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As standards, specifications, and designs change from time to time, information contained in this guide may be subject to change without notice.

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Safety

Important Safety Instructions — SAVE THESE INSTRUCTIONS

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service or maintain it. The following safety messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a “Danger” or “Warning” safety message indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages with this symbol to avoid possible injury or death.

⚠️ DANGER

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

Failure to follow these instructions will result in death or serious injury.

⚠️ WARNING

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

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠️ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Failure to follow these instructions can result in injury or equipment damage.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this type of safety message.

Failure to follow these instructions can result in equipment damage.

Please Note

Electrical equipment should only be installed, operated, serviced, and maintained by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.
Safety Notices When Installing Equipment

Read and adhere to the following important safety considerations when working with this equipment. Follow all local and national regulations when handling refrigerants.

⚠️ DANGER
HAZARD OF ELECTRICAL SHOCK, EXPLOSION, OR ARC FLASH
• Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E or CSA Z462.
• This equipment must be installed and serviced by qualified personnel only.
• Turn off all power supplying this equipment before working on or inside the equipment.
• Always use a properly rated voltage sensing device to confirm power is off.
• Replace all devices, doors, and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

⚠️ WARNING
HAZARD FROM MOVING PARTS
Keep hands, clothing, and jewelry away from moving parts. Check the equipment for foreign objects before closing the doors and starting the equipment.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠️ WARNING
HAZARD OF EQUIPMENT FALLING OVER
• Use two or more persons at all times to move or turn this equipment.
• Always push, pull, or turn while facing the front and rear of this equipment. Never push, pull, or turn while facing the sides of this equipment.
• Slowly move this equipment across uneven surfaces or door thresholds.
• Lower leveling feet to floor when this equipment is at rest.
• Lower leveling feet and attach joining brackets to adjacent racks when this equipment is in final position.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

 NOTICE
FREEZE HAZARD
External water piping must have adequate freeze protection and must be correctly applied based on local climate conditions and best practices. Install insulation and electric heat tracing (not supplied) on all exposed piping.

Failure to follow these instructions can result in equipment damage.
NOTICE

STATIC ELECTRICITY HAZARD

Circuit boards contained within this unit are sensitive to static electricity. Use one or more electrostatic-discharge devices while handling the board.

Failure to follow these instructions can result in equipment damage.
General Information

Overview

Save These Instructions

This manual contains important instructions that must be followed during the installation of this equipment.

Manual Updates

Schneider Electric™ policy is one of continuous technological innovation and the company reserves the right to amend any data herein without prior notice. The images shown in this manual are for descriptive purposes only and they may differ from specific models that are selected.

**NOTE:** Unit images and component identification information are examples only. The final configuration of the unit may change according to the different options.

Check for updates to this manual on the Schneider Electric Web site, [www.schneider-electric.com/support](http://www.schneider-electric.com/support). Select the **Download Documents and Software** link under the **Support** tab and enter the manual part number or SKU for your equipment in the search field. See the back cover of this manual for the part number.

Cross-Reference Symbol Used in This Manual

See another section of this document or another document for more information on this subject.

Receiving and Inspecting the Equipment

Your InRow air conditioner has been tested and inspected for quality assurance before shipment from Schneider Electric. Carefully inspect both the exterior and interior of the equipment immediately upon receipt to ensure that the equipment has not been damaged during transit.

Verify that all parts ordered were received as specified and that the equipment is the correct type, size, and voltage.

Filing a Claim

If damage is identified on receipt of the equipment, note the damage on the bill of lading and file a damage claim with the shipping company. Contact Schneider Electric Worldwide Customer Support at one of the numbers listed on the Web page on the back page of this manual for information on how to file a claim with the shipping company. The shipping claim must be filed at the receiving end of the delivery.

**NOTE:** In case of shipping damage, do not operate the equipment. Keep all packaging for inspection by the shipping company and contact Schneider Electric.
Environmental Considerations

Wind
The equipment is not intended for installation in areas of high wind. Consult your sales representative for information on any applicable options for installation in areas of high wind.

