Mitsubishi Electric Trane US
1340 Satellite Blvd Suwanee, GA 30024

BUILDING CONNECT +

PANEL INSTALLATION MANUAL

INTENDED AUDIENCE

List of intended audience members:

Installers

System Engineers

Date 9/24/2020

Version 1.1.0

Specifications are subject to change without notice.

© 2020 Mitsubishi Electric Trane HVAC US LLC

DOCUMENT HISTORY

Version	Issued By	Issue Date	Comments
1.0.0	Billy Briscoe	1/6/2020	
1.1.0	Dylan Thiery	9/24/2020	

Specifications are subject to change without notice.

© 2020 Mitsubishi Electric Trane HVAC US LLC

TABLE OF CONTENTS

1. Safety precautions 4
1.1. General precautions 4
1.2. Precautions for unit installation 5
1.3. Precautions for electrical wiring 6
1.4. Precautions for relocating or repairing the unit 7
1.5. Additional precautions 7
1.6. Contents 7
1.7. Installation 8
2. Appendix – Wiring details 12

Specifications are subject to change without notice.

© 2020 Mitsubishi Electric Trane HVAC US LLC

1. SAFETY PRECAUTIONS

►Thoroughly read the following safety precautions prior to installation.

►Observe these precautions carefully to ensure safety.

►After reading this manual, pass the manual on to the end user to retain for future reference.

►The user should keep this manual for future reference and refer to it as necessary. This manual should be made available to those who repair or relocate the units. Make sure that the manual is passed on to any future air conditioning system user.

►All electrical work must be performed by qualified personnel. :

⚠ WARNING	:indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	:indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
CAUTION	:addresses practices not related to personal injury, such as product and/or property damage.

1.1.GENERAL PRECAUTIONS

⚠ WARNING

Do not install in areas where large amounts of oil, steam, organic solvents, or corrosive gases (such as ammonia, sulfuric compounds, or acids), or areas where acidic/alkaline solutions or special chemical sprays are used frequently. These substances may significantly reduce the performance and corrode the internal parts, resulting in electric shock, malfunction, smoke, or fire.

To reduce the risk of short circuits, current leakage, electric shock, malfunction, smoke, or fire, do not with water or any other liquid.

To reduce the risk of electric shock, malfunction, smoke, or fire, do not touch with wet fingers.

To reduce the risk of injury or electric shock, before spraying a chemical around the panel, stop the operation and cover the panel.

To reduce the risk of burns, do not touch the electrical parts with bare hands during and immediately after operation.

Specifications are subject to change without notice.

© 2020 Mitsubishi Electric Trane HVAC US LLC

To reduce the risk of injury, keep children away while installing, inspecting, or repairing the panel.

Test runs, inspection, and service must be performed by qualified personnel in accordance with this manual. Incorrect use may result in injury, electric shock, malfunction, or fire.

If you notice any abnormality, stop the operation and turn off the panel. Continuing the operation may result in electric shock, malfunction, or fire.

Properly install all required covers to keep moisture and dust out of the panel. Dust accumulation and the presence of water may result in electric shock, smoke, or fire.

To reduce the risk of frostbite, burns, injury, or electric shock, keep the equipment out of the reach of children.

⚠ CAUTION

To reduce the risk of fire or explosion, do not place flammable materials or use flammable sprays around the panel.

To reduce the risk of electric shock or malfunction, do not touch the touch panel, switches, or buttons with a sharp object.

To avoid injury from broken glass, do not apply excessive force to the glass parts.

To reduce the risk of injury, electric shock, or malfunction, avoid contact with the sharp edges of certain parts.

To reduce the risk of injury, wear protective gear when working on the panel.

Wear protective gear when working on the panel. High-voltage parts pose a risk of electric shock, and high-temperature parts pose a risk of burns.

