



Caledonian

Composite Cables





Company Profile

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard. ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E-commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.



Our Certificate

INTERNATIONAL FIRST CERTIFICATION



INTERNATIONAL FIRST CERTIFICATION

CERTIFICATE

Caledonian Cables Limited

20-22 Wenlock Road London N1 7GU England

Novus Seahami Spectrum 7 Spectrum Business Park Seaham Sr7 7tt, England

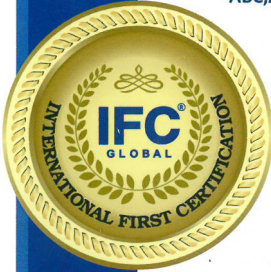
IFC Global Certification confirms that the above-named organization's management system has been assessed and complies with the requirements of the following standard.

Standard:

ISO 9001:2015

Scope:

Manufacture, design, supply, installation, assembly, commissioning, testing and maintenance of LV/MV/HV energy cables, data cables, instrumentation cables, telecommunication cables, fibre optic cables, railway cables, rolling stock cables, photovoltaic cables, marine cables, cabling system, cable accessories, ABC, AAC, ACSR, AAAC, power and distribution transformers, switchgears, communication systems, IT systems



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Approval
[Signature]





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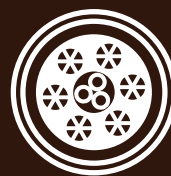


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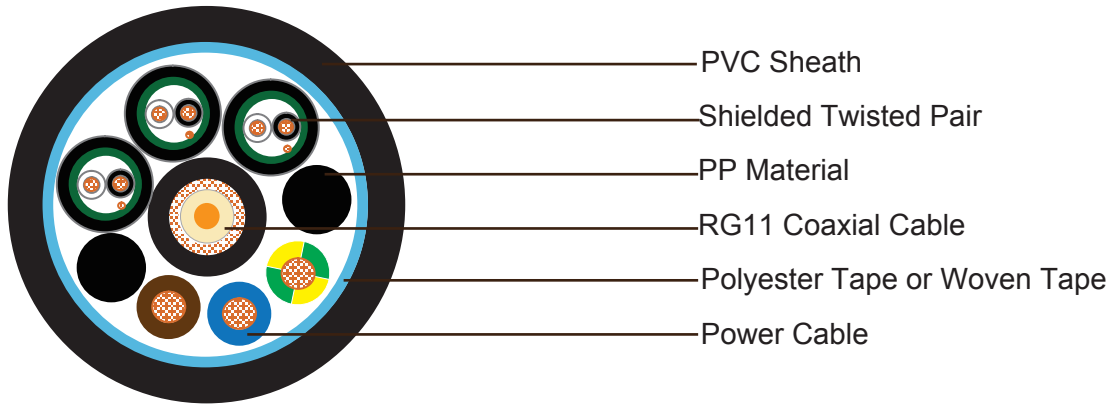
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1x RG11 + 3x2.5 Power Cable + 3x1x2x22AWG Data Pairs Unarmoured PVC Sheathed Composite Cable

Construction:



1x750hm RG11 Coaxial Cable (in the center of the cable core)

| | |
|---------------------|---|
| Conductor | 1.63mm Solid bare copper |
| Insulation | Polyethylene. Diameter 7.25mm. |
| Shield | Braid of bare copper wire. Coverage 95% |
| Sheath | PVC sheath. Nominal outer diameter is 10.3mm. |
| Sheath Color | Black |

3x1x2x22AWG Shielded Twisted Pair (around coaxial cable)

| | |
|--------------------------|---|
| Conductor | 7/0.254mm Stranded tinned copper. |
| Insulation | PVC material. Thickness 0.50mm. |
| Insulation Color | White and black |
| Individual Shield | Aluminum polyester tape |
| Drain Wire | 24 AWG stranded tinned copper |
| Sheath | PVC sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm. |
| Sheath Color | Black with white number code |



Composite Cables

3x2.5mm² Power Cable (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 2.5mm ² Stranded tinned copper wire. |
| Insulation | XLPE. Outer diameter 3.41mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP material (around coaxial cable) |
| Wrapping Tape | Polyester tape or woven tape |
| Outer Sheath | PVC, thickness 1.6mm, nominal outer diameter 25.0mm |
| Sheath Color | Black |
| Cable weight | 480kg/km |

Electrical and Physical Properties@20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 3.3dB/100m @50MHz

Power Cable

Electrical Resistance: 7.41Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 49Ohm/km

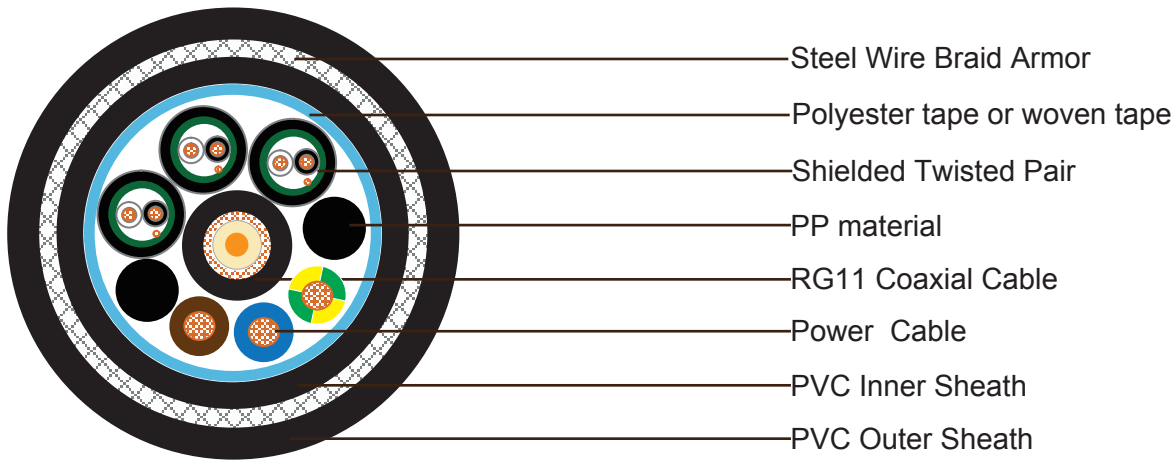
Insulation Resistance: ≥1000 MOhm×km

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1x RG11 + 3x2.5 Power Cable + 3x1x2x22AWG Data Pairs SWB PVC Sheathed Composite Cable

Construction:



1x750hm RG11 Coaxial Cable (in the center of the cable core)

| | |
|---------------------|---|
| Conductor | 1.63mm Solid bare copper |
| Insulation | Polyethylene. Diameter 7.25mm. |
| Shield | Braid of bare copper wire. Coverage 95% |
| Sheath | PVC sheath. Nominal outer diameter is 10.3mm. |
| Sheath Color | Black |

3x1x2x22AWG Shielded Twisted Pair (around coaxial cable)

| | |
|--------------------------|-----------------------------------|
| Conductor | 7/0.254mm Stranded tinned copper. |
| Insulation | PVC material. Thickness 0.50mm. |
| Insulation Color | White and black |
| Individual Shield | Aluminum polyester tape |
| Drain Wire | 24 AWG stranded tinned copper |



Composite Cables

| | |
|---------------------|------------------------------|
| Sheath | PVC sheath. Thickness 0.8mm. |
| Sheath Color | Black with white number code |

3x2.5mm² Power Cable (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 2.5mm ² Stranded tinned copper wire. |
| Insulation | XLPE. Outer diameter 3.41mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP material (around coaxial cable) |
| Wrapping Tape | Polyester tape or woven tape. |
| Inner Sheath | Black PVC, thickness 1.0mm |
| Aarmor | Steel wire braid, dia. 0.2mm, coverage 85% |
| Outer Sheath | PVC, thickness 1.8mm, nominal outer diameter 28.3mm |
| Sheath Color | Black |
| Cable weight | 550kg/km |

Electrical and Physical Properties@20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 3.3dB/100m @50MHz

Power Cable

Electrical Resistance: 7.41Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 49Ohm/km

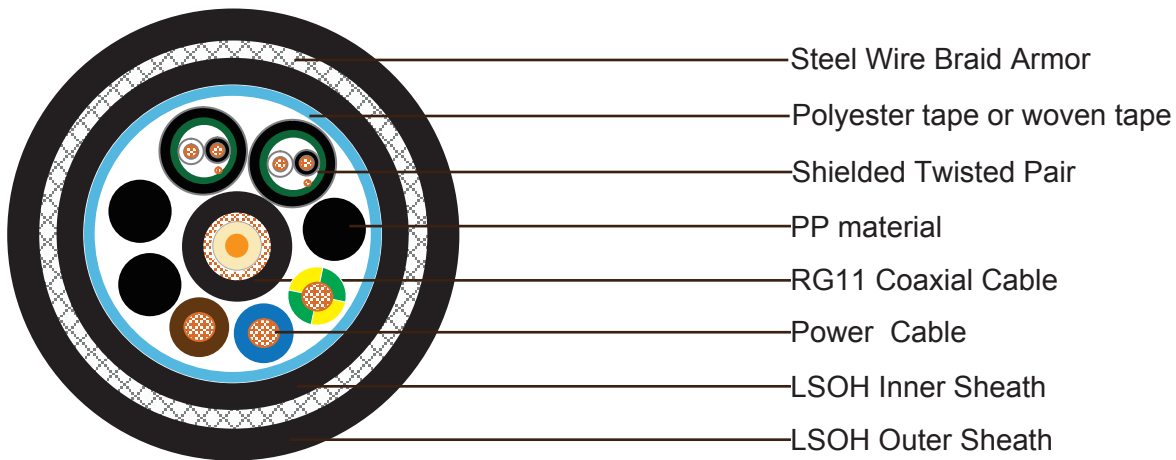
Insulation Resistance: ≥1000 MOhm×km

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1xRG11 + 3x3 Power Cable + 2x1x2x24AWG Data Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG11 Coaxial Cable(in the center of the cable core)

| | |
|---------------------|--|
| Conductor | 1.63mm Solid bare copper |
| Insulation | Polyethylene. Diameter 7.25mm. |
| Shield | Braid of bare copper wire. Coverage 95% |
| Sheath | LSZH sheath. Nominal outer diameter is 10.3mm. |
| Sheath Color | Black |

2x1x2x24AWG Shielded Twisted Pair (around coaxial cable)

| | |
|--------------------------|---------------------------------|
| Conductor | 7/0.2mm Stranded tinned copper. |
| Insulation | PVC material. Thickness 0.47mm. |
| Insulation Color | White and black |
| Individual Shield | Aluminum polyester tape |
| Drain Wire | 24 AWG stranded tinned copper |



Composite Cables

| | |
|---------------------|--|
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm. |
| Sheath Color | Black and Grey |

3x3mm² Power Cable (around coaxial cable)

| | |
|-------------------------|--|
| Conductor | 12AWG (3mm ² Stranded tinned copper wire. |
| Insulation | XLPE. Thickness 0.85mm. Outer diameter 3.65mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|--|
| Filler | PP material (around coaxial cable) |
| Wrapping Tape | Polyester tape. |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Aarmor | Stainless steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter 26.0mm |
| Sheath Color | Black |

Electrical and Physical Properties@20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 3.3dB/100m @50MHz

Power Cable

Electrical Resistance: 6.6Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Element Assembly

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C



Fire Performance:

Flame Propagation: IEC60332-1

Low Smoke Capacity: IEC61034-1/2

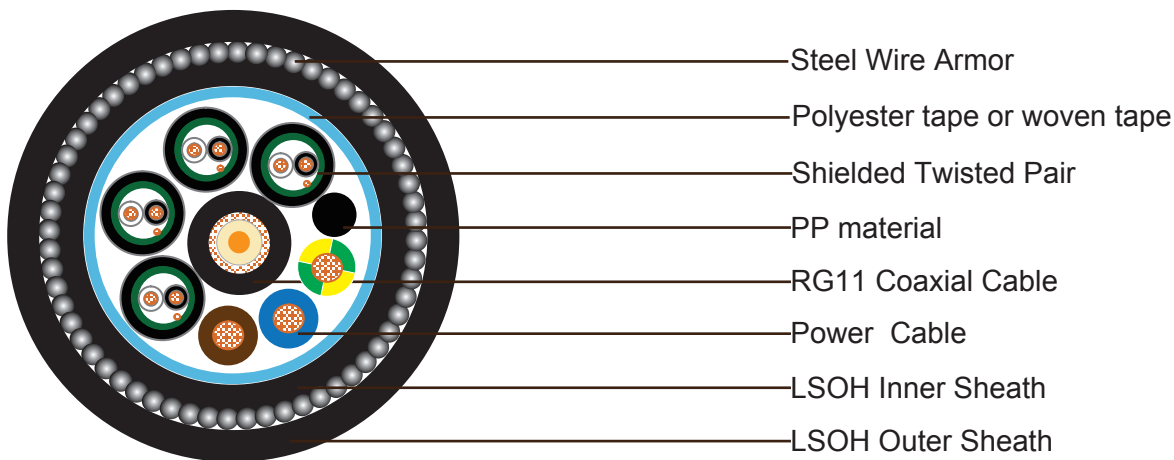
Halogen Free: IEC60754-1/2

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1x RG11 + 3x2.5 Power Cable + 4x1x2x24AWG Data Pairs SWA LSZH Sheathed Composite Cable

Construction:



1x750hm RG11 Coaxial Cable (in the center of the cable core)

| | |
|---------------------|--|
| Conductor | 1.63mm Solid bare copper |
| Insulation | Polyethylene. Diameter 7.25mm. |
| Shield | Braid of bare copper wire. Coverage 95% |
| Sheath | LSZH sheath. Nominal outer diameter is 10.3mm. |
| Sheath Color | Black |

4x1x2x24AWG Shielded Twisted Pair data cable (around coaxial cable)

| | |
|--------------------------|---------------------------------|
| Conductor | 7/0.2mm Stranded tinned copper. |
| Insulation | PVC material. Thickness 0.5mm. |
| Insulation Color | White and black |
| Individual Shield | Aluminum polyester tape |
| Drain Wire | 24 AWG stranded tinned copper |



| | |
|---------------------|--------------------------------|
| Sheath | LSZH sheath. Thickness 0.80mm. |
| Sheath Color | Black with white number code |

3x2.5mm² Power Cable (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 2.5mm ² Stranded tinned copper wire. |
| Insulation | XLPE. Outer diameter 3.41mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|--|
| Filler | PP material (around coaxial cable) |
| Wrapping Tape | Polyester tape or woven tape |
| Inner Sheath | Black LSZH, thickness 1.1mm |
| Aarmor | Steel wire armor, dia. 1.25mm |
| Outer Sheath | LSZH, thickness 1.8mm, nominal outer diameter 26.0±1.0mm |
| Sheath Color | Black |
| Cable Weight | 1100kg/km |

Electrical and Physical Properties@20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 3.3dB/100m @50MHz

Power Cable

Electrical Resistance: 7.41Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km



Composite Cables

Element Assembly

Conductor DC resistance per km@20°C:

24AWG: 95.8ohm/km

2.5mm²: 7.4ohm/km

1.63mm: 9.26ohm/km

Minimum Bending Radius: 312mm

Temperature Range: -10°C~70°C

Fire Performance:

Flame Propagation: IEC60332-1

Low Smoke Capacity: IEC61034-1/2

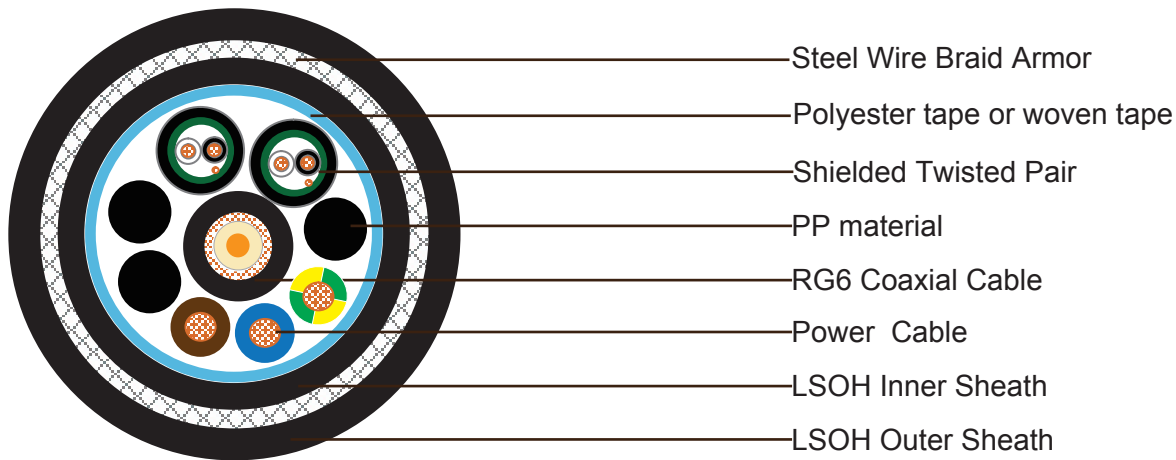
Halogen Free: IEC60754-1/2

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1xRG6 + 3x2.5 Power cable + 2x1x2x22AWG Data Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG6 Coaxial Cable (in the center of the cable core)

| | |
|--------------|--|
| Conductor | 1.02mm Solid bare copper |
| Insulation | Polyethylene. Diameter 4.57mm. |
| Shield 1 | Al-Polyester Tape |
| Shield 2 | Braid of bare copper wire. Coverage: 95% |
| Sheath | LSZH sheath. Nominal outer diameter is 6.91mm. |
| Sheath Color | Black |

2x1x2x22AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------|-----------------------------------|
| Conductor | 7/0.254mm Stranded tinned copper. |
| Insulation | PVC material. Thickness 0.50mm. |
| Insulation Color | White and black |
| Individual Shield | Aluminum polyester tape |



Composite Cables

| | |
|---------------------|-------------------------------|
| Drain Wire | 24 AWG stranded tinned copper |
| Sheath | LSZH sheath. Thickness 0.5mm. |
| Sheath Color | Black with white number code |

3x2.5mm² Power Cable (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 2.5mm ² Stranded tinned copper wire. |
| Insulation | XLPE. Outer diameter 3.6mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PE or PP material |
| Wrapping Tape | Polyester tape or woven tape |
| Inner Sheath | Black LSZH, thickness 0.75mm |
| Armor | Steel wire braid, dia. 0.2mm, coverage 95% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter 21.0mm. Approx. |
| Sheath Color | Black |
| Cable Weight | 485kg/km |

Electrical and Physical Properties@20°C:

Coaxial Cable

Conductor Resistance @ 20°C : 22 ohm/km

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 5.2dB/100m @50MHz

Power Cable

Conductor Resistance @ 20°C: 7.41Ohm/km

Insulation Resistance: ≥5500 MOhm²/km

Data Pairs

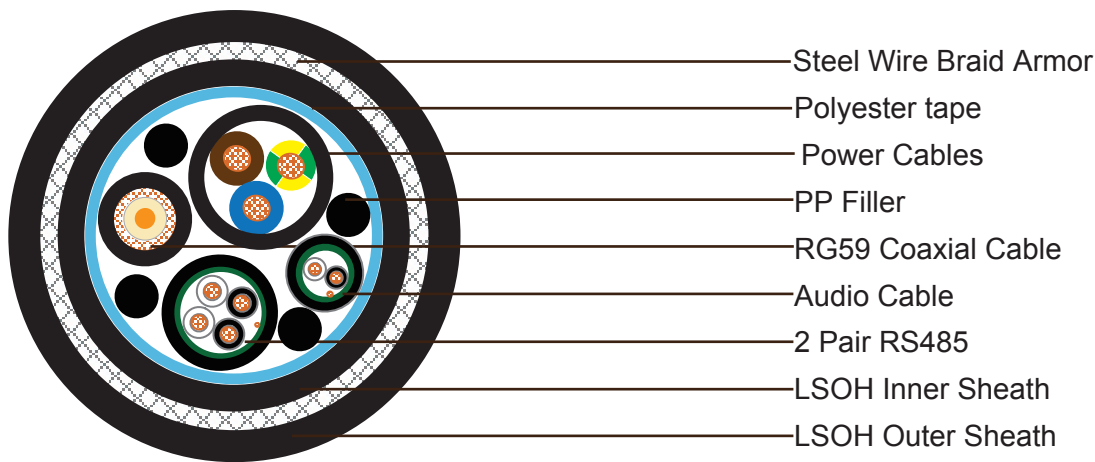
Electrical Resistance: 49Ohm/km

Insulation Resistance: ≥1000 MOhm²/km



RG59 + 3x2.5 Power cable + 2x2x24AWG RS485 + 1x2x18AWG Audio Cable SWB LSZH Sheathed Composite Cable

Construction:

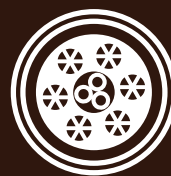


750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.81mm Copper Covered Steel Wire |
| Insulation | Polyethylene. Diameter 3.65mm |
| Shield | Bonded Al screen and braid of Al-Mg wire. Coverage: 80% |
| Sheath | LSZH sheath. Nominal outer diameter is 6.1mm |
| Sheath Color | Black |

24AWG RS485

| | |
|---------------------|---|
| Conductor | 24AWG (7/0.2mm Stranded tinned copper to IEC 60228 Class 2 2 pairs |
| Insulation | Polyethylene. Thickness 0.6mm |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter is 9.0mm |
| Sheath Color | Black |



Composite Cables

3x2.5mm² Power Cable

| | |
|---------------------|---|
| Conductor | 2.5mm ² Stranded tinned copper wire to IEC 60228 Class 2 |
| Insulation | XLPE. Thickness 0.7mm |
| Sheath | LSZH sheath. Nominal outer diameter is 12.0mm |
| Sheath Color | Black |

18AWG Audio Cable

| | |
|---------------------|---|
| Conductor | 1 pair 18AWG (16/0.254mm Stranded tinned copper |
| Insulation | Polyethylene |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter is 6.5mm |
| Sheath Color | Black |

Element Assembly

| | |
|----------------------|--|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.8-1.0mm |
| Aarmor | Steel wire braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.6- 1.8mm, nominal outer diameter is 24±2mm |
| Sheath Color | Black |
| Cable Weight | 730kg/km |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Nominal Attenuation: 6.72dB/100m @50MHz



RS485

Nominal Impedance: $120 \pm 10 \Omega$

Nominal Conductor DC Resistance @20°C: 78.7 Ohm/km

Nominal Attenuation: 1MHz 2.3dB/100m

Power Cable

Electrical Resistance: 7.41Ohm/km

Insulation Resistance: $\geq 5500 \text{ MOhm} \cdot \text{km}$

Audio Cable

Electrical Resistance: 18.1Ohm/km

Insulation Resistance: $\geq 1.1 \text{ MOhm} \cdot \text{km}$

Element Assembly

Min Bending Radius: 360mm

Operating Temperature: $-35^\circ\text{C}/+90^\circ\text{C}$

Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

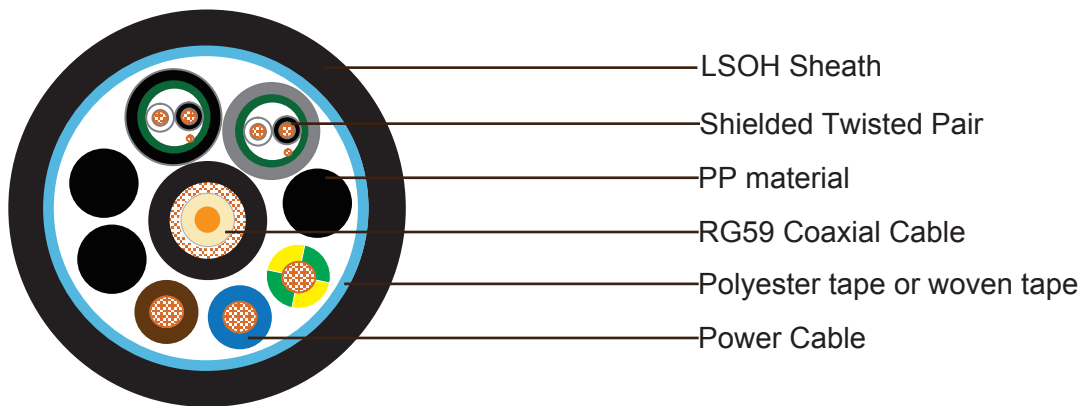
Flame Propagation: IEC60332

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1x RG59 + 3x1.5 Power Cable + 2x1x2x24AWG Data Pairs Unarmored LSZH Sheathed Composite cable

Construction:



1x750ohm RG59 Coaxial Cable(in the center of the cable core)

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x24AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm |
| Sheath Color | Black and Grey |



3x1.5mm² Power Cable (around coaxial cable)

| | |
|------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire |
| Insulation | XLPE. Nominal outer diameter 3.0mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PE or PP material |
| Wrapping Tape | Polyester tape or woven tape |
| Outer Sheath | LSZH, nominal outer diameter 16.0±1.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 12.1Ohm/km

Insulation Resistance: ≥5500 MOhm^xkm

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm^xkm

Element Assembly

Min Bending Radius: 160mm

Operating Temperature: -35°C/+80°C



← Composite Cables

Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

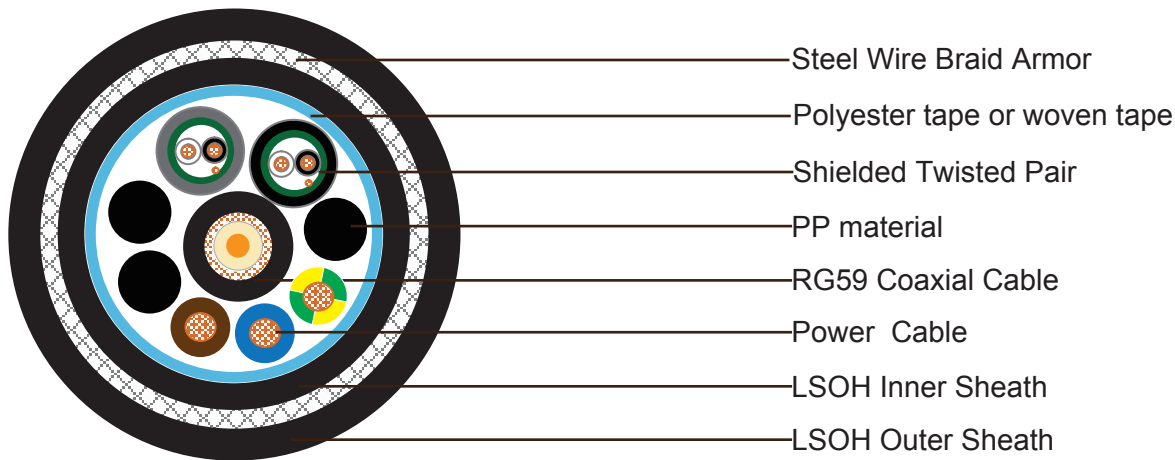
Flame Propagation: IEC60332

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1x RG59 + 3x1.5 Power Cable + 2x1x2x24AWG Data Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable(in the center of the cable core)

| | |
|---------------------|--|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x24AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm |



