



ACS – Slim Line System

A Complete Air Purification System
Specifically Designed for Roof Top Units
and Air Handlers with 2" filter tracks



Installation, Operating and Maintenance Guide

Congratulations on selecting the most advanced
2-inch wide air purification system!

SecureAire's Patented ACTIVE Particle Control™ Technology
removes airborne contaminants while INACTIVATING™
(killing) viable airborne pathogens including bacteria,
viruses and mold.

**Air
Purification
for a Safe,
Healthy,
and Clean
Environment™**

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Technical Support

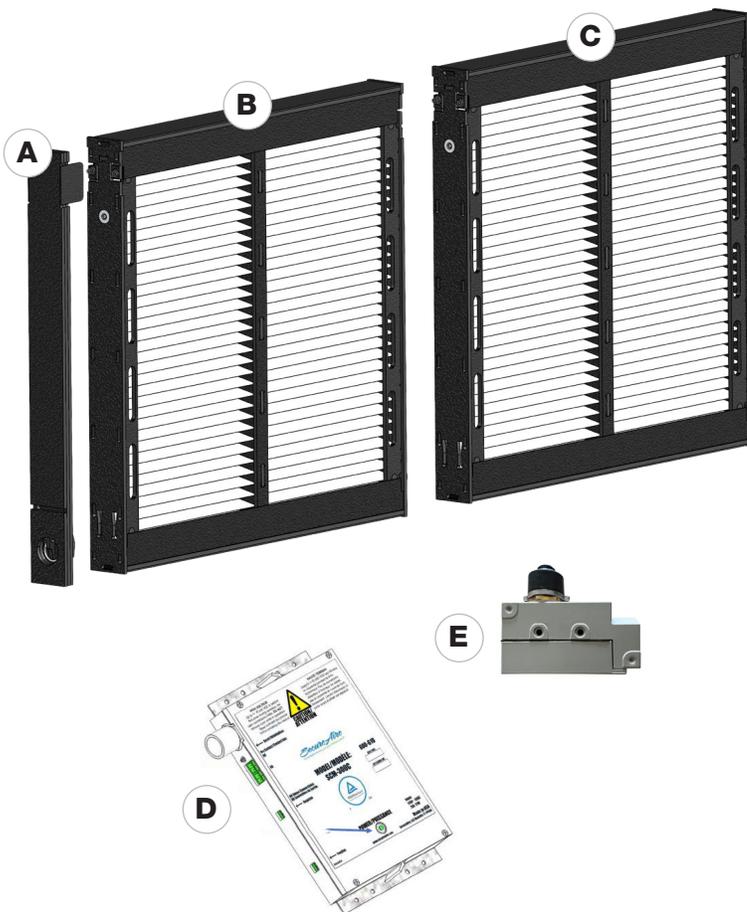
Please contact us at 813-300-6077 with any questions or problems.

Printing History

This manual was first printed in June 2021. The edition number will change when a new edition is printed. Minor changes may be made at reprint without changing the edition number. The part number will change when extensive changes are made.

System Overview

ACS – Slim Line System Parts List



Included:

- **A:** Connection Plate with high voltage wire(s)
- **B & C:** Slim Line Filter Unit(s)
(For each row within a system, item C is marked and comes with an internal protection plate, therefore it cannot be electrically connected between two B units.)
- **D:** SCM-300C Unit(s) Power Supply
- **E:** Safety Interlock Door Switch(es)

Not included:

- Electrical conduit, wiring and conduit junction boxes
- All appropriate control wiring
- 2" U - channel (**Nominal 2" ID, and 0.45" ID rise**)

Installation Overview

The ACS – Slim Line System should be installed by an experienced HVAC mechanical contractor and a licensed electrician. The installation consists of the following four phases:

- **Phase 1:** Removal of the existing 2" mechanical filters.
- **Phase 2:** Installing the ACS – Slim Line components.
- **Phase 3:** Connecting the ACS – Slim Line components and system power.
- **Phase 4:** Testing the system.

