Okotherm® CIC P-OS Fire Resistant Cable

600V Instrumentation Cable—Type MC-HL C-L-X, Aluminum Sheath

Single & Multiple Pair or Triad - Tin or Nickel Coated Copper Conductors

90°C Wet or Dry Rating

For Cable Tray Use, Sunlight Resistant

Cable Description

Tin or nickel coated copper conductors,
Okotherm CIC fire resistant thermostet silicone insulation, with FR tape if required, color or number coded fiber glass braid, cabled conductors, tin or nickel coated drain wire, aluminum-mylar shield tape, aluminum CLX sheath, Okoseal (PVC) jacket.

Conductors: Tin or nickel coated copper

Insulation: Okotherm Thermostet Silicone, with FR tape if required

Braid: Fiber Glass Braid

Color Code: ICEA S-73-532, Method 7

Assembly: Pairs or triads assembled with left hand lay. Fiberglass fillers included where required to provide a round cable.

Cable Shield: Aluminum/mylar tape overlapped to provide 100% coverage and a 7-strand tin or nickel coated copper drain wire, same size as conductors.

Armor-CLX: Continuously Welded and Corrugated Aluminum

Outer Jacket: Black PVC

Applicable Industry Standards:


Flame Tests:

IEC 60331, ICEA T-29-520, IEEE 1202

Applications

Okotherm CIC 600 volt instrumentation cables are used in systems where, in the event of a fire, circuit integrity is required in order to maintain a process or to safely shut down the process. Fire resistance is determined by compliance to the IEC 60331 circuit integrity fire test. Okotherm CIC cables maintain circuit integrity based on qualification to IEC standard 60331, for all temperatures and times up to and including 200°F for three hours. When exposed to a fire, the Okotherm CIC insulation becomes an electrically insulating ceramic-like ash that is capable of maintaining the operating voltage.

Okotherm CIC CLX Type MC-HL cables with the impervious, continuous aluminum corrugated sheath are recommended as an alternative to a wire conduit system. These cables may be installed indoors or outdoors, in wet or dry locations, as open runs of cable secured to supports not more than six feet apart, in cable tray, as an aerial cable on a messanger, in any approved raceway, direct burial, or encased in concrete. They are used in systems where, in the event of a fire, circuit integrity is required in order to maintain a process or to safely shut down the process. Fire resistant - Qualified to meet IEC 60331, -11 & -21, including temperature and time up to 2000°F for 3 hours, respectively.

The overall shield eliminates most of the static interference from the electric field radiated by power cables and other electrical equipment.

Okotherm CIC 600 volt instrumentation cables should be considered on circuits designed for fire detection and suppression, alarms, communication, circuits requiring redundancy and personnel egress.

Product Features

- UL Listed as Type MC-HL cable E38916 and Marine Shipboard Cable E137931.
- UL Listed for cable tray use, direct burial (2/C 14 AWG and larger) and sunlight resistant.
- Passes the 210,000 BTU ICEA T-29-520 Vertical Tray Flame Test.
- Complete pre-packaged, factory-tested wiring system.
- Individual pairs or triads are numbered and color coded for simplified hook-up.
- C-L-X cables are quality control inspected to meet or exceed applicable UL standards.
- 90°C continuous operating temperature in all types of installations.
- 130°C emergency rating.
- 250°C short circuit rating.
- Good EMI shielding characteristics.
- Impervious, continuous metallic sheath excludes moisture, gases and liquids.
- Lower installed system cost than conduit or EMT systems.
- Provides excellent grounding safety.
- Excellent compression and impact resistance.
- Continuous long lengths.
- Minimum installation temperature of -40°C or °F.
- American Bureau of Shipping (ABS) listed as CWCMC Type MC-HL.
- Optional LSZH jacket available.
- 14 AWG sizes available upon request.
- Fire Resistant - Qualified to meet IEC 60331, -11 & -21, including temperature and time up to 2000°F for 3 hours, respectively.
- Fire Resistant - Qualified to meet the Hydrocarbon Pool Circuit Integrity Fire Test, utilizing the UL 1709 time-temperature curve, with minimum requirements of 65,000 BTU/h·ft² heat flux, 2000°F flame temperature, 30 minute test duration, and 15A load.
Okotherm CIC P-OS Fire Resistant

600V Instrumentation Cable — Type MC-HL, C-L-X Aluminum Sheath
Single, Multiple Pair or Triad Conductors- 90°C Wet or Dry Rating
For Cable Tray Use - Sunlight Resistant
Okotherm Insulation: 45 mils

**Product Data**

**Section 5: Sheet 45**

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<th>Conductor Size (AWG)</th>
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**Tin Coated Copper Conductors, IEC Rating: 750°C for 90 minutes**

**Nickel Coated Copper Conductors, IEC Rating: 2000°F for 3 hours**

**ELECTRICAL SPECIFICATIONS**

Per UL Standard 44

- Conductor Resistance, nominal (1 ft) : ohms/1000 ft @ 25°C
- Dielectric Test Voltage: 3000 V ac for 5 min.
- Insulation Resistance Constant @ 60°F minimum (natural material typical value)
- Loop Resistance, nominal (1 ft) : ohms/1000 ft @ 25°C

Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.22.