



Installation Instructions

Part Numbers 39MA-UVC-92000203 through 39MA-UVC-92000293
Used in Cooling Coil Sections

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SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform basic maintenance functions such as changing lamps. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, on tags and labels attached to the unit or accessory, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses that are marked to comply with ANSI (American National Standards Institute) Z87.1 standard and gloves.

WARNING

Before installing an accessory or performing maintenance or service on an accessory, turn off main power switch to unit. Electrical shock can cause injury or death. There may be more than one disconnect switch.

CAUTION

Never expose eyes or skin to ultraviolet light from any source. The lamp must be off before entering the unit to perform maintenance or service. Personal injury may result. Field-supplied interlock switches are required in the cooling coil's access panels to prevent this hazard. Their installation is outlined in the instructions.

CAUTION

Ultraviolet band C (UV-C) energy may cause damage to non-metallic components except for UV-rated and HVAC-style drain pans. Select mounting locations that prevent exposure to vulnerable components. If mounting locations are limited, protect components with UV resistant material such as aluminum foil, aluminum duct tape, metallic shields, etc.

CAUTION

Do not touch emitter glass without gloves. Damage to lamp may result. Oil from fingerprints will permanently etch the glass of the lamp and weaken the structure. Clean the lamp after handling with 99% isopropyl alcohol and a lint free cloth.

CAUTION

Use only specified high-output, low temperature lamps with this accessory. Use of a lower wattage or incorrect lamp can result in damage to the accessory or lamp. Correct lamps have a blue end cap.

CAUTION

The lamp contains a small quantity of mercury. If a lamp breaks, clean and dispose of with care.

NOTE: The health aspects associated with the use of this product and its ability to aid in disinfection of environment air have not been investigated by UL (Underwriters Laboratories).

GENERAL

Carrier's commercial air handler ultraviolet germicidal lamp seen in Fig. 1 is designed to help kill odor causing mold and fungus that may develop in the wet sections of an HVAC (heating, ventilation, and air conditioning) unit. The high-output, low temperature germicidal lamps are installed in the cooling coil section of the 39M Series central station air-handling unit, and are pointed directly at the cooling coil and condensate pan. The short wavelength UV-C light helps inhibit and kill mold, fungus, and microbial growth.

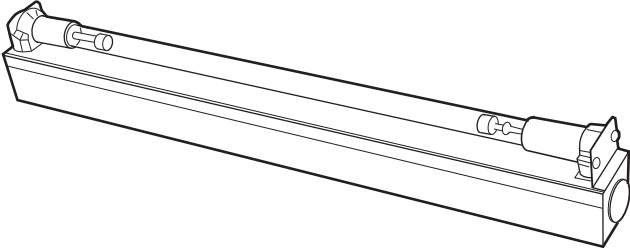


Fig. 1 — UV-C Germicidal Lamp

Carrier's germicidal lamps have been specifically designed and optimized for 40 to 45 F, high-humidity operation in a moving airstream, inside an HVAC unit. Carrier's germicidal lamps use ultraviolet radiation at output ratings of 45 F in a 400 fpm airflow of 10 microwatts/cm² per inch of arch length at a distance of 1 meter.

Germicidal lamp installation requires a separate, dedicated source of power.

The 39M cooling coil section can be shipped with UV-C lamp fixtures factory installed or UV-C lamp kits can be ordered separately for field installation (includes supports, fixtures, wiring, and lamps). Refer to Table 1 for kit usage and contents. If any of the following items are needed, they must be field supplied and can be ordered from Carrier using Table 2.

- 1 — Switch box
- 1 — Junction box
- 2 — Interlock door switches with wiring
(one for each door)

Refer to Table 3 for replacement lamp ordering information.

INSTALLATION

Location — The germicidal lamps are installed downstream of the cooling coil. Vertical supports and angle supports (fused to lamps) are provided to support the germicidal lamps.

Remove Shipping Assembly (Factory Installed) — Remove the shipping assembly included in the separately shipped UV-C sections before making any field connections. The shipping assembly includes: protective shipping channels, shipping channel braces, shipping covers, and section brace angles in the corners of the sections. The shipping channel is mounted immediately upstream of the fixtures to block the fixtures from damage during shipping. The braces maintain clearance between the shipping channel and the fixtures to prevent the channel from flexing into the fixtures.

Before Installing UV-C Lamp Kit

NOTE: A separate, dedicated, 115-208/230 v power source will need to be field-supplied and routed to the junction and switch boxes per applicable codes. Power source must be suitably fused, grounded, and protected with the correct voltage. Use of a ground-fault circuit interruptor (GFCI) is highly recommended. Any power source and lamp voltage conflict (misalignment) will permanently damage the germicidal lamp.