Earthquakes
The equipment is not intended for installation in areas at risk of seismic activity. Consult your sales representative for information on any applicable options for installation in areas at risk of seismic activity.

ATEX
The equipment is not intended for use in potentially explosive atmospheres and does not comply with Directive 2014/34 / EU (ATEX).

Corrosion
The equipment is not intended for use in a potentially corrosive environment.

Storing the Cooling Unit Before Installation

<table>
<thead>
<tr>
<th>NOTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAMAGE FROM EXPOSURE</td>
</tr>
<tr>
<td>Leaving the equipment uncovered and exposed to possible damage from the environment will void the factory warranty.</td>
</tr>
<tr>
<td>Failure to follow these instructions can result in equipment damage.</td>
</tr>
</tbody>
</table>

If the equipment will not be installed immediately, store it in a safe place, protected from the elements.
## Moving the Equipment

### Moving the Equipment Through Door Openings

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HAZARD OF EQUIPMENT FALLING OVER</strong></td>
</tr>
<tr>
<td>• Use two or more persons at all times to move or turn this equipment.</td>
</tr>
<tr>
<td>• Always push, pull, or turn while facing the front and rear of this equipment. Never push, pull, or turn while facing the sides of this equipment.</td>
</tr>
<tr>
<td>• Slowly move this equipment across uneven surfaces or door thresholds.</td>
</tr>
<tr>
<td>• Lower leveling feet to floor when this equipment is at rest.</td>
</tr>
<tr>
<td>• Lower leveling feet and attach joining brackets to adjacent racks when this equipment is in final position.</td>
</tr>
<tr>
<td><strong>Failure to follow these instructions can result in death, serious injury, or equipment damage.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DAMAGE TO EQUIPMENT OR PERSONNEL</strong></td>
</tr>
<tr>
<td>Do not tip the unit to fit it through a door. If the unit is tipped, it must be placed on a level surface and left in the vertical position for 24 hours.</td>
</tr>
<tr>
<td><strong>Failure to follow these instructions can result in injury or equipment damage.</strong></td>
</tr>
</tbody>
</table>

See *Dimensions and Weights, page 16*. If any door opening does not meet minimum requirements, the opening will need to be modified.
Moving the Equipment to the Final Location

⚠️ WARNING

HAZARD OF EQUIPMENT FALLING OVER
- Use two or more persons at all times to move or turn this equipment.
- Always push, pull, or turn while facing the front and rear of this equipment. Never push, pull, or turn while facing the sides of this equipment.
- Slowly move this equipment across uneven surfaces or door thresholds.
- Lower leveling feet to floor when this equipment is at rest.
- Lower leveling feet and attach joining brackets to adjacent racks when this equipment is in final position.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠️ CAUTION

DAMAGE TO EQUIPMENT OR PERSONNEL

When using a forklift to move the equipment, leave it on the pallet and make sure to lift only from the bottom.

Failure to follow these instructions can result in injury or equipment damage.

Select the appropriate tools for moving the equipment. Each site will have different needs and considerations.

Forklift

Pallet Jack
## Inventory

### Package Contents

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>InRow SC</td>
<td>1</td>
<td>3</td>
<td>Key</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Accessory box (contains all items listed below)</td>
<td>1</td>
<td>4</td>
<td>Standoff (Exhaust tubes only)</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>LCDI power cord (ACSC 100 only)</td>
<td>1</td>
<td>8</td>
<td>Bracket</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>M4 x 0.7 mm hex nut (use with clamps and standoffs)</td>
<td>20</td>
<td>9</td>
<td>Clamp</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>M6 x 1.0 mm nylock nut (use with bracket)</td>
<td>1</td>
<td>10</td>
<td>Ceiling tile adapter</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>IEC 309 power cord (ACSC101 only)</td>
<td>1</td>
<td>11</td>
<td>Wire clips</td>
<td>3</td>
</tr>
<tr>
<td>6*</td>
<td>Power cord (ACSC101 - for use in China only)</td>
<td>1</td>
<td>12</td>
<td>Strain relief for power cord</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Flex duct tube</td>
<td>3</td>
<td>12*</td>
<td>Bolt-down kit (not shown)</td>
<td>1</td>
</tr>
</tbody>
</table>

