

Reference Guide for the M-NET Connection

Please read and save these instructions for future reference. Read carefully before attempting to operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage!

M-NET Cable Specification	
Type Of cable	Shielded wire (2-conductors) CL3P/CMP, UL, RoHS
Conductor Gauge	16AWG
Cable diameter	0.189 - 0.25 inches
Remarks	Max cable length: 200 m (656 ft), Maximum length of transmission lines for centralized control and indoor/outdoor transmission lines (Maximum length via indoor units): 500 m (1640 ft). The maximum length of the wiring between power supply unit for transmission lines (on the transmission lines for centralized control) and each outdoor unit and system controller : 200 m (656 ft)

WARNING

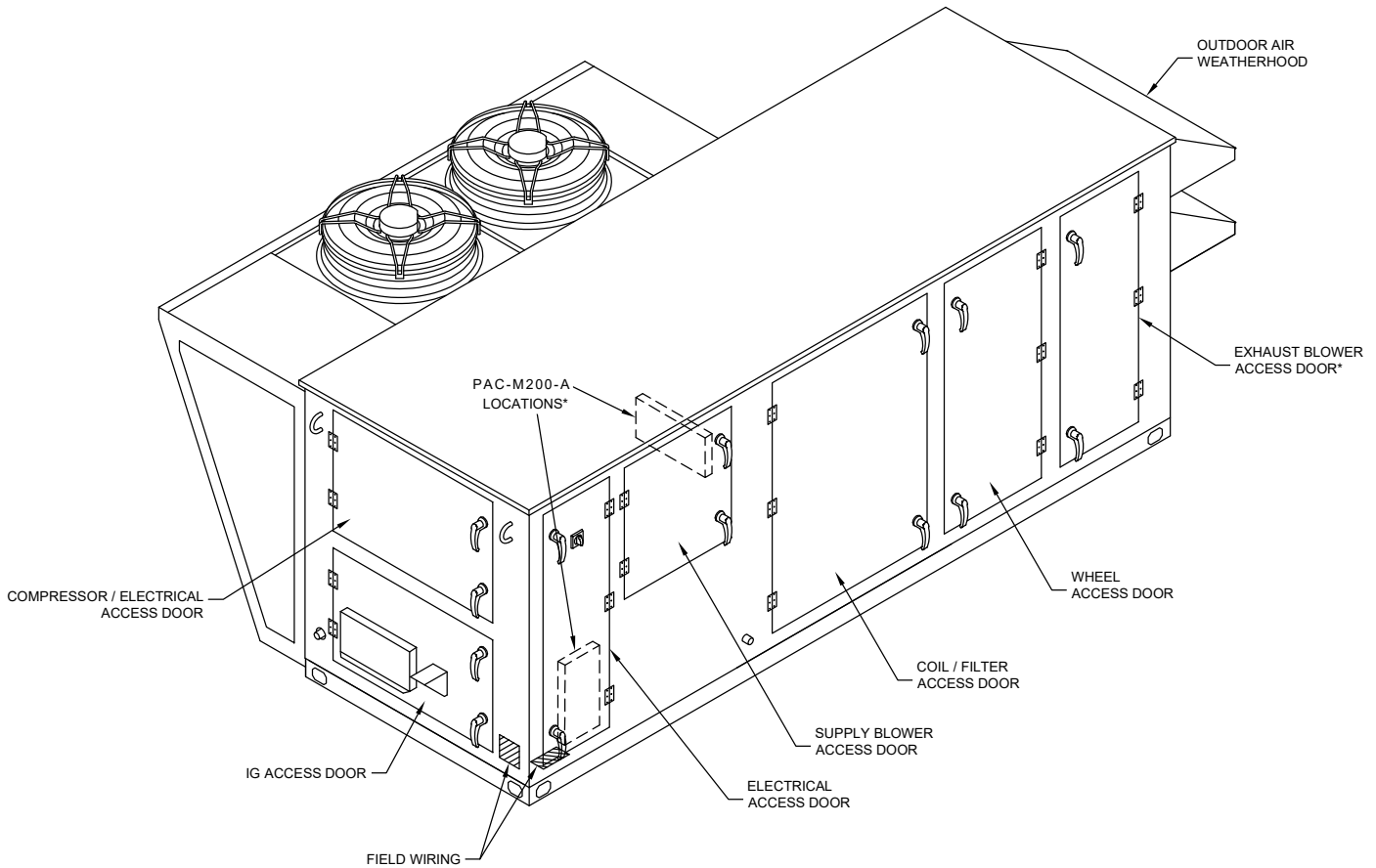
Power must be shut off to the PremiSys and the M-NET power source before any work is performed. All electric work must be performed according to local regulation. Improper electrical work may result in electric shock or fire.