1.2.PRECAUTIONS FOR UNIT INSTALLATION

⚠ WARNING

Do not install the panel where there is a risk of flammable gas leaks. If flammable gas accumulates around the panel, it may ignite and cause a fire or explosion.

Properly dispose of the packing materials. Plastic bags pose a suffocation hazard to children.

Take appropriate safety measures against earthquakes to prevent the panel from causing injury.

To prevent injury, install the panel on a flat surface strong enough to support its weight.

Specifications are subject to change without notice.
© 2020 Mitsubishi Electric Trane HVAC US LLC

⚠ CAUTION

To reduce the risk of short circuits, current leakage, electric shock, malfunction, smoke, or fire, do not install the panel in a place exposed to water or in a condensing environment.

The panel must be installed by qualified personnel according to the instructions detailed in this manual. Improper installation may result in electric shock or fire.

1.3. PRECAUTIONS FOR ELECTRICAL WIRING

⚠ WARNING

To reduce the risk of malfunction, smoke, fire, or damage to the panel, do not connect the power cable to the BACnet MS/TP terminal blocks.

To reduce the risk of malfunction, smoke, fire, or damage to the panel, do not apply a power supply voltage in excess of that specified.

Properly secure the cables in place and provide adequate slack in the cables so as not to stress the terminals. Improperly connected cables may break, overheat, and cause smoke or fire.

To reduce the risk of injury or electric shock, switch off the main power before performing electrical work.

Electrical work must be performed by qualified personnel in accordance with local regulations and the instructions provided in this manual. Only use specified cables and dedicated circuits. Inadequate power source capacity or improper electrical work will result in electric shock, malfunction, or fire.

To reduce the risk of current leakage, overheating, smoke, or fire, use properly rated cables with adequate current carrying capacity.

Proper grounding must be provided by qualified personnel. Do not connect the protective ground wire to a gas pipe, water pipe, lightning rod, or telephone wire. Improper grounding may result in electric shock, smoke, fire, or malfunction due to electrical noise interference.

⚠ CAUTION

To reduce the risk of short circuits, electric shock, or malfunction, keep wire pieces and sheath shavings out of the terminal block.

To reduce the risk of short circuits, current leakage, electric shock, or malfunction, keep the cables out of contact with controller edges.

To reduce the risk of electric shock, malfunction, or fire, seal the gap between the cable and the end of the conduit tube with putty.

To reduce the risk of injury, do not touch the burrs of the knockout holes.

Specifications are subject to change without notice.
© 2020 Mitsubishi Electric Trane HVAC US LLC

1.4. PRECAUTIONS FOR RELOCATING OR REPAIRING THE UNIT

⚠ WARNING

The panel must be repaired or moved only by qualified personnel. Do not disassemble or modify the panel. Improper installation or repair may result in injury, electric shock, or fire.

1.5. ADDITIONAL PRECAUTIONS

CAUTION

To avoid damage to the panel, use appropriate tools to install, inspect, or repair the controller.

Take appropriate measures against electrical noise interference when installing the controller in hospitals or radio communication facilities. Inverter, high-frequency medical, or wireless communication equipment as well as power generators may cause the air conditioning system to malfunction. The air conditioning system may also adversely affect the operation of these types of equipment by creating electrical noise.

To avoid malfunction, do not bundle power cables and signal cables together or place them in the same metallic conduit.

To avoid damage to the panel, do not overtighten the screws.

To avoid deformation and malfunction, do not install the panel in direct sunlight or where the ambient temperature may exceed 40°C (104°F) or drop below 0°C (32°F).