Installing the SecureAire ACS – Slim Line System

Phase 1: Removal of the existing 2" mechanical filters

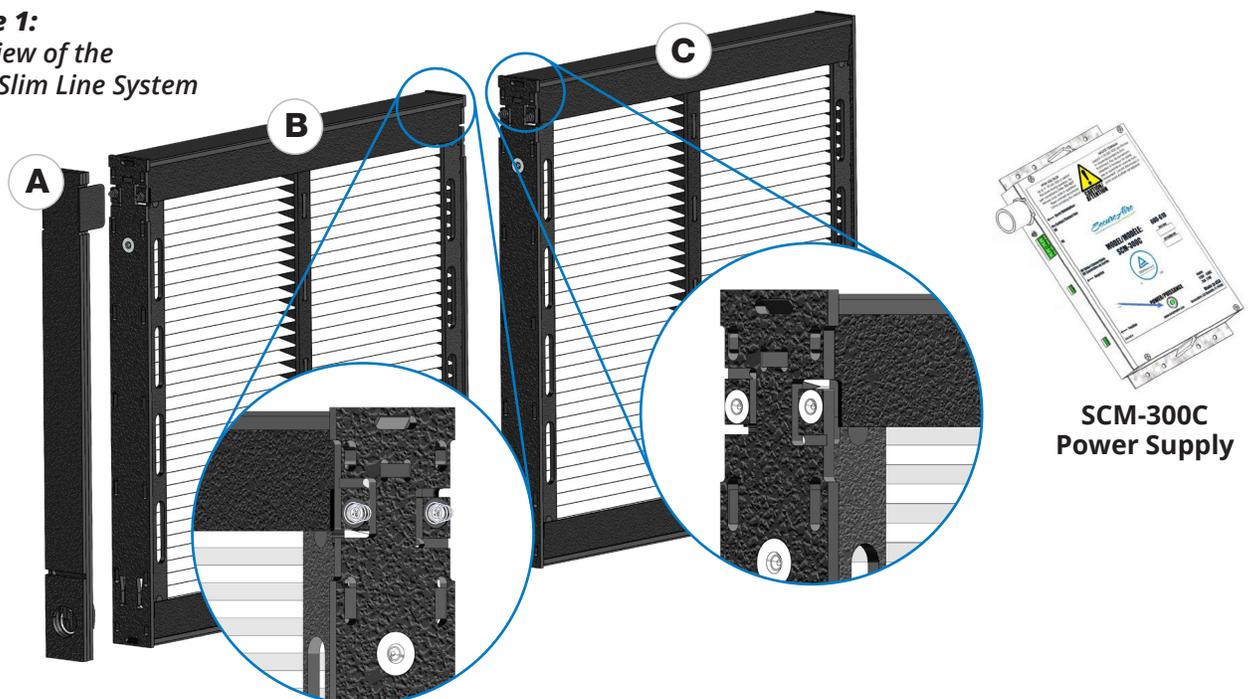
- STEP 1:** Ensure that you have measured the existing mechanical filters and have ordered the appropriate size SecureAire ACS – Slim Line Filter Units.
- STEP 2:** Check the existing 2" racking system for damage and/or adjustments and perform the necessary changes.
- STEP 3:** Plan and install blank-offs if and where required.

Phase 2: Installing the ACS – Slim Line Components

The ACS – Slim Line System has been designed for easy installation. Basic mechanical tools and skills are needed to install the ACS – Slim Line Filter Units, Power Supply, and Safety Interlock Door Switch components.

- STEP 1:** Remove the ACS – Slim Line filters and components from their shipping boxes. Be careful and utilize the filter frame as grasp points.

Figure 1:
Overview of the
ACS – Slim Line System



ACS – Slim Line System Installation

Phase 2: Installing the ACS – Slim Line Components (continued)

STEP 2: Slide the first ACS – Slim Line filter (Item C) into the 2" U-channel. The first unit (Item C) is the one that contains the internal protection plate which cannot be connected on one end.

STEP 3: Slide the remaining ACS – Slim Line Filter(s) (Item B) into the U-channel and gently push them together. The last filter unit may have the "Connection Plate" (Item A) already attached and is identified by the high voltage wires attached. (You may have more than 2 wide ACS – Slim Line Filter Positions, slide each one until you reach the last.)

Refer to **Figure 1** as needed.

