



Installation Manual

AQUA NEW STYLUS

Chilled Water Fan Coil
Convertible Type
CFEB Series 50/60 Hz



50 Hz Models Cooling Only

CFEB 04 C0M1
CFEB 06 C0M1
CFEB 08 C0M1
CFEB 10 C0M1
CFEB 12 C0M1
CFEB 14 C0M1
CFEB 16 C0M1
CFEB 20 C0M1

60 Hz Models Cooling Only

CFEB 04 C0M2
CFEB 06 C0M2
CFEB 08 C0M2
CFEB 10 C0M2
CFEB 12 C0M2
CFEB 14 C0M2
CFEB 16 C0M2
CFEB 20 C0M2

September 2009

UNT-SVN009-EN



General Information

General Information

This Installation Manual is given as a guide to good practice in the installation by the installer of CFEB chilled water fancoil system. Installation procedures should be performed in the sequence that they appear in this manual.

For installing the unit to operate properly and reliably, it must be installed in accordance with these instructions. Also, the services of a qualified service technician should be employed, through the maintenance contract with a reputable service company.

Read this Installation Manual completely before installing the air conditioning system.

About this Manual

Cautions appear at appropriate places in this Installation Manual. Your personal safety and the proper operation of this machine require that you follow them carefully. The Trane Company assumes no liability for installations or servicing performed by unqualified personnel. All phases of the installation of this air conditioning system must conform to all national, provincial, state and local codes.

About the Unit

These CFEB units are assembled, pressure tested, dehydrated and run tested before shipment. The information contained in this manual applies to CFEB units are designed to operate in cooling mode only and in cooling or heating modes.

Trane CFEB series of chilled water fancoil systems offer three styles of installation: floor, low wall and under ceiling with both LCD wireless remote control or wired control. Trane CFEB series provide flexibility and savings.

Note: For model CFEB 14, CFEB 16 and CFEB 20, there are only two styles of installation: under ceiling and low wall.

Reception

On arrival, inspect the unit before signing the delivery note. Specify any damage of the unit on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the dealer at the same time.

The unit should be totally inspected within 7 days of delivery. If any concealed damage is discovered, send a registered letter of protest to the carrier within 7 days of delivery and notify the dealer.

Warning

Warnings are provided at appropriate places in this manual to indicate to installers, operators and service personnel of potentially hazardous situations which, if not avoided, COULD result in death or serious injury.

Caution

Cautions are provided at appropriate places in this manual to indicate to installers, operators, and service personnel of potentially hazardous situations which, if not avoided, MAY result in minor or moderate injury or malfunction of the unit.

Your personal safety and the proper operation of this unit require that you follow them carefully. The Trane Company assumes no liability for installations or servicing performed by unqualified personnel.

Warranty

Warranty is based on the general terms and conditions by country. The warranty is void if the equipment is modified or repaired without the written approval of The Trane Company, if the perating limits are exceeded or if the control system or the electrical wiring is modified.

Damage due to inappropriate installation, lack of knowledge or failure to comply with the manufacturer's instructions, is not covered by the warranty obligation. If the installation does not conform to the rules described in Installation Manual, it may entail cancellation of warranty and liabilities by The Trane Company.

Important

This document is customer property and is to remain with unit. Please place in service information pack upon completion of work. These instructions do not cover all variations in systems, nor do they provide for every possible contingency to be met in connection with installation. Should further information be desired or should particular problems arise which are not covered sufficiently in this manual, the matter should be referred to your Trane Sales representative.

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Location and Preparation of Units

1. Select an appropriate position that allows every corner of the room to be uniformly air conditioned and where it is easy to route the water piping.
2. Ensure that the floor or ceiling construction is sufficient to fully support the weight of the indoor unit.
3. Consideration must be given to ensure an unobstructed flow of supply and return air.
4. Length of the condensate drain hose should be kept as short as possible. (Figure 1)
5. Recommended service clearance as shown in figure 2, 3 and 4.

