

# DPOFSK OVERFLOW SWITCH (FOR 3 - 25 Ton) LIGHT COMMERCIAL ROOFTOP UNITS INSTALLATION INSTRUCTIONS KIT INSTRUCTIONS

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## WARNING

ONLY PERSONNEL THAT HAVE BEEN TRAINED TO INSTALL, ADJUST, SERVICE, MAINTENANCE OR REPAIR (HEREINAFTER, "SERVICE") THE EQUIPMENT SPECIFIED IN THIS MANUAL SHOULD SERVICE THE EQUIPMENT.

THIS EQUIPMENT IS NOT INTENDED FOR USE BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPACITIES, OR LACK OF EXPERIENCE AND KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY. CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE EQUIPMENT.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SUPERVISION, SERVICE OR SERVICE PROCEDURES. IF YOU SERVICE THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY INJURY OR PROPERTY DAMAGE WHICH MAY RESULT. IN ADDITION, IN JURISDICTIONS THAT REQUIRE ONE OR MORE LICENSES TO SERVICE THE EQUIPMENT SPECIFIED IN THIS MANUAL, ONLY LICENSED PERSONNEL SHOULD SERVICE THE EQUIPMENT. IMPROPER SUPERVISION, INSTALLATION, ADJUSTMENT, SERVICING, MAINTENANCE OR REPAIR OF THE EQUIPMENT SPECIFIED IN THIS MANUAL, OR ATTEMPTING TO INSTALL, ADJUST, SERVICE OR REPAIR THE EQUIPMENT SPECIFIED IN THIS MANUAL WITHOUT PROPER SUPERVISION OR TRAINING MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



## WARNING

DO NOT BYPASS SAFETY DEVICES.

### Attention Installing Personnel

As a professional installer, you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair, it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

### Description

The AG-3180E float switch kit reduces the potential for water damage, part failure and microbial buildup due to water backup in the condensation pan.

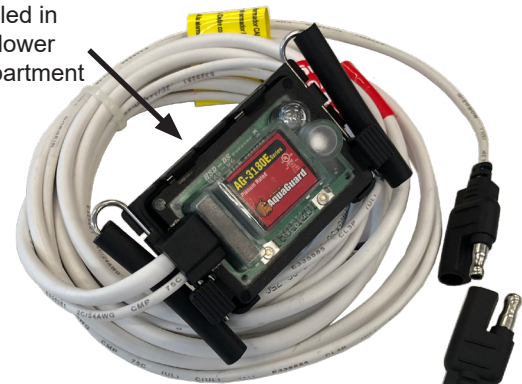
A non-illuminated LED light indicates normal operation of the water flow in condensation pan. If there is a water backup, and the micro-sensor detects a constant 60 seconds of water, the float switch will trip and shut the unit off. The LED light will turn on. When the micro-sensor stays out of the water for about 60 seconds, the float switch and the unit will return to normal operation.

### List of Parts

Accessory Kit Number	DPOFSK01	DPOFSK02	DPOFSK03	DPOFSK04	DPOFSK06
ITEM	QTY.	QTY.	QTY.	QTY.	QTY.
Electric Tie	4	4	4	4	4
Float Switch AG-3108E & Wire Harness	1	1	1	1	1
Installation Instructions	1	1	1	1	1
Cord Clip (PSA Backing)	4	1	1	1	1
Wiring Diagram	-	-	1	-	-
Screws	2	2	2	2	2
Bracket for mounting Micro Sensor	1	1	-	-	-

### Parts Identification

AG-3180E SERIES BOX  
installed in  
the blower  
compartment



Micro Sensor installed on  
the mounting bracket.

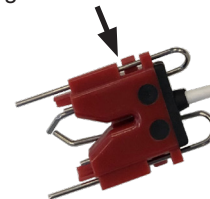


FIGURE 1



## For Small Units (3 - 6 Ton)


### Small Chassis Float Switch Installation

To install the Float Switch, see the following instructions.

1. Disconnect all power to the unit.

**⚠ WARNING**

**HIGH VOLTAGE**  
**DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.**



**⚠ CAUTION**

**SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.**

2. Remove Panel 1 and Panel 2 from the unit.  
**DO NOT REMOVE ANY ADDITIONAL PANELS.**

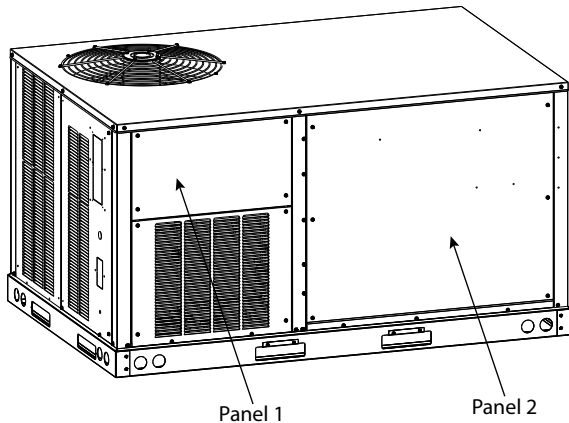


FIGURE 2

3. Disconnect the AG-3180E wiring harness at the 6 Pin connectors. See Figure 3.

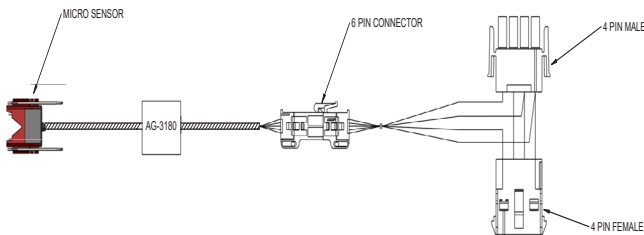


FIGURE 3

4. Locate the unit's emergency shutdown (ES) circuit inside the control box. If the unit has existing safety devices installed, reference sheet 10 for wiring instructions, otherwise, reference sheet 9. See Figure 4.

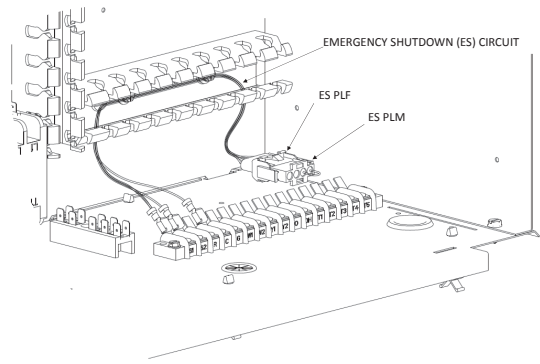


FIGURE 4

5. Place the AG-3180 inside the blower compartment and route the 6 pin connector into the control box and reconnect the 6 pin connectors that were disconnected in step 3.
6. Modify the mounting bracket as follows (See Figure 5A):  
 3 Ton Units (036) - break away one tab.  
 5 Ton Units (060) - do not break away any tabs.  
 4&6 Ton Units (048 & 072) - break away two tabs.