1. Turn off and lock out all existing power to unit.

IMPORTANT: Ensure that lamp is installed before power is applied. Installing lamp after power has been applied will trigger the "end-of-lamp-life circuit" and the lamp will fail to light. If this happens, shut off power for 10 seconds and then turn power back on. Lamp will then light.

2. Ultraviolet light may damage certain plastics. Wrap exposed plastic and wiring with aluminum tape or metal conduit.

⚠ CAUTION

Do NOT use any polyester or cotton filters in the cooling coil section when using ultraviolet light. Just as any other plastic exposed to UV light, they can be damaged. Replace any polyester or cotton filters with fiberglass-based filters.

Table 1 — UV-C fixture and Lamp Kit Usage and Contents

39M SIZE	KIT PART NUMBER 39MA-UVC-	CONTENTS
03W	92000203	1 - Lamp 2 - Vertical supports 4 - Mounting brackets
06W	92000206	1 - Warning label 1 - Caution label 2 - No. 10 fastener sets
08W	92000208	1 - Angle support 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
10W	92000210	2 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 2 - No. 10 fastener sets 1 - Angle support 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
12W	92000212	4 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label
14W	92000214	4 - No. 10 fastener sets 2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
16T	92000287	2 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 4 - No. 10 fastener sets 2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
17W	92000217	4 - Lamps 2 - Vertical supports 4 - Mounting brackets
18T	92000288	1 - Warning label 1 - Caution label 4 - No. 10 fastener sets
21W	92000221	2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
22T	92000289	8 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label
25T	92000290	8 - No. 10 fastener sets 4 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
25W	92000225	4 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 4 - No. 10 fastener sets 2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
30T	92000291	8 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 8 - No. 10 fastener sets 4 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit

39M SIZE	KIT PART NUMBER 39MA-UVC-	CONTENTS
30W	92000230	6 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 4 - No. 10 fastener sets 2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 2 - Cleaning kits
35T	92000293	8 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 8 - No. 10 fastener sets 4 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
36W	92000236	6 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 4 - No. 10 fastener sets 2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 2 - Cleaning kits
37T	92000292	8 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 8 - No. 10 fastener sets 4 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 1 - Cleaning kit
40W	92000240	6 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 4 - No. 10 fastener sets 2 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 2 - Cleaning kits
50W	92000250	12 - Lamps
61W	92000261	2 - Vertical supports 4 - Mounting brackets
72W	92000262	1 - Warning label 1 - Caution label
85W	92000263	8 - No. 10 fastener sets 4 - Angle supports
96W	92000264	8 - No. 10 x 1/2 in. self-tapping screws 2 - Cleaning kits
110W	92000265	16 - Lamps 2 - Vertical supports 4 - Mounting brackets 1 - Warning label 1 - Caution label 8 - No. 10 fastener sets 4 - Angle supports 8 - No. 10 x 1/2 in. self-tapping screws 2 - Cleaning kits

Table 2 — Interlock Switch Kit

KIT PART NUMBER	CONTENTS
39MX40139401	One Door Kit: 1 - Interlock Door Switch Assembly 1 - Switch Box 1 - Junction Box 1 - Schematic UVC Wiring Label 12 - No. 10 x 3/4 in. Torx Screws 1 - 72 in. #16 GA Wire 1 - 6 ft Conduit 3 - Conduit Connectors 4 - Wire Ties 3 - 12 in. #14 GA Wires (Black, White, Green)
39MX40139402	Two Door Kit: 2 - Interlock Door Switch Assemblies 1 - Switch Box 1 - Junction Box 1 - Schematic UVC Wiring Label 16 - No. 10 x 3/4 in. Torx Screws 1 - 72 in. #16 GA Wire 1 - 192 in. #16 GA Wire 1 - 120 in. #16 GA Wire 1 - 16 ft Conduit 4 - Conduit Connectors 8 - Wire Ties 3 - 12 in. #14 GA Wires (Black, White, Green)

Table 3 — UV-C Replacement Lamp

39M SIZE	NO. OF LAMPS REQUIRED	LAMP MODEL NUMBER
03W	1	CRDBLTUB002A00
06W	1	CRDBLTUB004A00
08W	1	CRDBLTUB005A00
10W	2	CRDBLTUB003A00
12W	4	CRDBLTUB003A00
14W	4	CRDBLTUB003A00
16T	2	CRDBLTUB005A00
17W	4	CRDBLTUB004A00
18T	4	CRDBLTUB002A00
21W	4	CRDBLTUB004A00
22T	8	CRDBLTUB002A00
25T	4	CRDBLTUB002A00
	4	CRDBLTUB003A00
25W	4	CRDBLTUB004A00
30W	6	CRDBLTUB003A00
30T	8	CRDBLTUB003A00
35T	8	CRDBLTUB004A00
36W	4	CRDBLTUB003A00,
	2	CRDBLTUB004A00
37T	8	CRDBLTUB003A00
40W	4	CRDBLTUB003A00,
	2	CRDBLTUB004A00
50W	12	CRDBLTUB004A00
61W	12	CRDBLTUB004A00
72W	12	CRDBLTUB004A00
85W	12	CRDBLTUB005A00
96W	12	CRDBLTUB005A00
110W	16	CRDBLTUB004A00

**UV-C Lamp Installation
(Factory-Installed Fixture)**

⚠ CAUTION

Do not touch emitter glass without gloves. Damage to lamp may result. Oil from fingerprints will permanently etch the glass of the lamp and weaken the structure. Clean the lamp after handling with 99% isopropyl alcohol and a lint free cloth.