1.6. CONTENTS

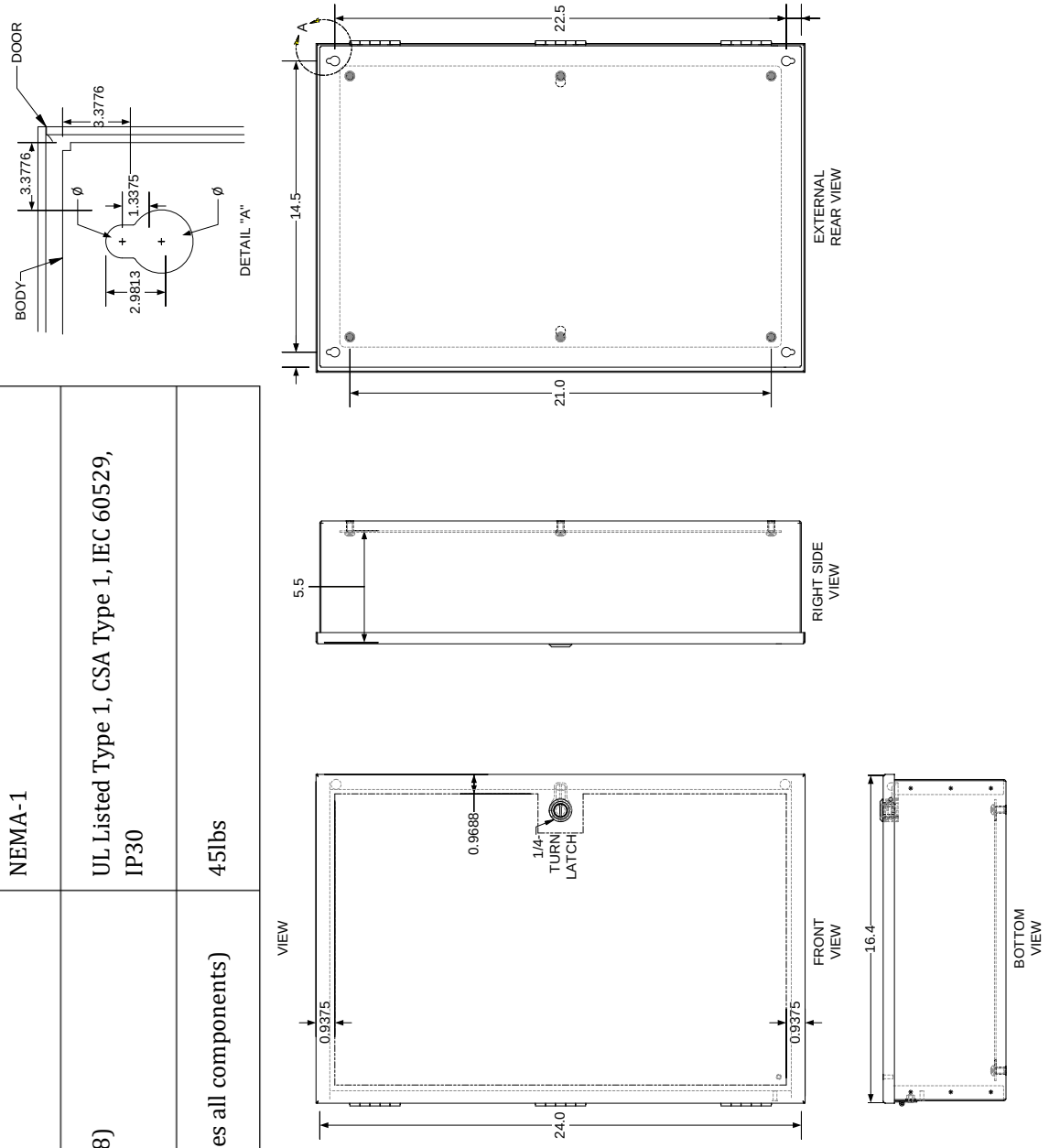
- BCP-50 Panel
- 2 Cellular Antenna Paddles

Specifications are subject to change without notice.

© 2020 Mitsubishi Electric Trane HVAC US LLC

1.7.INSTALLATION

1. Mount the panel on wall using appropriate fasteners based on weight, wall material, and local code requirements by a qualified technician. All dimensions shown in diagram are in inches.