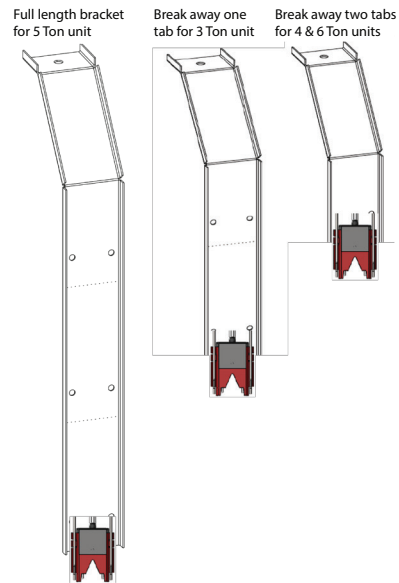


FIGURE 5A

7. Attach the Micro Sensor to the mounting bracket by sliding the Micro Sensor onto the pair of holes on the mounting bracket. Adjust depth as needed.



FIGURE 5B

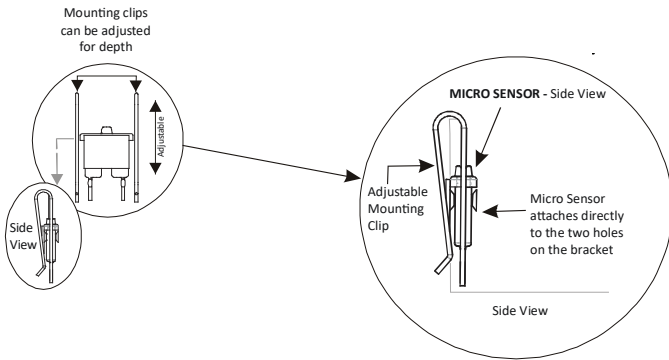


FIGURE 6

8. Carefully insert the bracket-micro sensor assembly into the gap between the blower deck and the evaporator coil and verify that the Micro Sensor reaches the drain pan. Remove the existing screw from blower deck at the mounting bracket installation location and use it to attach the mounting bracket to the blower deck.

**NOTE:** The return panels and evaporator coil have been hidden for clarity.

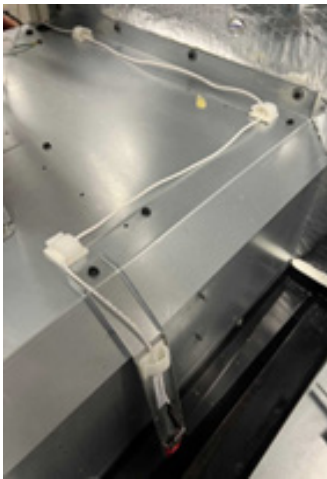


FIGURE 7A

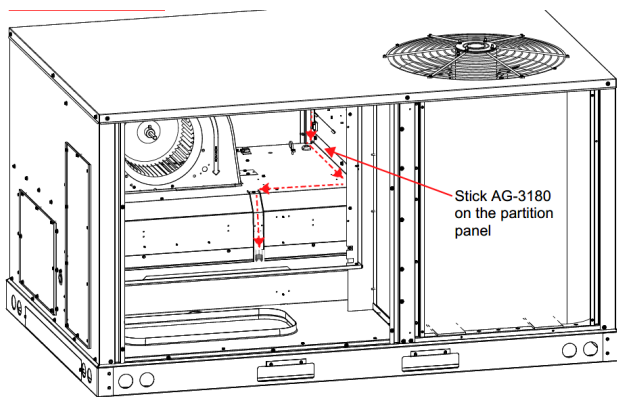


FIGURE 7B

9. Once the bracket-micro sensor assembly is mounted, route wires as shown in Figure 7B. Bundle and zip tie any excess wire, and use the supplied cord clip (PSA backing) to secure the wire to the blower deck and/or partition panel.
10. Remove the removable bracket from AG 3180E.



Removable bracket



Adhesive Strip

FIGURE 8

11. Use the Adhesive strip to attach the bracket to the inside of the blower compartment and replace AG 3180E. See Figure 9.



FIGURE 9

12. Verify float switch is wired according to the wiring instructions on page 8 or 9.
13. When wiring and other instructions are completed, reinstall Panel 1 and Panel 2 on the unit.

## For Medium Units (7.5 - 12.5 Ton)



### Parts Identification

**NOTE:** On units with a horizontal discharge configuration, the overflow switch must be installed before the Supply Air/Return Air ducts to allow for access to the drain pan panels.

### Medium Chassis Float Switch Installation

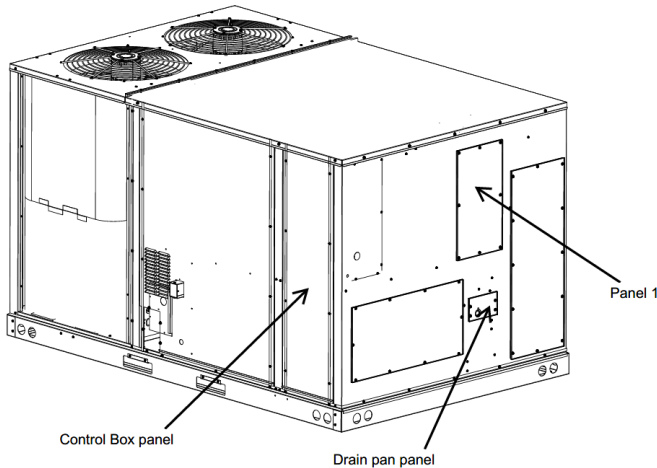
To install the Float Switch, see the following instructions.

1. Disconnect all power to the unit.

	<b>WARNING</b>
<p><b>HIGH VOLTAGE</b>  <b>DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.</b></p>	
	

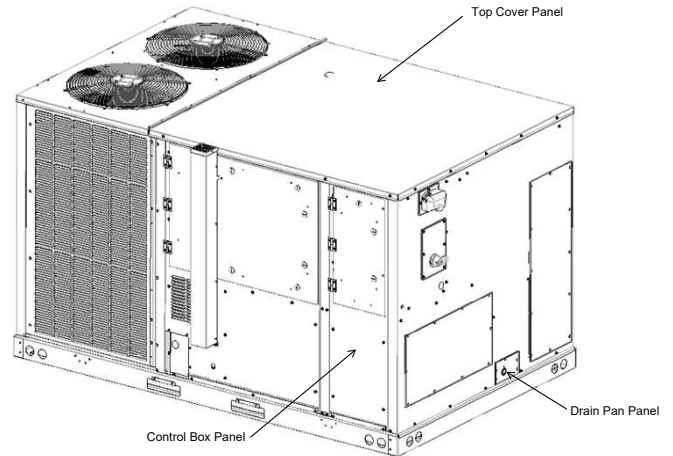
	<b>CAUTION</b>
<p><b>SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.</b></p>	

2. (For DR and DH Models) Remove Panel 1, Control Box panel and Drain Pan Panel from the unit. See Figure 10A.  
**DO NOT REMOVE ANY ADDITIONAL PANELS.**



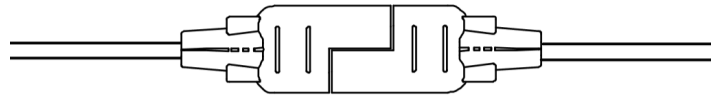
**FIGURE 10A**  
(DR AND DH MODELS)

(For DF and DS Models) Remove Top Cover Panel, Control Box panel and Drain Pan Panel from the unit. See figure 10B.



