Installation Manual

Daikin System Manager

Use with Daikin Intelligent Systems™
Revision History

<table>
<thead>
<tr>
<th>Version Number</th>
<th>Date</th>
<th>Comment</th>
</tr>
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<tr>
<td>IM 1253-1</td>
<td>February, 2017</td>
<td>Name Change</td>
</tr>
<tr>
<td>IM 1253</td>
<td>March, 2016</td>
<td>Initial Release</td>
</tr>
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Reference Documents

<table>
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<tr>
<th>Literature Number</th>
<th>Company</th>
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<tr>
<td>OM 1254</td>
<td>Daikin System Manager</td>
<td>Daikin System Manager</td>
<td>DaikinApplied.com</td>
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<td>IOM 1135</td>
<td>MicroTech III Generic I/O Manager</td>
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<td>IOM 1150</td>
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<td>IM 1255</td>
<td>Quick Installation Guide</td>
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Limited Warranty
Consult your local Daikin Applied representative for warranty details. To find your local Daikin Applied representative, go to www.DaikinApplied.com

Installer Responsibilities
The installation of this equipment shall be in accordance with the regulations of authorities having jurisdiction and all applicable codes. It is the responsibility of the installer to determine and follow the applicable codes.

Receiving Inspection
When the device is received, all items should be carefully checked against the bill of lading to be sure all packages have been received.

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General Information
This manual provides general information about the Intelligent System Manager. In addition to an overall description of the unit, it includes mechanical and electrical installation procedures.

The System Manager is in a headless encasement accompanied by a touch screen. For a detailed description of the operation of the System Manager refer to OM 1254

The System Manager consists of a web-based user interface (Web-like pages accessible with Chrome) which allows the user to edit control parameters required for control of the Intelligent Systems. It is a Windows® Embedded Standard 7 with Ethernet Card and TCP/IP Protocol, Chrome browser, and Ethernet Cable access to network.

Hazardous Information Messages

[CAUTION]
Cautions indicate potentially hazardous situations, which can result in personal injury or equipment damage if not avoided.

[WARNING]
Warnings indicate potentially hazardous situations, which can result in property damage, severe personal injury, or death if not avoided.

[DANGER]
Dangers indicate a hazardous situation which will result in death or serious injury if not avoided.

[NOTICE]
Notices give important information concerning a process, procedure, special handling or equipment attributes.

[CAUTION]
Static sensitive components. Can cause equipment damage.

Discharge any static electrical charge by touching the bare metal inside the control panel before performing any service work. Never unplug cables, circuit board terminal blocks, or power plugs while power is applied to the Manager.

Installer Responsibilities
The installation of this equipment shall be in accordance with the regulations of authorities having jurisdiction and all applicable codes. It is the responsibility of the installer to determine and follow the applicable codes.

Receiving Inspection
When the device is received, all items should be carefully checked against the bill of lading to be sure all packages have been received.

Inspect the System Manager for any shipping damage. Report all shipping damage to the carrier and file a claim.

Included Items:
A. System Manager
B. 15.6" touch screen monitor
C. System Manager display bracket
D. 4 × screws and 4 × 10mm standoffs for VESA mounting
E. Cables – VGA male to male plug, USB type A to type B
F. 120AC-12VDC adapter with screw lug power connector

**Wall-mounting screws and anchors are not included

Required Tools:
• Screwdriver
• Controls screwdrivers

Optional Jobsite Tools:
• Laptop
• USB storage device
• USB keyboard
• USB mouse
• Ethernet crossover cable
• Voltmeter
• Nut driver
• WCIS Cable – P/N 250804701
• Network wiring map
• OM 1254
Communication wires to all devices on the network, including the System Manager, shall be installed per standard BACnet MS/TP wiring guidelines. All devices in the network shall be Daisy-Chained in any order using 22 AWG twisted pair stranded shielded wire. For lengths over 4000 feet a repeater shall be used, however minimize wire length when possible. Do not “Star” or “T” the network wire. See Figure 1 for a detailed diagram. It is recommended to trace the wiring network on the building layout and upload to the System Manager and to keep a copy for your records.

**Figure 1: Intelligent Systems Field Wiring Details**
To properly connect the communication wires to the appropriate terminal block follow these steps:

1. Cut off 1 inch of the outer jacket of the cable, being cautious to not nick the inner insulation.
2. For each inner wire strip off 0.25 inches of the insulation.
3. Ensure the polarity (+/-) for each conductor is maintained throughout all devices.
4. When wiring two cables to the controller, twist together the shield wires from both cables and secure with a wire nut, shown in Figure 2. Twist the wire nut in the same direction the wires were twisted together. Land shield to earth ground at ONE END ONLY to prevent ground currents from being created as seen in Figure 4. Ensure that the shield wire does not ground against the case.
5. Insert the wires into the appropriate terminal block. The bare communication wire shall not extend beyond 0.125 inches, shown in Figure 3.

**NOTE:** If bare communication wire contacts the cable’s foil shield, shield wire, or a metal surface other than the terminal block, communications may fail.

In Figure 4 all of the non-isolated devices use two-wire connections with the reference level between devices established by an internal earth ground connection made through some impedance (Z) at each device. This is generally the lowest cost solution and is sufficient for installations where electrical noise, ground noise, and stray fields are low. EIA-485 is designed to operate with voltages on the signaling wires between -7 and +12 volts.

**Figure 4: Twisted Pair Wiring with Devices and Shield Grounded at One Location**

A 120 ohm end of line (EOL) resistor, also known as a termination resistor, is required on both ends, as seen in Figure 5. This will reduce bounce back interference when the MS/TP token gets to the end of the trunk. If a MicroTech III controller is EOL, an internal EOL resistor can be enabled, however if this unit needs to be powered down for maintenance, the software EOL resistor will no longer be applied. Therefore, it is highly recommended to use a physical EOL resistor.

**Figure 5: Wiring at EOL Device. Only Ground Shield at One Location**
Hardware improvements include bias resistors built into the System Manager.

**NOTE:** The older version of the System Manager required the installation of bias resistors.

Up to one additional set of bias resistors (510Ω ± 5%) may be added if desired. Refer to Figure 6 for wiring details.

### Avoid Signal Noise

For best communication avoid running communication wires or sensor input wires next to AC power wires, VFDs, or the controller’s relay output wires. These can be sources of noise that can affect signal quality. Devices that could cause noise are:

- Spark igniters
- Radio transmitter
- VFD
- Electric motor > 1 hp
- Generator
- Relays
- Transformers
- Induction heaters
- Large conductors
- Video display devices

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**Figure 6: Bias Resistors and EOL Resistors on Network**

![Bias Resistors and EOL Resistors on Network](image)
Control Panel (System Manager)

The System Manager shall be located in a conditioned space that is easily accessible. Allow for space around the System Manager for airflow circulation, this is needed for rejection of heat. It is recommended to install surge protection and an uninterruptible power supply (UPS) to protect the System Manager from a hard shutdown due to building power failure.