Composite Cables

| | |
|---------------------|----------------|
| Sheath Color | Black and Grey |
|---------------------|----------------|

3x1.5mm² Power Cable (around coaxial cable)

| | |
|-------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire |
| Insulation | XLPE. Nominal outer diameter 3.0mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|--|
| Filler | PE or PP material |
| Wrapping Tape | Polyester tape or woven tape |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter 21.5±2.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 12.1Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Element Assembly:

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C



Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

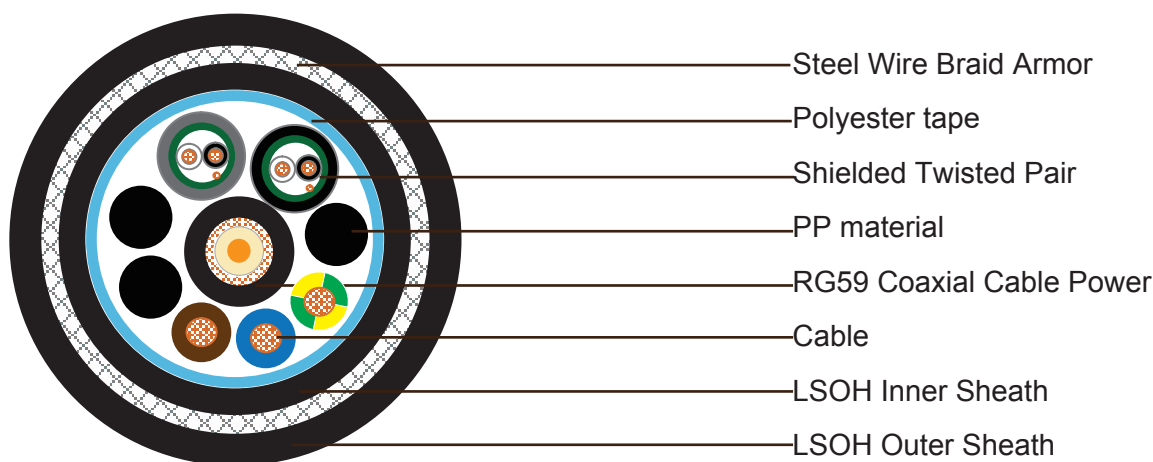
Flame Propagation: IEC60332

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 3x3 Power Cable + 2x1x2x24AWG Data Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x75Ohm RG59 Coaxial Cable(in the center of the cable core)

| | |
|---------------------|---|
| Conductor | 0.58 Solid copperweld (CCS). |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 92% |
| Sheath | LSZH sheath, nominal outer diameter 6.2mm |
| Sheath Color | Black |

2x1x2x24/7 AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------------|---|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.47mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm |
| Sheath Color | Black and Grey |



3x3mm² Power Cable (around coaxial cable)

| | |
|------------------------|--|
| Conductor | 12AWG (3mm ² Stranded tinned copper wire) |
| Insulation | XLPE. Thickness 0.85mm. Outer diameter 3.65mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP material (around coaxial cable) |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.5mm, norminal outer diameter 22.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 6.6Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Element Assembly

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C



Composite Cables

Fire Performance:

Flame Propagation: IEC60332-1

Low Smoke Capacity: IEC61034-1/2

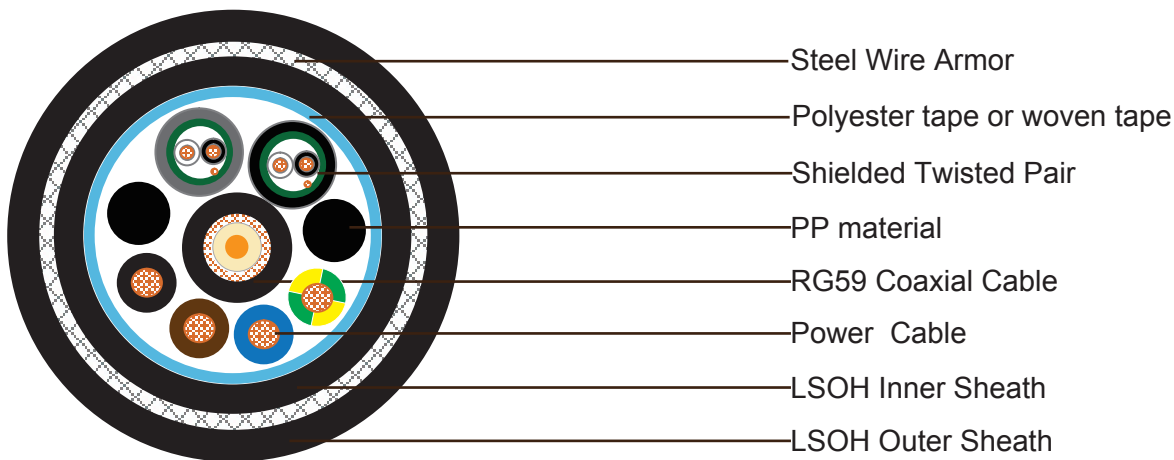
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 4x2.5 Power Cable + 2x1x2x22AWG Data Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable(in the center of the cable core)

| | |
|--------------|--|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x22AWG Shielded Twisted Pair (around coaxial cable)

| | |
|------------------|--|
| Conductor | 7/0.254mm Stranded bare copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 5.23mm. Thickness 0.76mm |
| Sheath Color | Black and Grey |



Composite Cables

4x2.5mm² Power Cable (around coaxial cable)

| | |
|------------------------|--|
| Conductor | 2.5mm ² Stranded bare copper wire |
| Insulation | XLPE. Nominal outer diameter 3.41mm |
| Insultion Color | Blue, Brown, Black and Green/Yellow |

Element Assembly

| | |
|----------------------|--|
| Filler | PE or PP material |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Armor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter is 22.34±2.0mm |
| Sheath Color | Black |
| Cable Weight | 740kg/km |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 7.41Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 48.4Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Element Assembly

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C



Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

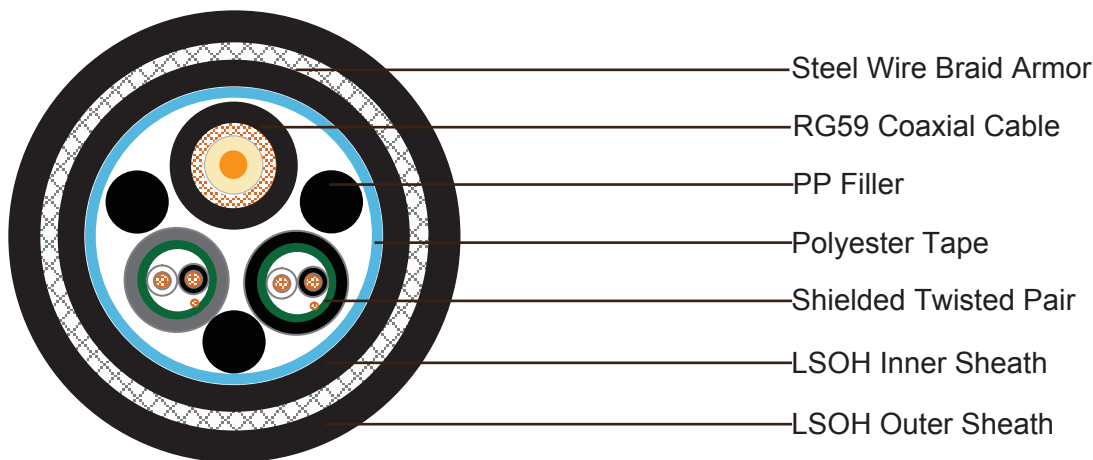
Flame Propagation: IEC60332

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 2x1x2x24AWG Data Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2 x (1 x 2 x 24AWG) Shielded Twisted Pair

| | |
|-------------------------|---|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.6mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm |
| Sheath Color | Black and Grey |



Element Assembly

| | |
|----------------------|--|
| Filler | PE or PP material when necessary |
| Wrapping Tape | Polyester tape or woven tape |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter is 16.25±2.0mm |
| Sheath Color | Black |
| Cable Weight | 400kg/km |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Element Assembly

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C

Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

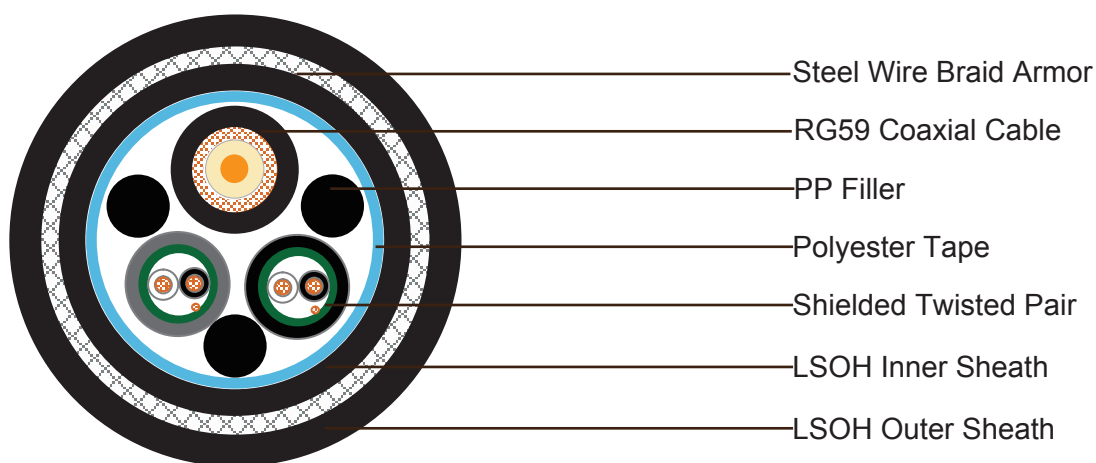
Flame Propagation: IEC60332

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 2x1x2x22AWG Data Cable SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 85\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.2mm |
| Sheath Color | Black |

2 Pair 22AWG Data Cable

| | |
|-------------------------|--|
| Conductor | 7/0.254mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 7/0.2mm stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. |
| Sheath Color | Black |



Element Assembly

| | |
|----------------------|---|
| Filler | PP material (around coaxial cable) |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter is 18.5mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Nominal Attenuation: 8.2dB/100m @50MHz

Data Cable

Nominal Conductor Resistance @20°C: 48.4 Ohm/km

Fire Performance:

Flame Propagation: IEC60332

Low Smoke Capacity: IEC61034-1/2

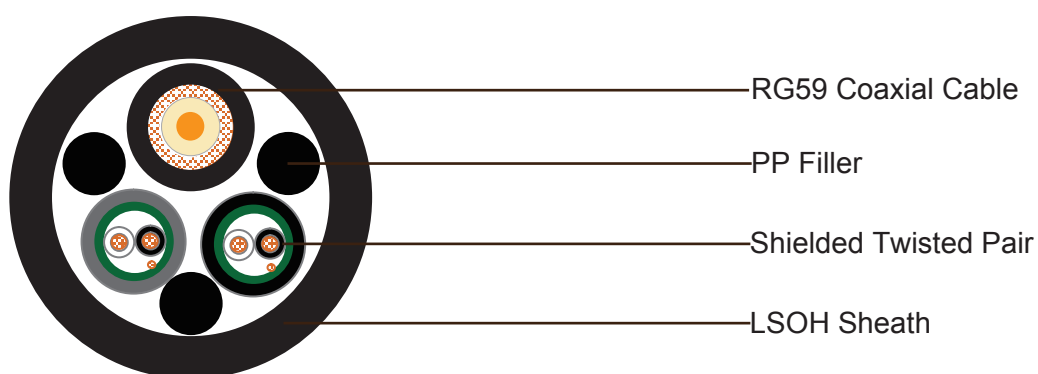
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 2x1x2x22AWG Data Cable Unarmored LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 85\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.2mm |
| Sheath Color | Black |

2 Pair 22AWG Data Cable

| | |
|-------------------------|--|
| Conductor | 7/0.254mm Stranded tinned copper |
| Insulation | PE material. Thickness 0.4mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 7/0.2mm stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. |
| Sheath Color | Black |



Element Assembly

| | |
|--------------|--|
| Outer Sheath | LSZH, thickness 1.6- 1.8mm, nominal outer diameter is 15.6mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Nominal Attenuation: 8.2dB/100m @50MHz

Data Cable

Nominal Conductor Resistance @20°C: 48.4 Ohm/km

Fire Performance:

Flame Propagation: IEC60332

Low Smoke Capacity: IEC61034-1/2

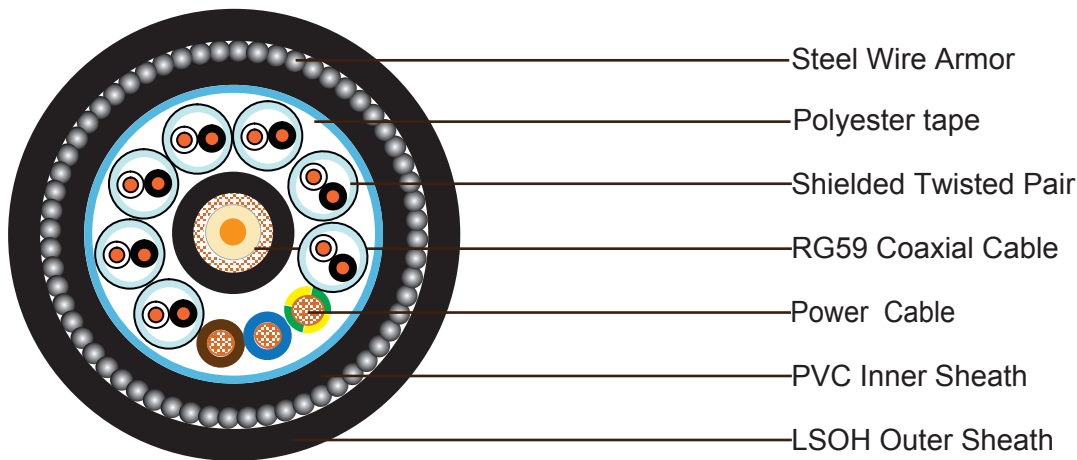
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 7x1x2x22AWG Pairs Data Cable+ 3x16AWG Power Cable SWA LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | PVC sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

7x1x2x22 AWG Shielded Twisted Pair Data Cables

| | |
|--------------------------|---|
| Conductor | 22AWG Stranded tinned copper |
| Insulation | PE material. Thickness 0.6mm |
| Insulation Color | Black and white with numbering |
| Individual Shield | Aluminium polyester tape with stranded tinned copper drain wire |



3x16AWG Power Cable

| | |
|------------------------|-----------------------------------|
| Conductor | 16AWG Stranded tinned copper wire |
| Insulation | XLPE. Thickness 0.7mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP material if necessary |
| Wrapping Tape | Polyester tape |
| Inner Sheath | 1.2mm PVC compound |
| Aarmor | Galvanized steel wire |
| Outer Sheath | An outer protection of extruded UV resisting, anti-rodent and anti-termite LSZH compound is applied over armor. Thickness: 2.0mm. Nominal outer diameter is 28.0mm. |
| Sheath Color | Black |
| Cable Weight | 510kg/km |

Physical Characteristic:

Min Bending Radius: 560mm

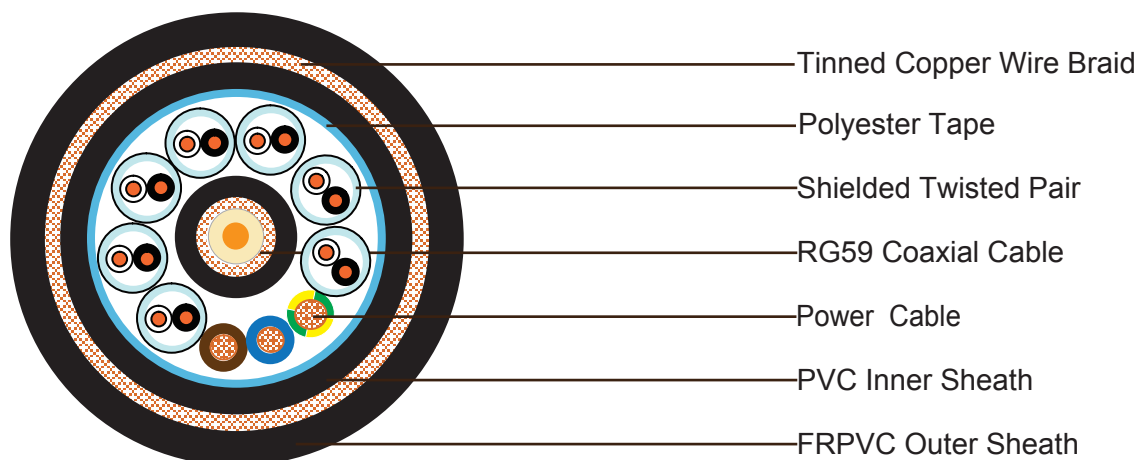
Operating Temperature: -30°C/+70°C

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 7x1x2x22AWG Data Cable + 3x16 AWG Power Cable TCWB FRPVC Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable(in the center of the cable core)

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Sheath | PVC sheath. Nominal outer diameter 6.2mm |
| Sheath Color | Black |

7x1x2x22 AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------------|--|
| Conductor | 7/0.254mm Stranded tinned copper |
| Insulation | PE material. Thickness 0.6mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |



3x16AWG Power Cable (around coaxial cable)

| | |
|-------------------|--|
| Conductor | 19/0.287mm Stranded tinned copper wire |
| Insulation | XLPE. Thickness 0.7mm |

Element Assembly

| | |
|----------------------|--|
| Filler | PP material if necessary |
| Wrapping Tape | Polyester tape |
| Shield | Tinned copper wire braid, coverage 80% |
| Outer Sheath | UV resisting FRPVC, thickness 1.8mm, nominal outer diameter 25.0mm |
| Sheath Color | Black |
| Cable Weight | 850kg/km |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 6.6Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Element Assembly

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C



Composite Cables

Fire Performance:

Flame Propagation: IEC60332-1

Low Smoke Capacity: IEC61034-1/2

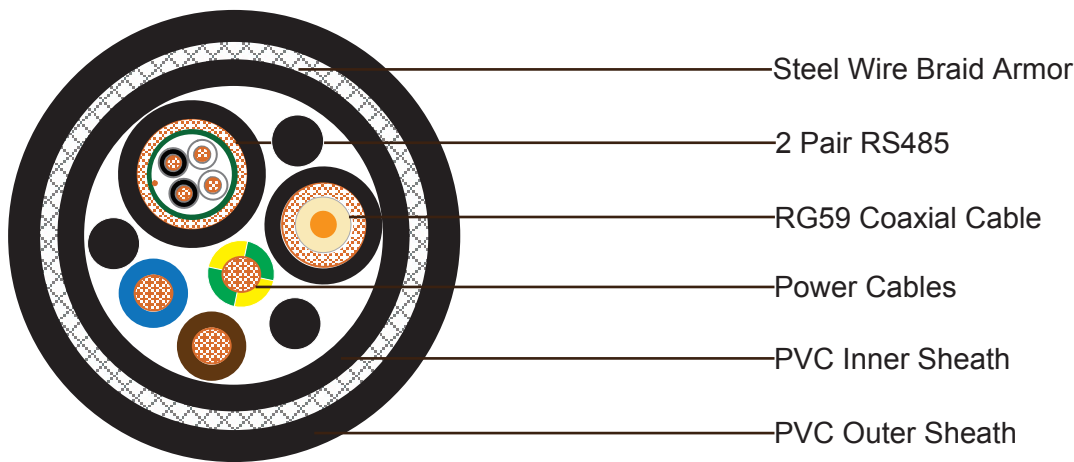
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 3x2.5 Power Cable + 2x1x2x24AWG RS485 SWB PVC Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 85\%$ |
| Sheath | PVC sheath. Nominal outer diameter 6.2mm |
| Sheath Color | Black |

2 Pair 24AWG RS485

| | |
|---------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PE material. Thickness 0.6mm |
| Shield 1 | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Shield 2 | Tinned copper wire braiding |
| Sheath | PVC sheath. Nominal outer diameter is 9.0mm |
| Sheath Color | Black |



Composite Cables

3x2.5mm² Power Cable

| | |
|------------------------|--|
| Conductor | 2.5mm ² Stranded tinned copper wire |
| Insulation | PVC. Thickness 0.7mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|---------------------|--|
| Inner Sheath | Black PVC, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 95% |
| Outer Sheath | PVC, thickness 1.8mm, nominal outer diameter is 26.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Nominal Attenuation: 8.2dB/100m @50MHz

RS485

Nominal Impedance: 120±10Ω

Nominal Conductor DC Resistance @20°C: 78.7 Ohm/km

Nominal Attenuation: 1MHz 2.3dB/100m

Power Cable

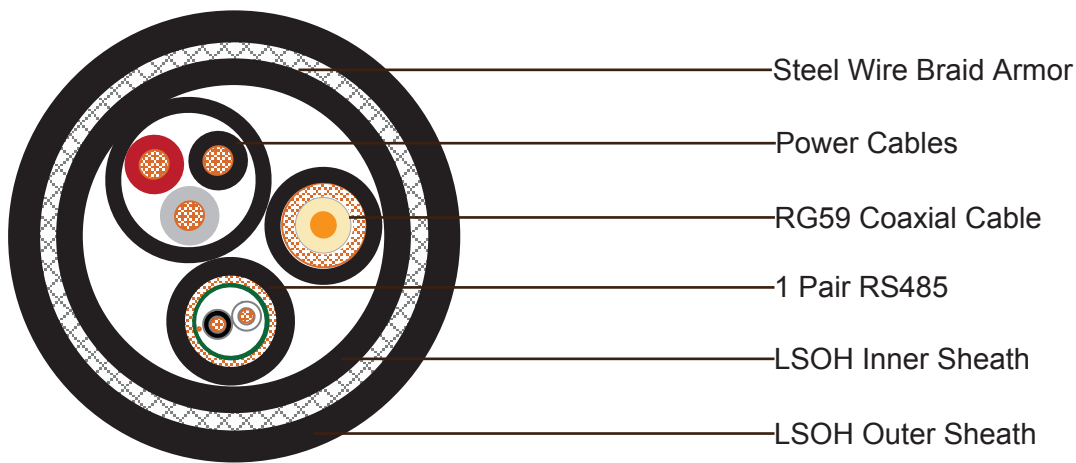
Electrical Resistance: 7.56Ohm/km

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59+ 3x2.5 Power Cable +1x2x24AWG RS485 SWB LSHZ Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 85\%$ |
| Sheath | PVC sheath. Nominal outer diameter 6.2mm |
| Sheath Color | Black |

1 Pair 24AWG RS485

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PE material. Thickness 0.6mm |
| Insulation Color | Black and white |
| Shield 1 | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Shield 2 | Tinned copper wire braiding |
| Sheath | PVC sheath. Nominal outer diameter is 6.0mm |
| Sheath Color | Black |



Composite Cables

3x2.5mm² Power Cable

| | |
|------------|--|
| Conductor | 2.5mm ² Stranded tinned copper wire |
| Insulation | XLPE. Thickness 0.7mm |
| Sheath | LSZH compound. Nominal diameter is 11.0mm |

Element Assembly

| | |
|--------------|---|
| Inner Sheath | Black LSZH, thickness 1.0mm |
| Aarmor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.8mm, nominal outer diameter is 25.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Nominal Attenuation: 8.2dB/100m @50MHz

RS485

Nominal Impedance: 120±10Ω

Nominal Conductor DC Resistance @20°C: 78.7 Ohm/km

Nominal Attenuation: 1MHz 2.3dB/100m

Power Cable

Electrical Resistance: 7.56Ohm/km

Fire Performance:

Flame Propagation: IEC60332-1

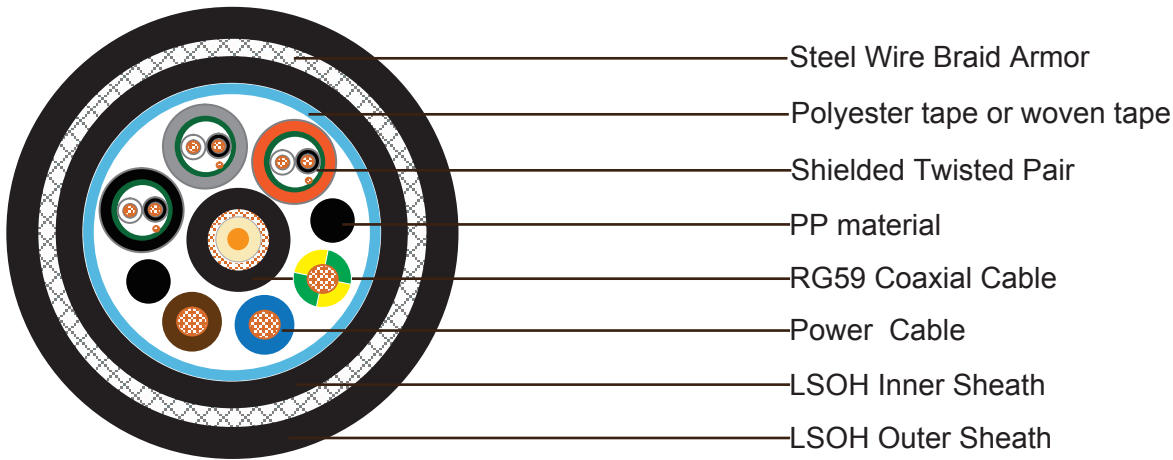
Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2



1xRG59 + 3x12AWG Power Cable + 3x1x2x24 AWG Shield Pairs SWB LSZH Sheathed Composite Cable

Construction:

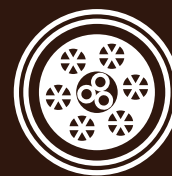


1x750hm RG59 Coaxial Cable(in the center of the cable core)

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 92% |
| Sheath | LSZH sheath. Nominal outer diameter 6.2mm |
| Sheath Color | Black |

3x1x2x24/7 AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.47mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |



Composite Cables

| | |
|---------------------|---|
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness 0.76mm |
| Sheath Color | Black , Grey and Orange |

3x3mm² Power Cable (around coaxial cable)

| | |
|-------------------------|--|
| Conductor | 3.0mm ² Stranded tinned copper wire |
| Insulation | XLPE. Thickness 0.85mm. Outer diameter 3.65mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PVC or PE material (around coaxial cable) |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter is 22.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Max. Electrical Resistance: 158Ohm/km

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 6.6Ohm/km

Insulation Resistance: ≥5500 MOhm²/km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm²/km



Element Assembly

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C

Fire Performance:

