cable(s) shall be installed within cables trays. The cable tray-type supports shall be secured to the surface of the wall or floor. Refer to the Manufacturer's Installation Instructions for additional details.

4A. **Taped Splice — (Optional Not Shown)** — 1 and 2 Hr. Ratings at 480V line to line (277V line to ground) — The MC cable(s) in the horizontal orientation may be installed with a straight through crimp (two-way) taped splice for a 2 Hr. rating or a pig tail crimp taped splice for a 1 Hr. rating. The following components are required: *Adalet stainless steel NEMA 4X enclosure, stainless steel breather/drain, and *American Connector stainless steel MC connector-Type WT-WSE. Refer to the Manufacturer's 2 Hour Taped Splice Straight Through Crimp Installation Instructions dated November 1, 2016 for additional details. Refer to the Manufacturer's 1 Hour Taped Splice Pig Tail Crimp Installation Instructions dated February 9, 2016 for additional details.

4B. **Ceramic Block Splice — (Optional Not Shown)** — 2 Hr. Rating at 480V line to line (277V line to ground) — The MC cable(s), with conductors sized 2AWG-14AWG, in the horizontal or vertical orientation may be installed with block splices/taps. The following components are required: *Adalet stainless steel NEMA 4X enclosure and *American Connector stainless steel MC connector-Type WT-WSE. Refer to the Manufacturer's Block Splice Kit Installation Instructions dated November 1, 2016 for additional details.

* Bearing the Certification Mark of UL

** Only those products manufactured February 2014 and after are identified as 2-hr. rated for horizontal and vertical installations and 1-hr. rated for horizontal or vertical splices.

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