#### way Cables kittý@ćálédóńián-cábles.com śales@railway-cables.com

# K24 LSZH Subway Signalling Cables

## **Applications**

The cables are designed for remote control and teletransmission in underground railway networks. The cables can be laid in channel, cable tray, or on hook supports, along suburban railway lines electrified at maximum 1500V DC

# Standards

• AFNOR NF F 55-624

## Construction

• Conductors: Solid copper conductor, 0.5/0.6/0.9 mm nominal diameter.

- Insulation: Polyethylene insulation.
- Cabling Element: Each two conductors are twisted together to form a pair.
- Stranding: For cables less than 15 pairs, pairs are helically stranded in concentric layers to form the cable core.

For cables from 21 to 112 pairs, pairs are stranded in concentric layers or bundles to form the cables core.

- Core Wrapping: One or more synthetic long ribbons or tapes are arranged on the cable core.
- Screen: Aluminium/Polyester tape.
- Drain Wire: A tinned copper drain wire, 0.5mm nominal diameter.
- Sheath: Fire retardant LSZH.

## ▲ Optional

Armoured Cables: For armoured cable, one or more tape(s) is (are) helically applied with overlap on the screen to form a bedding, and double steel tapes armour with a halogen-free fire retardant outer sheath are applied on the bedding.

# Electrical Characteristics at 20°C

| Nominal Conductor Diameter    | mm    | 0.5  | 0.6  | 0.9  |
|-------------------------------|-------|------|------|------|
| Minimum Insulation Resistance | MΩ.km | 5000 | 5000 | 5000 |
| Maximum Operating Voltage     | V     | 200  | 200  | 400  |
| Maximum Permissible Current   | А     | 0.25 | 0.35 | 0.80 |

# Mechanical and Thermal Properties

- Minimum Bending Radius: 7.5×OD (unarmoured); 10×OD (armoured)
- Temperature Range: -40°C to +60°C (during operation); -20°C to +50°C (during installation)



- Fire Resistant LSZH Sheath Solid Copper Conductor PE Insulation

  - Twisted Pair
  - Drain Wire
  - Synthetic Long Ribbons/Tape

Aluminium/Polyester Tape

# Caledonian



# **Dimensions and Weight**

#### Unarmoured K24 Cables A-2Y(L)H n × 2 × 0.5/0.6/0.9

| Cable Code                             | Number of Pairs<br>(n) | Nominal Sheath<br>Thickness<br>mm | Nominal Overall<br>Diameter<br>mm | Nominal Weight<br>kg/km |  |  |  |  |  |
|--|------------------------|-----------------------------------|-----------------------------------|-------------------------|--|--|--|--|--|
| 0.5mm Conductor, 0.9mm Insulated Wire  |                        |                                   |                                   |                         |  |  |  |  |  |
| RS/K24-2Y(L)H-2P0.5                    | 2                      | 1.0                               | 6.0                               | 55                      |  |  |  |  |  |
| RS/K24-2Y(L)H-3P0.5                    | 3                      | 1.0                               | 6.5                               | 65                      |  |  |  |  |  |
| RS/K24-2Y(L)H-5P0.5                    | 5                      | 1.0                               | 7.0                               | 80                      |  |  |  |  |  |
| RS/K24-2Y(L)H-7P0.5                    | 7                      | 1.0                               | 8.0                               | 95                      |  |  |  |  |  |
| RS/K24-2Y(L)H-10P0.5                   | 10                     | 1.0                               | 9.0                               | 120                     |  |  |  |  |  |
| RS/K24-2Y(L)H-15P0.5                   | 15                     | 1.2                               | 10.5                              | 150                     |  |  |  |  |  |
| RS/K24-2Y(L)H-21P0.5                   | 21                     | 1.2                               | 12.5                              | 185                     |  |  |  |  |  |
| 0.6mm Conductor, 0.96mm Insulated Wire |                        |                                   |                                   |                         |  |  |  |  |  |
| RS/K24-2Y(L)H-2P0.6                    | 2                      | 1.0                               | 6.5                               | 65                      |  |  |  |  |  |
| RS/K24-2Y(L)H-3P0.6                    | 3                      | 1.0                               | 7.0                               | 70                      |  |  |  |  |  |
| RS/K24-2Y(L)H-5P0.6                    | 5                      | 1.0                               | 8.0                               | 90                      |  |  |  |  |  |
| RS/K24-2Y(L)H-7P0.6                    | 7                      | 1.0                               | 8.5                               | 110                     |  |  |  |  |  |
| RS/K24-2Y(L)H-10P0.6                   | 10                     | 1.2                               | 10.0                              | 140                     |  |  |  |  |  |
| RS/K24-2Y(L)H-15P0.6                   | 15                     | 1.2                               | 11.5                              | 175                     |  |  |  |  |  |
| RS/K24-2Y(L)H-21P0.6                   | 21                     | 1.2                               | 13.5                              | 225                     |  |  |  |  |  |
| 0.9mm Conductor, 1.5mm Insulated Wire  |                        |                                   |                                   |                         |  |  |  |  |  |
| RS/K24-2Y(L)H-2P0.9                    | 2                      | 1.0                               | 8.5                               | 95                      |  |  |  |  |  |
| RS/K24-2Y(L)H-3P0.9                    | 3                      | 1.0                               | 9.0                               | 110                     |  |  |  |  |  |
| RS/K24-2Y(L)H-5P0.9                    | 5                      | 1.0                               | 10.5                              | 150                     |  |  |  |  |  |
| RS/K24-2Y(L)H-7P0.9                    | 7                      | 1.2                               | 12.0                              | 185                     |  |  |  |  |  |
| RS/K24-2Y(L)H-10P0.9                   | 10                     | 1.2                               | 13.5                              | 245                     |  |  |  |  |  |
| RS/K24-2Y(L)H-15P0.9                   | 15                     | 1.4                               | 15.0                              | 340                     |  |  |  |  |  |
| RS/K24-2Y(L)H-21P0.9                   | 21                     | 1.4                               | 19.0                              | 435                     |  |  |  |  |  |

