Nu-Calgon Instruction Bulletin

4-410

Specifications:

Approvals	OEM, UL 867
Input Voltage:	24VAC to 240VAC
Power (VA):	12 VA
Frequency:	50/60 HZ
Fusing:	Internal auto-reset circuit breaker
System Size:	Up to 12 tons (4800 CFM)*
Dimensions:	4" W x 7" H x 7" L
Weight:	3 lbs.
Waterproof Rating	NEMA 4X
Service Temp. Range:	-40°F to 160°F
Electrical Approvals:	UL and cUL Certified UL File #E475437
Plasma Output:	200 million ions/cc per polarity (400 million total ions/cc)
Indication:	LED display
Alarm:	Includes optional alarm contact
Mounting:	Duct mount
Orientation:	Mount unit so air flows across brushes like a football through a field goal post

**For systems beyond 12 tons, multiple iWave-Cs can be used. Install a minimum of two feet apart for maximum ion output.*

Packaging:

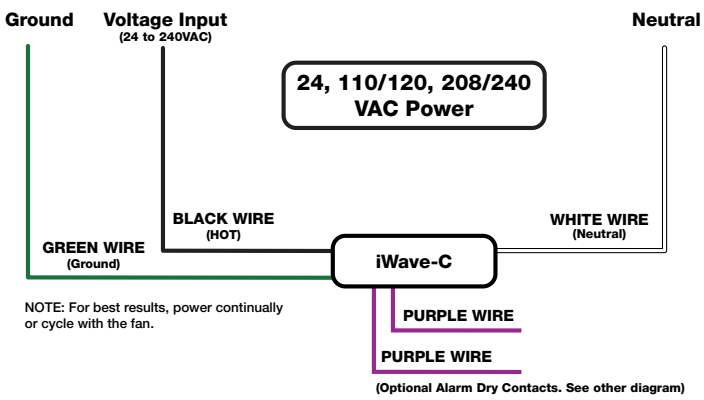
1 each **4900-10**

Installation:

The iWave-C is designed for metal duct mounting applications. The preferred mounting location is after a prefilter and before the cooling coil. An alternate mounting location is the supply air duct or the return air duct. The weatherproof housing will allow mounting indoor or outdoor.

Step 1. Turn power off to the unit.

Step 2. After finding the appropriate location, cut or drill a 4 inch (100mm) round hole. Insert the unit into the 4 inch (100mm) round hole and secure with four self tapping screws provided. Please note, if the unit is being mounted to duct board, the included spring loaded wing nuts and bolts will be required.



Indoor Air Quality

iWave®-C

Air Ionization System



Wiring:

Confirm power is off prior to wiring. Follow all local and national electric, mechanical and building codes when installing and wiring. The iWave-C can be powered with any voltage from 24VAC to 240VAC. The face panel of the unit is labeled showing which terminals are 24VAC to 240VAC input, neutral, ground and alarm wires and come prewired from the factory. Opening the unit is not necessary for installation. The unit is provided with 6 feet of liquid-tight flex conduit to reach a junction box for wiring. The wires are color coded as follows:

- Black wire = 24-240VAC input
- White wire = Neutral
- Green wire = Ground
- Purple wires = Alarm Dry Contact

The unit is provided with alarm contacts for use with a building management system. When the unit is powered and there are no faults, the alarm “dry” contacts will be closed, providing continuity. The contacts are rated up to 250VAC at 1A.

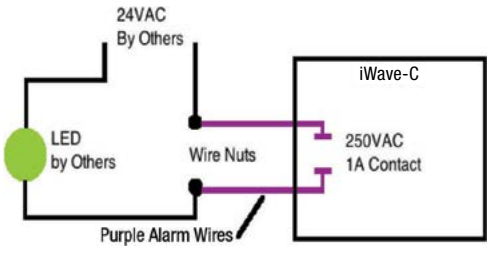
CAUTION! NEVER TOUCH BRUSHES WHILE OPERATING. SHOCK MAY OCCUR. DO NOT CONNECT WITH AN EXTENSION CORD.

Operation:

Once powered, the unit initiates an internal check of all systems. After initializing, the display will blink between

ALARM RELAY WIRING EXAMPLE

Remote mounted LED will illuminate when the iWave-C is powered and there are no faults. All remote mount wiring, LED, wire nuts and voltage source are provided, mounted and wired by others.



Continued on back.

“On”, “GPS” and the number of days the unit has been powered. If there is a fault, the unit display will show “FALT”.

Cleaning Cycle — The iWave-C comes with a preset cleaning cycle designed to clean the brushes every 5 days. At any time, the cleaning cycle test button on the front panel may be pushed and the unit will initiate a cleaning cycle. While the cleaning cycle is engaged, the display will change to “CLEA”. To change the cycle frequency, hold the cleaning cycle button in for 5 seconds once the display shows “CLEA” and then press it until you see the number of days you want it to wait between cycles, 1, 5, 10 and 20. Most applications will never require reprogramming.

Maintenance:

The iWave-C is designed to be maintenance free for years of trouble-free operation with the patent pending self-cleaning system; eliminating the need to replace expensive UV lights/cells every couple of years as with competing technologies. Although extensively tested for durability, it’s possible over years of self-cleaning cycles, the carbon fiber brushes can wear from friction and require replacement. With the unit powered off, remove the iWave-C from the duct. Remove the two Phillips screws that fasten the brushes to the iWave-C. Pull the brushes out of the electrical connector and insert new brushes (available through Nu-Calgon). Replace the Phillips screws and attach the iWave-C into the duct and re-energize the device to initiate normal operation.



Troubleshooting:

Problem	Solution
Unit won’t power up	Confirm proper voltage is applied and to the correct terminal
Display shows “FALT”	Remove power, wait one minute and reapply power. If “FALT” still appears, try using alternate power source, i.e. low voltage input versus high voltage input or vice versa. If FALT still shows, call Nu-Calgon.
No Display / LED	If the correct voltage source has been confirmed and the unit does not power up contact Nu-Calgon.
Water behind face plate	In rare occasions, small amounts of water can accumulate behind the face plate. To remove this water, you can remove the face plate entirely using the four screws. Be sure to replace the face plate prior to entering the unit back into service. You can also drill a small pilot hole using a 3/16” bit at the bottom of the plastic face plate as a drain for this water.

WARNING

1. The health aspects associated with the use of this product and its ability to aid in disinfection of environmental air have not been investigated by UL LLC.
2. This product shall not be installed behind a suspended floor/ceiling or a structural wall, ceiling, or floor.
3. This product is suitable for mounting to duct of metallic Construction only. Installation must be such that the structural integrity of the ducting is not compromised.
4. RISK OF ELECTRIC SHOCK. CAN CAUSE INJURY OR DEATH: DISCONNECT ALL ELECTRIC POWER SUPPLIES BEFORE SERVICING

Three-Year Limited Warranty:

The iWave-C offers a limited warranty for three years that covers any defects in material or workmanship under normal use. If you make a claim during the warranty period, you must provide proof of purchase and proof of proper installation by a licensed contractor for the warranty to be valid. The iWave warranty does not cover labor, return shipping charges, damage from improper installation or improper voltage usage. The iWave warranty begins on the date that the unit was purchased. Installation of your iWave by any person other than a licensed contractor will void the warranty. Contact your local Nu-Calgon account manager or info@nucalgon.com with further questions.

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