

SITELINE®

BUILDING CONTROLS FOR DEDICATED EQUIPMENT



- MODELS: AGZ-D, AGZ-E, AMZ, AWS, AWV, WCC, WDC, WMC, WME GEN 1, WME-C, WSC, DAH, DFSA, DPS, DPSA, MPS, RAH, RDS, RDT, RFS, RPS, SWT, AND SWP

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Safety Information

This manual provides installation, operation, and maintenance information for Daikin Applied SiteLine Building Controls used with MicroTech, MicroTech II, MicroTech III, MicroTech 4, and MicroTech E controllers.

NOTE: Installation and maintenance are to be performed only by licensed, if required by local codes and regulations, or qualified personnel who are familiar with local codes and regulations and are experienced with this type of equipment.

DANGER

LOCKOUT/TAGOUT all power sources prior to service, pressurizing, depressurizing, or powering down the unit. Failure to follow this warning exactly can result in serious injury or death. Disconnect electrical power before servicing the equipment. More than one disconnect may be required to deenergize the unit. Be sure to read and understand the installation, operation, and service instructions within this manual.

WARNING

Electric shock hazard. Improper handling of this equipment can cause personal injury or equipment damage. This equipment must be properly grounded. Connections to and service of the MicroTech control panel must be performed only by personnel that are knowledgeable in the operation of the equipment being controlled.

CAUTION

Static sensitive components. A static discharge while handling electronic circuit boards can cause damage to the components. Discharge any static electrical charge by touching the bare metal inside the control panel before performing any service work. Never unplug any cables, circuit board terminal blocks, or power plugs while power is applied to the panel.

NOTICE

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense. Daikin disclaims any liability resulting from any interference or for the correction thereof.

Hazard Identification

The following symbols and labels are used throughout this manual to indicate immediate or potential hazards. It is the owner and installer's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of property damage and/or product damage, serious personal injury or death. Improper installation, operation and maintenance can void the warranty.

DANGER

Danger indicates a hazardous situation, which will result in death or serious injury if not avoided.

WARNING

Warning indicates a potentially hazardous situations, which can result in property damage, personal injury, or death if not avoided.

CAUTION

Caution indicates a potentially hazardous situations, which can result in minor injury or equipment damage if not avoided.

NOTICE

Notice indicates practices not related to physical injury.

NOTE: Indicates important details or clarifying statements for information presented.

Introduction

Limited Warranty

Consult your local Daikin Representative for warranty details. To find your local Daikin Representative, go to www.DaikinApplied.com.

Security Statement

Product security starts with robust practices in development of interconnected systems. Daikin uses globally recognized standards, regulations, and laws, such as ISA 62443, to provide a secure solution.

General Information

This manual contains the information needed to install and configure the SiteLine Building Controls for Dedicated Equipment on MicroTech II Water Cooled Chiller models: WCC, WDC, WMC (Magnitude®) and WSC; MicroTech III and MicroTech Air Cooled Chiller models: AGZ-D, AGZ-E, AWV, AWS, and AMZ (Pathfinder® and Trailblazer®); MicroTech E Water Cooled Chiller model: WME (Magnitude) Gen 1; MicroTech Water Cooled Chiller model: WME-C (Magnitude); Packaged Rooftop models: DPS (Rebel®), DFSA, DPSA (Rebel Applied™), MPS (Maverick® II), RPS, RPR, RDT, and RFS (RoofPak®), Outdoor Air Handling Unit models: DAH (Rebel), RDS and RAH (RoofPak); and Self-Contained Air Conditioning Systems models: SWP and SWT. For installation Technical Support, please contact the Daikin Applied Controls Support Group at (866) 462-7829.

NOTICE

MicroTech II Chiller models WCC, WDC, WMC and WSC must have the latest version of HMI Touchscreen hardware, which uses either an Axiomtek or a Siemens touchscreen PC. Update kits are available through Daikin Applied Service offices.

Product Description

SiteLine for Dedicated Equipment is a Software-as-a-Service (SaaS) solution offers facility and equipment management, monitoring, control, analysis, and decision-making via a secure, cloud-communicating machine-to-machine Hardware Gateway or Software Gateway, that captures, analyzes, and delivers building and equipment information and third party content (e.g., weather, utility, and CRM data), to a user device (smart phone, tablet, etc.) via wireless (cellular, Wi-Fi) or local area network (LAN) connection.

SiteLine for Dedicated Equipment offers real-time power monitoring of individual equipment. The user can view unit statuses, modes, temperatures, pressures and setpoints, and make adjustments to modes, schedules and temperature setpoints. Messages and alarms can be viewed, acknowledged and cleared.

User accounts are role-based, and user interaction, including setpoint changes and clearing of alarms, is logged for later reporting. System updates can be delivered automatically from the cloud. Built-in trending tools provide easy access to unit performance history. Hardware components for the Hardware Gateway solution consist of: one Machine-to-Machine (M2M) Gateway, one Energy Management Module (EMM), two Antennas, and three Current Transformers (CT's).

On only WME-C model chillers, data exchange is provided through technology embedded in the chiller's HMI PC. This solution, subsequently referred to as, "Software Gateway," within this document, requires only a cellular modem to provide cloud connectivity.

NOTICE

EMM and CT's are not included with the Software Gateway, Gateway-on-the-Go™, Retrofit kit without EMM, or kits ordered without power monitoring.

Components (Hardware Gateway)

NOTICE

For Software Gateway cellular modem installation instructions, see Software Gateway Installation Instructions on page 22.



CAUTION

Extreme temperature hazard. Can cause damage to system components. The SiteLine hardware is designed to operate in ambient temperatures from -22 to 158 degrees F (-30 to 70 degrees C) and in relative humidity up to 90% (non-condensing).

Machine-to-Machine (M2M) Gateway

The M2M Gateway is a factory tested and commissioned device, which analyzes and delivers data to the cloud via wireless (Wi-Fi, cellular) or local area network (LAN) connection. The M2M Gateway implements security, including data delivery via secure HTTPS using SSL, and whitelisting protection. In the case of a unit ordered with SiteLine Building Controls for Dedicated Equipment the M2M Gateway will be factory-installed in the unit control panel. For installation in retrofit applications, see document section titled, "Chiller Installation Instructions" on page 7 or "Rooftop Installation Instructions" on page 27. There have been two generations of the M2M Gateway. The Generation 1 Gateway had a black case and is no longer supported. All instructions in this manual refer to the Generation 2 Gateway, which has a silver case.

Antennas

The provided Cellular/Wi-Fi antennas must be field-mounted, regardless of whether the SiteLine solution was ordered factory-installed or for retrofit installation. For cellular installations, both of the provided antennas are connected to the Gateway. The antenna has a magnetic base, which is suitable for directly mounting to the unit control panel or case.

Energy Management Module (EMM)

(Not on Gateway-on-the-Go™, Retrofit kit without EMM, or Centrifugal Chiller kits)

The EMM is a factory tested and commissioned device, which monitors unit voltage, current, and power and transmits this data to the M2M Gateway for delivery to the cloud. In the case of a unit ordered with SiteLine, the EMM will be factory-installed in the unit control panel. For installation in retrofit applications, see document section titled, “[Installing Energy Management Module](#)” on page 11.

Current Transformers (CT's)

(Not on Gateway-on-the-Go™, Retrofit kit without EMM, or Centrifugal Chiller kits)

Three Current Transformers (CT's) are supplied with the SiteLine solution. At the time of order, the Maximum Current Ampacity (MCA) for the unit is specified, thereby driving selection of appropriately-sized CT's (See [Table 1](#) for CT sizing and specifications). In the case of a unit ordered with SiteLine, the CT's will be factory-installed within the unit control panel. For installation of the CT's in retrofit applications, see document section titled, “[Installing Split-Core CT's](#)” on page 19 and “[Connection of EMM to Line Voltage](#)” on page 19.

Table 1: CT Sizing and Specifications

| Key Specifications | 50A Model | 100A Model | 200A Model | 600A Model | 1000A Model | Rogowski Coil Model |
|--------------------|--|----------------------------------|----------------------------------|---------------------------------|----------------------------------|----------------------------------|
| Window Size | 0.4" (10 mm) | 1" (25 mm) | 1" (25 mm) | 1.25" (31.8 mm) | 2" (50.8 mm) | 5" |
| Current Range | 0.25 – 80A AC | 1 - 200A AC | 1 – 300A AC | 12 – 780A AC | 20 – 1300A AC | 10 – 1300A AC |
| Output | 333 mV at rated current | 333 mV at rated current | 333 mV at rated current | 333 mV at rated current | 333 mV at rated current | 333 mV at rated current |
| Ratio Error | <0.5% from 0.25 – 80A AC (typical) | <0.3% from 1 – 200A AC (typical) | <1.0% from 1 – 300A AC (typical) | <1% from 12 – 780A AC (typical) | <1% from 20 – 1300A AC (typical) | <1% from 10 – 1300A AC (typical) |
| Phase Error | <1.5° from 1 – 80A AC <2° from 0.25 – 1A AC | <0.5° from 1 – 200A AC | <0.5° from 1 – 300A AC | <2° from 12 – 780A AC | <2° from 20 – 1300A AC | <2° from 10 – 1300A AC |

Power Supply

A 12 or 24 VDC Power Supply is provided to power the M2M Gateway. In the case of a unit ordered with SiteLine the power supply will be factory-installed in the unit control panel. For installation of the power supply in retrofit applications, see document section titled, “[Installing Power Supply](#)” on page 11.

Fuse Block

(Not on Gateway-on-the-Go™, Retrofit kit without EMM, or Centrifugal Chiller kits)

A Fuse Block is provided to provide over-current protection for the Energy Management Module (EMM). Replaceable 5Amp fuses are pre-installed in the Fuse Block. In the case of a unit ordered with SiteLine, the Fuse Block will be factory-installed in the unit control panel. For installation of the Fuse Block in retrofit applications, see document section titled, “[Installing Fuse Block](#)” on page 11.

Installation

Unpacking Hardware Gateway

Material Shipped Loose:

Factory Installed SiteLine for Dedicated Equipment

If the SiteLine for Dedicated Equipment solution was ordered with the chiller, rooftop, or air handling unit, it shipped with the M2M Gateway, EMM, CT's, Powers Supply and Fuse Block already installed in the control enclosure, and associated interconnections already made. On chillers, the antenna bases are shipped inside the control enclosure, along with the antenna flags. The coaxial cable for the antenna bases must be routed to the control enclosure once the antenna bases are installed in the field. For rooftop units, the antenna bases are pre-installed. The antenna flags are shipped inside the unit control panel.

Retrofit SiteLine on Chillers

When the SiteLine solution is ordered for retrofit installation, the following components will ship as a kit:

- M2M Gateway
- Power Supply
- EMM (Not on Gateway-on-the-Go™, Retrofit kit without EMM, or Centrifugal Chiller kits)
- Fuse Block (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- Antenna flags and bases
- Three Current Transformers (CT's) (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- 3 ft. USB cable (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- 6 ft. Ethernet Patch cable
- 6" EMM Wiring Harness (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- 6 ft. EMM Wiring Harness (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- Hardware packet, including (1) patch plate with two watertight grommets pre-installed, (1) 0.875" grommet, (2) grounding harnesses, (1) 3-wire voltage harness, wire ties, wire tie hangers, (12) self-tapping sheet metal screws, (1) section of 600V-rated heat shrink tubing.

Upon receiving, verify that all components are present, and notify the supplier of any shortage.

Retrofit SiteLine for Dedicated Equipment on Rooftop, or Air Handling Unit

When the SiteLine solution is ordered for retrofit installation on a rooftop or air handling unit, the following components will ship loose:

- Two Mounting brackets. One bracket contains the M2M Gateway and power supply, the other contains the EMM and fuse block (with 5A Fuses pre-installed) (EMM and Fuse block not included for Gateway-on-the-Go or Retrofit kit without EMM kits)
- Antenna flags and bases
- Three Current Transformers (CT's) (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- 3 ft. USB cable (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- 6 ft. Ethernet Patch cable
- 6" EMM Wiring Harness (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- 6 ft. EMM Wiring Harness (Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)
- Hardware packet, including (1) patch plate with two watertight grommets pre-installed
- (2) 5/8" bushings
- (1) grounding harness
- (1) 3-wire voltage harness, wire ties, wire tie hangers
- (12) self-tapping sheet metal screws
- (1) section of 600V-rated heat shrink tubing.

Upon receiving, verify that all components are present, and notify the supplier of any shortage.

Necessary Tools:

- Corded (or powerful cordless) Drill
- 7/8" Step Drill Bit (suitable for drilling through metal enclosure)
- 1/4" Drill Bit for wire tie hangers (suitable for drilling through metal enclosure)
- 3/32" Drill Bit for pilot holes (suitable for drilling through metal enclosure)
- Multimeter
- Wire strippers
- SAE hex wrench set
- Precision screwdriver set
- #2 Phillips screwdriver
- #2 Flat screwdriver
- 5/16" Nut driver
- Hammer
- Pliers
- Small carpenter square (8" × 12")
- Level
- Clear silicone sealant

Retrofit Installation (Hardware Gateway)



DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.



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 panel.



WARNING

Sharp edges on sheet metal and fasteners can cause personal injury. This equipment must be installed, operated, and serviced only by an experienced installation company and fully trained personnel.



CAUTION

To avoid damaging wires or components, verify clearance in and around the point of penetration prior to any drilling

During any drilling, ensure that resultant metal shavings are not allowed to contact unit electronics.

Subsequent to any drilling, remove all resulting metal shavings from the control enclosure.

NOTICE

For Cellular and Wi-Fi installations, do not power the M2M Gateway until the antennas have been installed and connected.

NOTICE

The SiteLine retrofit installation should take approximately one hour for a skilled HVAC technician.

Chiller Installation Instructions

Installing M2M Gateway

Prior to installing any SiteLine components, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician begin the install.

The retrofit kit is shipped with the M2M Gateway shipped loose. The M2M Gateway must be installed inside the unit control panel. The installation location will vary depending on the unit model and size of the control enclosure (see [Figure 1](#) through [Figure 5](#) for correct component locations on AGZ and AWV models).

On AWS models, locate M2M Gateway as space allows within control enclosure. Ensure adequate separation is maintained between low voltage and high voltage components and sources of high electromagnetic interference. [Figure 6](#) and [Figure 7](#) provide the typical layout of AWS small and large enclosures.

On centrifugal chillers, only the M2M Gateway and Gateway power supply are used. Locate these components within the unit control enclosure as space allows, ensuring that adequate separation is maintained between low voltage and high voltage components and sources of high Electromagnetic interference. [Figure 8](#) shows a typical WMC control panel. [Figure 9](#) shows a typical WSC, WDC, or WCC control panel. [Figure 10](#) shows a typical WME Gen 1 control panel.

For AMZ chillers, field verify component locations, ensuring adequate separation is maintained between low voltage and high voltage components and sources of high Electromagnetic interference. [Figure 11](#) is provided for reference. Begin by positioning the M2M Gateway on the backplane of the enclosure and marking the screw holes. Next, drill pilot holes, through the marks just created, using a 7/64" drill bit.

Finally, attach the M2M Gateway to the backplane using (4) of the provided #6 sheet metal screws (5/16" head). The M2M ground conductor has ring terminals at both ends. Termination for the other end of this conductor is described in the section entitled, "[Connection of M2M Gateway and EMM to Ground](#)" on [page 20](#).

Installing M2M Gateway

Prior to installing any SiteLine components, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician begin the install. The retrofit kit is shipped with the M2M Gateway shipped loose.

The M2M Gateway must be installed inside the unit control panel. The installation location will vary depending on the unit model and size of the control enclosure (see [Figure 1](#) through [Figure 5](#) for correct component locations on AGZ and AWV models). On AWS models, locate M2M Gateway as space allows within control enclosure. Ensure adequate separation is maintained between low voltage and high voltage components and sources of high electromagnetic interference. [Figure 6](#) and [Figure 7](#) provide the typical layout of AWS small and large enclosures. On centrifugal chillers, only the M2M Gateway and Gateway power

supply are used. Locate these components within the unit control enclosure as space allows, ensuring that adequate separation is maintained between low voltage and high voltage components and sources of high Electromagnetic interference. [Figure 8](#) shows a typical retrofit install for WMC chillers. [Figure 9](#) shows a typical retrofit install for WSC, WDC, and WCC chillers. [Figure 10](#) shows a typical retrofit install for WME Gen 1 chillers. For AMZ chillers, field verify component locations, ensuring adequate separation is maintained between low voltage and high voltage components and sources of high Electromagnetic interference. [Figure 11](#) is provided for reference. Begin by positioning the M2M Gateway on the backplane of the enclosure and marking the screw holes. Next, drill pilot holes, through the marks just created, using a 7/64" drill bit. Finally, attach the M2M Gateway to the backplane using (4) of the provided #6 sheet metal screws (5/16" head). The M2M ground conductor has ring terminals at both ends. Termination for the other end of this conductor is described in the section entitled, "[Connection of M2M Gateway and EMM to Ground](#)" on page 20.

