



# Doncaster Cables

## AUXILLARY SWA (H694-XL)

**CU / XLPE / PVC / SWA / PVC**

Manufactured to BS 5467 Table 18

Plain Annealed Copper Conductor / XLPE Insulated / PVC Bedded / Galvanised Steel Wire Armour / PVC Sheathed. 600/1000V

|                           |   |
|---------------------------|---|
| <b>Conductor :</b>        | Plain Annealed Copper Class 2 Stranded to BS EN 60228                     |
| <b>Insulation:</b>        | Thermosetting XLPE Type GP8 to BS 7655-1.3                                |
| <b>Bedding:</b>           | Compatible Polymeric Material (PVC)                                       |
| <b>Steel Wire Armour:</b> | Galvanised Steel Wire   |
| <b>Sheathing:</b>         | PVC Type 9 to BS 7655-4.2   |
| <b>Current Ratings:</b>   | For current ratings refer to table 4E4A of BS7671 IEE Wiring Regulations. |

Auxiliary Steel Wire Armoured cables are predominantly used for industrial wiring and signalling. They are designed to be used in industrial areas, areas with higher risk of mechanical stress/damage, in and around buildings and other similar environments.

These cables are designed to be installed in air, clipped to surface, on cable tray/ladder work, embedded in concrete and buried direct or in ducting underground

### STANDARD CORE COLOURS

WHITE NUMBERED CORES

### MINIMUM OPERATING TEMPERATURE

-15°C

### MAXIMUM OPERATING TEMPERATURE

90°C

### MINIMUM BENDING RADIUS

8 x Ø



# Doncaster Cables

## AUXILLARY SWA (H694-XL) CU / XLPE / PVC / SWA / PVC

| Reference Number | Number and Nominal Cross Sectional Area of Conductor (mm <sup>2</sup> ) | Nominal Stranding of Conductor (mm) | Nominal Radial Thickness of insulation (mm) | Nominal Radial Thickness of bedding (mm) | Nominal Diameter of Armour Wire (mm) | Nominal Radial Thickness of sheath (mm) | Approximate Overall Diameter (mm) | Approximate Weight (kg/km) | Recommended Gland Size |
|------------------|---|-------------------------------------|---|--|--------------------------------------|---|-----------------------------------|----------------------------|------------------------|
| 7C1.5            | 7 x 1.5   | 7/0.53                              | 0.6   | 0.8                                      | 0.9                                  | 1.4                                     | 15.2                              | 506                        | 20S                    |
| 7C2.5            | 7 x 2.5   | 7/0.67                              | 0.7   | 0.8                                      | 0.9                                  | 1.4                                     | 17.1                              | 618                        | 20                     |
| 7C4.0            | 7 x 4.0   | 7/0.85                              | 0.7   | 0.8                                      | 1.3                                  | 1.5                                     | 19.7                              | 904                        | 25                     |
| 7C6.0 *          | 7 x 6.0   | 7/1.04                              | 0.7   | 0.8                                      | 1.3                                  | 1.6                                     | 21.3                              | 1110                       | 25                     |
| 7C710 *          | 7 x 10.0  | 7/1.35                              | 0.7   | 0.8                                      | 1.6                                  | 1.6                                     | 25.6                              | 1720                       | 25                     |
| 12C1.5           | 12 x 1.5  | 7/0.53                              | 0.6   | 0.8                                      | 1.3                                  | 1.5                                     | 19.4                              | 854                        | 25                     |
| 12C2.5           | 12 x 2.5  | 7/0.67                              | 0.7   | 0.8                                      | 1.3                                  | 1.6                                     | 22.4                              | 1080                       | 25                     |
| 12C4.0           | 12 x 4.0  | 7/0.85                              | 0.7   | 1.0                                      | 1.6                                  | 1.6                                     | 25.7                              | 1550                       | 32                     |
| 19C1.5           | 19 x 1.5  | 7/0.53                              | 0.6   | 0.8                                      | 1.3                                  | 1.6                                     | 22.2                              | 1120                       | 25                     |
| 19C2.5           | 19 x 2.5  | 7/0.67                              | 0.7   | 1.0                                      | 1.6                                  | 1.7                                     | 26.6                              | 1570                       | 25                     |
| 19C4.0           | 19 x 4.0  | 7/0.85                              | 0.7   | 1.0                                      | 1.6                                  | 1.7                                     | 29.3                              | 2050                       | 32                     |
| 27C1.5**         | 27 x 1.5  | 7/0.53                              | 0.6   | 1  | 1.6                                  | 1.7                                     | 26.7                              | 1120                       | 32                     |
| 27C2.5**         | 27 x 2.5  | 7/0.67                              | 0.7   | 1.0                                      | 1.6                                  | 1.8                                     | 30.7                              | 1570                       | 32                     |

\* Manufactured generally to BS5467, not BASEC approved

\*\* Not BASEC approved



# Doncaster Cables

## AUXILLARY SWA (H694-XL)

**CU / XLPE / PVC / SWA / PVC**

### Multicore Loading

In practice, the majority of cores in a multicore control cable of 7 cores and above carry only small or intermittent current and a current rating based on the assumption that all cores are equally loaded is quite unrealistic. In most cases only two cores, the line and neutral feed cores are likely to approach the maximum permitted loading. The current rating for twin core cable can therefore be used in these cables.

Where more than two cores are known to carry an appreciable current, the multiplying factors applicable to the two core ratings are given below.

The normal current rating for twin cable may also be used in cases where the number of cores carrying appreciable current does not exceed the square root of the total number of cores in the cable.

|                        |      |      |      |      |      |      |      |      |
|------------------------|------|------|------|------|------|------|------|------|
| Number of loaded cores | 3    | 4    | 5    | 6    | 7    | 10   | 12   | 14   |
| Multiplying factor     | 0.87 | 0.78 | 0.72 | 0.67 | 0.63 | 0.56 | 0.53 | 0.51 |

|                        |      |      |      |      |      |      |      |      |
|------------------------|------|------|------|------|------|------|------|------|
| Number of loaded cores | 19   | 24   | 27   | 30   | 37   | 44   | 46   | 48   |
| Multiplying factor     | 0.45 | 0.42 | 0.40 | 0.39 | 0.36 | 0.34 | 0.33 | 0.33 |