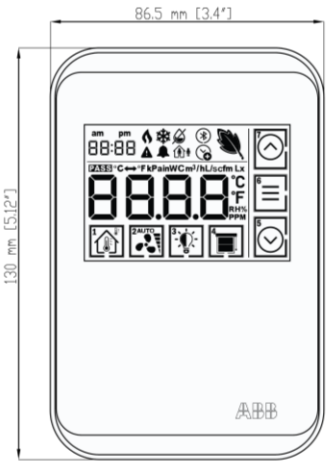
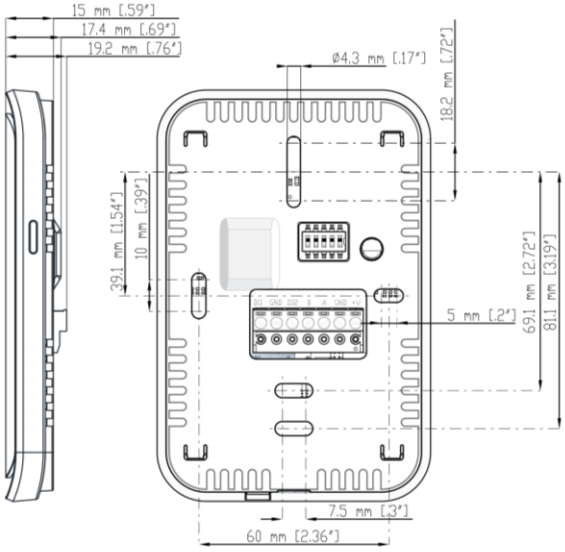
INSTALLATION AND WIRING
BDS0032 rev 8

ABB FusionAir Smart Sensor

DIMENSIONS

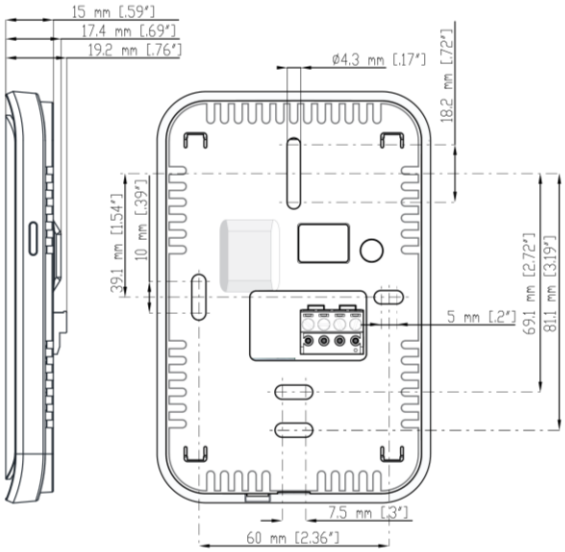


FA-TH-D, FA-THV-D, FA-THC-D



FA-TH, FA-TH-D, FA-THV, FA-THV-D, FA-THC, FA-THC-D

FA-T, FA-TH, FA-THV, FA-THC,



FA-T

Product Variants

FA-T	Analog Temperature sensor
FA-TH	Temperature + RH sensor
FA-THV	Temperature + RH + VOC sensor
FA-THC	Temperature + RH + CO_2 sensor
FA-TH-D	Temperature + RH + Display
FA-THV-D	Temperature + RH + VOC + Display
FA-THC-D	Temperature + RH + CO_2 + Display

MOUNTING

- Install the FusionAir Smart Sensor on an easily accessible interior wall, in an area of average temperature at approximately 48" (1.2 m) above the floor.
- Avoid direct sunlight or other heat sources (e.g. the area above radiators or other heat-emitting equipment)
- Avoid locations behind doors, on outside walls and above or below air discharge grills and diffusers

IMPORTANT NOTICE AND SAFETY ADVICE

This device is for use as an operating control. It is NOT a safety device. Where a device failure endangers human life and/or property, it is the responsibility of the client, installer, and system designer to add additional safety devices to prevent a system failure caused by such a device failure.

Ignoring specifications and local regulations may cause equipment damage and endangers life and property. Tampering with the device or misapplication will void warranty.

This device complies with part 15 of the FCC Rules. 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.

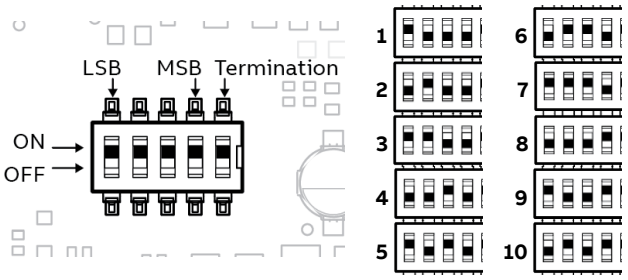
WARNING: Changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment.

