

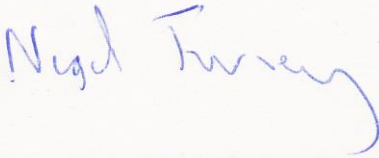
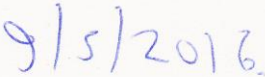
## Company Directive

### POLICY DOCUMENT : CA1/2

#### Relating to the Cable to be used on the Low Voltage System

##### Policy Summary

This document details the Company requirements for the type of cable to be used on the low voltage distribution system in the South West, South Wales and the Midland areas of Western Power Distribution.

|                             |   |
|-----------------------------|---|
| <b>Author:</b>              | <b>Richard Summers</b>  |
| <b>Implementation Date:</b> | <b>May 2016</b>   |
| <b>Approved by</b>          | <br><b>Network Strategy and Innovation Manager</b> |
| <b>Date:</b>                |    |

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## REVISION HISTORY

| <b>Document Revision &amp; Review Table</b> |   |                 |
|---|---|-----------------|
| <b>Date</b>                                 | <b>Comments</b>   | <b>Author</b>   |
| 20 May 2022                                 | <ul style="list-style-type: none"><li>• Document reviewed – no changes made</li></ul> | Richard Summers |
| 15 April 2019                               | <ul style="list-style-type: none"><li>• Document reviewed - no changes made</li></ul> | Richard Summers |
| 4 May 2016                                  | 4mm and 16mm cables removed for underground use to align with losses strategy         | Richard Summers |
| 24 July 2013                                | Low smoke and fume cables added to document   | Richard Summers |

## **1.0 INTRODUCTION**

This document details the Company requirements for the type of cable to be used on the low voltage distribution system in the South West, South Wales and the Midland areas of Western Power Distribution.

## **2.0 POLICY FOR 3 CORE MAINS CABLES**

600/1000 Volt 3 core cables, solid aluminium phase conductors 95, 185 or 300mm<sup>2</sup>, XLPE insulated coloured brown, black and grey, copper combined neutral earth conductors on a bedding comprising only as underlying rubber layer, to British Standard Specification (BS) BS 7870 Part 3.40, Table 1.

The oversheath of all sizes of the wavecon cable shall be installed by the “float down” method thereby preventing the oversheath from penetrating the combined neutral earth wires.

These cables are also available as a LSF variant

## **3.0 POLICY FOR 4 CORE MAINS CABLES**

600/1000 Volt 4 core cables, solid aluminium phase conductors 95, 185 or 300mm<sup>2</sup>, XLPE insulated coloured brown, black, grey and blue with a copper earth conductors on a bedding comprising only as underlying rubber layer, to British Standard Specification (BS) BS 7870-3.40, Table 2.

The oversheath of all sizes of the wavecon cable shall be installed by the “float down” method thereby preventing the oversheath from penetrating the separate neutral earth wires.

These cables are also available as a LSF variant

## **4.0 POLICY FOR SINGLE CORE SOLIDAL CABLES**

600/1000 Volt single phase armoured Solidal cables, with circular, sectoral aluminium conductors of 600 or 740mm<sup>2</sup>, insulation shall be cross-linked polyethylene (XLPE) coloured brown or blue. With a layer of extruded PVC bedding compound shall be applied over the insulation and a single layer of aluminium wire armour shall be applied over the PVC bedding, with a black PVC outer sheath. The finished cable shall meet the requirements of BS 5467.

**5.0 POLICY FOR 3 CORE SOLID ALUMINIUM CONDUCTORS, PLAIN CONCENTRIC SERVICE CABLES**

600/1000 Volt 3 core cables, solid aluminium phase conductors of 25 or 35mm<sup>2</sup>, XLPE insulated coloured brown, black and grey, with plain concentric, helically wound, stranded copper combined neutral earth conductor on a bedding comprising a P.V.C. tape layer, to British Standard Specification (BS) BS 7870 Part 3.11, Table 4.

This cable is also available as a 35mm 3c LSF variant

**6.0 POLICY FOR 3 CORE STRANDED COPPER CONDUCTORS, PLAIN CONCENTRIC SERVICE CABLES**

600/1000 Volt 3 core cables, stranded copper phase conductors of 16 (overhead use only) or 25mm<sup>2</sup>, XLPE insulated coloured brown, black and grey, with a plain concentric, helically wound, stranded copper combined neutral earth conductor on a bedding comprising a P.V.C. tape layer, to BS 7870 Part 3.11, Table 3.

**7.0 POLICY FOR SINGLE CORE SOLID ALUMINIUM, PLAIN CONCENTRIC SERVICE CABLES**

600/1000 Volt Single core cables, solid aluminium phase conductor of 25 or 35mm<sup>2</sup>, XLPE insulated coloured brown, with a plain concentric, helically wound, stranded copper combined neutral and earth conductor, to BS 7870-3.11, Table 2.

This cable is also available as a 35mm 1c LSF variant

**8.0 POLICY FOR SINGLE CORE STRANDED COPPER, PLAIN CONCENTRIC SERVICE CABLES**

600/1000 Volt Single core cables, stranded copper phase conductor of 16 (overhead use only), 25 or 35mm<sup>2</sup>, XLPE insulated coloured brown, with a plain concentric, helically wound stranded copper combined neutral and earth conductor, to BS 7870-3.11, Table 1. Note: - The 35mm<sup>2</sup> is not a standard size given in BS 7870 – 3.11 so the standard generally applies to the 35mm<sup>2</sup> cable.

**9.0 POLICY FOR 3 CORE STRANDED COPPER, SPLIT CONCENTRIC SERVICE CABLES**

600/1000 Volt 3 core cables, stranded copper phase conductors of 25mm<sup>2</sup>, XLPE insulated coloured brown, black and grey, with a split concentric, helically wound, stranded separate copper neutral earth conductor on a bedding comprising a P.V.C. tape layer, to BS 7870 Part 3.21, Table 6.

This cable is also available as a 25mm 3c LSF variant

**10.0 POLICY FOR SINGLE CORE SOLID ALUMINIUM, SPLIT CONCENTRIC SERVICE CABLES**

600/1000 Volt Single core cables, solid aluminium phase conductor of 25mm<sup>2</sup>, XLPE insulated coloured brown, with a split concentric, helically wound stranded separate copper neutral and earth conductors, to BS 7870-3.21, Table 2.

**11.0 POLICY FOR SINGLE CORE STRANDED COPPER, SPLIT CONCENTRIC SERVICE CABLES**

600/1000 Volt Single core cables, stranded copper phase conductor of 16 (overhead use only) or 25mm<sup>2</sup>, XLPE insulated coloured brown, with a split concentric, helically wound stranded separate copper neutral and earth conductors, to BS 7870-3.21, Table 1.

This cable is also available as a 25mm 1c LSF variant

## **APPENDIX A**

### **SUPERSEDED DOCUMENTATION**

This document has had minor amendments to bring it in line with current standards. It supersedes POL:CA1/1 dated July 2013 which should now be withdrawn.

## **APPENDIX B**

### **ASSOCIATED DOCUMENTATION**

Specifications EE 74, 75 and 76.

## **APPENDIX C**

### **IMPACT ON COMPANY POLICY**

This Standard Technique has been issued to bring a similar standard and to ensure that practices are shared between WPD South Wales and South West.

## **APPENDIX D**

### **IMPLEMENTATION OF POLICY**

Nil.

## **APPENDIX E**

### **KEY WORDS**

Wavecon cable, Solidal cable, copper concentric service cable, hybrid service cable.