Figure 1: Component Locations – AGZ-D and E Small Panel

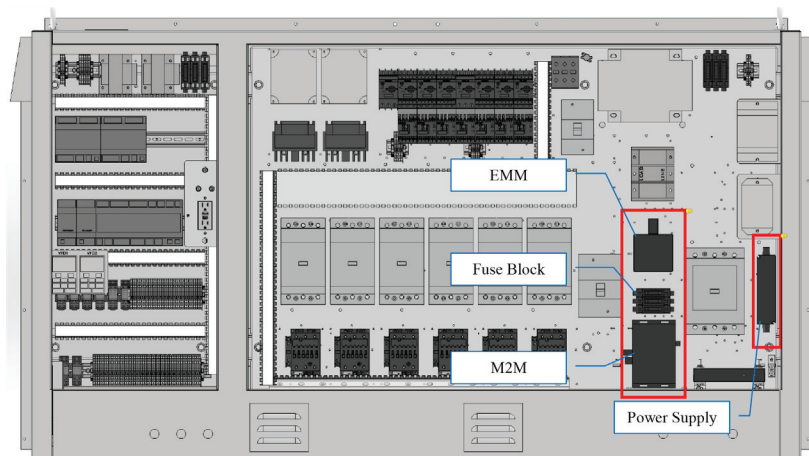


Figure 2: Component Locations – AGZ-D and E Medium Panel

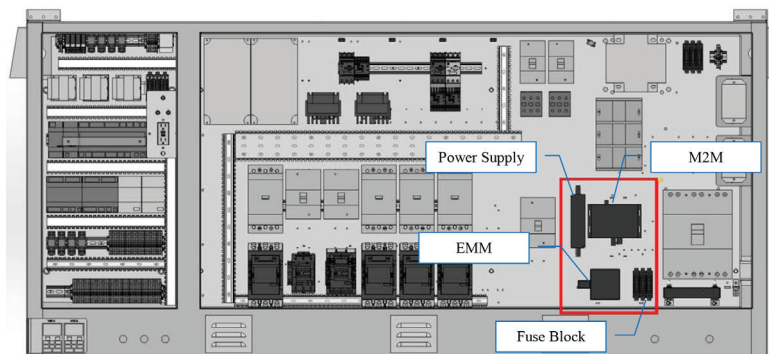


Figure 3: Component Locations – AGZ-D Large Panel

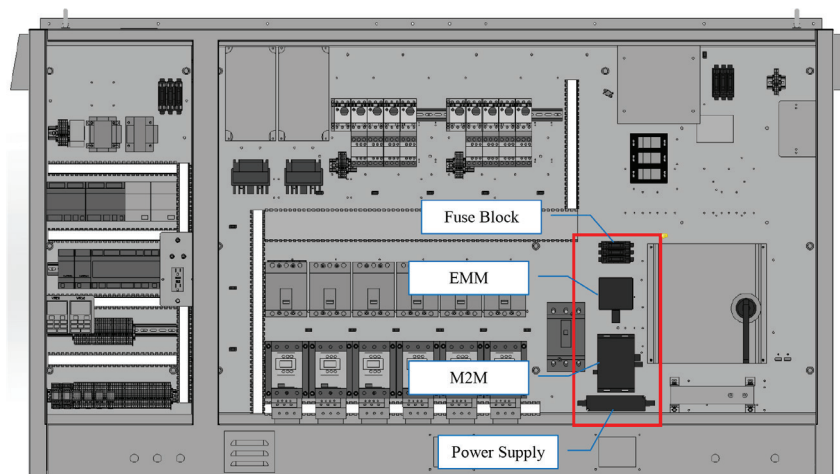


Figure 4: Component Locations – AGZ-E Large Panel

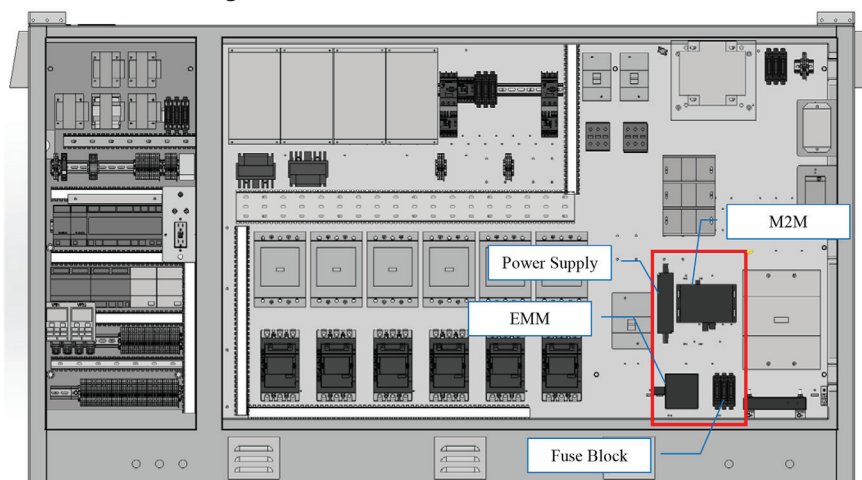


Figure 5: Component Locations – AWW Large Panel

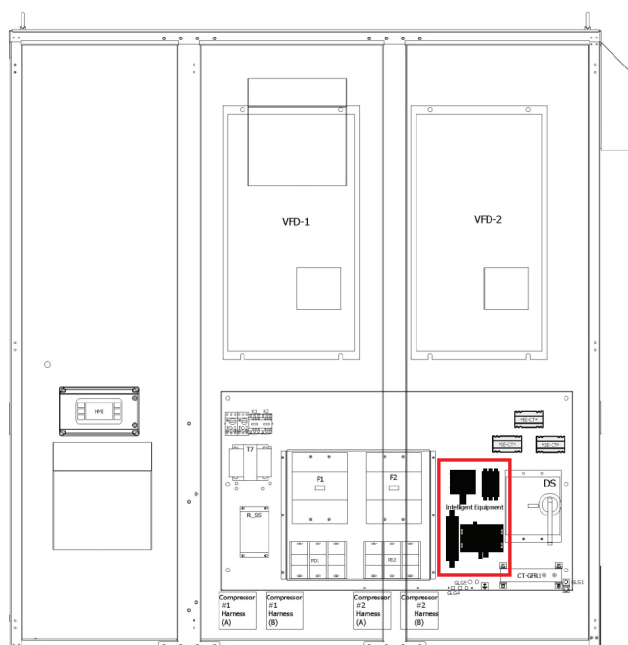


Figure 6: Component Locations – AWS Small Panel



Figure 7: Component Locations – AWS Large Panel

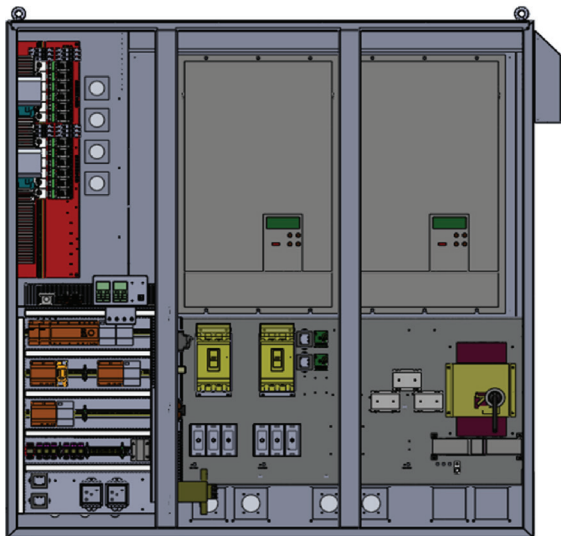


Figure 8: Component Locations – WMC Unit Control Enclosure

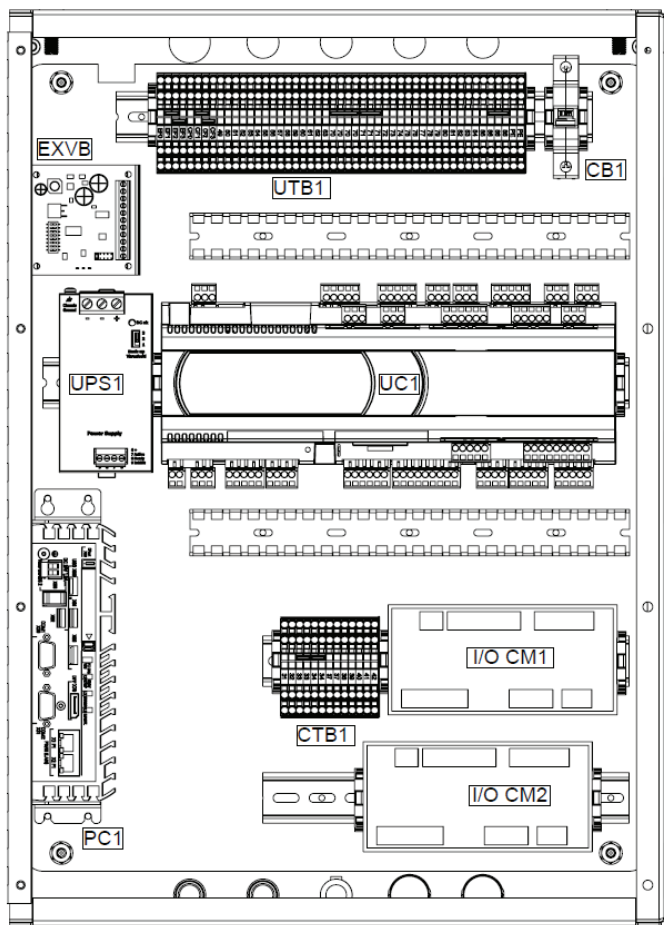


Figure 9: Component Locations - WSC, WDC, and WCC Unit Control Enclosure

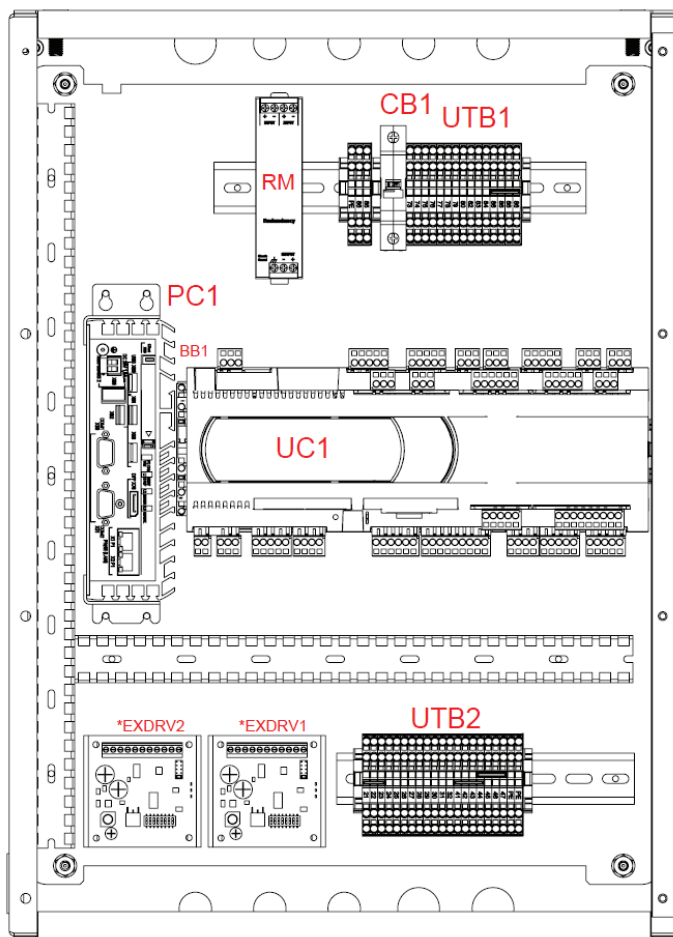


Figure 10: Typical WME Gen 1 Unit Control Enclosure Layout

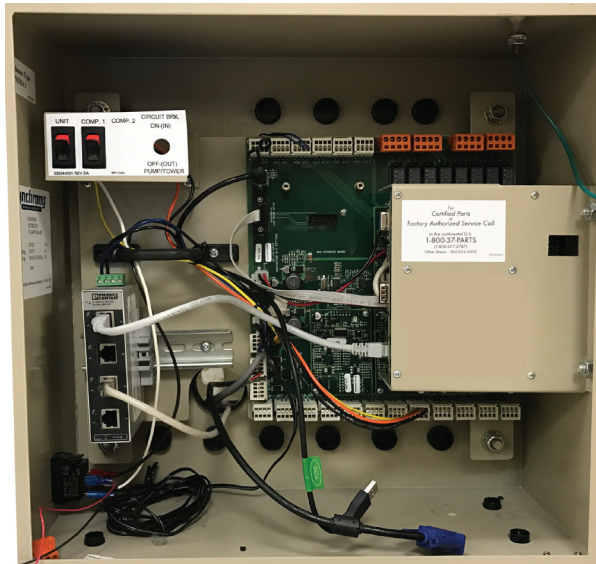
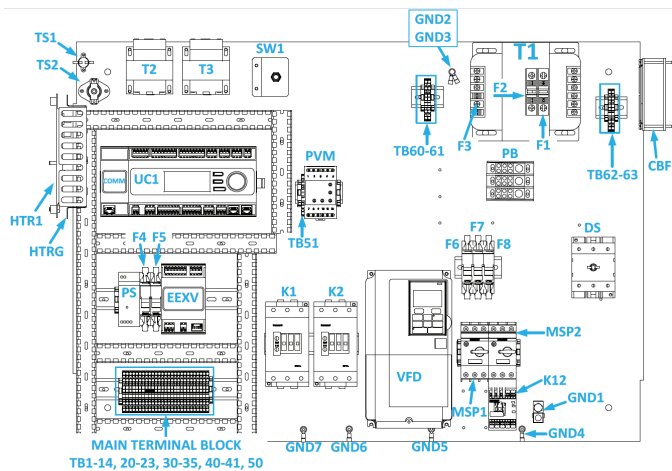


Figure 11: Typical AMZ Control Panel Layout



Installing Energy Management Module

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

Prior to installing any SiteLine components, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician begin the install. The retrofit kit is shipped with the EMM shipped loose. The EMM must be installed inside the unit control panel.

The installation location will vary depending on the unit model and size of the control enclosure (see Figure 1 through Figure 5 for correct component locations on AGZ and AWV models). On AWS models, locate SiteLine hardware as space allows within the control enclosure, ensuring adequate separation is maintained between low voltage and high voltage components. Figure 6 and Figure 7 provide a typical layout of AWS small and large enclosures. For AMZ chillers, field verify component locations, ensuring adequate separation is maintained between low voltage and high voltage components. Begin by positioning the EMM on the backplane of the enclosure and marking the screw holes. Next, drill pilot holes, through the marks just created, using a 7/64" drill bit. Finally, attach the EMM to the backplane using (4) of the provided #6 sheet metal screws (5/16" head).

Installing Power Supply

Prior to installing any SiteLine components, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician begin the install.

The retrofit kit is shipped with the power supply shipped loose.

The power supply must be installed inside the unit control panel. The installation location will vary depending on the unit model and size of the control enclosure (see Figure 1 through Figure 5 for correct component locations on AGZ and AWV models). On AWS models, locate SiteLine hardware as space allows within the control enclosure. Figure 6 and Figure 7 provide a typical layout of AWS small and large enclosures. On WMC, WSC, WDC, WCC and WME Gen 1 chillers, only the M2M Gateway and Gateway power supply are used. Locate these components within the unit control enclosure as space allows. Figure 8 shows a typical retrofit install for WMC chillers. Figure 9 shows a typical retrofit install for WSC, WDC, and WCC chillers. Figure 10 shows a typical retrofit install for WME Gen 1 chillers. Based on available space, the Gateway and power supply may need to be removed from the provided backplane. For AMZ chillers, field verify component locations (Figure 11 provided for reference).

Begin by positioning the power supply on the backplane of the enclosure and marking the screw holes. Next, drill pilot holes, through the marks just created, using a 7/64" drill bit. Finally, attach the power supply to the backplane using (2) of the provided #6 sheet metal screws (5/16" head).

Installing Fuse Block

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

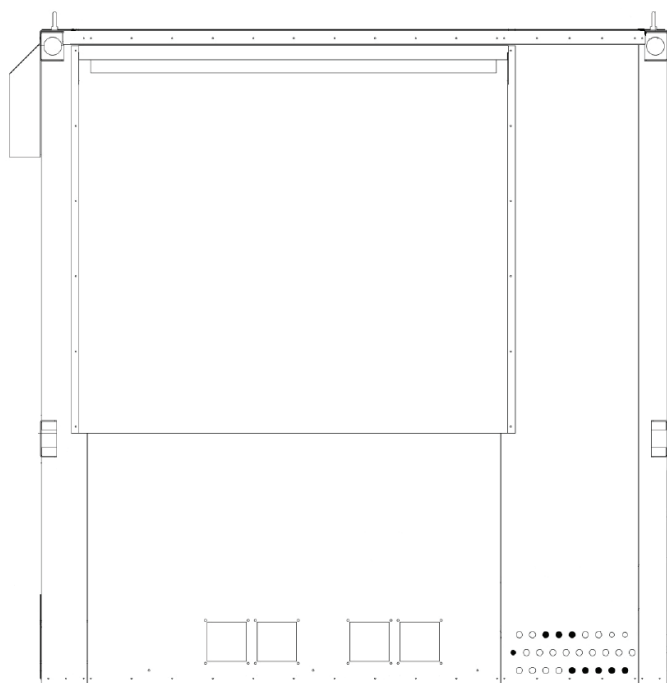
Prior to installing any SiteLine components, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician begin the install.

The retrofit kit is shipped with the fuse block shipped loose. The fuse block must be installed inside the unit control panel. The installation location will vary depending on the unit model and size of the control enclosure (see Figure 1 through Figure 5 for correct component locations on AGZ and AWV models). On AWS models, locate SiteLine hardware as space allows within the control enclosure. Figure 6 and Figure 7 provide a typical layout of AWS small and large enclosures. For AMZ chillers, field verify component locations (Figure 11 provided for reference).

Begin by removing the fuse covers and fuses from the fuse block (Figure 12). Prior to removal, make note of fuse orientation within the fuse block. Then, position the fuse block on the backplane of the enclosure and mark the screw holes. Next, drill pilot holes, through the marks just created, using a 1/8" drill bit.

Finally, attach the fuse block to the backplane using (2) of the provided #8 sheet metal screws (5/16" head). Fuses can be reinstalled, but the covers should remain off for subsequent install of necessary wiring.

Figure 16: AWW Large Enclosure Knockout Location (Rear of Enclosure)



**Figure 17: AWS Small Enclosure Knockout Location
(Rear of Enclosure)**

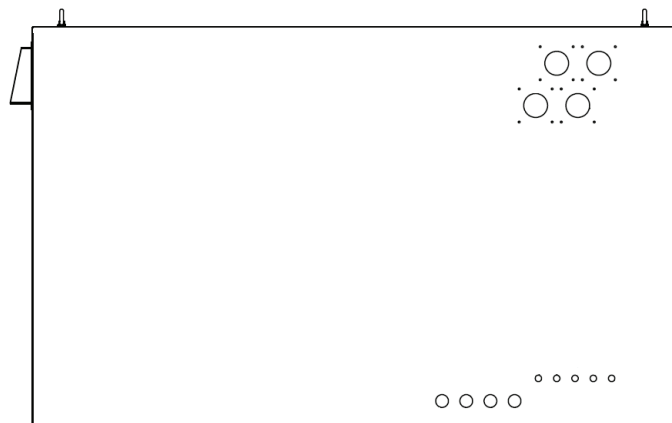


Figure 18: AWS Large Enclosure Knockout Location (Rear of Enclosure)

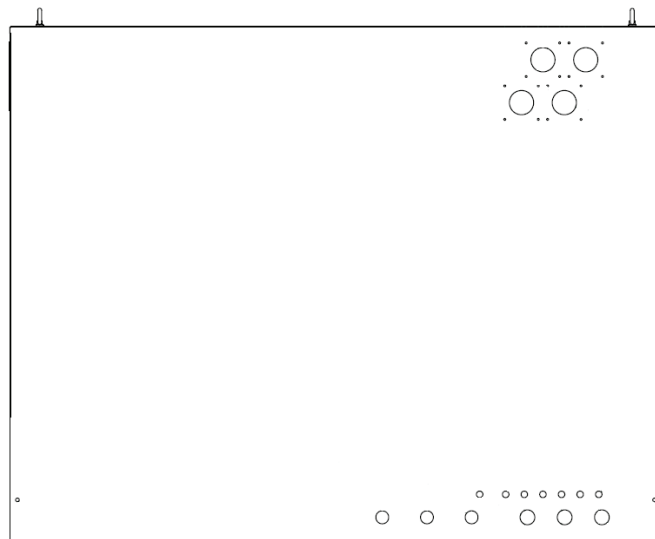
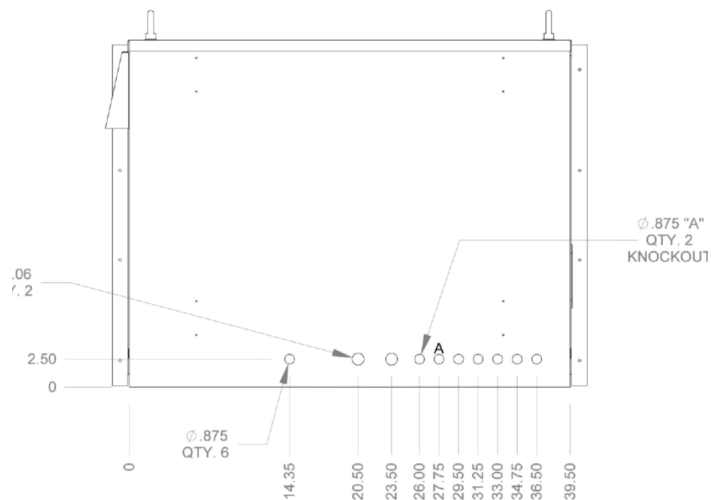


Figure 19: AMZ Enclosure Knockout Location (Rear of Enclosure)



Wiring Interconnections

DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.

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 panel.

WARNING

Care must be taken to ensure a minimum of 5 inches of clearance between all cables and conductors with 300V-rated insulation or less and areas of the control enclosure containing higher voltage components and conductors.

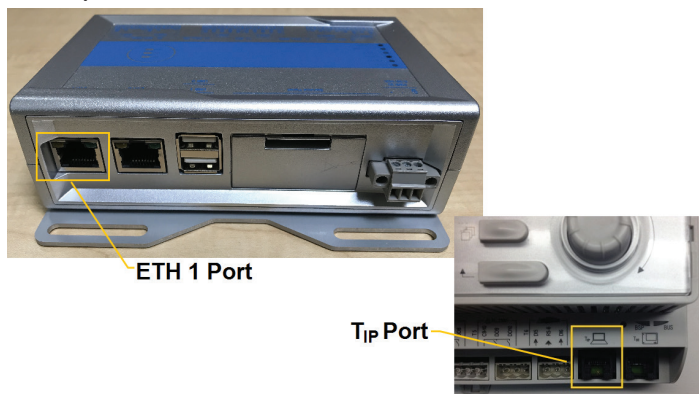
NOTICE

In the event that 300V or lower rated cables and conductors cannot be practically isolated from 600V-rated cables and conductors, a section of 600V-rated shrink wrap tubing is included in the installation kit. This tubing can be cut-to-fit and placed over the lower voltage rated cables and conductors to increase their rating to 600V.

M2M Gateway Connection to MTIII or MicroTech 4

The M2M Gateway is connected to the MicroTech III or MicroTech 4 unit controller via Ethernet. Connect one end of the provided 6 ft. Ethernet Patch cable to the M2M port marked, "ETH1", and the other end to the MicroTech III or MicroTech 4 Unit controller port marked, "TIP" (Figure 20).

Figure 20: 'ETH1' and 'TIP' Ports (MicroTech III Controller Shown)



M2M Gateway Connection to WDC, WCC, WMC, WSC (MicroTech II)

The Gateway is connected to the MicroTech II Centrifugal chiller HMI PC via Ethernet. Connect one end of the provided 6 ft. Ethernet Patch cable to the M2M port marked, "ETH1", and the other end to the HMI PC port marked "LAN2" or "X1P1" depending on HMI hardware (Figure 22).

