



Doncaster Cables

EV-ULTRA[®] Cat5e

Specially Developed to meet the requirements of EV charge points with data connectivity



Available in both CarbonTek[®] PVC Tuff-Sheathed or CarbonTek[®] SWA variants.

Conductor: Plain Annealed Copper Class 2 Stranded to BS EN 60228

Insulation: Thermosetting XLPE Type GP8 to BS 7655-1.3

Bedding: CarbonTek[®]

Steel Wire Armour: Galvanised steel wire armour (where applicable)

Sheathing: CarbonTek[®]

Energy Monitor Cable: Cat5e FTP—Foil Screened 4 twisted pair



Manufactured in the UK

This cable is designed for use in the installation of electric vehicle charge points. The cable incorporates power conductors and an enhanced Cat 5 screened data cable, encapsulated in a double sheathed design for extra protection. Whilst designed for use in electric vehicle charge points, the cable is also suitable for other installations where power and data is required.

These cables are designed to be installed in air, clipped to surface, on cable tray/ladder work and embedded in concrete. The cables can be laid direct in the ground providing that suitable mechanical protection is in place.

STANDARD CORE COLOURS



The British Cable Company You Can Trust



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Dimensional Details:

| Product Code | Number and nominal CSA of conductors | Nominal stranding of conductor | Nominal radial thickness of insulation | Nominal overall diameter of bedding | Galv. Steel Wire Armour | Nominal radial thickness of sheath | Approx. overall diameter | Approx. weight |
|----------------------|--------------------------------------|--------------------------------|--|-------------------------------------|-------------------------|------------------------------------|--------------------------|----------------|
| EV-ULTRA3C4.0CAT5 | 3 x 4.0mm ² + Cat5e FTP | 7/0.85mm | 0.7mm | 12.5mm | N/A | 1.0mm | 14.8mm | 315kg/km |
| EV-ULTRA3C4.0CAT5SWA | 3 x 4.0mm ² + Cat5e FTP | 7/0.85mm | 0.7mm | 12.5mm | 0.9mm | 1.0mm | 16.5mm | 510kg/km |
| EV-ULTRA3C6.0CAT5 | 3 x 6.0mm ² + Cat5e FTP | 7/1.04mm | 0.7mm | 13.6mm | N/A | 1.0mm | 16.0mm | 410kg/km |
| EV-ULTRA3C6.0CAT5SWA | 3 x 6.0mm ² + Cat5e FTP | 7/1.04mm | 0.7mm | 13.6mm | 1.25mm | 1.0mm | 18.6mm | 700kg/km |
| EV-ULTRA3C710CAT5 | 3 x 10.0mm ² + Cat5e FTP | 7/1.35mm | 0.7mm | 15.0mm | N/A | 1.0mm | 17.6mm | 492kg/km |
| EV-ULTRA3C710CAT5SWA | 3 x 10.0mm ² + Cat5e FTP | 7/1.35mm | 0.7mm | 15.0mm | 1.25mm | 1.0mm | 20.2mm | 835kg/km |
| EV-ULTRA3C716CAT5 | 3 x 16.0mm ² + Cat5e FTP | 7/1.70mm | 0.7mm | 17.4mm | N/A | 1.0mm | 20.0mm | 715kg/km |
| EV-ULTRA3C716CAT5SWA | 3 x 16.0mm ² + Cat5e FTP | 7/1.70mm | 0.7mm | 17.4mm | 1.25mm | 1.0mm | 22.5mm | 1094kg/km |
| EV-ULTRA5C6.0CAT5 | 5 x 6.0mm ² + Cat5e FTP | 7/1.04mm | 0.7mm | 15.5mm | N/A | 1.0mm | 17.9mm | 500kg/km |
| EV-ULTRA5C6.0CAT5SWA | 5 x 6.0mm ² + Cat5e FTP | 7/1.04mm | 0.7mm | 15.5mm | 1.25mm | 1.0mm | 20.5mm | 836kg/km |
| EV-ULTRA5C710CAT5 | 5 x 10.0mm ² + Cat5e FTP | 7/1.35mm | 0.7mm | 18.4mm | N/A | 1.0mm | 19.8mm | 709kg/km |
| EV-ULTRA5C710CAT5SWA | 5 x 10.0mm ² + Cat5e FTP | 7/1.35mm | 0.7mm | 18.4mm | 1.25mm | 1.0mm | 23.4mm | 1083kg/km |

Weight and dimensional information is provided as an approximate guide only.

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Electrical Properties:

| | Single Phase | | | |
|----------------------------|--------------------|--------------------|---------------------|---------------------|
| | 4.0mm ² | 6.0mm ² | 10.0mm ² | 16.0mm ² |
| Maximum current rating (A) | 45 | 58 | 80 | 107 |
| Voltage drop (mV/A/m) | 12 | 7.9 | 4.7 | 2.9 |

| | 3 Phase | |
|----------------------------|--------------------|---------------------|
| | 6.0mm ² | 10.0mm ² |
| Maximum current rating (A) | 52 | 71 |
| Voltage drop (mV/A/m) | 6.8 | 4.0 |

Current carrying capacities based on ambient temperature of 30°C and conductor operating temperature of 90°C. Refer to BS7671 for further details including grouping factors and ambient temperatures other than 30°C

Features and Benefits

- Power and data combined in one cable
- Easier to route through walls and buildings
- Less storage space required
- Saves installation time
- Easier to handle
- Gives a cleaner, neater looking installation

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Running data and power in a single cable is a concern for many electricians, with most believing that segregation of power (Band II) and data (Band I) is always required.

It is however already common to find power and data inside one cable in many existing applications, an example is DALI networks which incorporate data within a 5 core power cable.

It is recommended that the screening of the data cable is terminated to earth.

What do the regulations say?

Voltage Band I is defined as levels of voltage which are too low to provide serious electric shocks; effectively this limits the band to extra-low voltage (ELV), including telecommunications, signalling, bell, control and alarm circuits.

Voltage Band II is defined as all voltages which are used in electrical installations not included in Band I. This means that all 230V supplies are included in Band II.

Proximity of electrical services *(extract from 528.1) - Except where one of the following methods is adopted, neither a Band I nor a Band II circuit shall be contained in the same wiring system as a circuit of nominal voltage exceeding that of low voltage, and a Band I circuit shall not be contained in the same wiring system as a Band II circuit. (i) - Every cable or conductor is insulated for the highest voltage present.*

EV-Ultra® consists of power conductors and data cables that are rated to the same nominal voltage – therefore segregation of power and data is not required.

Proximity of communications cables *(extract from 528.2) - Special considerations of electrical interference, both electromagnetic and electrostatic, may apply to telecommunication circuits, data transfer circuits and the like.*

EV-Ultra® has been designed with these considerations in mind, it incorporates screened, twisted pair data cables and is also constructed with a lay length that reduces interference. Laboratory and on-site installation tests have also been conducted and no interference or degradation of signal was recorded.

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