*Use the appropriate power cord for your location.
# Component Identification

## External Components

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Intake air duct</td>
</tr>
<tr>
<td>2</td>
<td>Removable rear door</td>
</tr>
<tr>
<td>3</td>
<td>Side panel latch</td>
</tr>
<tr>
<td>4</td>
<td>Removable side panel</td>
</tr>
<tr>
<td>5</td>
<td>Rear casters (non-swiveling)</td>
</tr>
<tr>
<td>6</td>
<td>Front casters (swiveling)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Adjustable leveling foot</td>
</tr>
<tr>
<td>8</td>
<td>Display interface</td>
</tr>
<tr>
<td>9</td>
<td>Removable front door</td>
</tr>
<tr>
<td>10</td>
<td>Door lock</td>
</tr>
<tr>
<td>11</td>
<td>Exhaust air duct</td>
</tr>
</tbody>
</table>
Internal Components

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Condenser coil</td>
</tr>
<tr>
<td>2</td>
<td>Condenser fans</td>
</tr>
<tr>
<td>3</td>
<td>Compressor</td>
</tr>
<tr>
<td>4</td>
<td>Condensate pan floats</td>
</tr>
<tr>
<td>5</td>
<td>Evaporator fans</td>
</tr>
<tr>
<td>6</td>
<td>Evaporator coil</td>
</tr>
<tr>
<td>7</td>
<td>TXV expansion valve</td>
</tr>
<tr>
<td>8</td>
<td>Refrigeration filter/drier</td>
</tr>
<tr>
<td>9</td>
<td>Hot gas bypass valve</td>
</tr>
<tr>
<td>10</td>
<td>Power supply</td>
</tr>
<tr>
<td>11</td>
<td>Condensate pump</td>
</tr>
<tr>
<td>12</td>
<td>High voltage box</td>
</tr>
<tr>
<td>13</td>
<td>Standard washable 1/2-in. air filter</td>
</tr>
<tr>
<td>14</td>
<td>User interface panel</td>
</tr>
</tbody>
</table>

InRow® SCACSC100, ACSC101

Inventory
Room Preparation

During the design of the data center, consider ease of entry for the equipment, floor loading factors, and accessibility to ducting and wiring.

Ensure the room is insulated to minimize the influence of exterior heat loads. Reduce fresh air to the minimum required to comply with local and national codes and regulations. Fresh air imposes extreme load variation on the cooling equipment from summer to winter and causes increased system operating costs.

Incoming Power Supply Requirements

The equipment must be grounded. Electrical service must conform to national and local electrical codes and regulations.
Weights and Dimensions

Dimensions

NOTE: Dimensions shown in mm (in.).

Weights

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpacked weight</td>
<td>165.92 kg (365 lb)</td>
</tr>
<tr>
<td>Packed weight</td>
<td>216 kg (475.2 lb)</td>
</tr>
</tbody>
</table>
Installation

Removing Doors and Panels

Door Removal

**NOTE:** Do not lean doors against a wall with the spring latches facing the wall. This can deform the spring latches and prevent them from properly working.

Side Panel Removal
Positioning the Equipment

The equipment can be positioned inside of or at the end of a row of enclosures, or it can stand alone in any location inside the data center.

Remove Compressor Shipping Brackets

<table>
<thead>
<tr>
<th>NOTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD TO EQUIPMENT</td>
</tr>
<tr>
<td>Failure to remove the compressor shipping brackets will void the factory warranty.</td>
</tr>
<tr>
<td>Failure to follow these instructions can result in equipment damage.</td>
</tr>
</tbody>
</table>

The compressor is secured by a two-piece bracket to prevent damage during shipping. This bracket must be removed before you apply power to the equipment.

