IEC TR 63431

Edition 1.0 2025-09

TECHNICAL REPORT

Optical fibre cables - Microduct technology - Guidance

ICS 33.180.01

ISBN 978-2-8327-0710-4

IEC TR 63431:2025-09(en)

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CONTENTS

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IEC TR 63431 has been prepared by subcommittee 86A: Fibre and cables, of IEC technical committee 86A: Fibre optics. It is a Technical Report.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
86A/2609/DTR	86A/2620/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

INTRODUCTION

Microduct technology concerns the installation of optical fibre or copper transmission members into small 'microducts' which are typically 20 mm or less in outer diameter. The installation process is normally pushing, blowing or (less commonly) pulling, or a combination of these methods. Microducts can be packaged in several different ways to form bundles which are suitable for above ground, aerial, ducted and buried installations. In addition, specialised versions are available to meet in-building needs where localised fire protection measures are required. Microducts are commonly joined together by push-fit connectors (rather than compression fittings). These fittings can also connect dissimilar size microduct although there can be installation consequences for this. As well as their mechanical, temperature and (sometimes) fire performance, different microducts can be optimised for fibre installation by the use of low friction inner linings or low friction materials forming the entire product. Annex A contains potentially useful ITU-T references. Annex B contains potentially useful conference papers.

1 Scope

This document identifies issues which can be considered when adopting microduct technology for the provision of optical communications networks. It supplements the microduct sections of IEC 60794-5 series of publications and refers to products and practices in current use.

This documents also describes design types, colour codes, repairs, and environmental expectations, including guidance to standards and methods of installation.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60794-1-1, *Optical fibre cables - Part 1-1: Generic specification - General*

IEC 60794-5, *Optical fibre cables - Part 5: Sectional specification - Microduct cabling for installation by blowing*