Electrical rough-in requirements

Quick guide for electricians in North America

For details not included here, check wiring diagrams in individual device manuals or contact your Zehnder dealer.

Line voltage requirements

For ComfoAir 160, 200, 350, 550 and ComfoAir Q350, Q450, Q600…

NEMA 6-15

- A dedicated 240V/60Hz/15A circuit is required to operate Zehnder H/ERV units.
- 220V to 240V is acceptable; 208V will result in fan power reduction.
- The receptacle format is **NEMA 6-15**.

For ComfoAir 70…

- See the CA70 installation manual.
- Two options:
    1. Hard-wire the power leads of the transformer to either 110V or 220V 50-60Hz in a junction box in the wall…or…
    2. Wire the power leads of the transformer to a NEMA 1-15P power cord and provide a standard 110V receptacle.
- The ComfoAir 70 does not need to be connected to a ground wire (Class II protection).

Boost switch wiring

(For all ComfoAir and ComfoAir Q units, **except** ComfoAir 70)

A boost switch used with a ComfoAir ventilation system is a Decora-style momentary-contact (normally open) rocker switch.

- **DO NOT** substitute standard single pole single throw switch!

A standard single-gang electrical rough-in box should be installed for the switch.

- The boost switch **CANNOT** be ganged with line voltage circuits.

A low-voltage 18-2 cable is required to connect each boost switch to the ventilation unit.

- Connect the two conductors to the two terminals on the side of the switch (the ground terminal is not used)
- **DO NOT** connect 110V line voltage to the boost switches. They operate only with the low voltage supplied by the ventilation unit.

At the ventilation unit, connect the 18-2 wires to the circuit board terminals labeled “BS”.

- ComfoAir Q units do not have BS terminals; the BS terminals are in the “Option Box”, which should be mounted near the ventilation unit.
- For multiple boost switches, run all wires back to the unit location, connect to a single “pigtail” and connect the pigtail to the BS terminals.

ComfoSense 67 wall controller (for ComfoAir 160, 200, 350, 550)

- The ComfoSense 67 controller is **REQUIRED** to operate the CA 160, 200, 350, 550.
- Provide a shielded 18-4 cable (ideally 2 twisted pairs) from the wall controller location back to the ventilation unit location.
- The ComfoSense 67 comes with its own mounting box.

ComfoAir Q control devices (for ComfoAir Q350, Q450, Q600)

All of the following control devicies, including the ComfoSense **C**67 controller, are **OPTIONAL** with any Q ventilation unit (the unit has a control panel on its front cover).

- The ComfoConnect LAN C internet gateway should be mounted near the Q ventilation unit and connected to the owner's internet router with an RJ45 ethernet cable.
- A ComfoSense **C**67 wall controller requires a shielded 18-4 cable (ideally twisted pairs) from the controller location back to the Q ventilation unit.
- A ComfoSwitch C wall controller requires a shielded 18-4 cable (ideally twisted pairs) from the controller location back to the Q ventilation unit.
- An Option Box, if used, should be mounted near the Q ventilation unit and can be connected to the Q with either a shielded 18-4 cable (ideally 2 twisted pairs) or with an RJ45 ethernet cable.
- A ComfoSplitter, if used, should be mounted near the Q ventilation unit and can be connected to the Q or to the Option Box with a shielded 18-4 cable (ideally 2 twisted pairs).

Due to the many various control configurations for the Q, instructions for the finish wiring should be reviewed in the individual device manuals or reviewed with your Zehnder dealer.

ComfoFond-L wiring

For ComfoAir 350 and 550 units, the ComfoFond-L will be wired directly to the ventilation unit with a shielded 18-4 cable (ideally 2 twisted pairs).

For ComfoAir Q350, Q450 and Q600 units, the ComfoFond-L will be wired to the Option Box with a shielded 18-4 cable (ideally 2 twisted pairs).

- If a ComfoFond-L is used with a Q, the Option Box will need to be powered. An additional **NEMA 6-15 receptacle** must be provided (may be on the same circuit as the ventilation unit).

For all low voltage wiring…

AVOID running low voltage wiring alongside line voltage cables. Crossing over line voltage cables is acceptable, but running in parallel adjacent to line voltage can interfere with the control signals.