NOTICE

MicroTech II Chiller models WCC, WDC, WMC and WSC must have the latest version of HMI Touchscreen hardware, which uses either an Axiomtek or a Siemens touchscreen PC. Update kits are available through Daikin Applied Service offices.

M2M Gateway Connection to WME Gen 1 Chiller

The Gateway is connected to the WME Gen 1 chiller HMI PC via Ethernet. Connect one end of the provided 6 ft. Ethernet Patch cable to the M2M port marked, "ETH1", and the other end to any open port on the Ethernet switch located in the control enclosure (Figure 23).

M2M Gateway Connection to EMM

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

The Gateway is connected to the EMM via USB. Connect the type-A end of the provided 3 ft. USB cable to the M2M port marked, "USB 0" OR "USB 1", and the type-B end of the same cable to the USB port of the EMM (Figure 21).

Figure 21: USB Connections



Figure 22: M2M Gateway Connection to MicroTech II Centrifugal Chillers

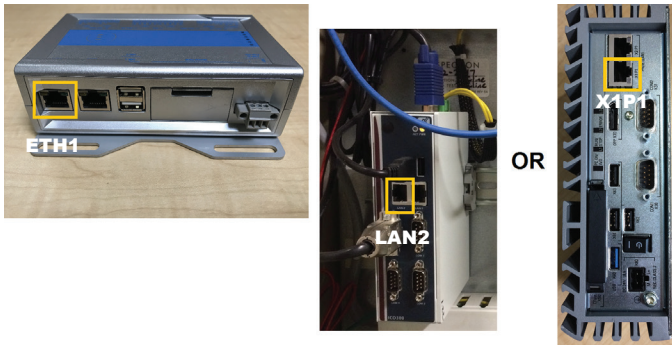
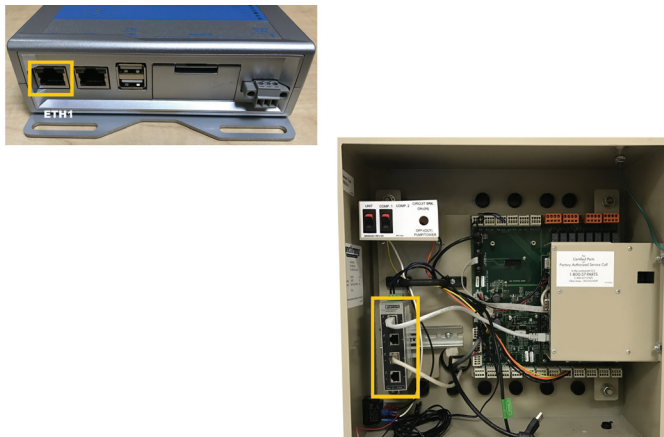


Figure 23: M2M Gateway Connection to WME Gen 1 Chiller



Connection of Power Supply

The Gateway uses a 12 or 24 VDC power supply. The 12 or 24 VDC connection is made by wiring the power supply red wire to the Gateway terminal marked, "PWR IN +", and the power supply black wire to the Gateway terminal marked, "PWR IN -" (Figure 24).

NOTICE

Field verify all connections with equipment as-built drawings.

The 120VAC power supply cable has the jacket and insulation pre-stripped, with the ends of both the Line and Neutral wires tinned. On an AGZ-D or AGZ-E chiller, connect the Line (brown or red) conductor to terminal TB1-11B and the Neutral (blue or white) conductor to terminal TB1-32B (Figure 25). On an AWW or AWS chiller, connect the Line (brown or red) conductor to terminal MQ-11 and the Neutral (blue or white) conductor to terminal MQ-17 (Figure 26).

On a WMC chiller, connect the Line (brown or red) conductor to terminal L1-30 and the Neutral (blue or white) conductor to terminal L2-29 (Figure 27). On WCC, WDC, and WSC chillers, connect the Line (brown or red) conductor to 120VAC terminal L3 in the compressor cabinet and the Neutral (blue or white) conductor to 120VAC terminal L2 the compressor cabinet (Figure

28). Field verify terminations on unit as-built drawing. On WME Gen 1 chillers, connect the Line (brown or red) conductor to terminal 106 of the auxiliary terminal strip and the Neutral (blue or white) conductor to terminal N of the auxiliary terminal strip (Figure 29). Field verify terminations on unit as-built drawing. On an AMZ chiller, connect the Line (brown or red) conductor to terminal TBH-7 and the Neutral (blue or white) conductor to terminal TB120N-60 (Figure 30).

Figure 24: M2M Power Input



Figure 25: AGZ-D and AGZ-E 120VAC Wiring

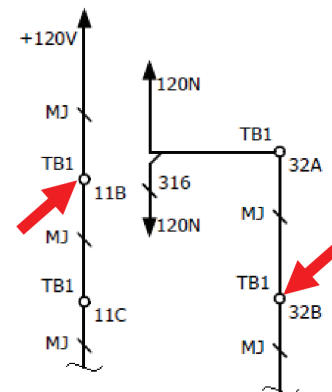
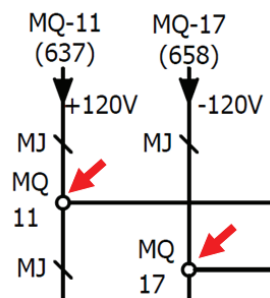


Figure 26: AWW and AWS 120VAC Wiring



Rogowski Coil Installation Instructions

Chillers with larger incoming power bundles will require the use of a flexible CT called a Rogowski coil. An updated Rogowski Coil kit has been developed for SiteLine for Dedicated Equipment. The components included with the Rogowski Coil kit include:

- (1) Rogowski Coil Integrator and (1) Power Supply installed on Din Rail and pre-wired (Figure 33)
- (3) Rogowski Coil CT's (Figure 34)

Figure 33: Pre-wired Integrator and Power Supply

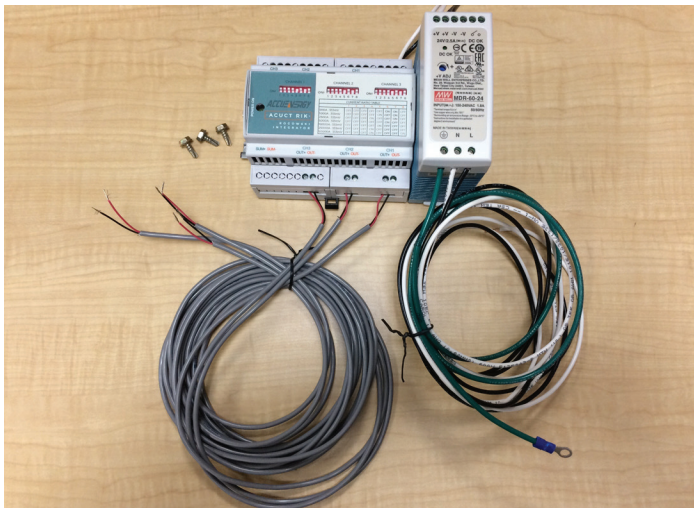
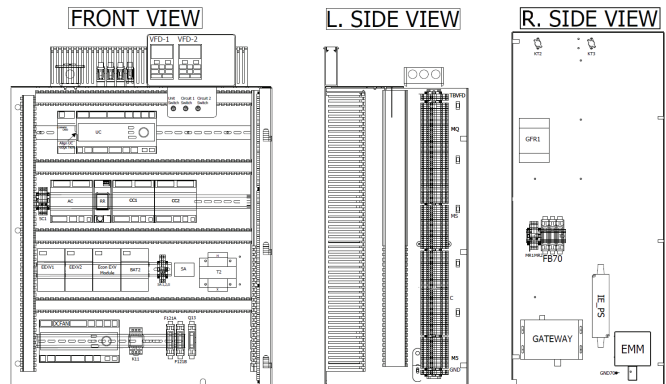


Figure 34: Rogowski Coil CT's



1. Using the provided sheet metal screws and Din Rail, install the Rogowski Coil Integrator and Power Supply at an available location within the Unit Control Panel. The mounting location must be within reach of the Rogowski Coil leads (6.5'). See Figure 35 for an example panel layout (actual configuration may vary).

Figure 35: AWW Control Panel Example



2. Once the Rogowski Coil Integrator and Power Supply are installed in the control panel, install each of the three Rogowski Coils on a leg of three-phase power (Figure 36). Open the Rogowski Coil by pulling apart the black connector of the CT. Install the CT around the conductor to be measured with the arrow on the Rogowski coil connector pointing to the load (Figure 37).

Figure 36: Installed Rogowski Coils

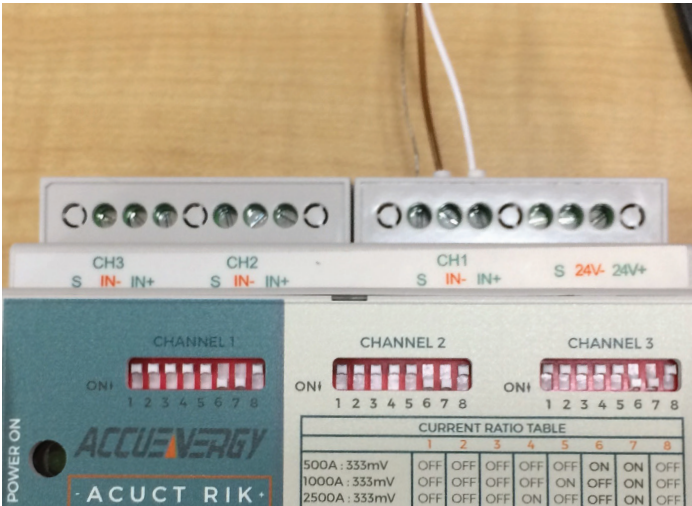


Figure 37: Indicator Arrow



3. Connect the leads of the CT installed on line L1 to the CH1 input on the Rogowski Coil Integrator. Connect the white lead to the 'IN+' terminal, the brown lead to the 'IN-' terminal, and the shield wire to the 'S' terminal (Figure 38). Repeat the same process for the other lines, ensuring L2 is connected to CH2 and L3 is connected to CH3.

Figure 38: CT Wiring to Input of Integrator



4. Connect the pre-wired leads on CH1 'OUT+' and CH1 'OUT-' (Figure 39) to the 'CT_A+' and 'CT_A-' terminals on the Energy Management Module (EMM). Connect the Red lead to 'CT_A+' and the Black lead to 'CT_A-' (Figure 40). Repeat the same process for the other outputs, ensuring CH2 is connected to CT_B and CH3 is connected to CT_C.

Figure 39: CH1 Output Connections

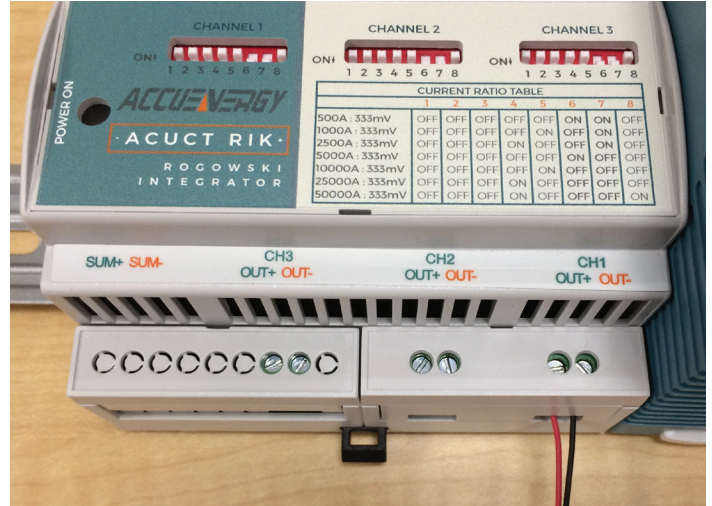
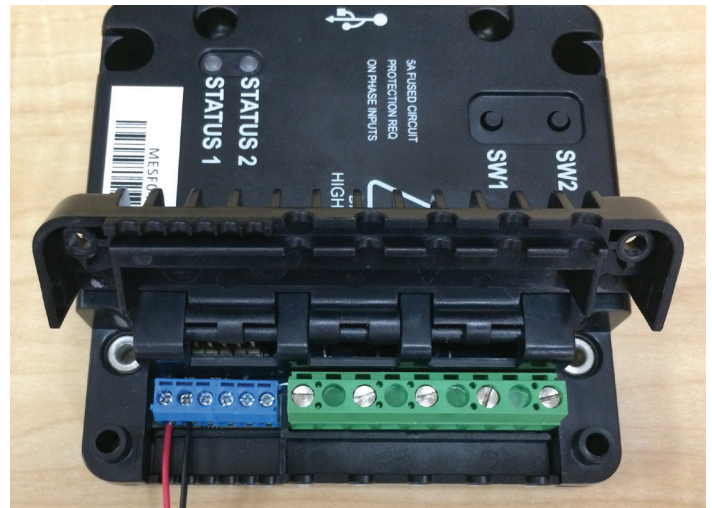
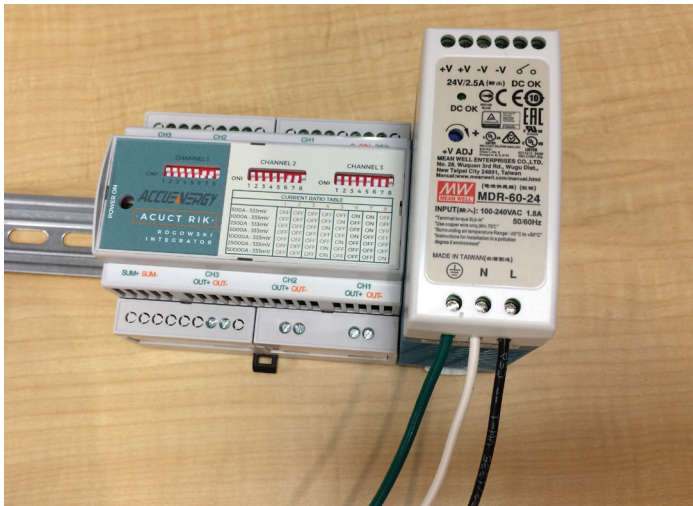


Figure 40: Connections to CT_A on EMM



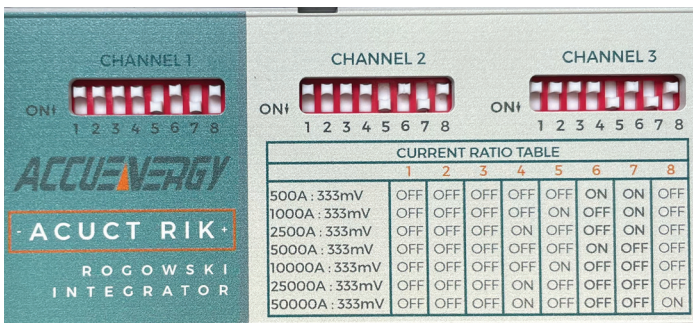
5. The Power Supply 24VDC comes pre-wired to the Rogowski Coil Integrator. The Power Supply is provided with leads pre-wired to the 120VAC inputs (Figure 41). To connect the Power Supply to 120VAC, wire the Black lead to 120VAC Line, the White lead to 120VAC Neutral, and the Green lead to unit Ground. Field verify available 120VAC Line, Neutral and Ground connections on the unit as-built wiring diagram.

Figure 41: 120 VAC Leads on Power Supply



6. Ensure each integrator channel is set for the 1000 Amp range. Only switches 5 and 7 should be in the "ON" position (Figure 42).

Figure 42: Integrator Channel Amp Range Setting



Installing Split-Core CT's

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

Current Transformers (CT's) are split-core type, to make installation easier. Snap split-core CT connected to EMM terminal CT_A on phase L1, snap split-core CT connected to EMM terminal CT_B on phase L2, and snap split-core CT connected to EMM terminal CT_C on phase L3 (Figure 43). Ensure that the "Load" indicator on the CT is oriented correctly.

Figure 43: CT Installation



Connection of EMM to Line Voltage

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

The EMM is connected to Line Voltage through the Fuse Block. Begin by removing the fuse covers and fuses from the Fuse Block. Prior to removal, make note of fuse orientation within the fuse block. Next, using the provided 6" wiring harness, connect the "VinA" (Tan), "VinB" (Orange), and "VinC" (Violet) terminals on the EMM to the "Load" terminals on the Fuse Block (Figure 44).

If needed, remove the plastic protective shield from Power Distribution Block 1 (PD1). Using the provided 6 ft. wiring harness, connect the corresponding "Line" terminals on the Fuse Block to the control panel (PD1) terminals "T1", "T2", and "T3", such that EMM terminal "VinA" (Tan) is connected to PD1-T1, "VinB" (Orange) is connected to PD1-T2, and "VinC" (Violet) is connected to PD1-T3 (Figure 45).

Figure 44: EMM Connection to Fuse Block

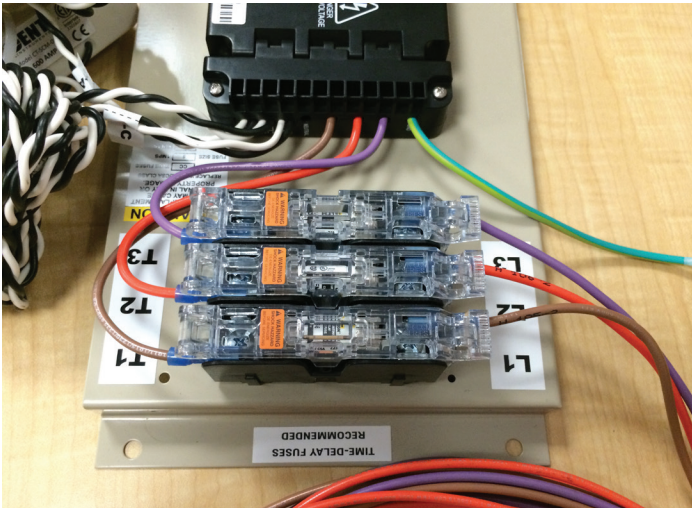
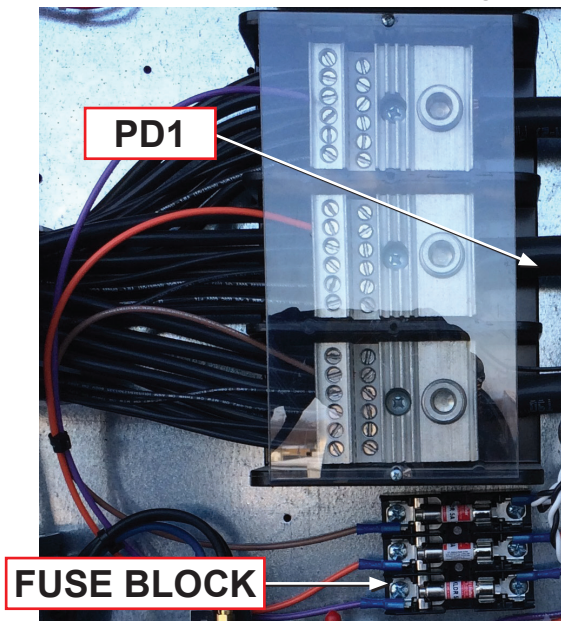


Figure 45: Fuse Block Connected to Line Voltage



Connection of M2M Gateway and EMM to Ground

One end of the M2M Gateway ground conductor should already be connected to the M2M case (see section entitled, "Installing M2M Gateway"). Connect the tinned end of the EMM ground conductor to the "GND" terminal on the EMM itself (Figure 46). Connect the free ring terminals for both the M2M and EMM to the nearest available grounding lug in the control enclosure (Figure 47).

Once all connections are made to the line voltage side of the EMM, close the hinged cover, and reinstall the screws. Figure 48 depicts an EMM with all high voltage terminations made and the hinged cover reinstalled.