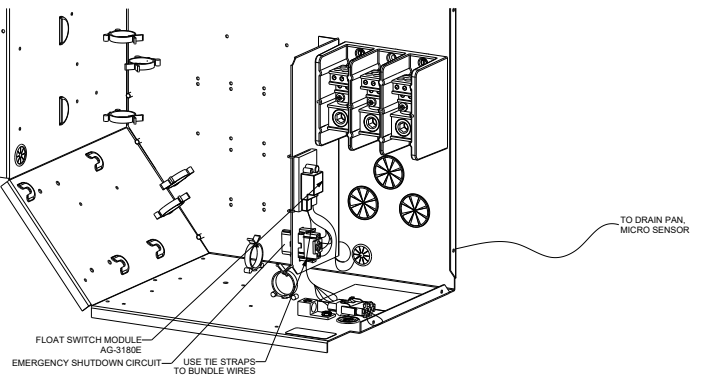
**FIGURE 10B**  
(DF AND DS MODELS)

3. Disconnect the micro sensor at the 2-way connector.

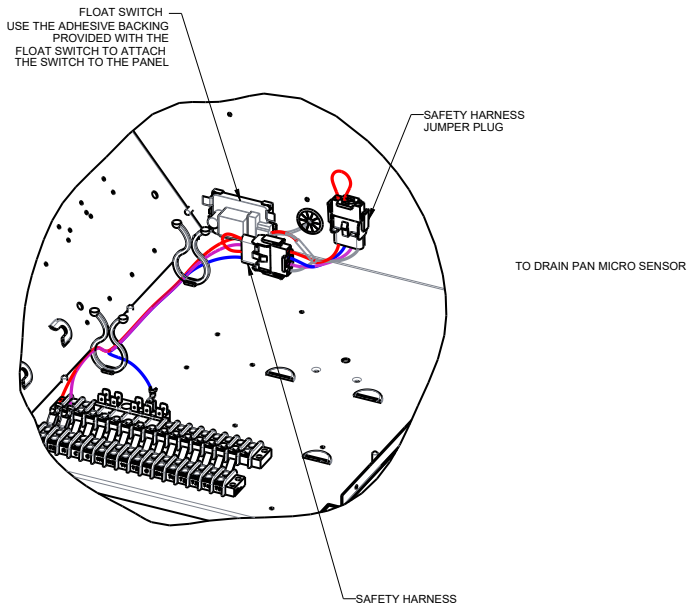


**FIGURE 11**

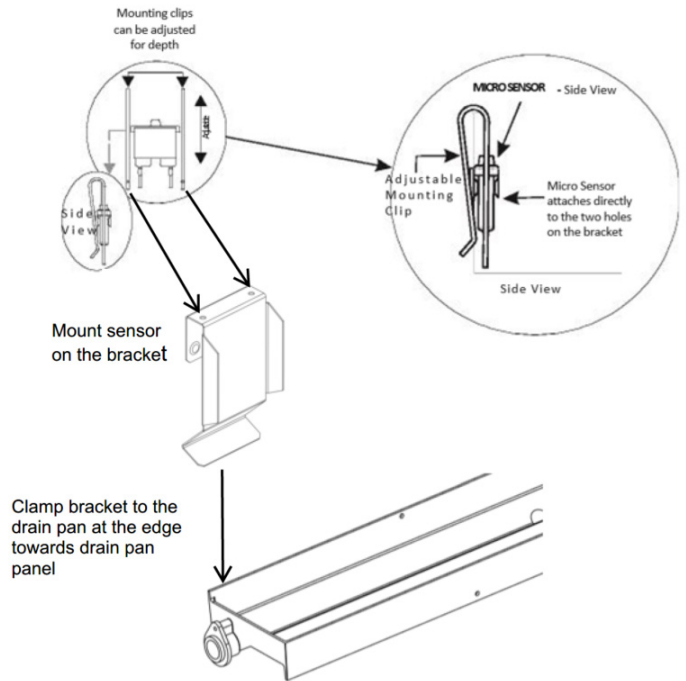
4. Locate the unit's emergency shutdown (ES) circuit inside the control box. See Figure 12A. If the unit has existing safety devices installed, reference sheet 10 for wiring instructions, otherwise, reference sheet 9.



**FIGURE 12A**  
(DR MODELS)



**FIGURE 12B**  
(FOR DF,DS AND DH MODELS)



**FIGURE 15A**  
(FOR DR MODELS)

5. Place the AG-3180 inside the control box. Insert the 2 way connector from the module through the bottom bushing (1/2" grommet) towards the drain pan.
6. Remove the removable bracket from AG 3180E.



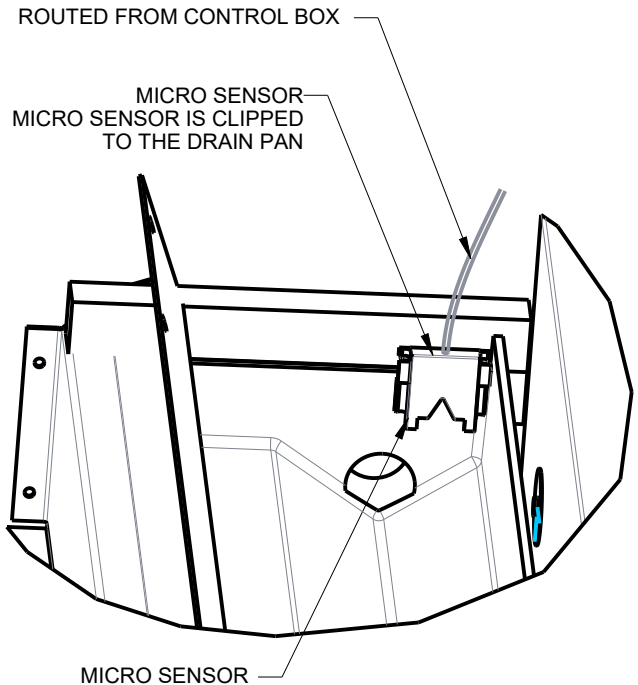
**FIGURE 13**

7. Use the adhesive strip to attach the bracket to the voltage barrier plate as shown in Figure 14.



**FIGURE 14**

8. (For DR models only) Fix the Micro Sensor on the metal mounting bracket by sliding the Micro Sensor clips into the pair of holes on the bracket. Mount the bracket on the drain pan. Adjust depth of the sensor as needed. Refer to Figure 15A.



**FIGURE 15B**  
(DF,DS, AND DH MODELS)

9. Route the 2 way connector from the back of the control box through the bushing on the coil bottom support as shown in Figures 16A through 16G.
  - a. DS models will require you to pass the connector through a gap in the end of coil support area near the duct panel, and then through a bushing in

the panel below in order to reach the drain pan (Figure 16D and 16E).

- b. DH models have two bushings specifically for the routing (Figure 16F and 16G). The upper bushing is near the end of the Coil Support, and the lower is in the end of the Drain Trough. Once the connector has been passed through the upper bushing, manipulate the wire to position it at the lower bushing, then reach up through the drain pan access area and pull the connector through the lower bushing.