Flame Propagation: IEC60332-1 & IEC60332-2

Low Smoke Capacity: IEC61034-1/2

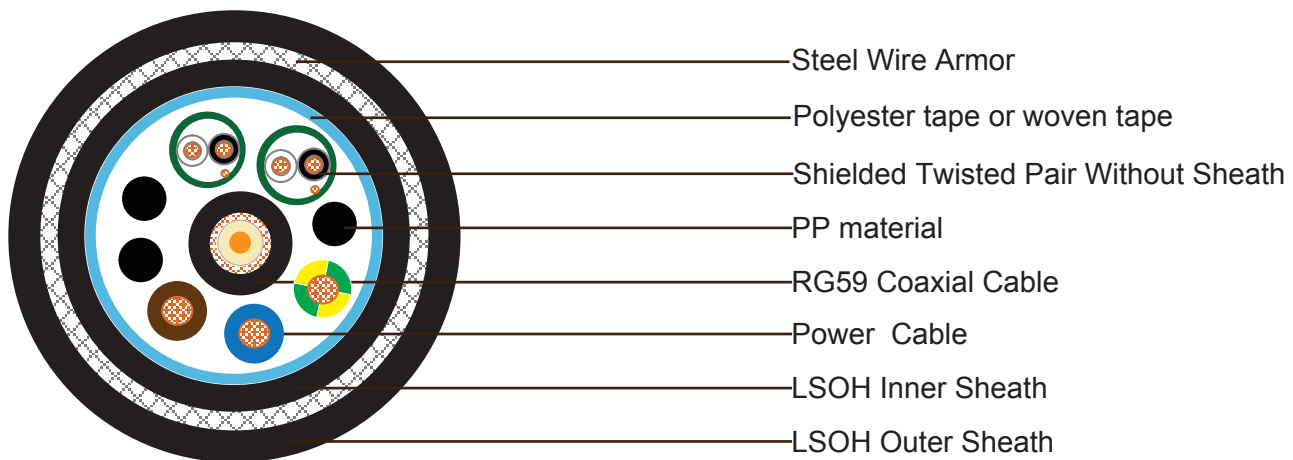
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 3x1.5 Power Cable + 2x1x2x24AWG Shielded Control Cable Without Sheath SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x24 AWG Shielded Control Cable Without Sheath

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | White and black |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |



3x1.5mm² Power Cable

| | |
|------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire to IEC 60228 Class 2 or BS 6360 |
| Insulation | XLPE compound to BS6234. Nominal outer diameter 3.0mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.76mm |
| Aarmor | 0.2mm steel wire interwoven braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.4mm, nominal outer diameter is 19.0mm |
| Sheath Color | Black |

Physical Characteristic:

Min Bending Radius: 360mm

Operating Temperature: -35°C/+90°C

Fire Performance:

Flame Retardant: IEC60332 part 1 & 2

Halogen Free: IEC 60754

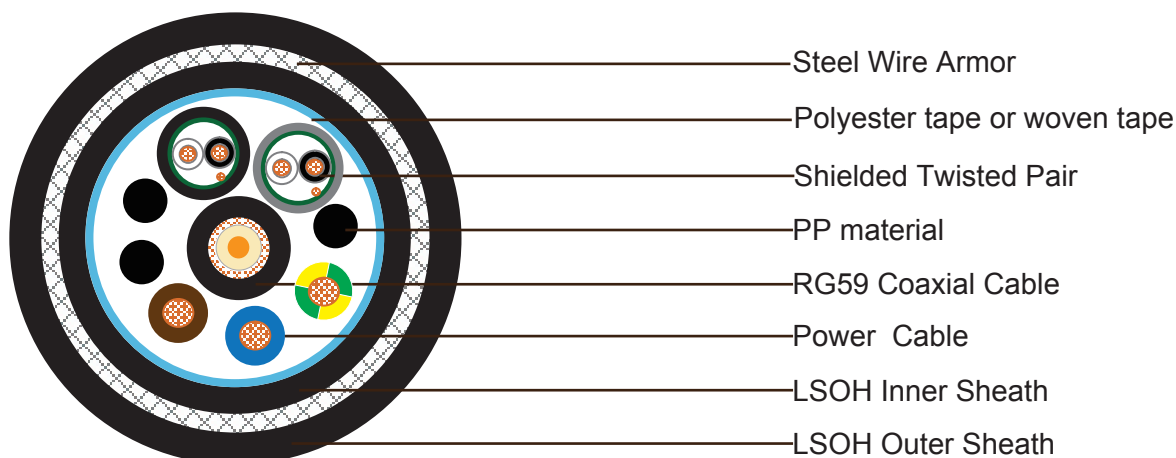
Low Smoke Emission: IEC 61034

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 3x1.5 Power Cable + 2x1x2x24AWG Shielded Control Cable SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|--------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x24 AWG Shielded Control Cable

| | |
|------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | White and black |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness: 0.76mm |
| Sheath Color | Black and Grey |



3x1.5mm² Power Cable

| | |
|------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire to IEC 60228 Class 2 or BS 6360 |
| Insulation | XLPE compound to BS6234. Nominal outer diameter 3.0mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.76mm |
| Aarmor | 0.2mm steel wire interwoven braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.4mm, nominal outer diameter is 22.6mm |
| Sheath Color | Black |

Physical Characteristic:

Min Bending Radius: 360mm

Operating Temperature: -35°C/+90°C

Fire Performance:

Flame Retardant: IEC60332 part 1 & 2

Halogen Free: IEC 60754

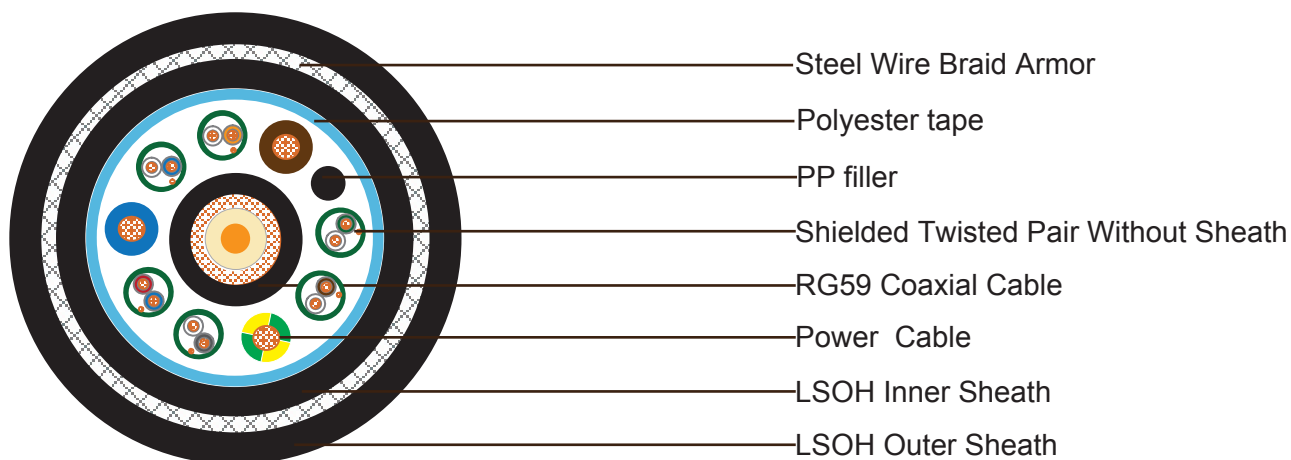
Low Smoke Emission: IEC 61034

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 3x1.5 Power Cable + 6x1x2x24AWG Shielded Control Cable Without Sheath SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

6x1x2x24 AWG Shielded Control Cable Without Sheath

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | White and blue, White and orange, White and green, White and brown, White and grey, Red and blue according to IEC60708-1 |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |



3x1.5mm² Power Cable

| | |
|------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire to IEC 60228 Class 2 or BS 6360 |
| Insulation | XLPE compound to BS6234. Nominal outer diameter 3.0mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.76mm |
| Aarmor | 0.2mm steel wire interwoven braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.4mm, nominal outer diameter is 22.6mm |
| Sheath Color | Black |

Physical Characteristic:

Min Bending Radius: 360mm

Operating Temperature: -35°C/+90°C

Fire Performance:

Flame Retardant: IEC60332 part 1 & 2

Halogen Free: IEC 60754

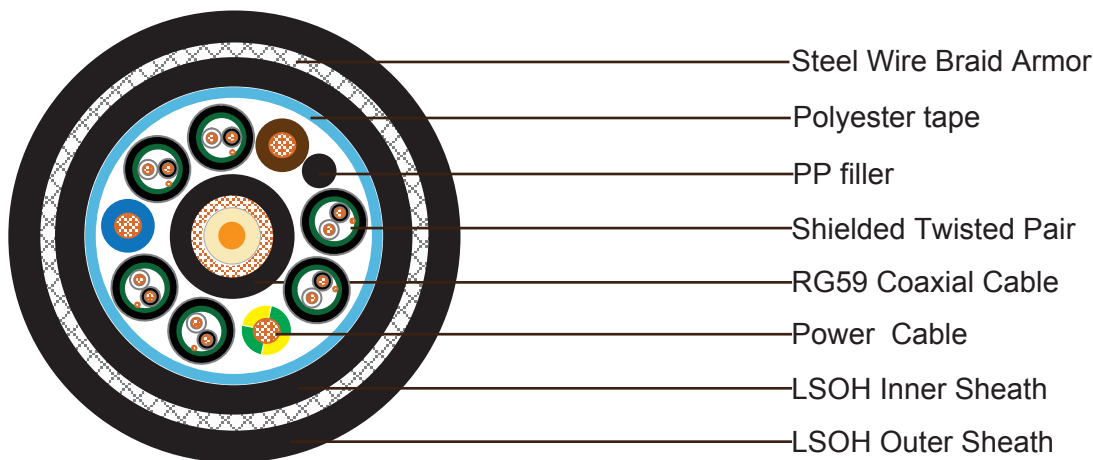
Low Smoke Emission: IEC 61034

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1xRG59 + 3x1.5 Power Cable + 6x1x2x24AWG Shielded Control Cable SWB LSZH Sheathed Composite Cable

Construction:



1x750ohm RG59 Coaxial Cable

| | |
|---------------------|--|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

6x1x2x24 AWG Shielded Control Cable

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | White and black |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness: 0.76mm |
| Sheath Color | Black and Grey |



3x1.5mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire to IEC 60228 Class 2 or BS 6360 |
| Insulation | XLPE compound to BS6234. Nominal outer diameter 3.0mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.76mm |
| Aarmor | 0.2mm steel wire interwoven braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.4mm, nominal outer diameter is 24.5mm |
| Sheath Color | Black |

Physical Characteristic:

Min Bending Radius: 360mm

Operating Temperature: -35°C/+90°C

Fire Performance:

Flame Retardant: IEC60332 part 1 & 2

Halogen Free: IEC 60754

Low Smoke Emission: IEC 61034

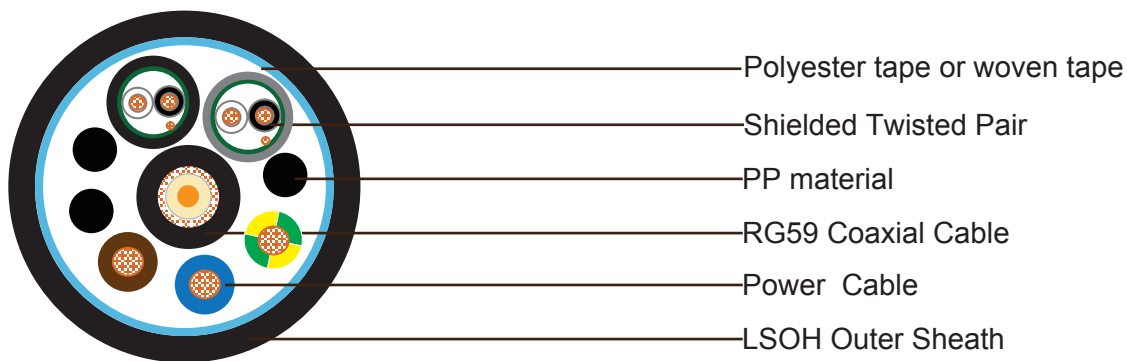
* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



Composite Cables

1xRG59 + 3x3 Power Cable + 2x1x2x24AWG Shielded Control Cable Unarmored LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x24 AWG Shielded Control Cable

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | White and black |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness: 0.76mm |
| Sheath Color | Black and Grey |



3x3mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 3mm ² Stranded tinned copper wire to IEC 60228 Class 2 or BS 6360 |
| Insulation | XLPE, Thickness 0.66mm. Outer diameter 3.63mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Outer Sheath | LSZH, thickness 1.2mm, nominal outer diameter is 18.5mm |
| Sheath Color | Black |

Physical Characteristic:

Min Bending Radius: 200mm

Operating Temperature: -35°C/+90°C

Fire Performance:

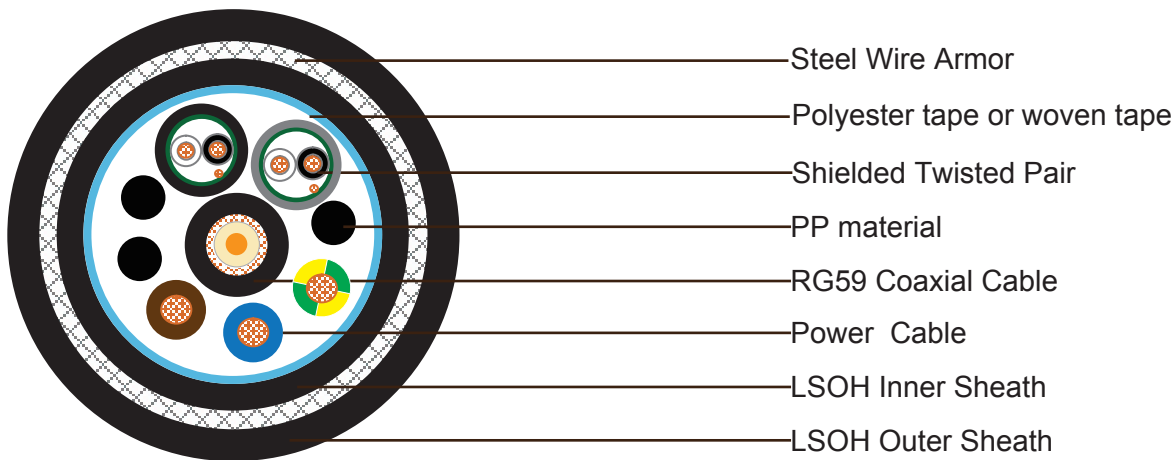
Flame Retardant: IEC60332 part 1 & 2

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1xRG59 + 3x3 Power Cable + 2x1x2x24AWG Shielded Control Cable SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|--------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage $\geq 95\%$ |
| Sheath | LSZH sheath. Nominal outer diameter 6.15mm |
| Sheath Color | Black |

2x1x2x24 AWG Shielded Control Cable

| | |
|------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | White and black |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Sheath | LSZH sheath. Nominal outer diameter 4.8mm. Thickness: 0.76mm |
| Sheath Color | Black and Grey |



3x3mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 3mm ² Stranded tinned copper wire to IEC 60228 Class 2 or BS 6360 |
| Insulation | XLPE, Thickness 0.66mm. Outer diameter 3.63mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|---|
| Filler | PP, PVC or PE |
| Wrapping Tape | Polyester tape |
| Inner Sheath | Black LSZH, thickness 0.76mm |
| Aarmor | 0.2mm steel wire interwoven braid, coverage 95% |
| Outer Sheath | LSZH, thickness 1.4mm, nominal outer diameter is 21.0mm |
| Sheath Color | Black |

Physical Characteristic:

Min Bending Radius: 360mm

Operating Temperature: -35°C/+90°C

Fire Performance:

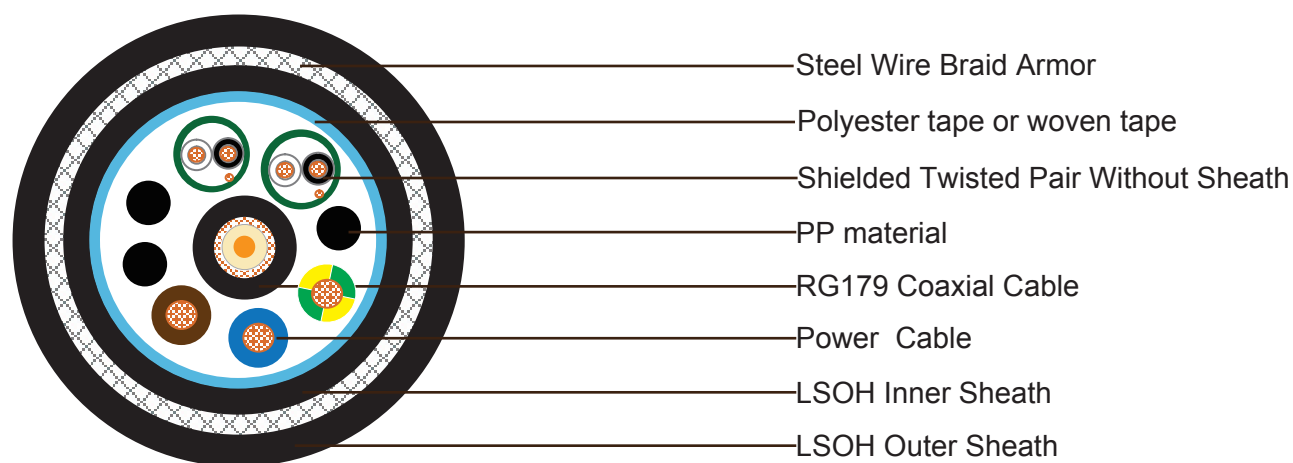
Flame Retardant: IEC60332 part 1 & 2

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1xRG179 + 3x1.5mm² Power Cable + 2x1x2x24 AWG Data Pairs Without Sheath SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG179 Coaxial Cable

| | |
|---------------------|--|
| Conductor | 7/0.1mm Silver plated copper conductor |
| Insulation | Solid PTFE. Diameter: 1.6mm |
| Shield | Braid of silver plated copper wire. Coverage ≥ 95% |
| Sheath | FEP sheath. Nominal outer diameter 2.5mm |
| Sheath Color | Black |

2x1x2x24 AWG Shielded Control Cable Without Sheath

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.4mm |
| Insulation Color | Black and white with pair number |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire. Nominal outer diameter 3.5mm |



3x1.5mm² Power Cable

| | |
|------------------------|--|
| Conductor | 1.5mm ² Stranded tinned copper wire |
| Insulation | XLPE. Nominal outer diameter 3.0mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|----------------------|--|
| Filler | PE or PP material |
| Wrapping Tape | Polyester tape or woven tape |
| Inner Sheath | Black LSZH, thickness 0.8mm. Diameter Over Bedding: 11.2mm±0.8mm |
| Aarmor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH, thickness 1.5mm, nominal outer diameter is 15.8±2.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±5Ohm (@1MHz)

Nominal capacitance: 63pF/m

Max. Attenuation: 28dB/100m @50MHz

Power Cable

Electrical Resistance: 12.1Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥1000 MOhm×km

Physical Characteristic:

Min Bending Radius: 420mm

Operating Temperature: -35°C/+80°C



Composite Cables

Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

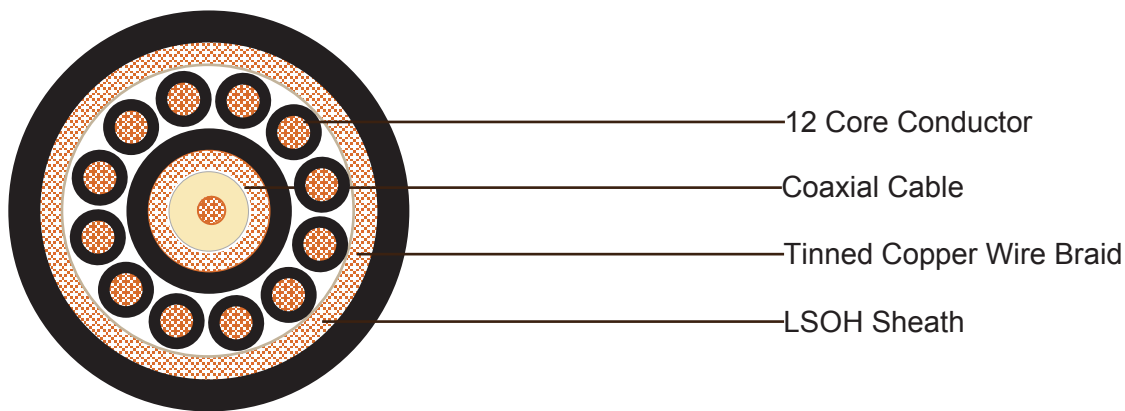
Flame Propagation: IEC60332

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



1C Coaxial Cable + 12 Core Conductors TCWB PVC Sheathed Composite Cable

Construction:



1x750hm Coaxial Cable

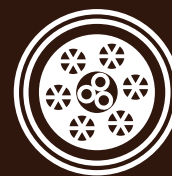
| | |
|---------------------|--|
| Conductor | 7/0.254mm stranded tinned copper wires |
| Insulation | Foamed polyethylene. Thickness is 1.46mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Sheath | PVC sheath. Nominal outer diameter: 5.28mm |
| Sheath Color | Black |

12 Core Conductor

| | |
|------------------------|---------------------------------------|
| Conductor | 7/0.32mm Stranded tinned copper wires |
| Insulation | PVC material. Thickness is 0.4mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|---------------------|--|
| Shield | Tinned copper wire braid, coverage 80% |
| Outer Sheath | LSZH, thickness 0.8mm, nominal outer diameter is 11.05mm |
| Sheath Color | Black |



Electrical and Physical Properties @20°C:

Coaxial Cable

Nom. Impedance: 75Ohm

Nom. Capacitance Conductor to Shield: 56.7pF/m (17.3pF/ft)

Nom. Velocity of Propagation: 78%

Nom. Delay: 4.26ns/m (1.3ns/ft)

Nom. Conductor DC Resistance: 0.047 Ohm/m (14.4 Ohm/1000ft)

Nom. Inner Shield DC Resistance: 0.0084 Ohm/m (2.55 Ohm/1000ft)

Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100m) | Attenuation (dB/100ft) |
|-------------|-----------------------|------------------------|
| 0.5 | 0.8 | 0.24 |
| 1 | 1.1 | 0.34 |
| 5 | 2.4 | 0.73 |
| 10 | 3.4 | 1.04 |
| 100 | 10.6 | 3.23 |
| 200 | 15.3 | 4.67 |
| 400 | 21.69 | 6.62 |

12C Conductor

Max. Operating Voltage: 300V

Max. Operating Voltage (overall): 300V

Element Assembly

Operating Temperature Range: -30°C to +75°C

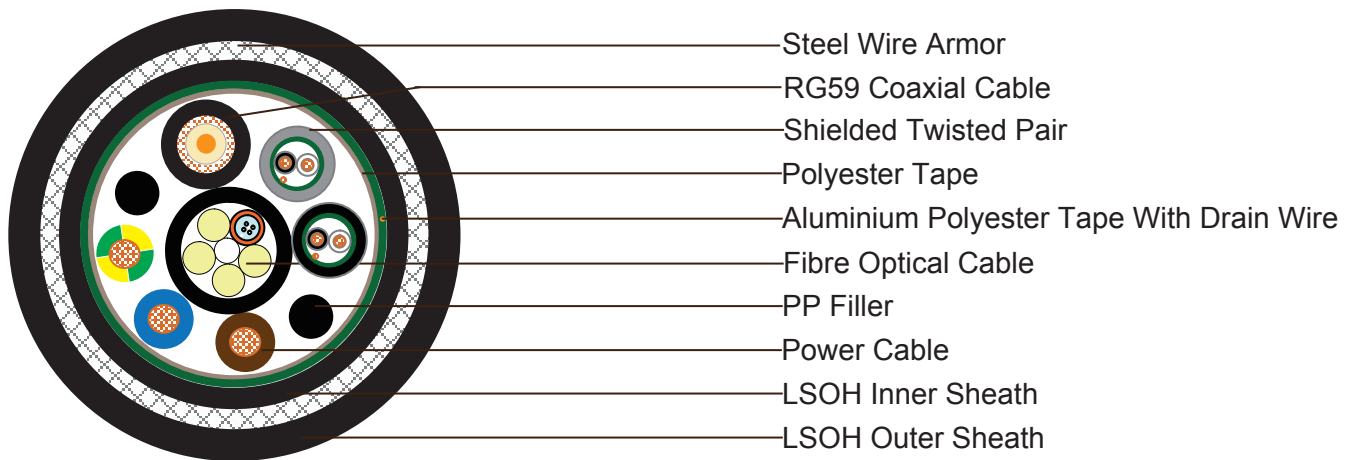
Min Bending Radius: 127mm

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1xRG59 + 4 Core 62.5 Fiber Cable + 3x2.5 Power Cable + 2x1x2x24AWG Pairs SWB LSZH Sheathed Composite Cable

Construction:



1x750hm RG59 Coaxial Cable

| | |
|---------------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Sheath | LSZH (SHF1) sheath. Norminal outer diameter 6.2mm |
| Sheath Color | Black |

4 core 62.5/125 Multi Loose Tube Type Fiber Cable

| | |
|-----------------------|------------------------------|
| Fibers | 4Cx62.5/125 |
| Central Member | Galvanized steel wire |
| Sheath | Nominal outer diameter 9.6mm |
| Sheath Color | Black |



Composite Cables

2x1x2x24 AWG Shielded Twisted Pair (around coaxial cable)

| | |
|-------------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Insulation | PVC material. Thickness 0.47mm |
| Insulation Color | Black and white with pair number |
| Shield | Aluminium polyester tape with 0.5mm ² stranded tinned copper drain wire. Nominal outer diameter 3.5mm |
| Sheath | LSZH (SHF1) sheath. Norminal outer diameter 5.2mm |

3x2.5mm² Power Cable

| | |
|------------------------|--|
| Conductor | 2.5mm ² Stranded tinned copper wire |
| Insulation | XLPE. Thickness 0.85mm. Outer diameter 3.6mm |
| Insultion Color | Blue, Brown and Green/Yellow |