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Packaged DX M-NET Wiring

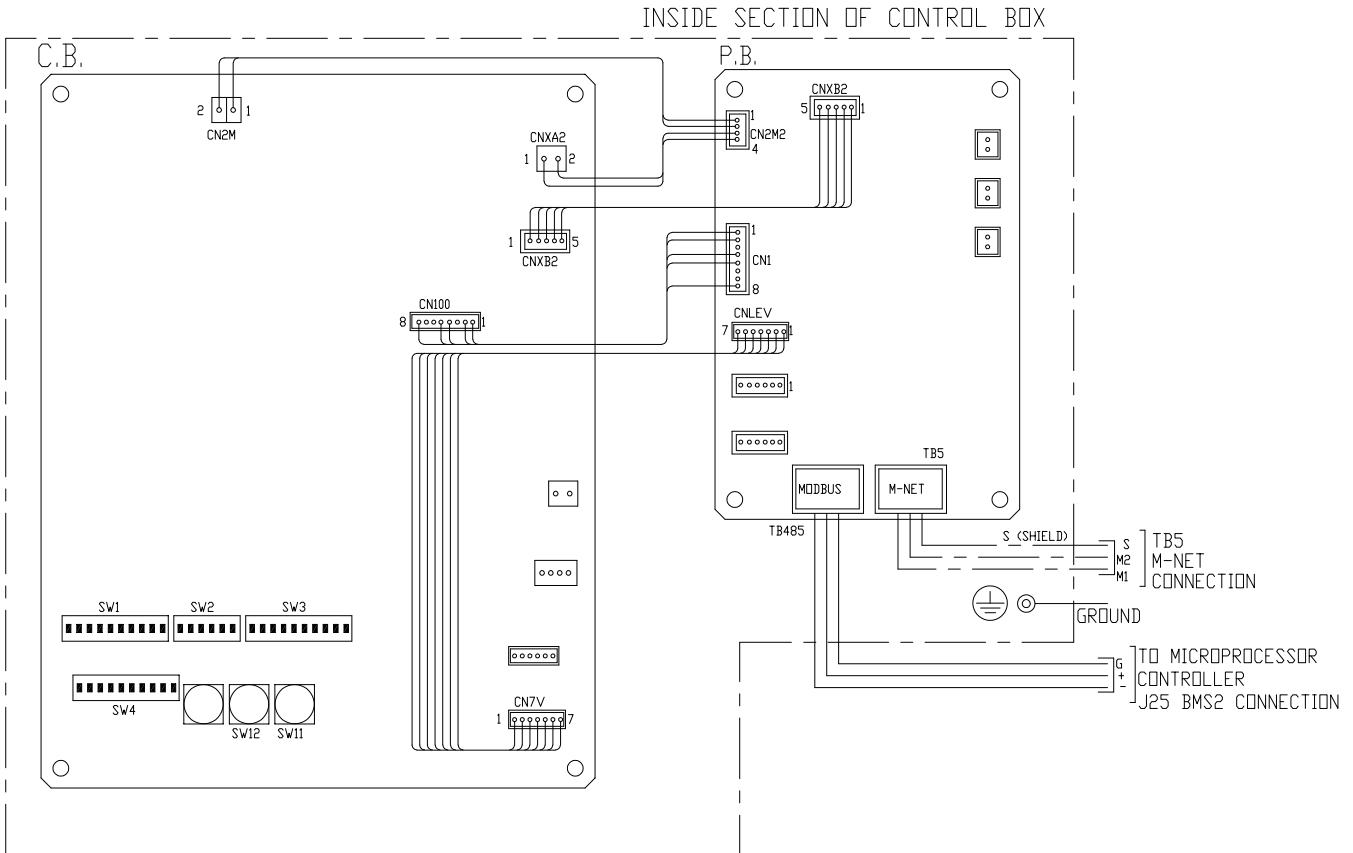
M-NET Wiring



M-NET Wiring (see Figure 1)

