

## TECHNICAL REPORT



**Information technology – Telecommunications cabling requirements for remote powering of terminal equipment**



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**Information technology – Telecommunications cabling requirements for remote powering of terminal equipment**

INTERNATIONAL  
ELECTROTECHNICAL  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INFORMATION TECHNOLOGY –  
TELECOMMUNICATIONS CABLING REQUIREMENTS  
FOR REMOTE POWERING OF TERMINAL EQUIPMENT**

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Technical reports of types 1 and 2 are subject to review within three years of publication to decide whether they can be transformed into International Standards. Technical reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/IEC TR 29125, which is a technical report of type 2, was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This document is issued in the type 2 technical report series of publications (according to 16.2.2 of the Procedures for the technical work of ISO/IEC JTC 1 (5<sup>th</sup> edition, 2004)) as a prospective standard for provisional application in the field of remote powering of terminal equipment, because there is an urgent requirement for guidance on how standards in this field should be used.

This document is not to be regarded as an International Standard. It is proposed for provisional application so that information and experience of its use in practice may be gathered. Comments on the content of this document should be sent to IEC Central Office.

A review of this type 2 technical report will be carried out not later than three years after its publication with the option of extension for a further three years, conversion into an International Standard or withdrawal.

This Technical Report has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## INTRODUCTION

This Technical Report specifies the use of generic balanced cabling for customer premises, as specified in international standards ISO/IEC 11801, ISO/IEC 15018, ISO/IEC 24702 and ISO/IEC 24764, for remote powering of terminal equipment. It provides guidance on new cabling installations and renovations. The customer premises may encompass one or more buildings or may be within a building that contains more than one organisation. The cabling may be installed prior to the selection of remote powering equipment or powered terminal equipment.

International standards ISO/IEC 11801, ISO/IEC 15018, ISO/IEC 24702 and ISO/IEC 24764 specify a structure and performance requirements for cabling subsystems that support a wide range of applications. They provide appropriate equipment interfaces to the cabling infrastructure in equipment rooms, telecommunications rooms and work areas.

A growing number of organisations employ equipment at locations that require the provision of remote powering. This Technical Report was created to provide supplementary information to ISO/IEC 11801 to implement remote powering over generic balanced cabling as specified in ISO/IEC 11801, ISO/IEC 15018, ISO/IEC 24702 and ISO/IEC 24764.

This Technical Report provides additional guidance for remote powering on the use of balanced cabling systems as specified in ISO/IEC 11801, ISO/IEC 15018, ISO/IEC 24702 and ISO/IEC 24764 guidance on different installation conditions that require special considerations;

- information to bring together all the considerations about remote powering in a single document,
- guidance on mating and unmating of connectors that convey remote power.

This Technical Report does not include requirements from national or local safety standards and regulations.

The Technical Report was developed based on a number of contributions describing remote powering over telecommunications cabling under different installation conditions. Consult with the relevant safety standards and regulations, application standard, and with equipment manufacturers for guidance on factors that should be taken into account during design of the generic balanced cabling that supports the distribution of remote powering.

# INFORMATION TECHNOLOGY – TELECOMMUNICATIONS CABLING REQUIREMENTS FOR REMOTE POWERING OF TERMINAL EQUIPMENT

## 1 Scope

This Technical Report:

- targets the support of applications that provide remote power over balanced cabling to terminal equipment;
- covers the transmission and electrical parameters needed to support remote power over balanced cabling;
- covers various installation scenarios and how these may impact the capability of balanced cabling to support remote powering;
- specifies design and configuration of cabling as specified in International Standards ISO/IEC 11801, ISO/IEC 15018, ISO/IEC 24702 and ISO/IEC 24764;
- provides requirements and guidelines that will enable the support of a wide variety of extra low voltage (ELV) limited power source (LPS) applications using remote power supplied over balanced cabling.

Requirements and guidelines are provided with respect to

- cabling selection and performance (Clause 5),
- installation conditions (Clause 6),
- transmission requirements (Clause 7),
- power delivery (Clause 8),
- connecting hardware (Clause 9),
- mitigation considerations (Annex A).

Safety (electrical, fire, etc.) and electromagnetic compatibility (EMC) requirements are outside the scope of this Technical Report.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

ISO/IEC 11801, *Information technology – Generic cabling for customer premises*

ISO/IEC 14763-2,– *Information technology – Implementation and operation of customer premises cabling – Part 2: Planning and installation*<sup>1</sup>

ISO/IEC 15018, *Information technology – Generic cabling for homes*

ISO/IEC 18010, *Information technology – Pathways and spaces for customer premises cabling*

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<sup>1</sup> To be published.