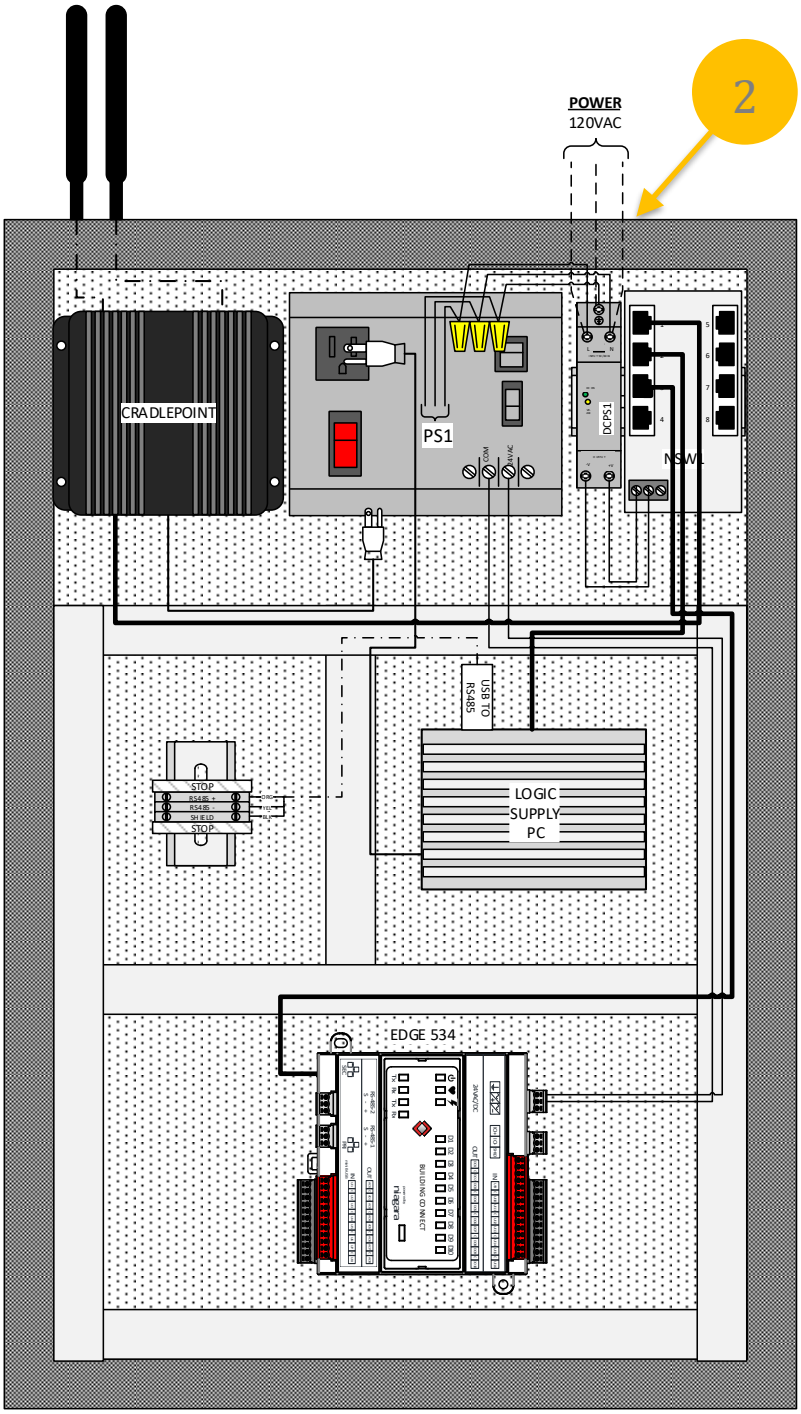


Rating	NEMA-1
Industry Standards - (IS8)	UL Listed Type 1, CSA Type 1, IEC 60529, IP30
Shipping Weight (includes all components)	45lbs

Specifications are subject to change without notice.