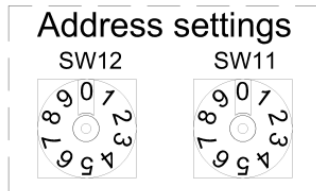
- 1) Open the main electrical and supply blower access doors. Locate the PAC-M200A Interface Module.
- 2) Route the M-NET cable through the low voltage access and into the main electrical access compartment.
- 3) There will be an opening in the right side of the electrical compartment. Route the M-NET cable into the supply blower compartment through this opening.
- 4) Remove the PAC-M100-A Interface cover. Loosen the available cable gland nut by hand. Route the M-NET cable through the cable gland and secured through wire strap inside the enclosure before connecting to terminal block.
- 5) Secure wires to TB 5 terminal strip as shown in the wiring diagram in figure 2.
- 6) Hand-tighten the cable gland around the M-NET cable.

Wiring Diagram



NOTE 1: Symbols used in wiring diagram above are,
 ⊙ : Terminal
 — (Heavy dotted line): Field wiring
 2. Use copper supply wires.

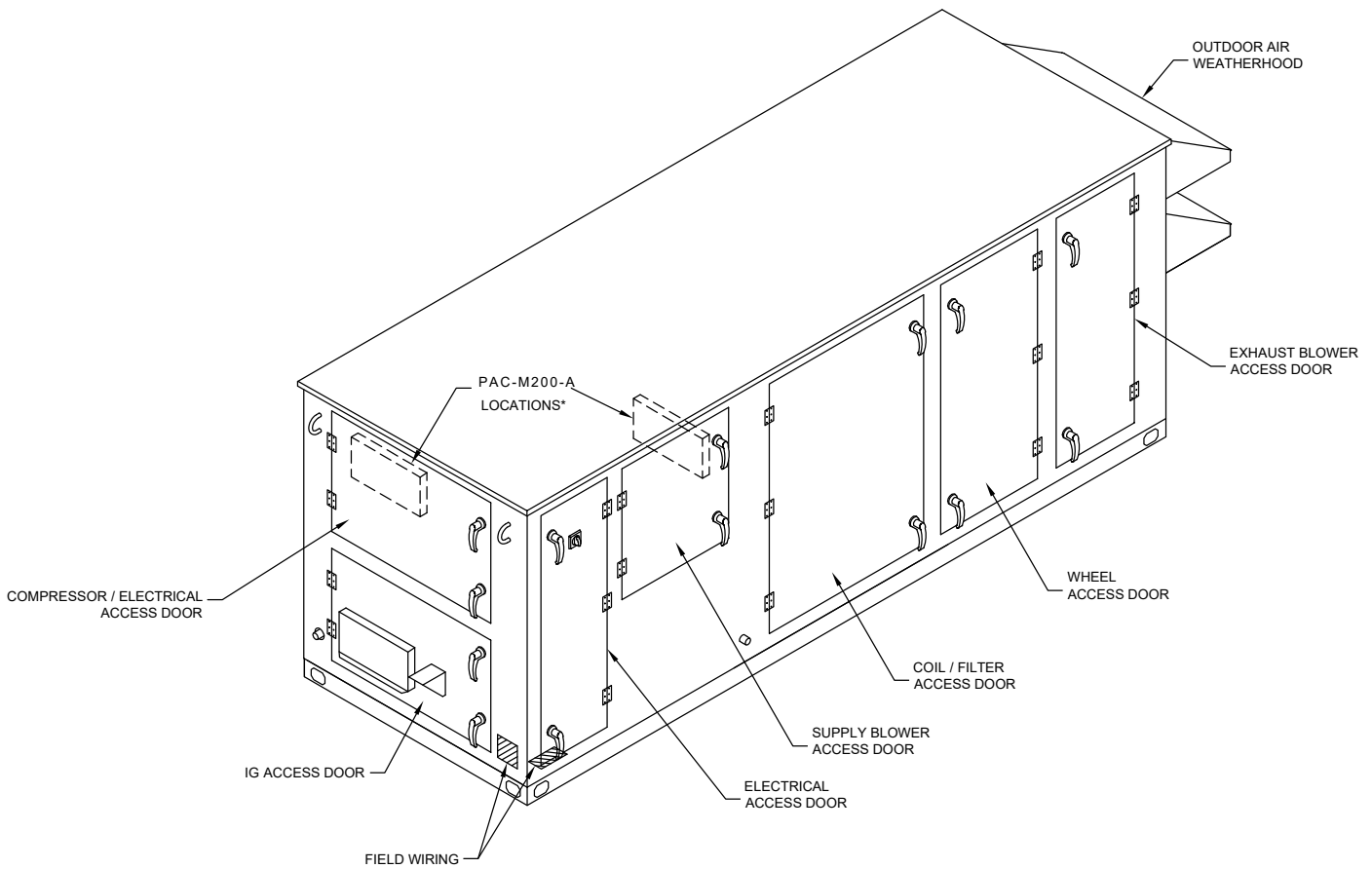
M-NET Address Setting



There are two rotary switch setting available: setting addresses 1 to 9 and over 10. Branch setting switch, SW14, will not be used to address this unit. How to set address: If address is “3”, leave SW12 (for over 10) at “0”, and set SW11 (for 1 to 9) to “3”. The rotary switches are all set to “0” when shipped from the factory.

Indoor unit M-NET addresses vary depending on design. Below are some sample systems.