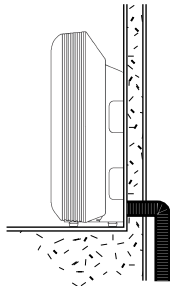


Figure 1

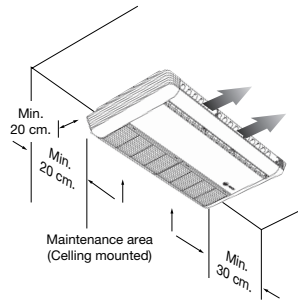


Figure 2

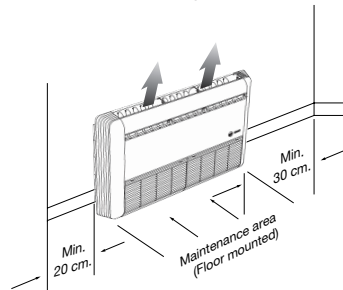


Figure 3

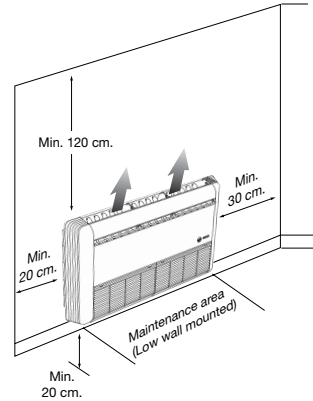


Figure 4

6. Do not install unit in direct sunlight or near other heat sources as this may affect performance. Do not allow outside air to directly enter unit or condensate may form at the unit's discharge.

Note: For CFEB 14 - CFEB 20 the unit should be installed over the floor at least 20 cm.

Unit Installation

Indoor Unit

1. Select a location to route piping, wiring and drain pipe.
2. Make a hole in the wall using a key hole saw or hole-cutting drill attachment. The hole should be made at a slight downward slant to the outdoor side (Figure 5).

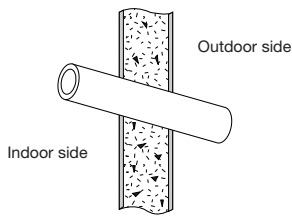


Figure 5

Before cutting, check that no pipes or studs are directly behind the place to be cut. Avoid areas where electrical wiring or conduits are located.

3. Place the unit on a solid and level foundation.
4. Tubing, wiring through and drain pipe of low wall and floor mounted units can be routed, rear or right side of unit when facing front. Ceiling mounted can be routed straight downward.
5. Pull air filters upward (Figure 6).

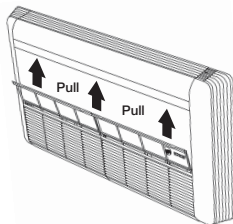


Figure 6

6. Unscrew at the return grille (Figure 7).

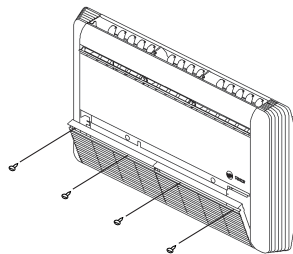


Figure 7

7. Unscrew at the grille bottom hinges, pull out the screw, and unscrew at the side panel front (Figure 8). Then, push down on the side panel front and pull up (Figure 9).

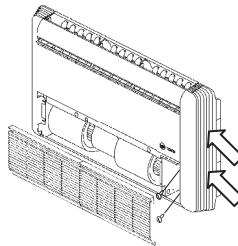


Figure 8

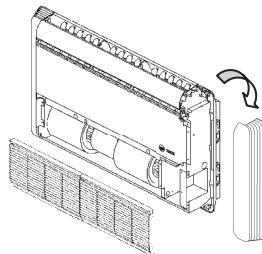


Figure 9

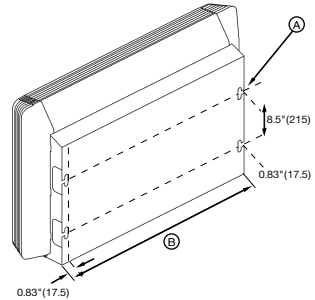


Figure 10

Note: = (A) 0.49" x 1.575" - 4 SLOT (Mounting hole) (12.5 mm 40.0 mm)

Unit Size	(B)
CFEB 04-06	36.2" (914)
CFEB 08	46.1" (1,164)
CFEB 10-12	55.9" (1,414)
CFEB 14	65.7" (1,664)
CFEB 16-20	75.6" (1,914)

8. Place or hang the unit at the selected position.
9. Replace both right and left side panels, and the return grille after the installation of wiring, tubing and piping is complete.