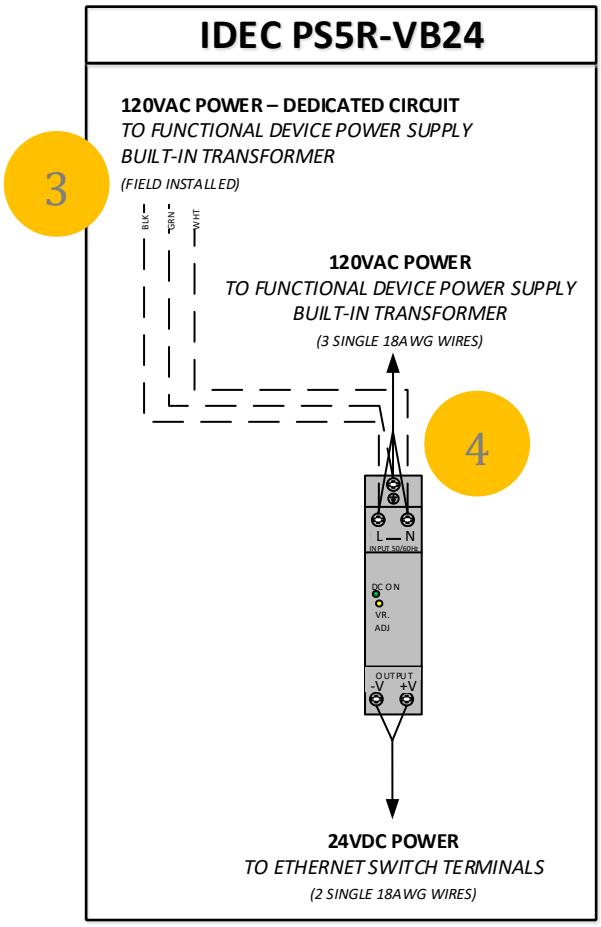
© 2020 Mitsubishi Electric Trane HVAC US LLC

2. Drill hole above Power Supply



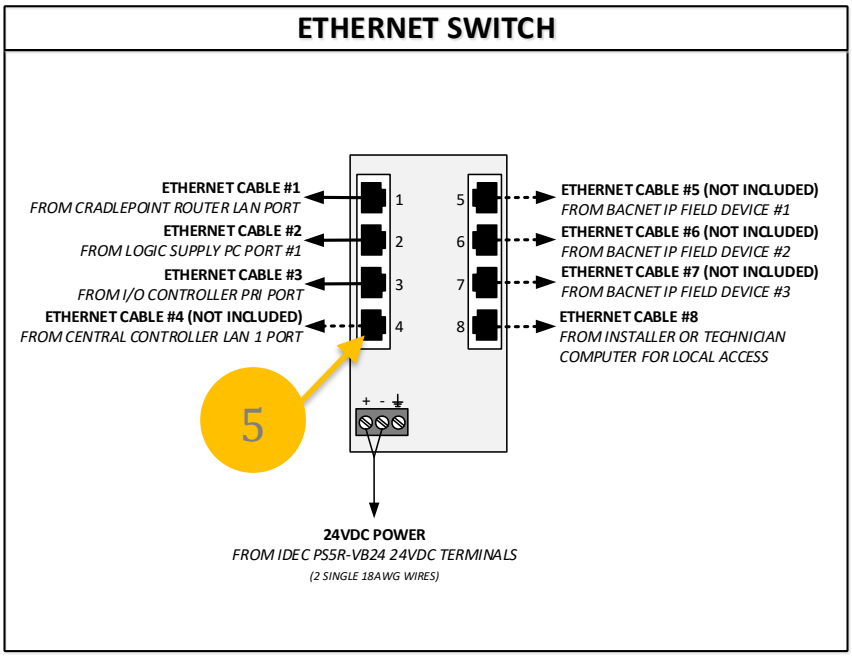
Specifications are subject to change without notice.
© 2020 Mitsubishi Electric Trane HVAC US LLC

3. Pull a dedicated 120VAC, 15A circuit to the panel
4. Connect 120VAC under the terminals on the 120VAC side of the IDEC PS5R-VB24.