1. Remove two T30 TORX® screws from the bracket as shown. Save the screws for possible future use.
2. Remove both halves of the bracket (one half of bracket shown) and save for possible future use.
Service Access

Perform all required periodic maintenance from the front or back of the equipment. For repair procedures, disconnect the equipment and move it away from the row of enclosures into a clear area. Approximately 1070 mm (42 in.) of clear floor space is required to free the equipment from the row of enclosures.

Once the equipment is clear of the row, allow approximately 914 mm (36 in.) of clear floor space in front and back of the equipment, plus 762 mm (30 in.) of clear floor space from the side you are accessing.

NOTE: Dimensions shown in mm (in.).
Leveling

**WARNING**

**HAZARD OF EQUIPMENT FALLING OVER**

- Use two or more persons at all times to move or turn this equipment.
- Always push, pull, or turn while facing the front and rear of this equipment. Never push, pull, or turn while facing the sides of this equipment.
- Slowly move this equipment across uneven surfaces or door thresholds.
- Lower leveling feet to floor when this equipment is at rest.
- Lower leveling feet and attach joining brackets to adjacent racks when this equipment is in final position.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

The leveling feet at the corners of the equipment provide a stable base if the floor is uneven, but cannot compensate for a badly sloped surface.

Once the equipment is in its intended location, use a screwdriver to turn each leveling foot to the right until it makes contact with the floor. Adjust each foot until the equipment is level and plumb.

Remove the casters and leveling feet to allow the equipment to rest directly on the floor.

Stabilizing the Equipment

**Floor Brackets**

To prevent the equipment from moving from its final location (if it is not joined with an enclosure), use the included bolt-down kit (AR7701). Follow the installation instructions included with the kit.
Joining to Enclosures

SX Enclosures

The equipment comes with two joining brackets installed on the front and two installed on the rear.

1. Remove the front and back doors. See Door Removal, page 17.

2. Locate the four joining brackets on the equipment. Rotate each bracket 90° toward the adjoining enclosure, so that the bracket is parallel to the floor, and secure using the screws provided. One screw hole allows 600 mm spacing and the other allows 24 in. spacing.

VX Enclosures

The equipment may be joined to a VX enclosure by using an accessory kit (AR7602, sold separately).
Mechanical Connections

Condenser Duct Considerations

The preferred method for managing condenser air in the InRow SC cooling unit is to install the unit using the flexible air ducts and ceiling tile plate, provided the drop ceiling plenum is connected to a building cooling system return.

To ensure proper operation and prevent downtime, the plenum must provide an adequate volume of airflow, be within a set temperature range, and be able to treat heat rejected by the unit on a continuous basis.

These requirements are defined as follows:

• Provide at least 1440 m³/hr (850 CFM) of airflow to and from the condenser of each installed unit.
• Condenser inlet air temperatures must be between 0-40°C (32-105°F).
• Total heat rejected by condenser, up to 10kW per unit, must be treated by the building cooling system or exhausted to the outside ambient air.

If the building cooling system has night and weekend setbacks, is shut down during the off-season, shut down for maintenance, or has limited remaining capacity, consider alternatives to the standard installation.

NOTE: Having a very large plenum is not a substitute for proper ventilation and heat rejection. Heat rejected into the plenum must be able to get out of the facility and into the ambient environment. Otherwise, it will accumulate in the plenum and cause the unit to shut down.

While the actual size of the plenum is not critical, the plenum should be at least 300 mm (12 in.) deep to prevent restriction of the duct tube outlets. Consult with your engineer, mechanical contractor, or HVAC specialist to determine if the building air conditioning system is capable of supporting this load.

For additional details see Application Note #109, available at http://www.schneider-electric.com/support.
Intake and Exhaust Tube Connections

Install one intake flex duct tube to the rear and two exhaust flex duct tubes to the middle and front. One of the exhaust tubes must always be installed in the single opening of the three-hole ceiling tile adapter as shown. Take your installation requirements into consideration when deciding where to place the ceiling tile adapter and where to install the intake tube and the second exhaust tube. One possible configuration is shown. Ensure the three tubes are similar in length and avoid causing sharp bends in the tubes.