Element Assembly

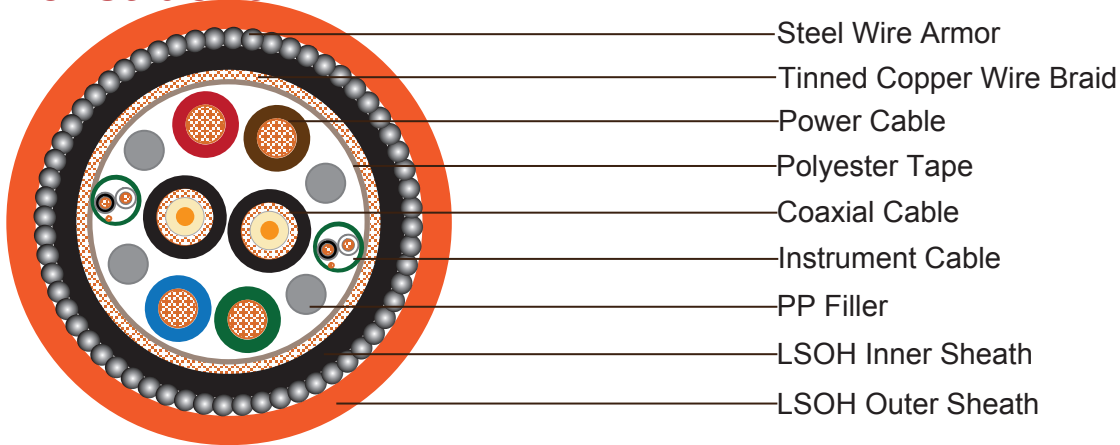
| | |
|----------------------|---|
| Filler | PP material around cable core |
| Wrapping Tape | Polyester tape |
| Shield | Aluminium polyester tape with 0.5mm ² tinned copper drain wire |
| Inner Sheath | Black LSZH (SHF1) , thickness 1.0-1.2mm |
| Aarmor | Steel wire braid, coverage 85% |
| Outer Sheath | LSZH (SHF1), thickness 1.8-2.0mm. norminal outer diameter 28.5mm |
| Sheath Color | Black |

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4x2.5 Power Cable +2 Instrument Pair+2 Coaxial Cable SWA LSOH Sheathed Composite Cables

Construction:



2 Core Coaxial Cable

| | |
|---------------------|--|
| Conductor | 7/0.22mm no oxygen copper conductor |
| Insulation | Polyethylene. Thickness 0.92mm |
| Shield | 0.12mm bare copper wire braided, coverage ca.85% |
| Sheath | LSZH, thickness: 0.8mm; Nominal outer diameter 4.5±0.3mm |
| Sheath Color | Black |

4x 2.5mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 7/0.68mm stranded no oxygen copper |
| Insulation | LSZH material. Thickness 0.8mm; outer diameter 3.7±0.2mm |
| Insulation Color | Red, blue, green, yellow |

2 Pair Instrument Cable

| | |
|-------------------------|---|
| Conductor | 7/0.22mm stranded tinned copper |
| Insulation | PE material. Thickness 0.50mm, outer diameter 1.6±0.2mm |
| Insulation Color | White/ blue; white/orange |



Composite Cables

| | |
|---------------|--|
| Shield | Aluminum-plastic compounded tape with 7/0.22mm tinned copper draining wire |
|---------------|--|

Element Assembly

| | |
|----------------------|--|
| Filler | Non-absorbent Polypropylene |
| Wrapping Tape | Polyester tape |
| Shield | Tinned copper wire braided, coverage ca.80% |
| Inner Sheath | Black LSOH, thickness: 1.0mm |
| Armor | 0.30mm galvanized steel(single ϕ wire braided; coverage ca.80%) |
| Outer Sheath | LSZH , thickness: 1.7mm, Norminal outer diameter 23.1 \pm 1.0mm |
| Sheath Color | Orange |
| Cable Weight | 735 kg/km |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75 \pm 3Ohm (@1MHz)

Max. Attenuation: 3dB/100m

Capacity: 55pF/m nominal at 1kHz

Power Cable

Electrical Resistance: 6.6Ohm/km

Insulation Resistance: \geq 5500 MOhm \times km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: \geq 1000 MOhm \times km

Element Assembly

Min Bending Radius: 280mm

Operating Temperature: -35°C/+90°C

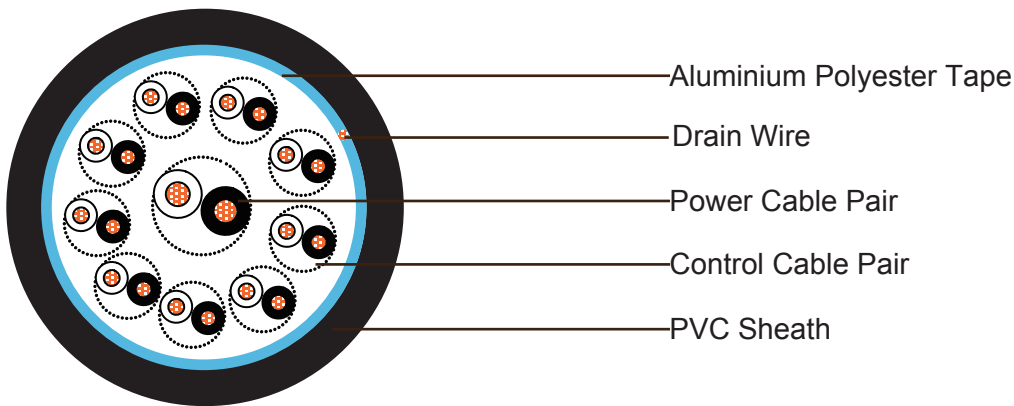
Long term operation temperature of cable conductor: 90°C

Max temperature of cable conductor during short circuit: \leq 250°C



1x2x2.5 Power Cable + 9x1x2x1.0 Control Cable Unarmored PVC Sheathed Composite Cable

Construction:



1x2x2.5mm² Power Cable

| | |
|-------------------------|------------------------------------|
| Conductor | 2.5mm ² annealed copper |
| Insulation | XLPE material. |
| Insulation Color | Black and white |

9x1x2x1.0mm² Control Cable

| | |
|-------------------------|------------------------------------|
| Conductor | 1.0mm ² annealed copper |
| Insulation | PE material. |
| Insulation Color | Black and white with pair number |

Element Assembly

| | |
|-------------------|--|
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | PVC sheath. Nominal outer diameter 25.5mm. Thickness 1.8mm |



Composite Cables

| | |
|--------------|-----------|
| Sheath Color | Black |
| Cable Weight | 477 kg/km |

Electrical and Physical Properties @20°C:

Power Cable

Max. Conductor Resistance: 7.41Ohm/km at 20°C

Control Cable

Max. Conductor Resistance: 18.5Ohm/km at 20°C

Operating Temperature: -20°C/+90°C

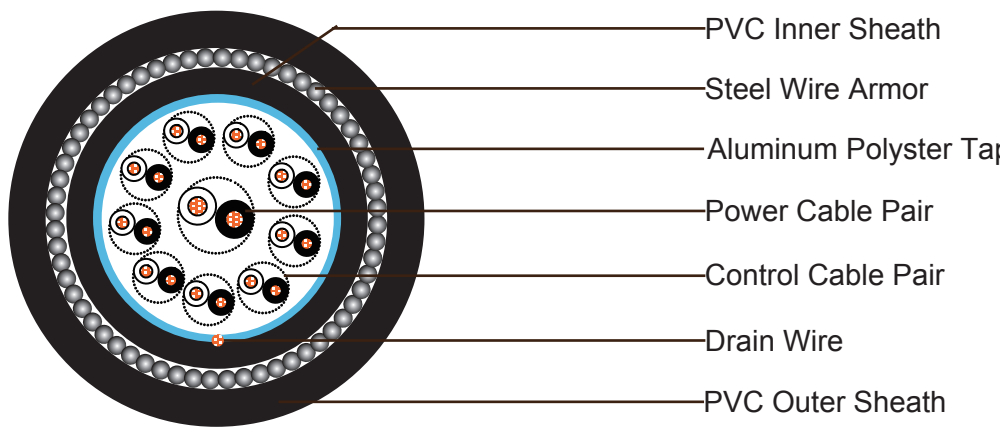
Voltage Rating: 600/1000V

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1x2x2.5 Power Cable + 9x1x2x1.0 Control Cable SWA PVC Sheathed Composite Cable

Construction:



1x2x2.5mm² Power Cable

| | |
|-------------------------|------------------------------------|
| Conductor | 2.5mm ² annealed copper |
| Insulation | XLPE material. |
| Insulation Color | Black and white |

9x1x2x1.0mm² Control Cable

| | |
|-------------------------|------------------------------------|
| Conductor | 1.0mm ² annealed copper |
| Insulation | PE material. |
| Insulation Color | Black and white with pair number |
| | |

Element Assembly

| | |
|-------------------|--|
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Bedding | PVC |



Composite Cables

| | |
|---------------------|--|
| Armour | 1.6mm Steel wire armor. |
| Sheath | PVC sheath. Nominal outer diameter 31.0mm. Thickness 2.0mm |
| Sheath Color | Black |
| Cable Weight | 1415 kg/km |

Electrical and Physical Properties @20°C:

Power Cable

Max. Conductor Resistance: 7.41Ohm/km at 20°C

Control Cable

Max. Conductor Resistance: 18.5Ohm/km at 20°C

Operating Temperature: -20°C/+90°C

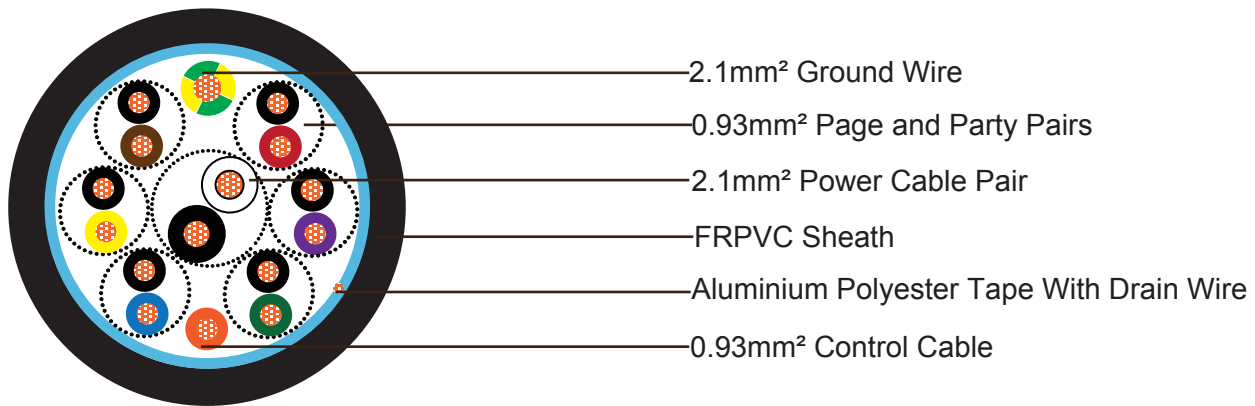
Voltage Rating: 600/1000V

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



Flame Retardant Unarmoured 16 Conductors UV Resistant & Vermin Proof FRPVC Composite Cable

Construction:



1 Pair Power cable and 1 ground wire

| | |
|--------------------------|---|
| Conductor | 2.10mm ² (42/0.25mm) annealed copper |
| Insulation | PVC material. Thickness 0.5mm |
| Insulation Color | Black and white |
| Ground wire color | Yellow-Green |

6 Page and party pairs, 1 control wire

| | |
|------------------------------|--|
| Conductor | 0.93mm ² (19/0.25mm) annealed copper |
| Insulation | PVC material. Thickness 0.5mm |
| Insulation Pair Color | Red-Black/Red, Violet-black/violet, Green-black/green, Blue-black/blue, Yellow-black/yellow, Brown-black/brown |
| Control wire color | Orange |

Element Assembly

| | |
|---------------------|---|
| Core make-up | Six pairs and control wire laid around power pair and ground wire |
|---------------------|---|



Composite Cables

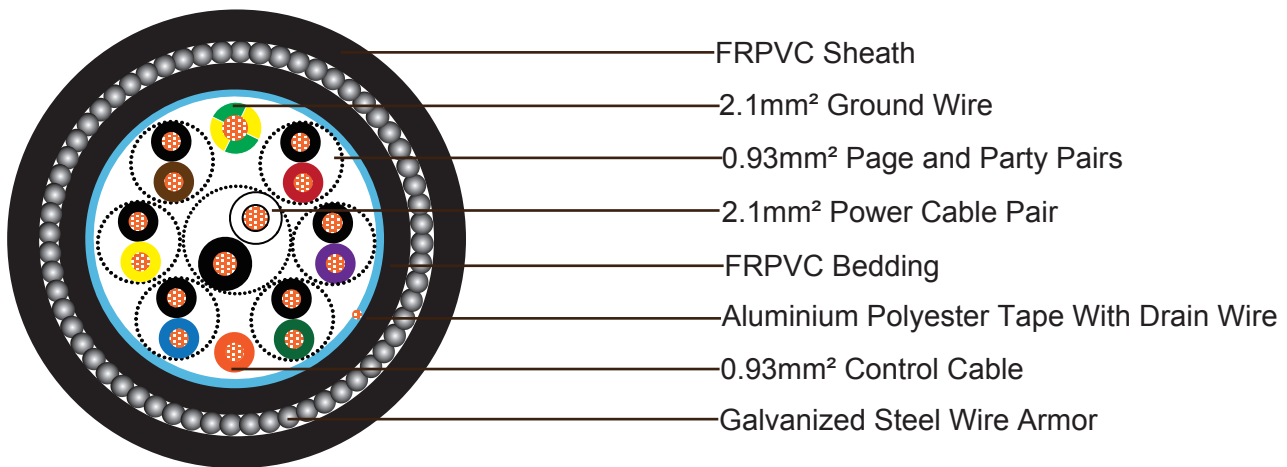
| | |
|--------------------------|--|
| Collective screen | Aluminium/p.e.t.p. laminated tape applied with the metallic side down in electrical contact with 7 stranded 0.25mm copper drain wire over the p.e.t.p. binder tape |
| Sheath | UV Resistant & Vermin Proof FRPVC compound. Thickness 1.8mm, Overall diameter 21.5±1.0mm. |
| Sheath Color | Black |

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



Flame Retardant SWA 16 Conductors UV Resistant & Vermin Proof FRPVC Composite Cable

Construction:



1 Pair Power cable and 1 ground wire

| | |
|-------------------|---|
| Conductor | 2.10mm ² (42/0.25mm) annealed copper |
| Insulation | PVC material. Thickness 0.5mm |
| Insulation Color | Black and white |
| Ground wire color | Yellow-Green |

6 Page and party pairs, 1 control wire

| | |
|-----------------------|--|
| Conductor | 0.93mm ² (19/0.25mm) annealed copper |
| Insulation | PVC material. Thickness 0.5mm |
| Insulation Pair Color | Red-Black/Red, Violet-black/violet, Green-black/green, Blue-black/blue, Yellow-black/yellow, Brown-black/brown |
| Control wire color | Orange |



Composite Cables

Element Assembly

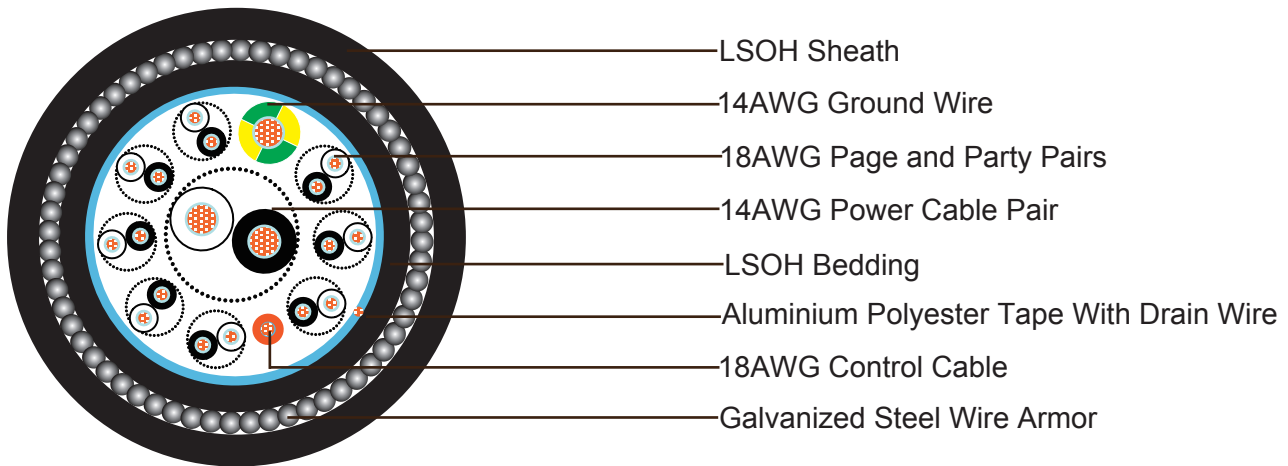
| | |
|--------------------------|--|
| Core make-up | Six pairs and control wire laid around power pair and ground wire |
| Collective screen | Aluminium/p.e.t.p. laminated tape applied with the metallic side down in electrical contact with 7 stranded 0.25mm copper drain wire over the p.e.t.p. binder tape |
| Bedding | 1.0mm FRPVC compound. |
| Armour | 1.6mm Galvanized steel wire. 0.2mm 80% Steel wire braid/1.25mm galvanized steel wire are optional |
| Sheath | UV Resistant & Vermin Proof FRPVC compound is applied over armour.. Thickness 1.7mm, Overall diameter 26.75±1.25mm |
| Sheath Color | Black |

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



Fire Resistant, SWA 20 Conductors UV Resistant, Flame Retardant LSZH Composite Cable

Construction:



1 Pair Power cable and 1 ground wire

| | |
|-------------------|------------------------------------|
| Conductor | 14AWG (19/0.361mm) annealed copper |
| Fire Barrier | Mica/Glass Tape |
| Insulation | XLPE material. Thickness 0.7mm |
| Insulation Color | Black and white |
| Ground wire color | Yellow-Green |

8 Party Line and Spare Pair, 1 control wire

| | |
|-----------------------|------------------------------------|
| Conductor | 18AWG (19/0.254mm) annealed copper |
| Fire Barrier | Mica/Glass Tape |
| Insulation | XLPE material. Thickness 0.7mm |
| Insulation Pair Color | Black & White with Pair Number |
| Control wire color | Orange |



Composite Cables

Element Assembly

| | |
|---------------------|---|
| Core make-up | The power pair, ground wire, Party Line and Spare Pair, and control wire are twisted together. Fillers will be used if necessary. |
| Binder tape | The polyester tape is wrapped over the cable cores |
| Bedding | 1.0mm Flame Retardant LSZH compound |
| Armour | 1.6mm Steel wire armor |
| Sheath | UV Resistant, Flame Retardant LSZH is applied over armour.. Thickness 1.7mm, Overall diameter 34.8±2.5mm |
| Sheath Color | Black |
| Cable Weight | 1722 kg/km |

Electrical and Physical Properties @20°C:

Power Pair, Ground Wire

Max. Conductor Resistance: 8.9Ohm/km at 20°C

Insulation Resistance: ≥1000 MOhm \times km

Party Line and Spare Pair, Control Wire

Max. Conductor Resistance: 17.9Ohm/km at 20°C

Insulation Resistance: ≥1000 MOhm \times km

Operating Temperature: -20°C/+90°C

Voltage Rating: 600/1000V

Fire Characteristics:

Fire Resistance: IEC 60331

Flame Propagation: IEC60332-1 & IEC60332-3C

Low Smoke Capacity: IEC61034-1/2

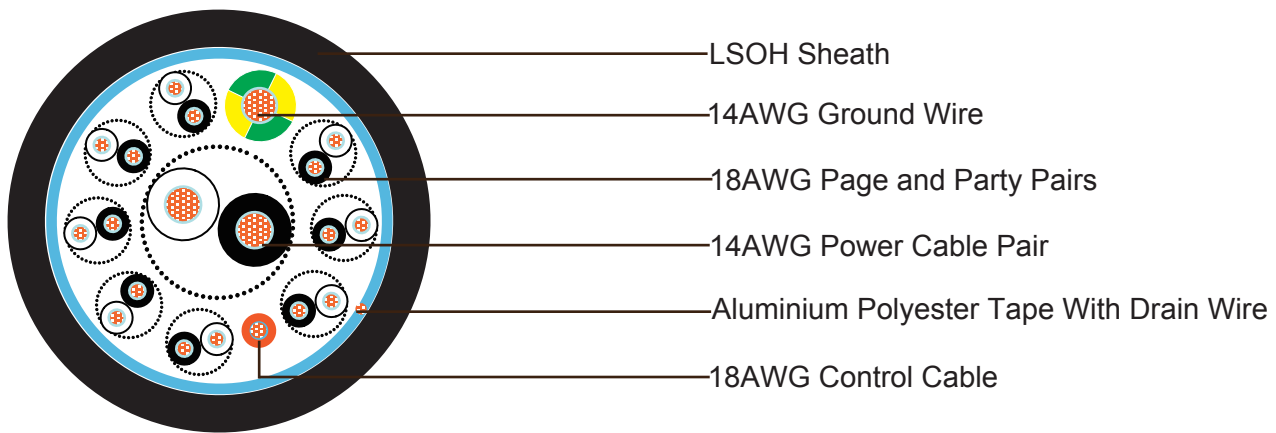
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



Fire Resistant, Unarmored 20 Conductors UV Resistant, Flame Retardant LSZH Composite Cable

Construction:



1 Pair Power cable and 1 ground wire

| | |
|--------------------------|------------------------------------|
| Conductor | 14AWG (19/0.361mm) annealed copper |
| Fire Barrier | Mica/Glass Tape |
| Insulation | XLPE material. Thickness 0.7mm |
| Insulation Color | Black and white |
| Ground wire color | Yellow-Green |

8 Party Line and Spare Pair, 1 control wire

| | |
|------------------------------|------------------------------------|
| Conductor | 18AWG (19/0.254mm) annealed copper |
| Fire Barrier | Mica/Glass Tape |
| Insulation | XLPE material. Thickness 0.7mm |
| Insulation Pair Color | Black & White with Pair Number |
| Control wire color | Orange |



Composite Cables

Element Assembly

| | |
|---------------------|---|
| Core make-up | The power pair, ground wire, Party Line and Spare Pair, and control wire are twisted together. Fillers will be used if necessary. |
| Binder tape | The polyester tape is wrapped over the cable cores |
| Sheath | UV Resistant, Flame Retardant LSZH is applied. Thickness 1.5mm, Overall diameter 29.5±2.0mm |
| Sheath Color | Black |
| Cable Weight | 566 kg/km |

Electrical and Physical Properties @20°C:

Power Pair, Ground Wire

Max. Conductor Resistance: 8.9Ohm/km at 20°C

Insulation Resistance: ≥1000 MOhm \times km

Party Line and Spare Pair, Control Wire

Max. Conductor Resistance: 17.9Ohm/km at 20°C

Insulation Resistance: ≥1000 MOhm \times km

Operating Temperature: -20°C/+90°C

Voltage Rating: 600/1000V

Fire Characteristics:

Fire Resistance: IEC 60331

Flame Propagation: IEC60332-1 & IEC60332-3C

Low Smoke Capacity: IEC61034-1/2

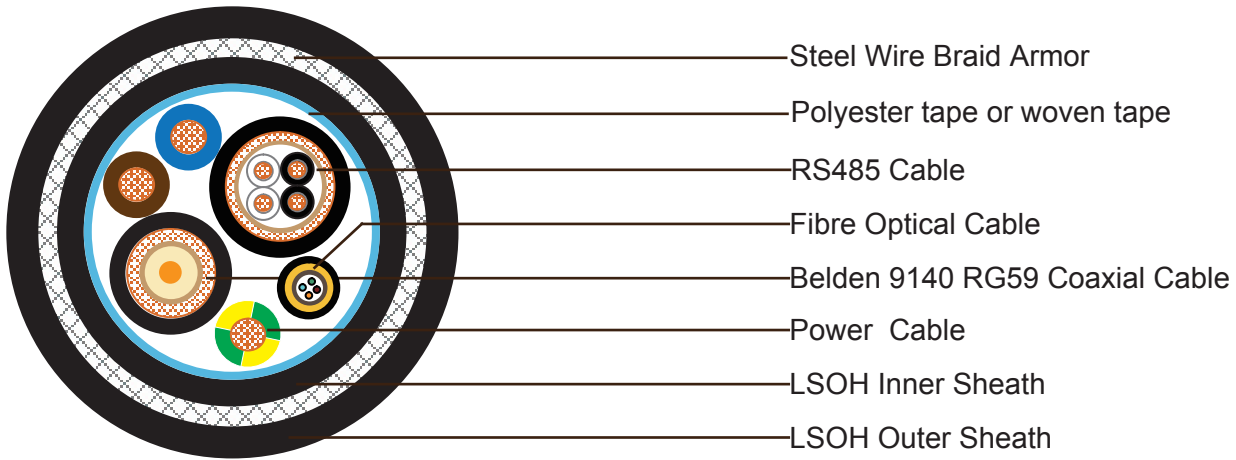
Halogen Free: IEC60754-1/2

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3x12AWG Power Cable + RS 485 + Belden 9104 + Fiber Optic Cable Steel Wire Braid Armored Composite Cable

Construction:



3x12AWG Power Cable

| | |
|-------------------------|--|
| Conductor | 12AWG (19/0.455mm) stranded copper wire |
| Insulation | XLPE compound. Nominal outer diameter 3.75mm |
| Insulation Color | Blue, Brown and Green/Yellow |

2 Pair 24AWG RS485

| | |
|---------------------|--|
| Conductor | 24AWG (7/0.2mm) stranded copper to IEC228 Class 2 |
| Insulation | PE material. Thickness 0.8mm |
| Shield | Aluminium polyester tape with 24 AWG stranded tinned copper drain wire |
| Braid | Copper wire braiding |
| Sheath | LSZH sheath. Nominal outer diameter is 9.0mm |
| Sheath Color | Black |



Composite Cables

Belden 9104 RG59 Coaxial Cable

| | |
|---------------------|--|
| Conductor | 20AWG bare copper covered steel wire |
| Insulation | Foam high density polyethylene. Norminal outer diameter 3.66mm |
| Shield | Aluminium foil with 100% coverage |
| Braid | Aluminium wire braiding with 67% coverage |
| Sheath | PVC sheath. Norminal outer diameter 6.02mm |
| Sheath Color | Black |

4 Core Central Loose Tube Fiber Optic Cable

| | |
|----------------------|---|
| Optical Fiber | Multi-mode cabled fibers meet or exceed the requirements of ITUT G.651 specification |
| Loose Tube | PBT tubes 1.80 ± 0.1 mm outer diameter, contains 4 fibers. The tubes are filled with a thixotropic gel to prevent the ingress of water |
| Aramid Yarn | Aramid Yarn is laid over the tube core to serve as peripheral strength member |
| Sheath | LSZH outer Sheath is extruded over the glass yarn. Nominal outer diameter is about 3.40mm |
| Sheath Color | Black |

Element Assembly

| | |
|----------------------|--|
| Wrapping Tape | Polyester tape or woven tape |
| Inner Jacket | Black LSZH, thickness 1.20mm |
| Aarmor | Steel wire braid, coverage 80% |
| Sheath | LSZH, thickness 1.80mm, nominal outer diameter 22.0 ± 2.0 mm |
| Sheath Color | Black |

Optical Characteristics

Optical Fiber

The Multi-mode fibers meet the ITU G.651 specification, as listed below:



| Property | 50/125 fibers | 62.5/125 fibers |
|--------------------------------|---|-----------------|
| Attenuation @ 850 nm (dB/km) | ≤ 3.0 | ≤ 3.2 |
| Attenuation @ 1300 nm (dB/km) | ≤ 1.0 | ≤ 1.2 |
| Added Attenuation with Bending | ≤ 0.5 dB (850 and 1300 nm for 100 turns around a 75 mm mandrel) | |
| Numerical Aperture | 0.20 ± 0.02 | 0.275 ± 0.015 |
| Bandwidth @ 850 nm | 400 MHz*km | 160 MHz*km |
| Bandwidth @ 1300 nm | 800 MHz*km | 500 MHz*km |
| Core diameter | 50 ± 3 μm | 62.5 ± 3 μm |
| Cladding diameter | 125 ± 2 μm | |
| Core-Cladding offset | ≤ 6% | |
| Cladding non-circularity | ≤ 2% | |
| Core non-circularity | ≤ 6% | |
| Coating diameter | 245 ± 10 μm | |
| Coating / Cladding offset | 12 μm | |
| Proof Test | ≥ 0.69 GN/m ² (100 kpsi) | |

The fibers contain no splices.

