

## **Company Directive**

### **ENGINEERING SPECIFICATION**

**EE SPEC: 78/2**

### **Specification for Multipair Cables**

**Author:** Richard Summers

**Implementation Date:** October 2024

**Approved by**



**Andrew Reynolds**  
**Engineering Policy Manager**

**Date:** 7<sup>th</sup> October 2024

<b>Target Staff Group</b>	<b>Network Services Staff</b>
<b>Impact of Change</b>	<b>Green – No major impact</b>
<b>Planned Assurance checks</b>	<b>Checks to be carried out by Team Managers as part of normal compliance checks</b>

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## **IMPLEMENTATION PLAN**

### **Introduction**

This EE document contains the specification for Pilot cables purchased in NGED.

### **Main Changes**

The document has been modified to enable global tender.

### **Impact of Changes**

None, this change provides Purchasing the ability to procure relevant Pilot cable that is fit for purpose.

### **Implementation Actions**

The specification is required by Purchasing to enable them to purchase Pilot cable required by Network Services.

No formal training will be required.

### **Implementation Timetable**

This Standard Technique can be implemented with immediate effect.

## REVISION HISTORY

Document Revision & Review Table		
Date	Comments	Author
October 2024	<ul style="list-style-type: none"><li>• Rebranded to NGED</li><li>• Induced voltage level increased to 15kV</li><li>• Removed replication</li></ul>	Richard Summers
December 2014	<ul style="list-style-type: none"><li>• The 61 Pair filled 5kV Pilot cable has been added.</li></ul>	Peter White

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## **1.0 SCOPE**

This specification deals with National Grid Electricity Distribution (NGED) requirement for polythene insulated, polythene inner-sheathed, filled Multipair Pilot armoured cables, with PVC oversheath.

The finished cable shall meet the requirements of Electricity Association Technical Specification (EATS) 09-6 (2024) section 3, except where modified by this Specification.

Cables shall be constructed for an induced voltage of up to 15kV.

## **2.0 CONDUCTORS**

Conductor diameters shall be as defined in EATS 09-06 table E.2(b) – Polyethylene Insulated Multi-pair Construction for an induced voltage of up to 15kV.

## **3.0 STANDARD DESIGNS**

The standard designs required by NGED are as follows: -  
7 pair, 19 pair, 37 pair and 61 pair.

## **4.0 INSULATION**

Insulation thicknesses shall be as defined in EATS 09-06 table E.2(b) – Polyethylene Insulated Multi-pair Construction for an induced voltage of up to 15kV.

## **5.0 PLASTIC TAPES**

Open spiral interlayer tapes of suitable plastic material shall be applied. In the case of unidirectional laying-up, interlayer tape binders shall be applied over each layer.

A suitable plastic tape or tapes shall be applied over the laid up cores. The tape shall be applied with a suitable overlap.

## **6.0 INNER SHEATH (BEDDING)**

The inner sheath shall consist of an extruded layer of polymer compound having a tensile strength of not less than 4MN/m<sup>2</sup> and an elongation at the break of not less than 50 %.

The minimum thickness of the inner polythene sheath, when measured in accordance with BS EN 60811.1.1 clause 8.1 shall not be less than the value given in EATS 09-6

## **7.0 OVER SHEATH**

The over sheath shall consist of an extruded covering of black PVC, which shall be type TM1 compound in accordance with BS 6746. The minimum thickness of the inner polythene sheath, when measured in accordance with BS EN 60811.1.1 shall not be less than the value given in EATS 09-6

## SCHEDULE 1

### SPECIFICATION FOR MULTIPAIR CABLES

ITEM NO.	SHOPS CODE	DESCRIPTION
1	30745	7 Pair, filled, Multipair Pilot, armoured, cable.
2	30746	19 Pair, filled, Multipair Pilot, armoured, cable.
3	30747	37 Pair, filled, Multipair Pilot, armoured, cable.
4	50814	61 Pair, filled, Multipair Pilot, armoured, cable.

## **APPENDIX A**

### **SUPERSEDED DOCUMENTATION**

This document supersedes EE SPEC : 78/1 dated December 2014 which should now be withdrawn.

## **APPENDIX B**

### **RECORD OF COMMENT DURING CONSULTATION**

[EE SPEC: 78/2 - Comments](#)

## **APPENDIX C**

### **KEY WORDS**

None.