



Fire Cables

LPCB • UL • CPR • VDE • RoHS • NFPA





- Fire Resistant Cables
- Fire Performance Cables
- Fire Alarm Cables

www.zion-communication.com
HANGZHOU ZION COMMUNICATION CO., LTD.



Solutions
UL1424 / UL13



262/70



DIN



CABLES UNDER THE FIRE

Fires are not only a leading cause of structural damage but also pose a significant risk to human life, primarily due to the inhalation of toxic gases and the obscuration of escape routes by dense smoke. This underscores the critical need for effective fire management strategies, including the installation of resilient electrical systems.

Even the most advanced alarm and emergency systems may fail if fire compromises the integrity of their associated cabling. This vulnerability has prompted companies to invest heavily in the research and development of insulation materials and cables that perform optimally under fire conditions. These advancements aim to minimize the emission of fumes and acidic gases, and maintain circuit integrity even during a fire.

HANGZHOU ZION has been a key player in this market for over 15 years, leveraging its extensive research, innovative products, and rich experience to enhance fire safety in electrical infrastructures.

Through this catalog, we aim to share our expertise, our philosophy, and our approach to designing fire performance cables. We consider the cables presented here to be practical demonstrations of our capabilities. When it comes to creating a cable tailored to your unique needs, we're ready to collaborate. By understanding your specific circumstances, we can custom-design a cable that perfectly suits your requirements.



Fire-resistant cables are designed to maintain their ability to transmit energy and signals during a fire for the minimum durations specified by relevant standards and regulations. These cables ensure continued operation of critical systems under extreme conditions.

The behavior of cables in the presence of flames involves several vital aspects, primarily how the cable responds under these conditions. This has led to the distinction between two types of performance:

FLAME RETARDANT

Flame retardant cables are designed to resist the spread of fire. However, these cables are typically destroyed during a fire, resulting in a loss of circuit integrity and causing all connected systems to fail. The primary function of flame retardant cables is to prevent the propagation of flames, not to maintain service during a fire.

FIRE RESISTANT

Fire-resistant cables, on the other hand, are capable of maintaining circuit integrity and continue to operate in the presence of fire. This is crucial for systems such as fire alarms, emergency lighting, and voice alarm systems, which are vital for facilitating building evacuation, transmitting alarm signals, and activating extinguishing systems. Fire-resistant cables also possess flame-retardant properties, ensuring a higher level of security during a fire.

GAS EMISSION / SMOKE DENSITY

Additional considerations in this context include the type and amount of gases emitted during combustion. Often, the danger in fire incidents stems not only from the flames themselves but also from the toxic gases released by the burning materials.

Polyvinyl Chloride (PVC) is a commonly used material for the insulation and jacketing of electrical cables due to its excellent flame-retardant properties. This effectiveness is largely due to the presence of chlorine, a flame suppressant within the compound. However, chlorine can be highly corrosive and toxic when burned, producing dense, heavy smoke. These are critical issues that need to be mitigated in fire scenarios. To address these concerns, important features to consider include:

- Absence of Halogen (Acid Gas):
Selecting materials that do not release halogenated acids or other toxic gases when exposed to fire.
- Low Smoke Emission:

Using materials that produce minimal smoke, thereby improving visibility and reducing inhalation hazards during a fire.

To ensure these properties, specific tests aligned with various standards are conducted to verify the performance of these cables under fire conditions.

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CERTIFICATES & APPROVALS



UL Plenum



GAS EMISSION

■ IEC 60332-3, CEI 20-22/3

BS EN 60754-1

Each non metallic material of the cable (~1.0 g) is burnt into a tube furnace up to 800 °C. A controlled air flow rate absorbs the generated gases in a appropriate solution. The titration of the solution allows to determine the developed hydrochloric acid (HCl) amount



HCl Emission



■ IEC 60754-2, CEI 20-37/2-2

BS EN 60754-2

This test allows estimation of corrosiveness against metals of gases released when cables burn. Materials composing the cable are burnt into a tubular oven with temperature higher than 935 °C. A controlled air flow rate absorbs the generated gases in a specific distilled water solution. pH and conductivity are finally measured.

STANDARD

BS EN 50267-2-2, IEC 60754-2,
CEI 20-37/2-2

REQUIRED VALUES

pH 4,3
Conductivity 100 μ S.cm-1



Gas Corrosivity



SMOKE DENSITY

■ IEC 61034-2, CEI 20-37/3

BS EN 61034-2

In a 3 m cube metal cabinet, samples of cables are burned by 100 cm³ of alcohol contained in a metal tray. A photometric system is based on a light source and a photocell placed horizontally in the mid vertical plane of the cube, at height of 2.15 m. Absorbance or light transmission are measured.

STANDARD

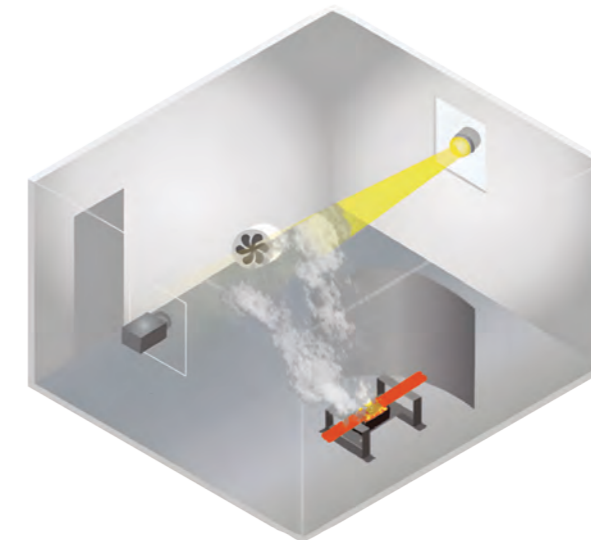
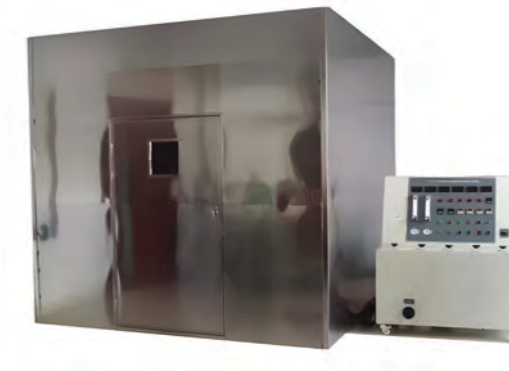
BS EN 61034-2, IEC 61034-2,
CEI 20-37/3 (Transmittance - LT)

REQUIRED VALUES

\geq 60% or 80%v



Smoke Density



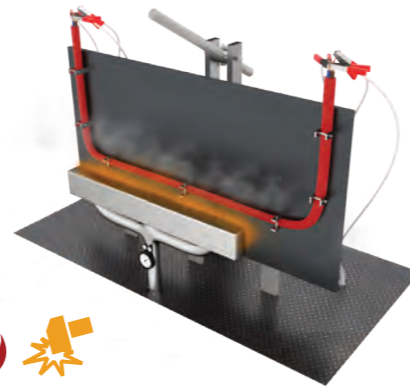
Fire Resistance/Performance Standards

■ BS EN 50200: 2015

This test is carried out to verify the circuit integrity of cables exposed to fire at 830°C and mechanical shocks.