The VESA mounts on the display bracket allows the System Manager to be attached to the back of the monitor via VESA mounting screws. The display bracket can also be mounted on a wall, with the monitor attached to the front, see Figure 7.

1. Fasten the display bracket to the back of the monitor using the screws.
2. Fasten wall mounting screws and anchors into a wall, leaving space to attach the display bracket. Slide the display bracket mounting holes onto the screws and fasten. It is recommended that at least one screw should be mounted in a wall stud.

NOTE: The wall mounting screws and anchors are not included.
3. Slide the System Manager into the display bracket, the rubber feet should be facing away from the monitor.
   a. VGA – System Manager to Monitor
   b. USB – System Manager to touch screen Monitor
   c. (2) Power Supply – Barrel Screw Connector to System Manager and touchscreen monitor
5. Connect the BACnet MS/TP twisted pair wire to the BACnet MS/TP terminal maintaining polarity throughout the daisy-chain, refer to Figure 8 and Figure 9.
6. The Intelligent Systems automatically starts when the System Manager has power and the BACnet MS/TP network is run appropriately. Refer to OM 1254 for user operation.

If the System Manager is at the end of the network, a 120 Ω resistor should be inserted into the terminal in addition to the twisted pair.

Figure 9: Rear Plate of System Manager

All Units

All units must be installed and started up per their Installation Manuals. Duct and building pressure tubing shall be run to pressure transducers per unit Installation Manual. VAV units shall be installed per their Installation Manual in the proper location. All VAV controllers shall have their space sensor wired with the provided cat3 cable. WSHP and Fan Coil Units shall be installed per their Installation Manual in the proper location.

System Manager Calibration

To ensure a judicious mode of operation, the System Manager should be calibrated. Tap on the top of the screen and a window saying “You have gone full screen. Press F11 to exit full screen.” Press “Press F11 to exit full screen” and minimize chrome in the upper right corner. Go into the start menu by pressing at the extreme bottom of the screen, or by moving a mouse down to the bottom of the screen. “Search Programs and Files” and type “Calibrate the screen for pen or touch input”. Select “Calibrate the screen for pen or touch input”. A window shown in Figure 10 should appear. Select “Calibrate...” and a screen with some border lines will appear. Tab the crosshairs as they appear in each corner to complete calibration.

Figure 10: Configuration
Shut down

The System Manager can be shut down safely using the shutdown button located in the left hand menu bar on the main screen, shown in Figure 11. This button is available if accessing the controller remotely only to commission level, but is available to all user levels locally at the System Manager. **Do not power down using the power cord.** The System Manager can also be shutdown using the power switch located on the controller itself.

**Figure 11: System Shutdown and Restart Buttons**

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**Restart**

**CAUTION**

Not following the proper shut down methods can result in corruption to the System Manager database

The System Manager can be restarted safely using the restart button located in the left hand menu bar on the main screen, shown in Figure 11. This button is available if accessing the controller remotely only to commission level, but is available to all user levels locally at the System Manager. **Do not restart using the power cord.** The system may also be restarted or shutdown remotely at Commission access level.
The System Manager is a Windows® Embedded Standard 7 computer that has a few features to change and update for installation.

**On-Screen Keyboard**

Windows Embedded Standard 7 has an on-screen keyboard application that can be used instead of a USB keyboard. This keyboard is used when needing to type outside of the Intelligent Systems application. To open the on-screen keyboard select the tab along the left side of the screen, shown in Figure 12. The on-screen keyboard, Figure 13, will appear.

To type within the System Manager, you may either use the embedded keyboard as shown above, or use the built-in virtual keyboard through the System Manager. By selecting the keyboard icon next to the small alarm notification icon in the top right corner, a notification saying “virtual keyboard enabled” or “virtual keyboard disabled” will appear. If it is enabled, the icon will be lit up, and whenever an interactive text box is selected, the virtual keyboard will appear.

**Updating Local Time**

**NOTICE**
You must restart the Intelligent Systems for Time/Date changes to apply.

To avoid problems with following scheduling plans, it’s necessary to update the Time and Time Zone of your System Manager.

Tap on the top of the screen and a window saying “You have gone full screen. Press F11 to exit full screen.” Press “**Press F11 to exit full screen**” and minimize chrome in the upper right corner. Tap at the extreme bottom of the screen. Go to your system clock, which you will find on the bottom right corner of the desktop, double press on the Date/Time to open the properties window, Figure 14. Use this window to adjust your system time. Update the Time Zone if necessary as seen in Figure 15. The Intelligent Systems application needs to be restarted for the changes to apply. Go to the Home screen and select Restart.

**Figure 12: On-Screen Keyboard Tab**

**Figure 13: On-Screen Keyboard**

**Figure 14: Date and Time Properties**

**Figure 15: Time Zone Settings**
Disabling Windows Firewall

To avoid network complications when viewing the system remotely, the Windows firewall needs to be either configured or disabled on the System Manager. To configure the firewall, navigate to the start menu. From the start menu, select the search box “Search Programs and Files” and type “Windows Firewall”. Next select “Windows Firewall”. Then click on the “Turn Windows Firewall ON or OFF” link on the left side menu. Select the “OFF” option to disable Windows Firewall. The other option is to navigate to “Windows Firewall with Advanced Security” where configuration options are available under “Windows Firewall Properties”. Click OK to apply new firewall settings.

Windows Update

By default, Windows Update has been disabled on the System Manager. The rationale behind this decision is if a selection window pops up during a shutdown or a system boot, the System Manager may not start properly. This is inconvenient, especially if the restart or shutdown was done remotely. The other reasoning is that some System Managers will not be connected to the internet (it is not required for it to run).

If you would like to enable it, make sure the System Manager is connected to the internet. Exit full screen and minimize Chrome, then select the Windows start menu. In “Search Programs & Features” type “Windows Update” and select “Windows Update.” This will bring you to the Windows Update section of the Control Panel where you may change Update Settings such as Automatic Updates, or tell the System Manager to check for updates manually.
Determining IP Address and Subnet Mask

The System Manager local touch screen is a Windows based PC and can be added into a network like any other personal computer with a Windows operating system. The System Manager interface is a browser window. When a network connection is provided to the touch screen PC through the Ethernet port on the bottom of the Controller, any other computer on that network will have full access to the same system interface using the browser on their local device. Your System Manager will control properly without being connected to a network, but it will not have full functionality. Applications that require a network connection (such as remote monitoring and alarm notifications) will simply not work without access to the internet. The following steps will explain how to determine and set the IP address and subnet mask, and then connect to the System Manager through a browser window.

NOTE: Before you can view an IP Address you must first make sure that the controller is connected to the LAN Network via an Ethernet cable. If the controller isn’t connected you will not be given an IP Address, and will therefore be unable to connect remotely to the device.