Perform the following procedure to install replacement UV-C lamps.

1. Determine which side panel (not the top panel) of the cooling coil section has the junction and switch boxes installed. Remove or open the adjacent panel to access the cooling coil section.
2. Remove a lamp from its packaging and align with a fixture fastened to an angle support. Push the lamp in until seated. Rotate the lamp 90 degrees until one distinct click is heard. Repeat for each fixture until all lamps are installed.
3. Replace or close the access panel.

UV-C Fixture and Lamp Kit Installation

1. Locate the side panel (not the top panel) that is easiest to access for service (junction and switch boxes should be installed on this panel). Remove or open the adjacent panel to access the cooling coil section.
2. At the bottom of the cooling coil section, just above the drain pan, locate the two ‘C’ channels that support the cooling coil above the drain pan. See Fig. 2.
3. Measure between 8 and 15 in. from the cooling coil on each ‘C’ channel. Make sure the distance from the cooling coil is the same for each channel. At this distance, install a mounting bracket on each channel by marking the holes through the bracket onto the channel, drilling through the channel, and attaching each bracket using 4 self-tapping screws. See Fig. 2.
4. Outside of the cooling coil section of the air handler, stand each 1-in. square vertical support up. Place a mounting bracket in the top opening of the vertical support with the ‘U’ side of the bracket inside the support.
5. Take each support inside the cooling coil section. With the predrilled holes in the vertical supports facing the cooling coil, stand each support up by inserting the ‘U’ side of the previously installed mounting bracket inside the support’s bottom opening. See Fig. 2.

NOTE: Ensure that the predrilled holes in the vertical supports are facing the cooling coil before fastening the top mounting brackets to the cooling coil section top panel. The angle support will be fastened to the vertical supports using these holes. Also, be sure the vertical supports’ bottom edges are flat to the ‘C’ circuit on the mounting brackets. This ensures that the vertical supports are straight.

6. Install the mounting brackets on to the top panel by marking the holes through the bracket onto the channel, drilling through the channel, and attaching each bracket using 4 self-tapping screws. See Fig. 2.

NOTE: Once Step 6 is completed, the top panel will no longer be removable. On the external side of the cooling coil section top panel, place in easy view the Panel Removal Warning sticker provided. See Fig. 3.