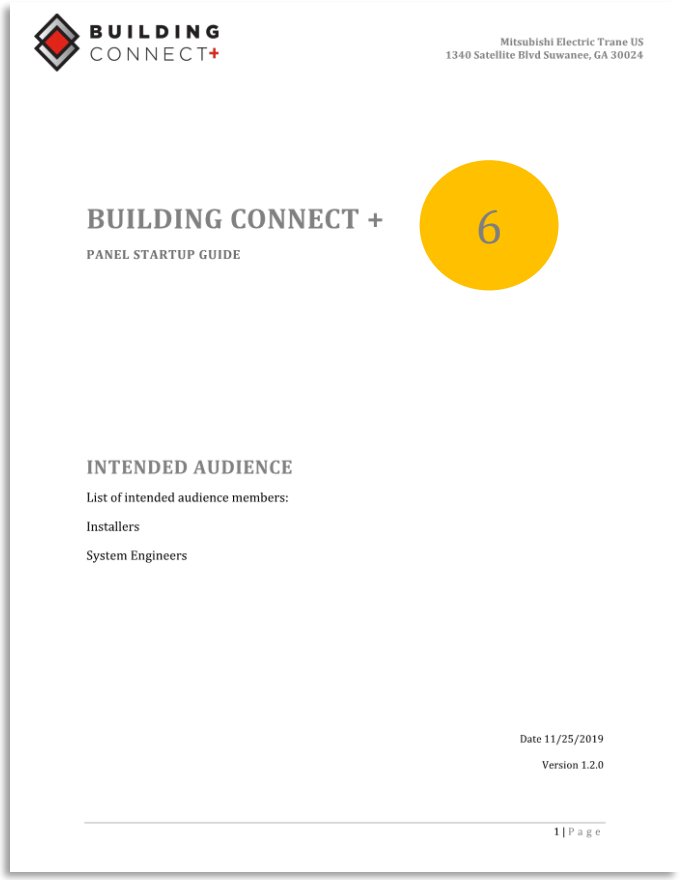


Specifications are subject to change without notice.
© 2020 Mitsubishi Electric Trane HVAC US LLC

5. Connect Ethernet from Centralized Controller to the network switch port #4



6. Refer to the "Building Connect + Panel Startup Guide" to complete the software and cloud configuration of the system


BUILDING CONNECT+

Mitsubishi Electric Trane US
1340 Satellite Blvd Suwanee, GA 30024

BUILDING CONNECT +

6

PANEL STARTUP GUIDE

INTENDED AUDIENCE

List of intended audience members:

Installers

System Engineers

Date 11/25/2019

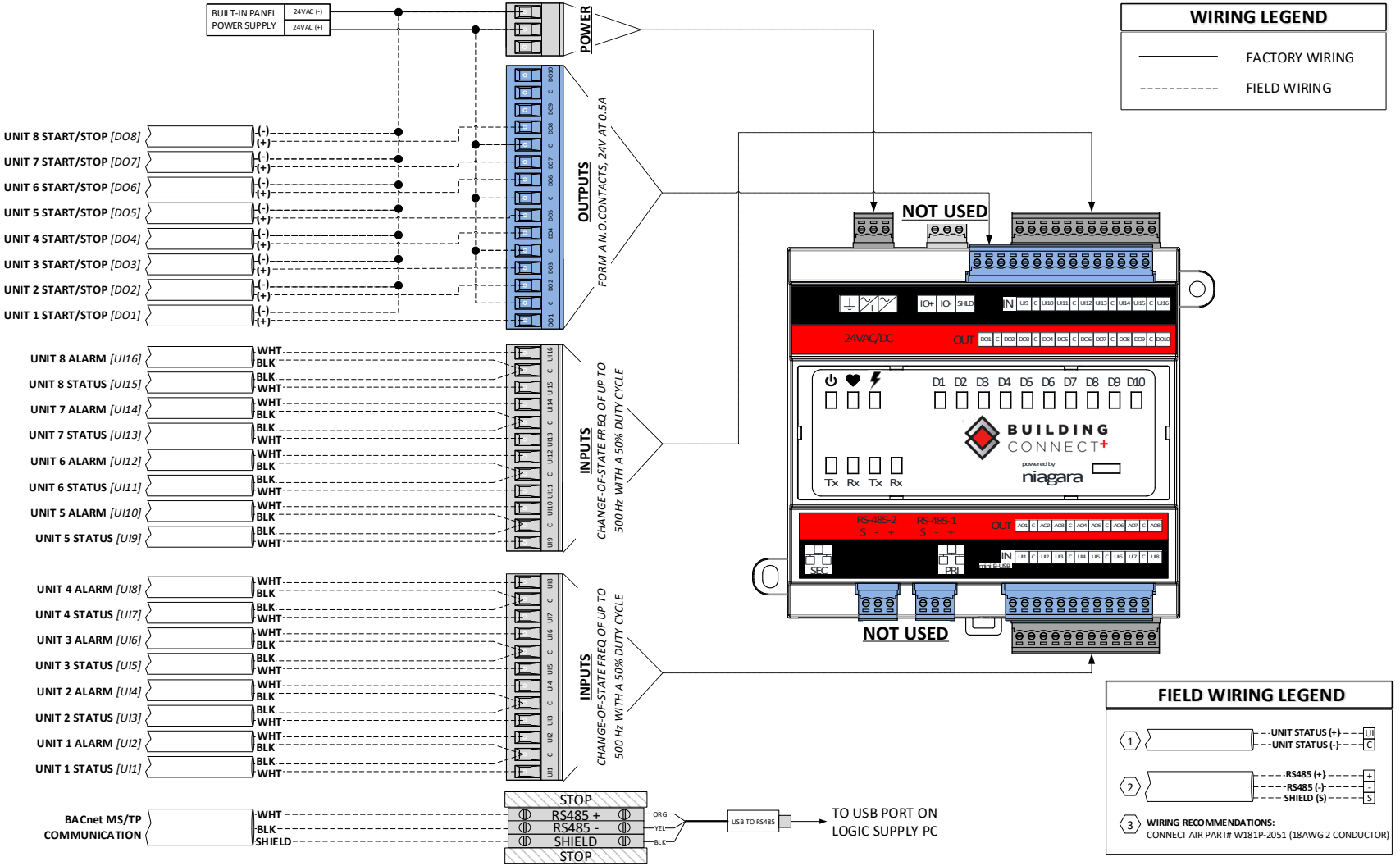
Version 1.2.0

1 | Page

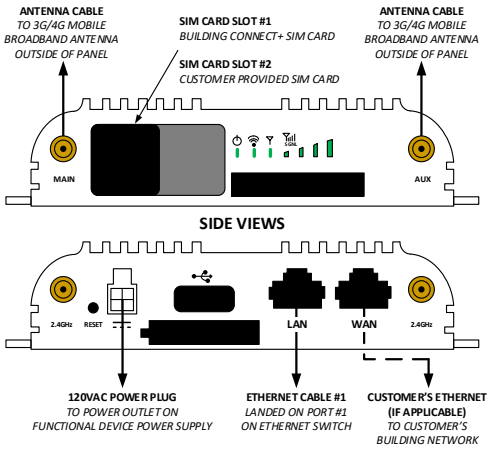
Specifications are subject to change without notice.