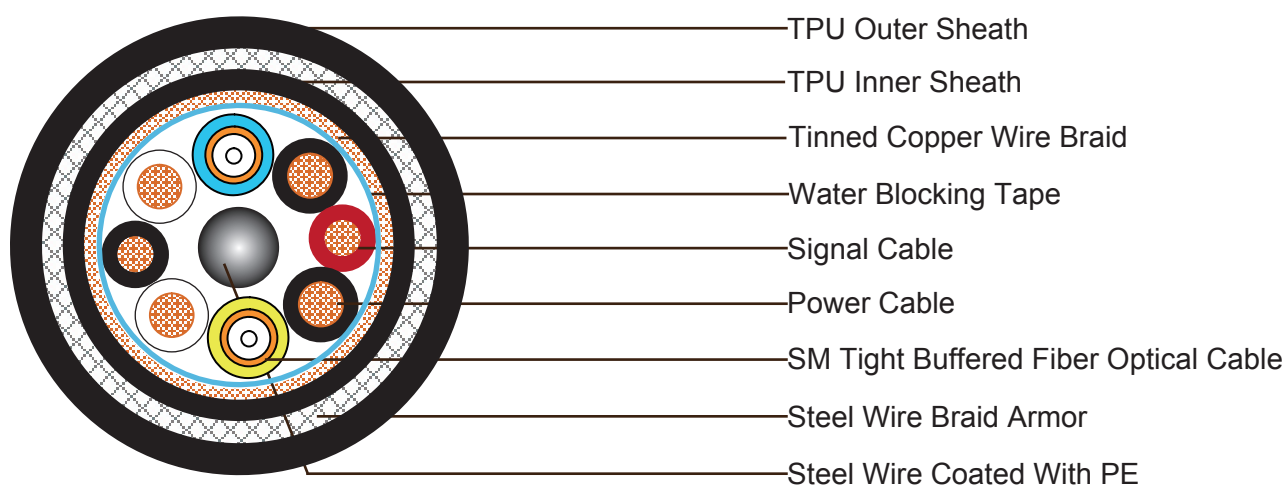
* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



Composite Cables

Power Cable + Signal Cable + SM Tight Buffered Fiber Optical Cable SWB Armored TPU Sheathed Composite Cable

Construction:



4x20AWG Power Cable

| | |
|------------------|---------------------------------------|
| Conductor | 20AWG stranded tinned copper wire |
| Insulation | XLPE. Nominal outer diameter is 1.5mm |
| Insulation Color | 2xBlack and 2xWhite |

2x24AWG Signal Conductor

| | |
|------------------|---------------------------------------|
| Conductor | 24AWG stranded tinned copper wire |
| Insulation | XLPE. Nominal outer diameter is 1.1mm |
| Insulation Color | Red and Black |

2Cx9/125um Tight Buffered Fiber Cable

| | |
|----------------------|--|
| Tight buffered fiber | Single-mode fiber meets the ITU G.652D specification |
| Strength meber | Aramid yarn |



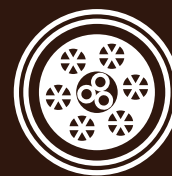
| | |
|---------------------|------------------------------------|
| Sheath | PVC, Nominal outer diameter: 1.6mm |
| Sheath Color | Blue & yellow |

Element Assembly

| | |
|--------------------------------|--|
| Central Strength Member | 1.5mm steel wire coated with PE, OD: 2.1mm |
| Wrapping Tape | Water blocking tape |
| Screen | Tinned copper wire braiding, 90% coverage |
| Inner Jacket | Black TPU |
| Aarmor | Steel wire braid, dia. 0.2mm, coverage 80% |
| Sheath | TPU, nominal outer diameter 12.0mm. |
| Sheath Color | Black |
| Cable Weight | 250kg/km |

Optical Characteristics

| Parameter | | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|---|----------------------------------|---|---|---|------------|
| Fiber Code | | 9 | 8 | 7 | |
| Attenuation, Loose Tube Cables | @1310nm | ≤0.35 | N/A | N/A | dB/km |
| | @1550nm | ≤0.22 | ≤0.22 | ≤0.22 | dB/km |
| | @1625nm | ≤0.25 | ≤0.26 | ≤0.26 | dB/km |
| Attenuation, Tight Buffer or Semi-Tight Cables | @1310nm | ≤0.38 | N/A | | dB/km |
| | @1550nm | ≤0.28 | N/A | | dB/km |
| Chromatic Dispersion | between 1260 and 1360nm (O Band) | ≤3.5 | N/A | N/A | ps/(nm*km) |
| | between 1460 and 1530nm (S Band) | N/A | N/A | 2.0-7.0 | ps/(nm*km) |
| | between 1530 and 1565nm (C Band) | ≤18 | 1.0-10.0 | 7.0-10.0 | ps/(nm*km) |
| | between 1565 and 1625nm (L Band) | ≤22 | 7.0-12.0 | 10.0-14.0 | ps/(nm*km) |



Composite Cables

| | | | | | |
|---|---------|-----------|-----------|-----------|--------------------------|
| Zero Dispersion Wavelength | | 1310±11 | 1530-1560 | 1460-1565 | nm |
| Zero Dispersion Slope | | 0.093 | 0.093 | 0.093 | ps/(nm ² .km) |
| Point Discontinuity at 1300nm & 1550nm | | 0.1 | 0.1 | 0.1 | dB |
| Mode Field Diameter | @1300nm | 9.3±0.5 | N/A | N/A | um |
| | @1550nm | 10.4±0.8 | 8.5±0.6 | 9.0±0.5 | um |
| Cable Cut-off Wavelength | | ≤1260 | ≤1450 | ≤1450 | nm |
| PMD (Individual fiber) | | ≤0.2 | ≤0.2 | ≤0.2 | ps/km ^{1/2} |
| Cladding Diameter | | 125±1 | 125±1 | 125±1 | um |
| Core/Cladding Concentricity Error | | ≤0.5 | ≤0.5 | ≤0.6 | um |
| Cladding Non-Circularity | | ≤1.0 | ≤1.0 | ≤1.0 | % |
| Coating Non-Circularity | | ≤6.0 | ≤6.0 | ≤6.0 | % |
| Primary Coating Diameter | | 245±10 | 245±10 | 245±10 | um |
| Proof-Test Level | | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m ² |
| Fatigue Coefficient | | ≥20 | ≥20 | ≥20 | |
| Temperature Dependence between 0°C ~ +70°C @ 1310 & 1550nm | | 0.1 | 0.1 | 0.1 | Db/km |

The fibers contain no splices.

Electrical Properties @20°C:

20AWG Power Cable

Conductor Resistance @ 20°C : 35.3 ohm/km

Insulation Resistance: ≥10GOhm x km

24AWG Signal Conductor

Conductor Resistance @ 20°C: 95Ohm/km

Insulation Resistance: ≥10GOhm x km

Mechanical Properties:

Max. Pulling Load

- Under installation: 1500N
- In service: 600N



Maximum Compressive Load: 1000N

Minimum Bending Radius:

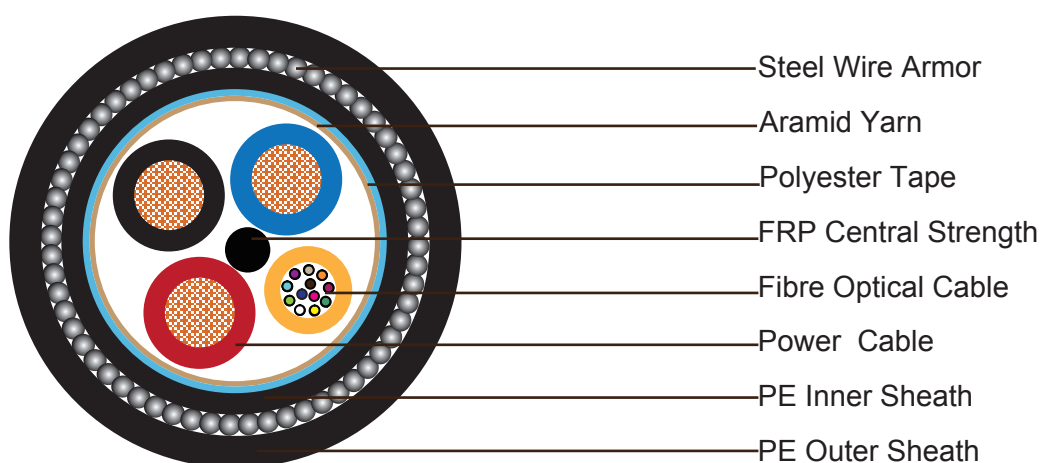
- Under installation: 20×OD
- During operation: 10×OD.

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3x2.5 Power Cable + 12C Fiber Optic Cable SWA Composite Cable

Construction:



3x2.5mm² Power Cable

| | |
|-------------------|---|
| Conductor | 7/0.67mm Stranded bare copper wire |
| Insulation | XLPE. Thickness is 0.7mm. Outer diameter 3.41mm |

12C Fiber Cable

| | |
|----------------------------|---|
| No of fibers in loose tube | 12 fibers |
| Loose tube | outer diameter: 2.4mm (PE or PVC Sheath would be used over the loose tube if necessary) |

Element Assembly

| | |
|--------------------------------|--|
| Central Strength Member | 1.5mm FRP central strength member with PE/PVC coating if necessary |
| Strength member | Aramid yarn helically is applied over cable core. |
| Wrapping Tape | Polyester tape is applied over cable core |
| Inner Jacket | PE, LSOH is optional, thickness is 1.0mm |
| Armor | Steel wire armour, size: 0.9mm |



| | |
|--------------|---|
| Sheath | PE, LSOH is optional, thickness is 1.8mm, nominal outer diameter 17.0±1.0mm |
| Sheath Color | Black |

Optical Characteristics

12C Optic Fiber Cable, G652D (around central member)

| Parameter | | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|--|----------------------------------|---|---|---|--------------------------|
| Fiber Code | | 9 | 8 | 7 | |
| Attenuation, Loose Tube Cables | @1310nm | ≤0.35 | N/A | N/A | dB/km |
| | @1550nm | ≤0.22 | ≤0.22 | ≤0.22 | dB/km |
| | @1625nm | ≤0.25 | ≤0.26 | ≤0.26 | dB/km |
| Attenuation, Tight Buffer or Semi-Tight Cables | @1310nm | ≤0.38 | N/A | | dB/km |
| | @1550nm | ≤0.28 | N/A | | dB/km |
| Chromatic Dispersion | between 1260 and 1360nm (O Band) | ≤3.5 | N/A | N/A | ps/(nm*km) |
| | between 1460 and 1530nm (S Band) | N/A | N/A | 2.0-7.0 | ps/(nm*km) |
| | between 1530 and 1565nm (C Band) | ≤18 | 1.0-10.0 | 7.0-10.0 | ps/(nm*km) |
| | between 1565 and 1625nm (L Band) | ≤22 | 7.0-12.0 | 10.0-14.0 | ps/(nm*km) |
| Zero Dispersion Wavelength | | 1310±11 | 1530-1560 | 1460-1565 | nm |
| Zero Dispersion Slope | | 0.093 | 0.093 | 0.093 | ps/(nm ² .km) |
| Point Discontinuity at 1300nm & 1550nm | | 0.1 | 0.1 | 0.1 | dB |
| Mode Field Diameter | @1300nm | 9.3±0.5 | N/A | N/A | um |
| | @1550nm | 10.4±0.8 | 8.5±0.6 | 9.0±0.5 | um |
| Cable Cut-off Wavelength | | ≤1260 | ≤1450 | ≤1450 | nm |
| PMD (Individual fiber) | | ≤0.2 | ≤0.2 | ≤0.2 | ps/km ^{1/2} |
| Cladding Diameter | | 125±1 | 125±1 | 125±1 | um |



Composite Cables

| | | | | |
|---|-----------|-----------|-----------|------------|
| Core/Cladding Concentricity Error | ≤0.5 | ≤0.5 | ≤0.6 | um |
| Cladding Non-Circularity | ≤1.0 | ≤1.0 | ≤1.0 | % |
| Coating Non-Circularity | ≤6.0 | ≤6.0 | ≤6.0 | % |
| Primary Coating Diameter | 245±10 | 245±10 | 245±10 | um |
| Proof-Test Level | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m2 |
| Fatigue Coefficient | ≥20 | ≥20 | ≥20 | |
| Temperature Dependence between 0°C ~ +70°C @ 1310 & 1550nm | 0.1 | 0.1 | 0.1 | Db/km |

The fibers contain no splices.

Mechanical Properties:

Tensile load:

Operating: 2650N

Installation: 8000N

Bending radius:

Operating: 15×OD

Installation: 30×OD

Compressive load:

Short term: 6000N

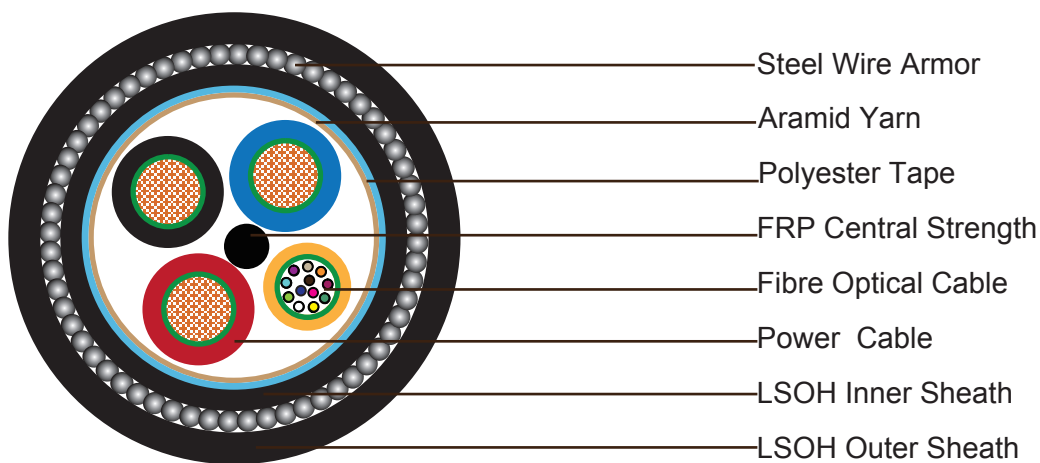
Long term: 4000N

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3x2.5 Power Cable+12C Fiber Optic Cable SWA Fire Resistant Composite Cable

Construction:



3x2.5mm² Power Cable

| | |
|---------------------|--|
| Conductor | 7/0.67mm Stranded bare copper wire |
| Fire barrier | Mica tape wrapped copper conductor |
| Insulation | XLPE. Thickness is 0.7mm. Outer diameter 4.6-4.7mm |

12C Optic Fiber Cable, G652D (around central member)

| | |
|----------------------------|---|
| No of fibers in loose tube | 12 fibers |
| Loose tube | outer diameter: 3.8mm (PE or PVC Sheath would be used over the loose tube if necessary) |
| Fire barrier | Mica tape wrapped loose tube |

Element Assembly

| | |
|--------------------------------|--|
| Central Strength Member | 1.9mm FRP central strength member with PE/PVC coating if necessary |
| Strength member | Aramid yarn helically is applied over cable core. |
| Inner Jacket | LSZH, thickness is 1.0mm |
| Armor | Steel wire armour, size: 0.9mm |



Composite Cables

| | |
|--------------|---|
| Sheath | LSZH, thickness is 1.8mm, nominal outer diameter 18.2±1.0mm |
| Sheath Color | Black |

Optical Characteristics

12C Optic Fiber Cable, G652D (around central member)

| Parameter | | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|--|----------------------------------|---|---|---|--------------------------|
| Fiber Code | | 9 | 8 | 7 | |
| Attenuation, Loose Tube Cables | @1310nm | ≤0.35 | N/A | N/A | dB/km |
| | @1550nm | ≤0.22 | ≤0.22 | ≤0.22 | dB/km |
| | @1625nm | ≤0.25 | ≤0.26 | ≤0.26 | dB/km |
| Attenuation, Tight Buffer or Semi-Tight Cables | @1310nm | ≤0.38 | N/A | | dB/km |
| | @1550nm | ≤0.28 | N/A | | dB/km |
| Chromatic Dispersion | between 1260 and 1360nm (O Band) | ≤3.5 | N/A | N/A | ps/(nm*km) |
| | between 1460 and 1530nm (S Band) | N/A | N/A | 2.0-7.0 | ps/(nm*km) |
| | between 1530 and 1565nm (C Band) | ≤18 | 1.0-10.0 | 7.0-10.0 | ps/(nm*km) |
| | between 1565 and 1625nm (L Band) | ≤22 | 7.0-12.0 | 10.0-14.0 | ps/(nm*km) |
| Zero Dispersion Wavelength | | 1310±11 | 1530-1560 | 1460-1565 | nm |
| Zero Dispersion Slope | | 0.093 | 0.093 | 0.093 | ps/(nm ² .km) |
| Point Discontinuity at 1300nm & 1550nm | | 0.1 | 0.1 | 0.1 | dB |
| Mode Field Diameter | @1300nm | 9.3±0.5 | N/A | N/A | um |
| | @1550nm | 10.4±0.8 | 8.5±0.6 | 9.0±0.5 | um |
| Cable Cut-off Wavelength | | ≤1260 | ≤1450 | ≤1450 | nm |
| PMD (Individual fiber) | | ≤0.2 | ≤0.2 | ≤0.2 | ps/km ^{1/2} |
| Cladding Diameter | | 125±1 | 125±1 | 125±1 | um |



| | | | | |
|---|-----------|-----------|-----------|------------|
| Core/Cladding Concentricity Error | ≤0.5 | ≤0.5 | ≤0.6 | um |
| Cladding Non-Circularity | ≤1.0 | ≤1.0 | ≤1.0 | % |
| Coating Non-Circularity | ≤6.0 | ≤6.0 | ≤6.0 | % |
| Primary Coating Diameter | 245±10 | 245±10 | 245±10 | um |
| Proof-Test Level | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m2 |
| Fatigue Coefficient | ≥20 | ≥20 | ≥20 | |
| Temperature Dependence between 0°C ~ +70°C @ 1310 & 1550nm | 0.1 | 0.1 | 0.1 | Db/km |

The fibers contain no splices.

Mechanical Properties:

Tensile load:

Operating: 600N

Installation: 1500N

Bending radius:

Operating: 12.5×OD

Installation: 25×OD

Compressive load:

Short term: 1000N

Long term: 300N

Fire Characteristics:

Fire Resistance: IEC 60331

Flame Propagation: IEC60332

Low Smoke Capacity: IEC61034-1/2

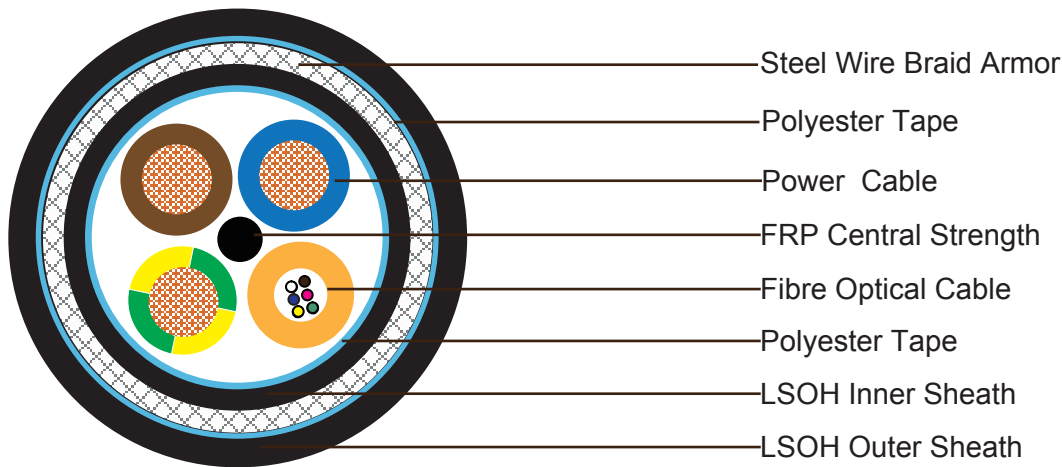
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



3x2.5 Power Cable + 6C Optical Fibre Cable SWB LSZH Sheathed Composite Cable

Construction:



3x2.5mm² Power Cable (around central member)

| | |
|------------------|---|
| Conductor | 50/0.25mm Stranded bare copper wire |
| Insulation | XLPE. Thickness is 0.86mm. Outer diameter 3.5mm |
| Insulation Color | Blue, Brown and Green/Yellow |

6C Optic Fiber Cable

| | |
|----------------------------|---|
| No of fibers in loose tube | 6 fibers |
| Loose tube | Outer diameter: 3.5mm (PE or PVC Sheath would be used over the loose tube if necessary) |

Element Assembly

| | |
|---------------|---|
| Wrapping Tape | Ployester tape |
| Inner Sheath | Grey LSZH, thickness 0.8mm |
| Aarmor | Steel wire braid, coverage 99% |
| Wrapping Tape | Ployester tape |
| Sheath | LSZH, thickness 1.6mm, norminal outer diameter 16.2mm |
| Sheath Color | Grey |



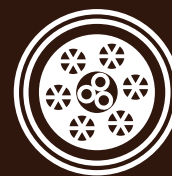
Optical Characteristics

Table 1. SM

| Property | Requirement |
|---------------------------------------|------------------------------------|
| Optical properties | |
| Attenuation @ 1310 nm | 0.35 dB/km |
| Attenuation @ 1550 nm | 0.22 dB/km |
| Point Discontinuity | 0.1 dB @ 1310 or 1550 nm |
| Chromatic Dispersion slope: | 0.092 ps/km/nm ² |
| Zero Chromatic Dispersion Wavelength: | 1300 - 1324 nm |
| Mode Field Diameter @ 1300 nm | 9.3 0.5m |
| Mode Field Diameter @ 1550 nm | 10.5 1.0m |
| Fiber Cut-Off Wavelength | 1260 70 nm |
| Cable Cut-Off Wavelength | 1260 nm |
| Geometrical properties | |
| Cladding Diameter: | 125 1.0 m |
| Core-Cladding Offset | 0.8 m |
| Cladding Non-Circularity: | 1.0 % |
| Colored Coating Diameter: | 250 10m |
| Coating / Cladding Offset: | 12m |
| Mechanical properties | |
| Proof Test: | 0.7 GN/m ² for 1 second |

Table 2. MM

| Property | 50/125 fibers | 62.5/125 fibers |
|--------------------------------|---|-----------------|
| Attenuation @ 850 nm (dB/km) | ≤ 3.0 | ≤ 3.2 |
| Attenuation @ 1300 nm (dB/km) | ≤ 1.0 | ≤ 1.2 |
| Added Attenuation with Bending | ≤ 0.5 dB (850 and 1300 nm for 100 turns around a 75 mm mandrel) | |
| Numerical Aperture | 0.20 ± 0.02 | 0.275 ± 0.015 |
| Bandwidth @ 850 nm | 400 MHz*km | 160 MHz*km |



Composite Cables

| | | |
|----------------------------------|-------------------------------------|-------------|
| Bandwidth @ 1300 nm | 800 MHz*km | 500 MHz*km |
| Core diameter | 50 ± 3 μm | 62.5 ± 3 μm |
| Cladding diameter | 125 ± 2 μm | |
| Core-Cladding offset | ≤ 6% | |
| Cladding non-circularity | ≤ 2% | |
| Core non-circularity | ≤ 6% | |
| Coating diameter | 245 ± 10 μm | |
| Coating / Cladding offset | 12 μm | |
| Proof Test | ≥ 0.69 GN/m ² (100 kpsi) | |

Electrical and Physical Properties @20°C(Power Cable):

Max. Electrical Resistance: 7.98Ω/km

Insulation Resistance: ≥5500 MΩ·km

Dielectric Strength: 1500V/1'

Physical Characteristic:

Min Bending Radius: 240mm

Operating Temperature: -35°C/+80°C

Fire Characteristics:

Flame Propagation: IEC60332-1

Low Smoke Capacity: IEC61034-1/2

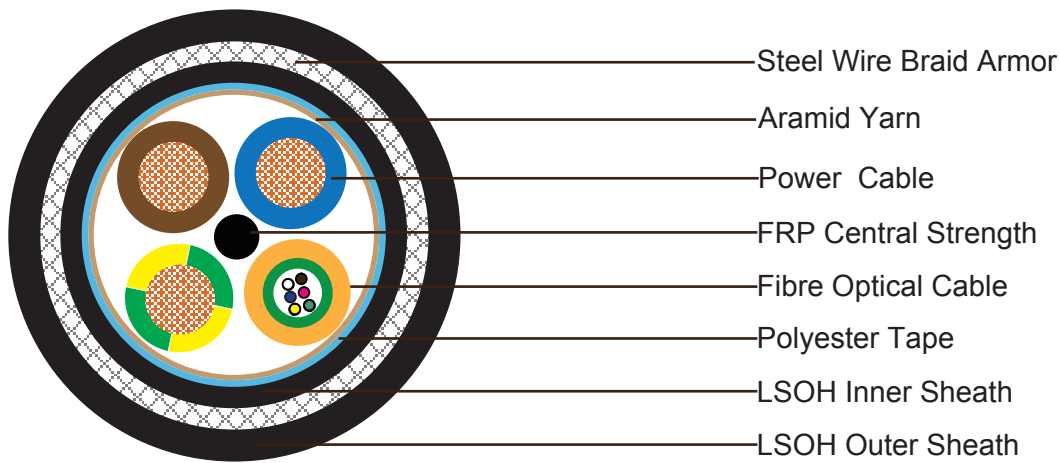
Halogen Free: IEC60754-1/2

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



3x2.5 Power Cable + 6C Fiber Optic Cable SWB Armored Composite Cable

Construction:



