

# Zhaga Book 18 Compliant FLS Series

## OUTDOOR LIGHTING RECEPTACLES, BASES AND DOMES

The FLS Series products are compliant with Zhaga Book 18. The FLS Receptacle is designed with 4 contacts for Power, DALI and Digital I/O, and mounts on a Luminaire. The mating FLS Base /Extension Module and Dome together form the housing for a Photocell/Sensor Module assembly.

The receptacle is compatible with and mates to all Photocells built with an Amphenol Book 18 Base/Extension Module which is available in both 40mm and 80mm diameters, as well as any certified Zhaga Book 18 extension module.

A Zhaga Book 18 protective cap is also available for receptacles which do not have a photocell connected to them. Typical applications are for roadway and smart city lighting. Sensor modules manufactured with the Amphenol Zhaga Book 18 Base and Dome are used to provide dimming control, wireless connectivity, a variety sensing and other functions.

- Receptacle has tool-less wire termination (poke home wire termination)
- Receptacle mounts to luminaire in a single hole with mounting nut and gasket
- Receptacle mated with Photocell is IP65/IP66 rated

### FEATURES

- Compliant with Zhaga Specification Book 18
- 4 contacts for Power and DALI
- Single-hole-mount with gasket and nut
- Tool-less Receptacle contacts for 20AWG -16AWG wire with poke-in wire termination
- Base available in 40mm and 80mm diameters
- Strong polycarbonate domes snap onto Base with integral sealing O-Ring
- UL94-V0 high temperature material
- RoHS compliant



### TARGET MARKETS



### BENEFITS

- Compatible with Zhaga luminaires and fixtures, and mating products
- Supports functionality for smart lighting controls, sensor applications, and wireless communication
- Easy and simple installation, seals to IP65/IP66
- Easy installation
- Application flexibility
- Domes provide rugged, sealed protection to module electronics, ensuring reliable operation in harsh environments
- Wide operating temperature range from -40°C to +105°C
- Meets environmental, health and safety requirements

## Zhaga Book 18 Compliant FLS Series

# TECHNICAL INFORMATION

### MATERIAL

- Receptacle / Base: PBT, UL94V-0, black
- Mounting Nut: High temperature thermoplastic
- Dome: Polycarbonate
- Contacts: Phosphor bronze, 2.54µm (100µin) min. Tin over 1.27µm (50µin) min. nickel
- Mounting Gasket, O-Ring: Silicone rubber
- Wire: Per UL758, 16–20AWG (provided by user). Strip length 10mm. Insulation O/D 3.0mm max. Solid wire, or tinned stranded wire can be used.

### MECHANICAL PERFORMANCE

- Mechanical Shock: 30G's, 11ms (per EIA-364-29, Condition H)
- Vibration with Load: Per EIA364-28, Condition 5A
- Durability: 25 mating cycles per EIA364-9

### ELECTRICAL PERFORMANCE

- Contact Rating: 1.5A at 250V
- Voltage Rating: 250VAC/VDC max.
- Contact Resistance (LLCR): 30mΩ max. (per IEC 60512-2-1, Test 2a)
- Insulation Resistance: 500MΩ min. @ 500V DC test voltage (IEC 60512-3-1, Test 3a)
- Dielectric Withstanding Voltage: 10kVDC (per IEC 60512-4-1, Test 4a, Method A)
- Contact 1: +24V DC Auxiliary Power
- Contact 2: DA- (Negative pole for DALI protocol and Power)
- Contact 3: DA+ (Positive pole for DALI protocol and Power)
- Contact 4: General digital I/O (greater than 7V) or not used

## PART NUMBERS

| Description  | Part Numbers    |
|--|-----------------|
| FLS Luminaire Receptacle Assembly, Zhaga Book 18       | FLS-SR40-01     |
| FLS Extension Module, 40mm Base, Zhaga Book 18         | FLS-SB40-01     |
| FLS Extension Module, 80mm Base, Zhaga Book 18         | FLS-SB80-01     |
| FLS Extension Module, 80mm Base, Vented, Zhaga Book 18 | FLS-SB80-02     |
| FLS Dome Cover, 40mm Diameter, 25mm Height, Grey       | FLS-C40-251-000 |
| FLS Dome Cover, 40mm Diameter, 25mm Height, Clear      | FLS-C40-252-000 |
| FLS Dome Cover, 40mm Diameter, 40mm Height, Grey       | FLS-C40-401-000 |
| FLS Dome Cover, 40mm Diameter, 40mm Height, Clear      | FLS-C40-402-000 |
| FLS Dome Cover, 80mm Diameter, 35mm Height, Grey       | FLS-C80-351-000 |
| FLS Dome Cover, 80mm Diameter, 35mm Height, Clear      | FLS-C80-352-000 |
| FLS Dome Cover, 80mm Diameter, 50mm Height, Grey       | FLS-C80-501-000 |
| FLS Dome Cover, 80mm Diameter, 50mm Height, Clear      | FLS-C80-502-000 |
| FLS Dome Cover, 80mm Diameter, 60mm Height, Grey       | FLS-C80-601-000 |
| FLS Dome Cover, 80mm Diameter, 60mm Height, Clear      | FLS-C80-602-000 |
| FLS Luminaire Receptacle Cap                           | FLS-2SC40-01    |

### PACKAGING

- Tray (carton)

### SPECIFICATION

- Zhaga Interface Specification Book 18
- Amphenol Product Specification: S6161C
- Amphenol Customer Drawings and 3D models

### ENVIRONMENTAL

- Operating Temperature: -40°C to +105°C
- Thermal Shock: -40°C to +65°C (per EIA364-32)
- Humidity: Per EIA512-6 / EIA364-11A
- Salt Spray: 250 Hours (per EIA364-26)
- Temperature Rise: 30°C ΔT (per EIA364-70)

### APPROVALS AND CERTIFICATIONS

- UL Pending

### TARGET MARKETS/APPLICATIONS



Roadway Lighting  
Smart Lighting & Sensor Modules (City, Building Management)  
Outdoor Lighting applications (Street, Area, Municipal, Walkways, Parking)

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