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Zhaga Interface Specification Book 18 including Book 1 – Outdoor Luminaire Extension Interface

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ZHAGA INTERFACE SPECIFICATION BOOK 18 INCLUDING BOOK 1 – OUTDOOR LUMINAIRE EXTENSION INTERFACE

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC PAS 63421 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**
34/890/DPAS	34/900/RVDPAS

Following publication of this PAS, which is a pre-standard publication, the technical committee or subcommittee concerned may transform it into an International Standard.

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IMPORTANT – The "colour inside" logo on the cover page of this document 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 PAS is a reproduction of Zhaga Book 1 Edition 1.9 and Book 18 Edition 2.0 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 18 Edition 2.0 – Outdoor Luminaire Extension Interface.

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

Zhaga Book 1 is essential to the interpretation of Zhaga Book 18 (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 18

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

This Book 18 defines a standardized interface between a LED Luminaire and a sensing/communication module (Luminaire Extension Module, LEX-M) that can be attached to the Luminaire. The interface is intended to be used in outdoor applications with high IP rating. The LEX-M may provide for example sensory inputs to the Luminaire or communication between the Luminaire and a network.

This Book should be read together with Zhaga Book 1.

Intended Use

The Luminaire Extension Module, Luminaire Extension Cap and Luminaire Extension Receptacle defined in this Book 18 are intended to be installed and replaced by professionals only.

1 General

1.1 Introduction

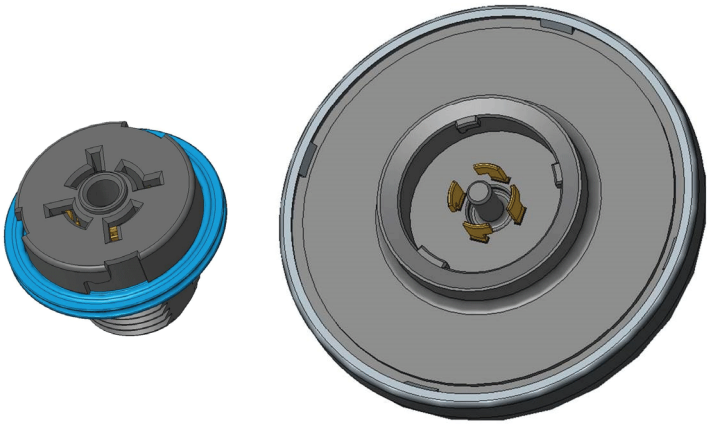
Zhaga is a global association of lighting companies that is standardizing interfaces of components of LED luminaires, including LED light engines, LED modules, LED arrays, holders, electronic control gears (LED drivers), sensors, communication modules and connectivity fit systems. This helps to streamline 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

This Book 18 defines a standardized interface between a LED Luminaire and a sensing/communication module (Luminaire Extension Module, LEX-M) that can be attached to the Luminaire. The interface is intended to be used in outdoor applications with high IP rating. The LEX-M may provide for example sensory inputs to the Luminaire or communication between the Luminaire and a network.

For attaching the LEX-M to the Luminaire, the Luminaire features one or two Luminaire Extension Receptacles (LEX-R) and the LEX-M features a base plate. Figure 1-1 shows an informative 3D-drawing of the LEX-R and the LEX-M base plate.



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Figure 1-1 – 3D-drawings of the Luminaire Extension Receptacle (top view) and the Luminaire Extension Module base plate (bottom view) as defined in this Book 18 (Informative)

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 150]	DiiA specification – DALI Part 150 – AUX Power Supply – Version 1.1 – October 2019.
[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-18 Luminaires, published on the Zhaga website.
[LoC-LEX-M]	Template for Letter of confirmation for Book-18 LEX-Ms, published on the Zhaga website.
[IEC 60598-1]	IEC 60598-1, Luminaires – Part 1: General requirements and tests.