Phase 3: Powering Up the ACS – Slim Line System

Basic electrical skills are needed to power up the ACS – Slim Line System to the SCM-300C Power Supplies, Safety Interlock Door Switches, and building automation system.

Once the ACS – Slim Line units, SCM-300Cs, and safety interlock switches are interconnected, the 120 VAC or 240 VAC power should be connected. A certified and licensed electrician must complete this part of the installation.

STEP 1: Connecting the Connection Plate (Item A) wires to the SCM-300C Power Supply

- Unit B has the Connection Plate (A) with wires pre-installed at the factory.
- The (+) and (-) wires need to be connected to the proper terminals on the SCM-300C Power Supply (included). The front wire should be negative (-) and the back wire should be positive (+).

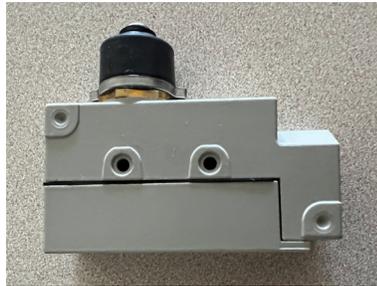
STEP 2: Locate and mount the System Control Module (SCM-300C) within 12 feet of the Connection Plate, which is now attached and located at the end of each row of the ACS – Slim Line.

STEP 3: Install the included SPDT (120 Vac) Safety Interlock Door Switch to all access doors and wire the input power line voltage circuit to interrupt the circuit so that the ACS – Slim Line Units become de-energized should a door or access panel be opened. The input supply power is 120 Vac 50/60 Hz, single phase, 3-wire.

