



BSI Standards Publication

Coaxial cables used in cabled distribution networks

Part 8: Repair and substitute of damaged buried cables

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National foreword

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Coaxial cables used in cabled distribution networks - Part 8: Repair and substitute of damaged buried cables

Câbles coaxiaux pour réseaux câblés de
distribution -
Partie 8: Réparation et remplacement de
câbles coaxiaux souterrain

Koaxialkabel für Kabelverteilanlagen -
Teil 8: Reparatur und Ersatz beschädigter
Koaxialkabel

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This document (CLC/TR 50117-8:2013) has been prepared by CLC/SC 46XA "Coaxial cables".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

EN 50117 is divided into the following parts:

- EN 50117-1, *Coaxial cables — Part 1: Generic specification*
- EN 50117-2-1, *Coaxial cables — Part 2-1: Sectional specification for cables used in cabled distribution networks — Indoor drop cables for systems operating at 5 MHz - 1 000 MHz*
- EN 50117-2-2, *Coaxial cables — Part 2-2: Sectional specification for cables used in cabled distribution networks — Outdoor drop cables for systems operating at 5 MHz - 1 000 MHz*
- EN 50117-2-3, *Coaxial cables — Part 2-3: Sectional specification for cables used in cabled distribution networks — Distribution and trunk cables for systems operating at 5 MHz - 1 000 MHz*
- EN 50117-2-4, *Coaxial cables — Part 2-4: Sectional specification for cables used in cabled distribution networks — Indoor drop cables for systems operating at 5 MHz - 3 000 MHz*
- EN 50117-2-5, *Coaxial cables — Part 2-5: Sectional specification for cables used in cabled distribution networks — Outdoor drop cables for systems operating at 5 MHz - 3 000 MHz*
- EN 50117-3-1, *Coaxial cables — Part 3-1: Sectional specifications for cables used in Telecom applications — Miniaturized cables used in digital communication systems*
- EN 50117-4-1, *Coaxial cables — Part 4-1: Sectional specification for cables for BCT cabling in accordance with EN 50173 — Indoor drop cables for systems operating at 5 MHz - 3 000 MHz*
- EN 50117-5, *Coaxial cables used in cabled distribution networks — Part 5: Sectional specification for indoor drop cables for cabled distribution networks operating at frequencies between 5 MHz and 2150 MHz*
- EN 50117-6, *Coaxial cables used in cabled distribution networks — Part 6: Sectional specification for outdoor drop cables for use in networks operating at frequencies between 5 MHz and 2150 MHz*
- CLC/TR 50117-8, *Coaxial cables used in cabled distribution networks — Part 8: Repair and substitution of damaged buried cables*

1 Scope

This Technical Report describes the procedure to repair damaged CATV cables.

The following coaxial cables are considered in this guide:

- Coaxial cables with semi air spaced dielectric
Outer conductor: **copper band, longitudinal welded**
- Coaxial cables foamed polyethylene or solid polyethylene dielectric
Outer conductor: **copper band, longitudinal welded**
- Coaxial cables foamed polyethylene or solid polyethylene dielectric
Outer conductor: **Overlapped foil of copper or aluminium with braid**
- Coaxial cables foamed polyethylene or solid polyethylene dielectric
Outer conductor: **Overlapped foil of copper or aluminium without braid**
- Coaxial cables foamed polyethylene dielectric
Outer conductor: **Corrugated copper**

This guide is a helpful tool for providers and installers to find out the extent and the effects of damaged cables and to achieve and to evaluate appropriate repair operations.

For not buried cables, e.g. indoor cables, the application of this guide is analogous.

NOTE The kind respectively the material of the cable sheath makes the coaxial cable an "underground" cable. In the underground area the cable jacket determines the long term behaviour of the cable significantly. For this purpose, only plastics with a high long-term stability are used, usually polyethylene (PE). This material provides protection against ingress of water or water-diffusion with good mechanical properties.

2 Normative References

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50117 (series), *Coaxial cables*

EN 50117-1:2002, *Coaxial cables — Part 1: Generic specification*

EN 50290-1-2:2004, *Communication cables — Part 1-2: Definitions*

EN 50290-4-2, *Communication cables — Part 4-2: General considerations for the use of cables — Guide to use*

EN 60728-1, *Cable networks for television signals, sound signals and interactive services — Part 1: System performance of forward paths (IEC 60728-1)*

EN 60728-1-1, *Cable networks for television signals, sound signals and interactive services — Part 1-1: RF cabling for two way home networks (IEC 60728-1-1)*

IEC 61196-1-108, *Coaxial communication cables — Part 1-108: Electrical test methods — Test for characteristic impedance, phase and group delay, electrical length and propagation velocity*

IEC 61196-1-112, *Coaxial communication cables — Part 1-112: Electrical test methods — Test for return loss (uniformity of impedance)*

IEC 61196-1-115, *Coaxial communication cables — Part 1-115: Electrical test methods — Test for regularity of impedance (pulse/step function return loss)*