INSTALLATION

1. Install a 4-core cable (24 AWG min. for a single FusionAir, 18 AWG min. for multi-device bus, max. bus length 328 ft. / 100 m) from the associated controller sensor bus and sensor power connections to a flush-mounting wall box compatible with the mounting plate (see previous page)
2. Connect the 4-core cable to the field controller and to the terminals of the FusionAir device according to the wiring diagrams below. Set the address of the FusionAir device (see *Addressing* below).
3. Attach the mounting plate to the flush-mounting box. Make sure the mounting screw heads do not stand out more than 0.2" (5 mm) off the surface of the mounting plate.
4. Align the body of the FusionAir device with the clips on the mounting plate and press gently until the front panel of the device is fully connected.

ADDRESSING

Multiple FusionAir device can be connected to a single sensor control bus. Each connected device must be assigned a unique address. This is set on the DIP switch visible on the back of the device



The address must be between 1 and the maximum number of FusionAir devices supported by the controller to which it is connected:

- 1 …4 (e.g. CBX, CBV, CBT-2U1R, CBT-3T6-5R), or
- 1 … 10 (e.g FBXi, CBXi, FBVi)

See the controller datasheet for more information.

The address must be within the controller's range, but gaps in the addressing of multiple devices are allowed.

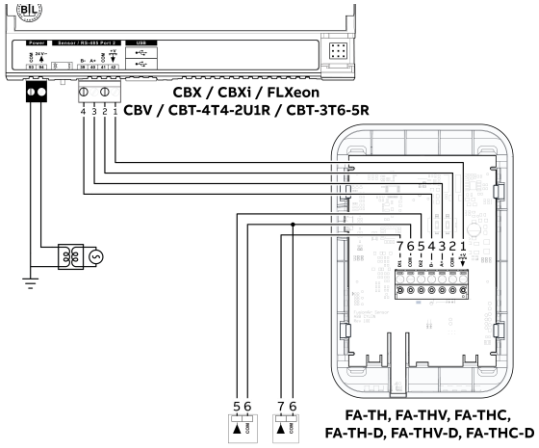
Note: The FusionAir device reads the dip switch settings when power is applied. Changing the DIP will not take effect during operation. The device must be disconnected and re-connected for this change to be effective.

WIRING

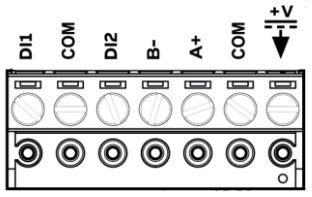
Single FusionAir per controller

Connect terminals 1…4 to the Sensor port on the CBX / CBXi / FLXeon controller.

Optionally connect terminals 5…7 to external digital signals such as Occupancy or Room Key Card.



Digital Inputs | RS485 | 24 V DC



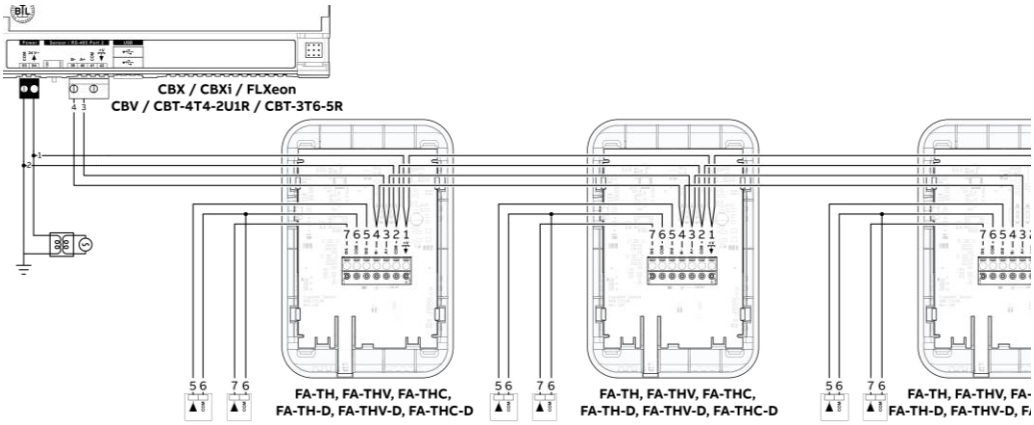
FA-TH, FA-THV, FA-THC, FA-THD, FA-THVD, FA-THCD

Push Switch | 10K3A1

Multiple FusionAir per controller

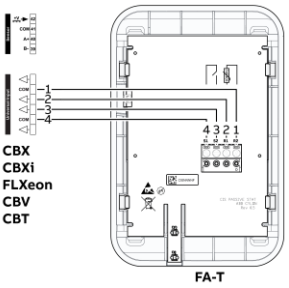
Daisy-chain terminals 1…4 as shown below.

Note: To allow for potential current requirements for multiple sensors when accent lights are used, it is recommended that the power lines (terminals 1 and 2) are connected to the Controller's 24 V power supply.



FA-T (Passive sensor)

The FA-T's temperature sensor and side switch can be connected directly to 4 terminals on the Controller as shown, one analog input and one digital input.



Alternatively they can be connected to a single analog input and logic in the Controller Strategy can derive the switch position.

The digital input is a push-button on the side of the FusionAir device and can be used for example to over-ride a schedule for 1hr or override until next value change.