Outdoor Unit

See the proper installation method provided in the Installation Manual for the outdoor unit.

Connection of Water Piping

The unit water piping connections are provided with a make straight fitting. The water piping connection is located on the right hand side of the unit (Figure 11).

To complete piping connections, connect the female connections to the male adapter of the water piping connections at the inlet and outlet of the coil. Then, screw in and fasten the connections with an adjustable wrench or torque wrench.

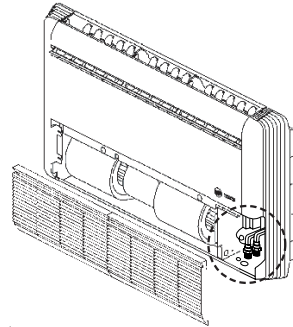
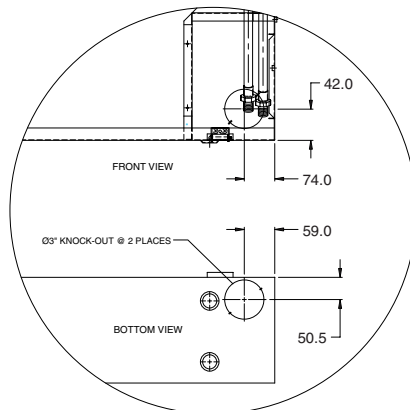


Figure 11

Unit Model	Pipe Connection (in)
CFEB 04-06	Male 1/2 MPT
CFEB 08-20	Male 3/4 MPT

Position of Piping Hole



Condensate Drain Piping

- The drain hose should run straight down the wall to a level where the runoff will not stain the wall.
- There should be no traps.
- Avoid putting the end of the hose in water.
- To conveniently drain the system, the drain hose must slant downward, with a slope of at least 1 : 50 to prevent leakage. Figure 12 shows the unit in the floor mounted position.
- When the drain hose is placed in the room, insulate the hose with foam polyethylene to avoid damage to the ceiling or furniture.

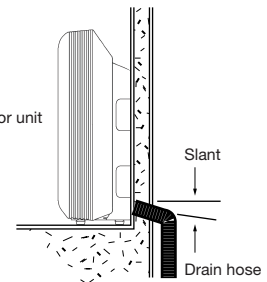


Figure 12

Electrical Installation

All wiring and grounding must comply with local electrical codes.

1. Wiring

Important Safeguards:

- Check the unit nameplate for electrical rating. Be sure wiring is done according to local codes and wiring diagram.
- Connect electrical ground to all units.
- Wiring should not touch motors or moving parts.
- The manufacturer will accept no responsibility for problems caused by unauthorized changes in the internal wiring.
- Pass the system wiring through the PVC pipe conduit or metal conduit, referred to Unit Installation section. (both power and control lines).
- Make sure all connections are tight.

2. Electrical Connections

See Section: Wiring System Diagram.

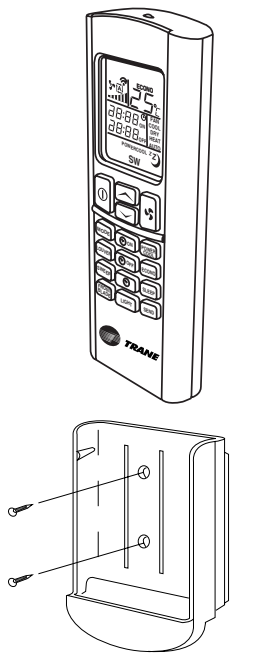
Note:

- All wiring must comply with local codes.
- After completing the connections, re-confirm them to be in accordance with the unit and system wiring diagrams.

Remote Control Installation

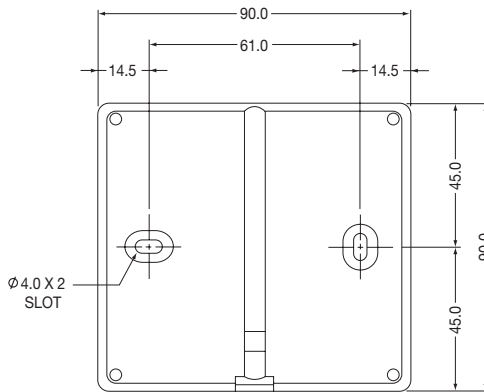
Locate and attach the wireless remote control and wired control as follows:

1. Do not place the control and the remote control near heat sources or expose to the direct rays of the sun.
2. Do not expose the control to the indoor unit's supply air stream.
3. Do not place in a confined space.
4. Attach the remote control holder as shown in Figure 13, 14.

