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Zhaga Interface Specification Book 20 including Book 1 – Smart interface between indoor luminaires and sensing/communication modules

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ZHAGA INTERFACE SPECIFICATION BOOK 20 INCLUDING BOOK 1 – SMART INTERFACE BETWEEN INDOOR LUMINAIRES AND SENSING/COMMUNICATION MODULES

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IEC PAS 63422 has been processed by IEC technical committee 34: Lighting.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
34/891/DPAS	34/901/RVDPAS

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INTRODUCTION

This PAS is a reproduction of Zhaga Book 1 Edition 1.9 and Book 20 Edition 1.0 with no change introduced.

The document layout, terms, and definitions, etc within this PAS therefore do not follow the IEC drafting rules that would be applied for an International Standard.

Section 1 comprises Zhaga Book 20 Edition 1.0 – Smart interface between indoor luminaires and sensing/communication modules.

Section 2 comprises Zhaga Book 1 Edition 1.9 – Overview and common information.

Zhaga Book 1 is essential to the interpretation of Zhaga Book 20 (and other Zhaga books).

The intention is for the content of this PAS to be incorporated within one or more International Standards following the IEC Directives and drafting rules.

Section 1:

Zhaga Interface Specification Book 20

Summary (informative)

Background

Zhaga is a global association of lighting companies that is standardizing interfaces of components of LED luminaires, including LED light engines, LED modules, LED arrays, holders, electronic control gears (LED drivers), sensors, communication modules and connectivity fit systems. This helps to streamline the LED lighting supply chain, and to simplify LED luminaire design and manufacturing. Zhaga continues to develop specifications based on the inter-related themes of interoperable components, smart and connected lighting, and serviceable luminaires.

Contents

Book 20 defines a smart interface between an indoor LED luminaire and a sensing/communication module. The module connects to the LED driver and control system, and typically can provide sensory inputs or enable communication between network components. Modules can be installed and replaced in the field.

Key benefits are provided for

- luminaire makers, as certified sensors from multiple suppliers are available with a range of different functions
- installers, as certification on interoperability of components exists
- end-users, as the luminaire can be adapted with modules for different functions, like air quality, presence detection, light levels etc.

This Book should be read together with Zhaga Book 1.

Intended Use

The luminaire extension module defined in this Book 20 is intended to be installed and replaced by professionals and non-professionals.

1 General

1.1 Introduction

Zhaga is a global association of lighting companies that is standardizing interfaces of components of LED luminaires, including LED light engines, LED modules, LED arrays, holders, electronic control gears (LED drivers), sensors, communication modules and connectivity fit systems. This helps to streamline the LED lighting supply chain, and to simplify LED luminaire design and manufacturing. Zhaga continues to develop specifications, called books, based on the inter-related themes of interoperable components, smart and connected lighting, and serviceable luminaires.

Book 1 is a special Book in the sense that it provides common information, which is relevant to all other Books in the series. In addition, Book 1 defines requirements and compliance tests, which are applicable across multiple Zhaga books. Such Books refer to those requirements and compliance tests as applicable.

1.2 Scope

Book 20 defines a smart interface between an indoor LED luminaire and a sensing/communication module. The module connects to the LED driver and control system, and typically can provide sensory inputs or enable communication between network components. Modules can be installed and replaced in the field.

1.3 Conformance and references

1.3.1 Conformance

All provisions in the Zhaga interface Specifications are mandatory, unless specifically indicated as recommended, optional or informative. Verbal expressions of provisions in the Zhaga interface specifications follow the rules provided in ISO/IEC Directives, Part 2. For clarity, the word "shall" indicates a requirement that is to be followed strictly in order to conform to the Zhaga interface specifications, and from which no deviation is permitted. The word "should" indicates that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

1.3.2 References

For references that are not listed in this section, see [Book 1]. For undated references, the most recently published edition applies.

[Book 1] Zhaga Interface Specification, Book 1: Overview and Common Information.

[DALI – Part 101] IEC 62386-101:2014, Digital addressable lighting interface – Part 101: General requirements – System components, Edition 2.0, 2014-11.

[DALI – Part 102] IEC 62386-102:2014, Digital addressable lighting interface – Part 102: General requirements – Control gear, Edition 2.0, 2014-11.

[DALI – Part 103] IEC 62386-103:2014, Digital addressable lighting interface – Part 103: General requirements – Control devices, Edition 2.0, 2014-11.

[DALI – Part 207] IEC 62386-207, Digital addressable lighting interface – Part 207: Particular requirements for control gear – LED modules (device type 6).

[DALI – Part 250] DiiA specification – DALI Part 250 – Integrated Bus Power Supply, Device Type 49, Version 1.1, October 2019.

[DALI – Part 251] DiiA specification – DALI Part 251 – Memory bank 1 extension, Device Type 50, Version 1.1, October 2019.

[DALI – Part 252] DiiA specification – DALI Part 252 – Energy reporting, Device Type 51, Version 1.1, October 2019.

[DALI – Part 253] DiiA specification – DALI Part 253 – Diagnostics & Maintenance, Device Type 52, Version 1.1, October 2019.

[DALI – Part 351] DiiA specification – DALI Part 351 – Luminaire-mounted Control Devices, Version 1.0, October 2019.

[D4i Requirements] DiiA Requirements – D4i Certification and Trademark use, Version 1.0, October 2019.

[DiiA Database] https://www.digitalilluminationinterface.org/products

[LoC-Luminaire] Template for letter of confirmation for Book-20 Luminaires, published on the Zhaga website.

[LoC-LEX-M] Template for letter of confirmation for Book-20 LEX-Ms, published on the Zhaga website.

[IEC 60598-1] IEC 60598-1, Luminaires – Part 1: General requirements and tests.

[IEC 60529] IEC 60529, Degrees of protection provided by enclosures.

[LoC-LEX-LP] Template for Letter of confirmation for Book-20 LEX-LP, published on the Zhaga website.

[LoC-LEX-MR] Template for Letter of confirmation for Book-20 LEX-MR, published on the Zhaga website.