

# BrightConnX™ ANSI C136.41 FLB Series Bases & Domes

## ANSI C136.41 COMPATIBLE BASES AND DOMES FOR ROADWAY AND OUTDOOR LIGHTING

The BrightConnX™ FLB series base assembly provides a platform for a customer supplied PCBA providing photocell or other control functionality. The BrightConnX™ FLB base mates with the BrightConnX™ FLA series receptacle and utilizes twist lock technology to provide a secure, integrated power and signal interface solution for use in roadway and area lighting applications. The BrightConnX™ FLB series cover couples with the base to provide IP66 protection (per IEC 60529) for the mated photocell/control assembly. All base assembly components meet the UL94V-0 flammability rating, and the cover meets the UL94-5VA flammability rating.

- 0, 2 or 4 dimming contacts options
- RoHS Compliant
- Bases available in 76mm, 84mm diameter
- Domes available in 35mm, 50mm, 60mm, 75mm, 100mm & 130mm heights
- Domes available in Grey, Clear, Red, Black, White and Translucent colors



### FEATURES

- 0, 2 or 4 dimming contacts options
- UL94V-0 rated engineering thermoplastic bases and UL94-5VA Polycarbonate domes
- RoHS compliant
- Vented and non-vented base options are available for moisture control
- Utilizes twist lock technology
- Integrated mating gaskets and O-rings on the bases

### BENEFITS

- Supports power only, or power plus 1 or 2 sets of dimming and/or additional control functions
- Meets critical safety standards
- Meets environmental, health and safety requirement
- Venting allows air pressure equalization while preventing moisture ingress to the photocell assembly
- Provides securely latched power and signal interface
- Ensures IP66 rating performance to protect equipment from moisture ingress

## TECHNICAL INFORMATION

### MATERIAL

- Bases: Engineering thermoplastic, UL94V-0 flammability rated
- Domes: Polycarbonate, UL94V-5V flammability rated
- Mating Gasket: Self-adhesive EPDM/SILICONE foam rubber with self-adhesive, UL94V-0 flammability rating
- O-Ring: Silicone rubber, UL94V-0 flammability rating
- Dimming Contacts: Copper Alloy plated with Nickel overall, matte Tin on the tails and 0.76µm Gold in the mating area
- Power Contacts: Copper Alloy plated with Tin over Nickel

### MECHANICAL PERFORMANCE

- Thermal Shock: 25 cycles between -40°C and +105°C, per EIA-364-32
- Mechanical Shock: 30G, ½ sine, 11ms, per EIA-364-27
- Humidity: Per EIA-364-31, Method IV, Cond. B, Omitting 7b
- Vibration With Load: 15A load, per EIA-364-28, Cond. I
- Salt Spray: 240 hrs, per EIA364-26
- Durability: 25 cycles, per EIA-364-09
- Operating Temperature Range: -40°C to 85°C
- Temperature Rise: 30°C max  $\Delta T$  @ rated current, per EIA-364-70
- Ingress Protection Ratings: IP66 (with approved domes)
- Impact Rating: IK09/Top Side and IK07 (side)

### ELECTRICAL CHARACTERISTICS

- Power Contact Voltage Rating: 600VAC/VDC
- Power Contact Current Rating: 15A max. per circuit @ 25°C
- Dimming Contact Current Rating: 1.5A max. per circuit @ 25°C, 30°C max.  $\Delta T$
- Dimming Contact Voltage Rating: 30VDC
- Contact Resistance LLCR:  $\Delta 30m\Omega$  max.
- Insulation Resistance: 500M $\Omega$  min. @ 500VDC test voltage
- Dielectric Withstanding Voltage: 2500VAC