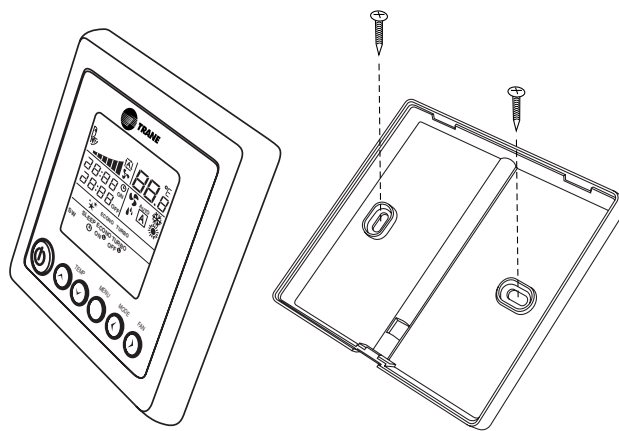


Wireless Remote Control

Figure 13



Dimension



Wired Remote Control

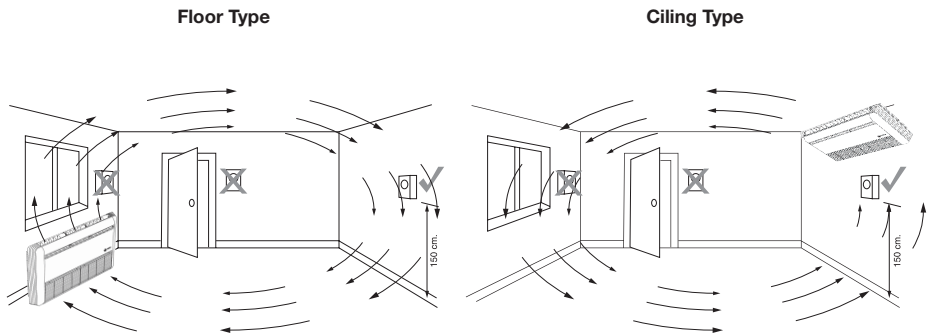
Mounting Bracket

Figure 14

Electronic Room Thermostat Installation

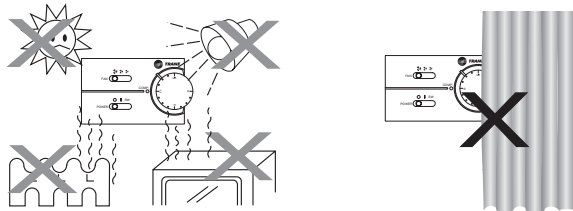
Precaution

- This room thermostat is an electronic control device, which requires special precaution for installation.
 - Follow the wiring diagram attached on page 9 for reference.
 - Room thermostat should not be located at or near the water drop or water mist.
 - Be careful not to leave any copper wire or piece of metal inside the control set.
- For better temperature control, please see the attached picture for the suitable room thermostat's location.