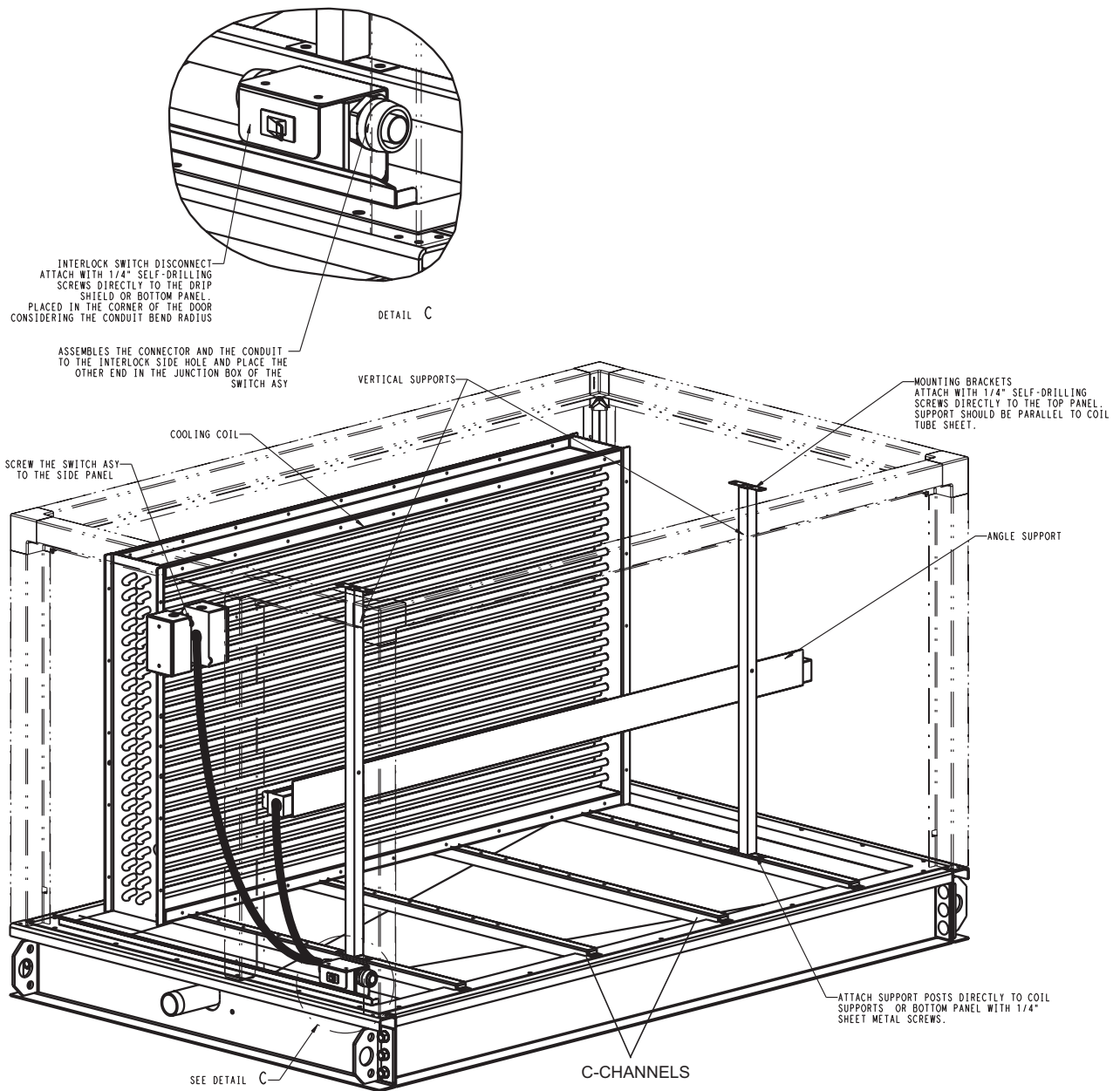


Fig. 2 — Typical UV-C Lamp and Fixture Kit Installation



Fig. 3 — Panel Removal Warning Sticker — to be Placed on External Side of Cooling Coil Section Top Panel

7. The first angle support should be installed on the lowest level of the vertical supports. Insert no. 10 bolt through hole in each end of angle support. Place one nylon washer over each bolt. Insert bolts, with washers and angle support, through holes in vertical support and secure each bolt with a nut. See Fig. 4.

NOTE: The UV-C light fixtures are already fastened to the angle support. Only one angle support is necessary at each level as more than one UV-C light fixture can be fastened to a single angle support. See Fig. 5-12.

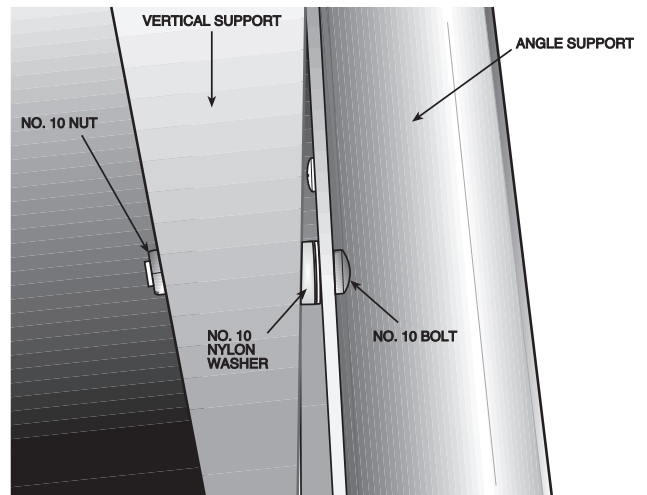


Fig. 4 — Installed Angle Support

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
03W	28 $\frac{1}{2}$	1	1
06W	28 $\frac{1}{2}$	1	1
08W	31 $\frac{1}{2}$	1	1