Figure 46: Ground Wire Connected to EMM

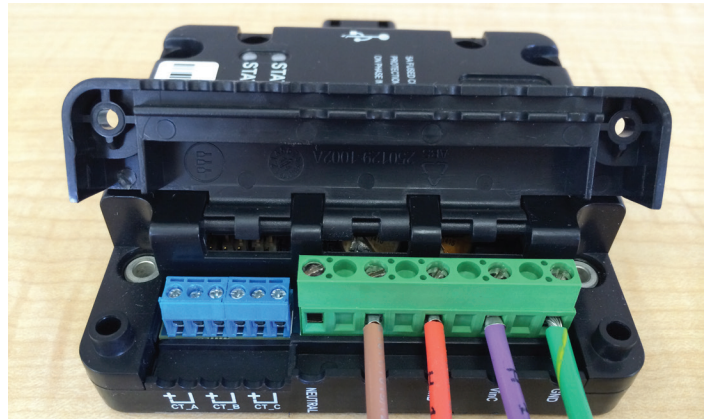
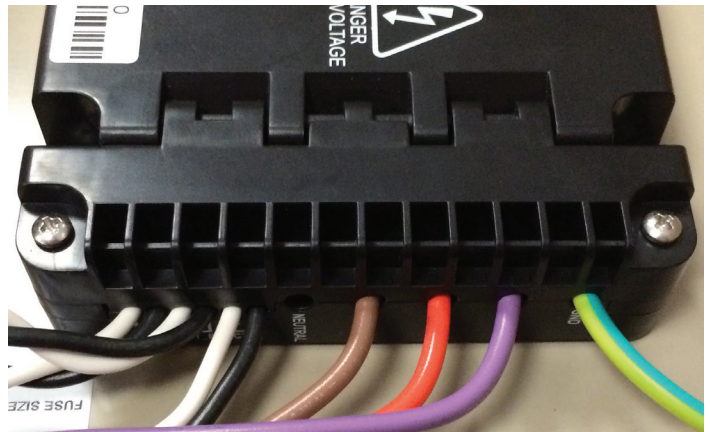


Figure 47: Typical Grounding Lug



Figure 48: EMM Following Reinstallation of Hinged Cover



Antenna Installation

NOTICE

Both antennas will be installed and connected to the M2M Gateway for cellular connectivity.



DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.



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 panel.



WARNING

Sharp edges on sheet metal and fasteners can cause personal injury. This equipment must be installed, operated, and serviced only by an experienced installation company and fully trained personnel.

Mounting

The antennas provided with the kit (Figure 49) are omnidirectional, and have a swiveling base. The antenna flags are shipped loose and must be screwed into the coaxial connector of the antenna base. The antennas should be oriented to avoid interference from structures or other antennas. For initial installation, it is recommended to install the antennas on top of the chiller, rooftop, or air handling unit with enough clearance from the edge to avoid accidental contact or damage. The antenna is held in place by its magnetic base. More information about aiming antennas can be found in the Troubleshooting section on page 52 of this document.

Wiring of Antenna (If Applicable)

As described previously, the antenna cable must be fed from the outside of the unit through the control enclosure and up to the mounting bracket with the M2M Gateway, EMM, power supply, and fuse block.

The cellular connection to the Gateway is made by screwing the SMA coaxial connector onto the M2M SMA coaxial connectors, "CELL MAIN" and "CELL DIV". For Wi-Fi, the connection is made by screwing the antenna's SMA coaxial connector onto the provided reverse polarity SMA adapter, then screwing the reverse polarity SMA adapter onto the "Wi-Fi/BT" connection on the Gateway (Figure 50).

Figure 49: Antenna on Magnetic Mounting Base



Figure 50: Cellular and Wi-Fi Connections



CELL MAIN & CELL DIV



Wi-Fi/BT

LAN Installation (If Applicable)

LAN Connection

For LAN installations, connect the Ethernet patch cable from the network switch to the port labeled, "Eth0", on the Gateway (Figure 51).

NOTICE

The M2M Gateway will not communicate with the cloud if the LAN cable is connected to the incorrect Ethernet port on the Gateway.

Figure 51: LAN Connection



Software Gateway Cell Modem Installation

(WME-C ONLY)

Contents of Modem Kit (Figure 52): cellular modem with SIM, 5' Ethernet cable, 5' power cable, 110VAC to 24VDC plug-in power supply, (2) cellular antennas, Wi-Fi antenna, hook-and-loop mounting squares, CFast card (only for units that shipped without embedded cloud connection capability), and instruction sheets.

Items not provided in Modem Kit: Tie straps and fixing pads for cable management, flat-head screwdriver for affixing wires to power supplies, scissors/wire cutters for cutting tie strap ends and power cable stripping, mobile phone or laptop for cell modem config/status confirmation, USB drive with latest Chiller PC upgrade software from Sales Portal, Chiller PC upgrade procedure.

Figure 52: Modem Kit Contents



Prior to starting installation and configuration for cloud connection, verify Chiller can run in normal operation mode (no alarms, etc.). Once verified, proceed with installation.

- i. Verify cellular signal strength at the Chiller location using the supplied modem
- ii. Connect the supplied two fixed cellular antennas (locations A and B) and the WiFi antenna (E) to the modem.

NOTICE

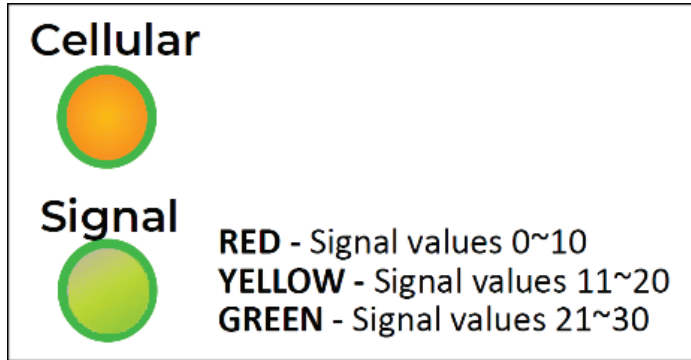
The antennas are not all the same, the WiFi antenna is different from the cellular antennas and needs to be attached to the WiFi port (E). The two cellular antennas will be labeled with the "4G" logo (the WiFi antenna will have no designation) and should be connected to ports A and B

Figure 53: Modem Connections



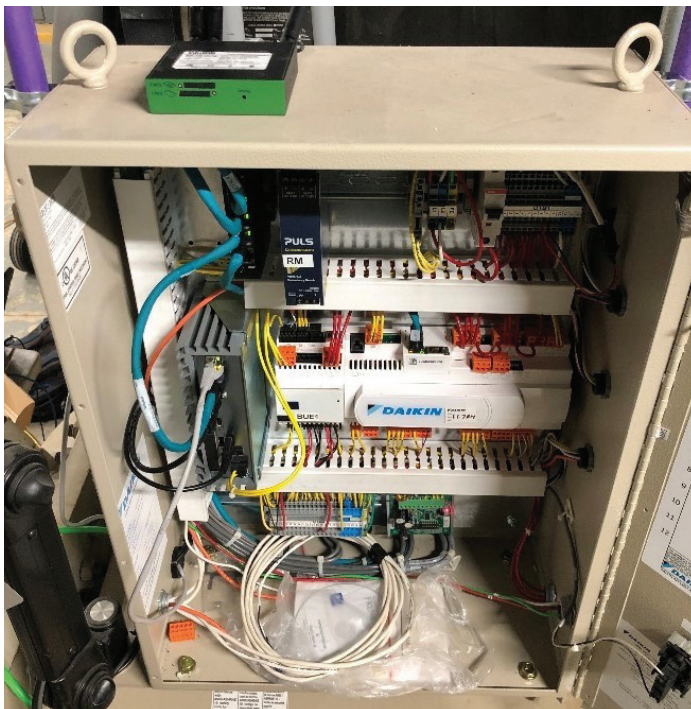
- ii. Use the provided power supply to power modem (location D above)
 - a. Verify the modem's Cellular LED is solid orange and the Signal LED is yellow or green (Figure 54). This may take 2-3 minutes to connect

Figure 54: Modem's LEDs



2. If the modem's Cellular LED is solid orange and the Signal LED is yellow or green:
 - a. Mount modem on top of control panel and fix in place using provided hook-and-loop mounting squares (Figure 55)
 - b. Connect provided 5' power cable to available 24VDC in Chiller cabinet (+24VDC conductor has red shrink-wrap)
 - c. Connect the Chiller PC X2P1 Ethernet port to modem's LAN2 port using the provided Ethernet cable
 - d. Continue to Step 4

Figure 55: Modem Mounting



3. If the modem's Cellular LED is not solid orange or the Signal LED is red:
 - a. Locate the modem at another location within the

building with adequate cellular coverage

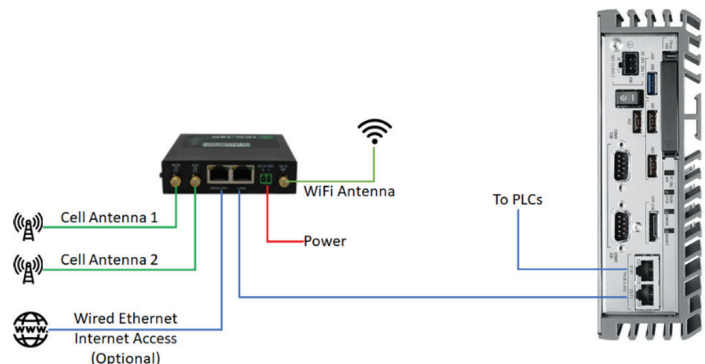
- b. Use the included power supply to power modem from building outlet
- c. Extend a (field provided) Cat5e or Cat6 connection from modem location (LAN2 port) to WME Chiller PC controller (X2P1 port).

NOTICE

the maximum allowed length of a Cat5e/Cat6 cable is 100 meters (328 ft)

4. Use tie straps, as desired, for clean cabling.
5. If the customer has wired Ethernet available, which will be used for cloud connectivity, connect the field-provided patch cable to WLAN/LAN1 port on modem
 - a. The modem must be configured for Ethernet in a later step (see Ethernet Configuration section)
6. The completed system networking diagram should appear as follows:

Figure 56: System Networking Diagram



7. Before continuing the install, verify again that the router's LEDs indicate Cellular connection (solid orange), and Signal LED is yellow or green (indicating adequate cell connection)

NOTICE

If an optional, customer-provided Ethernet connection will be used for internet connectivity, refer to "Ethernet Configuration" in the last section of this document to ensure proper network setup for use with the modem

NOTICE

Smartphones typically have the option to disable "auto-connect" for individual WiFi networks. It is recommended that you disable the auto-connect feature for the Daikin modem's WiFi network on your phone. Because the Daikin modem will not provide your phone access to the internet, you would not want to connect to it automatically under normal circumstances. Also, when servicing multiple chillers in the same vicinity, if auto-connect is not disabled, the phone could connect to the incorrect Daikin modem

8. Proceed to Cellular Modem Configuration for Cellular cloud connection or Ethernet Configuration section for cloud connection through customer-provided Ethernet

Cellular Modem Configuration (Software Gateway)

The following procedures should be used to configure the Software Gateway cellular modem for cloud connectivity.

1. Connect a smartphone or laptop to the modem Wi-Fi (Figure 57), using the SSID (WiFi Name) and password (WiFi PW) information located on the label on the bottom of the modem (Figure 58).

NOTICE

Both the WiFi password and the modem Admin password are case sensitive

Figure 57: Modem Wi-Fi

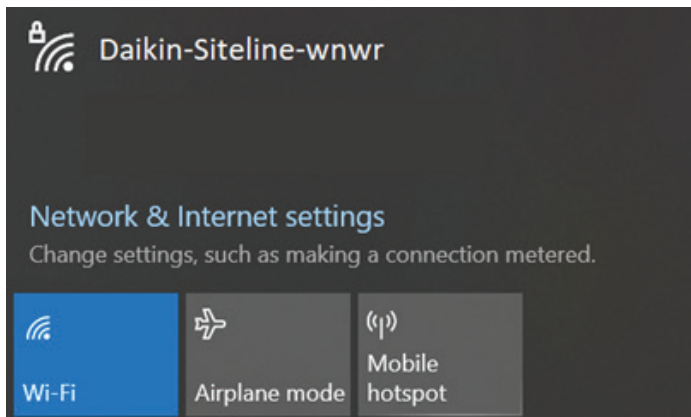


Figure 58: Modem Bottom Label



2. Access the modem configuration page by using a smartphone to scan the QR code on top of modem (Figure 59), which will load a standalone webpage that reads, "OK"; from there, navigate to "10.10.1.1/index.jsp" in the browser. Alternatively, enter "10.10.1.1" into the browser on a smartphone or laptop, then enter the password shown on bottom label as "Admin PW" (username is "admin")

Figure 59: Modem Top Label



3. Verify connectivity and signal strength by accessing "Status/Modem" menu and record the modem status and signal level.

NOTICE

You may need to scroll to the right and/or minimize the "help" screen to see the "Status" menu (especially when using a mobile device)

4. Verify connectivity to the Chiller PC by navigating to the "Status/Device List" and looking for a device on the modem network with an address of 10.10.1.1
5. Next, look at the Chiller HMI and confirm SiteLine parameters on the Interface screen of the Settings tab (Figure 60). If the configuration has been successful:
 - a. Internet Connection should = "Yes"
 - b. Cloud Capable should = "Yes"
 - c. Software Gateway should = "Running"
 - d. Cloud Connection should = "Enabled"

Figure 60: SiteLine Parameters

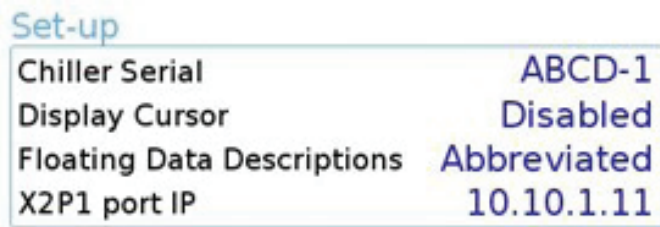


NOTICE

If you don't see the SiteLine parameters menu, complete the PLC software and CFast Card Swap Procedure in the next section

6. Enter the Chiller Serial Number in the Setup section (Settings tab) of the Interface screen (Figure 61)

Figure 61: Chiller Serial Number



7. This completes the cellular configuration of the Software Gateway modem

PLC software and CFast Card Swap Procedure

(Only necessary if unit shipped without embedded cloud connection capability)

Due to the nature of the upgrade, it cannot be managed by the typical Chiller PC upgrade procedure. Instead, the Chiller's CFast card will be replaced on units that shipped without embedded cloud connection capability. To verify whether the unit has embedded cloud connection capability, enter the technician-level password and navigate to the Interface screen of the Settings tab. If this screen has SiteLine information, as shown below, the Chiller PC has embedded cloud connection capability. The HMI Software Version and Chiller Software Version can also be used to verify embedded cloud connection capability. HMI Software Version 1.4.0 with Chiller Software Version 1.2.0-0 (and newer) have embedded cloud connection capability (Figure 62).

Figure 62: Software Versions



If the Chiller PC does not have embedded cloud connection capability, follow the procedure described below:

1. Make sure the networking steps above are completed and ensure modem internet connectivity
2. Take pictures or record the values for all settings screens in the HMI, paying special attention to the current tower setup for the Chiller (as this will need to be re-configured after the upgrade)

3. Update the Chiller application to the latest version available on Sales Portal, following the instructions included with the software. Before performing this procedure, ensure ALL controllers (PC, Unit Controller and Compressor Controller) are online, connected and fully functional. Note: This update should complete within 20-30 minutes
4. After the upload has completed, power off the Chiller PC
5. Remove, label, and save the original customer CFast card
6. Insert the provided preconfigured CFast card
7. Power up the Chiller PC
8. Perform a second update of the Chiller application using the same update files used during the first update (this update should be performed even if the CFast card contains the latest released HMI software). Note: This update should complete within 10 minutes
9. After the upload has completed, perform site specific Chiller configuration
 - a. On the touchscreen, go to Settings -> Interface tab and set Controller Platform to be Chiller PC.

NOTICE

This change requires the Technician password

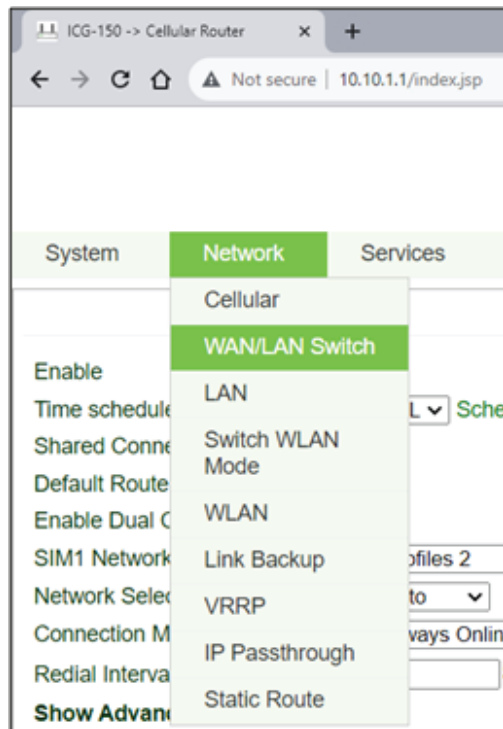
- b. Re-enter any tower configuration recorded in step 2
10. Next, look at the Chiller HMI and confirm SiteLine parameters on the Interface screen of the Settings tab. If the configuration has been successful:
 - a. Internet Connection should = "Yes"
 - b. Cloud Capable should = "Yes"
 - c. Software Gateway should = "Running"
 - d. Cloud Connection should = "Enabled"
11. Add the Chiller Serial Number in the Setup section of the Interface screen (Settings tab)
 - a. Please double-check that the correct serial number is entered
12. Set the correct Time Zone in the Time and Date section of the Interface screen (Settings tab)
13. After all settings are made, restart the Chiller PC
14. This completes the PLC software and CFast Card Swap Procedure

Ethernet Configuration

If an optional, customer-provided Ethernet connection will be used for cloud connectivity, the modem must be configured for the customer's network. For Ethernet, modem port WAN/LAN1 is used. This port is preconfigured to use Dynamic Host Configuration Protocol (DHCP) to obtain its IP address. Thus, if the customer's network uses DHCP, no further configuration of the modem is necessary. Simply connect modem port WAN/LAN1 to the customer's network switch using a field-supplied Ethernet patch cable. For applications not using DHCP, configure the modem per the following instructions:

1. Access the modem configuration page by using a smartphone to scan the QR code on top of the modem, which will load a standalone webpage that reads, "OK"; from there, navigate to "10.10.1.1/index.jsp" in the browser. Alternatively, enter "10.10.1.1" into the browser on a smartphone or laptop, then enter the password shown on bottom label as "Admin PW" (username is "admin")
2. On the web configuration page, hover over "Network" and select WAN/LAN Switch (Figure 63)

Figure 63: WAN/LAN Switch Selected



3. Change the Interface Mode dropdown from WAN to LAN, then click "Apply"

NOTICE

After the changes are saved, the modem services will restart

4. Click the "Settings" button, then change the Type dropdown from Dynamic Address (DHCP) to Static IP (Figure 64)

Figure 64: Static IP Selected

The screenshot shows the 'Static IP' configuration form. The 'Type' dropdown is set to 'Static IP'. The 'MAC Address' field is '00:18:05:24:3D:4E' with a 'Default' button. The 'IP Address' field is '10.10.1.1'. The 'Netmask' field is '255.255.255.0'. The 'MTU' field is 'Default' with a value of '1500'. The 'LAN Mode' dropdown is set to 'Auto Negotiation'.

5. Next, enter the customer-supplied IP Address and Netmask in their respective fields. Click the "Apply" button to complete the configuration
6. Once, the modem services are restarted, close the browser, then connect modem port WAN/LAN1 to the customer's network switch using a field-supplied Ethernet patch cable
7. Configuration complete

Rooftop Installation Instructions

Installing Mounting Brackets

Prior to installing the mounting brackets, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician begin the install.

The retrofit kit is shipped with two mounting brackets: one bracket contains the M2M Gateway and power supply, the other contains the EMM and fuse block (with 5A Fuses pre-installed). **The EMM and Fuse block are not included for Gateway-on-the-Go or Retrofit kit without EMM.** In a retrofit scenario, these brackets must be installed inside the unit control panel. For DPS and MPS units, the brackets are designed for installation inside of the main unit control panel, mounted to the top of the unit controller section (see [Figure 65](#) and [Figure 66](#) for preferred locations) using the provided sheet metal screws (5/16" head).

For RPS, RPR, RDT, RFS, RDS and RAH units, the M2M Gateway and EMM brackets are designed for installation on the inside of field-installed, door panels supplied with the retrofit kit. The M2M Gateway bracket is installed on the left door panel ([Figure 67](#)), and the EMM bracket is installed on the right door panel ([Figure 68](#)).

Care must be taken to ensure that the mounting brackets are not installed in such a way as to interfere with closing of the control panel door, or to cover any panel knock-outs. It may be useful to mark the screw holes of the bracket, and drill small pilot holes, before screwing the brackets firmly to the top of the control enclosure.