3x2.5mm² Power Cables

| | |
|-------------------------|--|
| Conductor | 7/0.67mm Stranded bare copper wire |
| Insulation | XLPE compound. Nominal outer diameter 3.41mm |
| Insulation Color | Blue, Brown and Green/Yellow |

6 Core Central Loose Tube Fiber Optic Cable

| | |
|-------------------------|---|
| Optical Fiber | Single-mode cabled fibers meet or exceed the requirements of ITUT G.652.D specification |
| Loose Tube | PBT tubes 1.80±0.1mm outer diameter, contains 6 fibers, The tubes are filled with a thixotropic gel to prevent the ingress of water |
| Fiber Glass Yarn | Fiber Glass Yarn is laid over the tube core to serve as peripheral strength member. |
| Sheath | PE outer Sheath is extruded over the glass yarn, Nominal outer diameter is about 3.40mm |
| Sheath Color | Black |

Element Assembly



Composite Cables

| | |
|--------------------------------|---|
| Central Strength Member | 1.5mm FRP central strength member with PE/PVC coating if necessary |
| Strength member | Aramid yarn helically is applied over cable core. |
| Inner Jacket | Black PE, thickness 1.00mm |
| Armor | Steel wire braid, coverage 80%, 0.25mm steel tape armor is optional |
| Sheath | PE, thickness 1.80mm, nominal outer diameter 16.00±1.0mm |
| Sheath Color | Black |

Optical Characteristics

Single-mode fibers meet or exceed the requirements of ITUT G.652.D, as listed in below:

| Parameter | | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|---|----------------------------------|---|---|---|---------------------------|
| Fiber Code | | 9 | 8 | 7 | |
| Attenuation, Loose Tube Cables | @1310nm | ≤0.35 | N/A | N/A | dB/km |
| | @1550nm | ≤0.22 | ≤0.22 | ≤0.22 | dB/km |
| | @1625nm | ≤0.25 | ≤0.26 | ≤0.26 | dB/km |
| Attenuation, Tight Buffer or Semi-Tight Cables | @1310nm | ≤0.38 | N/A | | dB/km |
| | @1550nm | ≤0.28 | N/A | | dB/km |
| Chromatic Dispersion | between 1260 and 1360nm (O Band) | ≤3.5 | N/A | N/A | ps/(nm*km) |
| | between 1460 and 1530nm (S Band) | N/A | N/A | 2.0-7.0 | ps/(nm*km) |
| | between 1530 and 1565nm (C Band) | ≤18 | 1.0-10.0 | 7.0-10.0 | ps/(nm*km) |
| | between 1565 and 1625nm (L Band) | ≤22 | 7.0-12.0 | 10.0-14.0 | ps/(nm*km) |
| Zero Dispersion Wavelength | | 1310±11 | 1530-1560 | 1460-1565 | nm |
| Zero Dispersion Slope | | 0.093 | 0.093 | 0.093 | ps/(nm ² . km) |
| Point Discontinuity at 1300nm & 1550nm | | 0.1 | 0.1 | 0.1 | dB |
| Mode Field Diameter | @1300nm | 9.3±0.5 | N/A | N/A | um |
| | @1550nm | 10.4±0.8 | 8.5±0.6 | 9.0±0.5 | um |



| | | | | |
|--|-----------|-----------|-----------|------------------------|
| Cable Cut-off Wavelength | ≤1260 | ≤1450 | ≤1450 | nm |
| PMD (Individual fiber) | ≤0.2 | ≤0.2 | ≤0.2 | ps/km ^{1/2} |
| Cladding Diameter | 125±1 | 125±1 | 125±1 | um |
| Core/Cladding Concentricity Error | ≤0.5 | ≤0.5 | ≤0.6 | um |
| Cladding Non-Circularity | ≤1.0 | ≤1.0 | ≤1.0 | % |
| Coating Non-Circularity | ≤6.0 | ≤6.0 | ≤6.0 | % |
| Primary Coating Diameter | 245±10 | 245±10 | 245±10 | um |
| Proof-Test Level | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m ² |
| Fatigue Coefficient | ≥20 | ≥20 | ≥20 | |
| Temperature Dependence between 0°C ~ +70°C @ 1310 & 1550nm | 0.1 | 0.1 | 0.1 | Db/km |

The fibers contain no splices.

Mechanical Properties:

Minimum Bending Radius:

Under Installation: 25×OD

During Operation: 12.5×OD

Temperature Range:

Operating Temperature Range: -40°C (-40 oF to +70°C (+158 oF)

Storage Temperature Range: -50°C (-58 oF to +70°C (+158 oF)

Maximum Crush Resistance:

Long Term: 300N

Short Term: 10000N

Minimum Tensile Resistance:

Under Installation: 1500N

During Operation: 600N.

Repeated Impact: 4.0 N.m (J)

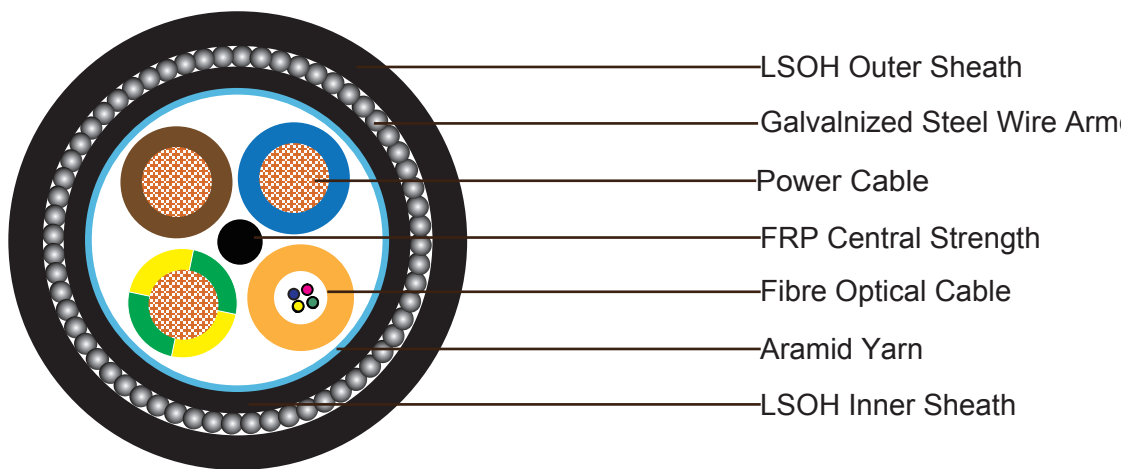
Twist (Torsion): 180x10 times, 125xOD

Cyclic Flexing: 25 cycles for armoured cables;



3x2.5 Power Cable + 4C Fiber Optic Cable SWA LSZH Sheathed Composite Cable

Construction:



3x2.5mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 50/0.25mm Stranded bare copper wire |
| Insulation | XLPE. Thickness is 0.7mm. Outer diameter 3.5mm |
| Insulation Color | Blue, Brown and Green/Yellow |

4C Optic Fiber Cable, G652D (around central member)

| | |
|----------------------------|---|
| No of fibers in loose tube | 4 fibers |
| Loose tube | Outer diameter: 3.5mm (PE or PVC Sheath would be used over the loose tube if necessary) |

Element Assembly

| | |
|--------------------------------|---|
| Central Strength Member | Steel wire central strength member with PE coating if necessary |
| Strength member | Aramid yarn helically is applied over cable core. |
| Inner Jacket | LSZH, thickness is 1.0mm |
| Armor | Galvanised steel wire armour, Outer diameter: 0.9mm |



| | |
|---------------------|---|
| Sheath | LSZH, thickness is 1.6mm, nominal outer diameter 17.0mm |
| Sheath Color | Black |

Optical Characteristics

4C Optic Fiber Cable, G652D (around central member)

| Parameter | | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|---|----------------------------------|---|---|---|--------------------------|
| Fiber Code | | 9 | 8 | 7 | |
| Attenuation, Loose Tube Cables | @1310nm | ≤0.35 | N/A | N/A | dB/km |
| | @1550nm | ≤0.22 | ≤0.22 | ≤0.22 | dB/km |
| | @1625nm | ≤0.25 | ≤0.26 | ≤0.26 | dB/km |
| Attenuation, Tight Buffer or Semi-Tight Cables | @1310nm | ≤0.38 | N/A | | dB/km |
| | @1550nm | ≤0.28 | N/A | | dB/km |
| Chromatic Dispersion | between 1260 and 1360nm (O Band) | ≤3.5 | N/A | N/A | ps/(nm*km) |
| | between 1460 and 1530nm (S Band) | N/A | N/A | 2.0-7.0 | ps/(nm*km) |
| | between 1530 and 1565nm (C Band) | ≤18 | 1.0-10.0 | 7.0-10.0 | ps/(nm*km) |
| | between 1565 and 1625nm (L Band) | ≤22 | 7.0-12.0 | 10.0-14.0 | ps/(nm*km) |
| Zero Dispersion Wavelength | | 1310±11 | 1530-1560 | 1460-1565 | nm |
| Zero Dispersion Slope | | 0.093 | 0.093 | 0.093 | ps/(nm ² .km) |
| Point Discontinuity at 1300nm & 1550nm | | 0.1 | 0.1 | 0.1 | dB |
| Mode Field Diameter | @1300nm | 9.3±0.5 | N/A | N/A | um |
| | @1550nm | 10.4±0.8 | 8.5±0.6 | 9.0±0.5 | um |
| Cable Cut-off Wavelength | | ≤1260 | ≤1450 | ≤1450 | nm |
| PMD (Individual fiber) | | ≤0.2 | ≤0.2 | ≤0.2 | ps/km ^{1/2} |
| Cladding Diameter | | 125±1 | 125±1 | 125±1 | um |



Composite Cables

| | | | | |
|---|-----------|-----------|-----------|------------|
| Core/Cladding Concentricity Error | ≤0.5 | ≤0.5 | ≤0.6 | um |
| Cladding Non-Circularity | ≤1.0 | ≤1.0 | ≤1.0 | % |
| Coating Non-Circularity | ≤6.0 | ≤6.0 | ≤6.0 | % |
| Primary Coating Diameter | 245±10 | 245±10 | 245±10 | um |
| Proof-Test Level | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m2 |
| Fatigue Coefficient | ≥20 | ≥20 | ≥20 | |
| Temperature Dependence between 0°C ~ +70°C @ 1310 & 1550nm | 0.1 | 0.1 | 0.1 | Db/km |

The fibers contain no splices.

Mechanical Properties:

Tensile load:

Short term: 600N

Long term: 1500N

Fire Characteristics:

Flame Propagation: IEC60332-1

Low Smoke Capacity: IEC61034-1/2

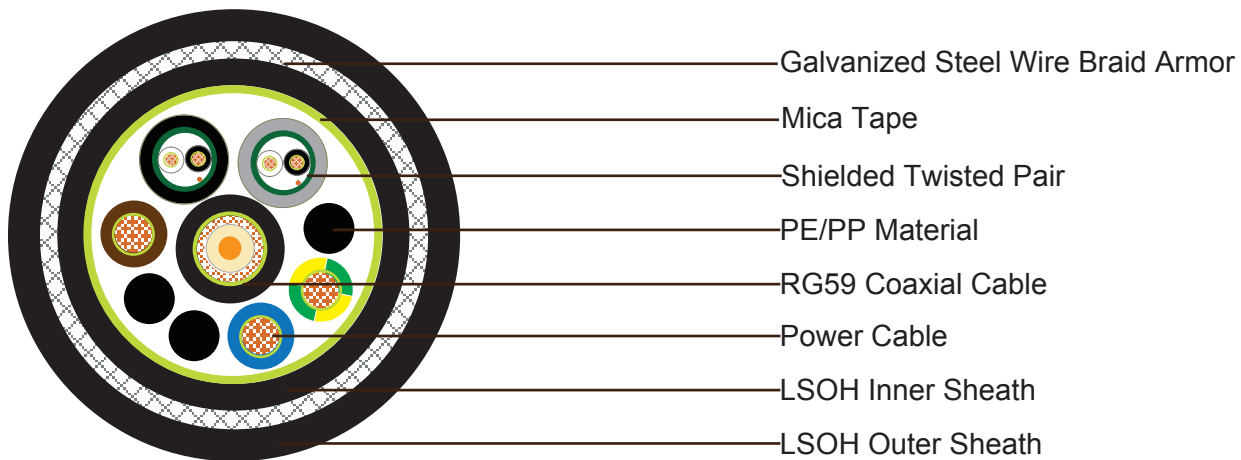
Halogen Free: IEC60754-1/2

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1x RG59 + 3x2.5 Power Cable + 2x1x2x24AWG Data Pairs SWB LSZH Sheathed Fire Resistant & Mud Resistant Composite Cable

Construction:



1x750hm RG59 Coaxial Cable(in the center of the cable core)

| | |
|--------------|---|
| Conductor | 0.58mm Solid copper conductor |
| Insulation | Polyethylene. Thickness 1.56mm |
| Shield | Braid of bare copper wire. Coverage ≥ 95% |
| Fire Barrier | Mica tape |
| Sheath | FRLSZH sheath. Nominal outer diameter 6.7mm |
| Sheath Color | Black |

2x1x2x24AWG Shielded Twisted Pair (around coaxial cable)

| | |
|------------------|--|
| Conductor | 7/0.2mm Stranded tinned copper |
| Fire Barrier | Mica tape |
| Insulation | PVC material. Thickness 0.7mm |
| Insulation Color | Black and white |
| Shield | Aluminium polyester tape |
| Drain Wire | 24 AWG stranded tinned copper drain wire |
| Sheath | FRLSZH sheath. Nominal outer diameter 8.5mm. Thickness 0.8mm |



Composite Cables

| | |
|--------------|----------------|
| Sheath Color | Black and Grey |
|--------------|----------------|

3x2.5mm² Power Cable (around coaxial cable)

| | |
|------------------|--|
| Conductor | 2.5mm ² Stranded tinned copper wire |
| Fire Barrier | Mica tape |
| Insulation | XLPE. Nominal outer diameter 4.2mm |
| Insulation Color | Blue, Brown and Green/Yellow |

Element Assembly

| | |
|--------------|--|
| Filler | PE or PP material |
| Fire Barrier | Mica tape |
| Inner Sheath | Black FRLSZH, thickness 1.5mm |
| Aarmor | Galvanized steel wire braid, coverage 95% |
| Outer Sheath | FRLSZH, thickness 1.5mm, nominal outer diameter 31.0±2.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Coaxial Cable

Impedance: 75±3Ohm (@1MHz)

Max. Attenuation: 7.5dB/100m @50MHz

Power Cable

Electrical Resistance: 7.56Ohm/km

Insulation Resistance: ≥5500 MOhm×km

Data Pairs

Electrical Resistance: 90Ohm/km

Insulation Resistance: ≥200 MOhm×km

Element Assembly:

Min Bending Radius: 420mm

Operating Temperature: -30°C/+80°C



Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

Flame Propagation: IEC60332

Fire Resistant: IEC60331-21

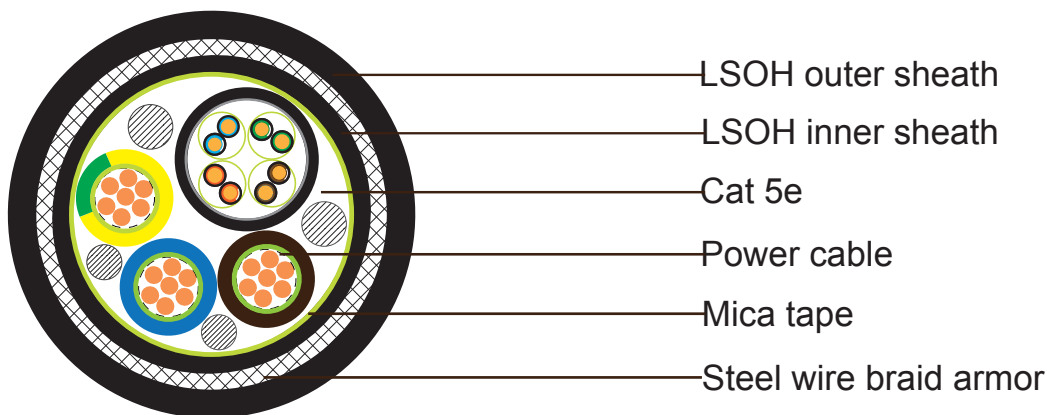
Mud Resistant & other properties could be met upon request

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Cat5e+3x2.5 Power Cable SWB LSHZ Sheathed Fire Resistant & Mud Resistant Composite Cable

Construction:



CAT5E 4x2x24AWG

| | |
|---------------------|---|
| Conductor | Solid copper conductor |
| Insulation | Polyethylene/Silicone Rubber |
| Fire Barrier | Mica tape |
| Sheath | FRLSZH sheath. Nominal outer diameter 9.5mm |
| Sheath Color | Black |

3x2.5mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 2.5mm ² Stranded tinned copper wire |
| Fire Barrier | Mica tape |
| Insulation | XLPE. Nominal outer diameter 5.0mm |
| Insulation Color | Blue, Brown and Green/Yellow |



Element Assembly

| | |
|---------------------|--|
| Filler | PE or PP material |
| Fire Barrier | Mica tape |
| Inner Sheath | Black FRLSZH, thickness 1.0mm |
| Aarmor | Galvanized steel wire braid, coverage 95% |
| Outer Sheath | FRLSZH, thickness 1.6mm, nominal outer diameter 23.0±1.5mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Cat5e

| FREQ (MHz) | NEXT(dB/100m) Minimum Value/Typical Value/ Standard Value | IL (dB/100m) | SRL (dB/100m) Minimum Value/Typical Value/ Standard Value |
|------------|---|--------------|---|
| 1 | 64.0/71.0/62.0 | 2.0 | 24.5/26.0/23.0 |
| 4 | 55.0/62.0/53.0 | 4.0 | 24.5/26.0/23.0 |
| 8 | 49.5/57.0/48.0 | 5.7 | 24.5/26.0/23.0 |
| 10 | 49.0/56.0/47.0 | 6.4 | 24.5/26.0/23.0 |
| 16 | 44.9/52.0/44.0 | 8.2 | 24.5/26.0/23.0 |
| 20 | 42.5/48.0/42.0 | 9.2 | 24.5/26.0/23.0 |
| 25 | 42.0/48.0/41.0 | 10.3 | 24.5/26.0/23.0 |
| 31.25 | 40.6/48.0/39.0 | 11.6 | 22.5/24.0/21.0 |
| 62.5 | 36.1/43.0/35.0 | 16.9 | 19.5/22.0/18.0 |
| 100 | 34.0/40.0/32.0 | 21.8 | 17.5/20.0/16.0 |

Power Cable

Electrical Resistance: 12.1Ohm/km

Insulation Resistance: ≥5500 MOhm \times km

Element Assembly:

Min Bending Radius: 420mm

Operating Temperature: -30°C/+80°C

| | |
|---------------------------------------|---------------------|
| Characteristic Impedance | 100 Ohm±15% |
| Nominal Velocity of Propagation (NVP) | 69% |
| Max. Dc Resistance | 9.38 Ohm/100m |
| Max. Resistance Unbalance | 5% |
| Max. Mutual Capacitance: | 5.6 nF/100m |
| Maximum Capacitance Unbalance | 330 pF/100m |
| Max. Propagation Delay Skew | 30 ns/100m |
| Max. Propagation Delay | 536 ns/100m@100 mhz |
| Max. Pulling Load | 80N |

Fire Performance:

Low Smoke Capacity: IEC61034-1/2

Halogen Free: IEC60754-1/2

Flame Propagation: IEC60332

Fire Resistant: IEC60331-21

Mud Resistant & other properties could be met upon request

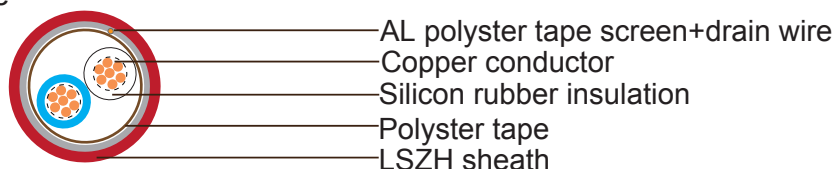


2x(2C1.5mm²) Audio Cable + Cat6 F/UTP LSZH Sheathed Unarmoured Composite Cable

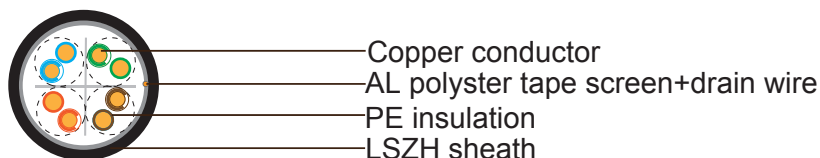
Construction:



Audio Cable



Cat 6 F/UTP



2Cx1.5mm² Audio Cable

| | |
|-------------------------|---|
| Conductor | 1.5mm ² Stranded copper wire, class 5 to IEC60228. |
| Insulation | Fire resistant silicone rubber compound. Nominal thickness 0.8mm. |
| Insulation Color | White and blue. |
| Screen | Aluminium tape with tinned copper drain wire. |
| Sheath | LSZH sheath. Nominal thickness 1.0 mm. |
| Sheath Color | Red. |
| General Standard | Basic design to EN50288-7. |



Cat 6 F/UTP

| | |
|-------------------------|---|
| Conductor | 24 AWG stranded plain copper. |
| Insulation | PE material. Nominal diameter is 0.97mm. |
| Insulation Color | White-orange,Orange;White-blue,Blue; White-green,Green;White-brown,Brown. |
| Screen | Alumminum tape with tinned copper drain wire. |
| Sheath | LSZH sheath. Nominal overall diameter is 6.5 mm. |
| Sheath Color | Black or Grey or Blue. Other colors also available upon request. |
| Applications | IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; IEEE 802.5 16 MB; ISDN; TPDDI; ATM. |
| Standards | ISO/IEC 11801, IEC 61156-5,EN 50173,ANSI/TIA 568B. |

Element Assembly

| | |
|----------------------|--|
| Filler | PP material . |
| Wrapping Tape | Polyester tape or woven tape. |
| Outer Sheath | High flexible LSZH. Nominal thickness 1.8mm. |
| Sheath Color | Black. Other colors also available upon request. |

Electrical and Physical Properties@20°C:

Audio Cable

Max.Electrical Resistance: 12.3Ohm/km

Min. Insulation Resistance: 1000 MOhm/km

Operating Temperature: -20°C/+90°C

Voltage rating: 300/500V

Insulation spark test: 7000 V r.m.s./H.F.

Max. Attenuation: 0.88 dB/km @800HZ

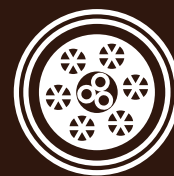
Max. Inductance: 0.75mH/km

Cat6 F/UTP (1-250MHz)

Max.Electrical Resistance: 93.8 Ohm/km

Min.Insulation Resistance: 2000 MOhm/km

Operating Temperature: -20°C/+70°C



Composite Cables

Max. Resistance Unbalance: 5%
Max. Mutual Capacitance: 5.6nF/100m
Max. Capacitance Unbalance: 330pF/100m
Characteristic Impedance : 100 ± 15 (1-250MHz)
Nominal Velocity of Propagation: 69%
Max. Propagation Delay : 536ns/100m@100MHz
Max. Propagation Delay skew : 45ns/100m(1-125MHz)
Test voltage (DC, 1 min) Core/Core : 1000V

Fire Performance:

Audio Cable

Fire Resistance : IEC60331
Flame Retardance: IEC60332-1-2
Fire Propagation : IEC60332-3-22
Halogen Free: IEC60754-1/2
Low Smoke Capacity: IEC61034-1/2
Oxygen Index : ISO 4589-2
Temperature Index : ISO 4589-3

Cat6 F/UTP

Flame Retardance: IEC60332-1-2
Fire Propagation : IEC60332-3-22
Halogen Free: IEC60754-1/2
Low Smoke Capacity: IEC61034-1/2
Oxygen Index : ISO 4589-2
Temperature Index : ISO 4589-3

Element Assembly

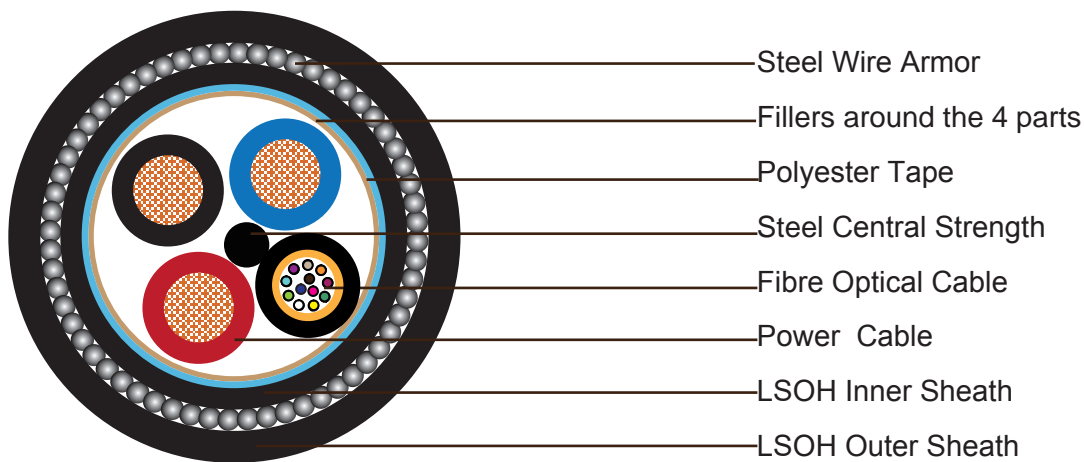
Flame Retardance: IEC60332-1-2
Fire Propagation : IEC60332-3-22
Halogen Free: IEC60754-1/2
Low Smoke Capacity: IEC61034-1/2
Oxygen Index : ISO 4589-2
Temperature Index : ISO 4589-3

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.2



3x2.5 Power Cable + 12C Fiber Optic Cable SWA LSOH Sheathed Composite Cable

Construction:



3x2.5mm² Power Cable

| | |
|-------------------|---|
| Conductor | 7/0.67mm Stranded bare copper wire |
| Insulation | XLPE. Thickness is 0.7mm. Outer diameter 3.41mm |

12C Fiber Cable

| | |
|----------------------------|--|
| No of fibers in loose tube | 12 fibers |
| Loose tube | outer diameter: 2.2+/-0.2mm (Aramid yarn &PE Sheath would be used over the loose tube) |

Element Assembly

| | |
|--------------------------------|--|
| Central Strength Member | Steel central strength member with PE/PVC coating if necessary |
| Fillers | PP fillers will be added around the 4 cable cores. |
| Wrapping Tape | Polyester tape is applied over cable core if necessary |
| Inner Jacket | PE, LSOH is optional, thickness is 1.0mm |
| Armor | Steel wire armour |



Composite Cables

| | |
|---------------------|---|
| Sheath | PE, LSOH is optional, thickness is 1.8mm, nominal outer diameter 16.2±2.0mm |
| Sheath Color | Black |

Optical Characteristics

| Property | 50/125 fibers | 62.5/125 fibers |
|--------------------------------|---|-----------------|
| Attenuation @ 850 nm (dB/km) | ≤ 3.0 | ≤ 3.2 |
| Attenuation @ 1300 nm (dB/km) | ≤ 1.0 | ≤ 1.2 |
| Added Attenuation with Bending | ≤ 0.5 dB (850 and 1300 nm) for 100 turns around a 75 mm mandrel | |
| Numerical Aperture | 0.20 ± 0.02 | 0.275 ± 0.015 |
| Bandwidth @ 850 nm | 400 MHz*km | 160 MHz*km |
| Bandwidth @ 1300 nm | 800 MHz*km | 500 MHz*km |
| Core diameter | 50 ± 3 μm | 62.5 ± 3 μm |
| Cladding diameter | 125 ± 2 μm | |
| Core-Cladding offset | ≤ 6% | |
| Cladding non-circularity | ≤ 2% | |
| Core non-circularity | ≤ 6% | |
| Coating diameter | 245 ± 10 μm | |
| Coating / Cladding offset | 12 μm | |
| Proof Test | ≥ 0.69 GN/m ² (100 kpsi) | |

The fibers contain no splices.