To find the System Manager IP Address and Subnet mask follow these steps:

1. Minimize the web-application (Exit full screen by going to the top of the screen).
2. Click the Windows desktop Start button.
3. Search Programs and Files → Type “cmd” and hit enter
4. From the command prompt screen type in “ipconfig” and hit enter.
5. A readout showing your IP Address and Subnet Mask should appear, shown in Figure 16.

Figure 16: Viewing System Manager’s IP Address and Subnet Mask
Setting Manual IP Address and Subnet Mask

If for some reason you need to change your IP Address or Subnet Mask, to match or be different, you can do so by following these steps:

1. Enter the Windows desktop Start menu
2. Search Programs and Files → Type “View Network Connections” and hit enter
3. Depending on whether you are connecting via LAN or wireless right-click on your connection medium and select Properties.
4. Select “Internet Protocol Version 4 (TCP/IPv4)” then click the properties button below, Figure 17.
5. Select “Use the following IP address” and enter the desired IP Address and subnet Mask in the space provided, Figure 18.

Figure 17: Accessing IP Address Configuration Page

Figure 18: TCP/IP Page
Commissioner level access will be needed during start-up for some of the actions required. Select the “login” button in the upper right corner of the screen and enter the appropriate user name and password. The default user names, passwords, and settings are shown in Table 1.

**Table 1: Access Levels, User Names, Passwords for Default Users and Settings**

<table>
<thead>
<tr>
<th>Access Level</th>
<th>User Name</th>
<th>Password</th>
<th>Settings Menu Access (Tabs/Buttons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guest (Default User)</td>
<td>N/A</td>
<td>N/A</td>
<td>Manage Users (View Only), System Configuration (View Only), Manage Documents</td>
</tr>
<tr>
<td>Tenant</td>
<td>Tenant</td>
<td>daikin123</td>
<td>See Guest</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Maintenance</td>
<td>daikin123</td>
<td>Manage Users (may add), System Configuration, Network Setup, Manage Documents</td>
</tr>
<tr>
<td>Owner</td>
<td>Owner</td>
<td>daikin123</td>
<td>Maintenance level plus access to Service and System Log tabs</td>
</tr>
<tr>
<td>Commissioning</td>
<td>Commission</td>
<td>daikin72639</td>
<td>Owner level plus access to Ancillary Control, Device Templates</td>
</tr>
</tbody>
</table>

**Discovery Mode**

After installation the Discovery Mode is the first stage for the System Manager. During this time all the devices and their associated points will be discovered if wired, powered, and addressed properly. At the top of the screen in the Daikin banner “Discovery Mode” will be displayed. Allow 10-15 minutes for the System Manager to go through this process.

If you expected to see a device and it is not appearing, there are two main things to check. Wiring tends to be the most common issue. Check the BACnet MS/TP connections of a particular device, and double check it is daisy chained appropriately if applicable. Also check to make sure the wiring is not wrapped around any source of power as this may introduce noise into the signal and prevent proper communication with the device. If wiring is fine, also check that the MAC address of the device is in the 0 to 127 range and the Device Instance number is in the 3101000 to 3101999 range. Many types of Daikin equipment will already have this addressing completed, and the Device Instance number will have its last three digits match the MAC address (e.g. 3101047 and 47).

**Service Utilities – Global Actions**

Use the Service tab for Global Actions, Balancing, and Network Actions.

The System Stop button will set all VAVs to unoccupied and the AHUs and WSHPs to “App Mode: OFF”. Selecting Start will set the VAVs back to occupied and AHUs and WSHPs to “App Mode: Auto”.

The tabular list shows all devices connected to the System Manager. In this list you may update a particular device’s set points, parents, or even schedules. This list makes it easy to change a large number of devices all at once rather than one at a time. If more control over a single device is desired, select the pencil icon at the end of a particular device on the list, and you may edit all three properties (set points, parents, and schedule) of a single device.

**Service Utilities - Balancing**

Enable the Manual Mode - this will override critical control points. Once enabled, the page allows the user to select either a single air handler unit, or all known air handlers, and then select an action to perform.

- **Max Flow**: The air handling unit’s associated VAVs’ control flow setpoint will be overridden to 100% to maintain maximum design cfm.
- **Min Flow**: The air handling unit’s associated VAVs’ control flow setpoint will be overridden to the minimum percentage (Flow Minimum/Flow Maximum) to maintain the minimum design cfm.
- **Open Dampers**: The air handling unit’s associated VAV’s damper command setpoint will be overridden to 100%.

After selecting an action to perform press Go to command all the VAVs connected to the indicated air handler. This override will remain as long as the System Manager remains in Manual Mode. To stop the override, select Automatic. This will return VAVs back to local control.

Depending on the physical location and construction of the VAV box the Flow Coefficient may need adjusting. Scrolling down on the Balancing Tab, a Flow Coefficients table lists all of the VAV terminals recognized by the System Manager along with their Current Flow Coefficient and Displayed Air Volume. To edit a particular VAV’s flow coefficient, select the pencil icon under Action. Upon selection, you will have the ability to enter the Actual Air Volume for the VAV, and based on that the New Flow Coefficient will be calculated. This Flow Coefficient is limited in value between 0 and 2.55. Before exiting this page, remember to select Update to save any changes that have been made.
Service Utilities – Network Actions

To remove an override on a VAV point, select the Network Actions tab. In the VAV Point Release submenu, first select one or many VAV terminals, then select one or many points to release on those VAV terminals. Once selections have been made, press the Release button to release selected points on selected VAV terminals. This Release function is also useful if any overrides were done through WCIS (described in the next section) at the VAV actuator and will release all of the overrides.

ATS Auto Assignment

ATS Auto Assignment is a tool that will assist in locating and identifying the various WSHP and Fan Coil units within the building. WSHP and Fan Coil units will initiate communication on the network when the tenant override button on their associated space sensor is held in for more than 10 seconds.

The strategy for doing this is as follows. Turn on Discovery Mode in the Network Actions – ATS Auto Assignment if it is not already enabled. Go zone to zone and initiate communications on each of the WSHP and Fan Coil units right away, one right after another. Record the time and order when pressing the tenant override button for each device. Do this on all units and then go back and identify them on the Intelligent Systems by the time stamp the communication was initiated in the System Log (Owner access level and above). This will help with device labeling in the System Manager. Once devices have been discovered to your liking, press Optimize Communication. This will reassign MAC addresses to the devices that have been discovered to get them in line with the rest of the devices. This should speed up token passing on the BACnet MS/TP network.

WCIS Software Tool for VAVs

Adjusting the application software, addressing, or setpoints on the controller can be harmful – affecting system operation and communication. Software should only be used by trained technicians experienced with the particular equipment.

WCIS is a BACnet VAV controller software that allows for gathering or manipulating setpoints and information directly on the BACnet VAV controllers through a personal computer. This can be particularly useful during balancing or in the troubleshooting of a particular VAV terminal unit because it is an unfiltered steady stream of data directly from the VAV controller itself. Also, it eliminates the typical communication delays that are present when reading data over the network. The WCIS Software Tool is used in conjunction with the WCIS cable (part number 250804701). Personal computers without a male serial connection need a serial to USB adapter. The WCIS program can be obtained by contacting the Daikin Applied controls group. Run the setup.exe file and follow the wizard instructions.