CLASSIFICATION

EN50200 PH30	Flame exposure for 30 min
EN50200 PH120	Flame exposure for 120 min



BS EN 50200: 2015

■ BS EN 50200 annex E

Standard Cable - BS 5839-1 - Clause 26.2D

This test is carried out to verify circuit integrity during a fire. The cable is exposed to a flame at 830°C and mechanical shocks for 15 minutes and additional 15 minutes to flame, mechanical shocks and water spray.



BS EN 50200 annex E

■ BS 8434-2

Enhanced Cable - BS 5839-1 - Clause 26.2E

This test is carried out to verify circuit integrity during a fire. The cable is exposed to a flame at 930°C and mechanical shocks for 60 minutes and additional 60 minutes to flame, Mechanical shocks and water spray.



BS 8434-2

Fire Resistance/Performance Standards

BS 6387 CWZ

Following tests are carried out to verify if a cable is capable of maintaining circuit integrity under fire condition, fire with water, and fire with mechanical shocks. During the tests the cables are maintained at their rated voltage.

■ BS 6387 Cat. C

Fire Resistance

The cable is exposed to fire at the 950°C for 180 minutes.

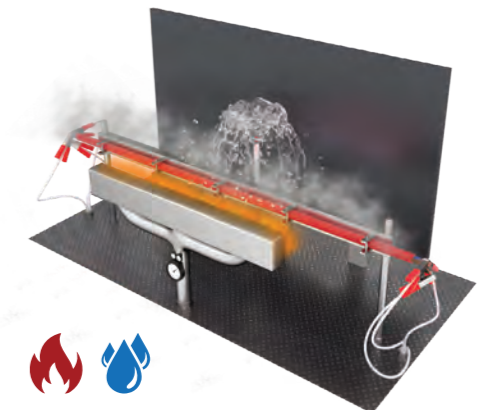


BS 6387 Cat. C

■ BS 6387 Cat. W

Fire And Water Resistance

The cable is exposed for 15 minutes to flame at 650°C and for additional 15 minutes to fire and water spray.

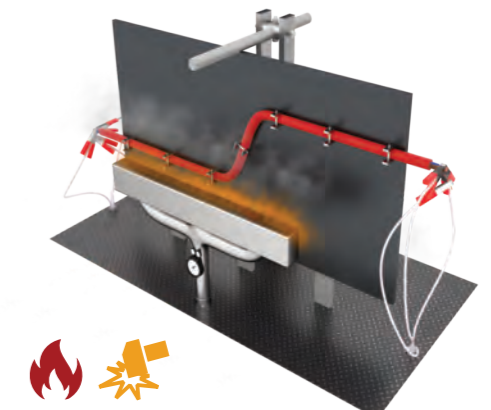


BS 6387 Cat. W

■ BS 6387 Cat. Z

Fire Resistance with Mechanical Shocks

The cable is mounted on a vertical panel and shocked with a steel bar for 15 minutes while submitted to the action of a flame.



BS 6387 Cat. Z

Fire Resistance/Performance Standards

Fire Propagation Test on Bunched Cable

■ IEC 60331, CEI 20-36

Fire Resistance

This test is carried out to verify circuit integrity even during a fire. A sample of cable is held on a flame at about 750°C for a period of minimum 90 min, under rated voltage. No break or short circuit should occur. The test can also be performed in more severe conditions, up to 1100 °C. Fibre optic cables can be tested in same conditions, monitoring the attenuation of the signal of one or more fibres.

CLASSIFICATION

CEI 20-36/2-1 – IEC 60331-21 – Electrical cables up to 0,6/1 kV

CEI 20-36/2-3 – IEC 60331-23 – Data cables

CEI 20-36/2-5 – IEC 60331-25 – Fibre optic cables



IEC 60331, CEI 20-36

Fire & Flame Information

Flame Propagation Test on a Single Cable

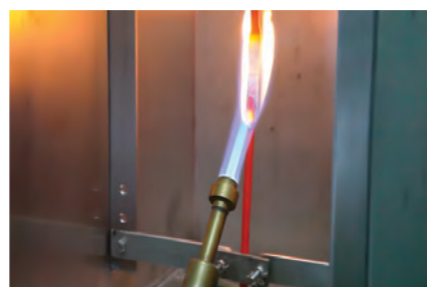
■ IEC 60332-1, CEI 20-35/1

BS EN 60332-1

■ IEC 60332-1, CEI 20-35/2 for small diameter cables

BS EN 60332-2

A 60 cm long sample of cable is vertically fixed with two clamps inside a small cabin, open on the front. The cable is subjected to the action of a flame produced by a calibrated Bunsen burner. The application time of the flame is according to the cable diameter (60-480 seconds). At the end of the test the burnt portion of cable must not be 50 mm close to the higher clamp.



IEC 60332-1

Fire Propagation Test on Bunched Cable

■ IEC 60332-3, CEI 20-22/3

BS EN 60332-3

Samples of cables 3,5 m long in quantities required by standard are installed on a ladder inside a metallic cabinet. They are subjected to the action of a flame at 750°C for a specific time (20 or 40 minutes). Cables must not burn for more than 2,5 m.



IEC 60332-3

Construction & General Information



■ Sheath

To enhance safety in the event of a fire, the sheath is constructed from Low Smoke Zero Halogen (LSZH) materials. This choice ensures that the fire does not spread and prevents the release of toxic or corrosive gases while minimizing the emission of white fumes.

■ Insulation

The most prevalent technologies to maintain the integrity of electric cable connections during a fire are:

- Ceramified silicone-rubber
- Mica-glass tape and Cross-linked polyolefin

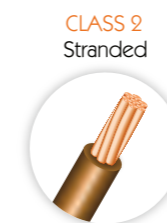
Historically, mica tape taping has been the conventional method due to its compatibility with various insulation materials and its inherent fire resistance.

However, silicone rubber has recently become the preferred choice because it facilitates and speeds up the installation process. This material is especially appreciated for its easy-peeling features and for eliminating the necessity for extra taping.



■ Conductor

Conductors are typically manufactured in accordance with EN 60228 standards.



The type of conductors is selected based on electrical characteristics, required flexibility, connection systems, or specific installation conditions. For instance:

- In environments with vibration, movement, or a reduced bending radius, a class 5 flexible conductor is preferable.
- For permanent installations with crimping terminations, a class 1 solid conductor is ideal.
- In corrosive atmospheres, high temperatures, or situations where soldering is necessary, a tinned conductor is recommended.