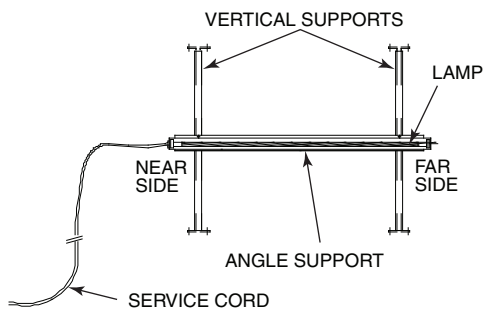


Fig. 5 — Vertical and Angle Support Layout for 39M03W-08W Units

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
10W	31 $\frac{1}{2}$	1	2

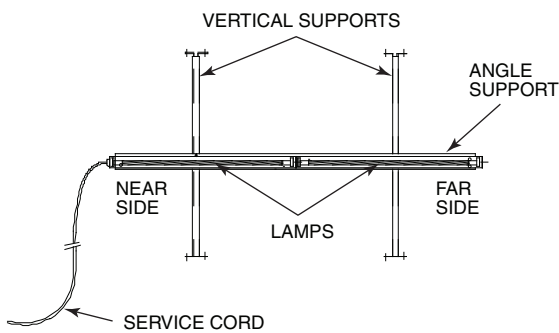


Fig. 6 — Vertical and Angle Support Layout for 39M10W Unit

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
12W	38 $\frac{1}{2}$	2	4
14W	38 $\frac{1}{2}$	2	4
17W	41 $\frac{1}{2}$	2	4
18T	69 $\frac{2}{5}$	2	4
21W	51 $\frac{1}{2}$	2	4
25W	51 $\frac{1}{2}$	2	4

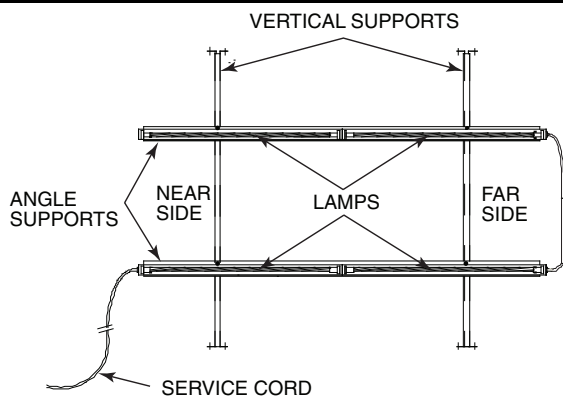


Fig. 7 — Vertical and Angle Support Layout for 39M12W-25W Units, and 18T Units

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
16T	66 $\frac{2}{5}$	2	2

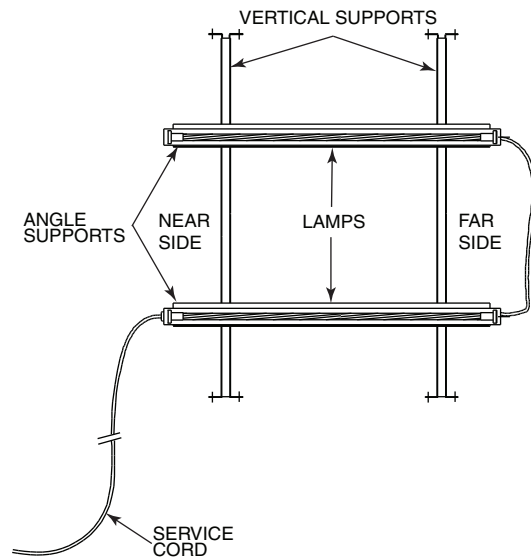


Fig. 8 — Vertical and Angle Support Layout for 39M16T Units

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
22T	75 $\frac{2}{5}$	4	8
25T	80 $\frac{2}{5}$	4	8
30T	80 $\frac{2}{5}$	4	8
35T	83 $\frac{2}{5}$	4	8
37T	99 $\frac{2}{5}$	4	8

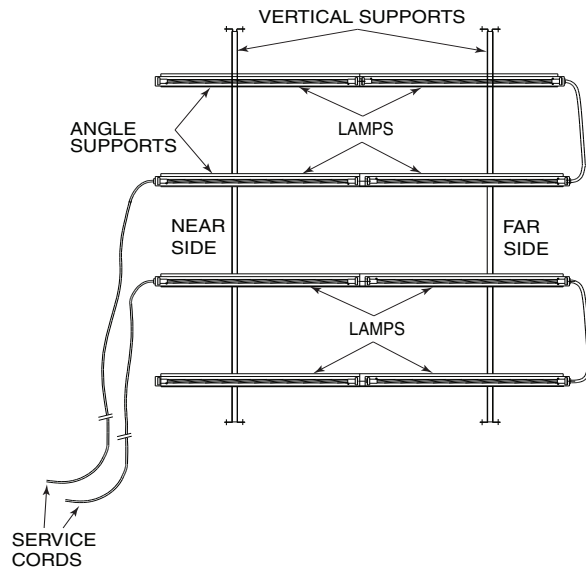


Fig. 9 — Vertical and Angle Support Layout for 39M22T-37T Units

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
30W	51 ¹ / ₂	2	6
36W	62 ¹ / ₂	2	6
40W	68 ¹ / ₂	2	6

