ATIS-0600001.2021

Technical Report on -

ELECTRICAL PROTECTION STANDARDS AND REFERENCE DOCUMENTS ASSOCIATED WITH TELECOMMUNICATION NETWORKS

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ATIS-0600001.2021, *Electrical Protection Standards and Reference Documents Associated with Telecommunications Networks*

Is an American National Standard developed by the **Network Electrical Protection (NEP)** Subcommittee under the **ATIS Sustainability in Telecom: Energy and Protection Committee (STEP).**

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Alliance for Telecommunications Industry Solutions

Approved February 26, 2021

Abstract

This Technical Report is a selective list of standards and other reference documents in several areas primarily related to electrical protection, power and grounding of telecommunication networks. This Technical Report is purely informative and tutorial in nature and is not considered to be all-inclusive.

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Sustainability in Telecom: Energy and Protection Committee (STEP) -- formerly T1E1 and NIPP -- develops and recommends standards and technical reports. The standards and technical reports are related to power systems, electrical and physical protection for the exchange and interexchange carrier networks, and interfaces associated with user access to telecommunications networks.

Many specialists and subject matter experts continue to retire from the telecommunications industry.. The members of NEP have felt the need to provide this Technical Report (TR) as a handy reference to those that have replaced the specialists in the field.

This Technical Report is a selective list of standards and other reference documents in several areas primarily related to electrical protection, power and grounding of telecommunication networks. Standards and other reference documents are included in the list to the extent strictly necessary to achieve the objectives indicate

Foreword

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between providers, customers, and manufacturers. The Sustainability in Telecom: Energy and Protection (STEP) Committee – formerly the Network Interface, Power, and Protection (NIPP) Committee – engages industry expertise to develop standards and technical reports for telecommunications equipment and environments in the areas of energy efficiency, environmental impacts, power, and protection. The work products of STEP enable vendors, operators, and their customers to deploy and operate reliable, environmentally sustainable, energy efficient communications technologies. STEP is committed to proactive engagement with national, regional, and international standards development organizations and forums that share its scope of work.

The mandatory requirements are designated by the word shall and recommendations by the word should. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word may denote an optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, STEP, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time it approved this document, STEP, which is responsible for the development of this Standard, had the following leadership:

E. Gallo, STEP Chair (Ericsson)

J. Fuller, STEP Vice Chair and STEP NEP Vice Chair (AT&T)

Dan Ashton, STEP NEP Chair and Technical Editor (Lumen)

The Network Electrical Protection (NEP) Subcommittee was responsible for the development of this document.

TABLE OF CONTENTS

Table of Tables

Technical Report for Telecommunications –

Electrical Protection Standards and Reference Documents Associated with Telecommunication Networks

1 Introduction

This Technical Report (TR) may be useful to those searching for standards and information relative to the subject of safety and electrical protection associated with telecommunication networks. This TR is a collective list of standards and other reference documents in several areas primarily related to safety, electrical protection, power and grounding of telecommunication networks.

This TR is informative and is not considered to be all-inclusive. The telecommunications industry and other interrelated industries develop codes, standards, practices, methods, and procedures related to the electrical protection of electronic equipment.

Any dates provided are the current editions at the time of publication of this TR. All standards are subject to revision and users of this TR are encouraged to investigate the possibility of applying the most recent editions of the standards listed below.

NOTE – Annex A contains the availability information for each of the documents identified in this Technical Report.

NOTE – Annex C provides a translation table for various voltage, current, and safety terms that are commonly used in the communications industry.

1.1 Compliance

Recommendations for safety, powering, surge protection, grounding and bonding of telecommunications equipment in commercial and industrial locations are usually accomplished within the context of compliance to adopted codes, regulations, and standards such as,

a) Compliance with local codes in effect for the location

b) Compliance with the National Electrical Code®(NEC®)

c) Compliance with the National Electrical Safety Code® (NESC®)

d) Compliance with applicable product safety standards listings [Nationally Recognized Testing Laboratory (NRTL)]

e) Compliance with other regulatory documents such as those from the Federal Communications Commission (FCC) and Occupational Safety and Health Administration (OSHA).