RS-7000
Flush-Mounted Analog Sensor

Product Bulletin

The Flush-Mounted Analog Sensor RS-7000 Series with LCD is an electronic room command module designed to work with Johnson Controls® controllers in heating, ventilating and air conditioning (HVAC) systems. Models in this series monitor the zone temperature and humidity, and transmit data to a field controller using up to three analog outputs.

RS-7060-0000 can toggle between Temperature and Humidity (RH) on the display, depending on the desired default display.

The temperature only model RS-7080-0002 includes Fan mode push button to set the desired fan speed (OFF-LOW-MED-HIGH-AUTO). Both models with display have occupancy button, which allows user to select when the zone is occupied, to set the comfort mode only when is necessary.

The model without display RS-7040-0000 provides a combined measurement of the zone temperature and humidity.

Installation is quite easy, given the possibility to configure the Setpoint Mode and temperature limits from the sensor display, during installation.

Features and Benefits

- **Large backlit display in a low profile enclosure**
  Display larger than 40% of front area, provides real time status of the environment with intuitive and clear user interface.

- **Flush mount installation**
  Suitable for various installation boxes, flush mount offers low profile of only 14 mm outside the wall.

- **Temperature sensor with combined humidity for best comfort**
  Models in the range offer Fan Speed control button or combined temperature and humidity sensor for best comfort.

- **Configurable options reduce stock need**
  The Setpoint mode Adjust or Warmer/Cooler and temperature limits can be configured from the display during the installation.

- **Customizable display helps tenants to meet building policy**
  Sensors can be configured to show, temperature, humidity or setpoint only, in addition the keypad can be locked to avoid misuse in public spaces.

- **Mounting plate and protection cap make installation safe**
  The mounting plate allows installation without opening the sensor. The removable e repositionable protection cap protects the sensor during commissioning and decorating. Both avoid the risk of component damages during installation phase.

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General Description

The RS-7000 has four or three buttons keypads and a large customizable display.

The model RS-7080-0002 with **four buttons** can manage:
Occupancy, Fan Speed, Setpoint and provides an accurate measurement of room temperature.

The other model with **three buttons** RS-7060-0000 can manage:
Occupancy, Set point and provide temperature plus humidity measurement.

In corridors or public space where occupancy and setpoint management is demanded to the Building Management System the RS-7000 range can offer the model RS-7040-0000 without display and keypad that provides the Temperature and the humidity present in the room.
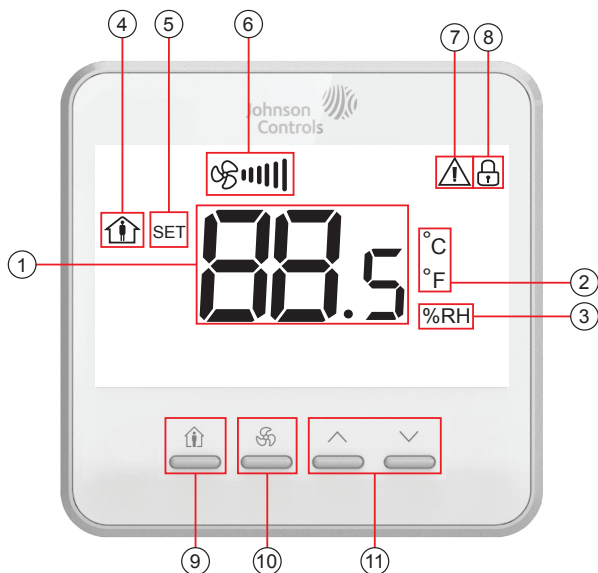
The RS7000 provides up to three analog outputs 0..10 V to the HVAC controller to transmit: Temperature, Setpoint, Fan Speed or the humidity value. Occupancy button will toggle a digital output.

Sensor are powered by Johnson Control controller at 15 VDC.

Customization

Display and Keypad Protection

The Backlit display provides real time status of the environment with intuitive and clear user interface:

1	Display room temperature, humidity and setpoint
2	Temperature units
3	Humidity unit
4	Occupancy status
5	Setpoint indicator
6	Fan speed status
7	Warning indicator
8	Key lock indicator
9	Occupancy
10	Fan speed adjustment
11	Setpoint adjustment

From the parameters configuration page the RS-7000 can be customize to meet the building policy.

Where required the display can be configured to show temperature in Celsius or Fahrenheit, it can toggle Humidity and Temperature or show Setpoint only.
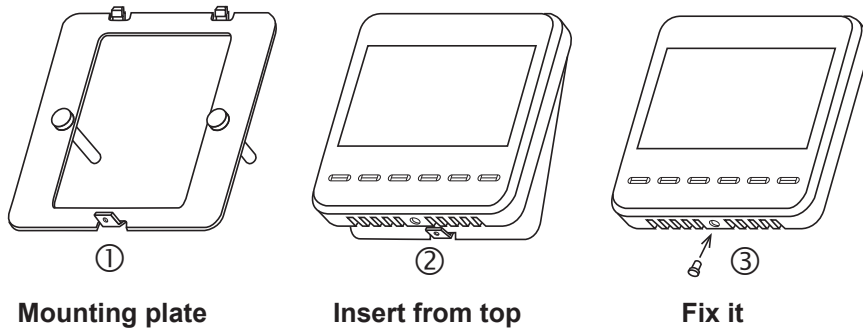
The Default Setpoint Mode Adjustment from 12 to 28°C can be changed to W/C mode ±3°C by selecting the Temperature Setpoint adjustment type parameter. To meet building policy the Setpoint range can be limited just operating from the parameters configuration page. The Adjust set point can be configure with a range from 2 to 40°C, while the W/C limits can be configured between any values from -5 to 5°C.