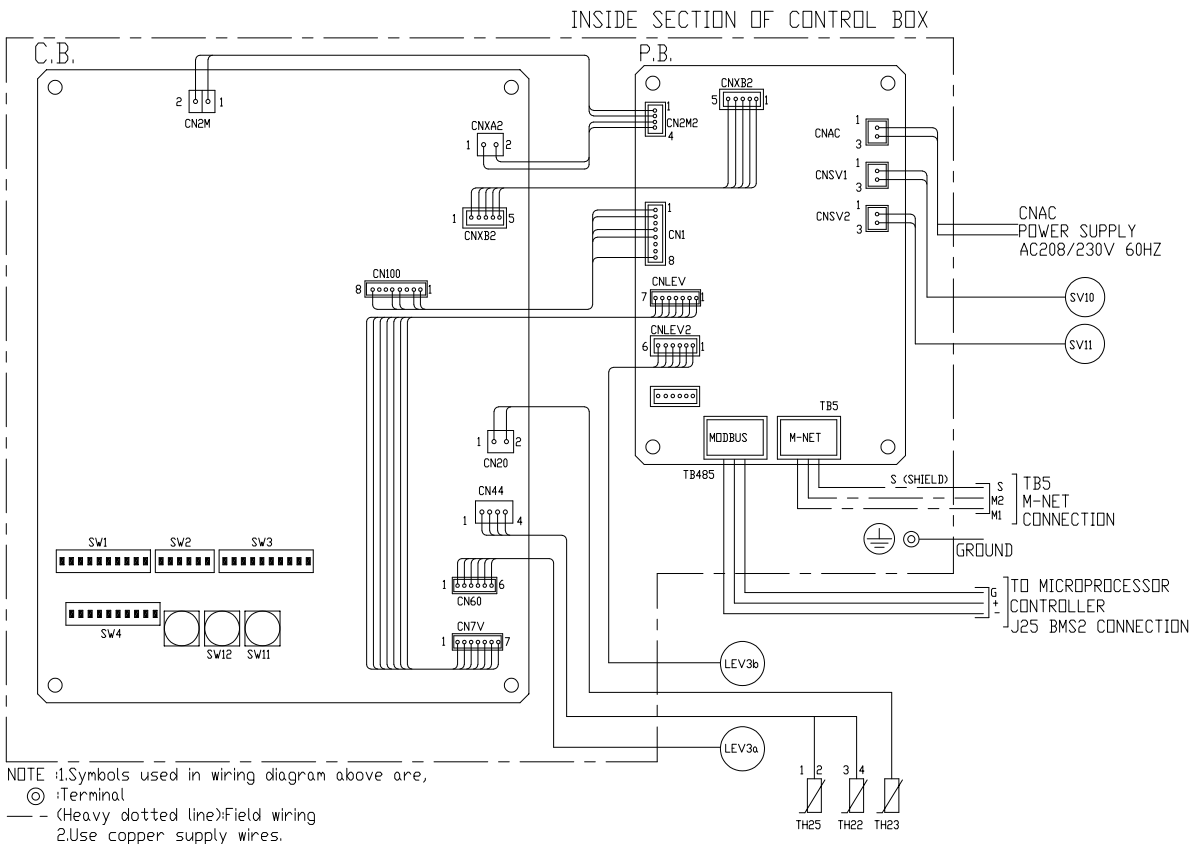
M-NET Wiring



Connecting Interface

- 1) Shut off all power to the DOAS and connected outdoor unit.
- 2) Open Compressor and Supply Fan Access doors. Locate the PAC-M200A Interface Module.
- 3) Remove the cover on the PAC-M200-A Interface Module.
- 4) Route M-NET wires through cable gland into box.
- 5) Connect M-NET wires to terminal TB5 as shown in Figure 3-2.
- 6) Tighten all cable glands to secure wires.
- 7) Set DIP switches and address dials per system design requirements.
- 8) Replace cover on PAC-M200-A Interface Module.

Wiring Diagram



M-NET Address Setting



- Two (2) types of rotary switch setting:
- Setting addresses 1 to 9 and over 10, and
 - Setting branch numbers.

NOTE: Do not use branch setting switch for this unit.

Examples how to set addresses:

- If address is "3", leave SW12 (for over 10) at "0", and set SW11 (for 1 to 9) to "3".