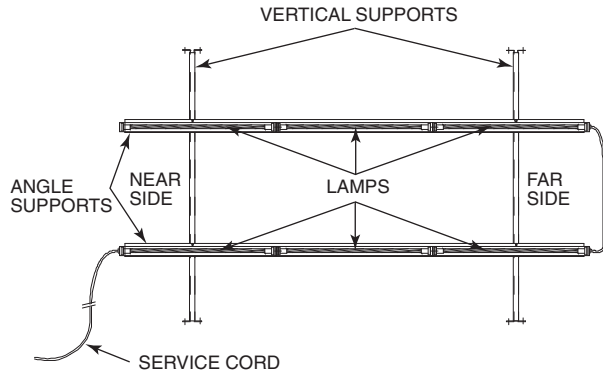


Fig. 10 — Vertical and Angle Support Layout for 39M30W-40W Units

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
110W	117 ² / ₅	4	16

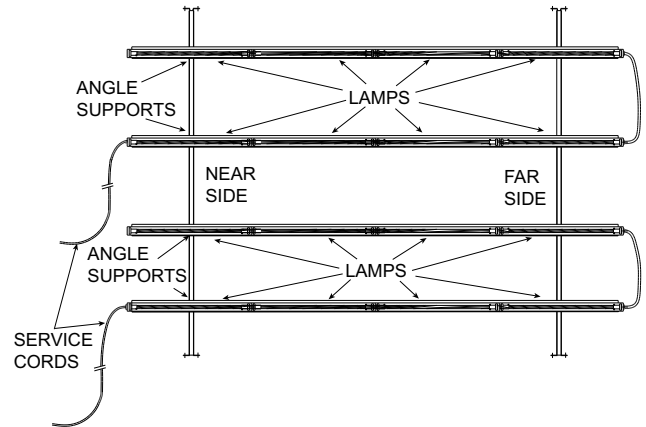


Fig. 12 — Vertical and Angle Support Layout for 39M110W Units

39M UNIT SIZE	VERTICAL SUPPORT HEIGHT (IN.)	ANGLE SUPPORT FIXTURES (LEVELS)	LAMPS
50W	78 ¹ / ₂	4	12
61W	93 ¹ / ₂	4	12
72W	104 ² / ₅	4	12
85W	104 ² / ₅	4	12
96W	117 ² / ₅	4	12

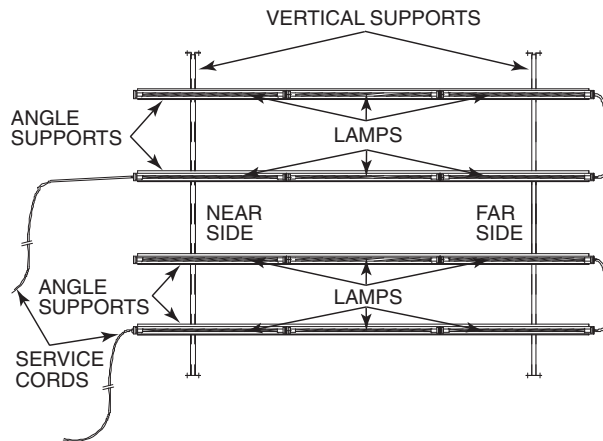


Fig. 11 — Vertical and Angle Support Layout for 39M50W-96W Units

- Remove the cap on the near end of the angle support and locate the wires inside. Install the supplied service cord on the near end of the first angle support by soldering and insulating the identical cables: black, white, and green (ground wire). All fixtures will be interlinked and powered by this service cord. See Fig. 5-12.
- If more than one row is needed, follow Step 7 to install the next angle support directly above the previous support.

NOTE: Lamp kits used in 39M22T-37T and 39M50W-110W units require 2 service cords to prevent circuit overload. Follow Step 8 to install the first service cord on the bottom angle support and to install the second service cord on the angle support located on the second level from the top of the vertical supports. See Fig. 9, 11, and 12.

CAUTION

Do not touch emitter glass without gloves. Damage to lamp may result. Oil from fingerprints will permanently etch the glass of the lamp and weaken the structure. Clean the lamp after handling with 99% isopropyl alcohol and a lint free cloth.

- Once the wiring and vertical and angle supports are installed, remove a lamp from its packaging and align with a fixture fastened to an angle support. Push the lamp in until seated. Rotate the lamp 90 degrees until one distinct click is heard. Repeat for each fixture until all lamps are installed.
- Replace or close the access panel. On this panel, place in easy view one of the UV-C Light Warning labels. See Fig. 13.

Interlock Switch Installation

1. Remove or open the cooling coil section access panel on the opposite side of the air handler.
2. Install one field-supplied interlock switch into the desired base rail drip shield or bottom panel of each access panel. Be sure to test that the switches are placed properly so that when the door panels are closed, the switches are depressed. Wire these switches to run to where the service cord will run for power (junction and switch boxes on the near side).
3. Replace or close the access panel. On this panel, place in easy view one of the UV-C Light Warning labels. See Fig. 13.
4. Return to the first access panel and attach the junction and switch boxes to the external side. If factory installed, remove plastic shipping cover on junction and switch boxes. On this panel, place in easy view one of the UV-C Light Warning labels. See Fig. 13.
5. Drill or punch an electrical conduit pilot hole into the non-access side panel, as directed on the cooling coil section pilot hole label.