EN 50200:2015 Class PH 120 STR Flexible Cable

LPCB Certificated

EN 50200 PH120 STR FLEXIBLE CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 5
STR Flexible

Insulation:

Special Mix Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White | Orange

REFERENCE STANDARDS

Flame Propagation

EN 50200:2015 Class PH120

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V




Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

IDENTIFICATION OF CORES

2 cores 
3 cores 
4 cores 

POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables LPCB EN50200:2015 Class PH120 STR Flexible
300/500V xCxSQMM+BATCH NO.+METER MARKING

LPCB EN 50200:2015 Class PH 120 CABLE STR Flexible

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
L7110701C5Rxxx	2x0.50 mm ²	16x0.20 mm	16x0.20 mm	5.6±0.2 mm
L7110702C5Rxxx	2x0.75 mm ²	24x0.20 mm	24x0.20 mm	6.0±0.2 mm
L7110703C5Rxxx	2x1.00 mm ²	32x0.20 mm	32x0.20 mm	6.5±0.2 mm
L7110704C5Rxxx	2x1.50 mm ²	30x0.25 mm	30x0.25 mm	7.4±0.2 mm
L7110705C5Rxxx	2x2.50 mm ²	50x0.25 mm	50x0.25 mm	8.8±0.2 mm
L7110706C5Rxxx	2x4.00 mm ²	81x0.25 mm	81x0.25 mm	11.0±0.2 mm
L7110707C5Rxxx	2x6.00 mm ²	122x0.25 mm	122x0.25 mm	12.6±0.2 mm
L7110731C5Rxxx	3x0.50 mm ²	16x0.20 mm	16x0.20 mm	5.7±0.2 mm
L7110732C5Rxxx	3x0.75 mm ²	24x0.20 mm	24x0.20 mm	6.2±0.2 mm
L7110733C5Rxxx	3x1.00 mm ²	32x0.20 mm	32x0.20 mm	6.7±0.2 mm
L7110734C5Rxxx	3x1.50 mm ²	30x0.25 mm	30x0.25 mm	7.6±0.2 mm
L7110735C5Rxxx	3x2.50 mm ²	50x0.25 mm	50x0.25 mm	9.1±0.2 mm
L7110736C5Rxxx	3x4.00 mm ²	81x0.25 mm	81x0.25 mm	11.3±0.2 mm
L7110737C5Rxxx	3x6.00 mm ²	122x0.25 mm	122x0.25 mm	13.0±0.2 mm
L7110751C5Rxxx	4x0.50 mm ²	16x0.20 mm	16x0.20 mm	6.3±0.2 mm
L7110752C5Rxxx	4x0.75 mm ²	24x0.20 mm	24x0.20 mm	6.8±0.2 mm
L7110753C5Rxxx	4x1.00 mm ²	32x0.20 mm	32x0.20 mm	7.4±0.2 mm
L7110754C5Rxxx	4x1.50 mm ²	30x0.25 mm	30x0.25 mm	8.4±0.2 mm
L7110755C5Rxxx	4x2.50 mm ²	50x0.25 mm	50x0.25 mm	10.1±0.2 mm
L7110756C5Rxxx	4x4.00 mm ²	81x0.25 mm	81x0.25 mm	12.7±0.2 mm
L7110757C5Rxxx	4x6.00 mm ²	122x0.25 mm	122x0.25 mm	14.8±0.2 mm

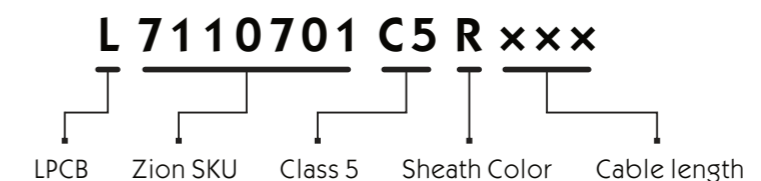
* Cable certified by LPCB BRE GLOBAL

* If the cables are with a WHITE outer sheath the ZION CODE will change in: L*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Label; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



EN 50200:2015 Class PH 120 Solid Cable

LPCB Certificated

EN 50200 PH120 SOLID CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 1
Solid

Insulation:

Special Mix Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White | Orange

REFERENCE STANDARDS

Flame Propagation

EN 50200:2015 Class PH120

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V

Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

IDENTIFICATION OF CORES

2 cores



3 cores



4 cores



POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables LPCB EN50200:2015 Class PH120 Solid
300/500V xCxSQMM+BATCH NO.+METER MARKING

LPCB EN 50200:2015 Class PH 120 CABLE SOLID

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
L7110701C1Rxxx	2x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	5.6±0.2 mm
L7110702C1Rxxx	2x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.0±0.2 mm
L7110703C1Rxxx	2x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	6.5±0.2 mm
L7110704C1Rxxx	2x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	7.4±0.2 mm
L7110705C1Rxxx	2x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	8.8±0.2 mm
L7110706C1Rxxx	2x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	11.0±0.2 mm
L7110707C1Rxxx	2x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	12.6±0.2 mm
L7110731C1Rxxx	3x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	5.7±0.2 mm
L7110732C1Rxxx	3x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.2±0.2 mm
L7110733C1Rxxx	3x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	6.7±0.2 mm
L7110734C1Rxxx	3x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	7.6±0.2 mm
L7110735C1Rxxx	3x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	9.1±0.2 mm
L7110736C1Rxxx	3x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	11.3±0.2 mm
L7110737C1Rxxx	3x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	13.0±0.2 mm
L7110751C1Rxxx	4x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	6.3±0.2 mm
L7110752C1Rxxx	4x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.8±0.2 mm
L7110753C1Rxxx	4x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	7.4±0.2 mm
L7110754C1Rxxx	4x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	8.4±0.2 mm
L7110755C1Rxxx	4x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	10.1±0.2 mm
L7110756C1Rxxx	4x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	12.7±0.2 mm
L7110757C1Rxxx	4x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	14.8±0.2 mm

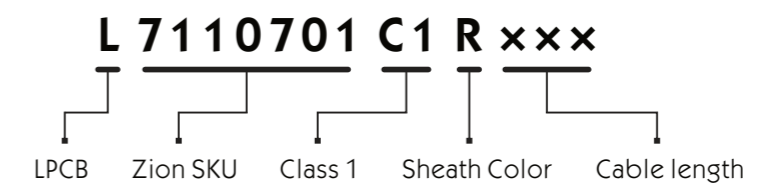
* Cable certified by LPCB BRE GLOBAL

* If the cables are with a WHITE outer sheath the ZION CODE will change in: L*****C1W***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



BS 6387:2013 Cat.C-W-Z STR Flexible Cable

LPCB Certificated

BS 6387 CWZ STR FLEXIBLE CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 5
Stranded

Insulation:

Ceramicized Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White

REFERENCE STANDARDS

Flame Propagation

BS 6387:2013 Cat.C-W-Z
EN 50200:2015 Class PH120
EN 60332-3-24:2009
EN 60332-1-2:2004

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation



-30°C up to +180°C

During Installation

-5°C up to +50°C



IDENTIFICATION OF CORES

2 cores 
3 cores 
4 cores 

ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V

Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables LPCB BS 6387:2013 Cat.C-W-Z STR FLEXIBLE
300/500V xCxSQMM+BATCH NO.+METER MARKING