The rotary switches are all set to "0" when shipped from the factory. Use these switches to set unit addresses and branch numbers as well.

NOTE: Indoor unit M-NET addresses vary depending on design. Refer to sample systems, page 6.

- If address is "3", leave SW12 (for over 10) at "0", and set SW11 (for 1 to 9) to "3".

The rotary switches are all set to "0" when shipped from the factory. Use these switches to set unit addresses and branch numbers as well.

CITY MULTI® System and PremiSys®

For proper operation of PremiSys units, follow the address rules and see samples below:

The whole system address determines the indoor unit associated with PremiSys units. The PremiSys unit looks for its own address until it finds another PremiSys unit.

If the indoor unit 01 through 04 receives outside air from the PremiSys unit, the PremiSys unit address is 05.

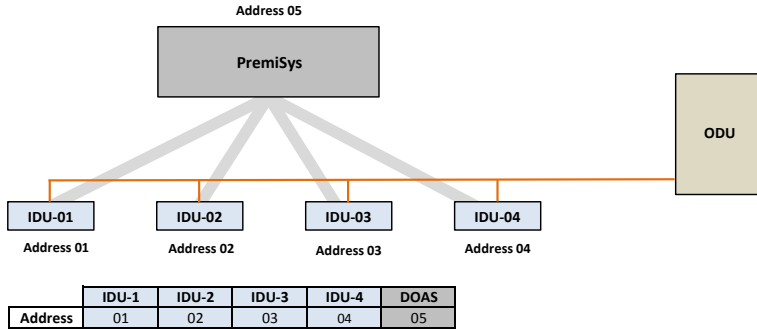
For system with one or more PremiSys units:

PremiSys unit 1 address 05 supplies outside air to indoor unit 01-04.