- c. Attach the 2 way connector to the matching connector on the sensor, keeping the connection outside of the drain pan.

**NOTE:** The return panel, supply panel, and evaporator coil have been hidden for clarity.

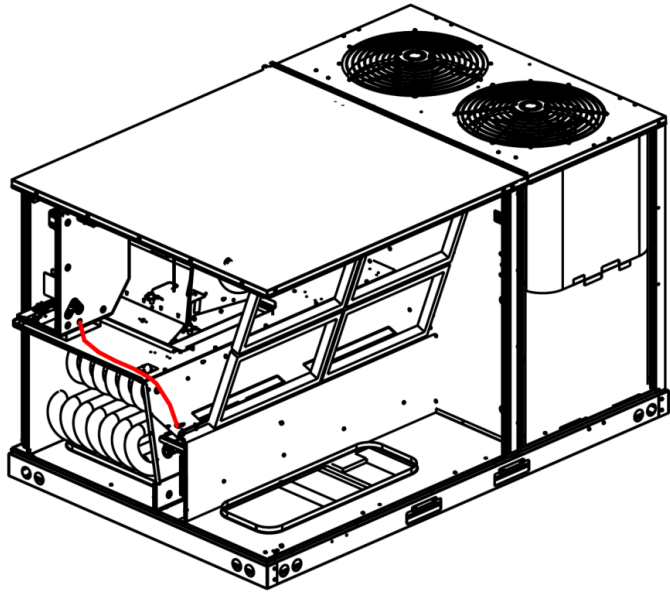


FIGURE 16A

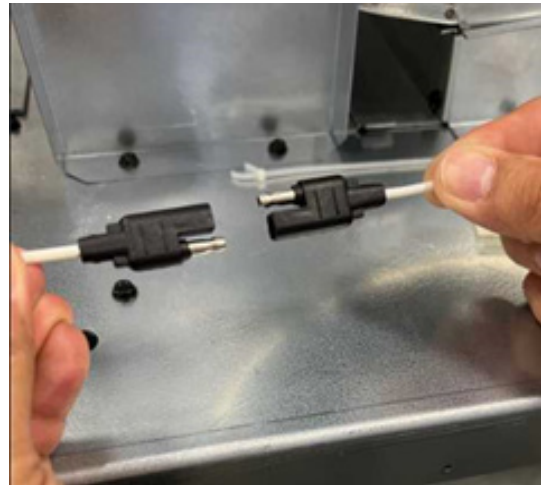


FIGURE 16C



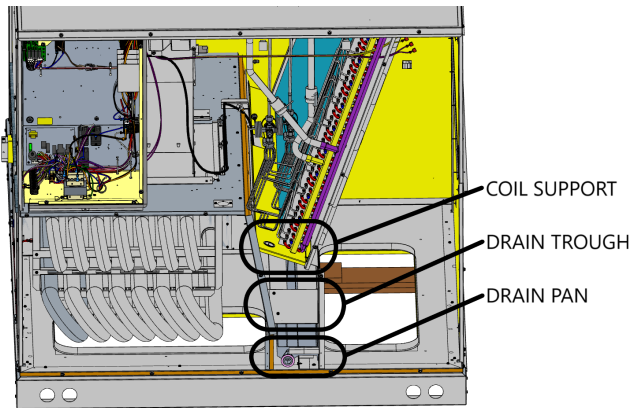
FIGURE 16D  
DS MODEL ROUTING GAP



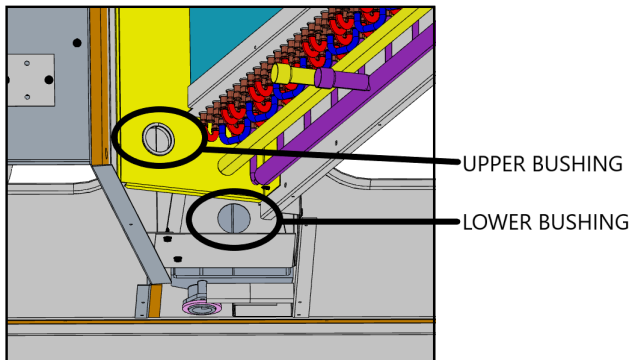
FIGURE 16B



FIGURE 16E  
DS MODEL ROUTING GAP AND BUSHING



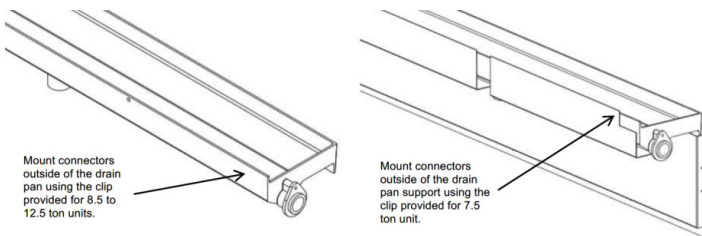
**FIGURE 16F**  
DH MODEL (DUCT PANEL HIDDEN FOR CLARITY)



**FIGURE 16G**  
DH MODEL TOP-DOWN (DUCT PANEL HIDDEN FOR CLARITY)

**NOTE:** Ensure that the wire for the overflow switch is routed and connected directly above/over the drain pan such that if condensate were to form or land on the cable, it would run off into the drain pan.

- For DR Units ONLY: Make sure to fix the 2 way connector on the left side of the drain pan using the cord clip for 7.5 ton, and on the drain pan support for 8.5-12.5 ton unit. See Figure 17.



**FIGURE 17**

- Verify float switch is wired according to the wiring instructions on page 9 or 10.
- When wiring and other instructions are completed, reinstall all panels that had previously been removed.
- Restore power to the unit.
- Expect "Non Status Led" on AG-3180E, if "Red Status Led" inspect drain pan level and micro sensor.
- Test the unit for proper operation.
- Complete the Control Box cover installation.



## For Large Units (15 - 25 Ton)

### Parts Identification

#### Large Chassis Float Switch Installation

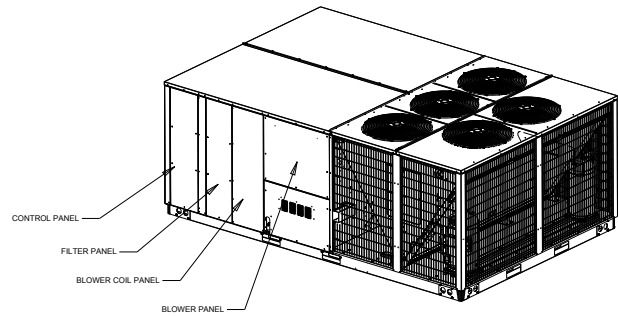
To install the Float Switch, see the following instructions.

- Disconnect all power to the unit.

 <b>WARNING</b>	
<p><b>HIGH VOLTAGE</b> DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.</p>	

 <b>CAUTION</b>	
<p>SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.</p>	

- Remove the Control, Filter, Blower Coil and Blower panels from the unit. See Figure 18.  
**DO NOT REMOVE ANY ADDITIONAL PANELS.**



**FIGURE 18**

- Locate the unit's emergency shutdown (ES) circuit inside the control box. If the unit has existing safety devices installed, reference sheet 9 for wiring instructions, otherwise, reference sheet 8.
- Disconnect the micro sensor at the 2-way connector as shown in Figure 19 and 20.