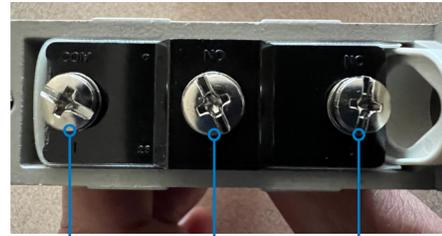
ACS – Slim Line System Installation

Figure 2: Safety Interlock Door Switch Wiring

Omron Safety Switch

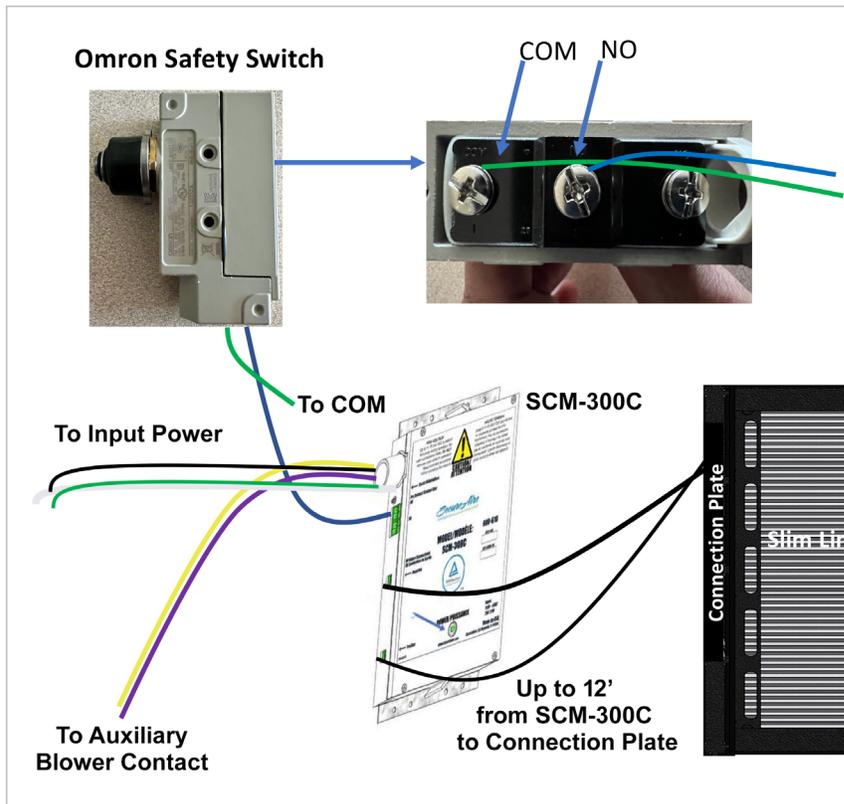


Safety Switch Key



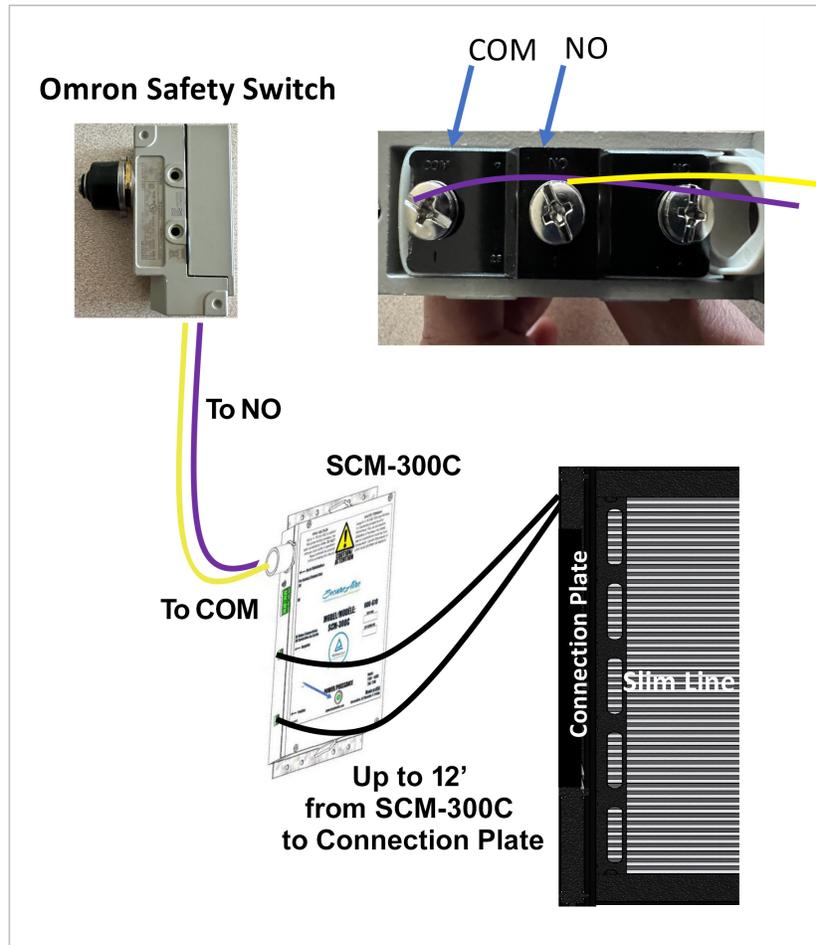
COM
(Common) **NO**
(Normally Open) **NC**
(Normally Closed)

**Option 1:
To SCM-300C
and Auxiliary
Blower Contact**



ACS – Slim Line System Installation

Option 2: Direct Contact to SCM-300C



STEP 4: Install appropriate local building code compliant conduit between the Safety Interlock Door Switch, the SCM-300C unit(s) and the high voltage wires traveling from the SCM-300C unit(s) to the Connection Plate(s) of each row of the filter array.

The electrical rating of the SCM-300C is: voltage (V): 120 Vac, Current (A): 3/4 A, and Power (W): 21W. Should a 120 Vac power supply circuit not be available, please contact the factory for recommendations on available transformers.

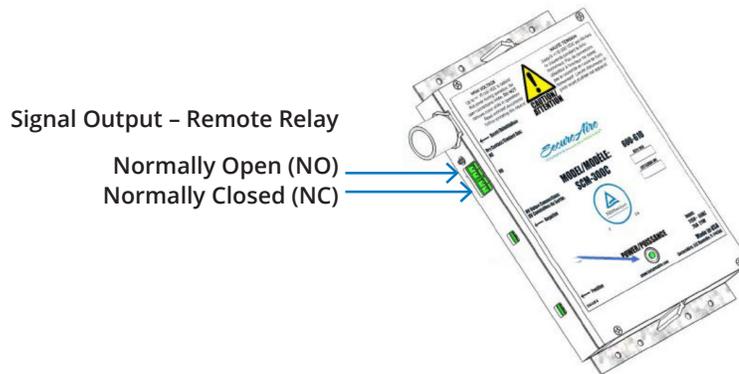
Each SCM-300C unit is equipped with an Auxiliary Blower Contact Circuit (yellow and purple wires), which may be used to de-energize the system if the air handler fan is not operating. This step is recommended as an energy conservation method but is not required.