LPCB BS 6387:2013 Cat.C-W-Z STR Flexible Cable

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
L7110801C5Rxxx	2x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	5.6±0.2 mm
L7110802C5Rxxx	2x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.0±0.2 mm
L7110803C5Rxxx	2x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.5±0.2 mm
L7110804C5Rxxx	2x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.4±0.2 mm
L7110805C5Rxxx	2x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.8±0.2 mm
L7110806C5Rxxx	2x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.0±0.2 mm
L7110807C5Rxxx	2x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	12.6±0.2 mm
L7110831C5Rxxx	3x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	5.7±0.2 mm
L7110832C5Rxxx	3x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.2±0.2 mm
L7110833C5Rxxx	3x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.7±0.2 mm
L7110834C5Rxxx	3x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.6±0.2 mm
L7110835C5Rxxx	3x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	9.1±0.2 mm
L7110836C5Rxxx	3x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.3±0.2 mm
L7110837C5Rxxx	3x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	13.0±0.2 mm
L7110851C5Rxxx	4x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	6.3±0.2 mm
L7110852C5Rxxx	4x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.8±0.2 mm
L7110853C5Rxxx	4x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	7.4±0.2 mm
L7110854C5Rxxx	4x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	8.4±0.2 mm
L7110855C5Rxxx	4x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	10.1±0.2 mm
L7110856C5Rxxx	4x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	12.7±0.2 mm
L7110857C5Rxxx	4x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	14.8±0.2 mm

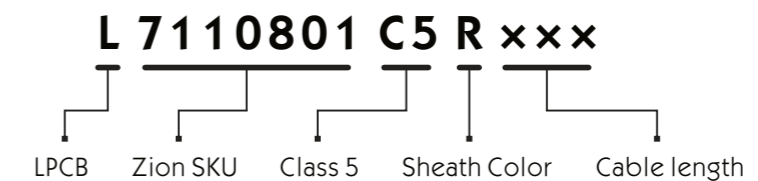
* Cable certified by LPCB BRE GLOBAL

* If the cables are with a WHITE outer sheath the ZION CODE will change in: L*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Label; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



BS 6387:2013 Cat.C-W-Z Solid Cable

LPCB Certificated

BS 6387 CWZ SOLID CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 1
Solid

Insulation:

Ceramicized Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White

REFERENCE STANDARDS

Flame Propagation

BS 6387:2013 Cat.C-W-Z
EN 50200:2015 Class PH120
EN 60332-3-24:2009
EN 60332-1-2:2004

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



IDENTIFICATION OF CORES

2 cores 
3 cores 
4 cores 

ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V

Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables LPCB BS 6387:2013 Cat.C-W-Z Solid
300/500V xCxSQMM+BATCH NO.+METER MARKING

LPCB BS 6387:2013 Cat.C-W-Z Solid Cable

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
L7110801C1Rxxx	2x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	5.6±0.2 mm
L7110802C1Rxxx	2x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.0±0.2 mm
L7110803C1Rxxx	2x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	6.5±0.2 mm
L7110804C1Rxxx	2x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	7.4±0.2 mm
L7110805C1Rxxx	2x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	8.8±0.2 mm
L7110806C1Rxxx	2x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	11.0±0.2 mm
L7110807C1Rxxx	2x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	12.6±0.2 mm
L7110831C1Rxxx	3x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	5.7±0.2 mm
L7110832C1Rxxx	3x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.2±0.2 mm
L7110833C1Rxxx	3x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	6.7±0.2 mm
L7110834C1Rxxx	3x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	7.6±0.2 mm
L7110835C1Rxxx	3x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	9.1±0.2 mm
L7110836C1Rxxx	3x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	11.3±0.2 mm
L7110837C1Rxxx	3x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	13.0±0.2 mm
L7110851C1Rxxx	4x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	6.3±0.2 mm
L7110852C1Rxxx	4x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.8±0.2 mm
L7110853C1Rxxx	4x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	7.4±0.2 mm
L7110854C1Rxxx	4x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	8.4±0.2 mm
L7110855C1Rxxx	4x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	10.1±0.2 mm
L7110856C1Rxxx	4x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	12.7±0.2 mm
L7110857C1Rxxx	4x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	14.8±0.2 mm

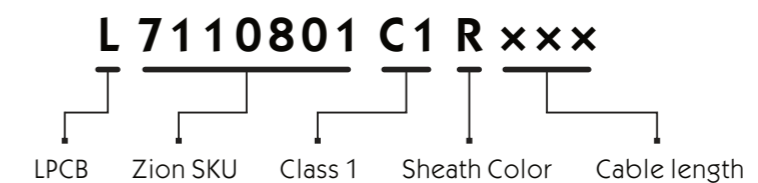
* Cable certified by LPCB BRE GLOBAL

* If the cables are with a WHITE outer sheath the ZION CODE will change in: L*****C1W***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



EN 50200:2015 Class PH 120 STR Flexible Cable

UL Certificate Number: UL-US-2319226-1

EN 50200 PH120 STR FLEXIBLE CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 5
STR Flexible

Insulation:

Special Mix Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White | Orange

REFERENCE STANDARDS

Flame Propagation

EN 50200:2015 Class PH120

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V

Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

IDENTIFICATION OF CORES

2 cores



3 cores



4 cores



POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables UL EN50200:2015 Class PH120 STR Flexible
300/500V xCxSQMM+BATCH NO.+METER MARKING

UL EN 50200:2015 Class PH 120 CABLE STR Flexible

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
U7110441C5Rxxx	2x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	5.6±0.2 mm
U7110442C5Rxxx	2x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.0±0.2 mm
U7110451C5Rxxx	2x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.5±0.2 mm
U7110452C5Rxxx	2x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.4±0.2 mm
U7110453C5Rxxx	2x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.8±0.2 mm
U7110454C5Rxxx	2x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.0±0.2 mm
U7110455C5Rxxx	2x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	12.6±0.2 mm
U7110443C5Rxxx	3x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	5.7±0.2 mm
U7110444C5Rxxx	3x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.2±0.2 mm
U7110456C5Rxxx	3x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.7±0.2 mm
U7110457C5Rxxx	3x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.6±0.2 mm
U7110458C5Rxxx	3x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	9.1±0.2 mm
U7110459C5Rxxx	3x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.3±0.2 mm
U7110470C5Rxxx	3x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	13.0±0.2 mm
U7110445C5Rxxx	4x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	6.3±0.2 mm
U7110446C5Rxxx	4x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.8±0.2 mm
U7110460C5Rxxx	4x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	7.4±0.2 mm
U7110461C5Rxxx	4x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	8.4±0.2 mm
U7110462C5Rxxx	4x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	10.1±0.2 mm
U7110463C5Rxxx	4x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	12.7±0.2 mm
U7110472C5Rxxx	4x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	14.8±0.2 mm

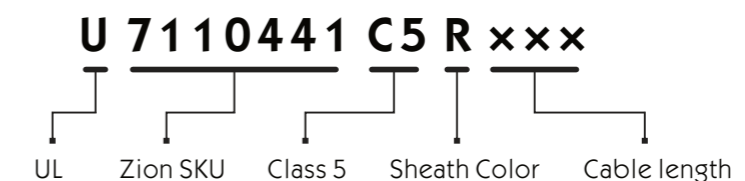
* Cable certified by UL GLOBAL

* If the cables are with a WHITE outer sheath the ZION CODE will change in: U*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Label; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



EN 50200:2015 Class PH 120 Solid Cable

UL Certificate Number: UL-US-2319226-1

EN 50200 PH120 SOLID CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 1
Solid

Insulation:

Special Mix Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White | Orange

REFERENCE STANDARDS

Flame Propagation

EN 50200:2015 Class PH120

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation




-30°C up to +180°C

During Installation

-5°C up to +50°C



IDENTIFICATION OF CORES

2 cores 
3 cores 
4 cores 

ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V

Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables UL EN50200:2015 Class PH120 Solid
300/500V xCxSQMM+BATCH NO.+METER MARKING

UL EN 50200:2015 Class PH 120 CABLE SOLID

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
U7110441C1Rxxx	2x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	5.6±0.2 mm
U7110442C1Rxxx	2x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.0±0.2 mm
U7110451C1Rxxx	2x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	6.5±0.2 mm
U7110452C1Rxxx	2x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	7.4±0.2 mm
U7110453C1Rxxx	2x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	8.8±0.2 mm
U7110454C1Rxxx	2x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	11.0±0.2 mm
U7110455C1Rxxx	2x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	12.6±0.2 mm
U7110443C1Rxxx	3x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	5.7±0.2 mm
U7110444C1Rxxx	3x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.2±0.2 mm
U7110456C1Rxxx	3x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	6.7±0.2 mm
U7110457C1Rxxx	3x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	7.6±0.2 mm
U7110458C1Rxxx	3x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	9.1±0.2 mm
U7110459C1Rxxx	3x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	11.3±0.2 mm
U7110470C1Rxxx	3x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	13.0±0.2 mm
U7110445C1Rxxx	4x0.50 mm ²	1x0.80 mm	1.80±0.10 mm	6.3±0.2 mm
U7110446C1Rxxx	4x0.75 mm ²	1x0.98 mm	2.00±0.10 mm	6.8±0.2 mm
U7110460C1Rxxx	4x1.00 mm ²	1x1.13 mm	2.20±0.10 mm	7.4±0.2 mm
U7110461C1Rxxx	4x1.50 mm ²	1x1.38 mm	2.60±0.10 mm	8.4±0.2 mm
U7110462C1Rxxx	4x2.50 mm ²	1x1.78 mm	3.20±0.10 mm	10.1±0.2 mm
U7110463C1Rxxx	4x4.00 mm ²	1x2.25 mm	4.20±0.10 mm	12.7±0.2 mm
U7110472C1Rxxx	4x6.00 mm ²	1x2.76 mm	5.00±0.10 mm	14.8±0.2 mm

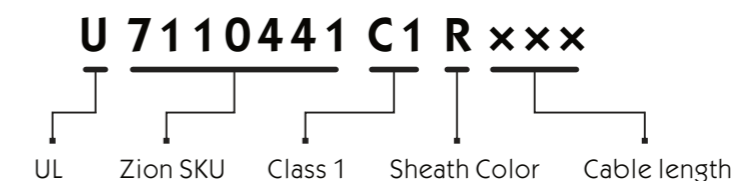
* Cable certified by UL GLOBAL

* If the cables are with a WHITE outer sheath the ZION CODE will change in: U*****C1W***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



EN 50575:2014 +A1:2016 CPR Cca s1b,d0,a1 Cable

CPR Cca Certificated

EN 50575:2014 +A1:2016 CPR Cca s1b,d0,a1 Cable



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 5
STR Flexible

Insulation:

Special Mix Silicon Rubber

Screen 1st:

Fibre Glass Tape, >110% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White | Orange

REFERENCE STANDARDS

EU No 305/2011: CPR-Cables

EN 50575:2014+A1:2016

EN 50399

EN 60332-1-2

EN 61034-2:2005+A2:2013

EN 60754-1:2014

EN 60754-2:2014

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V




Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

IDENTIFICATION OF CORES

2 cores 
3 cores 
4 cores 

POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables CPR EN 50575:2014+A1:2016 Cca s1b,d0,a1 STR Flexible
300/500V xCxSQMM+BATCH NO.+METER MARKING

EN 50575:2014 +A1:2016 CPR Cca s1b,d0,a1 Cable

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
C7110901CbC5Rxxx	2x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	5.6±0.2 mm
C7110902CbC5Rxxx	2x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.0±0.2 mm
C7110903CbC5Rxxx	2x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.5±0.2 mm
C7110904CbC5Rxxx	2x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.4±0.2 mm
C7110905CbC5Rxxx	2x2.00 mm ²	45x0.25 mm	3.00±0.10 mm	8.2±0.2 mm
C7110906CbC5Rxxx	2x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.8±0.2 mm
C7110907CbC5Rxxx	2x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.0±0.2 mm
C7110908CbC5Rxxx	2x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	12.6±0.2 mm
C7110931CbC5Rxxx	3x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	5.7±0.2 mm
C7110932CbC5Rxxx	3x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.2±0.2 mm
C7110933CbC5Rxxx	3x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.7±0.2 mm
C7110934CbC5Rxxx	3x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.6±0.2 mm
C7110935CbC5Rxxx	3x2.00 mm ²	45x0.25 mm	3.00±0.10 mm	8.7±0.2 mm
C7110936CbC5Rxxx	3x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	9.1±0.2 mm
C7110937CbC5Rxxx	3x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.3±0.2 mm
C7110938CbC5Rxxx	3x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	13.0±0.2 mm
C7110951CbC5Rxxx	4x0.50 mm ²	16x0.20 mm	1.80±0.10 mm	6.3±0.2 mm
C7110952CbC5Rxxx	4x0.75 mm ²	24x0.20 mm	2.00±0.10 mm	6.8±0.2 mm
C7110953CbC5Rxxx	4x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	7.4±0.2 mm
C7110954CbC5Rxxx	4x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	8.4±0.2 mm
C7110955CbC5Rxxx	4x2.00 mm ²	45x0.25 mm	3.00±0.10 mm	9.6±0.2 mm
C7110956CbC5Rxxx	4x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	10.1±0.2 mm
C7110957CbC5Rxxx	4x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	12.7±0.2 mm
C7110958CbC5Rxxx	4x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	14.8±0.2 mm

* Cable certified by EU No 305/2011 CPR-Cables

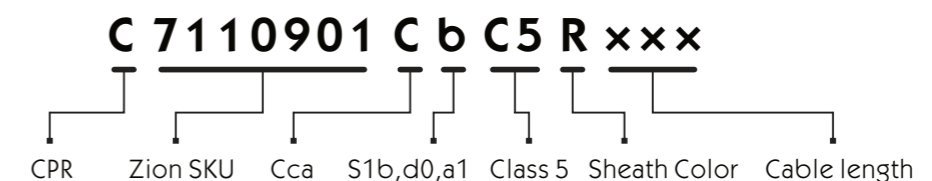
* If the smoke test standard is s1 then the ZION code will change in with "b"

* If the cables are with a WHITE outer sheath the ZION CODE will change in: C*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



EN 50200:2015 Class PH 30 STR Flexible Cable



CONSTRUCTION

Conductors:
Plain annealed copper wire,
Class 5
STR Flexible

Insulation:
Special Mix Silicon Rubber

Screen 1st:
PET Foil, >120% Coverage

Drain Wire:
Tinned Copper; OD: 0.80mm

Screen 2nd:
Aluminum Polyester Tape, >120% Coverage

Outer Sheath:
Thermoplastic Low Smoke, Halogen Free

Sheath Color:
Red | White | Orange

REFERENCE STANDARDS

Flame Propagation
EN 50200:2015 Class PH30
IEC 60331-21:1999

Acidity
EN / IEC 60754-1:2014

Smoke Density
EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation
-30°C up to +180°C
During Installation
-5°C up to +50°C