**FIGURE 19**

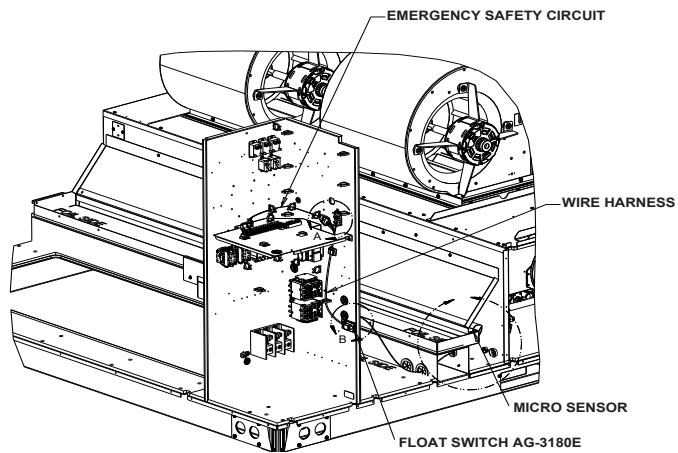


FIGURE 20

- Place the AG-3180 inside the control box. Use the adhesive strip to attach the bracket to the control box as shown in Figure 21. Insert the 2 way connector from the module through the bottom bushing (1.375" grommet) towards the drain pan.

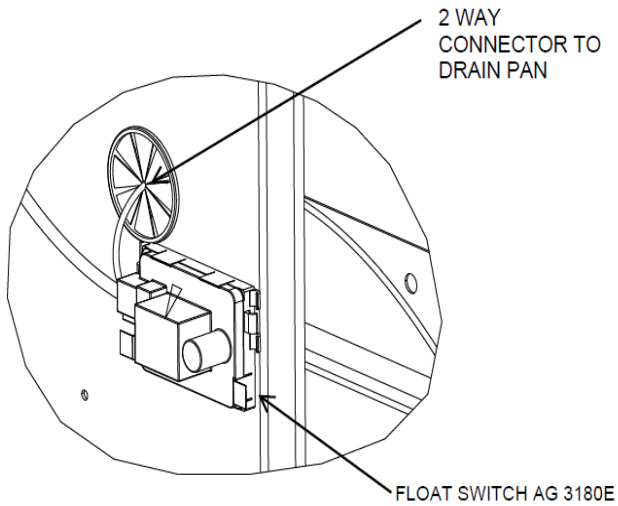


FIGURE 21

- Fix the micro sensor on the mounting bracket by sliding the micro sensor onto the drain pan as shown in Figure 22. Adjust depth of the sensor as needed.

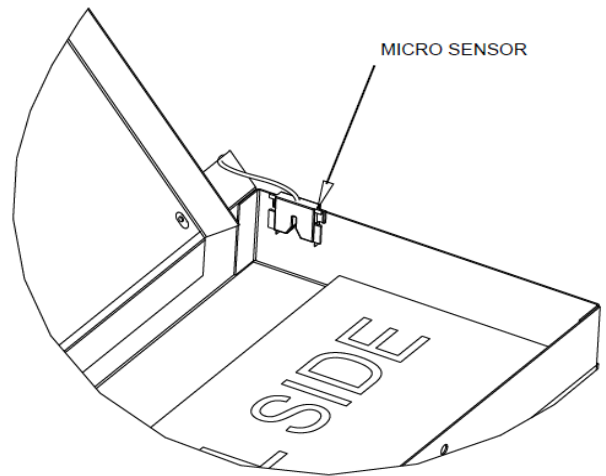


FIGURE 22

- Route the 2 way connector from the control box through the bushing underneath the coil support as shown in Figure 23.

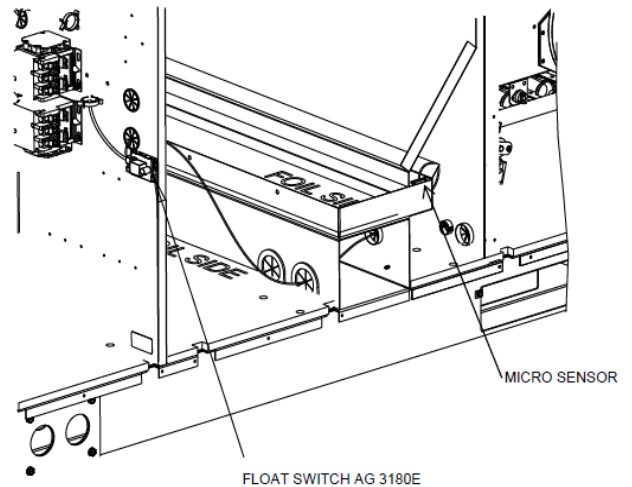


FIGURE 23

- Make sure to fix the 2 way connector on the right side of the drain pan using the tie wraps to secure wires.
- Route the remaining harness from the AG-3180E towards the top of the control box to the emergency shutdown circuit shown in Figure 24.

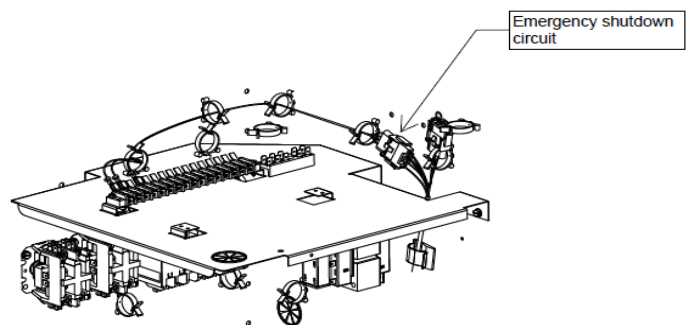


FIGURE 24

10. Verify float switch is wired according to the wiring instructions on page 9 or 10.
11. When wiring and other instructions are completed, reinstall panel, Filter, Blower Coil and Blower Panel on the unit.
12. Restore power to the unit.
13. Expect "Non Status Led" on AG-3180E, if "Red Status Led" inspect drain pan level and micro sensor.
14. Test the unit for proper operation.
15. Reinstall all panels that had previously been removed.

## For Medium Inverter Units (7.5 – 10 Ton)

### Parts Identification

**NOTE:** ON UNITS WITH A HORIZONTAL DISCHARGE CONFIGURATION, THE OVERFLOW SWITCH MUST BE INSTALLED BEFORE THE SUPPLY AIR/RETURN AIR DUCTS TO ALLOW FOR ACCESS TO THE DRAIN PAN PANELS.

### Medium Chassis (Inverter) Float Switch Installation

To install the Float Switch, see the following instructions.

1. Disconnect all power to the unit.
2. For DVH models, remove Panel 1, Control Box panel and Drain Pan panel from the unit. See Figure 25.