NOTE: If the Auxiliary Blower Contact Circuit is not used, simply wire nut together both the yellow and purple wires.

ACS – Slim Line System Installation

STEP 5: If required, the SCM-300C unit(s) can communicate directly to a Building Automation System. Simply connect the chosen control wiring to the SCM-300C unit(s) through the optional communication ports (Figure 3).

Figure 3: Optional Communication Protocols



Phase 4: Test the system

Once the connections have been made in Steps 4 and 5, turn on the power and close the AHU door to check the SCM-300C(s) for a GREEN light normal-operating signal.

Your installation is now complete!

Important Notes:

1. Make sure no metal, including metal shavings or screws, gets placed or lodged in the ACS – Slim Line units as this can create an electrical short and cause a failure condition, thus preventing the system from proper operation.
2. Should the SCM-300Cs be subject to outside weather conditions a NEMA 4 rated enclosure box is recommended.
3. An Air Unit Access Door is recommended to provide clearance for installation, service or filter change-outs of the ACS – Slim Line Units.
4. A minimum of 1” of clearance must be maintained from any metallic objects or surfaces from the ACS – Slim Line units and racking system.
5. All electronic equipment should have proper earth grounding wires in place prior to turning on any electrical circuits.
6. In inclement weather conditions, it is strongly recommended that a Mist Eliminator or Hydrophobic Pre-Filter be used upstream of the ACS – Slim Line System.
7. The ACS – Slim Line is an electrically enhanced air purification device and should not be exposed to direct contact with water (rain, snow, etc.). Relative humidity rates of up to 95% are acceptable but direct contact with the elements are not.

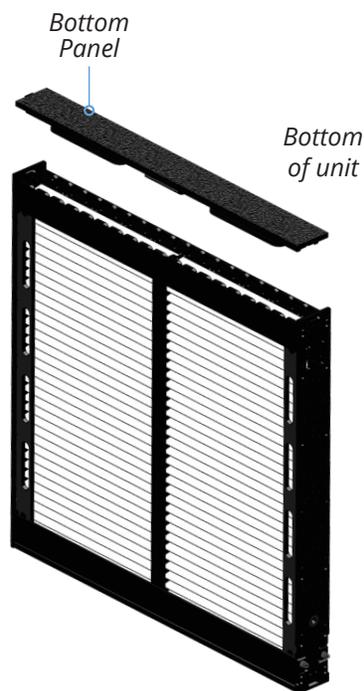
Startup and Maintenance

The ACS – Slim Line system was designed for easy installation and maintenance. Once the ACS – Slim Line system has been installed and properly connected the system is ready to run. Once the ACS – Slim Line is turned on, a constant green light appears, and operation is underway. It is that simple.

Filter media change-outs: Filter media change-outs are solely based upon airborne contaminant loading from the environment that the system has been installed in. SecureAire filter media typically lasts 2-3X longer than equivalent MERV rated mechanical filters. The replacement of SecureAire filter media is accomplished through the removal of the bottom access panel door which is appropriately labeled. Simply release the bottom panel with a flat-head screwdriver, carefully remove the loaded filter media, and replace it with the new media.

Maintenance: While no further maintenance is specifically required, it is advised to occasionally check for dirt buildup on the units. If dirt buildup does occur it can simply be blown off with an air gun while units are **not energized**.

Designed for safety: Each SCM-300C is designed to monitor all power parameters. If the current, voltage, and temperature level increases to an unacceptable level the SCM-300C will turn itself off and go into safety mode. All other SCM 300Cs will not be affected.



