

Project: \_\_\_\_\_

Reference Type: \_\_\_\_\_

Item Code: \_\_\_\_\_

Date: \_\_\_\_\_

Notes: \_\_\_\_\_

**SAL-4016 | SAL-4032 | SAL-4064**

Salvador Series 4000



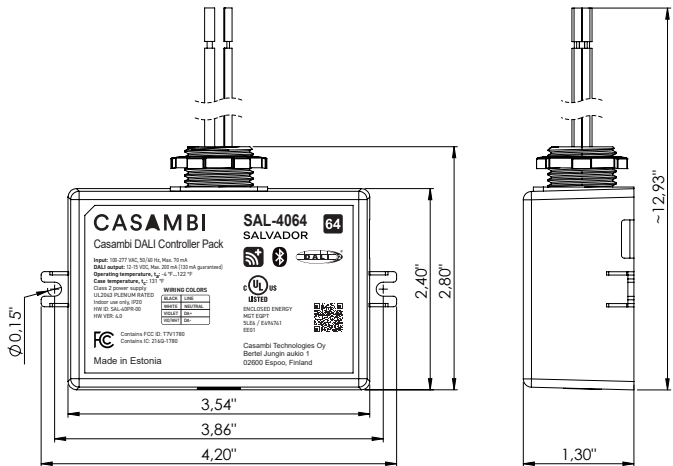


**Warning!**



Hazardous voltages. Risk of electric shock or fire. Only qualified professionals should make the connections. Disconnect the mains power supply and verify its absence prior to installation.

**DIMENSIONS (INCH)**



**PRODUCT DESCRIPTION**

The Salvador Series 4000 product family includes three models: SAL-4016, SAL-4032 and SAL-4064.

- SAL-4016: Can address up to 16 DALI driver addresses.
- SAL-4032: Can address up to 32 DALI driver addresses.
- SAL-4064: Can address the maximum allowed 64 DALI driver addresses.

The Salvador Series 4000 seamlessly integrates wired DALI drivers into the Casambi system. When integrated, DALI luminaires appear as luminaires in the Casambi network. Notably, this product supports industry standards such as DALI D4i, DALI DT6, and DALI DT8.

The Salvador Series 4000 is only for connecting to DALI drivers. No DALI controls must be connected to Salvador Series 4000 products.

The Salvador Series 4000 has integrated 130 mA bus power supply for the DALI operation.

**CERTIFICATIONS**

Contains FCC ID: T7V1780  
 Contains IC: 216Q-1780  
 UL: 5LE6 / E494741

**DISPOSAL INSTRUCTIONS**

This electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product correctly: Regulations governing hazardous waste identification, classification, generation, management and disposal, found in title 40 CFR parts 260 through 273, should be observed.



Project: \_\_\_\_\_

Reference Type: \_\_\_\_\_

Item Code: \_\_\_\_\_

Date: \_\_\_\_\_

Notes: \_\_\_\_\_

**TECHNICAL DATA****Input**

- Voltage range: 100 - 277 VAC
- Frequency: 50/60 Hz
- Mains current: 70 mA
- Inrush current: 20 A

**DALI Output**

- Voltage range: 12 - 15 VDC
- Guaranteed current: 130 mA
- Maximum current: 200 mA
- Max. shutdown current: <4 mA

**Radio Transceiver**

- Operating frequencies: 2.402...2.480 Ghz
- Maximum output power: +8 dBm

**Wires**

- Mains: AWG 16
- DALI bus: AWG 22

**Insulation**

- Casing to DALI: Reinforced
- DALI to Mains: FELV

**Mechanical data**

- Dimensions: 4.2" x 2.4" x (2.8" with threaded nipple) x 1.3"  
106.7 x 61.0 mm (71.1 with threaded nipple) x 33.0 mm
- Weight: 4 oz (114 g)
- Degree of protection: IP20 (indoor use only)
- Protection class: Class 2

**Operating conditions**

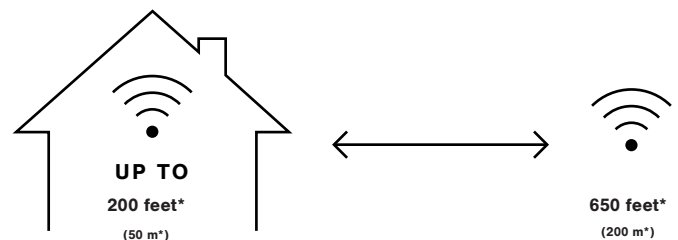
- Ambient temperature,  $t_a$ : -4...+113°F (-20...+45°C)
- Max. case temperature,  $t_c$ : +131°F (+55°C)
- Storage temperature: -13...+167°F (-25...+75°C)
- Max. relative humidity: 0...80%, non-cond.

**Internal Real Time Clock back-up time**

- Back-up time, min.: 12 hours

**RANGE**

The communication range in radio technology may ultimately vary depending on the design of the product in which the antenna is housed and on the environment in which it operates. In practice, this means a well-designed product from a radio point of view, with a good line of sight connection between nodes, can achieve radio coverage up to 200 feet (50 meters) indoors, and, in theory, up to 650 feet (200 meters) in the open air. Casambi uses a mesh network technology, whereby each Casambi unit, or Casambi Ready product, also acts as a repeater. Hence, longer ranges can be achieved by using multiple Casambi products within the network.



\*The wireless range of a Casambi unit is dependent on several factors; how it has been integrated into a luminaire, where it has been installed; taking into consideration surrounding obstacles such as walls and other building materials that may block signals.

**COMPATIBLE DEVICES**

Compatible devices: iOS and Android Operating Systems.

We support the latest OS versions for Android and iOS, and their last two major versions respectively.