#### Armoured K24 Cables A–2Y(L)HBH $n \times 2 \times 0.5/0.6/0.9$

| Cable Code                             | Number of Pairs<br>(n) | (n) mm |       | Nominal Overall<br>Diameter<br>mm | Nominal Weight<br>kg/km |  |  |  |
|--|------------------------|--------|-------|-----------------------------------|-------------------------|--|--|--|
|  | 0.5                    | Inner  | Outer |                                   |                         |  |  |  |
| 0.5mm Conductor, 0.9mm Insulated Wire  |                        |        |       |                                   |                         |  |  |  |
| RS/K24-2Y(L)HBH-2P0.5                  | 2                      | 1.0    | 1.0   | 10.0                              | 195                     |  |  |  |
| RS/K24-2Y(L)HBH-3P0.5                  | 3                      | 1.0    | 1.0   | 10.5                              | 205                     |  |  |  |
| RS/K24-2Y(L)HBH-5P0.5                  | 5                      | 1.0    | 1.0   | 11.0                              | 230                     |  |  |  |
| RS/K24-2Y(L)HBH-7P0.5                  | 7                      | 1.0    | 1.0   | 12.0                              | 255                     |  |  |  |
| RS/K24-2Y(L)HBH-10P0.5                 | 10                     | 1.0    | 1.0   | 13.0                              | 295                     |  |  |  |
| RS/K24-2Y(L)HBH-15P0.5                 | 15                     | 1.0    | 1.2   | 14.5                              | 345                     |  |  |  |
| RS/K24-2Y(L)HBH-21P0.5                 | 21                     | 1.0    | 1.2   | 16.5                              | 400                     |  |  |  |
| 0.6mm Conductor. 0.96mm Insulated Wire |                        |        |       |                                   |                         |  |  |  |
| RS/K24-2Y(L)HBH-2P0.6                  | 2                      | 1.0    | 1.0   | 10.5                              | 200                     |  |  |  |
| RS/K24-2Y(L)HBH-3P0.6                  | 3                      | 1.0    | 1.0   | 11.0                              | 210                     |  |  |  |
| RS/K24-2Y(L)HBH-5P0.6                  | 5                      | 1.0    | 1.0   | 12.0                              | 245                     |  |  |  |
| RS/K24-2Y(L)HBH-7P0.6                  | 7                      | 1.0    | 1.0   | 12.5                              | 285                     |  |  |  |
| RS/K24-2Y(L)HBH-10P0.6                 | 10                     | 1.0    | 1.2   | 14.0                              | 330                     |  |  |  |
| RS/K24-2Y(L)HBH-15P0.6                 | 15                     | 1.0    | 1.2   | 15.5                              | 385                     |  |  |  |
| RS/K24-2Y(L)HBH-21P0.6                 | 21                     | 1.0    | 1.2   | 18.0                              | 450                     |  |  |  |
| 0.9mm Conductor, 1.5mm Insulated Wire  |                        |        |       |                                   |                         |  |  |  |
| RS/K24-2Y(L)HBH-2P0.9                  | 2                      | 1.0    | 1.0   | 12.5                              | 260                     |  |  |  |
| RS/K24-2Y(L)HBH-3P0.9                  | 3                      | 1.0    | 1.0   | 13.5                              | 285                     |  |  |  |
| RS/K24-2Y(L)HBH-5P0.9                  | 5                      | 1.0    | 1.0   | 14.5                              | 345                     |  |  |  |
| RS/K24-2Y(L)HBH-7P0.9                  | 7                      | 1.0    | 1.2   | 16.0                              | 395                     |  |  |  |
| RS/K24-2Y(L)HBH-10P0.9                 | 10                     | 1.0    | 1.2   | 18.0                              | 485                     |  |  |  |
| RS/K24-2Y(L)HBH-15P0.9                 | 15                     | 1.0    | 1.4   | 19.5                              | 610                     |  |  |  |
| RS/K24-2Y(L)HBH-21P0.9                 | 21                     | 1.0    | 1.4   | 24.0                              | 735                     |  |  |  |



Impact Resistant



Mineral Oil Resistant







Acid&Alkaline









Flame Retardant NF C32-070-2.1(C2) IEC 60332-1/EN 50265-2-1

Fire Retardant NF C32-070-2.2(C1) IEC 60332-3/EN50266

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

Low Smoke Emission IEC 61034/NFC20-902 EN 50268/NF C32-073

Low Corrosivity EN 50267-2-2/NF C32-074 IEC 60754-2/NF C20-453

Low Toxicity

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