If an ACS – Slim Line System is going to be accessed, the amount of time to be allowed for discharge after removing power and before accessing the grid assembly is approximately 30 seconds. It is recommended that verification of high voltage be performed (using a high-voltage meter or other suitable indicator) prior to working on or near the grid assembly.

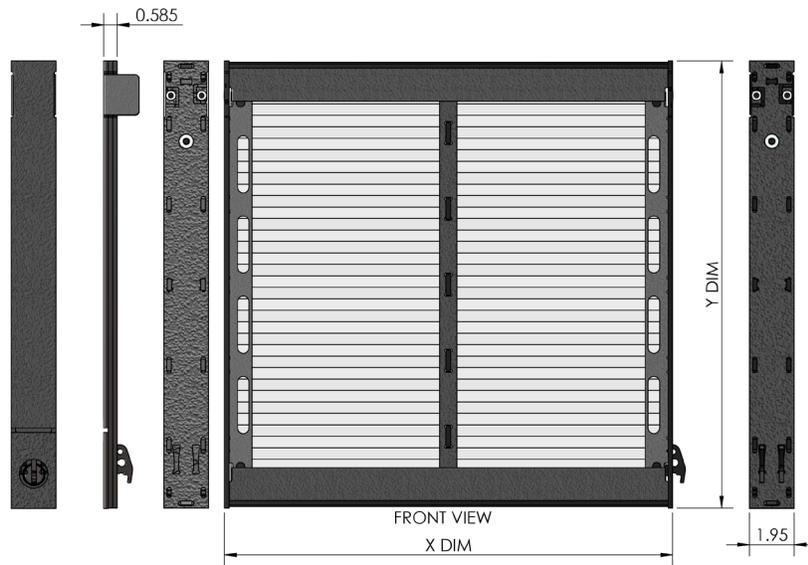


WARNING

Risk of Electric Shock!

These servicing instructions are for use by qualified personnel ONLY. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

ACS - Slim Line System Configuration



Frame Configuration Sizes (in):

1. 16x16 (X=15.5 Y=15.5)
2. 18x24 (X=17.5 Y=23.5)
3. 20x16 (X=19.5 Y=15.5)
4. 20x20 (X=19.5 Y=19.5)
5. 24x12 (X=23.5 Y=11.5)
6. 24x18 (X=23.5 Y=17.5)
7. 24x20 (X=23.5 Y=19.5)
8. 24x24 (X=23.5 Y=23.5)
9. 25x16 (X=24.5 Y=15.5)
10. 25x20 (X=24.5 Y=19.5)

Notes:

1. HV Connectoin Panel is supplied with high-voltage wire to hook up to SecureAire HV controller.

Technical Support

Please contact your local representative or SecureAire at 813-300-6077 with any questions.

SecureAire Product Warranty

Limited Warranty. SecureAire products are expressly warranted for normal product use for twelve (12) months from the date of shipment (as shown on proper purchase paperwork) or manufactured date code (if purchase paperwork is unavailable, the **"Warranty Period"**) against failure due to defects in workmanship and materials. SecureAire's exclusive obligation under this limited warranty shall be to supply, without charge, a new or like new replacement for any product part that fails due to defect during the Warranty Period. Replacement of a part shall not extend the original product Warranty Period and any replacement part provided under this warranty shall only be subject to the remainder of the original warranty for the product, including the original twelve (12) month Warranty Period. This limited warranty shall not obligate SecureAire for any labor costs associated with replacing product parts.

Warranty Exclusions. Filter media is considered a disposable item and is not covered under this limited warranty. SecureAire is not responsible should the product (i) fail to be maintained properly, or (ii) be modified in any fashion whatsoever, or (iii) fail to function properly as a result of misuse, abuse, improper installation, neglect, damage caused by disaster such as fire, flood and lightning, improper electrical current, or (iv) be repaired other than by SecureAire or an Authorized SecureAire Services Representative, or (v) be repaired using parts other than those supplied by SecureAire, or (vi) be used with non-SecureAire filter media, or (vii) be damaged due to acts of war or terrorism. Additionally, this limited warranty shall not apply if purchaser has not paid all invoiced amounts due. SecureAire Products are for installation and operation in the United States and Canada only. Installation and operation of the SecureAire Products outside of the United States and Canada voids all warranties

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