**NOTE:** The exhaust tubes must protrude higher above the ceiling tile adapter than the intake tube to prevent hot air bypassing of the airflow between the exhaust and supply air ducts.

![SINGLE OPENING](image-url)
Install the Adapter in a Suspended Ceiling

**NOTE:** At least 30.5 cm (12 in.) of open space must be above the ceiling adapter opening so exhaust air is not blocked.

**NOTE:** Use 10-gauge (minimum) steel wire to support the ceiling tile adapter as shown. Ensure the wire is anchored to the building structural support (not the suspended ceiling frame).

Connect Intake and Exhaust Tubes to the Equipment

1. Ensure the three tubes are similar in length and contain no sharp bends.
2. Trim any excess length.
3. Push each tube into its corresponding air duct on the equipment.
Ducting to an Ambient Environment

If necessary, the equipment can be ducted to an ambient (outside air) environment. If you choose to do so, you must obtain all components necessary for that installation (not included with the equipment). Comply with all local codes and observe the following requirements:

- Additional 250 mm (10 in.) diameter tubes may be needed. Flexible metal tubes can be used.
- Booster fans may be required depending upon the length of the additional tubing installed.
- Route all three tubes to the ambient environment, and ensure the tubes are all of similar length.
- Avoid sharp bends that could cause a reduction of air flow in the tubes.
- Insulate all tubes to prevent condensation on their outer surfaces (in winter, ambient temperature may be low enough that uninsulated tubes may sweat, depending on room condition).

**NOTE:** The condenser entering air temperature must be at a minimum of 0°C (32°F) to prevent condensation on the outside of the InRow SC cooling unit.

See *Condenser Duct Considerations, page 22* for more information.

- Install screening or nets as necessary to prevent insects or other solid objects from entering the tubes.
- Install covers as necessary to prevent rain and snow from entering the tubes.

**NOTE:** Fresh air imposes extreme load variation on the cooling equipment from summer to winter and causes increased system operating costs. Monitor equipment performance to ensure the venting installation is working properly. The capacity of the equipment will be reduced during very hot days.

For more information on ducting to an ambient temperature, see Schneider Electric application note AN-109 Application Guidelines for the InRow SC Condenser.
Condensate Pump

The pump is factory-wired and piped internally to the condensate pan. The pump is capable of moving liquid a maximum of 15.2 m (50.0 ft), which may include a maximum lift of 4.9 m (16.0 ft). For example, if your lift is 3 m (10 ft), you only have 12.2 m (40.0 ft) of usable run remaining. The pump also uses an on-board condensate high level float switch wired into the alarm input for local and remote alarm capabilities.

**NOTE:** Do not exceed the lift or run length of the drain system.

---

Condensate Pump Drain Connection

**NOTICE**

**EQUIPMENT DAMAGE**

To prevent equipment damage from condensate, do not leave the condensate drain line coiled inside the unit. Route the condensate line out the top or bottom of the unit as shown on the next page.

Failure to follow these instructions can result in equipment damage.

**NOTE:** Sufficient PVC drain line is supplied to route the drain to the outside of the equipment. Provide additional drain line at installation to allow routing to a remote drain.
Routing the Condensate Pump Drain Line

**NOTICE**

**WATER DAMAGE**

Failure to properly route condensate drain line before operation could result in water damage.

Failure to follow these instructions can result in equipment damage.

Route the condensate drain line through the top or the bottom of the equipment to an appropriate drain.

**NOTE:** Comply with all local codes when installing the condensate drain line to the drain system.
Electrical Connections

Electrical Connections in the Field

⚠️ DANGER
HAZARD OF ELECTRICAL SHOCK, EXPLOSION, OR ARC FLASH
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E or CSA Z462.
- This equipment must be installed and serviced by qualified personnel only.
- Turn off all power supplying this equipment before working on or inside the equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

⚠️ WARNING
ELECTRICAL HAZARD

Use a voltmeter to ensure that power is turned off before making any electrical connections.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

- Controls (user interface, Network Management Card, A-Link)
- Communication (Building Management System)
- Power to InRow SC cooling unit
- Temperature sensor

All electrical connections must be in accordance with applicable industry guidelines as well as national and local codes.