NOTE: As this is a panel (not a door), enough cable has been supplied to remove the panel and set next to the air handler without having to unwire the junction or switch boxes. Do NOT cut any of the wires shorter than provided.

UVC LIGHTS	UVC LIGHTS
⚠ WARNING	⚠ WARNING
<p>UVC EXPOSURE HAZARD</p> <ul style="list-style-type: none"> • This unit contains high energy ultraviolet C-band (UVC) germicidal lamps which may cause serious temporary eye and skin irritation. • Turn off power to unit before servicing or repairing. • Never expose unprotected eyes or skin to UVC light. 	<p>UVC EXPOSURE HAZARD</p> <ul style="list-style-type: none"> • This unit contains high energy ultraviolet C-band (UVC) germicidal lamps which may cause serious temporary eye and skin irritation. • Turn off power to unit before servicing or repairing. • Never expose unprotected eyes or skin to UVC light.
⚠ AVERTISSEMENT	⚠ AVERTISSEMENT
<p>RISQUE D'EXPOSITION AUX UVC</p> <ul style="list-style-type: none"> • Cet appareil contient des lampes germicides haute énergie à ultra-violet de bande C (UVC), qui peuvent causer l'irritation momentanée grave des yeux et de la peau. • Couper l'alimentation des lampes UVC avant l'entretien ou les réparations. • Ne jamais exposer les yeux ou la peau non protégés à la lumière UVC. 	<p>RISQUE D'EXPOSITION AUX UVC</p> <ul style="list-style-type: none"> • Cet appareil contient des lampes germicides haute énergie à ultra-violet de bande C (UVC), qui peuvent causer l'irritation momentanée grave des yeux et de la peau. • Couper l'alimentation des lampes UVC avant l'entretien ou les réparations. • Ne jamais exposer les yeux ou la peau non protégés à la lumière UVC.
IMPORTANT	IMPORTANT
<ul style="list-style-type: none"> • Replace bulb(s) annually to maintain germicidal lamp potency. • Replace bulb(s) only with certified CARRIER part(s). • Install only components that are approved for UVC exposure. <p style="text-align: right;"><small>CU000144</small></p>	<ul style="list-style-type: none"> • Replace bulb(s) annually to maintain germicidal lamp potency. • Replace bulb(s) only with certified CARRIER part(s). • Install only components that are approved for UVC exposure. <p style="text-align: right;"><small>CU000144</small></p>

Fig. 13 — UV-C Light Warning Labels — To Be Placed on External Side of Cooling Coil Section Access Panels

Wiring Lamp Kit to Power Source

1. Wire the separate, dedicated, 115-208/230 v power source to the junction box. Wire per Table 4 and Fig. 14.
NOTE: The two service cords needed for lamp kits used in 39M22T-37T and 39M50W-110W units can be wired together in the junction box.
2. Run the service and interlock switch cables through the pilot hole, and wire in the junction box and switch box. See Fig. 14.
3. Seal pilot holes in the internal side of the panel to prevent air entering or exiting through this hole. Add a piece of aluminum tape to shield the sealant from the UV-C light

Table 4 — Wiring

WIRING	COLOR
POWER	Black
NEUTRAL	White
GROUND	Green

NOTE: Recommended type: No. 14 AWG (American Wire Gage), 105° C, TFFN (thermoplastic flexible fixture wire nylon jacketed), 3 conductor.

Testing Lamp Kit

⚠ WARNING

Ensure safety equipment is being worn for germicidal lamp operational testing. **WEAR A FULL FACE MASK AND COMPLETE COVERAGE CLOTHING.** Exposure to germicidal lamps **WITHOUT** safety glasses and protective clothing is limited to 15 seconds in any 24-hour period.

1. Return power to UV-C section ONLY for lamp operation verification.
2. Verify all germicidal lamps glow in a blue hue when the exterior disconnect box is in ON position and both safety panel interlock switches are depressed.
3. Verify lamps deenergize when the exterior disconnect box is in OFF position or either safety panel interlock switch is in the extended, “panel open” position.
4. Turn off power when proper operation is verified. If lamp(s) did not glow, check switch box wiring, junction box wiring, safety panel interlock switches, and lamp(s).
5. Close unit access panel, turn on the switch box and return all power to the unit.