To meet building policy the sensor keypad can be totally locked or all buttons can be locked except the occupancy button.
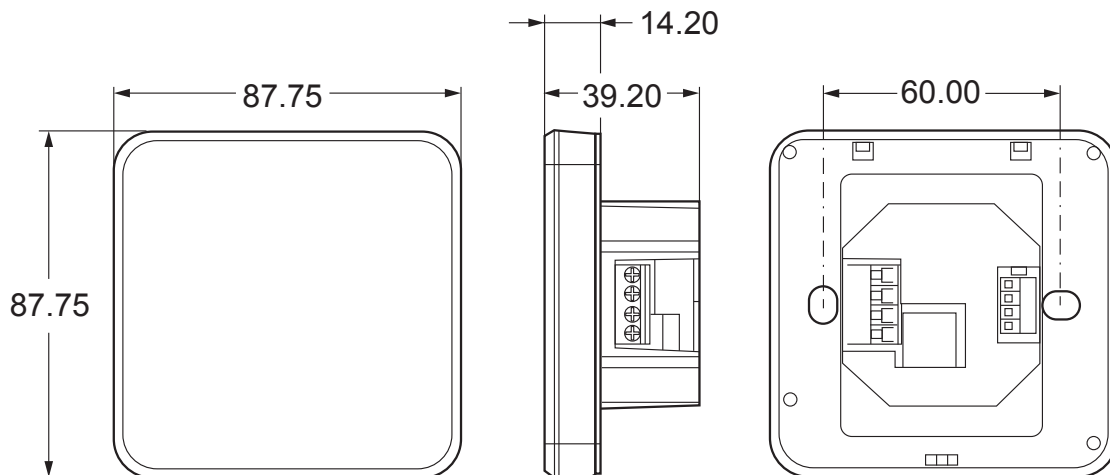
Display will turn off the backlight automatically after 30 sec. from last keypad activity, timer is configurable from 5 to 60 sec.

Installation

The RS-7000 can be installed on round or square boxes using the mounting plate included in the supply.
Once installed the devices will cover completely the mounting plate and it will protrude from the wall of 14 mm only.
A little screw keeps the device in place.

① **Mounting plate**   ② **Insert from top**   ③ **Fix it**

Dimensions *(in mm)*

87.75

87.75

14.20

39.20

60.00

Ordering Information

Codes	LCD	Temperature	Humidity [1]	Fan control	Temperature Adjustment [3]	°F/°C Scale Toggle	Occupancy Override
RS-7040-0000	---	•	• (±3%)	---	N/A	---	---
RS-7060-0000	•	•	• (±3%)	---	Adj/WC	•	•
RS-7080-0002	•	•	---	•	Adj/WC	•	•

Note

[1] For models with humidity sensor, the humidity value can be displayed in LCD too.

[2] Adj/WC, sensor can operate with Setpoint Adjust 12 to 28°C or WC (Warmer/Cooler) 3°C setpoint mode, configurable.

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Technical Specification

Supply Voltage	15 VDC nominal
Current Consumption	35 mA maximum
Terminations	Screw terminal block
Wire Size	
Screw Terminal Block	18 - 22 AWG (1.0 - 0.6 mm diameter); 22 AWG (0.6 mm diameter) recommended
Outputs	
RS-7040-0000	Temperature: 0…10 V @ 0…40°C
	Humidity: 0…10 V @ 0…100 RH%
RS-7060-0000	Temperature: 0…10 V @ 0…40°C
	Humidity: 0…10 V @ 0…100 RH%
	Setpoint: 0…10 V
	Occupancy: Open collector 30 V @ 50 mA, Occupied = Contact Open
RS-7080-0002	Temperature: 0…10 V @ 0…40°C
	Fan Speed: 0…10 V
	Setpoint: 0…10 V
	Occupancy: Open collector 30 V @ 50 mA, Occupied = Contact Open
Mounting	Flush-Mounted
Sensor Readings	
Temperature Accuracy	±0.5°C
Humidity Accuracy	±3%RH
Default Setpoint Adjustment Range	
Default Adjust Range	12 to 28°C, max configurable 0 to 40°C in 0.5°C increments
Default W/C Range	-3 to 3°C, max configurable 0 to ±5°C in 0.5°C increments
Ambient Conditions	
Operating	0 to 40°C with 10 - 90% RH, non-condensing
Storage	-20 to 60°C with 5 - 95% RH, non-condensing
Housing	Polycarbonate
Protection Class	IP20
Dimensions (H x W x D)	87.75 x 87.75 x 39.20 mm
Shipping Weight	Approx. 300 g
CE **Compliance**	Johnson Controls declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive and Low Voltage Directive.
	RCM mark, Australia/NZ emissions compliance
	RoHS, REACH, WEEE

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 shall not be liable for damages resulting from misapplication or misuse of its products.