

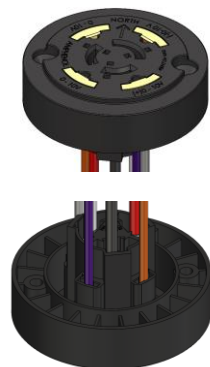
Now you're connected!

About Amphenol Commercial Products

Amphenol's commercial connector products are used in a variety of end user applications including networking, telecom, server & computer, storage & HDD, consumer electronics and entertainment, professional audio & Industrial & Military/Aerospace.

Related Products

FLA Series ANSI C136.41 Receptacles



FLA-XXXX-XX

FLA-C Series ANSI C136.41 Shorting Caps



Product Overview

This product specification defines the general use and performance parameters for Amphenol's FLM Series Luminaire Receptacles and Luminaire Plugs.

Availability

Zhaga Book 20 Plugs and Receptacles with Wire to Wire Termination		
<p>FLM-S21-00 & FLM-P21-00 Crimp Termination</p>	<p>FLM-S23-00 & FLM-P21-00 Poke In Termination</p>	<p><u>Options Include:</u></p> <ul style="list-style-type: none"> Wire termination with crimp contacts Wire termination with poke in connection <p>Z H A G A Regular Member</p>
Zhaga Book 20 Plugs and Receptacles with Wire to Board Termination		
<p>FLM-S23-00 & FLM-P22-00 (Right Angle)</p>	<p>FLM-S23-00 & FLM-P25-00 (Vertical)</p>	<p><u>Options Include:</u></p> <ul style="list-style-type: none"> Right angle SMT termination Vertical SMT termination with hold down tabs <p>Z H A G A Regular Member</p>

Usage

The FLM series connectors provide a smart interface between indoor luminaires and sensor/communication modules. These interconnects allow modules to connect to the LED driver and control system. This standardized Book 20 interface allows modules to be replaced in the field and, provided that the module is D4i compliant, interoperability is assured.

Amphenol's FLM connector series allows LED and control systems to integrate sensory inputs or enable communication between network components.

Applications

Intended for use in indoor luminaire applications such as commercial buildings, hospitals, universities, etc. The interconnected Dali bus allows the integration of:

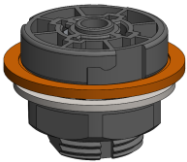
- Light level sensing
- Presence detection
- Air quality monitoring
- Push button controls
- Wireless networking
- People counting
- Temperature sensing
- Audio sensing

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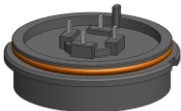
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Related Products

FLS Series Book 18 Compliant Connectors



FLS-SR40-01
Luminaire Extension Receptacle



FLS-SB40-01
Luminaire Extension Module, 40mm Base



FLS-SB80-01
Luminaire Extension Module, 80mm Base



FLS-2SC40-01
Luminaire Receptacle Cap

Connector Electrical Characteristics

- Current Rating (per UL 1977):
 - 7 A max per circuit for 18 AWG wire
 - 5 A max per circuit for 20 AWG wire
 - 3 A max per circuit for 22 AWG wire
 - Note: Zhaga Book 20 specifies 250 mA maximum supply current in support of DALI protocol.
- Voltage Rating (per UL 1977):
 - 250 V
 - Note: The physical low level or active state for DALI has been defined with the interface voltage of <9.5 V. The high-level condition is an interface voltage between 9.5 V to 22.5 V, most commonly being 16 V.
- Contact Resistance (LLCR):
 - Δ20 mΩ max after environmental exposure
- Insulation Resistance:
 - 500 MΩ min @ 500 VDC test voltage
- Dielectric Withstanding Voltage:
 - 1500 VAC

Connector Mechanical Characteristics

- Thermal Shock:
 - 25 cycles between -40 °C and +105 °C, per EIA-364-32
- Mechanical Shock:
 - 50 G's, ½ sine, 11 ms, per EIA-364-27
- Vibration:
 - Cond VII, Letter D, per EIA-364-28
- Durability:
 - 25 cycles, per EIA-364-09
- Operating Temperature:
 - 40 °C to +105 °C

Material Characteristics

FLM series components are RoHS compliant per EU directive 2011/65/EU and amendments. Unless otherwise specified, the materials for each component shall be:

- Contacts: Copper alloy plated with matte tin over nickel
- Housing: High temperature resistant thermoplastic, UL94V-0 flammability rating

Refer to respective customer drawing for additional details.

