

THERMAL IMAGING OCCUPANCY COUNTER FOR SINGLE WIDTH INTERIOR DOORS



PRODUCT HIGHLIGHTS

- Thermal imaging technology
- Bi-directional counting
- Ideal for single entry doors
- 5% or better typical counting accuracy
- Advanced algorithm reduces false counts
- Compatible with BRG-N100 when no B.A.S. network is available
- RS-485 network connection
- Analog output connection
- Install over door opening
- Door jamb or stand-off mounting
- Operates on 24 VAC power
- Three-year warranty
- Toll-free customer support for the lifetime of the product

TYPICAL APPLICATIONS

- Classrooms
- Lecture halls
- Conference rooms
- Waiting rooms
- Libraries
- Retail spaces
- Arenas or exhibition spaces with channeled entry paths

MODEL DESCRIPTION

The CENSus-C100 is a unique solution for reliable and cost effective occupancy counting. Ideal for Demand Control Ventilation (DCV) applications. Ideal for single entry interior doors or openings. Multiple counters can be installed on rooms with more than one entry.

CENSus-C100 TECHNICAL SPECIFICATIONS

General

Counting Technology: Dual sensor differential thermal imaging

Accuracy: Typically better than $\pm 5\%$ of actual population or 3 people, whichever is greater, on openings less than or equal to 42 in. [1.07m]

Listings and Compliance

FCC: This device complies with Part 15 of the FCC rules

RoHS: This device is RoHS2 compliant

Environmental Limits

Temperature (recommended limits): 65 to 85 °F [18.3 to 29.4 °C]

Humidity: 5 to 95%

Sensor Assembly

Sensors: Two thermopile sensors

Mounting Options:

Standard: Install on overhead door jamb

Optional: Install above door opening with optional stand-off bracket

Maximum Recommended Mounting Height: 96 in. [2.43 m]

Integral Transmitter

Power Requirement: 24 VAC (22.8 to 26.4 under load) @1.5V-A

B.A.S. Connectivity Options

CENSUS-C100: One 0-10 VDC, scalable and protected analog output signal (AO1=occupancy count) and one field selectable (BACnet MS/TP or Modbus RTU) and non-isolated RS-485 network connection (provide individual 24 VAC transformers for each CENSUS-C100 device for applications requiring isolated RS-485)