In some enclosure configurations, particularly with early DPS and MPS units, the control enclosure layout and dimensions may not allow for the desired mounting locations. In these situations, the installer should use discretion in determining suitable replacement locations within the control enclosure, paying special attention to the following limitations:

- When routing wiring through the control enclosure, care must be taken to maintain a minimum of 5 inches of clearance between all cables and conductors with 300V-rated insulation or less and areas of the control enclosure containing higher voltage components and conductors, such as 575V.
- Avoid routing communication cables (Cat 5e, USB, etc.) near sources of line voltage.

On SWP and SWT retrofits, the installer should field verify available space within the control enclosure for mounting required hardware. Ensure adequate separation is maintained between low voltage and high voltage components and sources of high Electromagnetic interference. [Figure 69](#) and [Figure 70](#) provide sample control panel configurations for SWP and SWT units. Components, component layout, and component quantity may vary depending upon unit size, voltage, and options selected.

For DPSA (Rebel Applied) units, the gateway bracket is designed for installation on the left side of the Main Control Panel ([Figure 71](#)).

Figure 65: MPS Bracket Mounting Locations

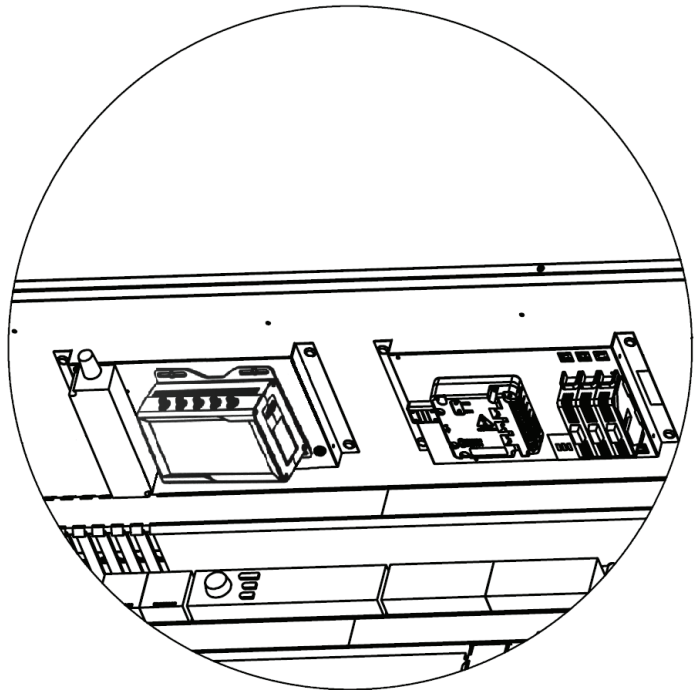


Figure 66: MPS Bracket Mounting Location

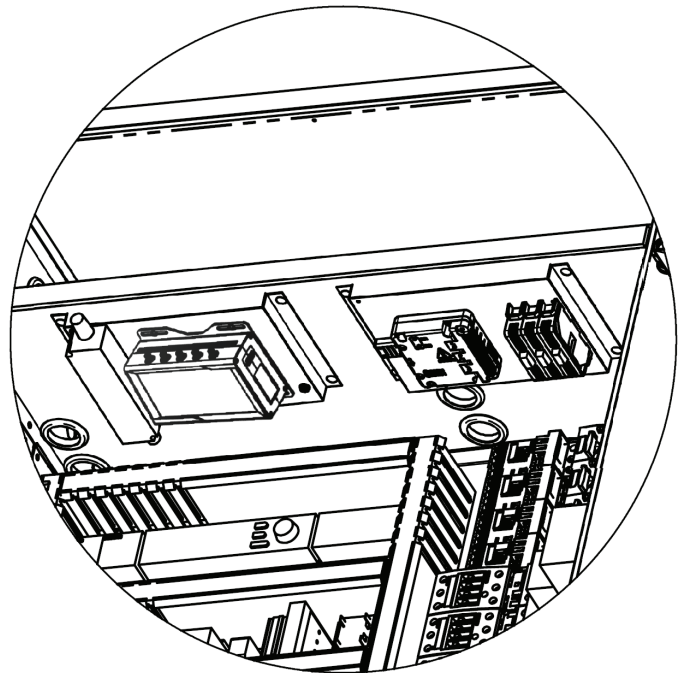


Figure 67: M2M Bracket Mounting Location - RoofPak

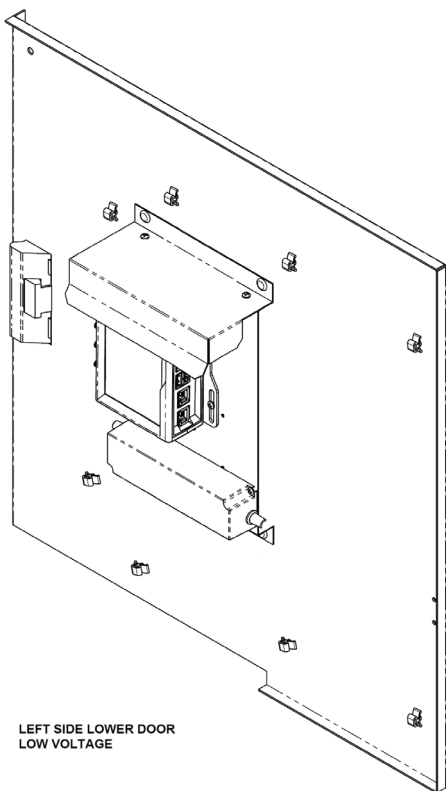


Figure 68: EMM Bracket Mounting Location – RoofPak

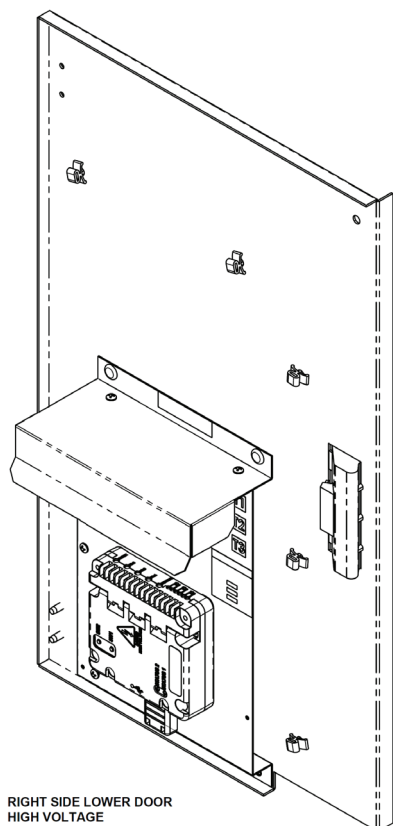


Figure 69: SWP Control Enclosure Example (460V, 6-Compressor Unit)

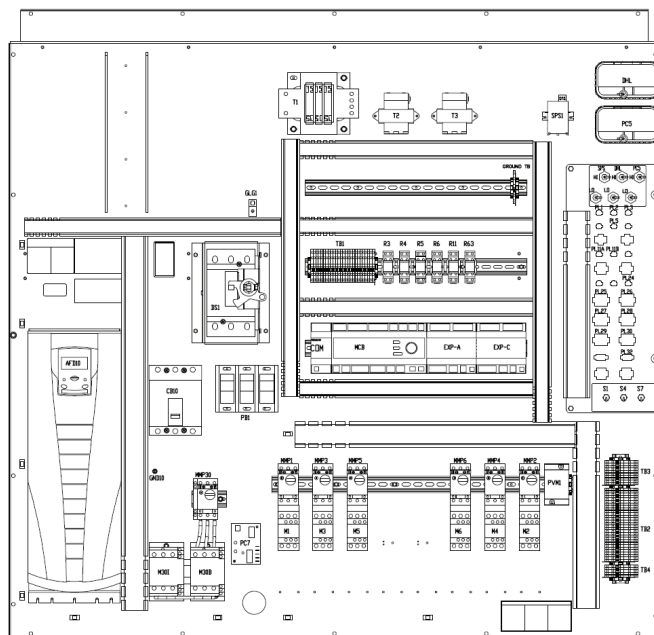


Figure 70: SWT Control Enclosure Example (460V, 6-Compressor Unit)

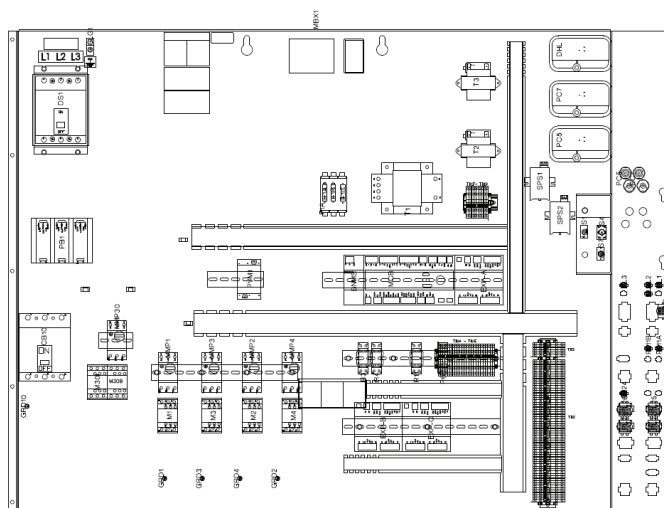


Figure 71: DPSA (Rebel Applied) Gateway Bracket Mounting Location



When routing wiring through the control enclosure, care must be taken to maintain a minimum of 5 inches of clearance between all cables and conductors with 300V-rated insulation or less and areas of the control enclosure containing higher voltage components and conductors, such as 575V. For practical purposes, this means routing all cables and conductors from the high-voltage side of the EMM (Figure 72) away from any cables and conductors connected to the M2M Gateway.

Figure 72: Line Voltage Side of EMM



Wire Routing

DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all of the equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.

WARNING

Care must be taken to ensure a minimum of 5 inches of clearance between all cables and conductors with 300V-rated insulation or less and areas of the control enclosure containing higher voltage components and conductors.

NOTICE

In the event that 300V or lower rated cables and conductors cannot be practically isolated from 600V-rated cables and conductors, a section of 600V-rated shrink wrap tubing is included in the installation kit. This tubing can be cut-to-fit and placed over the lower voltage rated cables and conductors to increase their rating to 600V.

Figure 73 indicates the expected routing for a typical Maverick II unit, and Figure 74 indicates the expected routing for a typical Rebel unit. Figure 67 and Figure 68 show the cable ties used for cable management in a typical RoofPak (RPS, RPR, RDT, RFS, RDS or RAH) unit. The left door panel is for low voltage wires (300V Insulation or less), and the right door panel is for high voltage wires (600V Insulation).

Wire routing for SWP and SWT installations should be verified by the installer, ensuring adequate separation is maintained between low voltage and high voltage components. For DPSA (Rebel Applied) installations, the Ethernet cable will be routed into the Low Voltage Panel, directly behind the Gateway mounting location. The power and antenna cables will be routed to the left-side of the Main Control Panel.

In all retrofit situations, the installer should use discretion in determining suitable routing within the control enclosure, in order to ensure the required 5-inch clearance between all cables and conductors with 300V-rated insulation or less and areas of the control enclosure containing higher voltage components and conductors. In RoofPak and Rebel Applied installations, all non-600V-rated wires (Ethernet, Coax, USB) must be wrapped in the 600V-rated insulation sleeve provided with the retrofit kit.

Figure 73: Typical Maverick II Wire Routing

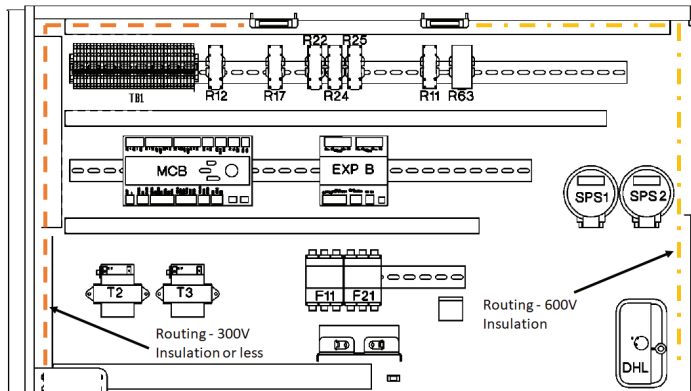


Figure 74: Typical Rebel Wire Routing



Control Cabinet Penetrations

Only the antenna cable(s) or Ethernet cable must be routed to the outside of the control enclosure. All other terminations remain within the control enclosure. To limit the risk of moisture damage, the required external penetration should be made in the lower part of the left stile of the control enclosure for DPS (A and B cabinets), and the right side for MPS units (Figure 75), or out the condenser box section of RoofPak units (Figure 76). For SWP and SWT units, the installer should field-verify an appropriate location for cables to exit the control enclosure. For DPSA (Rebel Applied) installations, the Ethernet cable will be routed into the Low Voltage Panel, directly behind the Gateway mounting location. The power and antenna cables will be routed to the left-side of the Main Control Panel (Figure 77).

The retrofit kit includes a patch plate containing two watertight grommets pre-installed. There are several options for using this plate. If only one of the antennas is used, as is the case for Wi-Fi installations, one of the two grommets can be removed from the patch plate and discarded (Figure 78). Ethernet installations will also use a single grommet.

In this case, only a single penetration will be made through the control enclosure. If two antennas are used, as is the case for cellular installations, both grommets will remain in place, and two penetrations will be required. Alternatively, the grommets can be removed from the patch plate entirely and installed directly into the sheet metal of the control enclosure. Regardless of which method is used, it is important that silicone sealant be used to seal all penetrations. If two antennas are used, it is recommended to remove the grommets and use the patch plate as a template for marking the two penetration prior to drilling. When setting the patch plate as a template, use a carpenter square and level to ensure that the patch plate is aligned squarely with the unit control enclosure.

On the outside of the unit enclosure, drill a 7/8" hole using a step drill bit, centered from right to left, no more than 6" from the bottom of the stile. Drill no deeper than necessary to ensure the 7/8" hole is created. After doing this, a smaller diameter hole should be present on the inside of the enclosure. Again using the step drill bit, drill this hole on the inside of the enclosure to a 5/8" diameter. Drill no deeper than necessary to ensure the 5/8" hole is created. Install the provided 5/8" bushing (Figure 79) on the inside of the enclosure within the newly drilled hole. The bushing should snap into place on the sheet metal.

Install the patch plate on the outside of the enclosure, using the self-tapping sheet metal screws included in the hardware kit. Prior to installation, remove the protective plastic from the patch plate. Apply a bead of silicone sealant around the perimeter of the back side of the patch plate, ensuring that all potential points of moisture entry are covered. Once the plate is located as desired, press the grommet(s) into the 7/8" hole created previously. Again, use a carpenter square and level to ensure that the patch plate is aligned squarely with the unit control enclosure. The grommet(s) should snap into place on the sheet metal. Using the drill and nut driver, screw the patch plate in place using the four pre-drilled mounting holes (Figure 80).

Next, temporarily attach the antenna(s) to the top of the air-handling unit, directly above the stile. The antenna's coaxial cable is permanently affixed to the base, so the free end must be fed through the grommet (from outside inward) being careful to avoid sharp edges or pinch-points within the cabinet. Loosely coil the excess coaxial cable, until connected later during the installation procedure.

Figure 75: Recommended Location for DPS and MPS Control Enclosure Penetration

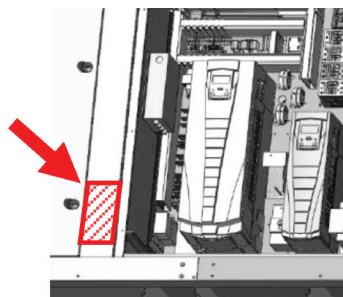


Figure 76: Recommended Location for RoofPak Control Enclosure Penetration

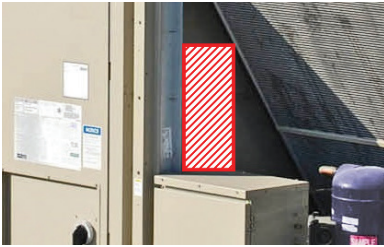


Figure 77: Rebel Applied Cabinet Knockouts



Figure 78: Patch Plate with One Grommet Removed

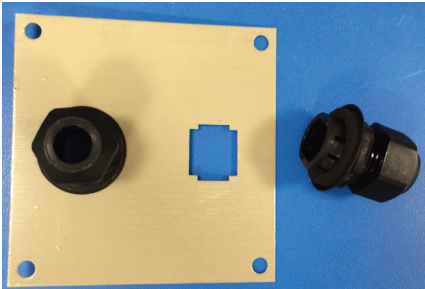
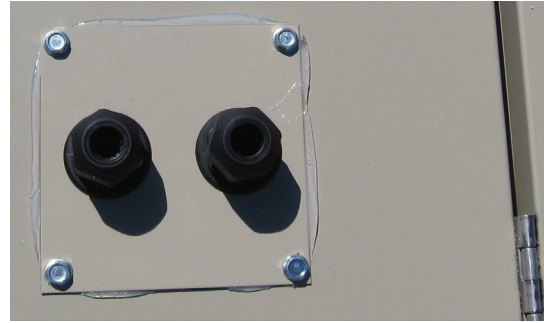


Figure 79: 5/8" Bushing for Installation Inside Control Enclosure



Figure 80: Patch Plate Installed



Wiring Interconnections

⚠ DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all of the equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.

⚠ CAUTION

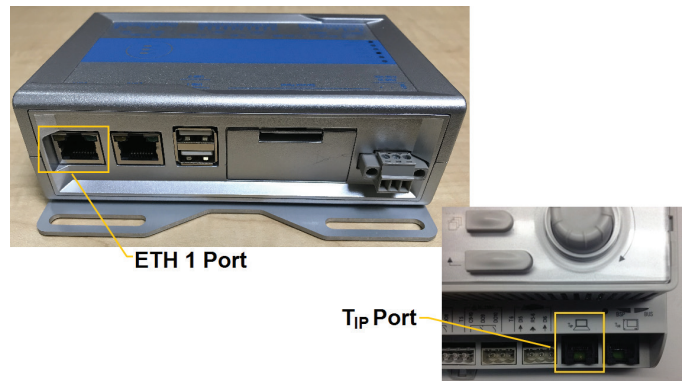
Static sensitive components. Can cause equipment damage.

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 panel.

Gateway Connection to MicroTech III or 4 Controller

Connect one end of the provided 6 ft. Ethernet Patch cable to the Gateway port marked, "ETH1", and the other end to the MicroTech III or MicroTech 4 Unit Controller port marked, "TIP" (Figure 81).

Figure 81: 'ETH1' and 'TIP' Ports (MicroTech III Controller Shown)

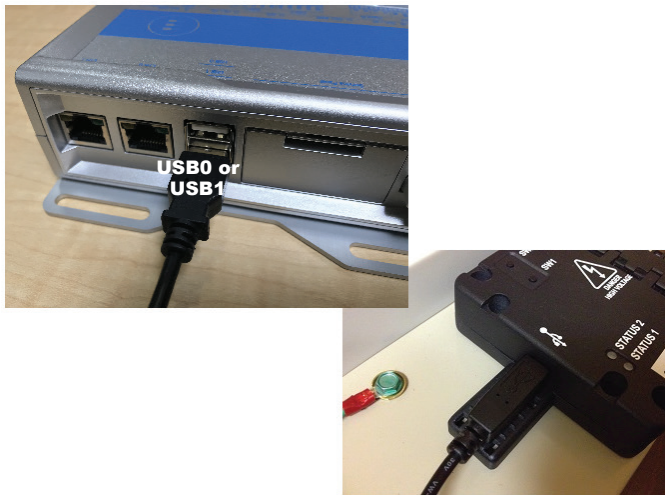


M2M Gateway Connection to EMM

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

The Gateway is connected to the EMM via USB. Connect the type-A end of the provided 3 ft. USB cable to the M2M Gateway port marked, "USB 0" **OR** "USB 1", and the type-B end of the same cable to the USB port of the EMM (Figure 82).

Figure 82: USB Connections



Connection of Power Supply

The Gateway uses a 12 or 24 VDC power supply. The VDC connection is made by wiring the power supply red wire to the Gateway terminal marked, "PWR IN +", and the power supply black wire to the Gateway terminal marked, "PWR IN -" (Figure 83).

Figure 83: M2M Gateway Power Input



The 120VAC power supply cable has the jacket and insulation pre-stripped, with the ends of both the Line and Neutral wires tinned.

NOTICE

Field verify all connections with equipment as-built drawings.

On Rebel A and B units, connect the Line (brown or red) conductor to terminal TB1-1 and the Neutral (blue or white) conductor to terminal TB1-3 (Figure 84). On Rebel C units, connect the Line to TB3 300 and the Neutral to TB3 303.