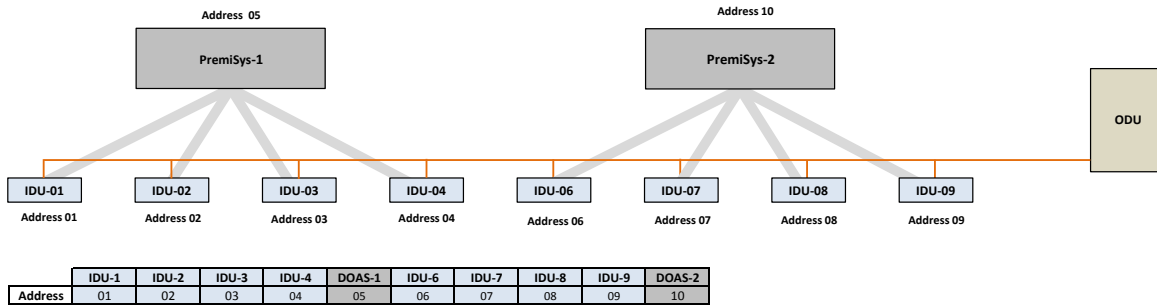
PremiSys unit 2 address 10 supplies outside air to indoor units 06-09. PremiSys unit 2 will look at addresses 09, 08, 07, and stop at 06 since 05 is a PremiSys unit.

A system can have indoor units not receiving outdoor air from a PremiSys unit with address 06.

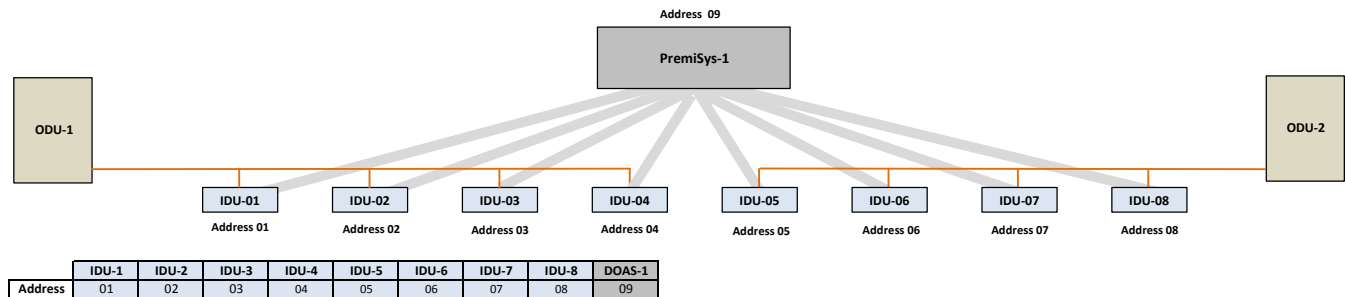
One CITY MULTI® System and one PremiSys® unit



One CITY MULTI® System and two PremiSys® units



Two CITY MULTI® Systems and one PremiSys® unit



Outdoor Reset Function

Using Dip switch SW3 and SW4 to adjust Outdoor Reset Function Located in the PAC-M100-A Interface Module

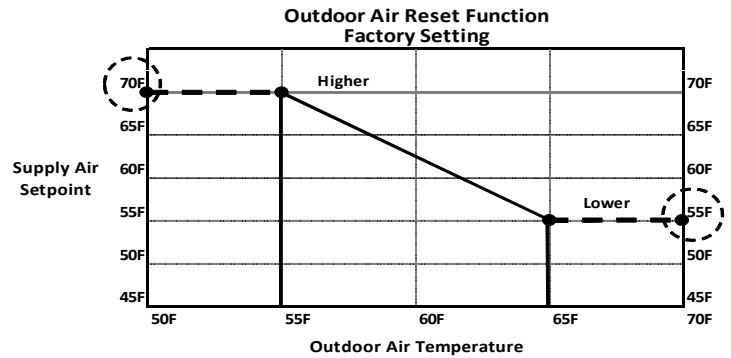
Outdoor air reset function temperature Range
 Outdoor Ambient 50° F - 75° F
 Supply Air Setpoint 50° F - 75° F