ELECTRICAL DATA




Insulation Resistance @ 20°C:
> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen
2000 V / 2000V

Mutual Capacitance:
< 150 nF/km

Operating Voltage:
300/500 V

IDENTIFICATION OF CORES

2 cores 
3 cores 
4 cores 

POPULAR PACKING

100M, 300M, 500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables EN50200:2015 Class PH30 STR Flexible
300/500V xCxSQMM+BATCH NO.+METER MARKING

EN 50200:2015 Class PH 30 CABLE STR Flexible

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
7110401C5Rxxx	2x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.1±0.2 mm
7110402C5Rxxx	2x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.1±0.2 mm
7110403C5Rxxx	2x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.3±0.2 mm
7110404C5Rxxx	2x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	9.6±0.2 mm
7110405C5Rxxx	2x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	11.5±0.2 mm
7110406C5Rxxx	3x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.5±0.2 mm
7110407C5Rxxx	3x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.4±0.2 mm
7110408C5Rxxx	3x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.7±0.2 mm
7110409C5Rxxx	3x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	10.1±0.2 mm
7110410C5Rxxx	4x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	7.1±0.2 mm
7110411C5Rxxx	4x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	8.2±0.2 mm
7110412C5Rxxx	4x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	9.8±0.2 mm
7110413C5Rxxx	4x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.4±0.2 mm

* Cable certified by EU No 305/2011 CPR-Cables

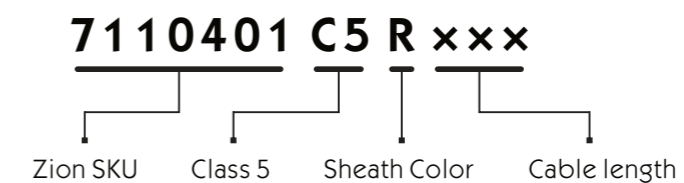
* If the smoke test standard is s1 then the ZION code will change in with "b"

* If the cables are with a WHITE outer sheath the ZION CODE will change in: C*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



BS 7629-1:2015 Standard 60 STR Flexible Cable

BS 7629-1: 2015 STANDARD 60 STR FIRE CABLE



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 5
STR Flexible

Insulation:

Special Mix Silicon Rubber

Screen 1st:

PET Foil, >120% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

Thermoplastic Low Smoke, Halogen Free

Sheath Color:

Red | White | Orange

REFERENCE STANDARDS

Flame Propagation

BS 7629-1:2015 (Standard 60)
BS 6387:2013(CWZ)
EN 50200:2015 Annex E(30 mins)
BS 5839-1:2013(Clause 26.2d standard)

Acidity

EN / IEC 60754-1:2014

Smoke Density

EN / IEC 61034-2:2005+A1:2013

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 200 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

2000 V / 2000V

Mutual Capacitance:

< 150 nF/km

Operating Voltage:

300/500 V

IDENTIFICATION OF CORES

2 cores



3 cores



4 cores



POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius
8 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables BS 7629-1:2015 (Standard 60) STR Flexible
300/500V xCxSQMM+BATCH NO.+METER MARKING

BS 7629-1:2015 Standard 60 STR Flexible Fire Cables

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
7113101C5Rxxx	2x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.1±0.2 mm
7113102C5Rxxx	2x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.1±0.2 mm
7113103C5Rxxx	2x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.3±0.2 mm
7113104C5Rxxx	2x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	9.6±0.2 mm
7113105C5Rxxx	2x6.00 mm ²	122x0.25 mm	5.00±0.10 mm	11.5±0.2 mm
7113106C5Rxxx	3x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	6.5±0.2 mm
7113207C5Rxxx	3x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	7.4±0.2 mm
7113308C5Rxxx	3x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	8.7±0.2 mm
7113109C5Rxxx	3x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	10.1±0.2 mm
7113110C5Rxxx	4x1.00 mm ²	32x0.20 mm	2.20±0.10 mm	7.1±0.2 mm
7113111C5Rxxx	4x1.50 mm ²	30x0.25 mm	2.60±0.10 mm	8.2±0.2 mm
7113112C5Rxxx	4x2.50 mm ²	50x0.25 mm	3.20±0.10 mm	9.8±0.2 mm
7113113C5Rxxx	4x4.00 mm ²	81x0.25 mm	4.20±0.10 mm	11.4±0.2 mm

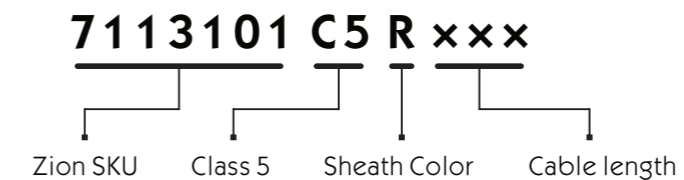
* Cable tested as BS 7629-1:2015 Standard 60

* If the cables are with a WHITE outer sheath the ZION CODE will change in: 7*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Label; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



JE-H(St)H...Bd FE180-E30/E90 Solid Fire Cable

Fire Communication cable with circuit integrity

JE-H(St)H...Bd FE180-E30/E90 Solid Fire Cable



CONSTRUCTION

Conductors:

Plain annealed copper wire,
Class 1
Solid

Insulation:

FRNC-compound HI 1

Screen 1st:

Fibre Foil, >120% Coverage

Drain Wire:

Tinned Copper; OD: 0.80mm

Screen 2nd:

Aluminum Polyester Tape, >120% Coverage

Outer Sheath:

FRNC-compound HM2

Sheath Color:

Orange

REFERENCE STANDARDS

Flame Propagation

VDE 0482-266-2-4/IEC 60332-3-24

Fire Resistant

VDE 0472-814/IEC 60331-11(FE 180)

Circuit Integrity

E30/E90: DIN 4102-12

Halogen Free

DIN EN 50267/IEC 60754

Smoke Density

DIN EN 61034/IEC 61034

TEMPERATURE RANGE

During Operation

-30°C up to +180°C

During Installation

-5°C up to +50°C



ELECTRICAL DATA

Insulation Resistance @ 20°C:

> 100 M Ohm*Km

Test Voltage Core-Core/ Core-Screen

500 V / 2000V

Mutual Capacitance:

< 120 nF/km at 800 Hz

Peak Operating Voltage:

225 V

IDENTIFICATION OF CORES

Colours acc. to VDE 0815

POPULAR PACKING

100M,300M,500M Wooden Spool

CHARACTERISTICS

Min. Bending Radius

7.5 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables JE-H(St)H...Bd FE180/E30-E90 Solid
x C x SQMM + BATCH NO. + METER MARKING