Mechanical Properties:

Tensile load:

Operating: 3000N Installation: 5000N

Bending radius:

Operating: 15×OD Installation: 28×OD

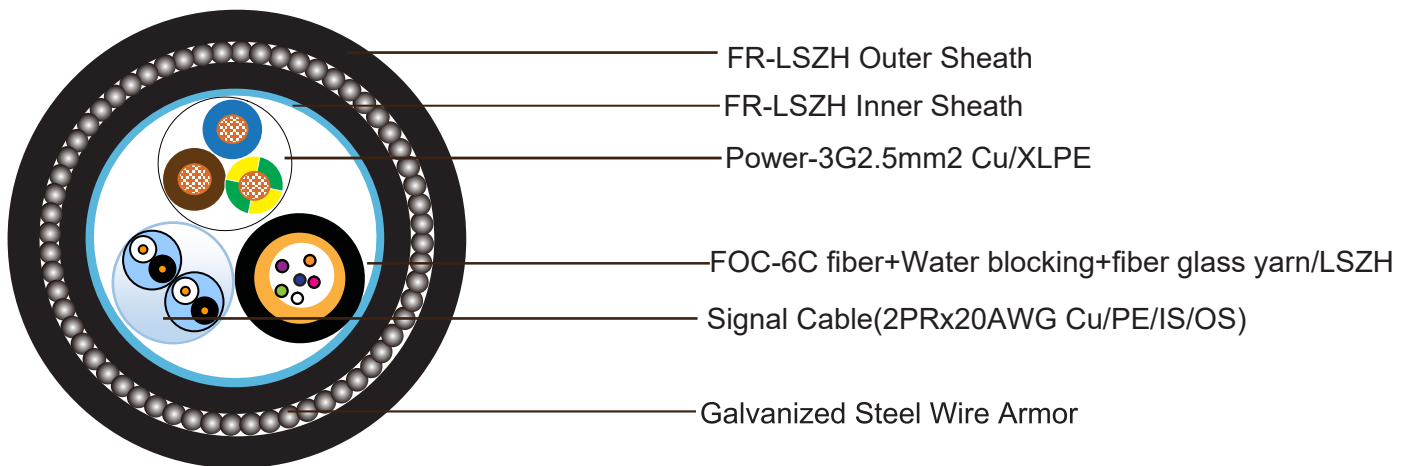
Compressive load:

Short term: 5500N Long term: 3500N



Composite Cable Armoured (Power 3G2.5+Signal 2PR+FO 6C)/FRLSZH/ SWA/FRLSZH

Construction:



Power Cable 3G2.5mm2

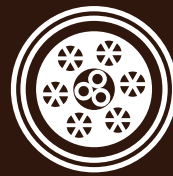
| | |
|-------------------------|---|
| Conductor | 2.5mm ² Stranded copper wire |
| Strands | 7/0.68mm |
| Insulation | Halogen free XLPE. Nominal thickness 0.7mm, diameter 3.55mm |
| Insulation Color | Blue,Brown, Green/Yellow as the ground core |

Twisted Pair Signal Cable

| | |
|--------------------------|--|
| Conductor | Solid copper conductor 20AWG=1/0.81mm to IEC 60228 Class1 |
| Insulation | XLPE, nom. diameter 1.6+/-0.2 mm |
| Individual Screen | Individual Al-foil pair screen with tinned copper drain wire,coverage>100% |
| Overall Screen | Overall Al-foil screen, the aluminum side contact with the drain wire |
| Sheath | Without sheath |

6C Optic Fiber Cable, Single-mode

| | |
|------------------------------------|---|
| No. of fibers in loose tube | 9/125um fibers meet or exceed the requirements of ITUT G.652 D |
| Loose tube | Central loose tube cable contains one tube with 6 single mode fibers, which are filled with thixotropic water blocking Gel. |
| Strength member | Water blocking fiber glass strength yarn |
| Sheath | FR-LSZH.Overall diam. 6+/-1.5mm. |



Composite Cables

Element Assembly

| | |
|---------------------|---|
| Filler | PE or PP material |
| Binder | Wrapping tape |
| Inner Sheath | FR-LSZH, thickness 1.2mm nominal |
| Armour | Galvanized steel wire armour, diameter of steel-1.25mm |
| Outer Sheath | FR-LSZH, thickness 1.6mm, nominal outer diameter 23±3mm |
| Sheath color | Black, approx. weight 319kg/km |

Electrical and Physical Properties @20°C:

1) Power Cable

Electrical Resistance: <7.41 ohm/km

Insulation Resistance:>1000 MOhm.km

Rated voltage: 0.6/1KV

Testing voltage:3500V

2) 2 Pair Signal Cable

Conductor Resistance: <35.8 Ohm/km

Insulation Resistance: >1000MOhm.km

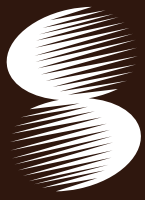
Operating Voltage: 150/250V

Test Voltage: 1500 V/5mins

Operating Temperature: -25°C--- +90°C

Minimum bending radius during installation (mobile state): 12 x Overall Diameter

Minimum bending radius during operation (fixed state): 9 x Overall Diameter



Optical Characteristics:

The Single-mode fibers meet the ITU G.65D specification, as listed below

| Parameter | | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|--|----------------------------------|---|---|---|--------------------------|
| Fiber Code | | 9 | 8 | 7 | |
| Attenuation, Loose Tube Cables | | Standard | Metro Area | Long Haul | |
| | @1310nm | ≤0.35 | - | - | dB/km |
| | @1550nm | ≤0.22 | ≤0.22 | ≤0.22 | dB/km |
| | @1625nm | ≤0.26 | ≤0.26 | ≤0.26 | dB/km |
| Attenuation, Tight Buffer or Semi-Tight Cables | | | | | |
| | @1310nm | ≤0.38 | - | - | dB/km |
| | @1550nm | ≤0.28 | - | - | dB/km |
| Chromatic Dispersion | between 1260 and 1360nm (O Band) | ≤3.5 | NA- | - | ps/(nm*km) |
| | between 1460 and 1530nm (S Band) | - | - | 2.0-7.0 | ps/(nm*km) |
| | between 1530 and 1565nm (C Band) | ≤18 | 1.0-10.0 | 7.0-10.0 | ps/(nm*km) |
| | between 1565 and 1625nm (L Band) | ≤22 | 7.0-12.0 | 10.0-14.0 | ps/(nm*km) |
| Zero Dispersion Wavelength | | 1310±11 | ≤1520 | ≤1420 | nm |
| Zero Dispersion Slope | | 0.093 | 0.093 | 0.093 | ps/(nm ² .km) |
| Point Discontinuity at 1300nm & 1550nm | | 0.1 | 0.1 | 0.1 | dB |
| Mode Field Diameter | @1300nm | 9.3±0.5 | - | - | um |
| | @1550nm | 10.4±0.8 | 8.5±0.6 | 9.0±0.5 | um |
| Cable Cut-off Wavelength | | ≤1260 | ≤1450 | ≤1310 | nm |
| PMD (Individual fiber) | | ≤0.2 | ≤0.2 | ≤0.2 | ps/km 1/2 |
| Cladding Diameter | | 125±1 | 125±1 | 125±1 | um |



Composite Cables

| Parameter | Standard Single Mode Fiber per ITU-T G.652D | Non-zero Dispersion Shifted fiber per ITU-T G.655 | Non-zero Dispersion Shifted fiber per ITU-T G.656 | Units |
|--|---|---|---|------------------------|
| Core/Cladding Concentricity Error | ≤0.5 | ≤0.5 | ≤0.6 | um |
| Cladding Non-Circularity | ≤1.0 | ≤1.0 | ≤1.0 | % |
| Coating Non-Circularity | ≤6.0 | ≤6.0 | ≤6.0 | % |
| Primary Coating Diameter | 245±10 | 245±10 | 245±10 | um |
| Proof-Test Level | 100 (0.7) | 100 (0.7) | 100 (0.7) | Kpsi/GN/m ² |
| Fatigue Coefficient | ≥20 | ≥20 | ≥20 | |
| Temperature Dependence between 0°C ~ +70°C @ 1310 & 1550nm | 0.1 | 0.1 | 0.1 | Db/km |

Standards:

| | |
|---|---|
| Flame Retardance | IEC 60332-1 |
| Reduced Fire Propagation (Vertically-mounted bundledtest) | IEC 60332-3-244 |
| Halogen Free | IEC 60754-1 |
| No Corrosive Gas Emission | IEC 60754-2 |
| Minimum Smoke Emission | IEC 61034-1,2 |
| Design Standard | IEC 60079-14; RoHS 3 2015/863/EU ; EN 50288-7 |



Standard



Flame Retardancy
IEC60332-1



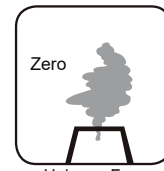
Reduced Fire Propagation
EN 60332-3-24



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

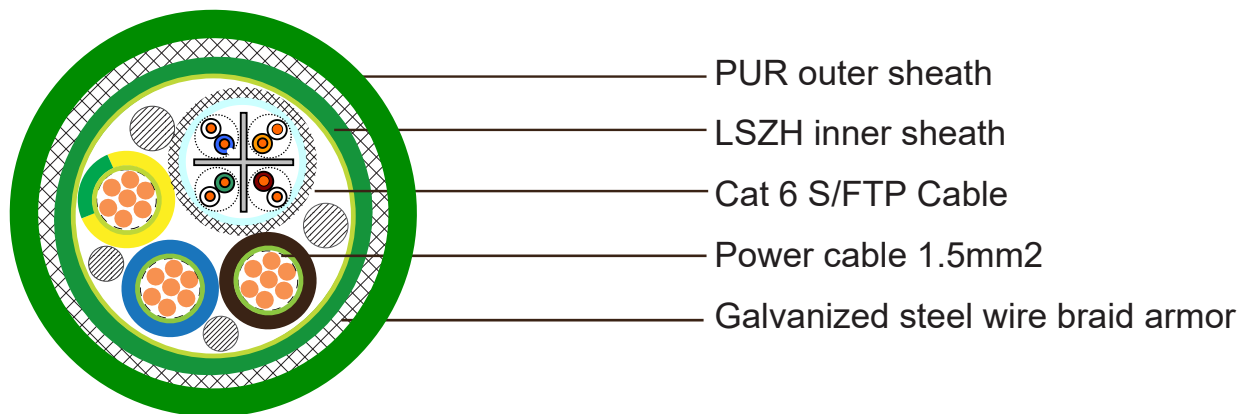


Halogen Free
IEC60754-1
EN50267-2-1



Composite Cable Armoured 3G1 .5mm²+ Cat6 S/FTP (4x2x23AWG Cu/PE/ Al-foil pair screen/TCWB) /LSZH/GSWB/PUR

Construction:



CAT6 4x2x23AWG

| | |
|---------------------|---|
| Conductor | Solid copper conductor 23AWG |
| Insulation | Foam PE, nom. diameter 1.43 ± 0.2 mm |
| Twisted pair | 4 twisted pairs as the cable core, individual Al-foil pair screen, coverage >100% |
| Screen | Tinned copper wire braiding, 0.1mm tinned copper diameter |
| Sheath | Without sheath |

3x1.5mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 1.5mm ² Stranded copper wire |
| Strands | 30/0.25mm |
| Insulation | Halogen free XLPE. Nominal thickness 0.6mm, diameter 2.3+/-0.5mm |
| Insulation Color | Blue, Brown, Green/Yellow as the ground core |

Element Assembly

| | |
|---------------------|---|
| Filler | PE or PP material |
| Binder | Wrapping tape |
| Inner Sheath | LSZH, thickness 1.0mm nominal |
| Armor | Galvanized steel wire braid, coverage 85% |
| Outer Sheath | PUR, thickness 1.1mm, nominal outer diameter 15.9±1.5mm |
| Sheath Color | Green, approx. weight 319kg/km |



Composite Cables

Electrical and Physical Properties @20°C:

1) Cat6 S/FTP Data Cable

Characteristic Impedance: 100 +/- 5 ohm

Conductor Resistance: 75 Ohm/km; Loop resistance <: 140 Ohm/km

Insulation Resistance: 5G MOhm.km; Operating capacity: 55 +/- 5 nF/km

Operating voltage: 100V

Test voltage: 1000 V

2) Power Cable

Electrical Resistance: 12.1 Ohm/km

Insulation Resistance: ≥ 5 G Ohm.km

Rated voltage: 0.6/1KV; Testing voltage: 3500V

Minimum bending radius during installation (mobile state): 9 x Overall Diameter

Minimum bending radius during operation (fixed state): 7 x Overall Diameter

Operating Temperature: -30°C --- +85°C

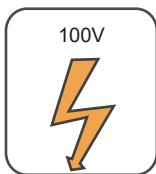
Transmission Properties-Typical:

| FREQ MHz | NEXT dB/100m | Attenuation dB/100m | RL dB/100m | ELFEXT dB/100m | PSNEXT dB/100m | PSELFEXT dB/100m |
|-------------|-----------------|------------------------|---------------|-------------------|-------------------|---------------------|
| 1.0 | 74.3 | 2.0 | 20.0 | 67.8 | 72.3 | 64.8 |
| 4.0 | 65.3 | 3.8 | 23.0 | 55.8 | 63.3 | 52.8 |
| 8.0 | 60.8 | 5.3 | 24.5 | 49.7 | 58.8 | 46.7 |
| 10.0 | 59.3 | 6.0 | 25.0 | 47.8 | 57.3 | 44.8 |
| 16.0 | 56.2 | 7.6 | 25.0 | 43.7 | 54.2 | 40.7 |
| 20.0 | 54.8 | 8.5 | 25.0 | 41.8 | 52.8 | 38.8 |
| 25.0 | 53.3 | 9.5 | 24.3 | 39.8 | 51.3 | 36.8 |
| 31.3 | 51.9 | 10.7 | 23.6 | 37.9 | 49.9 | 34.9 |
| 62.5 | 47.4 | 15.4 | 21.5 | 31.9 | 45.4 | 28.9 |
| 100.0 | 44.3 | 19.8 | 20.1 | 27.8 | 42.3 | 24.8 |
| 200.0 | 39.8 | 29.0 | 18.0 | 21.8 | 37.8 | 18.8 |
| 250.0 | 38.3 | 32.8 | 17.3 | 19.8 | 36.3 | 16.8 |
| 300.0 | 37.1 | 36.4 | 16.8 | 18.3 | 35.1 | 15.3 |
| 350.0 | 36.1 | 39.8 | 16.3 | 16.9 | 34.1 | 13.9 |
| 400.0 | 35.3 | 43.0 | 15.9 | 15.8 | 33.3 | 12.8 |
| 450.0 | 34.5 | 46.3 | 15.5 | 14.7 | 32.5 | 11.7 |
| 500.0 | 33.8 | 48.9 | 15.2 | 13.8 | 31.8 | 10.8 |



Standards:

| | |
|---------------------------|-------------------------------|
| Oil Resistance | IEC 60811-404 (7x24h at 90°C) |
| Flame Retardance | IEC 60332-1 |
| Halogen Free | IEC 60754-1 |
| No Corrosive Gas Emission | IEC 60754-2 |
| Minimum Smoke Emission | IEC 61034-2 |
| Design Standard | IEC 60079-14 |



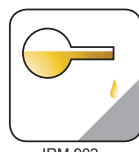
Rated Voltage



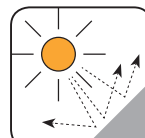
Standard



Flame Retardancy
IEC60332-1



IRM 902
Mineral Oil Resistant



UV Resistant



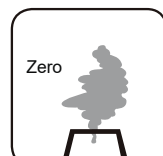
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



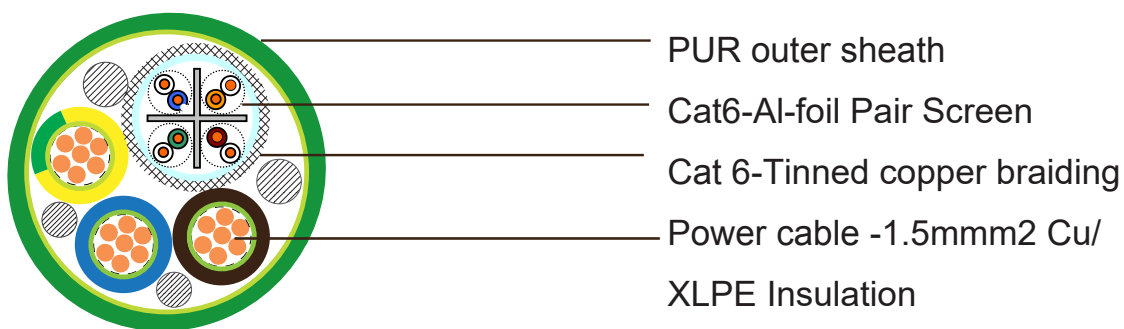
Zero
Halogen Free
IEC60754-1
EN50267-2-1



Composite Cables

Composite Cable: 3G1.5mm²+ Cat6 S/FTP (4x2x23AWG Cu/PE/Al-foil pair screen/TCWB) /PUR

Construction:



CAT6 4x2x23AWG

| | |
|---------------------|--|
| Conductor | Solid copper conductor 23AWG |
| Insulation | Foam PE, nom. diameter 1.43 ± 0.2 mm |
| Twisted pair | 4 twisted pairs as the cable core, individual Al-foil pair screen, coverage > 100% |
| Screen | Tinned copper wire braiding, 0.1mm tinned copper diameter |
| Sheath | Without sheath |

3x1.5mm² Power Cable

| | |
|-------------------------|--|
| Conductor | 1.5mm ² Stranded copper wire |
| Strands | 30/0.25mm |
| Insulation | Halogen free XLPE. Nominal thickness 0.6mm, diameter 2.3+/-0.5mm |
| Insulation Color | Blue, Brown, Green/Yellow as the ground core |

Element Assembly

| | |
|---------------------|--|
| Filler | PE or PP material |
| Binder | Wrapping tape |
| Outer Sheath | PUR, thickness 1.0mm, nominal outer diameter 12.8±1.5m |
| Sheath Color | Green, approx. weight 215kg/km |



Electrical and Physical Properties @20°C:

1) Cat6 S/FTP Data Cable

Characteristic Impedance: 100 +/- 5 ohm

Conductor Resistance: 75 Ohm/km

Loop resistance<: 140 Ohm/km

Insulation Resistance: 5G MOhm.km

Operating capacity: 55+/-5 nF/km

Operating voltage: 100V

Test voltage: 1000 V

2) Power Cable

Electrical Resistance: 12.1Ohm/km

Insulation Resistance: ≥5GOhm.km

Rated voltage: 0.6/1KV; Testing voltage: 3500V

Minimum bending radius during installation (mobile state): 8 x Overall Diameter

Minimum bending radius during operation (fixed state): 4 x Overall Diameter

Operating Temperature: -30°C--- +85°C

Transmission Properties-Typical:

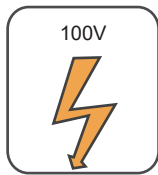
| FREQ MHz | NEXT dB/100m | Attenuation dB/100m | RL dB/100m | ELFEXT dB/100m | PSNEXT dB/100m | PSELFEXT dB/100m |
|-------------|-----------------|------------------------|---------------|-------------------|-------------------|---------------------|
| 1.0 | 74.3 | 2.0 | 20.0 | 67.8 | 72.3 | 64.8 |
| 4.0 | 65.3 | 3.8 | 23.0 | 55.8 | 63.3 | 52.8 |
| 8.0 | 60.8 | 5.3 | 24.5 | 49.7 | 58.8 | 46.7 |
| 10.0 | 59.3 | 6.0 | 25.0 | 47.8 | 57.3 | 44.8 |
| 16.0 | 56.2 | 7.6 | 25.0 | 43.7 | 54.2 | 40.7 |
| 20.0 | 54.8 | 8.5 | 25.0 | 41.8 | 52.8 | 38.8 |
| 25.0 | 53.3 | 9.5 | 24.3 | 39.8 | 51.3 | 36.8 |
| 31.3 | 51.9 | 10.7 | 23.6 | 37.9 | 49.9 | 34.9 |
| 62.5 | 47.4 | 15.4 | 21.5 | 31.9 | 45.4 | 28.9 |
| 100.0 | 44.3 | 19.8 | 20.1 | 27.8 | 42.3 | 24.8 |
| 200.0 | 39.8 | 29.0 | 18.0 | 21.8 | 37.8 | 18.8 |
| 250.0 | 38.3 | 32.8 | 17.3 | 19.8 | 36.3 | 16.8 |
| 300.0 | 37.1 | 36.4 | 16.8 | 18.3 | 35.1 | 15.3 |
| 350.0 | 36.1 | 39.8 | 16.3 | 16.9 | 34.1 | 13.9 |
| 400.0 | 35.3 | 43.0 | 15.9 | 15.8 | 33.3 | 12.8 |
| 450.0 | 34.5 | 46.3 | 15.5 | 14.7 | 32.5 | 11.7 |
| 500.0 | 33.8 | 48.9 | 15.2 | 13.8 | 31.8 | 10.8 |



Composite Cables

Standards:

| | |
|---------------------------|-------------------------------|
| Oil Resistance | IEC 60811-404 (7x24h at 90°C) |
| Flame Retardance | IEC 60332-1 |
| Halogen Free | IEC 60754-1 |
| No Corrosive Gas Emission | IEC 60754-2 |
| Minimum Smoke Emission | IEC 61034-2 |
| Design Standard | IEC 60079-14 |



Rated Voltage



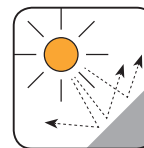
Standard



Flame Retardancy
IEC60332-1



IRM 902
Mineral Oil Resistant



UV Resistant



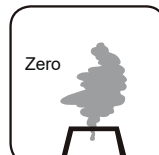
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

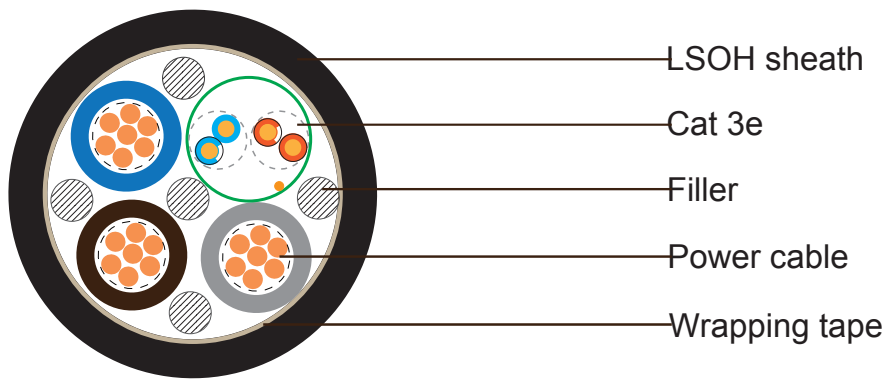


Halogen Free
IEC60754-1
EN50267-2-1



Cat3e+3x16AWG Power Cable LSZH Sheathed Unarmored Composite Cable

Construction:



CAT3E 2x2x24AWG

| | |
|-----------------------|--|
| Conductor | 1/1.5mm Solid copper conductor |
| Insulation | Polyethylene, nominal thickness 0.2mm |
| Color | 1st Pair: Blue White / Blue Stripe 2nd Pair: Orange White / Orange Stripe |
| Overall screen | 100% Al/polyester foil screen with 0.5mmsq tinned copper drain wire. A 23 micron polyester tape is applied over the screening tape with a minimum 25% overlap, Nominal outer diameter 3.15mm |

3x16AWG Power Cable

| | |
|------------------------|--|
| Conductor | 7/0.49mm stranded tinned copper wire |
| Insulation | XLPE. Nominal thickness 0.6mm overall diameter 2.7mm |
| Insultion Color | Blue, Brown and Grey, or as per client's requirement |



Composite Cables

Element Assembly

| | |
|----------------------|--|
| Wrapping Tape | Polyester tape or woven tape with PE or PP material filler(optional) |
| Outer Sheath | LSZH, thickness 1.2mm, nominal outer diameter 10.6±2.0mm |
| Sheath Color | Black |

Electrical and Physical Properties @20°C:

Power Cable

Temperature rating: -20 to +90

Minimum bending radius: 6 x Overall diameter

Nom. conductor resistance at 20 :