Switch Position

OFF
 ON

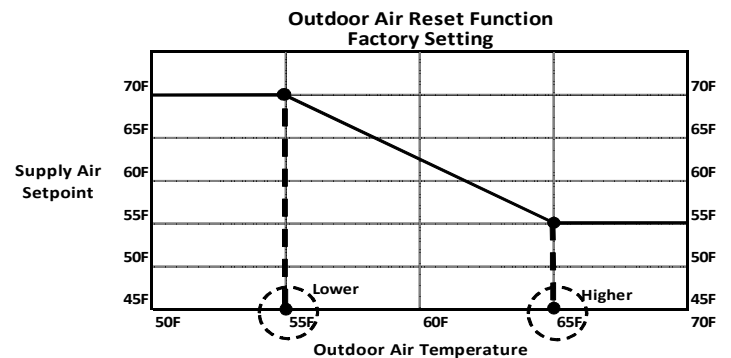
SW4 Dip Switch Settings
Supply air Setpoint

SW4 -					SW4 -						
1	2	3	4	5	Higher Setpoint	6	7	8	9	10	Lower Setpoint
					70F Fac. Setting						55F Fac. Setting
					50						50
					51						51
					52						52
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					75						75



SW3 Dip Switch Settings
Outdoor Air Temperature

SW3 -					SW3 -						
1	2	3	4	5	Higher Setpoint	6	7	8	9	10	Lower Setpoint
					65F Fac. Setting						55F Fac. Setting
					50						50
					51						51
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					75						75



Control Methods

Condition List

ON OFF

Mode Cool Heat **Auto**

Set Temp.

67 °F

Cannot change setting. Will display temperature based on reset chart above

Prohibit Remote Controller Operation

ON/OFF Mode Set Temp. Filter Sign

Hold

ON OFF

Cancel OK

AUTO (Outdoor Reset) Control

System Supply Air will operate based on the Outdoor Reset Settings
Control method when the PremiSys is providing air into VFR Indoor Units

1. Leave the switches in factory default position on the interface control board
2. Set Microprocessor "Supply Temp Set Point" source to BMS
3. Set Microprocessor "ON/OFF" control source to BMS
4. On central controller, set the system group to ON
5. On central controller, set the system group mode to Auto

The Set Temp. cannot be changed while operating in the auto mode
 The current Set Temp. will be displayed
 See VRF and PremiSys Integrated Control Function below for description of Mode prohibit

Note:
Mode prohibit can be ON or OFF

Condition List

ON OFF

Mode **Cool** Heat Auto

Set Temp.

72 °F

Prohibit Remote Controller Operation

ON/OFF Mode Set Temp. Filter Sign

Hold

ON OFF

Cancel OK

Controlling System Supply Air Temp from the central controller

System Supply Air Temp will operate based on the setting in the central controller
Control method when air is directly into the space

1. Leave the Dip switches in factory setting position on the interface control board
2. Set Microprocessor "Supply Temp Set Point" source to BMS
3. Set Microprocessor "ON/OFF" control source to BMS
4. On central controller, turn the system group to ON
5. On central controller, turn the system group mode to Cool or Heat
 The Set Temp. for Cool or Heat mode will be the same
 The unit will determine the Mode automatically
6. Set the Set Temp. to a temperature that represents the average space Set Temp. served by this DOAS unit,, for example 72° F

Note:
Mode prohibit can be ON or OFF
See VRF and PremiSys Integrated Control Function below
Recommended OFF when providing outside air directly to the space

Condition List

ON OFF

Mode Cool Heat **Auto**

Set Temp.

72 °F

Prohibit Remote Controller Operation

ON/OFF Mode Set Temp. Filter Sign

Hold

ON OFF

Cancel OK

VRF and PremiSys Integrated Control Function

Override the Supply Air Temperature setpoint in the above control setups
Best used when the air is supplied to the VRF indoor units

When all indoor units are in Cool mode and thermal ON,
 the reheat will be turned off and 55° F air will be supplied

Under Prohibit Remote Controller Operation, use the MODE prohibit switch to activate and deactivate the this function
 Prohibit as shown, turns the function OFF
 Permit position turns the function ON
 Cool mode function only