Enclosure

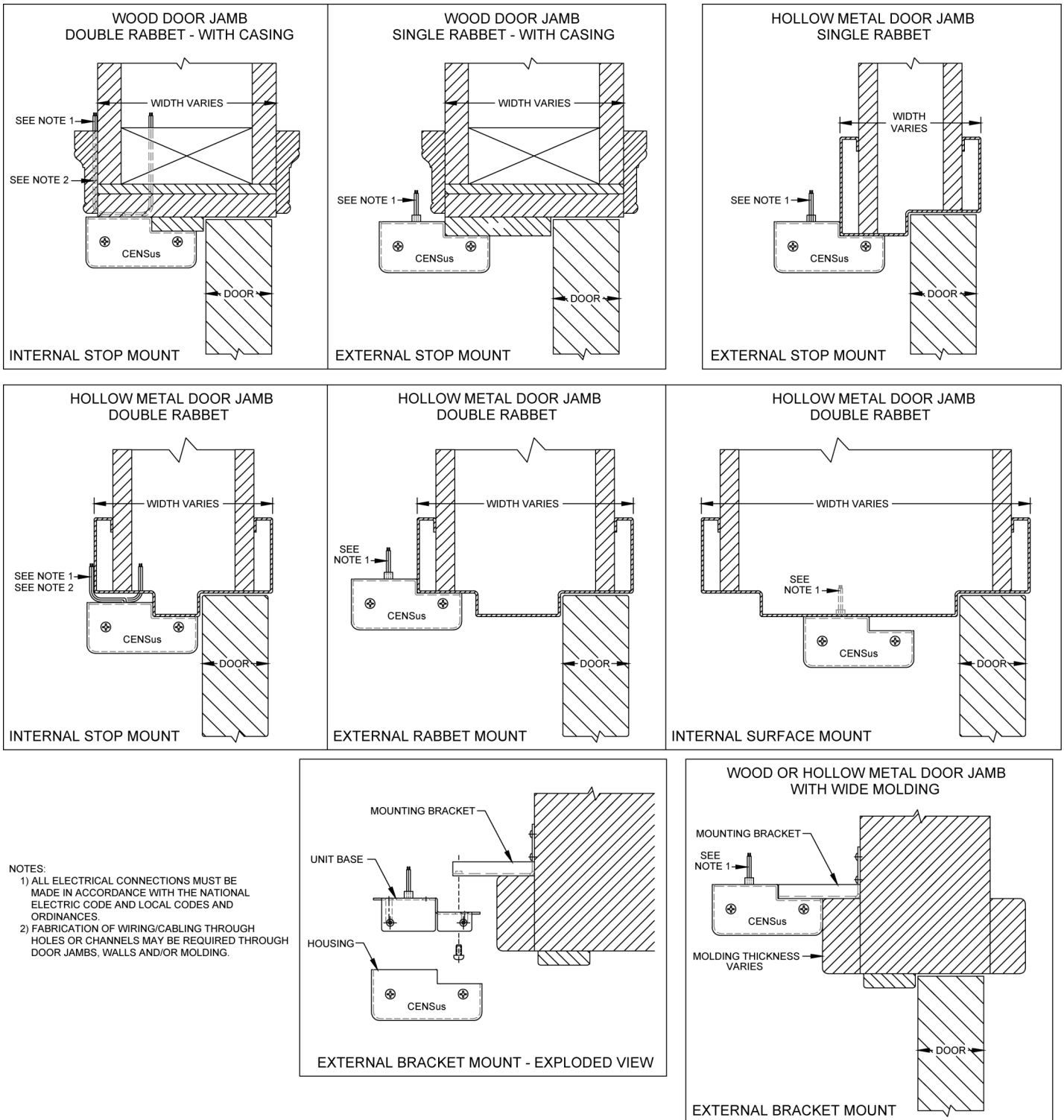
Enclosure: White powder coated formed aluminum

CENSus-C100 INSTALLATION and WIRING

Detailed installation and wiring instructions are provided in the CENSus-C100 INSTALLATION AND SETUP Guide.