**DO NOT REMOVE ANY ADDITIONAL PANELS.**

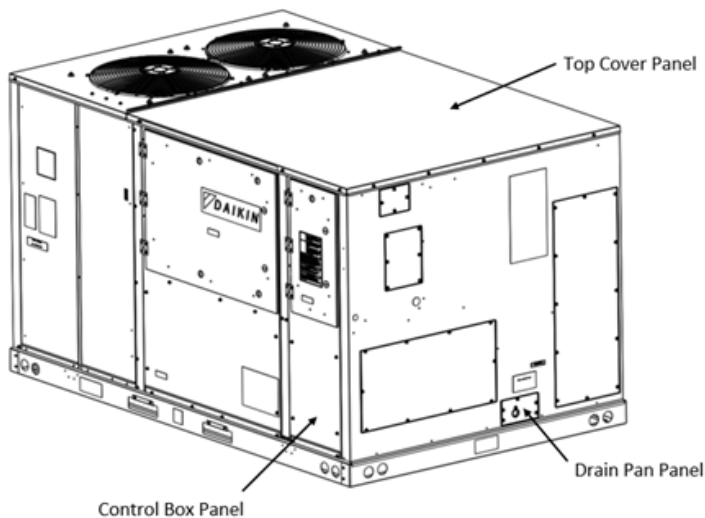


FIGURE 25

3. Disconnect the micro sensor at the 2-way connector.



FIGURE 26

4. Locate the unit's emergency shutdown (ES) circuit inside the control box. See figure 27. If the unit has existing safety devices installed, reference sheet 11 for wiring instructions.

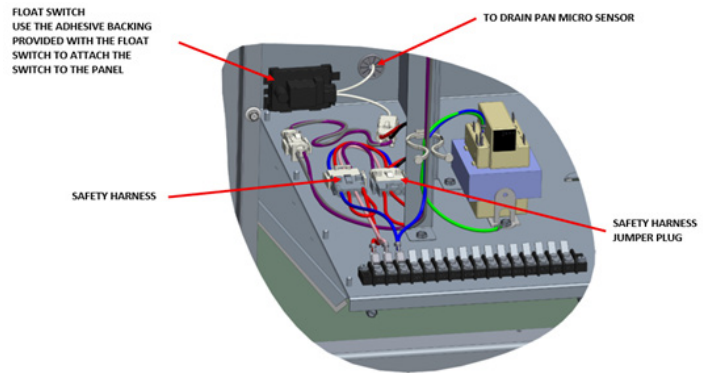


FIGURE 27

5. Place the AG-3180E/3000E inside the control box. Insert the 2-way connector from the module through the bottom bushing (1/2" grommet) towards the drain pan.
6. Remove the removable bracket from AG-3180E/3000E.



Removable bracket



FIGURE 28

7. Use the adhesive strip to attach the bracket to the voltage barrier plate as shown in Figure 29.



Adhesive Strip

FIGURE 29

8. Fix the Micro Sensor directly on the drain pan using the clips on the sensor. Adjust the depth of the sensor as needed. Refer to figure 30.

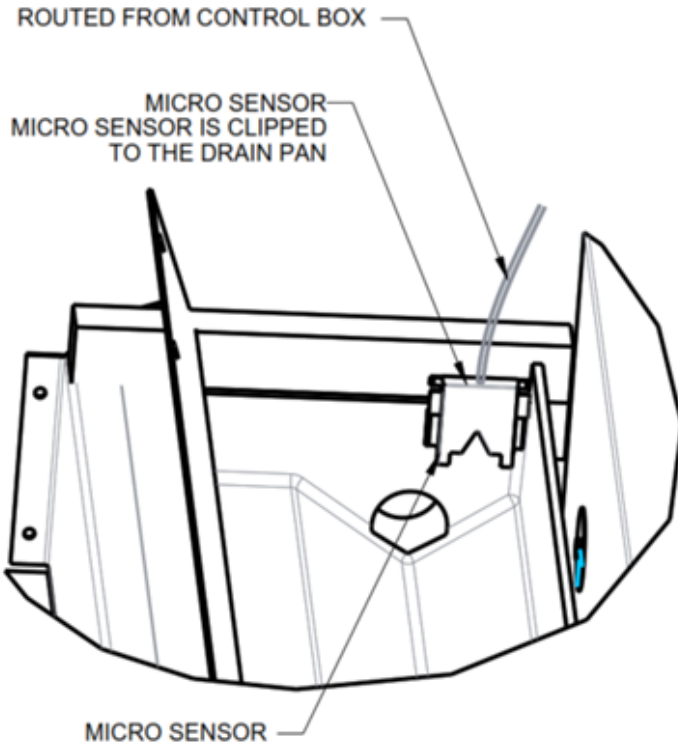


FIGURE 30

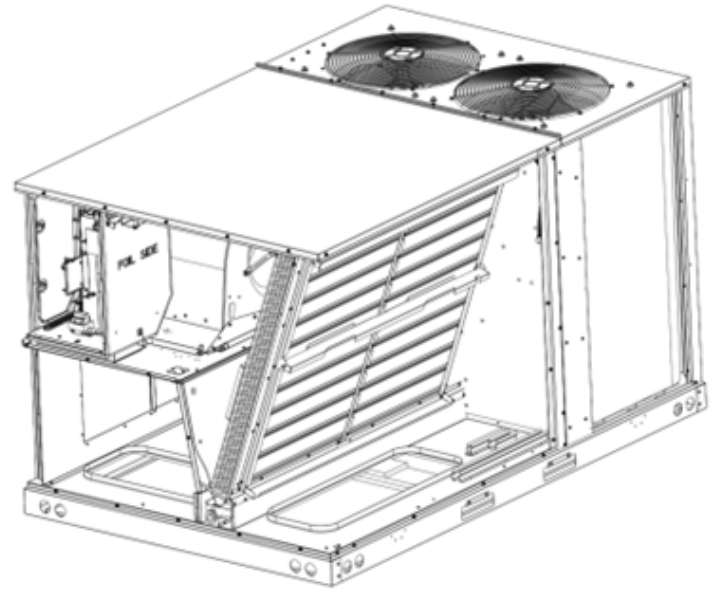


FIGURE 31A

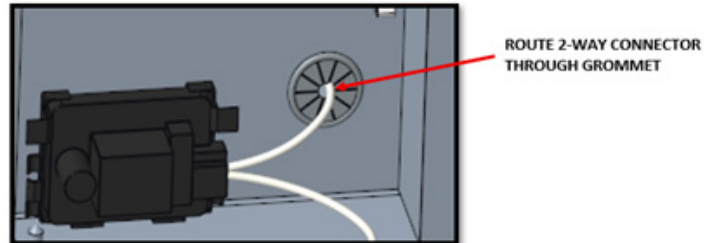


FIGURE 31B

9. Route the 2-way connector from the back of the control box through the bushing on the coil bottom support as shown in Figure 31A through 31E.
  - A. DVH models have two bushings for routing (Figure 31D). The upper bushing is near the end of the Coil Support, and the lower is in the end of the Drain Trough. Once the connector has been passed through the upper bushing, manipulate the wire to position it at the lower bushing, then reach up through the drain pan access area and pull the connector through its lower bushing.
  - B. Attach the 2-way connector to the matching connector on the sensor, keeping the connection outside of the drain pan.