© 2020 Mitsubishi Electric Trane HVAC US LLC

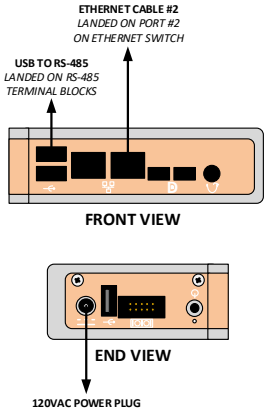
2. APPENDIX – WIRING DETAILS



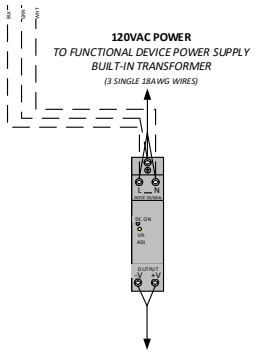
CRADLEPOINT ROUTER



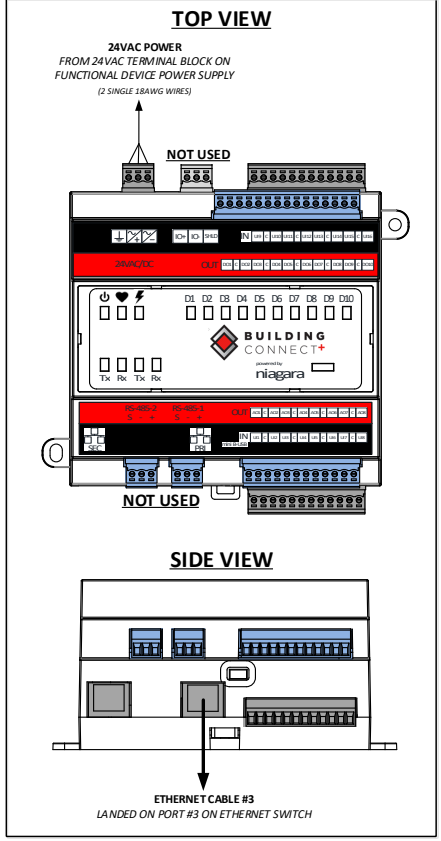
LOGIC SUPPLY PC



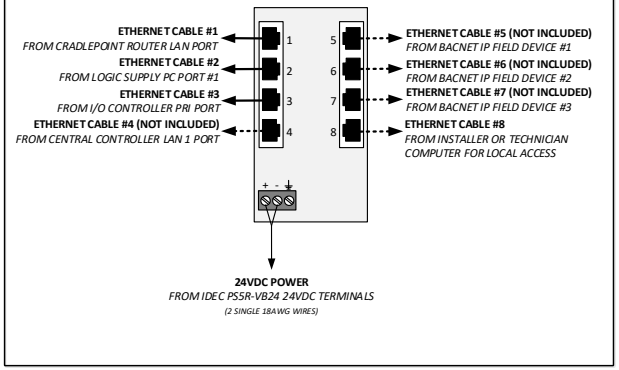
IDEC PS5R-VB24



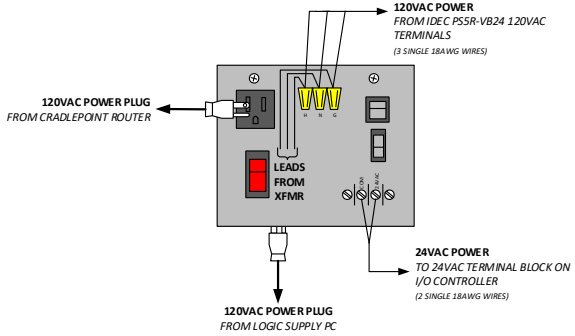
I/O CONTROLLER



ETHERNET SWITCH



FUNCTIONAL DEVICE POWER SUPPLY



WIRING LEGEND

FACTORY WIRING

FIELD WIRING