See the equipment nameplate for voltage and current requirements.

All low-voltage connections, including data and control connections, must be made with properly insulated wires. The low voltage wires and connections must have at least 300-V insulation.

NOTE: Single phase service is required. Electrical service must conform to national and local electrical codes. The equipment is grounded through the power cord.
Temperature Sensor

The temperature sensor is coiled inside the unit as shown.

In Spot Cooling and RACS configurations, the reading from the temperature sensor (AP9335T) is used for monitoring only. The sensor may be placed where desired or left coiled inside the unit. Route the sensor to the front of the heat load for the most accurate temperature reading. If the sensor is left inside the unit, ensure the sensor and cable do not rest against the compressor or refrigerant lines. Doing so may damage the sensor.

In InRow configuration, the temperature sensor (AP9335T) monitors the temperature of the air entering the IT equipment.

The reading is used to control the operation of the unit, so the sensor must be placed as directed on Connect the Temperature Sensor, page 31 or the equipment will not operate properly.
Connect the Temperature Sensor

1. Insert the rack temperature sensor connector in the temperature sensor port at the user interface.

   ![Temperature Sensor Diagram]

   See Power Connections, page 36.

   • For a top installation, push the rack temperature sensor through the wire channel located at the top of the equipment in the left hand side just above the user interface connectors.

   • For a bottom installation, route the sensor through the wire clamps along the electrical panel and then push the sensor through the customer access hole in the bottom of the equipment.

2. Route the sensor through either the top or the bottom of the equipment.

3. Secure the temperature sensor bulb in front of the warmest heat source in the enclosure. Do not secure in front of a blanking panel.

4. Secure the temperature sensor cable to the front door of the enclosure at multiple locations using the provided wire clips as shown.

   ![Package Contents Diagram]

   See Package Contents, page 12.

The sensors must be installed where lack of sufficient cooling air is most likely. The optimum position of the rack temperature sensors will vary from installation to installation.

Servers most likely to have insufficient or inadequately cooled cooling air due to the recirculation of hot air from the hot aisle include:

• Servers positioned at the top of a rack.
• Servers positioned at any height in the last rack at an open end of a row.
• Servers positioned behind flow-impairing obstacles such as building elements.
• Servers positioned in a bank of high-density racks.
• Servers positioned next to racks with Air Removal Units (ARU).
• Servers positioned very far from the equipment.
• Servers positioned very close to the equipment.
## User Interface Box

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A-Link port</td>
</tr>
<tr>
<td>2</td>
<td>Reset button</td>
</tr>
<tr>
<td>3</td>
<td>Network port (for CAT-5 10/100 Base T Ethernet cable)</td>
</tr>
<tr>
<td>4</td>
<td>Modbus shield/ground</td>
</tr>
<tr>
<td>5</td>
<td>Modbus (A- = True)</td>
</tr>
<tr>
<td>6</td>
<td>Modbus (B+ = True)</td>
</tr>
<tr>
<td>7</td>
<td>Shutdown - (for remote shutdown)</td>
</tr>
<tr>
<td>8</td>
<td>Shutdown + (for remote shutdown)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>24 Vdc (bias)—20 mA is the maximum current allowed from this voltage output port</td>
</tr>
<tr>
<td>10</td>
<td>12 Vdc (bias)—20 mA is the maximum current allowed from this voltage output port</td>
</tr>
<tr>
<td>11</td>
<td>Return (bias)</td>
</tr>
<tr>
<td>12</td>
<td>NO (normally open)</td>
</tr>
<tr>
<td>13</td>
<td>COM (common)</td>
</tr>
<tr>
<td>14</td>
<td>NC (normally closed)</td>
</tr>
<tr>
<td>15</td>
<td>RS-232 console port (see the InRow SC Service manual)</td>
</tr>
<tr>
<td>16</td>
<td>Leak detector (AP9325)</td>
</tr>
</tbody>
</table>
**A-Link Connection**