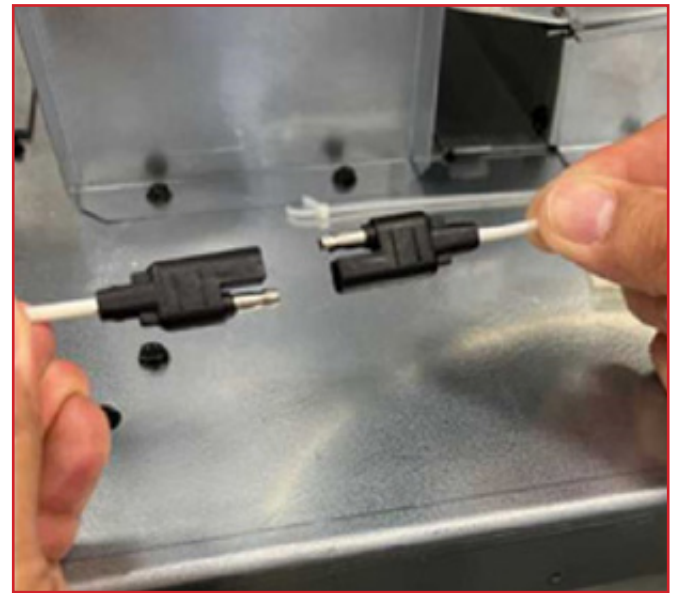


FIGURE 31C

**NOTE:** THE RETURN PANEL, SUPPLY PANEL, AND EVAPORATOR COIL HAVE BEEN HIDDEN FOR CLARITY.

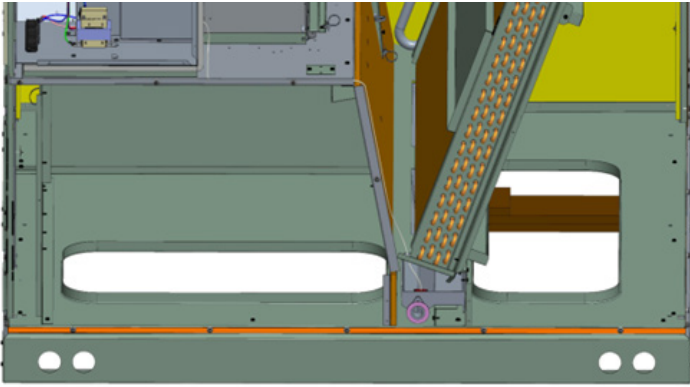


FIGURE 31D

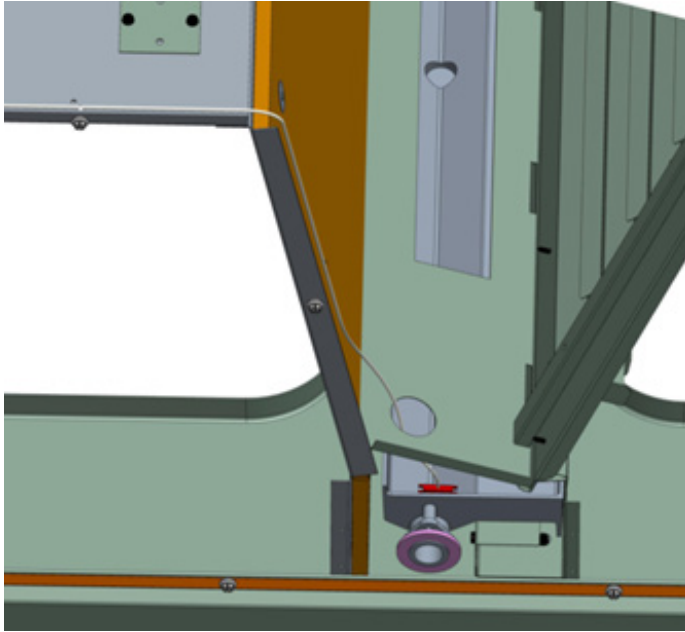


FIGURE 31E

**NOTE:** ENSURE THAT THE WIRE FOR THE OVERFLOW SWITCH IS ROUTED AND CONNECTED DIRECTLY ABOVE/OVER THE DRAIN PAN SUCH THAT IF CONDENSATE WERE TO FORM OR LAND ON THE CABLE, IT WOULD RUN OFF INTO THE DRAIN PAN.

10. Verify float switch is wired according to the wiring instructions on page 12.
11. When wiring and other instructions are completed, reinstall all panels that had previously been removed.
12. Restore the power to the unit.
13. Expect “Non Status LED” on AG-3180E/3000E, if “Red Status LED” flashes, then inspect drain pan level and micro sensor.
14. Test the unit for proper operation.
15. Complete the control box cover installation.

# Field Installed Float Switch

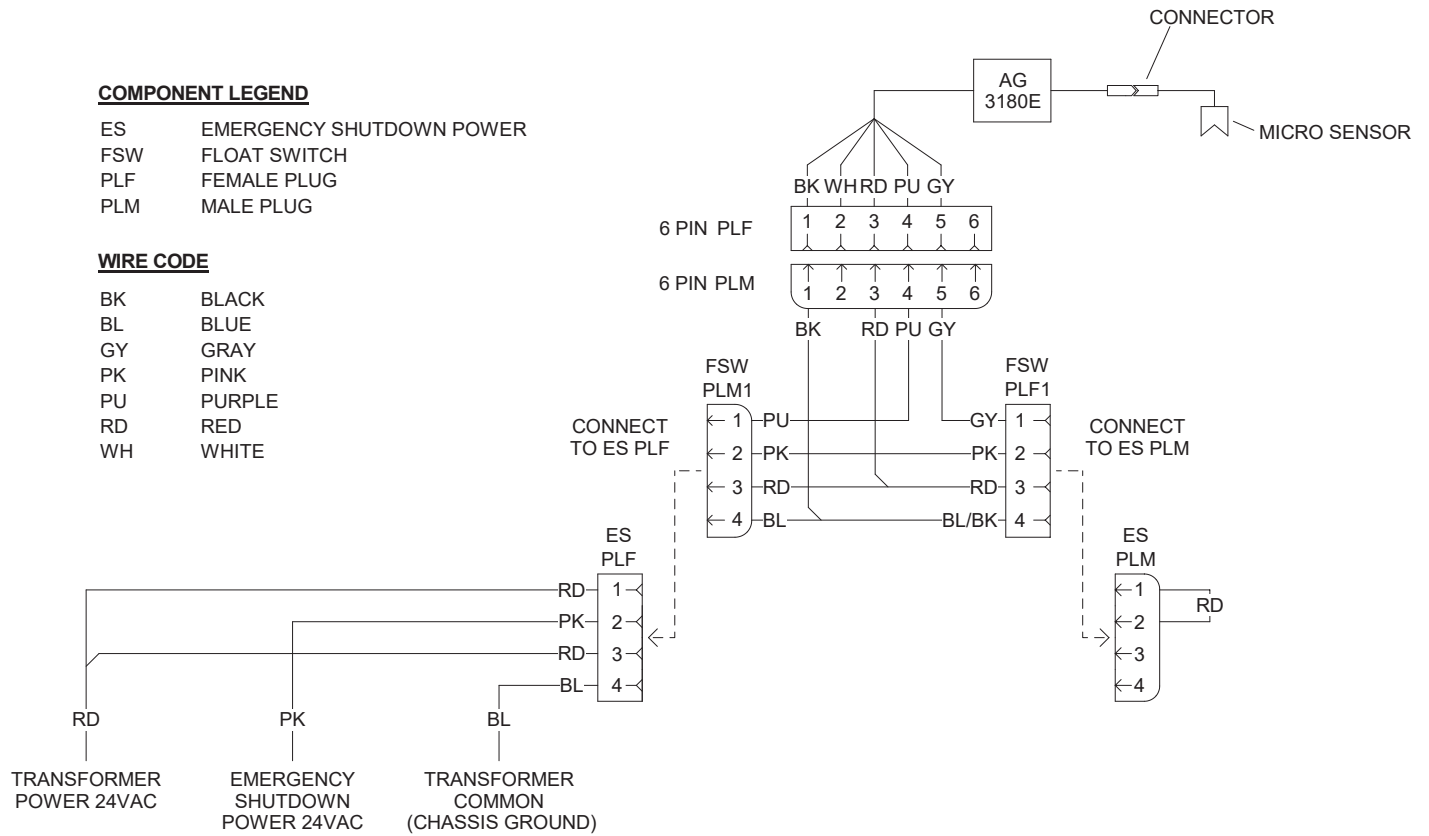
Wiring instructions for R-410a Units with no smoke detector.