Mounting Diagram and Dimensions

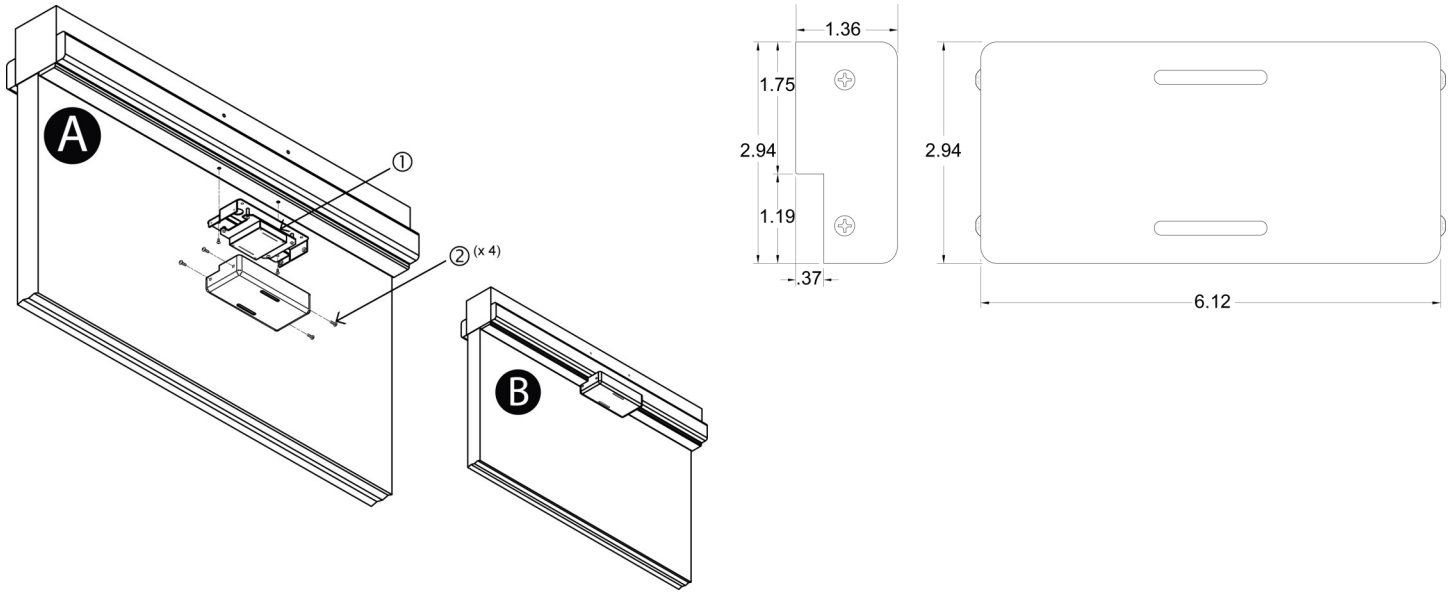
CENSus-C100 Installation



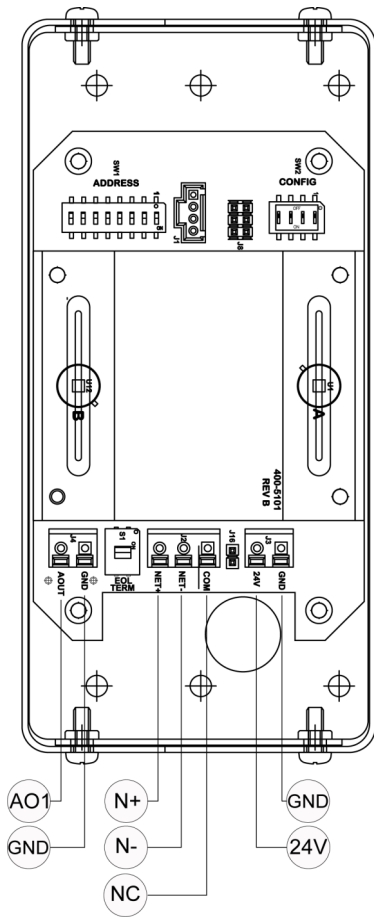
- NOTES:
- 1) ALL ELECTRICAL CONNECTIONS MUST BE MADE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND LOCAL CODES AND ORDINANCES.
 - 2) FABRICATION OF WIRING/CABLING THROUGH HOLES OR CHANNELS MAY BE REQUIRED THROUGH DOOR JAMBS, WALLS AND/OR MOLDING.

Mounting Diagram and Dimensions—Continued

CENSus-C100 Installation



CENSus-C100 - Wiring Connections



CENSus-C100 CONNECTIONS

Power		Analog Out (non-isolated)		RS-485 (non-isolated)		
24V	GND	AO1	GND	N+	N-	NC
24 VAC (hot)	24 VAC (neutral)	Occupancy Count +	Signal Common	Network +	Network -	Network Common

Connect the analog output signal if required to the host B.A.S. using shielded twisted-pair wire. Properly terminate the shield (typically at the B.A.S.).

! If twisted pair wire and/or shielded cable is not used, extraneous electrical noise can be picked up between the CENSus-C100 and host control panel.

Use a 3-conductor network cable meeting the corresponding BACnet or Modbus standards. Ensure that all three connections, N+, N- and NC are connected.

i Refer to the CENSus-C100 INSTALLATION AND SETUP manual for information regarding network configuration, BACnet objects, and Modbus registers.

i The CENSus-C100 is preconfigured for BACnet MS/TP. Consult the CENSus-C100 INSTALLATION AND SETUP manual to change the output to Modbus RTU network protocol.

! If a 2-conductor network cable or other non-conforming cable is used, network speed, length and reliability may be compromised or network failure may occur.

i If the CENSus-C100 is the first or last device on the network run, place switch S1 (EOL TERM) in the ON position.

STARTUP

Detailed startup instructions are provided in the CENSus-C100 INSTALLATION AND SETUP Guide.

QUOTATIONS AND ORDERING

Use the model code below to request a quote or place an order. Quotations and orders are provided by your local EBTRON representative.