Reference Documents

- **P-FLH-PC136-1-XXX**: Pin Contacts, Crimp termination, RoHS Compliant
- **P-FLH-SC136-1-XXX**: Socket Contacts, Crimp termination, RoHS Compliant
- **P-FLM-P21-XX**: FLM Series, LEX-MR receptacle for crimp contacts, RoHS Compliant
- **P-FLM-P22-XX**: FLM Series, LEX-MR right angle SMT receptacle, RoHS Compliant
- **P-FLM-P23-XX**: FLM Series, LEX-MR receptacle with poke in contacts, RoHS Compliant
- **P-FLM-P25-XX**: FLM Series, LEX-MR vertical SMT receptacle, RoHS Compliant
- **P-FLM-P2X-XX-XXX-XX**: FLM Series, LEX-MR receptacle cable assembly, RoHS Compliant
- **P-FLM-S21-XX**: FLM Series, LEX-LP plug for crimp contacts, RoHS Compliant
- **P-FLM-S23-XX**: FLM Series, LEX-LP plug with poke in contacts, RoHS Compliant
- **P-FLM-S2X-XX-XXX-XX**: FLM Series, LEX-LP plug cable assembly, RoHS Compliant

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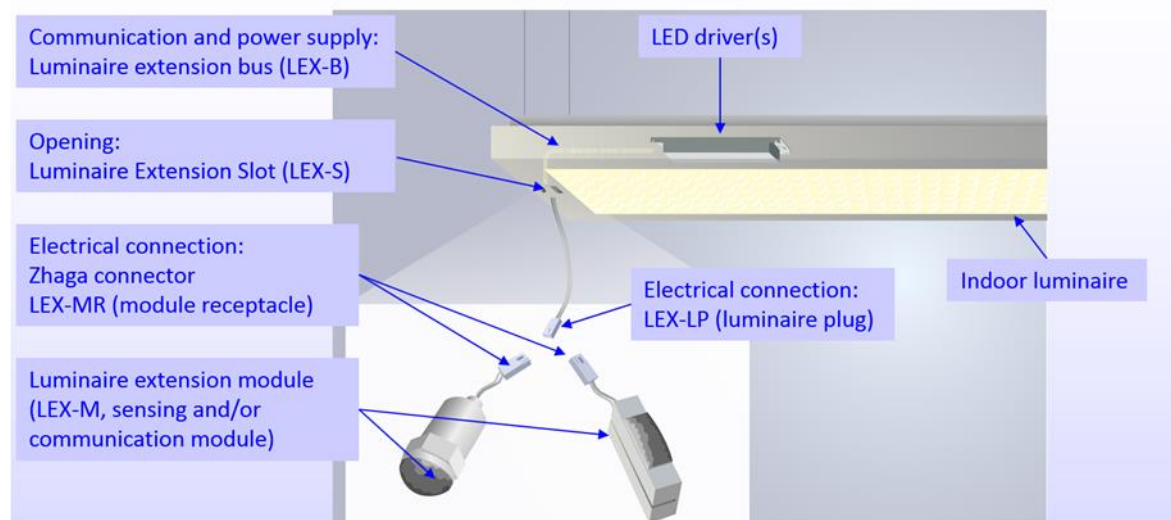
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Related Products**FLH Series Mini Sealed LED Connectors****FLH-SX1-00**

2, 3, 4, or 6 Position
Socket Connector

**FLH-PX1-00**

2, 3, 4, or 6 Position
Pin Connector

Application Overview**Book 20: smart interface for indoor luminaires**

Now you're connected!

Product Numbering System

FLM

-

X

-

2

-

X

-

XX

Series

FLM FLM Series Zhaga Book 20

Part Description

P Pin Contacts (LEX-MR Receptacle)

S Socket Contacts (LEX-LP Plug)

Number of Contacts

2 Number of Contacts (always 2 unless otherwise specified)

Termination, Mounting Style

1 Crimp Termination, Vertical Exit

2 Right Angle Board Termination, SMT

3 Poke In Wire Termination

4 Right Angle Board Termination

5 Vertical Board Termination with Hold Down Tabs, SMT

6 Vertical Board Termination

Modifier

00 Black Housing (Standard)

W0 White Housing