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Connectivity for lighting systems

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONNECTIVITY FOR LIGHTING SYSTEMS

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

Draft	Report on voting
34/896/DTR	34/913A/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.

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INTRODUCTION

Lighting systems are used in various applications such as indoor lighting (both residential and non-residential), outdoor lighting and emergency lighting. These lighting systems can include functionalities such as lighting monitoring and control, lighting energy management and data collection. There are many communication protocols in the global market. It is important for system designers and integrators to have an understanding of the variety of communication protocols used in lighting systems. By taking into account knowledge and information of other industries, designers can create appropriate systems that integrate lighting and non-lighting performances. Standards and reports referencing communication protocols such as the ISO/IEC 14543 series, the IEC 62386 series and ANSI/IES TM-23-17 exist, but a need for a comprehensive international technical report has been identified.

Technologies of lighting systems are rapidly developing as a result of evolving customer needs and new connectivity technologies. Examples of such systems are smart homes/buildings, smart cities, adaptive roadways and horticultural lighting. The internet of things (IoT) enables the interconnecting of lighting systems. This document provides information and guidance on how lighting systems operate and interconnect with other systems.

CONNECTIVITY FOR LIGHTING SYSTEMS

1 Scope

This document provides information and guidance on the connectivity aspects of lighting systems to operate and to interconnect with other systems.

This document provides an overview of various connectivity solutions used within lighting systems, including topologies, communication protocols and related embedded functionalities.

This document does not express preference for any specific topology or protocol.

2 Normative references

There are no normative references in this document.