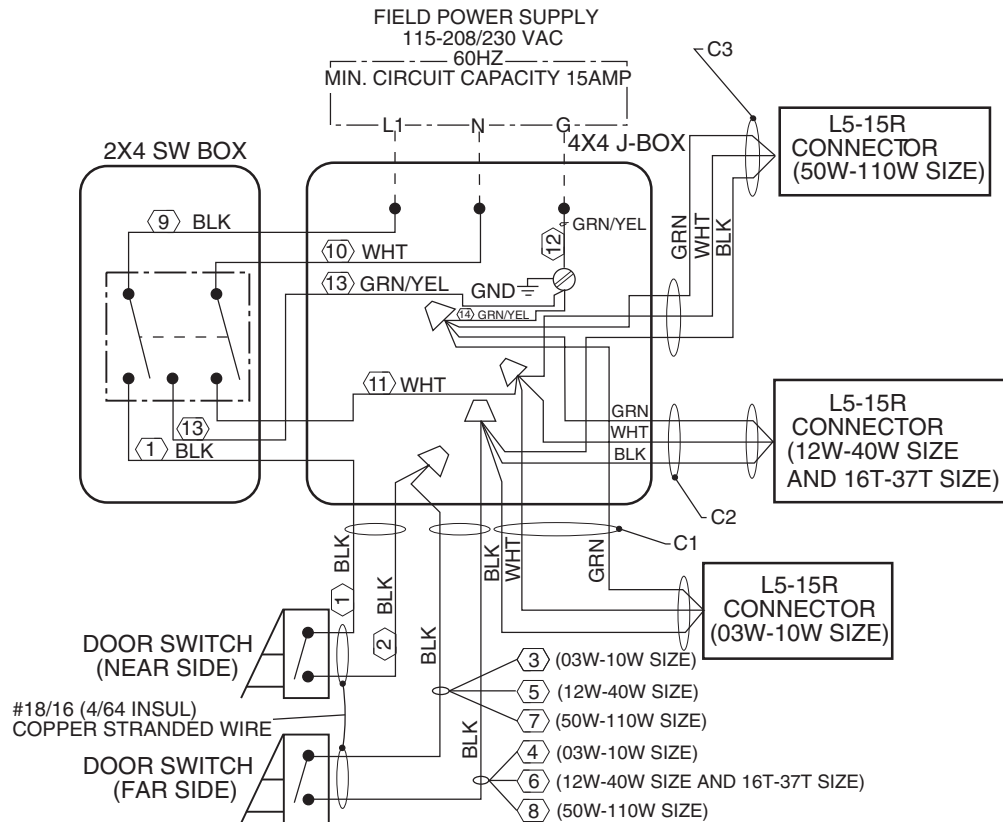


Fig. 14 — UV-C Section Wiring Diagram

MAINTENANCE

Turn off and lock out ALL unit power before performing any maintenance or service.

Lamps need periodic replacement to maintain design specifications. Replace lamps after 1 year. For optimum performance, replace lamps at the beginning of each cooling season. Lamp output may also be checked with a UV-C radiometer. A digital unit-mounted radiometer is available from Carrier (P/N 80000123). Replace lamp when output falls below 50% of initial radiometer reading.

⚠ CAUTION

Use only specified high-output, low temperature lamps with this accessory. Use of a lower wattage or incorrect lamp can result in damage to the accessory or lamp. Correct lamps have a blue end cap.

Refer to Table 3 for Carrier replacement lamp ordering information that can be safely used. Other lamps should not be substituted. Use of non-approved lamps will cause overheating of the lamp and power source.

OPERATION

Ultraviolet lamps should be operated continuously from a separate, dedicated, 115-208/230 v power source. Lamps should not be connected to the indoor fan power source or any power source where the lamps would be cycled more than twice a day.

While lit, lamp color should be light blue. If lamp color changes to red or flickers, replace the lamp. Lamps that are not light blue or lamps exceeding 9000 hours of operation will not emit ultraviolet radiation and will not kill harmful bacteria or fungi.

Fiberglass filter media are recommended for operation of HVAC when filters are directly exposed to ultraviolet lamps. Polyester or cotton filters are subject to ultraviolet degradation and are not recommended.

TROUBLESHOOTING

Refer to Table 5 for troubleshooting information.

Table 5 — Troubleshooting

FAULT	SOLUTION
LAMP DOES NOT LIGHT	TURN OFF POWER FOR 10 SECONDS, AND THEN TURN POWER BACK ON.
	REPLACE LAMP WITH NEW UNIT. NORMAL REPLACEMENTS RECOMMENDED ONCE PER YEAR.
	CHECK LINE VOLTAGE.
	CHECK WIRING TO LAMP.
LOW OUTPUT (RADIOMETER READING) OR VISIBLY WEAK LIGHT	REPLACE POWER SUPPLY.
	REPLACE LAMP WITH NEW UNIT.
	CHECK LINE VOLTAGE.
RED/ORANGE LIGHT	CHECK WIRING TO LAMP.
	CHECK AMBIENT TEMPERATURE. IF THE TEMPERATURE IS AT OR BELOW 35 F, LAMP IS TOO COLD TO OPERATE PROPERLY.
	IF AMBIENT TEMPERATURE IS IN EXCESS OF 35 F, FOLLOW ACTIONS FOR THE LOW OUTPUT FAULT.