Tablet



Smartphone





Project: \_\_\_\_\_

Reference Type: \_\_\_\_\_

Item Code: \_\_\_\_\_

Date: \_\_\_\_\_

Notes: \_\_\_\_\_

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna,
- Increase the separation between the equipment and the receiver,
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected,
- Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## INSTALLATION

### Warning!



The maximum supply current from all bus power supplies must not exceed 250 mA, which is the maximum allowed for DALI systems. Maximum supply current shall be calculated using Salvador Series 4000 maximum current (200 mA).

A Salvador Series 4000 device has integrated 130 mA DALI bus power supply required for bus operation.

Make sure that the mains voltage is switched off when making any connections.

Use supplied locknut with 1/2" NPT-thread or two cheese-headed screws for mechanical fixation of the Salvador Series 4000 during installation.

Choose the wiring diagram according to your application.

The mains input is marked with Black (Line) and White (Neutral) wires, wire gauge is AWG 16.

The DALI bus connection is marked with Violet (DA+) and Violet/White (DA-) colors. Observe bus polarity connection, if required, wire gauge is AWG 22.

Use special terminal connection blocks for AWG16 (mains). Use AWG22 (DALI bus) for stranded conductor electrical wires. Remove pre-stripped insulation from the individual wires that are used for connection. Insert the wires into the corresponding holes and close the connector lock or tighten the connector screw.

If you install the Salvador Series 4000 into a heat-sensitive environment (i.e. inside a luminaire or in a ceiling outlet box above a luminaire), make sure that the ambient temperature does not exceed the specified maximum value.

The unit has a radio transceiver and an embedded antenna. To guarantee optimal unit performance and operational range, avoid enclosed installation into metal boxes.

## DALI DRIVER CONNECTIONS

Only DALI drivers can be physically connected to a Salvador. DALI controls (such as switches and sensors) must not be connected. If DALI controls are required to be part of the Casambi network, they must be converted to be Casambi Ready using a suitable Casambi CBU or device from one of our Ecosystem partners.

Salvador Series 4000 devices are compatible with Casambi Evolution networks only.

The Salvador Series 4000 allows the addressing, programming and control of wired DALI drivers individually from the Casambi App. It enables the creation of hybrid networks consisting of both Casambi Ready and DALI devices.



Project: \_\_\_\_\_

Reference Type: \_\_\_\_\_

Item Code: \_\_\_\_\_

Date: \_\_\_\_\_

Notes: \_\_\_\_\_

All DALI drivers connected to a Salvador can be easily programmed and controlled in the same way as Casambi Ready devices via the Casambi App. This eliminates the need for a specific DALI controller, complex DALI configuration software, or a DALI specialist. The Salvador SAL-4016 is ideal for low-budget renovations, replacing multiple standalone DALI networks, while the Salvador SAL-4064 is designed for larger hybrid network setups.

The Salvador does not permit the discovery and addressing of more DALI drivers than the capabilities of the specific Salvador Series 4000 model you are using.

Physically connecting more DALI drivers than the particular Salvador Series 4000 product can discover and address is possible. However, during the discovery process, you will be prompted that too many drivers are connected, and the process will terminate. However, multiple Salvadors can be wirelessly connected to form a single Casambi mesh network.

One Salvador is one Casambi node. Each addressed wired DALI driver is one Casambi node. A Casambi network can contain up to 250 nodes, regardless of whether they are wired DALI drivers or Casambi Ready devices.

Wired DALI luminaires appear in the Casambi App in the same way as Casambi Ready luminaires. They can be individually controlled, grouped, or used in scenes that combine both Casambi Ready and wired DALI luminaires.

#### INTERNAL DALI BUS POWER SUPPLY

The Salvador Series 4000 has an integrated 130 mA bus power supply for the DALI operation.

Observe polarity when connecting additional DALI bus power supply and/or D4i driver with integrated power supply. Note: When powered on, a Salvador Series 4000 module automatically sends a command to all connected D4i drivers to turn off their internal power supply.

When designing the DALI power system, ensure the total DALI line current from all connected DALI power supplies does not exceed 250 mA. Exceeding this limit may cause DALI system components to malfunction or may cause permanent damage.

Salvador Series products with integrated DALI bus power supply have internal power shutdown mechanisms, as a safety measure. When the embedded MCU detects a prolonged short circuit for min 800 ms (Shutdown delay time) on the DALI bus, the DALI power supply will be disabled. DALI bus power supply will be enabled after 10 s (Restart period), with the Retry time of 800 ms.

#### Warning!



When designing the DALI power system, ensure the total DALI line current from all connected DALI power supplies does not exceed 250 mA. Exceeding this limit may cause DALI system components to malfunction or may cause permanent damage.

Project: \_\_\_\_\_

Reference Type: \_\_\_\_\_

Item Code: \_\_\_\_\_

Date: \_\_\_\_\_

Notes: \_\_\_\_\_

FIXTURE PROFILES

| Profile# | Profile name / in app description | Description                                                           | Wiring diagram |
|----------|-----------------------------------|-----------------------------------------------------------------------|----------------|
| 4064*    | Salvador 4000                     | Generic profile for Casambi Salvador Series 4000 controller products. | 1              |

\* Default profile

DALI CONFIGURATIONS

| ADR# | Description                                                                       | Remarks  |
|------|-----------------------------------------------------------------------------------|----------|
| 16   | Salvador Series 4000 product with sixteen (16) addressable devices configuration. | SAL-4016 |
| 32   | Salvador Series 4000 product with sixteen (32) addressable devices configuration. | SAL-4032 |
| 64   | Salvador Series 4000 product with sixteen (64) addressable devices configuration. | SAL-4064 |

WIRING DIAGRAMS

1.