On a Maverick II unit, connect the Line (brown or red) conductor to terminal TB1A-1, 2, 3, or 4 and the Neutral (blue or white) conductor to terminal TB1A-5, 6, 7, 8, or 9 (Figure 85).

On a RPS, RPR, RDT, RFS, RDS or RAH unit, connect the Line (brown or red) conductor to terminal TB1A-1, 2, 3, or 4, and the Neutral (blue or white) conductor to terminal TB1A-5, 6, 7, 8, or 9 (Figure 86).

On a SWP or SWT unit, connect the Line (brown or red) conductor to terminal TB1A-1, 2, 3, or 4, and the Neutral (blue or white) conductor to terminal TB1A-5, 6, 7, or 8 (Figure 87).

On a DPSA unit, connect the Line (brown or red) conductor to terminal TBHV-120V and the Neutral (blue or white) conductor to terminal TBHV-N120 (Figure 88).

Figure 84: Typical Rebel A and B 120VAC Wiring

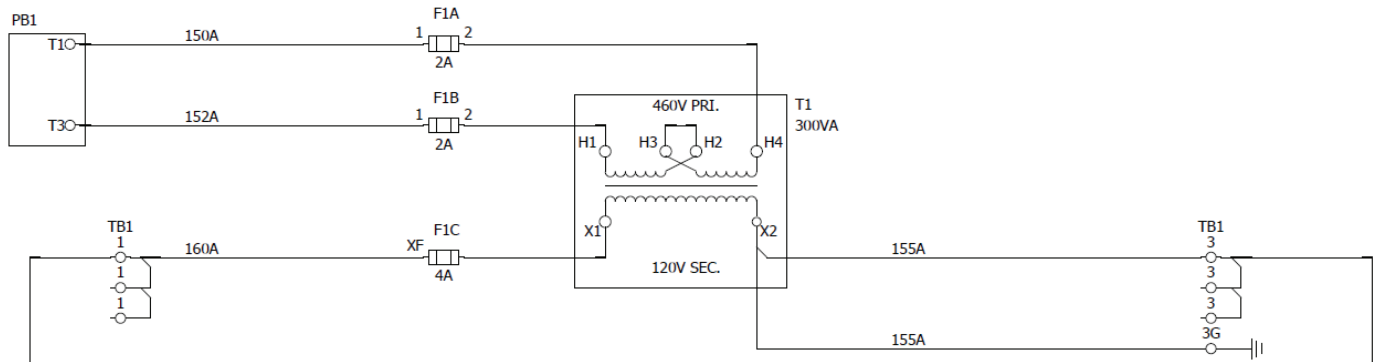


Figure 85: Typical Maverick II 120VAC Wiring

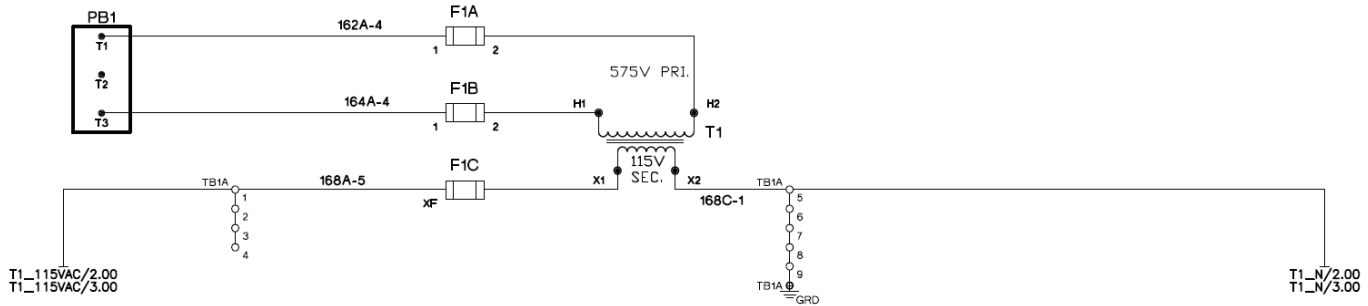


Figure 86: Typical RoofPak Unit 120VAC Wiring

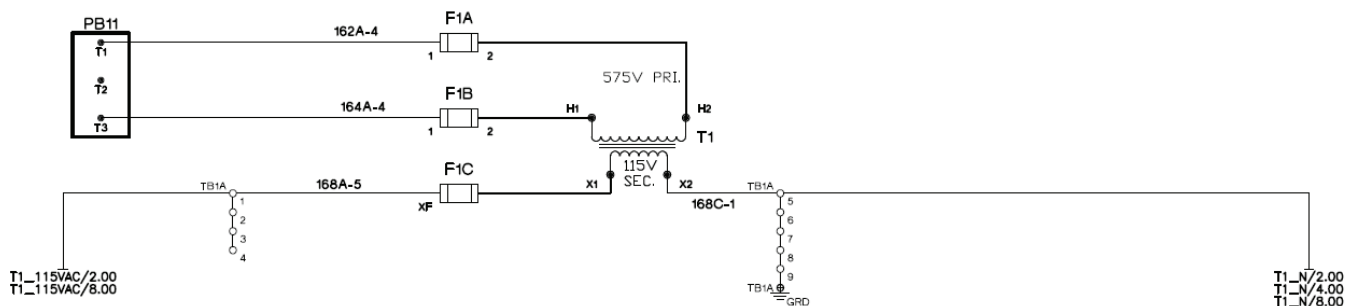


Figure 87: Typical SWP and SWT Unit 120VAC Wiring

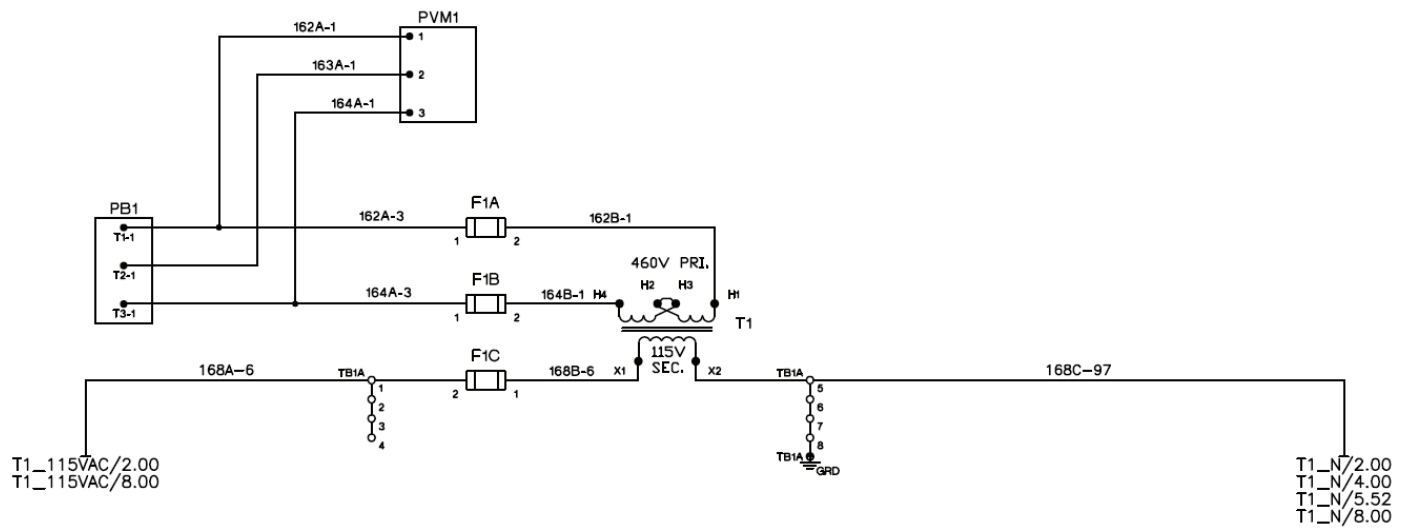
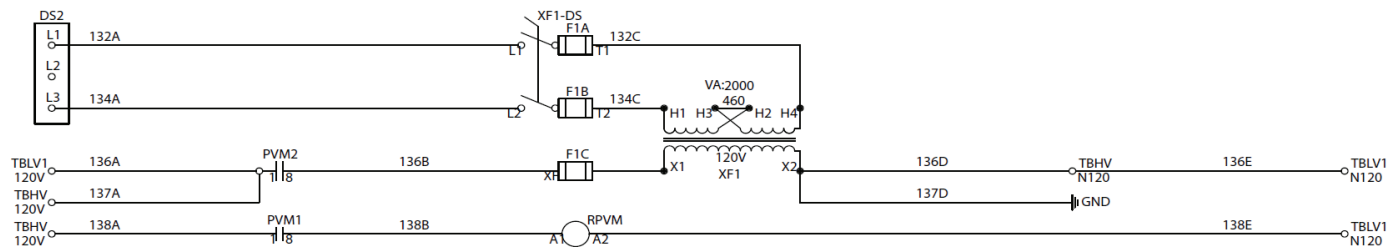


Figure 88: Typical Rebel Applied 120VAC Wiring



Connection of EMM to CT's

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

The high voltage side of the EMM has a hinged cover, which must be opened. First, remove the two installation screws (Figure 89), then flip the cover open. The EMM uses an open style hinge, so it may be easier to completely remove the hinged door while installing conductors.

The CT's have built-in output conductors, which may need to be connected to the EMM. Insert the white conductor from the CT on Line 1 into the CT_A+ terminal, and the black conductor from the CT on Line 1 into the CT_A- terminal. Next, insert the white conductor from the CT on Line 2 into the CT_B+ terminal, and the black conductor from the CT on Line 2 into the CT_B- terminal. Finally, insert the white conductor from the CT on Line 3 into the CT_C+ terminal, and the black conductor from the CT on Line 3 into the CT_C- terminal. (Figure 90).

Figure 89: Hinged Cover Screw Locations

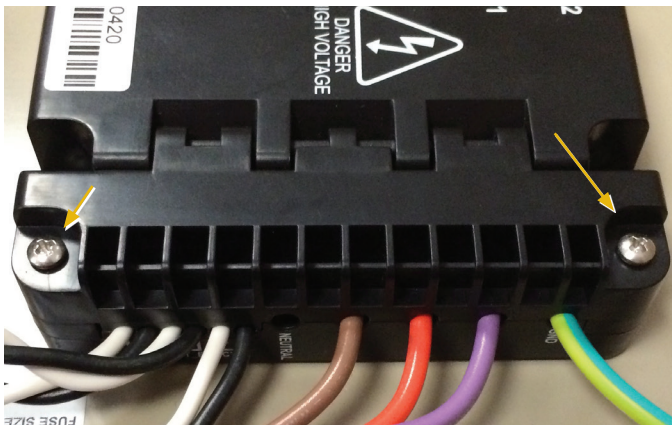
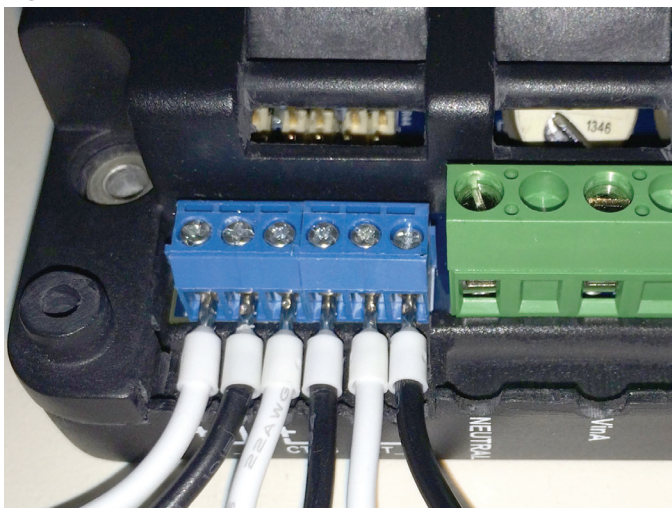


Figure 90: Connection of EMM to CT's



Installing CT's

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

Current Transformers (CT's) are split-core type, to make installation easier. Snap split-core CT connected to EMM terminal CT_A on phase L1, snap split-core CT connected to EMM terminal CT_B on phase L2, and snap split-core CT connected to EMM terminal CT_C on phase L3 (Figure 91). Ensure that the "Load" indicator on the CT is oriented correctly.

Figure 91: CT Installation

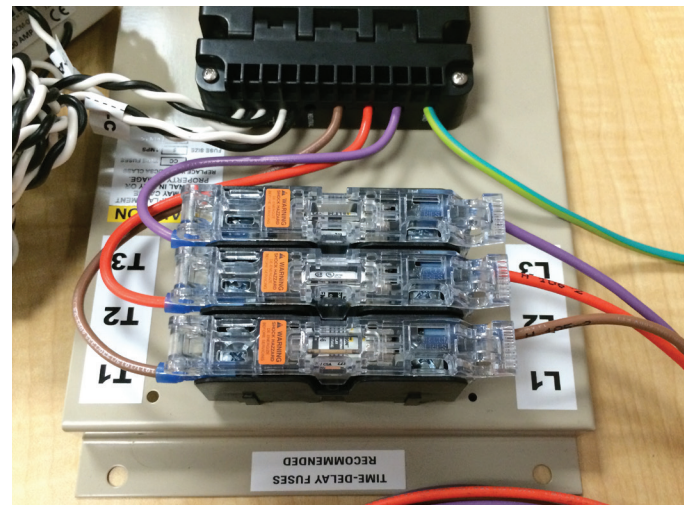


Connection of EMM to Line Voltage

(Not on Gateway-on-the-Go, Retrofit kit without EMM, or Centrifugal Chiller kits)

The EMM is connected to Line Voltage through the Fuse Block pre-installed on the mounting bracket. Using the provided 6" wiring harness, connect the "VinA" (Tan), "VinB" (Orange), and "VinC" (Violet) terminals on the EMM to the "Load" terminals on the Fuse Block (Figure 92).

Figure 92: EMM Connection to Fuse Block



For DPS and MPS Units, use the the provided 6 ft. wiring harness, to connect the corresponding “Line” terminals on the Fuse Block to the control panel Power Block 1 (PB1) terminals “T1”, “T2”, and “T3”, such that EMM terminal “VinA” (Tan) is connected to PB1-T1, “VinB”(Orange) is connected to PB1-T2, and “VinC” (Violet) is connected to PB1-T3 (Figure 93).

For RoofPak Units, use the provided 6 ft. wiring harness to connect the “Line” terminals on the Fuse Block to the control panel Power Block 11 (PB11) terminals “T1”, “T2”, and “T3”, such that EMM terminal “VinA” (Tan) is connected to PB11-T1, “VinB”(Orange) is connected to PB11-T2, and “VinC” (Violet) is connected to PB11-T3 (Figure 94). For SWT and SWP field verify connections to unit power block. Once all connections are made to the line voltage side of the EMM, close the hinged cover, and reinstall the screws. Figure 95 depicts an EMM with all high voltage terminations made and the hinged cover reinstalled.

Figure 93: DPS and MPS Fuse Block Connected to Line Voltage

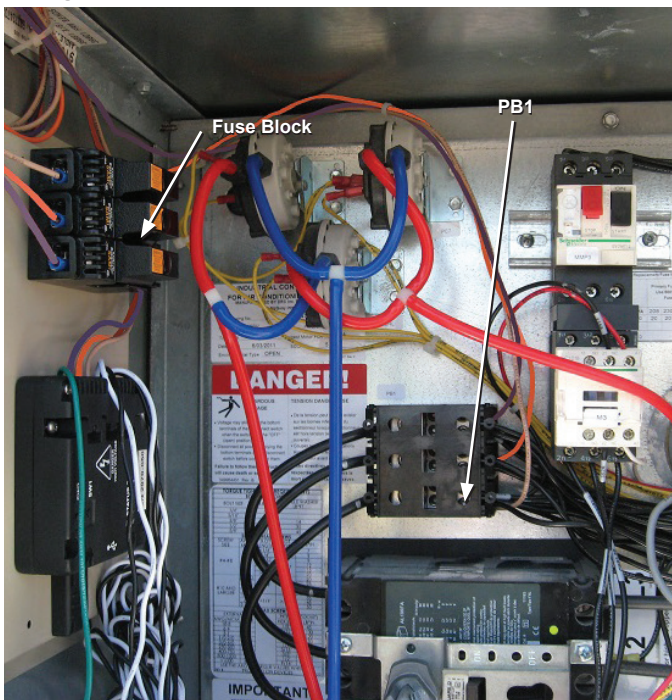


Figure 94: RoofPak Fuse Block Connection to Line Voltage

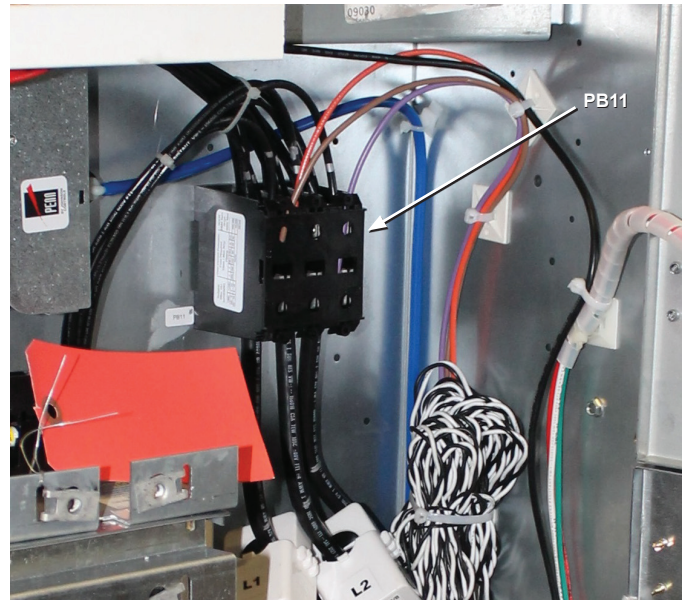
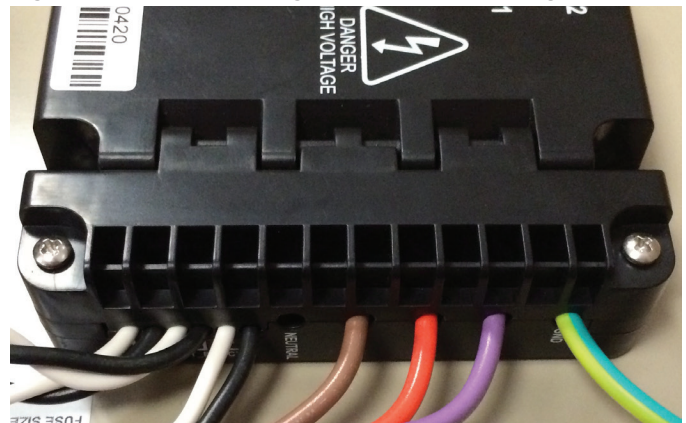


Figure 95: EMM Following Reinstallation of Hinged Cover



Connection of M2M Gateway and EMM to Ground

Both the M2M Gateway and EMM arrive with their respective ground conductors connected at the device. In the case of the M2M Gateway, one end of the ground conductor is connected to the mounting bracket, while in the case of the EMM, one end of the ground conductor is connected to the “Safety” terminal on the EMM itself. For both the M2M Gateway and EMM, the “free” end of the ground conductor should be connected to the nearest available grounding lug in the control enclosure.

Antenna Installation

NOTICE

On Gateways using cellular connectivity, both of the provided antennas are used.



DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all of the equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.



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 panel.



CAUTION

Sharp edges on sheet metal and fasteners can cause personal injury. This equipment must be installed, operated, and serviced only by an experienced installation company and fully trained personnel.

Mounting

The antennas provided with the kit (Figure 49) are omnidirectional, and have a swiveling base. The antenna flags are shipped loose and must be screwed into the coaxial connector of the antenna base. The antennas should be oriented to avoid interference from structures or other antennas. For initial installation, it is recommended to install the antennas on top of the rooftop unit, with enough clearance from the edge to avoid accidental contact or damage. The antenna is held in place by its magnetic base. More information about aiming antennas can be found in "Troubleshooting" on page 52.

Wiring of Antennas (If Applicable)

As described previously, the antenna cables must be fed from the outside of the unit through the control enclosure and up to the mounting bracket with the M2M Gateway.

The cellular connection is made by screwing the SMA coaxial connector onto the appropriate M2M SMA coaxial connectors, "CELL MAIN" and "CELL DIV". For Wi-Fi, the connection is made by screwing the antenna's SMA coaxial connector onto the provided reverse polarity SMA adapter, then screwing the reverse polarity SMA adapter onto the "Wi-Fi/BT" connection on the Gateway. (Figure 96).