The WCIS cable RJ-11 connector can be plugged into the bottom of the room sensor connected to the VAV actuator, or directly into the VAV actuator room sensor input. Open the WCIS Software Tool on your PC. Select Device and then Connection Settings to configure the software, see Figure 19. Select the appropriate COM port on your PC that has the WCIS cable connected, and use the default Baud Rate (1200). Use Device Address of 99 and select OK. Select Device and then Connect, a pop-up screen will appear, press OK. The software should have a highlighted row scrolling through continuously updating the data points.

Figure 19: Connection Settings in WCIS
Applications and setpoints can be viewed and manipulated in the software. To change point values double-click on the value to open a new screen. The pop-up screen will give a brief description of the data point, and the value can be adjusted in the text box, after adjustments select OK to save configurations. Some convenient data points to view and configure are: controller address, cooling and heating setpoints, flow minimums and maximums, air volume, flow coefficient, and duct area. For more information on data points, refer to OM 1063 BACnet VAV Actuator Operation Manual.

**NOTE:** Anytime you make a manual change to a data point in WCIS, you are overriding that point and disabling the internal logic that generally governs it. This will be indicated to you in the WCIS tool, under the stats column. You must release that point again before the controller will return to normal operation! Right click on the column to release the point in WCIS, or this can be done globally at the System Manager under the service tab. Also, if a point has failed because of an input that doesn’t exist or a hardware issue, it will show up as a red line and this will be indicated in the status column as well.
Scheduling is done at a zone level, not at an air handling unit level. The VAV boxes, WSHPs, and Fan Coil Units are assigned to schedules, and their parent devices will follow their schedules.

Creating Schedules

To create a schedule, select the “Schedule” tab. A window labeled “Manage Schedules” will appear with a list of existing schedules. To create a new schedule, select the “Add New Schedule” button. A weekly schedule will appear with a default setting of occupied times on Monday through Friday and unoccupied on the weekend. Occupied is represented in blue and Unoccupied is represented in white.

Give the schedule a unique name at the top of the window. If the name matches another schedule, a notification at the top saying “A schedule by this name already exists.” will appear. Set up the desired schedule by sliding the slider tabs to adjust times, or by pressing the clock button to the right of the times to enter the desired time, shown in Figure 20. For each day a maximum of 4 slider bars is allowed. To add a slider bar, select “+”. To remove the last slider bar added, select “X”. To switch the occupied and unoccupied times in a day select “Toggle Occupancy”.

Holiday schedules can be added by selecting the “Holiday Schedule” subtab. Here the user can add holidays assigned for special hours of operation on a specific day.

Giving Devices a Schedule

With a new schedule being created, the user must specify which devices are going to follow the new schedule. Select the “Devices” subtab. A dropdown box appears listing all of the connected devices, shown in Figure 21. To select a device, select it from the dropdown box and a checkmark will appear to the left of the device name. In addition, the device’s name will now appear below the “Assign Devices to Schedule” menu. To remove a device from the schedule, select the “X” next to the device name below “Assign Devices to Schedule” or go into the dropdown box and select the device name again to remove the checkmark. When finished, click “Save” and Intelligent Systems will display a notification confirming the action.

Figure 20: Adjusting Schedule Times

Figure 21: Assign Devices to Schedule
To quickly reference what devices are following which schedule, select the “Schedules” tab. On the list of saved schedules, a black arrow will be next to any schedule with assigned devices. Toggle the arrow to see what devices are currently assigned to the schedule, along with a room temperature measurement for each device, shown in Figure 22. The device listings are also linked back to their respective device information and settings page.

**Adding Users**

1. Login as Maintenance access level or higher
2. Select the “Settings” tab
3. Select “Manage Users” (Figure 23)
4. Select the “New User” button
5. Input the required information into the “Add User” window: First Name, Last Name, User Name, Security Level*, Password that meets listed criteria, and confirmed Password. (Figure 24)
6. Once all information has been entered, select “Add”

**NOTE:** The access level at which you login will dictate the level of access you may provide to the new user. Table 2 lists the access levels from lowest to highest. For instance, since a commissioner is the highest access level, they can create a new user with any access. An owner, though, cannot create a commissioner level, but can create a user with any other access level.

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**NOTE:** For security purposes, it is recommended to change the default passwords from what is published in OM 1254. Be sure to record them somewhere for safe keeping. Passwords cannot be reset again without higher level access.

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**Figure 22: Schedule Device Quick Reference**

Table 2: Access Levels, User Names, Passwords for Default Users and Settings
**Figure 23: Manage Users Page**

Manage Users Page

<table>
<thead>
<tr>
<th>User Name</th>
<th>First Name</th>
<th>Last Name</th>
<th>Security Level</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commission</td>
<td>Daikin Commission</td>
<td>Daikin</td>
<td>Guest</td>
<td>Maintenance Owner Tenant</td>
</tr>
<tr>
<td>Guest</td>
<td>Guest</td>
<td>Guest</td>
<td>Guest</td>
<td>Maintenance Owner Tenant</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Maintenance</td>
<td>Maintenance</td>
<td>Maintenance</td>
<td>Maintenance Owner Tenant</td>
</tr>
<tr>
<td>Owner</td>
<td>Owner</td>
<td>Owner</td>
<td>Owner</td>
<td>Maintenance Owner Tenant</td>
</tr>
<tr>
<td>Tenant</td>
<td>Tenant</td>
<td>Tenant</td>
<td>Tenant</td>
<td>Maintenance Owner Tenant</td>
</tr>
</tbody>
</table>

**Figure 24: Add User Page**

Add User Page

- First Name
- Last Name
- User Name
- Security Level: Guest
- Password
  - Password must be between 8 and 30 characters long.
  - Password must contain characters from at least two of the following groups:
    - Lowercase letters
    - Uppercase letters
    - Numbers
    - Special Characters
- Confirm Password*
Saving the Configuration

After completing the setup for the System manager, save the configuration file. This will have all the settings created and allows for quick recovery in the event of a PC failure. To do so follow these steps (refer to Figure 25):

1. Go to the “Settings” tab → “System Configuration”
2. Under “System Actions” press the “Export Local Config” button

The configuration is now saved in case of future need to upload the file to return to the systems original settings. It is recommended to save the configuration file to a USB flash drive. The location of the LocalConfig.xml file is C:\MISystem\Config\System.

In addition to saving the LocalConfig.xml file, it is also recommended to save and send Template xml files. They organize device information on each Device Property page and are located in C:\MISystem\Config\Templates – please create a .zip file of the Config folder (outlined in the next paragraph). If some devices do not have templates in place you may either read up on how to create and edit your own templates in “Manage Device Templates” under “Settings,” or contact Daikin Applied.

