

Prefabricated Data Center IT Module

User Manual



90kW All-in-One Module



110kW, 150kW, & 205kW
Single Bay Module



240kW Dual Bay Module



500kW Multi Bay Module

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1. Safety Information

- Refer to Safety Guides of electrical components, Schneider Electric #990-6023B, 990-2984-001, 80043-055-09, PB2.1-2002 before beginning any service on this product.
- Keep areas in front of and behind racks clear of all obstacles for ease of exit in case of emergency.
- All electrical changes and maintenance to and within the IT Module must be performed by a licensed electrician.
- All maintenance and service must be done in accordance with recommendations for individual pieces of equipment. In addition, module maintenance should be done in accordance with industry best practice. Failure to comply could result in electrical shock which could cause personal injury or death.
- The IT module must not be installed near open flame per local codes and ASHRAE specifications.
- Follow all safety instructions for each of the components inside the IT Module as well as all national and local codes.
- The IT Module is not intended for human occupancy other than the short duration of access to carry out maintenance.
- Consult your local planning office for applicable codes and to review necessary permitting and guidelines for your specific site.
- Service of refrigeration system must be completed by a licensed HVAC technician.

2. Transportation and Installation

The following Section provides general guidelines on initial transport and installation of the IT module.

2.1 Lifting Module

Each IT module is equipped with multiple lifting points. The location and number of these point is dependent upon the particular module in question, please refer to specific module for location and configuration. Care should be taken to minimize contact between the lifting hardware and the module in order to avoid damage to either the module structure or appearance. The lifting mechanism is to be arranged to balance the load at each lifting point. Module must be lifted in a manner so that it stays level.



Figure 1a- Lifting IT Module with spreader bars: two crane option



Figure 1b- Lifting IT Module with spreader bars: one crane option

2.2 Guidelines for Initial Transport

Adhere to local and national codes. All transport, lifting and installation operations must be done by certified personnel.

Before transport, ensure that

- UPS Batteries are removed from the UPS (All-in-one only)
- Any loose items are tied down or removed
- Outside ground connections are removed
- Outside tie-downs are removed
- All doors are secured
- No other outside attachments remain
- For the All-in-One Module, the condensers are to be transported on a separate truck
- Estimated dimensions, weight, and center of gravity will be available at time of final equipment specification. Final dimensions, weight, and center of gravity will be available at time of shipment.

Note: If module is to be relocated, contact Schneider Electric for assistance. Be sure the above conditions are satisfied.

2.3 Movement of Modules On-Site

The IT Module must be fixed in place to withstand uplifting and horizontal forces (such as wind loading). The recommended method of fixing is to use the anchor bracket which is fixed to

2.4 Joining Modules

The IT Module must be fixed in place to withstand uplifting and horizontal forces (such as wind loading). The recommended method of fixing is to use the anchor bracket which is fixed to

2.5 Anchoring

The IT Module must be fixed in place to withstand uplifting and horizontal forces (such as wind loading). The recommended method of fixing is to use the anchor bracket which is fixed to the supporting structure by hold-down bolts. The hardware required to attach the module is:

- Standard base bracket
- Fasteners
 - Nut
 - Split washer
 - Plain washer

2.6 Power Connections

Cabling must be designed for the actual application (i.e. above ground / underground, conduit, ladder, etc.). Installation must comply with all national and local codes. The IT Module requires electrical service to match the expected load and circuit breaker ratings.

2.7 Cooling Connections

2.7.1 Chilled Water

Where cooling water piping is required, refer to the Site Preparation Guide for piping connection details. All piping should be installed in accordance with national and local codes.

Piping Size: 4" (DN100) flanged schedule 40 steel
Flange Bolt Size: 5/8" (16mm) Grade 5 bolt

2.7.2 Natural Free Cooling (NFC)

Where cooling water piping is required, refer to the Site Preparation Guide for piping connection details. All piping should be installed in accordance with national and local codes.

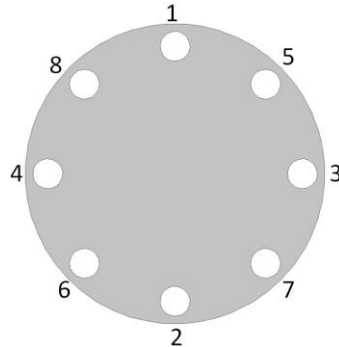


Figure 2- Torque pattern for chilled water pipe

2.8 Electrical Grounding and Lightning Protection

The IT module must be grounded in accordance with national and local codes. Provisions for grounding are included on the outside of each module enclosure. Lightning protection must be considered based on national and local code requirements as well as the specific site plan.

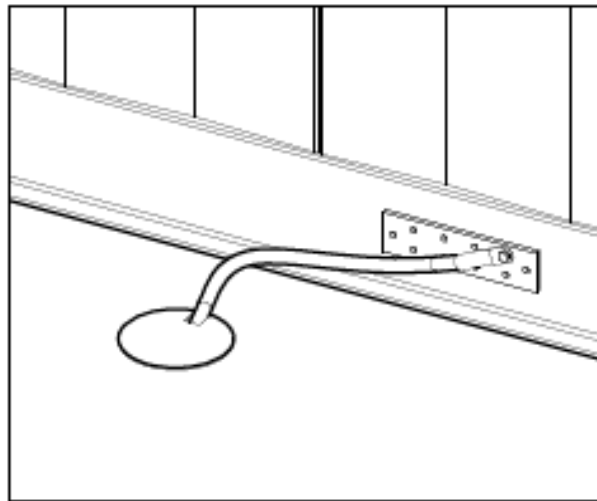


Figure 3- Connections for electrical grounding (May be located inside of grounding connection panel)

2.9 Optional Lobby Installation

The IT module must be grounded in accordance with national and local codes. Provisions for grounding are included on the outside of each module enclosure.

3. Additional Considerations

3.1 Commissioning and Operation

Schneider Electric field service personnel or third party affiliate will be available for initial equipment, cooling system, security system, and fire suppression system startup.

Maintenance to individual equipment must be done in accordance with manufacturer's recommendations and requirements. Refer to each individual maintenance manual for details

3.2 Equipment Cut Sheets

Refer to drawing submittal package which includes piping layout/schematic, electrical one line diagram, and equipment layout.

3.3 Equipment User Manuals

Equipment user manuals will be supplied on a CD or can be supplied electronically.

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