Figure 96: Cellular and Wi-Fi Connections



CELL MAIN & CELL DIV



Wi-Fi/BT

LAN Installation (If Applicable)

LAN Connection

For LAN connection to the Gateway, connect the Ethernet patch cable from the network switch to the port labeled, "Eth0", on the Gateway (Figure 97).

NOTICE

The M2M Gateway will not communicate with the cloud if the LAN cable is connected to the incorrect Ethernet port on the Gateway.

Figure 97: LAN Connection



Wi-Fi Configuration

(Hardware Gateway)

The following procedures should be used to configure the SiteLine for Dedicated Equipment for Wi-Fi connectivity.

NOTICE

Wi-Fi is one of three possible methods of cloud connectivity. The method of connectivity is specified at the time of order. The M2M Gateway should only be configured for Wi-Fi connectivity if certain that Wi-Fi was specified at the time of order. If unsure, contact the salesperson or Daikin Applied Controls Technical Response Center. Prior to configuring the M2M Gateway for Wi-Fi, please refer to Appendix A of this document for required IT information.

1. Mount and connect the antenna per the instructions included in document section, “[Antenna Installation](#)” on [page 21](#).
2. Temporarily remove the factory-provided Ethernet patch cable from the “ETH1” port of the M2M Gateway. This cable will be reconnected when the configuration procedure is complete. NOTE: The opposite end of the factory-supplied Ethernet patch cable is connected to the unit controller, and this connection can remain in place during the configuration procedure.
3. Using a laptop computer and Ethernet patch cable, connect to the “ETH1” port of the M2M Gateway.
4. Navigate to the laptop’s Local Area Connection settings screen and change the IP subnet mask to 255.255.255.0 and set the IP address to be compatible with the default M2M Gateway ETH1 IP address of 192.168.1.40 (example compatible address: 192.168.1.45). For more information on how to change the computer’s IP settings, consult the Operating System’s “Help” files.
5. Temporarily disable the wireless adapter(s) on the computer, as these may prevent accessing the Gateway Configuration User Interface.
6. Open a web browser page and type, **192.168.1.40:5050**, then press enter.
7. When prompted, enter the User Name: “**service**”, then enter the unique password that was provided with the M2M Gateway hardware and click the Arrow to sign in ([Figure 98](#)).
 - a. If either the username or password is incorrect, a message displays to indicate the incorrect value ([Figure 99](#) and [Figure 100](#)).

If the username and password are correct, the Gateway Configuration User Interface displays a message indicating the login is successful and shows the ‘Status’ screen ([Figure 101](#)).

8. The Gateway Configuration User Interface has three tabs, ‘Status’, ‘Diagnostics’, and ‘Network’, which provide information about the M2M Gateway.
 - a. ‘Status’ indicates uptime, firmware, and memory information
 - b. ‘Diagnostics’ indicates memory usage and data transmission information

- c. ‘Network’ indicates network settings and status.

Because it has not yet been configured to communicate on the network, the Wi-Fi connection will indicate, “Sorry, No Connection Available” ([Figure 102](#)).

9. To configure the M2M Gateway Wi-Fi settings, click the ‘**Configuration Settings**’ link in the upper-right corner of the interface ([Figure 103](#)).
10. On the Wi-Fi tab of the Configuration screen ([Figure 104](#)), enter the following information provided by the facility IT Staff (refer to “[Pre-Start-up Form](#)” on [page 54](#) of this document for required IT information):
 - a. In the ‘Network Name’ field, enter the **SSID** (service set identifier).
 - b. In the ‘Wireless Security’ field, select the **appropriate security protocol** for the wireless network.
 - c. In the ‘Wireless Password’ field, enter the **password** for the wireless network.
 - d. In the ‘Key Management’ field, enter the **type of key management** used by the network.
 - e. If used, enter the **correct settings** for ‘Pairwise Ciphers’ and ‘Group Ciphers’.

Once all settings are entered, click the ‘**Apply**’ button at the bottom of the Wi-Fi tab. This will trigger a prompt to Reboot the Gateway ([Figure 105](#)).

11. Click the ‘Reboot’ button in the upper right corner of the screen, then click ‘OK’ in the popup message to confirm the reboot ([Figure 106](#)).
12. After the Gateway has finished rebooting, click the ‘Configuration Settings’ link and select the LAN tab ([Figure 107](#)).
13. If the M2M Gateway will use DHCP (Dynamic Host Configuration Protocol) for its network configuration parameters, select “**DHCP**” in the ‘Configure’ field, then click the ‘**Apply**’ button at the bottom of the LAN tab. This will trigger a prompt to Reboot the Gateway ([Figure 108](#)).
14. Click the ‘Reboot’ button in the upper right corner of the screen, then click ‘OK’ on the popup message to confirm the reboot ([Figure 106](#)).

NOTICE

With “DHCP” selected in the ‘Configure’ field, all other fields are disabled. Proceed to step 21.

15. If the M2M Gateway will use a Static IP Address, enter the following information provided by the facility IT Staff (refer to “[Pre-Start-up Form](#)” on [page 54](#) of this document for required IT information):
 - a. In the ‘Configure’ field, select “**Static**”.
 - b. In the ‘IP Address’ field, enter the required device **IP address**.
 - c. In the ‘Sub Mask’ field, enter the required network **Subnet Mask**.
 - d. In the ‘Gateway’ field, enter the required network

Gateway.

- e. If required by the network, enter the correct **settings** for 'DNS Servers' and 'Search Domains'.

Once all settings are entered, click the '**Apply**' button at the bottom of the LAN tab. This will trigger a prompt to Reboot the Gateway (Figure 105).

Click the 'Reboot' button in the upper right corner of the screen, then click 'OK' in the popup message to confirm the reboot (Figure 106).

Once the Gateway has finished rebooting, click the '**HOME**' link in the upper-left corner of the screen, then click the Network tab (Figure 108).

- a. Confirm the Wi-Fi icon in the middle of the screen indicates, "Connected" and the Signal Strength is Good or Excellent.
- b. Confirm the 'Status' under 'Wireless Settings' indicates, "OK".

If 21a and 21b are true, click the 'Logout' link (Figure 109) in the upper-right corner of the screen, then close the computer's browser. Disconnect the laptop computer and Ethernet cable used for the configuration procedure from the M2M Gateway and restore the laptop's Local Area Connection settings to the previous values. Procedure complete.

16. If 21a and 21b are not true, repeats steps 5 thru 18. For further assistance, review the "[Troubleshooting](#)" section of this document.

Figure 98: Login

Figure 99: Incorrect User ID

Figure 100: Incorrect Password

NOTICE

Be certain that the IT staff has allowed incoming and outgoing Internet traffic on TCP ports 80, 443, 3197, 3199, 5222, 5223, 8080 and 8883. IT Group must also create rules to allow access to the following:

- 8.8.8.8
- www.google.com
- iedata.daikinapplied.com
- **Two or more of the following NTP servers:**
 - us.pool.ntp.org
 - 0.pool.ntp.org
 - 1.pool.ntp.org
 - 2.pool.ntp.org
 - 3.pool.ntp.org
- iedata.daikinapplied.com on port 8883
- iedata.daikinapplied.com on port 3199
- 52.176.101.12
- 192.168.1.40
- 192.168.1.42
- 192.168.1.220
- 192.168.1.45
- 192.168.1.132

It can take up to two hours for an initial push of all unit data to the cloud.

Figure 101: Login Successful**Figure 102: User Interface – No Connection****Figure 103: Configure Settings Icon**

Figure 104: Wi-Fi Configuration

Figure 105: Reboot Request

Figure 106: Reboot Confirmation

Figure 107: LAN Configuration

DAIKIN Configuration Settings | Logout

HOME > CONFIGURATION Reboot

LAN WiFi Cellular

LAN No Connectivity

WiFi No Connectivity

Cell No Connectivity

LAN

Configure

Sub Mask

DNS Servers

IP Address

Gateway

Search Domains

Apply

Figure 108: Connection Successful

DAIKIN Configuration Settings | Logout

HOME > NETWORK Reboot

CONNECTED!

LAN No connectivity

WiFi Excellent (-35 dBm)

Cell No Connectivity

Status Diagnostics **Network**

Ethernet Settings

Status: Link down

Capacity: -

Download Bytes: -

Upload Bytes: -

Monitoring Status: Monitored

IP Address:

Wireless Settings

Status: OK

Capacity: -

Download Bytes: 10 B/s

Upload Bytes: 13 B/s

Monitoring Status: Monitored

IP Address: 10.42.0.188

Cellular Settings

Status: Link down

Capacity: -

Download Bytes: -

Upload Bytes: -

Monitoring Status: Monitored

IP Address:

Figure 109: Log Out

[Logout](#)

Ethernet LAN Configuration

(Hardware Gateway)

The following procedures should be used to configure the SiteLine for Dedicated Equipment for Ethernet LAN connectivity.

NOTICE

Ethernet LAN is one of three possible methods of cloud connectivity. The method of connectivity is specified at the time of order. The M2M Gateway should only be configured for Ethernet LAN connectivity if certain that Ethernet LAN was specified at the time of order. If unsure, contact the salesperson or Daikin Applied Controls Technical Response Center. Prior to configuring the M2M Gateway for Ethernet LAN, please refer to Appendix A of this document for required IT information.

1. Connect the Ethernet patch cable from the network switch to the port labeled, "ETH0", on the M2M Gateway.
2. Temporarily remove the factory-provided Ethernet patch cable from the "ETH1" port of the M2M Gateway. This cable will be reconnected when the configuration procedure is complete. NOTE: The opposite end of the factory-supplied Ethernet patch cable is connected to the unit controller, and this connection can remain in place during the configuration procedure.
3. Using a laptop computer and Ethernet patch cable, connect to the "ETH1" port of the M2M Gateway.
4. Navigate to the laptop's Local Area Connection settings screen and change the IP subnet mask to **255.255.255.0** and set the IP address to be compatible with the default M2M Gateway ETH1 IP address of **192.168.1.40** (example compatible address: 192.168.1.45). For more information on how to change the computer's IP settings, consult the Operating System's "Help" files.
5. Temporarily disable the wireless adapter(s) on the computer, as these may prevent accessing the Gateway Configuration User Interface.
6. Open a web browser page and type, **192.168.1.40:5050**, then press enter.
7. When prompted, enter the User Name: "**service**", then enter the unique password that was provided with the M2M Gateway hardware and click the Arrow to sign in (Figure 110).
 - a. If either the username or password is incorrect, a message displays to indicate the incorrect value (Figure 111 and Figure 112).

If the username and password are correct, the Gateway Configuration User Interface displays a message indicating the login is successful and shows the 'Status' screen (Figure 113 on page 45).

The Gateway Configuration User Interface has three tabs, 'Status', 'Diagnostics', and 'Network', which provide information about the M2M Gateway (Figure 113 on page 45).

- a. 'Status' indicates uptime, firmware, and memory information
- b. 'Diagnostics' indicates memory usage and data

transmission information

- c. 'Network' indicates network settings and status.

Because it has not yet been configured to communicate on the network, the Ethernet LAN connection will indicate, "Sorry, No Connection Available" (Figure 114 on page 45).

8. To configure the M2M Gateway Ethernet LAN settings, click the 'Configuration Settings' link in the upper-right corner of the interface (Figure 115 on page 46).
9. Click the LAN tab of the Configuration screen (Figure 116 on page 46).
10. If the M2M Gateway will use DHCP (Dynamic Host Configuration Protocol) for its network configuration parameters, select "DHCP" in the 'Configure' field, then click the 'Apply' button at the bottom of the LAN tab. This will trigger a prompt to Reboot the Gateway (Figure 117 on page 46).
11. Click the 'Reboot' button in the upper right corner of the screen, then click 'OK' in the popup message to confirm the reboot (Figure 118 on page 46).

NOTICE

With "DHCP" selected in the 'Configure' field, all other fields are disabled. Proceed to step 17.

12. If the M2M Gateway will use a Static IP Address, enter the following information provided by the facility IT Staff (refer to Appendix A of this document for required IT information):
 - a. In the 'Configure' field, select "Static".
 - b. In the 'IP Address' field, enter the required device IP address.
 - c. In the 'Sub Mask' field, enter the required network Subnet Mask.
 - d. In the 'Gateway' field, enter the required network Gateway.
 - e. If required by the network, enter the correct settings for 'DNS Servers' and 'Search Domains'.
16. Once all settings are entered, click the '**Apply**' button at the bottom of the LAN tab. This will trigger a prompt to Reboot the Gateway (Figure 117 on page 46).
17. Click the 'Reboot' button in the upper right corner of the screen, then click 'OK' in the popup message to confirm the reboot (Figure 118 on page 46).

Click the 'HOME' link in the upper-left corner of the screen, then click the Network tab (Figure 119 on page 47).

- a. Confirm the LAN icon in the middle of the screen indicates, "Connected".
- b. Confirm the 'Status' under 'Ethernet Settings' indicates, "OK".

If 18a and 18b are true, click the 'Logout' link (Figure 120 on page 47) in the upper-right corner of the screen, then close the computer's browser. Disconnect the laptop computer and Ethernet cable used for the configuration procedure from the M2M Gateway, reconnect the factory-supplied Ethernet patch cable to the "ETH1" port of the M2M Gateway, and restore the laptop's Local Area Connection settings to the previous values. Procedure complete.

18. If 18a and 18b are not true, repeats steps 6 thru 18. For further assistance, review the 'Troubleshooting' section of this document.

Figure 110: Login

Figure 111: Incorrect User ID

NOTICE

Be certain that the IT staff has allowed incoming and outgoing Internet traffic on TCP ports 80, 443, 3197, 3199, 5222, 5223, 8080 and 8883.

IT Group must also create rules to allow access to the following:

- 8.8.8.8
- www.google.com
- iedata.daikinapplied.com
- Two or more of the following NTP servers:
 - us.pool.ntp.org
 - 0.pool.ntp.org
 - 1.pool.ntp.org
 - 2.pool.ntp.org
 - 3.pool.ntp.org
- iedata.daikinapplied.com on port 8883
- iedata.daikinapplied.com on port 3199
- 52.176.101.12
- 192.168.1.40
- 192.168.1.42
- 192.168.1.220
- 192.168.1.45
- 192.168.1.132

It can take up to two hours for an initial push of all unit data to the cloud.

Figure 112: Incorrect Password

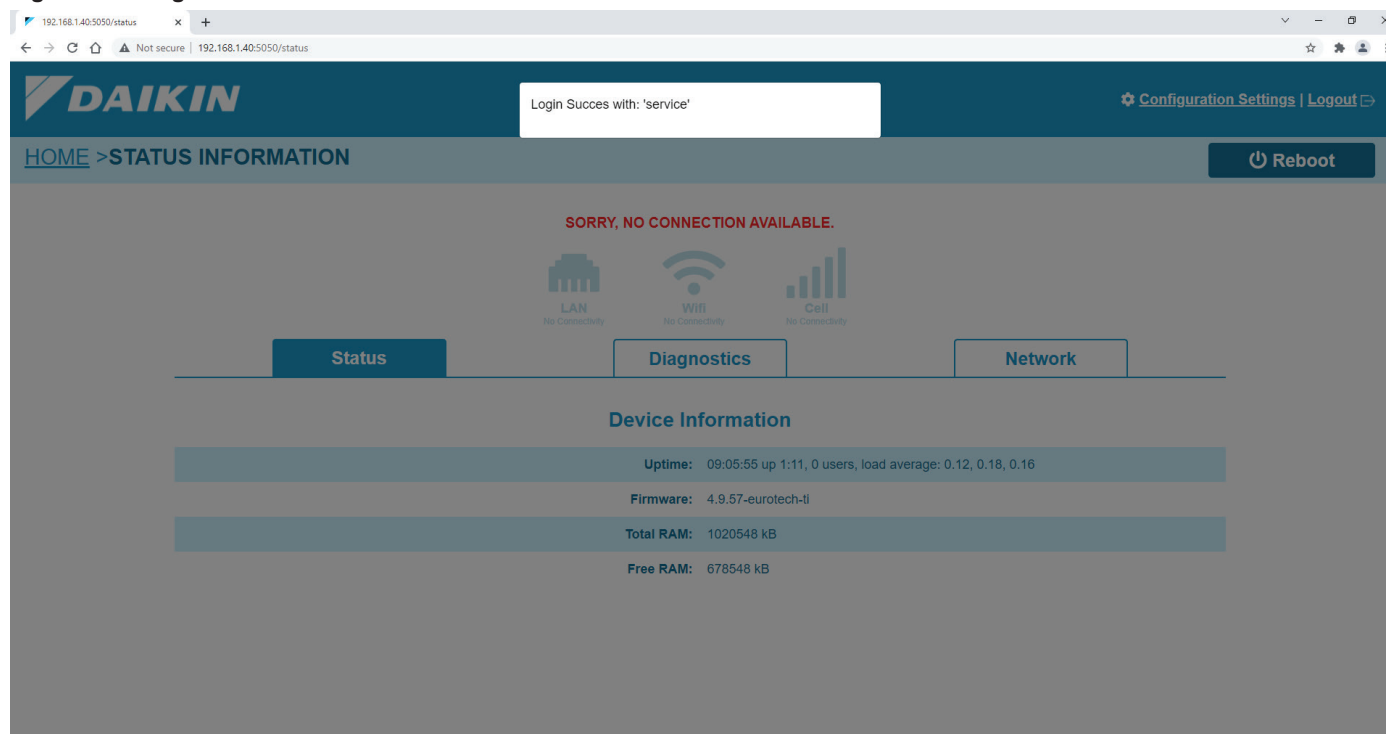
Figure 113: Login Successful**Figure 114: User Interface – Not Connected**

Figure 115: Configure Settings Icon



Figure 116: LAN Configuration

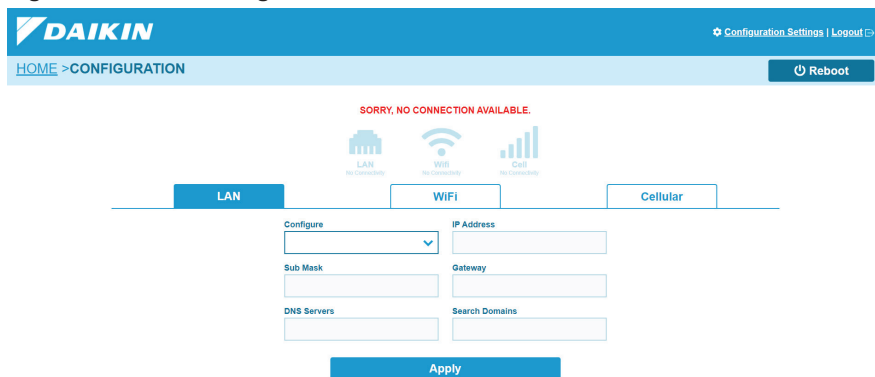


Figure 117: Reboot Request

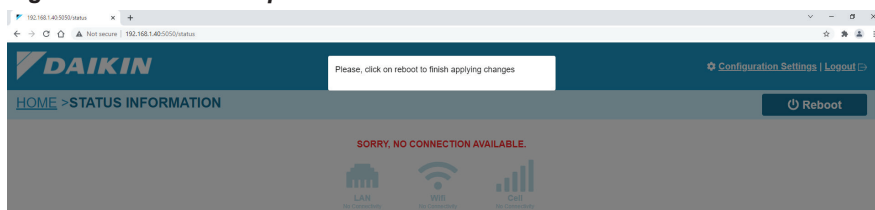


Figure 118: Reboot Confirmation

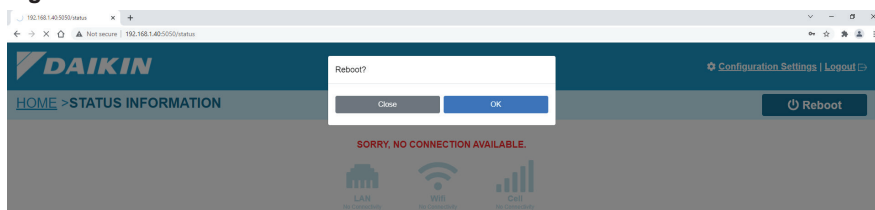


Figure 119: Connection Successful

The screenshot displays the DAIKIN network configuration web interface. At the top, the DAIKIN logo is on the left, and 'Configuration Settings | Logout' is on the right. Below the logo, a breadcrumb trail shows 'HOME > NETWORK'. A 'Reboot' button is located in the top right corner. The main section is titled 'CONNECTED!' in green. Below this, three connection status icons are shown: 'LAN Connected' (with a router icon), 'Wifi No connectivity' (with a Wi-Fi icon), and 'Cell No Connectivity' (with a cellular signal icon). Three tabs are visible: 'Status', 'Diagnostics', and 'Network'. The 'Status' tab is active, showing three columns of settings: Ethernet Settings, Wireless Settings, and Cellular Settings. Each column lists status, capacity, download/upload bytes, monitoring status, and IP address.

| Ethernet Settings | | Wireless Settings | | Cellular Settings | |
|--------------------|-------------|--------------------|-----------|--------------------|-----------|
| Status: | OK | Status: | Link down | Status: | Link down |
| Capacity: | - | Capacity: | - | Capacity: | - |
| Download Bytes: | 10 B/s | Download Bytes: | - | Download Bytes: | - |
| Upload Bytes: | 13 B/s | Upload Bytes: | - | Upload Bytes: | - |
| Monitoring Status: | Monitored | Monitoring Status: | Monitored | Monitoring Status: | Monitored |
| IP Address: | 10.42.0.188 | IP Address: | | IP Address: | |

Figure 120: Log Out

[Logout](#)

Configuring HMI for SiteLine

In order for a MicroTech II chiller model WCC, WDC, WMC, or WSC to exchange data with the M2M Gateway, the API (Application Programming Interface) Server on the HMI (Human-Machine Interface) must be enabled. To enable the API Server:

1. Press the 'Operator' icon (Figure 121) in the lower-right corner of the HMI (Figure 122).
2. Press the 'API Server Enable' field.
3. When prompted, enter the Technician-level password using the numeric keypad that appears on the HMI. Once the password is entered, press the 'Enter' button.
4. Pressing the 'API Server Enable' field again will open a drop-down menu. Select, "Enable," from the list, then press the 'Enter' button to confirm the selection.
5. The 'API Server Enable' field on the HMI should now indicate, "Enabled" (Figure 122). Procedure complete.