To save the current configuration and template files to a removable storage device, simply plug the device into the USB port located on back of the Intelligent Systems. You must first minimize the browser window by touching (or clicking if a mouse is connected) at the upper right hand corner of the screen. With the browser minimized, navigate to the appropriate folder by double clicking the “My Computer” icon, and then navigating to C:\MISystem. Locate the Config file, then press and hold (or right click if using a mouse). In the menu that appears, select “Send to…” and in the side menu select “Compressed (zipped) folder” (refer to Figure 26). This will create a new .zip folder of the Config folder in the same area. The file will automatically be looking for a new name, but renaming is optional. Tap in the empty space of the file explorer to exit out of changing the file name – or enter a new name. Once renaming is complete (changed or not), press and hold on the zipped Config file. In the menu that appears, select copy. Then on the left side of the file explorer, look for the flash drive connected under Computer. If it does not appear, double tap or double-click on Computer to see the various storage locations available and find and select your USB drive. Once in your USB drive, press and hold anywhere in the file area for the USB until the menu appears, and select Paste.

It is recommended to email the Config.zip file to MISystem@daikinapplied.com. This will ensure any replacement PCs get set up prior to shipping.

Figure 25: Saving the Configuration

Figure 26: Creating a Zipped File
System Manager Back Plate Connections

See the System Manager back plate in Figure 27.

**Figure 27: System Manager Back Plate**

LED Indicators

Four LED indicators provide diagnostic information.

- **LED D1** – Flashes each time the Communication Module
  sends a message to the host PC
- **LED D2** – Flashes each time the Communication Module
  receives a message from the host PC
- **LED D3** – Flashes each time the Communication Module
  sends a message to the MS/TP network
- **LED D4** – Flashes each time the Communication Module
  receives a message from the MS/TP network

MS/TP Network Connector

A four pin plug connector is used to connect to the MS/TP network. For troubleshooting purposes, the start-up LED sequence may be useful:

**On power-up:**

1. All LEDs ON.
2. **LED D1** OFF immediately after power, then short pulse about every 4 seconds. This is a request to the Intelligent Systems computer to send configuration data to the BACnet module. The other three LEDs remain ON until the BACnet module is configured by the Intelligent Systems application.

When the Intelligent Systems Application starts:

1. **LED D2** short pulse indicating Intelligent Systems application is sending configuration data to the BACnet module.
2. **LED D3** starts fast flicker as the BACnet module is now sending Poll for Master (PFM) requests to the BACnet network.
3. **LED D4** remains ON steady indicating no network traffic received.
4. **LED D2** flickers about every 8 seconds as Intelligent Systems sends Who-IS requests attempting to wake up devices that may connect to the MS/TP network.

**LAN 1/LAN 2 & USB**

RJ-45 or Ethernet connections used to connect the System Manager to the Internet. The other port may be used for troubleshooting or other applications.

The USB ports are there for uses such as: Keyboard, Mouse, external storage, etc.

**VGA & HDMI**

The System Manager by default is connected through VGA to the touch screen. If desired, it could be instead hooked up through HDMI to a different display.

**Power Connection (PWR)**

This pin connection is used to deliver power to the System Manager. The actual power button is found on the front plate on the left side.

**Headphone & Microphone Jack**

Although there is no sound currently being emitted by the System Manager, these ports are also included on the back of the device (it is a computer with internet access, so it could potentially need sound).
## Troubleshooting

<table>
<thead>
<tr>
<th>Error/Condition</th>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System Manager doesn’t find all devices on the network</strong></td>
<td>• Check network wiring for loose or nicked wires. Ensure polarity for each conductor is maintained throughout all devices • Verify the devices have power applied • Verify the Device Instance and MS/TP address on the unit controllers • Check the Min and Max Device Instance on the Settings/Network Setup screen • Check the network addressing and baud rate • Verify the network twisted-pair shield should only be earth grounded at one location • Verify the EOL resistors are installed properly • Install bias resistors • Verify network wiring is apart from AC power, VFDs, or other devices causing network interference</td>
<td></td>
</tr>
<tr>
<td><strong>MicroTech III RTU controller isn’t communicating to the System Manager</strong></td>
<td>• See steps above in “System Manager doesn’t find all devices on the network” • Verify the BUS LED and BSP LED are green signifying communication capability</td>
<td></td>
</tr>
<tr>
<td><strong>VAV actuator isn’t communicating to the System Manager</strong></td>
<td>• See steps above in “System Manager doesn’t find all devices on the network” • Verify the RX LED and TX LED are flashing signifying communication</td>
<td></td>
</tr>
<tr>
<td><strong>Can’t communicate to the System Manager through a direct connection on my laptop</strong></td>
<td>• Compare the IP Address of your computer to the IP Address of the System Manager. • Verify you are on the same subnet. • Turn firewall off on System Manager</td>
<td></td>
</tr>
<tr>
<td><strong>Can’t log in to my System Manager</strong></td>
<td>Incorrect username or password • The password is case sensitive. Be sure you are typing the username and password correctly. • Use a higher access level to reset your password</td>
<td></td>
</tr>
<tr>
<td><strong>Alarms are not being sent to my phone or email</strong></td>
<td>Which alarms are sent depend on the configuration in the System Manager and the configuration of the unit controller • While logged in to the System Manager go to Settings, then System Configuration. Select Alarm Configuration, and scroll all the way down. • Verify the “Enable Email/Text Alarming” checkbox is checked and select “Save”</td>
<td></td>
</tr>
<tr>
<td><strong>Cannot access certain screens or data on my System Manager</strong></td>
<td>You are most likely logged on at a lower user level than is needed for that particular screen • Log in under higher user access level to access additional menus</td>
<td></td>
</tr>
<tr>
<td><strong>I try to access certain screens like the list or property pages, but I’m redirected to the main screen</strong></td>
<td>The server is disabled. The main screen shows the message “VAV Server Disabled” • Start the server with the link on the System Manager desktop • Reboot System Manager PC with toggle switch</td>
<td></td>
</tr>
<tr>
<td><strong>The points I want to trend on the Trend Log page are not available in the object drop down list</strong></td>
<td>This object is either not available for this unit, has not yet been read or is not setup to be trended • Verify the point you are looking for is a valid point for this unit. • Verify the data point is configured for trending by accessing the “Unit Config” menu. See OM 1254 for details.</td>
<td></td>
</tr>
<tr>
<td><strong>I try to add a user, but the User Level I want to assign is not available</strong></td>
<td>You can only add users with a User Level equal to or lower than the User Level you are currently logged in as • Assign the new user a different user level. • Log in as a higher level user and create the new user. • Have some with a higher user level add the new user.</td>
<td></td>
</tr>
<tr>
<td><strong>System Manager is responding slowly, showing timeout errors, or not applying changes I’ve made</strong></td>
<td>• System Manager is overburdened • Communication errors are consuming PC resources • Verify communications are clean by accessing the event log on the System Manager (see OM 1254 for details) • Reduce trended points, trend intervals, or trend history. Also reduce Event Log history.</td>
<td></td>
</tr>
<tr>
<td><strong>The application works fine when I access it locally or from within a local network, but seems incomplete or broken when accessed from outside</strong></td>
<td>• Your local IT firewall may be causing an issue • Too many users are accessing the System Manager simultaneously • Consult with local IT staff on troubleshooting firewall rules. This may be commonly caused by an Internet-facing firewall rule that denies an ampersand ‘&amp;’ within URL headers, though there may be other issues. • Close your web browser and try back later.</td>
<td></td>
</tr>
</tbody>
</table>
Event Log Troubleshooting

Network health is key to proper operation and control over any system. Verifying that the communications are happening properly can ensure prompt responsiveness during your interaction with the System Manager and eliminate potential issues down the road. A healthy Intelligent Systems network is one where the System Manager requests updates and writes data to the various unit controllers and they respond appropriately without errors or timeout events. Unhealthy communication events will show up in the Event Log and may indicate a wiring, addressing, or hardware problem. For this reason, it is recommended that you view the Event Log to determine if any of these events are occurring at the time of startup so they can be addressed immediately.