Power core: ≤14.7Ohm/Km

Data core: ≤89.3 Ohm/Km

Rated voltage: 300V

Test voltage: 1000V

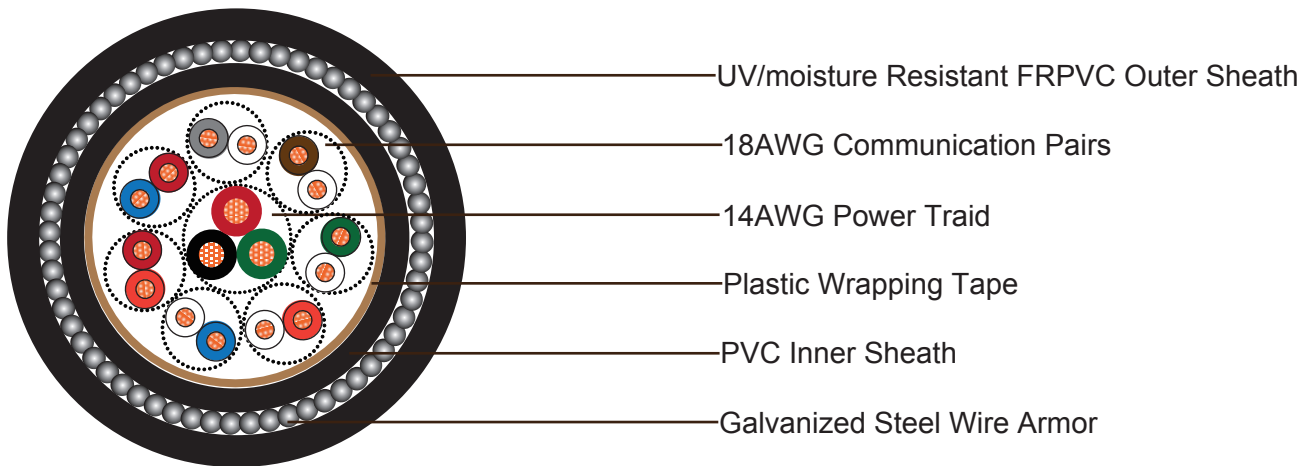
Fire Performance:

Flame retardant: IEC60332 -1



Flame Retardant SWA 17 Conductors UV/ Moisture Resistant PVC Sheathed Composite Cable

Construction:



14AWG Power cable

| | |
|------------------|----------------------------------|
| Conductor | 14AWG(19/0.38mm) annealed copper |
| Insulation | PVC material. Thickness 0.8mm |
| Insulation Color | Red, black and green |

18AWG Communication pairs

| | |
|-----------------------|--|
| Conductor | 18AWG(16/0.27mm) annealed copper |
| Insulation | PVC material. Thickness 0.8mm |
| Insulation Pair Color | White & Blue, White & Orange, White & Green, White&Brown, White & Grey, Red & Blue, Red & Orange |

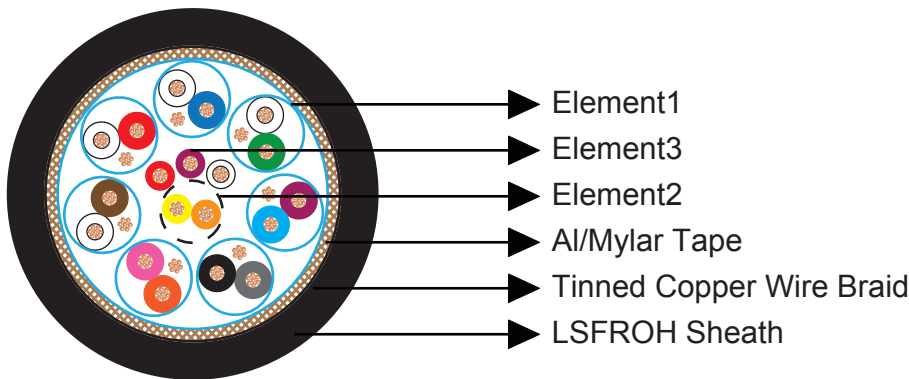
Element Assembly

| | |
|--------------|---|
| Core make-up | Seven pairs and one triad are wrapped with plastic tape |
| Bedding | 1.2mm PVC compound |
| Armour | 1.6mm Galvanized steel wire |
| Sheath | 1.65mm UV/moisture resistant FRPVC, Overall diameter 33.0±1.5mm |
| Sheath Color | Black |



DVI Rolling Stock Cable (7P+1P+3C)

Construction:



Element 1: 7PR×24AWG(Cu/PE/Individual Al-mylar Screen+ TC Drain Wire)

| | |
|----------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/0.20mm |
| Insulation | Polyethylene. Thickness 0.28mm. Outer diameter 1.16±0.05mm |
| Core Identification | 1PR=White/Brown; 2PR=White/Red, 3PR=White/Green; 4PR=White/Blue, 5PR=Grey/Black, 6PR=Pink/Orange, 7PR=Light Blue/Purple |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |
| Individual Shield | Aluminum/ mylar laminated tape applied with the metallic side down in electrical contact with a 24AWG tinned copper drain wire (7 strands formation). A 23 micron mylar tape is applied over the screening tape with a minimum 25% overlap. |

Element 2: 1PR×24AWG(7/0.2mm) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/0.20mm |
| Insulation | High density polyethylene. Thickness 0.15mm. Outer diameter 0.9mm |
| Insulation Color | Yellow and orange |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |

Element 3: 3C×24AWG(7/0.2mm) Stranded TC/PE

| | |
|-------------------------|---|
| Conductor | Stranded annealed tinned copper wire, 7/0.20mm |
| Insulation | High density polyethylene. Thickness 0.15mm. Outer diameter 0.9mm |
| Insulation Color | Red/Purple/White |



Composite Cables

Element Assembly

| | |
|-----------------------|--|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. Coverage $\geq 85\%$ |
| Outer Sheath | LSFROH elastomeric sheath, Thickness 1.0mm. Outer diameter 12.5 ± 1 mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to $+80^{\circ}\text{C}$

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C : ≤ 89.2 Ohm/Km

Min insulation resistance: $\geq 100\text{M}$ Ohm/m

Test voltage: Min. AC 250V/1second

Nom. mutual capacitance at 1KHz: 57 pF/m

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)

Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4; EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816

Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815



Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808



Fire Retardant
NF C32-070-2.2(C1)
IEC60332-3-24/EN50266-2-4



Flame Retardant
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



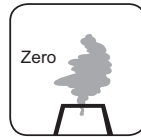
Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853



Low Corrosivity
IEC60754-2/EN50267-2-2/3
NF C32-074/NF C20-453



Low Smoke Emission
IEC 61034-2 / EN 50268-2
NF C32-073/NF C 20-902



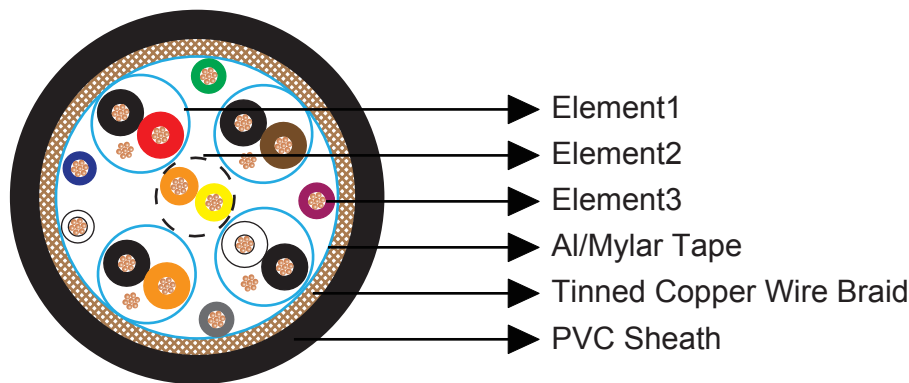
Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



HDMI Bulk Cable(5 Pairs + 5 Conductors)

Construction:



Element 1: 4PR×30AWG(Cu/Foam Skin/Individual Al-mylar Screen+ TC Drain Wire)

| | |
|----------------------------|--|
| Conductor | Stranded bare copper wire, 30AWG(7/38AWG) |
| Insulation | Foam skin. Thickness 0.235mm. Outer diameter 0.76±0.05mm |
| Core Identification | 1PR=Black/White; 2PR=Black/Brown, 3PR=Black/red; 4PR=Black/Orange |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |
| Individual Shield | Aluminum/ mylar laminated tape applied with the metallic side down in electrical contact with a 30AWG tinned copper drain wire (7 strands formation). A 23 micron mylar tape is applied over the screening tape with a minimum 25% overlap. |

Element 2: 1PR×30AWG(7/38AWG) Stranded TC/PP

| | |
|-------------------------|--|
| Conductor | Stranded bare copper wire, 30AWG(7/38AWG) |
| Insulation | PP. Thickness 0.13mm. Outer diameter 0.55±0.05mm |
| Insulation Color | Yellow and orange |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |



Element 3: 5C×30AWG(7/38AWG) Stranded TC/PP

| | |
|-------------------------|--|
| Conductor | Stranded bare copper wire, 30AWG(7/38AWG) |
| Insulation | PP. Thickness 0.13mm. Outer diameter 0.55±0.05mm |
| Insulation Color | Blue, Green, Violet, Grey and White |

Element Assembly

| | |
|-----------------------|--|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. Coverage ≥ 90% |
| Outer Sheath | LSFROH elastomeric sheath, Thickness 0.41mm. Outer diameter 5.2+0.19mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to +80°C

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C: ≤376 Ohm/Km

Min insulation resistance: ≥100M Ohm/m

Spark test: Min. AC 500V/0.15second

Nom. differential impedance: 100±5 Ohm

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)



Composite Cables

Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816

Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815

Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

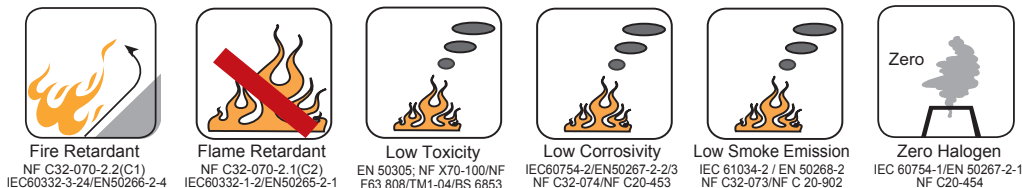
Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808

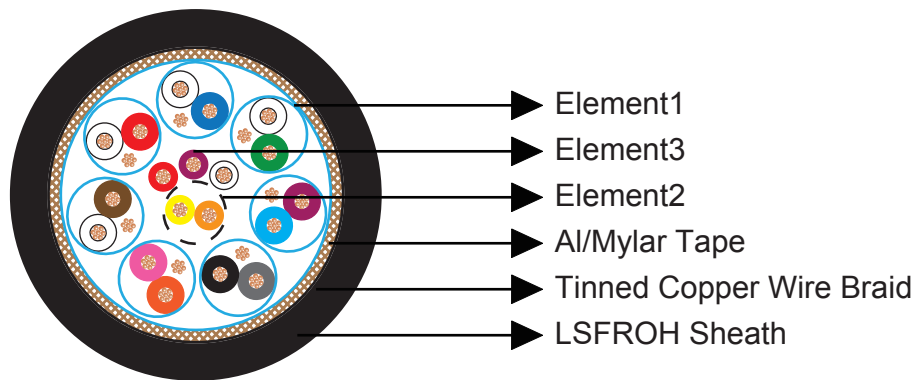


* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



DVI Digital Dual Link Cable(8 Pair + 3C)

Construction:



Element 1: 7PR×28AWG(Cu/S.S. cell/Individual Al-mylar Screen+ TC Drain Wire)

| | |
|----------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | S.S. cell. Thickness 0.305mm. Outer diameter 0.98±0.05mm |
| Core Identification | 1PR=White/Green; 2PR=White/Blue, 3PR=White/Red; 4PR=White/Brown, 5PR=Pink/Orange, 6PR=Black/Grey, 7PR=Light Blue/Purple |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |
| Individual Shield | Aluminum/ mylar laminated tape applied with the metallic side down in electrical contact with a 28AWG tinned copper drain wire (7 strands formation). A 23 micron mylar tape is applied over the screening tape with a minimum 25% overlap. |

Element 2: 1PR×28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.165mm. Outer diameter 0.7±0.03mm |
| Insulation Color | Yellow and orange |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |



Composite Cables

Element 3: 3C×28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|---|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.165mm. Outer diameter 0.7±0.03mm |
| Insulation Color | Red/Purple/White |

Element Assembly

| | |
|-----------------------|--|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. Coverage ≥ 85% |
| Outer Sheath | LSFROH elastomeric sheath, Thickness 0.97mm. Outer diameter 8.6 +0.2mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to +80°C

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C: ≤237 Ohm/Km

Min insulation resistance: ≥100M Ohm/m

Spark test: Min. AC 500V/0.15second

Nom. differential impedance: 100±5 Ohm

Mutual capacitance: 46pF/m

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)



Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816

Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815

Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808



Fire Retardant
NF C32-070-2.2(C1)
IEC60332-3-24/EN50266-2-4



Flame Retardant
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



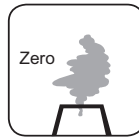
Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853



Low Corrosivity
IEC60754-2/EN50267-2-2/3
NF C32-074/NF C20-453



Low Smoke Emission
IEC 61034-2 / EN 50268-2
NF C32-073/NF C 20-902



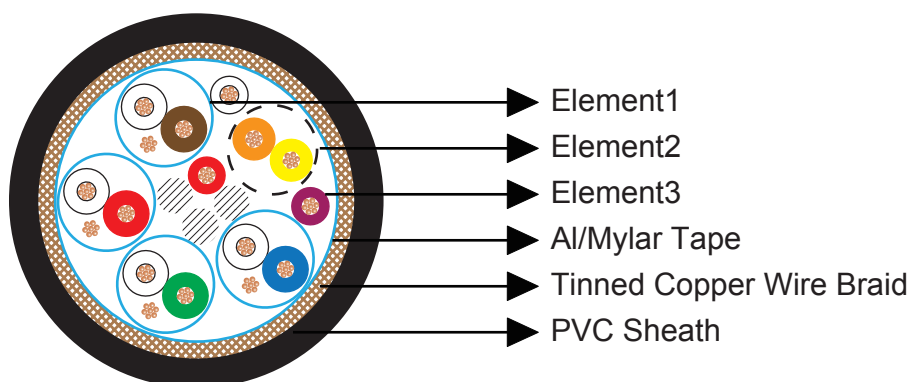
Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



DVI Digital Single Link Cable(5 Pair + 3C)

Construction:



Element 1: 4PR×28AWG(Cu/S.S. cell/Individual Al-mylar Screen+ TC Drain Wire)

| | |
|----------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | S.S. cell. Thickness 0.305mm. Outer diameter 0.98±0.07mm |
| Core Identification | 1PR=White/Brown, 2PR=White/Red, 3PR=White/Green, 4PR=White/Blue |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm |
| Individual Shield | Aluminum/ mylar laminated tape applied with the metallic side down in electrical contact with a 28AWG tinned copper drain wire (7 strands formation). A 23 micron mylar tape is applied over the screening tape with a minimum 25% overlap. |

Element 2: 1PR×28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.15mm. Outer diameter 0.7±0.03mm |
| Insulation Color | Yellow and orange |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm, Outer diameter 1.4mm |



Element 3: 3C×28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.15mm. Outer diameter 0.7±0.03mm |
| Insulation Color | Red/Purple/White |

Element Assembly

| | |
|-----------------------|--|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. Coverage ≥ 85% |
| Outer Sheath | PVC sheath, Thickness 0.87mm. Outer diameter 7.3±0.2mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to +80°C

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C: ≤237 Ohm/Km

Min insulation resistance: ≥100M Ohm/m

Spark test: Min. AC 500V/0.15second

Nom. differential impedance: 100±5 Ohm

Mutual capacitance: 46pF/m

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)



Composite Cables

Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816

Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815

Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

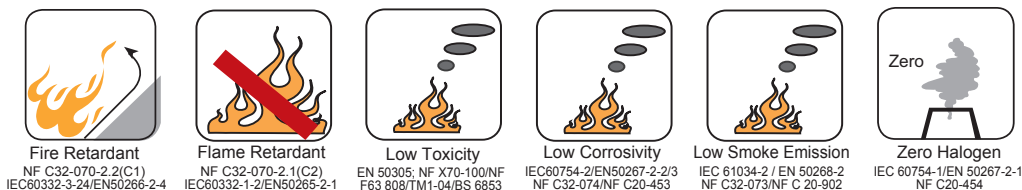
Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808

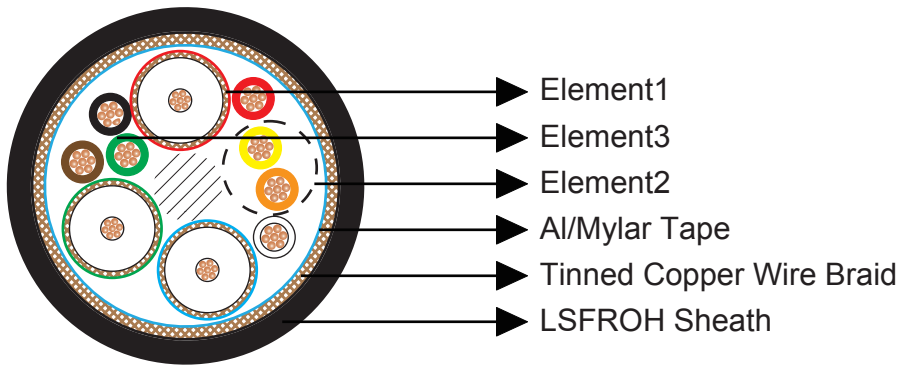


* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



DVI Analog Cable(3 Coax, 1 Pair + 5C)

Construction:



Element 1: 3 Coaxial(Cu/S.S. cell/TC Braid+ PVC)

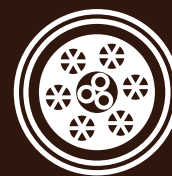
| | |
|---------------------|---|
| Conductor | Stranded annealed tinned copper wire, 30AWG(7/38AWG) |
| Insulation | S.S. cell. Thickness 0.505mm. Outer diameter 1.3±0.07mm |
| Shield | Tinned copper braid, 0.1mm, 90% coverage |
| Sheath | PVC, Thickness 0.219mm. Outer diameter 2.15mm |
| Sheath Color | Green/Blue/Red |

Element 2: 1PRx28AWG(7/36AWG) Stranded TC/Foam PE+Skin

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.15mm. Outer diameter 0.7±0.05mm |
| Insulation Color | Yellow and orange |
| Twisting | The cores shall twisted together in pair, the lay between each twist shall not exceed 100 mm. Outer diameter 1.4mm |

Element 3: 5Cx28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.15mm. Outer diameter 0.7±0.03mm |
| Insulation Color | Red/Purple/White/Green/Black |



Composite Cables

Element Assembly

| | |
|-----------------------|--|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. Coverage $\geq 85\%$ |
| Outer Sheath | LSFROH elastomeric sheath, Thickness 0.87mm. Outer diameter 7.3 +0.2mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to $+80^{\circ}\text{C}$

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C : ≤ 237 Ohm/Km

Min insulation resistance: $\geq 100\text{M}$ Ohm/m

Spark test: Min. AC 500V/0.15second

Nom. differential impedance: 100 ± 15 Ohm

Mutual capacitance: 46pF/m

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)

Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816



Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815

Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808



Fire Retardant
NF C32-070-2.2(C1)
IEC60332-3-24/EN50266-2-4



Flame Retardant
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



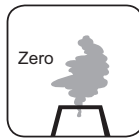
Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853



Low Corrosivity
IEC60754-2/EN50267-2-2/3
NF C32-074/NF C20-453



Low Smoke Emission
IEC 61034-2 / EN 50268-2
NF C32-073/NF C 20-902



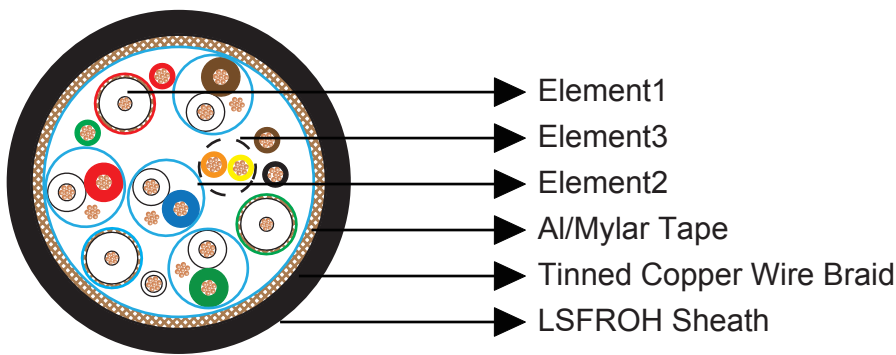
Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



DVI Analog Cable(3 Coax, 4 Pair + 1Pair+5C)

Construction:



Element 1: 3 Coaxial(Cu/Foam PE+Skin/TC Braid+ PVC)

| | |
|---------------------|--|
| Conductor | Stranded annealed tinned copper wire, 30AWG(7/38AWG) |
| Insulation | Foam PE+Skin. Thickness 0.505mm. Outer diameter 1.3±0.07mm |
| Shield | Tinned copper braid, 0.1mm, 90% coverage |
| Sheath | PVC, Thickness 0.219mm. Outer diameter 2.15mm |
| Sheath Color | Green/Blue/Red |

Element 2: 4PRx28AWG(7/36AWG) Stranded TC/Foam PE+Skin

| | |
|--------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | Foam PE+Skin. Thickness 0.25mm. Outer diameter 0.98±0.05mm |
| Insulation Color | Yellow and orange |
| Individual Shield | Aluminum/ mylar laminated tape applied with the metallic side down in electrical contact with a 28AWG tinned copper drain wire (7 strands formation). A 23 micron mylar tape is applied over the screening tape with a minimum 25% overlap. |



Element 3: 1P+5Cx28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.12mm. Outer diameter 0.7±0.05mm |
| Insulation Color | Black/Brown/Red/Green/White |

Element Assembly

| | |
|-----------------------|---|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. 24x9x0.12mm |
| Outer Sheath | LSFROH elastomeric sheath, Thickness 0.51mm. Outer diameter 8.5+0.2mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to +80°C

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C: 28AWG ≤237 Ohm/Km

30AWG ≤376 Ohm/Km

Min insulation resistance: ≥100M Ohm/m

Nom. differential impedance: Pairs 100±15 Ohm

Coaxial 75 Ohm

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)



Composite Cables

Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816

Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815

Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808



Fire Retardant
NF C32-070-2.2(C1)
IEC60332-3-24/EN50266-2-4



Flame Retardant
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



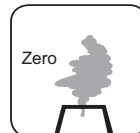
Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853



Low Corrosivity
IEC60754-2/EN50267-2-2/3
NF C32-074/NF C20-453



Low Smoke Emission
IEC 61034-2 / EN 50268-2
NF C32-073/NF C 20-902



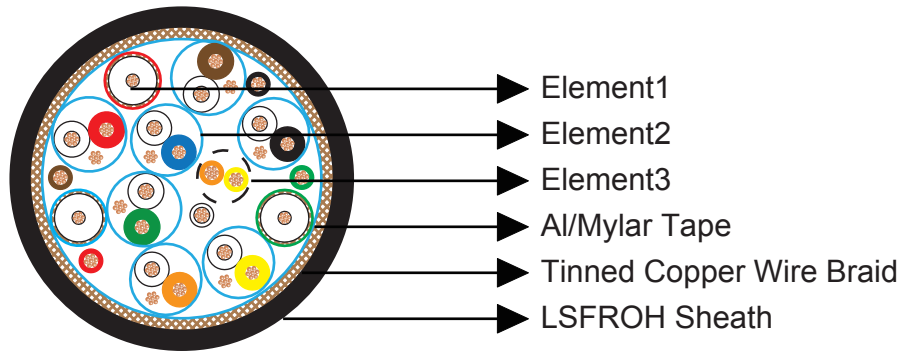
Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



DVI Analog Cable(3 Coax, 7 Pair + 1Pair+5C)

Construction:

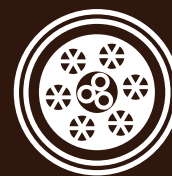


Element 1: 3 Coaxial(Cu/Foam PE+Skin/TC Braid+ PVC)

| | |
|---------------------|--|
| Conductor | Stranded annealed tinned copper wire, 30AWG(7/38AWG) |
| Insulation | Foam PE+Skin. Thickness 0.50mm. Outer diameter 1.37±0.05mm |
| Shield | Tinned copper braid, 0.1mm, 90% coverage |
| Sheath | PVC, Thickness 0.219mm. Outer diameter 2.15mm |
| Sheath Color | Green/Blue/Red |

Element 2: 7PRx28AWG(7/36AWG) Stranded TC/Foam PE+Skin

| | |
|--------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | Foam PE+Skin. Thickness 0.25mm. Outer diameter 0.98±0.05mm |
| Insulation Color | Yellow and orange |
| Individual Shield | Aluminum/ mylar laminated tape applied with the metallic side down in electrical contact with a 28AWG tinned copper drain wire (7 strands formation). A 23 micron mylar tape is applied over the screening tape with a minimum 25% overlap. |



Composite Cables

Element 3: 1P+5Cx28AWG(7/36AWG) Stranded TC/PE

| | |
|-------------------------|--|
| Conductor | Stranded annealed tinned copper wire, 7/36AWG |
| Insulation | High density polyethylene. Thickness 0.12mm. Outer diameter 0.7±0.05mm |
| Insulation Color | Black/Brown/Red/Green/White |

Element Assembly

| | |
|-----------------------|---|
| Overall Screen | Aluminum/ mylar tape |
| Braid Shield | Braid of tinned copper wire. 24x10x0.12mm |
| Outer Sheath | LSFROH elastomeric sheath, Thickness 0.51mm. Outer diameter 9.5+0.2mm, other material is optional |
| Sheath Color | Black or as per the client's requirement |

Physical Properties:

Temperature rating: -25°C to +80°C

Minimum bending radius: 3 x Overall Diameter

Electrical Properties:

Rated voltage: 30V

Max conductor resistance at 20°C: 28AWG ≤237 Ohm/Km

30AWG ≤376 Ohm/Km

Min insulation resistance: ≥100M Ohm/m

Nom. differential impedance: Pairs 100±15 Ohm

Coaxial 75 Ohm

Fire Performance in General:

Vertical flame propagation for a single insulated wire or cable

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)



Vertical flame spread of vertically mounted bunched wires or cables

EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804

Low Smoke Emission

EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816

Halogen Free

EN 50267-2-1; IEC 60754-1; NF C 32-074; NF C 20-454; VDE 0472 Teil 815

Low Corrosivity (Acidity & Conductivity)

EN 50267-2-2/3; IEC 60754-2; NF C 32-074; NF C 20-453; VDE 0472 Teil 813

Low Toxicity

EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853

Smoke Index

NF F 63 808; BS6853; NF F 16 101

Fire Performance Relating to Rolling Stock Application:

DIN 5510-2

BS 6853

NF F16 101

NF F 63 808



Fire Retardant
NF C32-070-2.2(C1)
IEC60332-3-24/EN50266-2-4



Flame Retardant
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



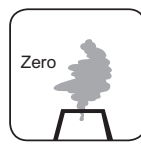
Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853



Low Corrosivity
IEC60754-2/EN50267-2-2/3
NF C32-074/NF C20-453



Low Smoke Emission
IEC 61034-2 / EN 50268-2
NF C32-073/NF C 20-902



Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454

* The data included in the present catalogue are merely indicative; Caledonian Cables Limited reserves to itself the right to change them as its own discretion in any time.



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