Electricity Distribution

nationalgrid

Company Directive

ENGINEERING SPECIFICATION

EE SPEC: 80/2

Specification for Multicore Cables

Author: **Richard Summers**

Implementation Date: **October 2024**

Approved by

Andrew Reynolds
Engineering Policy Manager

Date: **7th October 2024**

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

IMPLEMENTATION PLAN

Introduction

This EE document contains the specification for Multicore 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 Multicore cable that is fit for purpose.

Implementation Actions

The specification is required by Purchasing to enable them to purchase Multicore 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	• Rebranded to NGED • Removed replication	Richard Summers
December 2014	• The document has been modified to reflect the rebranding of the company and include 2 core multicore cable.	Peter White

Contents

1.0 SCOPE

This specification deals with Western Power Distribution's (NGED) requirement for PVC insulated and sheathed multicore armoured cables, which are intended primarily for use within substations for remote operation of electrical equipment and for protection circuits, and are suitable for use on circuits having a working voltage up to and including 600/1000V.

The finished cable shall meet the requirements of Electricity Association Technical Specification (EATS) 09-6 (2024) section 2, except where modified by this Specification.

2.0 CONDUCTORS

The conductors shall comply with BS 6360 (class 2), (or equivalent standard), in so far as applicable for plain annealed copper wires.

Conductor diameters shall be as defined in EATS 09-06 table E.1 – PVC Insulated Multi-core Construction. The size of conductor shall be 7/0.67mm.

3.0 STANDARD DESIGNS

The standard designs required by NGED are as follows: -

4 core, 7 core, 12 core, 19 core and 27 core.

4.0 INSULATION

PVC insulation shall be Type TI1 compound in accordance with BS 6746 (or equivalent standard).

Insulation diameters shall be as defined in EATS 09-06 table E.1 – PVC Insulated Multi-core Construction.

5.0 PLASTIC TAPES

A suitable plastic tape or tapes shall be applied over the laid up cores.

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.

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 $4MN/m^2$ and an elongation at the break of not less than 50 %.

The minimum thickness of the inner polymer 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 OUTER SHEATH

The outer 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 oversheath, when measured in accordance with BS EN 60811.1.1 shall not be less than the value given in EATS 09-6 section 2, Table 2.1.

SCHEDULE 1

SPECIFICATION FOR LOW VOLTAGE MULTICORE CABLES

ITEM NO.	SHOPS CODE	DESCRIPTION
1	30749	4 Core multicore armoured cable
2	30750	7 Core multicore armoured cable
3	30751	12 Core multicore armoured cable
4	30752	19 Core multicore armoured cable
5	30753	27 Core multicore armoured cable
6	50005	2 Core multicore armoured cable

APPENDIX A

SUPERSEDED DOCUMENTATION

This document supersedes EE SPEC: 80/1 dated December 2014 which has now been withdrawn.

APPENDIX B

RECORD OF COMMENT DURING CONSULTATION

EE SPEC: 80/2 - Comments

APPENDIX C

KEY WORDS

None.