To access the Event Log, log in to the System Manager at a owner level access or higher. From the Home screen, select Event Log. Here you will be able to view the raw BACnet communications between the System Manager and all the HVAC devices on the network. The table below indicates several events that might indicate a “dirty” network and suggested troubleshooting for each type.

<table>
<thead>
<tr>
<th>Error/Condition</th>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
</table>
| UART errors     | Physical wiring issue, or duplicate addresses on the network | • Check the network wiring  
• Check the Device Instance and MS/TP Address on the unit controllers  
  – Compare to correct addresses in Settings → Network Setup → System Summary |
| Timeouts        | No communication to devices. Timeouts could be for a particular device, or for many devices | • See steps in Troubleshooting “System Manager doesn’t find all devices on the network |
| Pet MTM         | The MTM is trying to get a response from the network due to communication errors. | • Check LEDs and view LED Indicators on page 39. |
| MTM_TryConfig   | Indicates the MTM is not responding. Normally this would be accompanied with an MTM Failure alarm if a cable had fallen off or the MTM completely failed. Since the MTM would respond before the alarm occurred, the alarm was not created. | • MTM board may be defective |
**Figure 28: Intelligent Systems Alarms Troubleshooting Decision Tree**

**Alarms**

- BACnet Module Failure
- Communication Failure

**Cause**

- Check API and BACnet firmware main version numbers on Settings page to see if they are similar

**Troubleshoot**

- Upgrade needed for BACnet Communication board or Intelligent Systems application
- Are all units uniquely addressed?
  - Yes?
  - No?
    - Readdress units
    - Is wiring done properly?
    - All wires securely connected?
    - Polarity maintained?
    - Earth ground at one location?
    - No splices?
    - Yes?
    - No?
      - Redo wiring
      - Check LEDs on BACnet Communication board, are they flashing?
        - Yes?
        - No?
          - On the Settings/General check the Initialize Network on Startup, press Save. Then go to the Home page and press Restart.

**Solution**

- Loss of communication to a unit
  - Unit wiring, addressing, or power failure
  - Are all units uniquely addressed?
    - Yes?
    - No?
      - Readdress units
      - Is the unit Device Instance in the System Manager Network Setup Device Instance range?
        - Yes?
        - No?
          - Verify or change Device Instance range on Settings/Network Setup page
          - Readdress units
      - Are communications clear of AC power, VFDs and other devices causing network interference?
        - Yes?
        - No?
          - Are the termination resistors installed properly?
            - Yes?
            - No?
              - Install 120Ω termination resistors
              - Redo wiring
Figure 29: Intelligent Systems System Log Troubleshooting Decision Tree

- **Issue**: Pet MTM
  - **Cause**: Object reference not set to an instance of an object
  - **Troubleshoot**: BACnet Communication Board not responding
    - **Check LEDs on back of System Manager, are they flashing?**
    - **Are the BACnet Communication cables secured and wired properly?**
    - **RS232 cable connected properly?**
  - **Solution**: On the Settings/General check the Initialize Network on Startup, press Save. Then go to the Home page and press Restart.

- **Issue**: MTM_TryConfig
  - **Troubleshoot**: BACnet Communication Board not responding
    - **Are the BACnet Communication cables secured and wired properly?**
    - **RS232 cable connected properly?**
  - **Solution**: Redo wiring

- **Issue**: UART Error
  - **Troubleshoot**: Communication Failure
    - **Are all units uniquely addressed?**
    - **Is wiring done properly?**
    - **All wires securely connected?**
    - **Polarity maintained?**
    - **Earth ground at one location?**
    - **No splices?**
    - **Check LEDs on back of System Manager, are they flashing?**
  - **Solution**: On the Settings/General check the Initialize Network on Startup, press Save. Then go to the Home page and press Restart.

- **Issue**: Timeouts
  - **Troubleshoot**: Communication Failure
    - **Are all units uniquely addressed?**
    - **Redo wiring**

- **Issue**: MTM Negotiating Data
  - **Troubleshoot**: BACnet Communication board possibly needs to be updated or has failed
    - **Check API and BACnet firmware main version numbers on Settings page to see if they are similar**
  - **Solution**: Upgrade needed for BACnet Communication board or Intelligent Systems application

- **Issue**: Ser.Rx MTM Undefined Simple Request Data Error
  - **Troubleshoot**: BACnet Communication board possibly needs to be updated or has failed
    - **Check API and BACnet firmware main version numbers on Settings page to see if they are similar**
  - **Solution**: Go through communication failure troubleshooting steps
Figure 30: Intelligent Systems System Troubleshooting Decision Tree

