



HVAC Systems Monitoring

Sustain and Grow your Business through Duct Smoke Detector Maintenance

Are you looking to increase revenues by focusing on service or product replacements to help sustain and grow your business?

All duct smoke detectors regularly need to be sensitivity tested and cleaned as necessary to maintain optimum performance and required sensitivity levels.

Since 2008, System Sensor InnovairFlex™ Duct Smoke Detectors have included a feature that sends a maintenance condition to the panel if the detector needs to be cleaned (see “Cleaning the sensing chamber on the sensor head”). This feature is a great way to maintain service revenues, establish regular contact with your customers and identify new opportunities.

However, duct smoke detectors installed prior to 2008 do not include this maintenance condition feature. For these customers, you can offer the MOD400R Field Sensitivity Test Module along with a voltmeter to test legacy duct smoke detectors. These installations also provide an opportunity for you to schedule service calls to perform the test yourself.

The legacy System Sensor models to look for include:

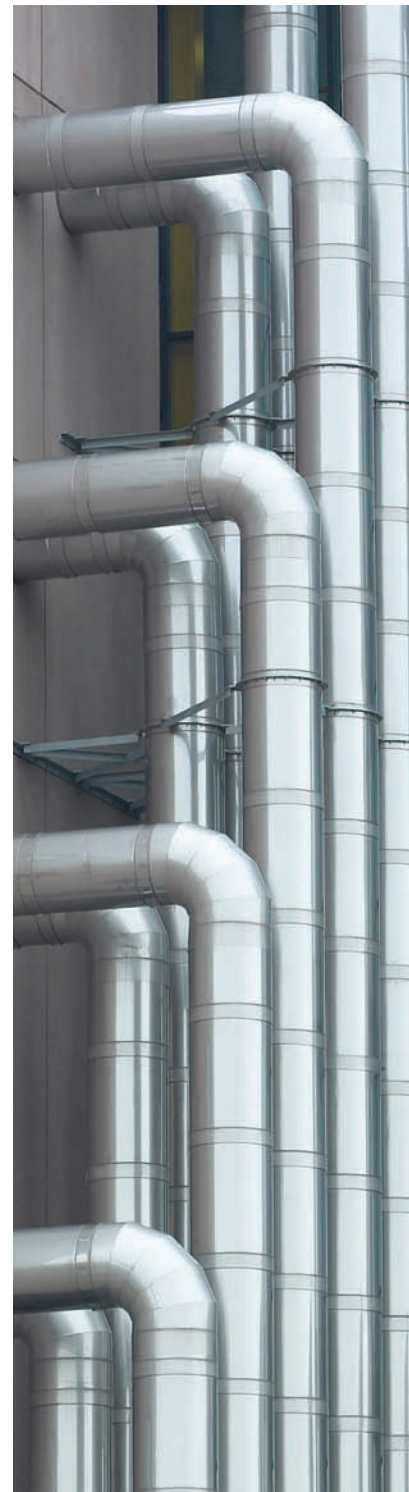
Photoelectric	Ionization
DH400ACDCP	DH400ACDCIHT
DH100ACDCP	DH100ACDCI
DH100ACDCLP	

If legacy detectors are out of the recommended sensitivity range, you can offer an upgraded package that includes the newer InnovairFlex D4120 Duct Smoke Detector along with the RTS2-AOS accessory. This accessory provides the building owner with an easy method to verify the detector's sensitivity and a clear indication of when the sensor head needs to be cleaned. The new D4120 duct smoke detector is backwards compatible with legacy remote test accessories, but new sampling tubes must be purchased for use with InnovairFlex.

Conducting Sensitivity Testing

MOD400R Setup

1. Connect a voltmeter with a sensitivity of 10 kΩ/V or greater to the banana jacks on the side of the MOD400R. Be sure to connect the positive test lead to the red jack and the negative lead to the black.



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2. Connect the interface cord to the RJ-11 telephone jack on the bottom edge of the module.
3. Test the MOD400R battery as described in BATTERY TESTING.

Battery Testing

The MOD400R operates from a single 9-volt alkaline battery with a life expectancy of approximately one year. However, it should be tested before each use of the MOD400R to ensure accurate sensitivity measurements.

Testing the Battery

1. Make sure that the MOD400R is NOT connected to any detector or sensor.
2. Set a voltmeter with a sensitivity of at least 10 k Ω /V to measure 9 VDC.
3. Connect the meter to the banana jacks on the side of the MOD400R. Be sure to connect the positive lead to the red jack and the negative lead to the black.
4. Set SW1 to its A position and read the meter. It should indicate at least 5.5 VDC. If it does not, replace the 9-volt alkaline battery.

Smoke Detector Testing

Conventional Ion

1. Prepare the MOD400R for testing by performing the procedure in "MOD400R Setup."
2. Set the voltmeter to measure at least 3 VDC.
3. Make sure that power is applied to the detector to be tested.
4. Set SW1 to its A position and the 2-position switch, SW2, to CONV.
5. Insert the test plug into the test module socket on the detector. See photos below. The test module socket is circled in red.
6. The voltmeter should display a voltage that falls in the MOD400(R) RANGE printed on the label on the detector housing. This corresponds to the NOMINAL SENS. (sensitivity) on the label.

7. If the voltmeter displays a voltage outside the MOD400(R) RANGE, it indicates that the detector requires cleaning or repair.
8. Disconnect the MOD400R from the detector and set SW1 to OFF.

Conventional Photoelectric Detectors

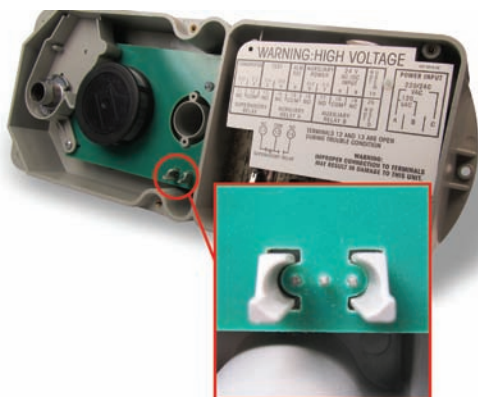
1. Prepare the MOD400R for testing by performing the procedure in "MOD400R Setup."
2. Set the voltmeter to measure at least 3 VDC.
3. Make sure that power is applied to the detector to be tested.
4. Set SW1 to its B position and the 2-position switch, SW2, to CONV.
5. Insert the test plug into the test module socket on the detector. See photos below. The test module socket is circled in red.
6. The voltmeter should display a voltage that falls in the MOD400(R) RANGE printed on the label on the detector housing or back of the sensor head. This corresponds to the NOMINAL SENS. (sensitivity) on the label.
7. If the voltmeter displays a voltage outside the MOD400(R) RANGE, it indicates that the detector requires cleaning or repair.
8. Disconnect the MOD400R from the detector and set SW1 to OFF.

Printed Labels on Products



**MOD400(R) RANGE
.35 - 1.00 VOLTS**

DH100 Test Module Socket



DH400 Test Module Socket