### PACKAGING

- Box

### SPECIFICATION

- Amphenol Specification: S6169C

### ENVIRONMENTAL

- RoHS compliant per EU directive 2011/65/EU and amendments

### APPROVALS & CERTIFICATION

- UL, Certification Number: E514916

### TARGET MARKETS/APPLICATIONS



Roadway Lighting  
Outdoor Lighting

## PART NUMBER SELECTOR – BASES

|  |            |   |          |          |          |   |           |          |
|--|------------|---|----------|----------|----------|---|-----------|----------|
|  | <b>FLB</b> | — | <b>P</b> | <b>X</b> | <b>X</b> | — | <b>0X</b> | <b>X</b> |
|--|------------|---|----------|----------|----------|---|-----------|----------|

| Series |                         |
|--------|-------------------------|
| FLB    | FLB Series ANSI C136.41 |

| Part Description |             |
|------------------|-------------|
| P                | Base (Plug) |

| Base Diameter |         |
|---------------|---------|
| 7             | 76.00mm |
| 8             | 84.00mm |

| Number of Contacts |                                |
|--------------------|--------------------------------|
| 0                  | 3 Contacts (3 power, 0 Signal) |
| 5                  | 5 Contacts (3 Power, 2 Signal) |
| 7                  | 7 Contacts (3 Power, 4Signal)  |

| Gasket Material       |    |          |
|-----------------------|----|----------|
| 76.00mm base diameter | 00 | EPDM     |
|                       | 01 | SILICONE |
| 84.00mm base diameter | 00 | SILICONE |

| Vent Options |            |
|--------------|------------|
| 1            | Non-vented |
| 2            | Vented     |

## ENVIRONMENTAL CHARACTERISTICS

| GASKET MATERIAL | IP RATING* (PER IEC 60529) | OPERATING TEMPERATURE |
|-----------------|----------------------------|-----------------------|
| EPDM            | IP53                       | –40°C to +65°C        |
| SILICONE RUBBER | IP66                       | –40°C to +85°C        |

## PART NUMBERS – BASES /EXAMPLES

| Description                                                      | Part Numbers |
|------------------------------------------------------------------|--------------|
| FLB Base NEMA ANSI C136.41, 76mm, 3 Power, No Signal, Non-Vented | FLB–P70–001  |
| FLB Base NEMA ANSI C136.41, 76mm, 3 Power, 2 Signal, Non-Vented  | FLB–P75–001  |
| FLB Base NEMA ANSI C136.41, 76mm, 3 Power, 4 Signal, Non-Vented  | FLB–P77–001  |
| FLB Base NEMA ANSI C136.41, 84mm, 3 Power, 4 Signal, Non-Vented  | FLB–P87–001  |

## PART NUMBER SELECTOR – DOMES

|  |            |   |          |           |   |           |          |   |            |
|--|------------|---|----------|-----------|---|-----------|----------|---|------------|
|  | <b>FLB</b> | — | <b>C</b> | <b>XX</b> | — | <b>XX</b> | <b>X</b> | — | <b>001</b> |
|--|------------|---|----------|-----------|---|-----------|----------|---|------------|

  

| Series |                         |
|--------|-------------------------|
| FLB    | FLA Series ANSI C136.41 |

  

| Part Description |              |
|------------------|--------------|
| C                | Cover (Dome) |

  

| Cover Diameter |         |
|----------------|---------|
| 70             | 76.00mm |
| 80             | 84.00mm |

  

| Height |       |
|--------|-------|
| 35     | 35mm  |
| 50     | 50mm  |
| 75     | 75mm  |
| 10     | 100mm |
| 13     | 130mm |

  

| Color |             |
|-------|-------------|
| 1     | Grey        |
| 2     | Clear       |
| 3     | Red         |
| 4     | Black       |
| 5     | White       |
| 6     | Translucent |

  

| Modifier |                |
|----------|----------------|
| 001      | 001 = Standard |

## PART NUMBERS – DOMES/ EXAMPLES

| Description                                           | Part Numbers    |
|-------------------------------------------------------|-----------------|
| FLB Dome, NEMA ANSI C136.41, 76mm, 35mm Height, Grey  | FLB-C70-351-001 |
| FLB Dome, NEMA ANSI C136.41, 76mm, 50mm Height, Grey  | FLB-C70-501-001 |
| FLB Dome, NEMA ANSI C136.41, 84MM, 100mm Height, Grey | FLB-C80-101-001 |