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The System Manager doesn’t find all devices on the network.</td>
<td>Check wiring, and avoid any devices that may cause interference on the network.</td>
<td>○ Verify the devices have power applied, appropriate addressing, Baud Rate, and are communicating properly. ○ Check the Min and Max Device Instance on the Settings/Network page.</td>
</tr>
<tr>
<td>Not able to communicate to the System Manager through a direct connect to a PC.</td>
<td></td>
<td>○ Compare the IP Address of the PC to the IP Address of the System Manager. Verify the subnet masks are the same. Disable the firewall on the System Manager.</td>
</tr>
<tr>
<td>Not able to log in to the System Manager.</td>
<td>Incorrect username or password.</td>
<td>○ The password is case sensitive. Be sure to type the username and password correctly. If the password needs to be reset, please refer to “Changing or Resetting User Passwords”</td>
</tr>
<tr>
<td>Some, but not all alarms are being texted or emailed.</td>
<td>Which alarms are sent depend on the configuration in the System Manager and the configuration of the unit controller.</td>
<td>○ Log in as a commission user and navigate to the Settings/System Configuration/Alarm Configuration page. Verify that all settings are correct.</td>
</tr>
<tr>
<td>No alarms are being sent to my phone or email.</td>
<td>This is probably a setup problem.</td>
<td>○ Log in as a commission user and navigate to the Settings/System Configuration/Alarm Configuration page. Verify that all settings are correct.</td>
</tr>
<tr>
<td>Certain screens or data aren’t accessible on the System Manager.</td>
<td>Lower access levels limit the screens and data that are displayed on the System Manager.</td>
<td>○ Login in at a higher access level.</td>
</tr>
<tr>
<td>When adding a user, the desired User Level is not available.</td>
<td>When adding a user, the User Levels available are equal to or lower than the User Level currently logged in as.</td>
<td>○ Assign the new user a different user level. Log in at a higher level user and change the user level.</td>
</tr>
<tr>
<td>The points in the Trend Information page are not available in the object drop down list.</td>
<td>The object is either not available for this unit, has not yet been read or is not setup to be trended.</td>
<td>○ Verify the point you are looking for is a valid point for this unit. ○ On the device list page select the Update Device Config button (the Wrench and Gear icon) in the Action column. ○ Locate the desired object and select Action (pencil icon). ○ Verify the Trend checkbox is checked. ○ Verify the Refresh Interval for reading the object is correct.</td>
</tr>
<tr>
<td>The application works fine when accessing it locally or from within a local network, but seems incomplete or broken when accessed from outside the network.</td>
<td>The local IT firewall may be causing an issue. The application is HTML and can be viewed in all browsers, but was designed in Google Chrome.</td>
<td>○ Consult with local IT staff on troubleshooting firewall rules. This may be commonly caused by an Internet facing firewall rule that denies an ampersand ‘&amp;’ within URL headers, though there may be other issues. ○ Open the application in Google Chrome.</td>
</tr>
<tr>
<td>The application has a 404 error.</td>
<td>The server may be disabled.</td>
<td>○ Start the Intelligent Systems server.</td>
</tr>
</tbody>
</table>
Figure 31: VAV Troubleshooting Decision Tree

**Issue**

- Air volume reading of 0 cfm
- Electric heat won’t enable

**Cause**

- Is there air passing through?
- Is there sufficient airflow going through the box?

**Troubleshoot**

- Are intake tubes connected properly and in the right positions?
- Minimum 70 cfm per kW to enable heating
- Check setpoints
- Check heating and cooling loopouts
- Check mode
- Check switch deadband
- Check switch time
- Check application number

**Solution**

- Ensure there isn’t air leakage coming from the tubing. The blue stripe tubing is the HIGH pressure side and is what the air hits first. The red striped tubing is the LOW pressure side and is the farthest away from the airflow.
- Install the airflow sensor properly.
- Reverse direction of damper by manually rotating the damper, or through the Intelligent Systems.
- Air flow must be increased to satisfy mechanical safety switches.
- Adjust setpoints if necessary
- The loopouts show the demand for heating/cooling. The heating loopout must be above zero to enable heating.
- Ensure the VAV is in heat mode
- The switch deadband default is 1°F, the control temp must be less than the control setpoint by at least the value of the switch deadband to go into heating
- Default is 10 minutes, if the appropriate conditions are met for the length of time set in the switch time the VAV will switch from cooling to heating

**Issue**

- Is the airflow sensor installed properly?
- Is the damper closed?

**Troubleshoot**

- Check switch time

**Solution**

- Install the airflow sensor properly.
- Reverse direction of damper by manually rotating the damper, or through the Intelligent Systems.
System Manager
Equipment Warranty Registration Form

To comply with the terms of Daikin Applied Warranty, complete and return this form within 10 days to Daikin Applied at MISystem@daikinapplied.com.

Check, test, and start procedure for Intelligent Systems™.

GENERAL INFORMATION

Job Name: ____________________________________________________________ SOI No.: __________________________

Installation address: ______________________________________________________________________________________

City: __________________________ State: __________________________

Purchasing contractor: __________________________________________

City: __________________________ State: __________________________

UNIT INFORMATION

Model Number: __________________________ Serial Number: __________________________

BRING TO SITE (OPTIONAL)

☐ OM 1254
☐ IM 1253
☐ Laptop
☐ USB storage device
☐ USB Keyboard
☐ USB mouse
☐ WCIS Cable (p/n 250804701)
☐ Control Screwdriver
System Manager Equipment Warranty Registration Form (continued)

Select Yes, No or Complete.

I. Initial Check

A. Is there any shipping damage to System Manager? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
B. Is the System Manager installed and powered with 120VAC? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
C. Is each Rooftop or Self Contained unit installed and started up per their Installation Manual? . . . Yes □ No □
D. Is duct and building pressure tubing run to pressure transducers per unit Installation Manual? . . . Yes □ No □

<table>
<thead>
<tr>
<th>Unit Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPS/RDT/RFS/RCS 015C-105C IM 926</td>
</tr>
<tr>
<td>RPS/RDT/RFS/RCS 050D-140D IM 893</td>
</tr>
<tr>
<td>SWP Self-Contained 018-105 IM 937</td>
</tr>
<tr>
<td>RoofPak® RAH/RDS IM 987</td>
</tr>
<tr>
<td>Maverick® II Rooftop 62-75 ton IM 991</td>
</tr>
<tr>
<td>Maverick® II Rooftop 15-50 ton IM 1058</td>
</tr>
<tr>
<td>Rebel® IM 1125</td>
</tr>
<tr>
<td>RPS/RDT/RFS/RCS 015C-105C IM 926</td>
</tr>
<tr>
<td>RPS/RDT/RFS/RCS 050D-140D IM 893</td>
</tr>
<tr>
<td>SWP Self-Contained 018-105 IM 937</td>
</tr>
<tr>
<td>RoofPak® RAH/RDS IM 987</td>
</tr>
<tr>
<td>Maverick® II Rooftop 62-75 ton IM 991</td>
</tr>
<tr>
<td>Maverick® II Rooftop 15-50 ton IM 1058</td>
</tr>
<tr>
<td>Rebel® IM 1125</td>
</tr>
</tbody>
</table>

E. Is each WSHP unit installed and started up per their Installation Manual? . . . Yes □ No □

<table>
<thead>
<tr>
<th>Unit Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartSource® GSH/GSV IM 1139</td>
</tr>
<tr>
<td>SmartSource® GTH/GTV IM 1140</td>
</tr>
<tr>
<td>Infinity® CCH/CCW ½-6 ton IM 1049</td>
</tr>
<tr>
<td>Infinity® CCH/CCW 6-10 ton IM 1060</td>
</tr>
<tr>
<td>Infinity® LVC/LVW IM 1059</td>
</tr>
<tr>
<td>Infinity® VFC/VFW IM 930</td>
</tr>
<tr>
<td>Vertical Stack VHC/VHF IM 986</td>
</tr>
</tbody>
</table>

F. Is each Fan Coil Unit with MicroTech III controls installed and started up per their Installation Manual? . . Yes □ No □

<table>
<thead>
<tr>
<th>Unit Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinLine Horizontal Fan Coils IM 1152</td>
</tr>
</tbody>
</table>