JE-H(St)H FE180-E30/E90 Solid Fire Cables

ZION CODE	No of conductors x cross section [mm ²]	CONDUCTOR NOM.DIA [mm]	DIELECTRIC NOM.DIA [mm]	OUTER NOM.DIA [mm]
7115001C1ORxxx	1x2x0.8	0.8±0.005 mm	12	6.1±0.2 mm
7115002C1ORxxx	2x2x0.8	0.8±0.005 mm	25	7.1±0.2 mm
7115003C1ORxxx	4x2x0.8	0.8±0.005 mm	45	8.3±0.2 mm
7115004C1ORxxx	8x2x0.8	0.8±0.005 mm	85	9.6±0.2 mm
7115005C1ORxxx	12x2x0.8	0.8±0.005 mm	126	11.5±0.2 mm
7115006C1ORxxx	16x2x0.8	0.8±0.005 mm	166	6.5±0.2 mm
7115007C1ORxxx	20x2x0.8	0.8±0.005 mm	206	7.4±0.2 mm
7115008C1ORxxx	32x2x0.8	0.8±0.005 mm	326	8.7±0.2 mm
7115009C1ORxxx	40x2x0.8	0.8±0.005 mm	407	10.1±0.2 mm
7115010C1ORxxx	52x2x0.8	0.8±0.005 mm	529	7.1±0.2 mm

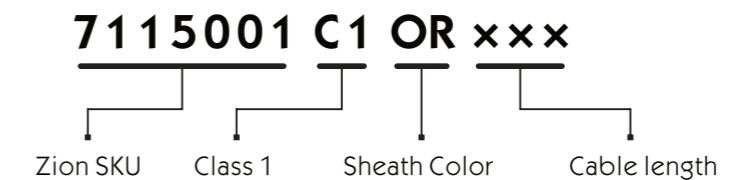
* Cable tested as VDE 0472 / VDE 0482

* If the cables are with a WHITE outer sheath the ZION CODE will change in: 7*****C5W***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

Zion Code Naming rules



UL Fire Alarm Cable Plenum Rated Shielded

UL Certificate Number: E541137



CONSTRUCTION

Conductors:

Plain annealed copper wire,
SOL = Solid = Class 1
STR = Stranded = Class 2 or Class 5

Insulation:

LS-PVC

Drain Wire:

Tinned Copper drain wire

Screen

Aluminum Mylar Tape

Ripcord

With

Outer Sheath:

LS-PVC

Sheath Color:

Red /White/ More...

REFERENCE STANDARDS

NEC Article 725
NEC Article 760
UL 13 CL2P/CL3P
NFPA 262
ANSI/NFPA 70
UL 1581
UL 910

TEMPERATURE RANGE

During Operation
-20°C up to +75°C
During Installation
0°C up to +65°C



IDENTIFICATION OF CORES

Black / Red / Green / Yellow

CHARACTERISTICS

Min. Bending Radius
7.5 x cable diameter



ELECTRICAL DATA

Operating Voltage:
300V max.

POPULAR PACKING

500 ft packages, reel or pull box
1000 ft packages, reel or pull box

CABLE PRINTING

HANGZHOU ZION Fire Cables SKU xAWGxC 75C E***** (UL/ETL) SOL/STR Shielded
CL2P/CL3P SUN RES(ROHS) +BATCH NO.+FT DEVICE/ZONE MARKING

UL Fire Alarm Cable Plenum Shielded Solid BC

ZION CODE	Type	AWG	#/C	NOM.DIA. [mm]	Jacket Color	UL/NEC
7110142SOLSRxxx	18/2 SOL BC Plenum	18	2	3.57	Red	CL2P/CL3P
7110143SOLSRxxx	18/4 SOL BC Plenum	18	4	4.27	Red	CL2P/CL3P
7110144SOLSRxxx	18/6 SOL BC Plenum	18	6	4.27	Red	CL2P/CL3P
7110145SOLSRxxx	16/2 SOL BC Plenum	16	2	4.45	Red	CL2P/CL3P
7110146SOLSRxxx	16/4 SOL BC Plenum	16	4	5.13	Red	CL2P/CL3P
7110147SOLSRxxx	14/2 SOL BC Plenum	14	2	5.28	Red	CL2P/CL3P
7110148SOLSRxxx	14/4 SOL BC Plenum	14	4	6.86	Red	CL2P/CL3P
7110149SOLSRxxx	12/2 SOL BC Plenum	12	2	6.22	Red	CL2P/CL3P

UL Fire Alarm Cable Plenum Unshielded Stranded BC

ZION CODE	Type	AWG	#/C	NOM.DIA. [mm]	Jacket Color	UL/NEC
7110342SOLSRxxx	18/2 SOL BC Plenum	18	2	3.97	Red	CL2P/CL3P
7110343SOLSRxxx	18/4 SOL BC Plenum	18	4	4.67	Red	CL2P/CL3P
7110344SOLSRxxx	18/6 SOL BC Plenum	18	6	4.67	Red	CL2P/CL3P
7110345SOLSRxxx	16/2 SOL BC Plenum	16	2	4.85	Red	CL2P/CL3P
7110346SOLSRxxx	16/4 SOL BC Plenum	16	4	5.53	Red	CL2P/CL3P
7110347SOLSRxxx	14/2 SOL BC Plenum	14	2	5.68	Red	CL2P/CL3P
7110348SOLSRxxx	14/4 SOL BC Plenum	14	4	7.26	Red	CL2P/CL3P
7110349SOLSRxxx	12/2 SOL BC Plenum	12	2	6.62	Red	CL2P/CL3P

* Cable tested by UL Global

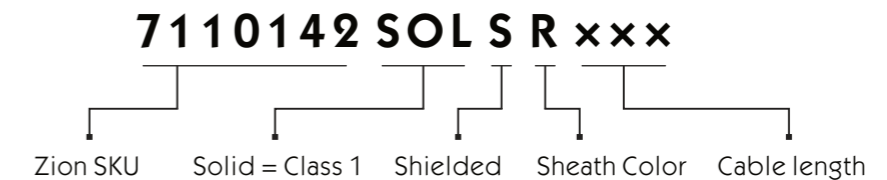
* If the cables are with a WHITE outer sheath the ZION CODE will change in: 7*****STRSW***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

* OD of Jacket will be within the tolerance range: ±0.3mm

Zion Code Naming rules



UL Fire Alarm Cable Riser Rated Unshielded

UL Certificated

UL Fire Alarm Cable Riser Rated Unshielded SOL

UL Fire Alarm Cable Riser Rated Unshielded STR

CONSTRUCTION

Conductors:

Plain annealed copper wire,
SOL = Solid = Class 1
STR = Stranded = Class 2 or Class 5

Insulation:

LS-PVC

Screen 1st:

Unshielded

Drain Wire:

Without

Ripcord

With

Outer Sheath:

LS-PVC

Sheath Color:

Red /White/ More...

REFERENCE STANDARDS

NEC Article 725
NEC Article 760
UL 1424 FPL/FPLR
NFPA 262
ANSI/NFPA 70
UL 1666;FT4
UL 910

TEMPERATURE RANGE

During Operation
-20°C up to +75°C
During Installation
0°C up to +65°C



ELECTRICAL DATA

Operating Voltage:

300V max.

