

## Modular Room Control (MRC) Outdoor Temperature Broadcast (OTB) Sensor

### Application

**Note:** This sensor is provided with the MRC19-OTB software package.

Outdoor Temperature Broadcast (OTB) is an add-on feature for the MRC series of controls. In a typical system, the temperature and other aspects of the room operation are controlled by the MRC system. The OTB feature allows the current outdoor air temperature to be displayed on the MRC thermostat in the room.

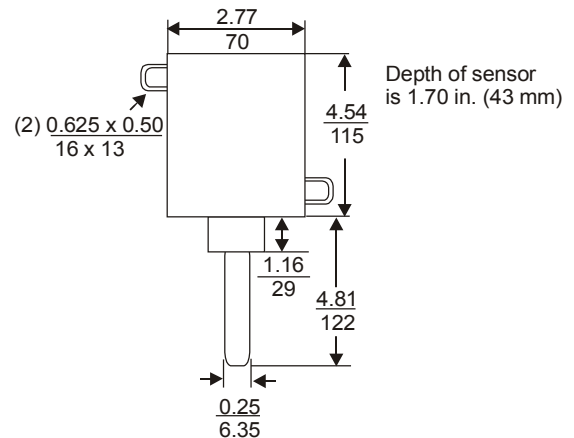
Due to limitations on the range of temperatures that can be displayed by the MRC thermostat, the outdoor air temperature being broadcast by the OTB subsystem is limited to the range of 0 to 99°F (-18 to 37°C).

### Installation

The sensor should be installed in a location that is easily accessible to one of the floor bridges and the distance of wire is kept to a minimum. Conceptually, it is not important which floor bridge is used for the interface with the sensor, as long as the software (MRC19-OTB) has been loaded and structured to look for the sensor in the correct address.

### Mounting

Mount the sensor on the outside wall, facing north, without direct exposure to sunlight. Refer to Figure 1 for mounting dimensions.



**Figure 1: Outdoor Temperature Broadcast Sensor Dimensions**

### Wiring

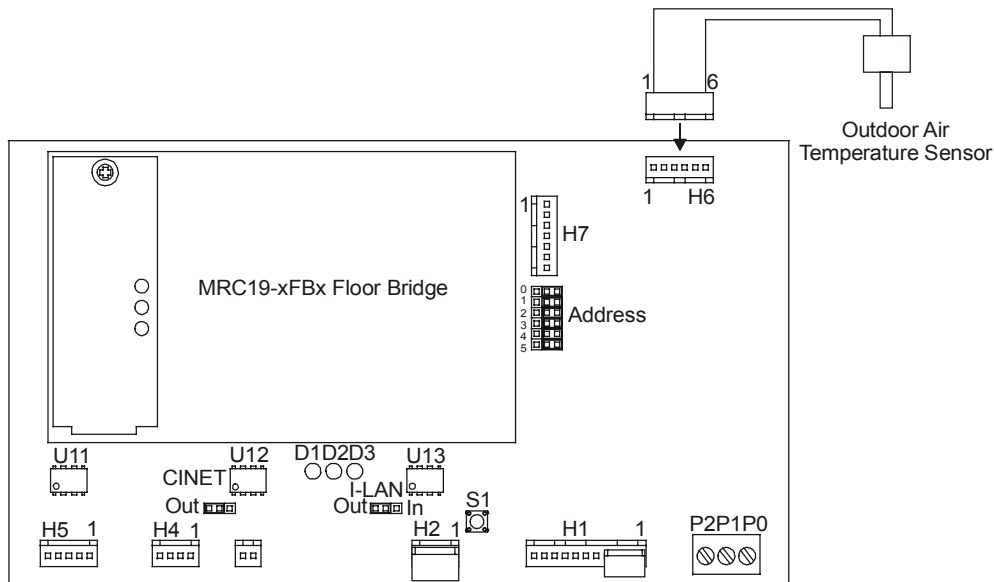


**CAUTION: Risk of Electrical Shock.**

Before applying power, make all wiring connections and check the connections. Short-circuited or improperly connected wires may result in permanent damage to the unit.

**IMPORTANT:** Make all wiring connections in accordance with the National Electrical Code (NEC) and all local regulations.

The sensor requires a two-wire, minimum 22-gage conductors. If the distance from the sensor exceeds 20 ft. (6.1 m), use a shielded wire. The sensor is connected to Header H6, Pins 1 and 6 (see Figure 2). Pin 1 is common, and if a shielded wire is used, the shield should also be terminated at this pin. Do not terminate the shield at the sensor end.



**Figure 2: Typical Connection to Floor Bridge**

## Setup and Adjustments

For the OTB feature to work, the MRC System requires the MRC19-OTB software package to be loaded. This is typically ordered and loaded by the factory on the MRC19-CIS5 Central Interface Server.

The OTB sensor is not functional until it has been enabled in the floor bridge software. The command must be sent to the specific Floor Bridge where the OTB sensor has been installed.

Using Floor Bridge 3 on Riser 1 as an example, the command to enable the OTB sensor is below:

From the dialog window:

Technical Address: 1:3:80

Device is: R239/F239

Command: /OUTTS"0"\EX1

Next Command: SYSAPP0\EX5 to reset the floor bridge.

To disable the OTB sensor: /OUTTS"0"\EX2

## Technical Specifications

|                                     |   |
|-------------------------------------|---|
| <b>Product</b>                      | Modular Room Control (MRC) Outdoor Temperature Broadcast (OTB) Sensor |
| <b>Power Requirements</b>           | 24 VAC at 50/60 Hz (Floor Bridge)                                     |
| <b>Agency Listings</b>              | FCC<br>UL<br>CSA  |
| <b>Sensor Range</b>                 | 0 to 99°F (-18 to 37°C)   |
| <b>Ambient Operating Conditions</b> | -20 to 149°F (-29 to 65°C), 0-95% RH noncondensing                    |
| <b>Ambient Storage Conditions</b>   | -20 to 149°F (-29 to 65°C)  |
| <b>Shipping Weight</b>              | 0.5 lb (0.22 kg)  |

*The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.*

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Published in U.S.A.  
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