G. Is the LWM unit installed and started per IOM 1150? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
H. Is the I/O Manager installed and started per IOM 1135? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
I. Is each VAV unit located as indicated on the building plans? . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
J. Is each VAV unit installed per IM 1063? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
K. Are the communication wires to each VAV box, air handler, and System Manager installed per the BACnet MS/TP wiring specification? . Yes □ No □
1. 22 AWG, shielded twisted pair? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
2. 120 ohm terminal resistors on each end? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
3. Polarity (+/-) verified at each device? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
4. Shield grounded at one location only: Location of shield ground:________ . . . . . . . . . . . . . . . . . Yes □ No □
L. Are all space sensors wired to VAV controllers with cat3 cable provided? . . . . . . . . . . . . . . . . . Yes □ No □
M. Optional: Is the System Manager PC installed on a network for remote access? . . . . . . . . . . . . Yes □ No □
1. Panel static IP address:____________________________ . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □ No □
N. Is the electrical wiring completed and power applied to all devices and System Manager? . . . . Yes □ No □
O. Is control wiring run from VAV Box controller to appropriate field controls per wiring diagrams provided? . Yes □ No □
Select Yes, No or Complete.

*NOTE: It is the building owner’s responsibility to properly protect the System Manager PC that is connected to the internet with the appropriate protection software as required (firewall, anti-virus, anti-spyware, etc).

Exceptions to the initial check:

____________________________________________________________________________________________________
____________________________________________________________________________________________________
____________________________________________________________________________________________________
____________________________________________________________________________________________________

II. Start-up

A. Do you have IM 1253 and OM 1254 for System Manager? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □  No □

B. Apply power to the System Manager and allow the system to boot up . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete □

C. Perform calibrate procedure per IM or OM. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete □

D. Set time/date on system panel per IM or OM . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete □

E. Reboot System Manager via the “Restart” button on the home screen . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete □

F. Launch Google Chrome browser if it did not start automatically . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete □

G. Allow several minutes (up to 30) for the panel to discover all units connected to the MS/TP trunk. During this time “Discovery Mode Active” will appear at the top of the screen . . . . . . . . . . . . Complete □

H. Were all devices discovered successfully? . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Yes □  No □

I. Note all units not discovered in the exceptions portion following . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete □

J. Resolve any discrepancies in communication by verifying power and communication wiring to devices . . Complete □

Exceptions to the startup:

____________________________________________________________________________________________________
____________________________________________________________________________________________________
____________________________________________________________________________________________________
____________________________________________________________________________________________________
System Manager Equipment Warranty Registration Form (continued)

Select Yes, No or Complete.

III. System Configuration

Once all units are running and there are no communications errors, ATS Auto Commissioning should be run to confirm all units are under the control of the System Manager and to resolve any discrepancies between the factory configuration and actual build. Run the ATS Auto Commissioning by following the instructions in the System Manager Operators Manual (OM 1254) or System Manager Installation Manual (IM 1253).

A. Run ATS Auto Commissioning for WSHP and Fan Coil Units. Yes □ No □

B. Were the WSHP and FCU units found successfully? Yes □ No □

C. Were the WSHP and FCU units assigned successfully? Yes □ No □

D. Save the Current System. Yes □ No □

E. Export the new system configuration and save to a remote storage device. Yes □ No □

F. Email the local configuration file to MISystem@daikinapplied.com Yes □ No □

Notes from System Configuration:
____________________________________________________________________________________________________
____________________________________________________________________________________________________
____________________________________________________________________________________________________
____________________________________________________________________________________________________

Thank you for completing this form. Please sign and date below.

Performed By: __________________________ Title: __________________________

Signature __________________________ Startup date: __________________________

Return completed form by mail to:
Daikin Warranty Department, 13600 Industrial Park Boulevard, Minneapolis, MN 55441

or by email to: MISystem@daikinapplied.com

Please fill out the Daikin Applied “Quality Assurance Survey Report” and list any additional comments that could affect the operation of this unit; e.g., shipping damage, failed components, adverse installation applications, etc. If additional comment space is needed, write the comment(s) on a separate sheet, attach it to the Survey Report and return it to the Warranty Department of Daikin Applied with the completed Equipment Warranty Registration form.
Quality Assurance Survey Report

To whom it may concern:
Please review the items below upon receiving and installing our product. Select N/A on any item that does not apply to the product.

Job Name: ___________________________________________ Daikin Applied S.O. No. _____________

Installation address: ___________________________________________

City: ___________________________ State: ___________________________

Purchasing contractor: ___________________________________________

City: ___________________________ State: ___________________________

Name of person doing start-up (print): ___________________________________________

Company name: ___________________________________________

Address: ___________________________________________

City/State/Zip: ___________________________________________

Unit model number: ___________________________ Unit serial number: ___________________________

1. Is there any shipping damage visible? ___________________________ Yes No N/A

   Location on unit ___________________________________________

2. How would you rate the overall appearance of the product; i.e., paint, fin damage, etc.? ___________________________

   Excellent Good Fair Poor

3. Did all sections of the unit fit together properly? ___________________________ Yes No N/A

   Location on unit ___________________________________________

4. Did the cabinet have any air leakage? ___________________________ Yes No N/A

   Location on unit ___________________________________________

5. Were there any refrigerant leaks? ___________________________ Yes No N/A

   From where did it occur? Shipping Workmanship Design

6. Does the refrigerant piping have excessive vibration? ___________________________ Yes No N/A

   Location on unit ___________________________________________

7. Did all of the electrical controls function at start-up? ___________________________ Yes No N/A

   Comments ___________________________________________

8. Did the labeling and schematics provide adequate information? ___________________________ Yes No N/A

9. How would you rate the serviceability of the product? ___________________________

   Excellent Good Fair Poor

10. How would you rate the overall quality of the product? ___________________________

   Excellent Good Fair Poor

11. How does the quality of Daikin Applied products rank in relation to competitive products? ___________________________

   Excellent Good Fair Poor

   Comments ___________________________________________

Please list any additional comments which could affect the operation of this unit; i.e., shipping damage, failed components, adverse installation applications, etc. If additional comment space is needed, write the comment(s) on a separate sheet, attach the sheet to this completed Quality Assurance Survey Report, and return it to the Warranty Department with the completed preceding "Equipment Warranty Registration Form".

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Daikin Applied Training and Development

Now that you have made an investment in modern, efficient Daikin equipment, its care should be a high priority. For training information on all Daikin HVAC products, please visit us at www.DaikinApplied.com and click on Training, or call 540-248-9646 and ask for the Training Department.

Warranty

All Daikin equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied representative for warranty details. To find your local Daikin Applied representative, go to www.DaikinApplied.com.

Aftermarket Services

To find your local parts office, visit www.DaikinApplied.com or call 800-37PARTS (800-377-2787). To find your local service office, visit www.DaikinApplied.com or call 800-432-1342.

This document contains the most current product information as of this printing. For the most up-to-date product information, please go to www.DaikinApplied.com.

Products manufactured in an ISO Certified Facility.