IDENTIFICATION OF CORES

Black / Red / Green / Yellow

POPULAR PACKING

500 ft packages, reel or pull box
1000 ft packages, reel or pull box

CHARACTERISTICS

Min. Bending Radius
7.5 x cable diameter



CABLE PRINTING

HANGZHOU ZION Fire Cables SKU xAWGxC 75C E***** (UL/ETL) SOL/STR Unshielded
FPLR SUN RES(ROHS) +BATCH NO.+FT DEVICE/ZONE MARKING

UL Fire Alarm Cable Riser Unshielded Solid BC

ZION CODE	Type	AWG	#/C	NOM.DIA. [mm]	Jacket Color	UL/NEC
7110022SOLURxxx	18/2 SOL BC Riser	18	2	3.45	Red	FPLR
7110023SOLURxxx	18/4 SOL BC Riser	18	4	4.05	Red	FPLR
7110024SOLURxxx	18/6 SOL BC Riser	18	6	4.90	Red	FPLR
7110026SOLURxxx	16/2 SOL BC Riser	16	2	3.90	Red	FPLR
7110027SOLURxxx	16/4 SOL BC Riser	16	4	4.60	Red	FPLR
7110028SOLURxxx	14/2 SOL BC Riser	14	2	4.60	Red	FPLR
7110029SOLURxxx	14/4 SOL BC Riser	14	4	6.25	Red	FPLR
7110030SOLURxxx	12/2 SOL BC Riser	12	2	6.25	Red	FPLR

UL Fire Alarm Cable Riser Unshielded Stranded BC

ZION CODE	Type	AWG	#/C	NOM.DIA. [mm]	Jacket Color	UL/NEC
7110222STRURxxx	18/2 STR BC Riser	18	2	3.85	Red	FPLR
7110223STRURxxx	18/4 STR BC Riser	18	4	4.40	Red	FPLR
7110224STRURxxx	18/6 STR BC Riser	18	6	5.28	Red	FPLR
7110226STRURxxx	16/2 STR BC Riser	16	2	4.31	Red	FPLR
7110227STRURxxx	16/4 STR BC Riser	16	4	4.97	Red	FPLR
7110228STRURxxx	14/2 STR BC Riser	14	2	4.97	Red	FPLR
7110229STRURxxx	14/4 STR BC Riser	14	4	6.65	Red	FPLR
7110230STRURxxx	12/2 STR BC Riser	12	2	6.65	Red	FPLR

* Cable tested by UL Global

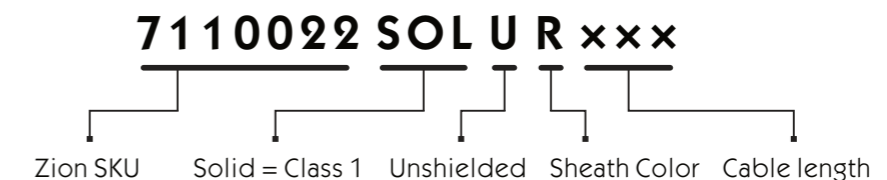
* If the cables are with a WHITE outer sheath the ZION CODE will change in: 7*****STRUW***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

* OD of Jacket will be within the tolerance range: ±0.3mm

Zion Code Naming rules



UL Fire Alarm Cable Riser Rated Shielded

UL Certificated



CONSTRUCTION

Conductors:

Plain annealed copper wire,
SOL = Solid = Class 1
STR = Stranded = Class 2 or Class 5

Insulation:

LS-PVC

Drain Wire:

Tinned Copper drain wire

Screen

Aluminum Mylar Tape

Ripcord

With

Outer Sheath:

LS-PVC

Sheath Color:

Red /White/ More...

REFERENCE STANDARDS

NEC Article 725

NEC Article 760

UL 1424 FPL/FPLR

NFPA 262

ANSI/NFPA 70

UL 1666;FT4

UL 910

TEMPERATURE RANGE

During Operation

-20°C up to +75°C

During Installation

0°C up to +65°C



IDENTIFICATION OF CORES

Black / Red / Green / Yellow

CHARACTERISTICS

Min. Bending Radius

7.5 x cable diameter



ELECTRICAL DATA

Operating Voltage:

300V max.

POPULAR PACKING

500 ft packages, reel or pull box

1000 ft packages, reel or pull box

CABLE PRINTING

HANGZHOU ZION Fire Cables SKU xAWGxC 75C E***** (UL/ETL) SOL/STR Shielded
FPLR SUN RES(ROHS) +BATCH NO.+FT DEVICE/ZONE MARKING

UL Fire Alarm Cable Riser Shielded

Solid BC

ZION CODE	Type	AWG	#/C	NOM.DIA. [mm]	Jacket Color	UL/NEC
7110122SOLSRxxx	18/2 SOL BC Riser	18	2	3.57	Red	FPLR
7110123SOLSRxxx	18/4 SOL BC Riser	18	4	4.27	Red	FPLR
7110124SOLSRxxx	18/6 SOL BC Riser	18	6	4.27	Red	FPLR
7110126SOLSRxxx	16/2 SOL BC Riser	16	2	4.45	Red	FPLR
7110127SOLSRxxx	16/4 SOL BC Riser	16	4	5.13	Red	FPLR
7110128SOLSRxxx	14/2 SOL BC Riser	14	2	5.28	Red	FPLR
7110129SOLSRxxx	14/4 SOL BC Riser	14	4	6.86	Red	FPLR
7110130SOLSRxxx	12/2 SOL BC Riser	12	2	6.22	Red	FPLR

UL Fire Alarm Cable Riser Shielded

Stranded BC

ZION CODE	Type	AWG	#/C	NOM.DIA. [mm]	Jacket Color	UL/NEC
7110322STRSRxxx	18/2 STR BC Riser	18	2	3.97	Red	FPLR
7110323STRSRxxx	18/4 STR BC Riser	18	4	4.67	Red	FPLR
7110324STRSRxxx	18/6 STR BC Riser	18	6	4.67	Red	FPLR
7110326STRSRxxx	16/2 STR BC Riser	16	2	4.85	Red	FPLR
7110327STRSRxxx	16/4 STR BC Riser	16	4	5.53	Red	FPLR
7110328STRSRxxx	14/2 STR BC Riser	14	2	5.68	Red	FPLR
7110329STRSRxxx	14/4 STR BC Riser	14	4	7.26	Red	FPLR
7110330STRSRxxx	12/2 STR BC Riser	12	2	6.62	Red	FPLR

* Cable tested by UL Global

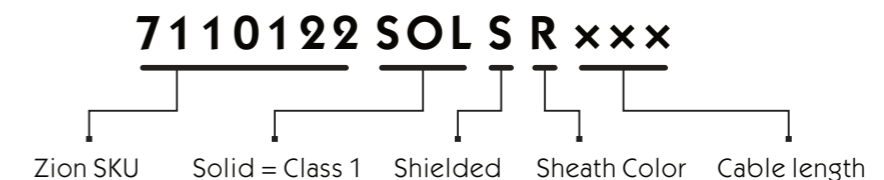
* If the cables are with a WHITE outer sheath the ZION CODE will change in: 7*****STRSW***

* CUSTOMIZED ITEMS: Printing on Sheath; Lable; Carton

* Conductor will be within the tolerance range: ±0.005mm

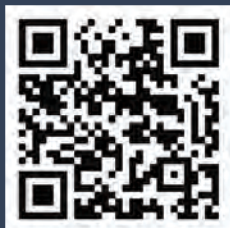
* OD of Jacket will be within the tolerance range: ±0.3mm

Zion Code Naming rules



 GLOBAL MARKET

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