**NOTE:** Wire all input and output connections as Class 2 circuits.

The A-Link bus connection allows multiple InRow SC cooling units (up to twelve) to communicate with one another. To enable the InRow SC cooling unit to work as a group, link them using CAT-5 cables with RJ-45 connectors. A supplied terminator (150 W, 1/4 W) is factory installed in the A-Link port, and must remain inserted into the A-Link ports of the first and final InRow SC cooling units only.

The maximum wire length for the entire group may not exceed 1000 m (3,280 ft).

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RJ-45 terminator (provided)</td>
</tr>
<tr>
<td>2</td>
<td>A-Link cable</td>
</tr>
</tbody>
</table>
Network Port

Item Description
1 CAT–5 LAN cable (10/100 Base T)

Modbus—Building Management System

Item Description
1 150W 5% termination resistor (provided)
2 Modbus cable (RS-485) segment

NOTE: Connect the shield only once per segment. For example, the shield is connected at the first InRow SC cooling unit, but not at the Modbus Master.
Form C Alarm Contacts and Shutdown Input

A relay internal to the user interface is typically controlled by a user-defined alarm (malfunctioning fans, for example). Before an alarm condition exists, the signal on the COM (common) terminal is routed to the NC (normally closed) terminal. When the alarm is activated, the relay is energized, causing the signal on the COM terminal to be routed to the NO (normally open) terminal and changing the state of the connected device. The NO and NC terminals could be connected to remote indicator lights, a warning buzzer, or another device to alert an operator to the presence of an alarm condition.

A remote disconnect switch can be connected to the shutdown inputs.

Leak Detector Port

Rope Water Detector (AP9325)

You can install up to four optional rope water detectors in series. The rope water detector connects to the RJ-45 leak detector port located at the top of the interface box.

See the Rope Water Detector Installation Manual, supplied with the kit, for installation and setup instructions.
Power Connections

⚠️⚠️ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Turn off all power supplying this equipment before working on the equipment. All electrical work must be performed by qualified personnel. Practice Lockout/Tagout procedures. Do not wear jewelry when working with electrical equipment.

Failure to follow these instructions will result in death or serious injury.

⚠️ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The equipment is supplied with either an LCDI power cord (for 60 Hz operation), an IEC 309 power cord (for 50 Hz operation), or a GB 2099 power cord (for use in China). Use the equipment only with the supplied power cord appropriate for your region. Replacement power cords must be purchased from Schneider Electric only.

Failure to follow these instructions will result in death or serious injury.

Connect the power cord to the top of the equipment (standard) or route the cord through the bottom (optional).

**NOTE:** Use only one connection.

---

Connect the Power Cord to the Top Power Connector
Connect the Power Cord to the Bottom Power Connector

1. Connect the Power Cord
2. Slide Cover Plate to Capture Power Cord
3. Plug Power Cord into High Voltage Box

POWER CORD
GROMMETS
HIGH VOLTAGE BOX
SLIDE COVER PLATE TO CAPTURE POWER CORD
PLUG POWER CORD INTO HIGH VOLTAGE BOX
Worldwide Customer Support

Customer support for this or any other product is available at no charge in any of the following ways:

- Visit the Schneider Electric Web site to access documents in the Schneider Electric Knowledge Base and to submit customer support requests.
  - www.schneider-electric.com (Corporate Headquarters)
  Connect to localized Schneider Electric Web sites for specific countries, each of which provides customer support information.
  - www.schneider-electric.com/support/
  Global support searching Schneider Electric Knowledge Base and using esupport.

- Contact the Schneider Electric Customer Support Center by telephone or e-mail.
  Local, country-specific centers: go to www.schneider-electric.com/support/contact
  www.schneider-electric.com > Support > Operations around the world for contact information.

For information on how to obtain local customer support, contact the representative or other distributors from whom you purchased your product.