### COMPONENT LEGEND

ES	EMERGENCY SHUTDOWN POWER
FSW	FLOAT SWITCH
PLF	FEMALE PLUG
PLM	MALE PLUG

### WIRE CODE

BK	BLACK
BL	BLUE
GY	GRAY
PK	PINK
PU	PURPLE
RD	RED
WH	WHITE



1. Disconnect all power to the unit.

**WARNING**

**HIGH VOLTAGE**  
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

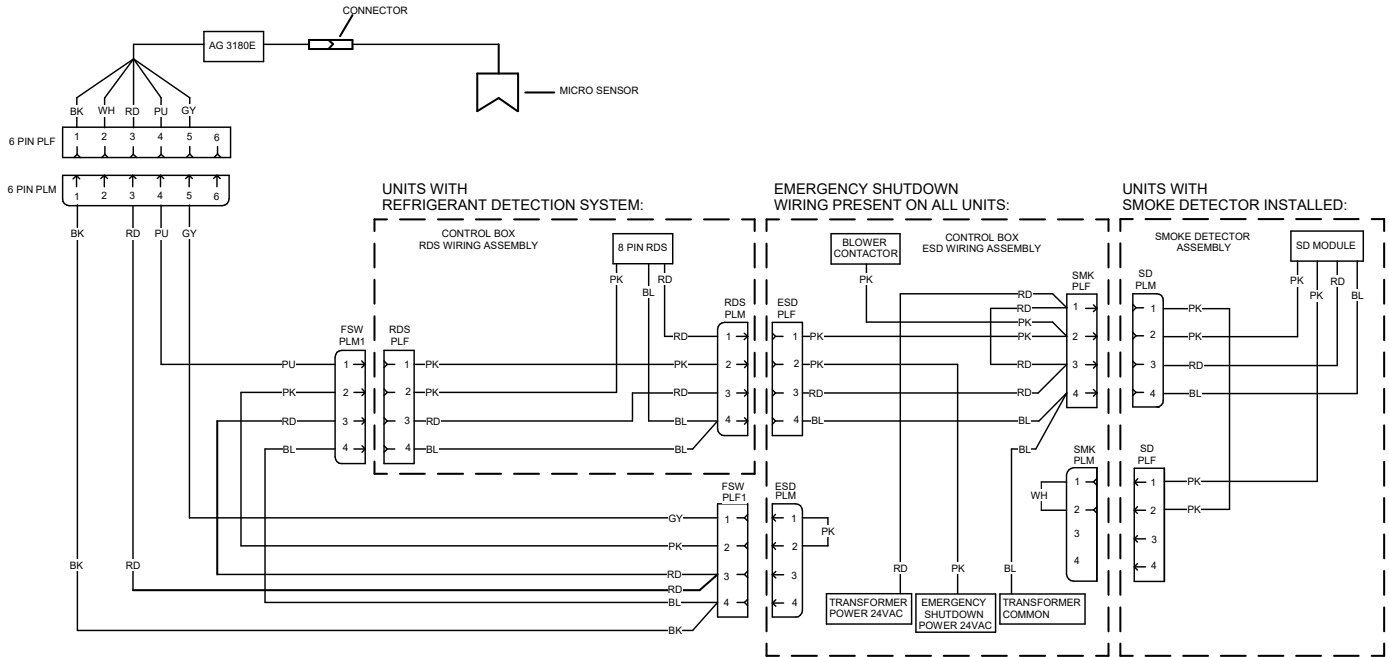
**CAUTION**

SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.

2. Unplug ES PLM from ES PLF.
3. Plug FSW PLM into ES PLF
4. Plug ES PLM into FSW PLF.
5. Zip tie and organize any extra wire.

# Field Installed Float Switch

Wiring instructions for R-32 Units with Refrigerant Detection system



## WARNING

**HIGH VOLTAGE**  
 Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.



## CAUTION

SHEET METAL PARTS, SCREWS, CLIPS AND SIMILAR ITEMS INHERENTLY HAVE SHARP EDGES, AND IT IS NECESSARY THAT THE INSTALLER AND SERVICE PERSONNEL EXERCISE CAUTION.

UNIT HAS REFRIGERANT DETECTION SYSTEM (RDS) INSTALLED	UNIT HAS SMOKE DETECTOR (SD) INSTALLED	UNIT HAS BOTH RDS AND SD INSTALLED
1. Disconnect all power to the unit	1. Disconnect all power to the unit	1. Disconnect all power to the unit
2. Unplug ES PLM from ES PLF	2. Unplug ES PLM from ES PLF	2. Unplug ES PLM from ES PLF
3. Plug FSW PLM into RDS PLF	3. Plug FSW PLM into ESD PLF	3. Plug FSW PLM into RDS PLF
4. Plug RDS PLM into ESD PLF	4. Plug SD PLM into SMK PLF	4. Plug RDS PLM into ESD PLF
5. Plug ESD PLM into FSW PLF	5. Plug ESD PLM into FSW PLF	4. Plug SD PLM into SMK PLF
6. Zip Tie and organize any extra wiring.	6. Plug SMK PLM into SD PLF	5. Plug ESD PLM into FSW PLF
	7. Zip Tie and organize any extra wiring.	6. Plug SMK PLM into SD PLF
		7. Zip Tie and organize any extra wiring.

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**CUSTOMER FEEDBACK**

Daikin is very interested in all product comments.

Please fill out the feedback form on the following link:

<https://daikincomfort.com/contact-us>

You can also scan the QR code on the right to be directed to the feedback page.



Our continuing commitment to quality products may mean a change in specifications without notice.

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