Figure 121: The 'Operator' Icon



Figure 122: The 'API Server Enable' Field on the HMI

Unit Status: Cool Auto - Remote Switch
Compressor 1 Status: Off: Evap Flow/Re-circulate
Compressor 2 Status: Off: Evap Flow/Re-circulate

Leaving Water: 79.3 °F
Water Setpoint: 45.6 °F
Date & Time: November 30, 2018 10:54:50 AM

Chiller Control: Auto
Switches

Set a different password level.
Password Level Required: None

Language

- English
- Español (Spanish)
- 日本語 (Japanese)
- 繁體中文 (Chinese-Traditional)
- Français (French)

Display Units

- Imperial Units (°F, PSI)
- SI Units (°C, kPa)

Documents

Display Document
Copy Document
Upload Documents

Load
Copy
Upload

Password Level

Current Password Level: Technician
Password Timer: 14394 sec
Set Password Level: Set
Clear Password Level: Clear

Display

Display Timeout: 10 Minutes

API Server

API Server Enable: Enabled

Calibrate Touch Screen

Calibrate

Home
Evaporator
Compressor
Condenser
Expansion
Tower
Settings
Trend
Alarm
Operator

Commissioning the Gateway in the Cloud

NOTICE

The SiteLine User Interface works best with Chrome and Firefox browsers. If using Internet Explorer, compatibility mode must be disabled in the browser, as it blocks key HTML 5 features of SiteLine. For instructions on disabling compatibility mode, please reference Internet Explorer's help files.

In order for data to be populated on a unit's detail pages in the cloud-based user interface, it must first be commissioned to the cloud application. To complete this process, first log into the SiteLine user interface at <https://siteline.daikinapplied.com/Account/Login> (Figure 123). If you have not been given access to the unit Gateway, please contact Daikin Applied. Once logged in, the user interface displays a building list and map of all assigned units (Figure 124). Under the 'Buildings' list (Figure 125), locate the building with the new unit and click the drop-down arrow (Figure 126). Locate the desired unit from the list and click the unit tag, which opens the Unit Details screen (Figure 127). Click the 'Commissioning Procedure' button. A message will display indicating that the commissioning procedure must be completed within 30 days (Figure 128). Clicking the 'OK' button opens the 'Commissioning Procedures' screen for the unit (Figure 129). Commissioning of the unit can be completed within SiteLine or outside of the SiteLine application (traditional paper form). Either method commissions the SiteLine application in the cloud. If the unit will be commissioned outside of SiteLine, simply click the checkbox for 'Commission has been performed outside SiteLine Application', then navigate to the bottom of the 'General' tab and click, 'Submit'. If using SiteLine to commission the unit itself, complete all of the fields on each tab, then navigate to the bottom of the 'General' tab and click, 'Submit'.

It can take up to 2 hours for all data to be pushed to the cloud and indexed. However, some data should begin to appear within 15 minutes. To check for connectivity, wait for 15 minutes, then navigate to each of the sections of the Unit Details screen and verify that some unit data has begun to appear. If no data is present, contact Daikin Applied for additional support.

Figure 123: Login

The login form is titled 'Email Address' and 'Password'. It contains a text input field for the email address with the value 'john.doe@daikinapplied.com'. Below it is a password input field with masked characters '.....'. There is a checkbox labeled 'Remember me'. At the bottom, there are two buttons: 'Log In' and 'Forgot Password?'.

Figure 124: Buildings List and Map View

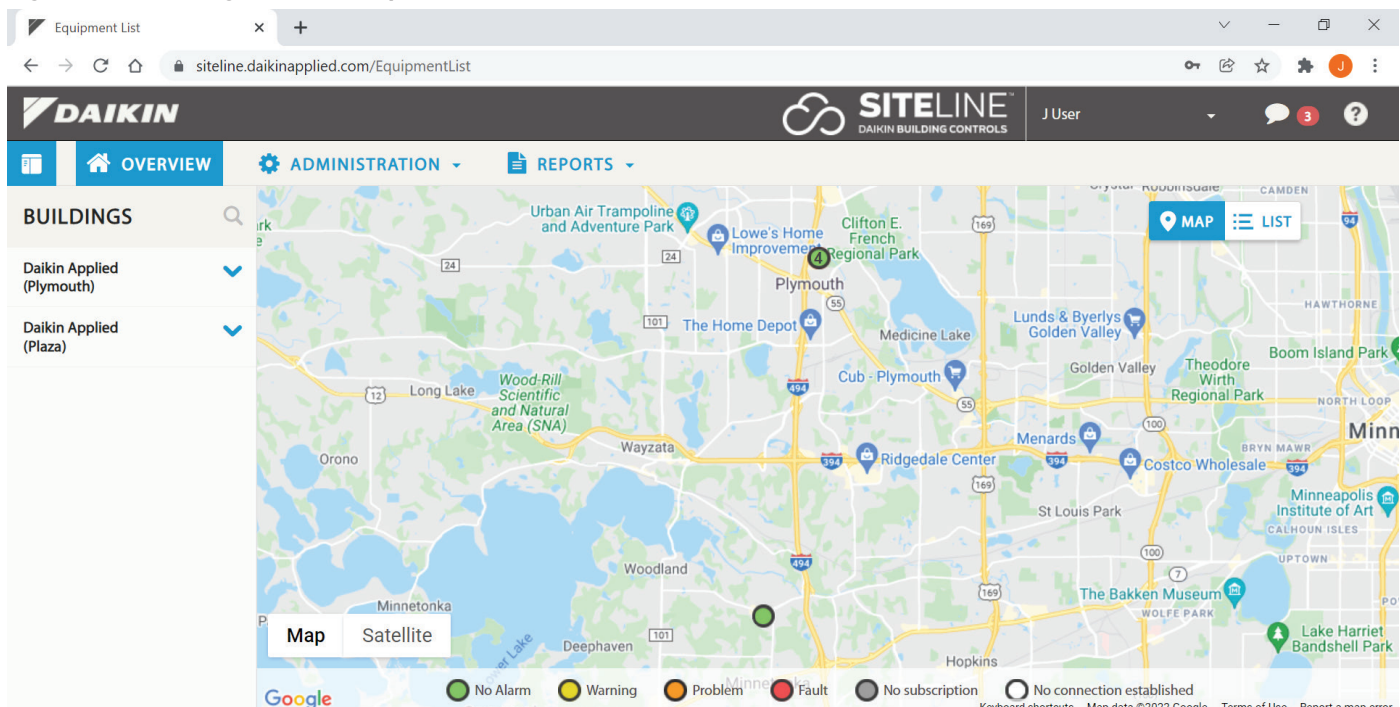


Figure 125: Buildings List

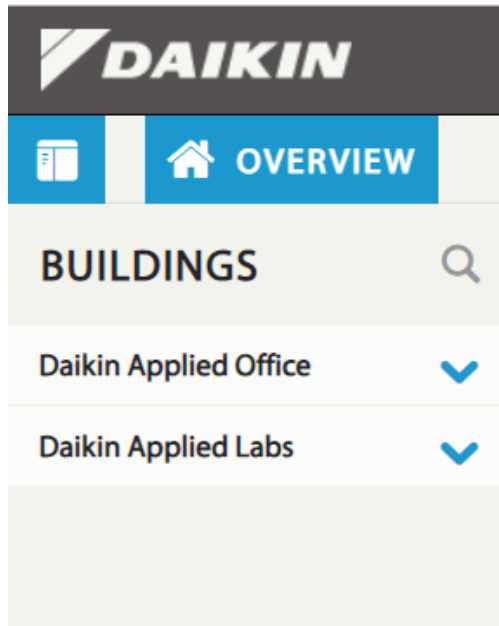


Figure 126: Unit List

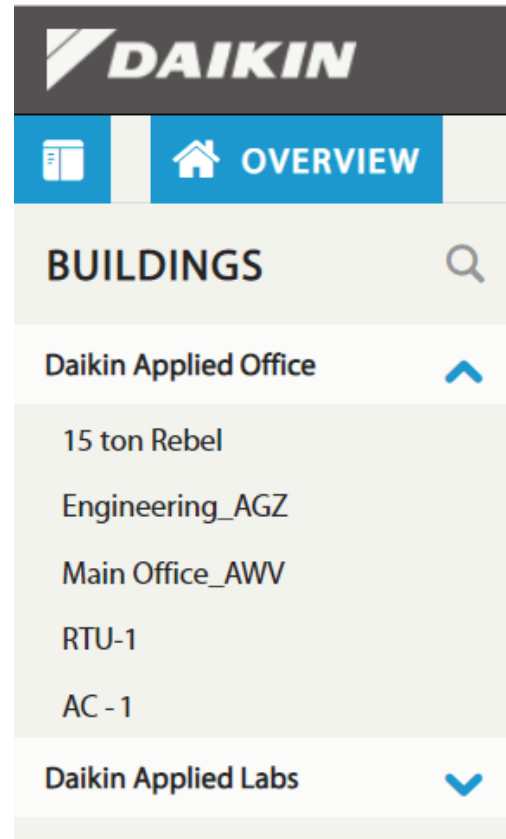


Figure 127: Unit Details

CH-6

✓ Commissioning Procedure

● Unit has not been commissioned

Standard Subscription
expiration date 05/02/2022 is active

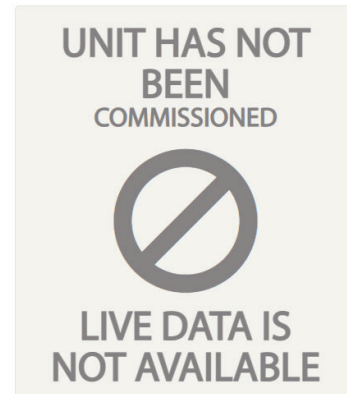


Figure 128: Thirty Day Message

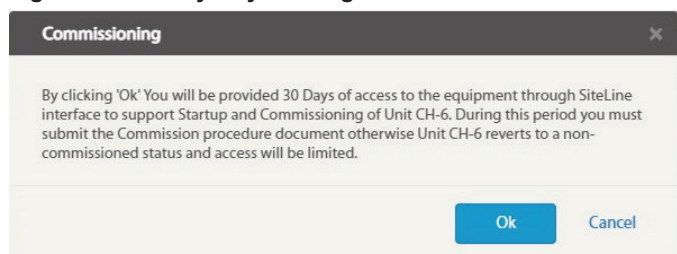


Figure 129: Commissioning Procedures Screen

Before Start-up Refrigeration System Design Controls Start - Up Non Microtech Readings Control Setpoints Heat Recovery General

Metric Units
English Units
Next >

Commission has been performed outside SiteLine Application ☐

Commission Date

II. Pre Start-Up Checklist

Pre Start-Up Checklist, All NO checks require an explanation under "Description". Please check yes or no.

| | YES | NO |
|--|-----------------------|-----------------------|
| A. Is the unit free of visible shipping damage, corrosion or paint problems? | <input type="radio"/> | <input type="radio"/> |
| B. Is unit installed level? | <input type="radio"/> | <input type="radio"/> |
| C. Does the unit meet all location, installation and service clearances per IM Bulletin? | <input type="radio"/> | <input type="radio"/> |
| D. Has thermostat bulb been properly installed in the well? | <input type="radio"/> | <input type="radio"/> |
| E. Are all set screws on all pulleys, bearings, and fans tight? | <input type="radio"/> | <input type="radio"/> |
| F. Does electrical service correspond to unit nameplate? | <input type="radio"/> | <input type="radio"/> |
| Volts <input type="text"/> Hertz <input type="text"/> Phase <input type="text"/> | | |
| G. Has electrical service been checked for proper phasing at each circuit power terminal block? | <input type="radio"/> | <input type="radio"/> |
| H. Has unit been properly grounded? | <input type="radio"/> | <input type="radio"/> |
| I. Has a fused disconnect and fuses or breaker been sized per product manual and installed per local code? | <input type="radio"/> | <input type="radio"/> |
| J. Are all electrical power connections tight? | <input type="radio"/> | <input type="radio"/> |
| K. Have compressor heaters and oil separator heaters been operating for 24 hours prior to start-up? | <input type="radio"/> | <input type="radio"/> |

Troubleshooting

Cellular Signal Verification

The following procedures should be used to verify the cellular signal strength for the SiteLine Gateway.

1. Mount and connect the cellular antenna per the instructions included in document section, [“Antenna Installation” on page 21](#).
2. Temporarily remove the factory-provided Ethernet patch cable from the “ETH1” port of the M2M Gateway. This cable will be reconnected when the configuration procedure is complete. NOTE: The opposite end of the factory-supplied Ethernet patch cable is connected to the unit controller, and this connection can remain in place during the configuration procedure.
3. Using a laptop computer and Ethernet patch cable, connect to the “ETH1” port of the M2M Gateway.
4. Navigate to the laptop's Local Area Connection settings screen and change the IP subnet mask to 255.255.255.0 and set the IP address to be compatible with the default M2M Gateway ETH1 IP address of 192.168.1.40 (example compatible address: 192.168.1.45). For more information on how to change the computer's IP settings, consult the Operating System's “Help” files.
5. Temporarily disable the wireless adapter(s) on the computer, as these may prevent accessing the Gateway Configuration User Interface.
6. Open a web browser page and type, 192.168.1.40:5050, then press enter.
7. When prompted, enter the User Name: “service”, then enter the unique password that was provided with the M2M Gateway hardware and click ‘Sign In’.
8. On the Status Tab of the Home Screen, verify the Cell icon indicates “Connected”, and the signal strength is in the Good or Excellent range ([Figure 130](#)).

Figure 130: Connected/Signal Strength

The screenshot displays the DAIKIN Gateway Configuration User Interface. At the top, the DAIKIN logo is on the left, and 'Configuration Settings | Logout' is on the right. Below the header, a navigation bar shows 'HOME > CONFIGURATION' and a 'Reboot' button. The main content area is titled 'CONNECTED!' and features three status icons: LAN (No Connectivity), WiFi (No Connectivity), and Cell (Excellent (-57 dBm)). Below these icons are three tabs: LAN, WiFi, and Cellular. The Cellular tab is selected, showing a configuration form with fields for IP Address, Sub Mask, Gateway, DNS Servers, and Search Domains. An 'Apply' button is at the bottom.

Potential issues:

Gateway does not power up (LED does not illuminate)

- Verify the unit terminal board
- Verify that power supply wires are properly installed to unit terminal block
- Verify that power supply is properly connected to the Gateway
- Contact Daikin Applied

Energy Management Module does not power up

- Verify USB cable connection to Gateway and Energy Management Module
- Verify that Gateway has power
- Contact Daikin Applied

Cell connection cannot be established

- Check antenna connection to magnetic base
- Check CELL MAIN and CELL DIV ports on Gateway
- Check signal strength through the Gateway Configuration User Interface
- Contact Daikin Applied

Wi-Fi connection cannot be established

- Check antenna connection to magnetic base
- Check antenna connection to Wi-Fi/BT port on Gateway
- Check signal strength through Gateway Configuration User Interface
- Verify Wi-Fi IP addressing, ESSID, and login credentials match customer supplied Wireless LAN requirements
- Connect to Wi-Fi network and try to ping the Gateway's IP address to prove the Gateway is on the network.
- Contact Daikin Applied

LAN connection cannot be established

- Verify LED activity on USB to Ethernet adapter
- Verify LAN addressing through the Gateway configuration interface
- Connect to LAN and try to ping the Gateway's IP address to prove the Gateway is on the network
- Contact Daikin Applied

MicroTech III or MicroTech 4 Data Not Showing Up In User Interface

- Confirm Ethernet cable is plugged into 'ETH1' port on Gateway
- Confirm Ethernet cable is plugged into 'TIP' port on MicroTech III or MicroTech 4 controller
- Check for LED activity on Gateway's 'ETH1' port
- Verify IP address of the MicroTech III or MicroTech 4 controller is 192.168.1.42
 - Menu Path (Chillers): View/Set Unit -> Ctrlr IP Setup
 - Menu Path (RTU's): Service Menus -> IP Set Up
- Contact Daikin Applied

Appendix

Hardware Gateway Wi-Fi or Hardwired LAN Ethernet Connection

Pre-Start-up Form

NOTICE

This form must be completed in collaboration with site IT staff prior to configuring the Gateway for Wi-Fi or Hardwired LAN Ethernet connectivity.

This form is not required for Cellular connectivity.

The M2M Gateway is capable of communicating via cellular connection, Wi-Fi connection, or wired Ethernet LAN connection. For both Wi-Fi and wired Ethernet LAN, the Gateway supports DHCP to have an IP address assigned automatically, or it can be field programmed with a static IP address.

If either Wi-Fi or wired Ethernet LAN is used for cloud connectivity, the customer's LAN Administrator should review and supply the following information (as necessary) **prior to a technician going to the jobsite and commissioning the Gateway.** A CAT 5E Ethernet communication cable with an extra:

feet of coiled cable and a RJ45 connector on the free end has been run per local codes from the customer's LAN to the unit main control box of each unit with an M2M Gateway.

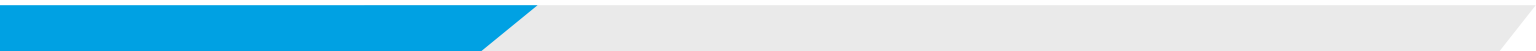
1. IT Group must allow incoming and outgoing internet traffic on TCP ports 80, 443, 3197, 3199, 5222, 5223, 8080 and 8883.
2. IT Group must also create rules to allow access to the following:
 - 8.8.8.8
 - www.google.com
 - iedata.daikinapplied.com
 - Two or more of the following NTP servers:
 - us.pool.ntp.org
 - 0.pool.ntp.org
 - 1.pool.ntp.org
 - 2.pool.ntp.org
 - 3.pool.ntp.org
 - iedata.daikinapplied.com on port 8883
 - iedata.daikinapplied.com on port 3199
 - 52.176.101.12
 - 192.168.1.40
 - 192.168.1.42
 - 192.168.1.220
 - 192.168.1.45
 - 192.168.1.132

3. If the Gateway will be required to use a static IP address the following information will need to be supplied:

| | | |
|---------------------------------|--|---------------|
| Internal LAN Static IP Address: | | required |
| IP Subnet Mask: | | required |
| Default Gateway: | | required |
| DNS Server (primary): | | required |
| DNS Server (secondary): | | if applicable |
| Proxy Server IP Address: | | if applicable |
| Proxy Server Port Number: | | if applicable |

4. For Wi-Fi Ethernet connections the following information will be required as well:

| | |
|--------------------------|--|
| Wi-Fi network SSID: | |
| Wi-Fi network password: | |
| Wi-Fi encryption type: | |
| Wi-Fi Mode: | |
| Preferred Wi-Fi channel: | |



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