Location of room thermostat

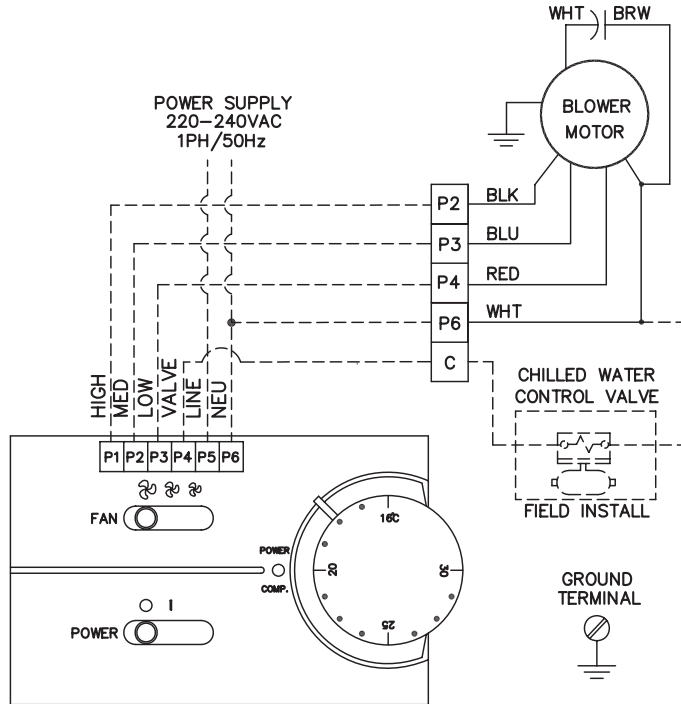
- Do not place the control set and room thermostat near heat sources or expose to the direct sunlight.
- Do not expose the room thermostat to the indoor unit's supply air stream.
- Do not place the room thermostat in a confined space.





Typical Wiring Diagram

WIRING DIAGRAM



DESCRIPTION

- — — FIELD WIRING
- FACTORY WIRING
- COIL
- JUNCTION
- TERMINAL BLOCK
- |—|— CAPACITOR

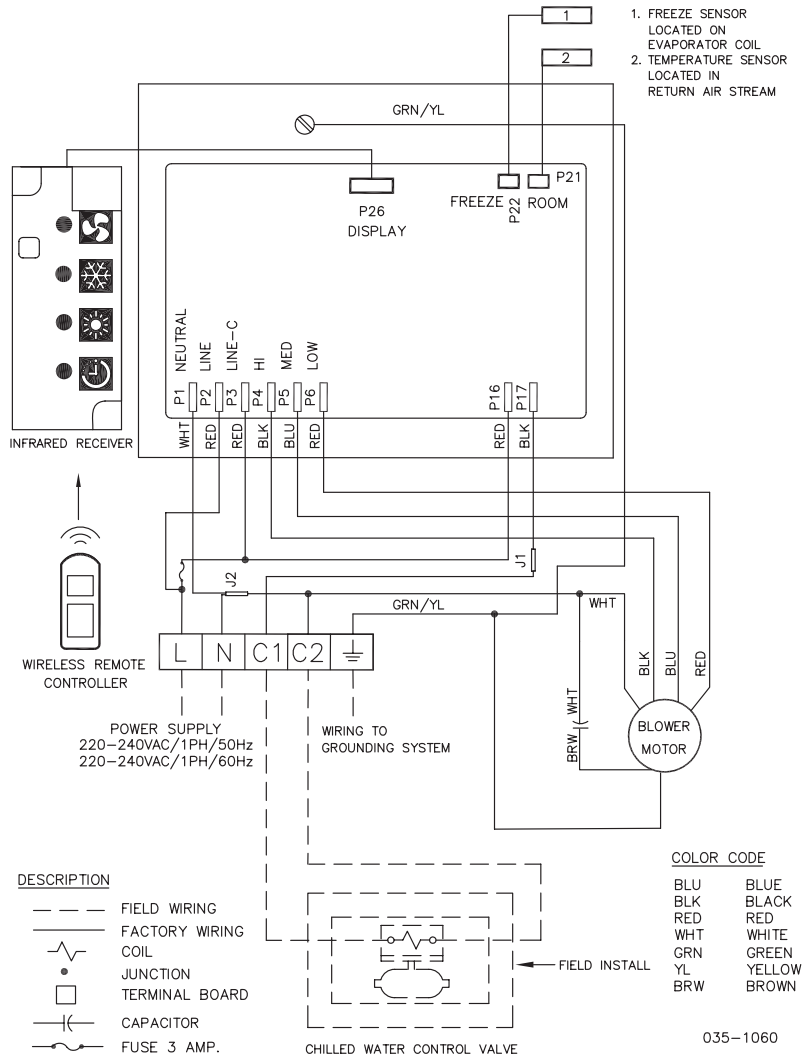
COLOR CODE

- BLK BLACK
- BLU BLUE
- WHT WHITE
- RED RED
- BRW BROWN

035-1048

Typical Wiring Diagram

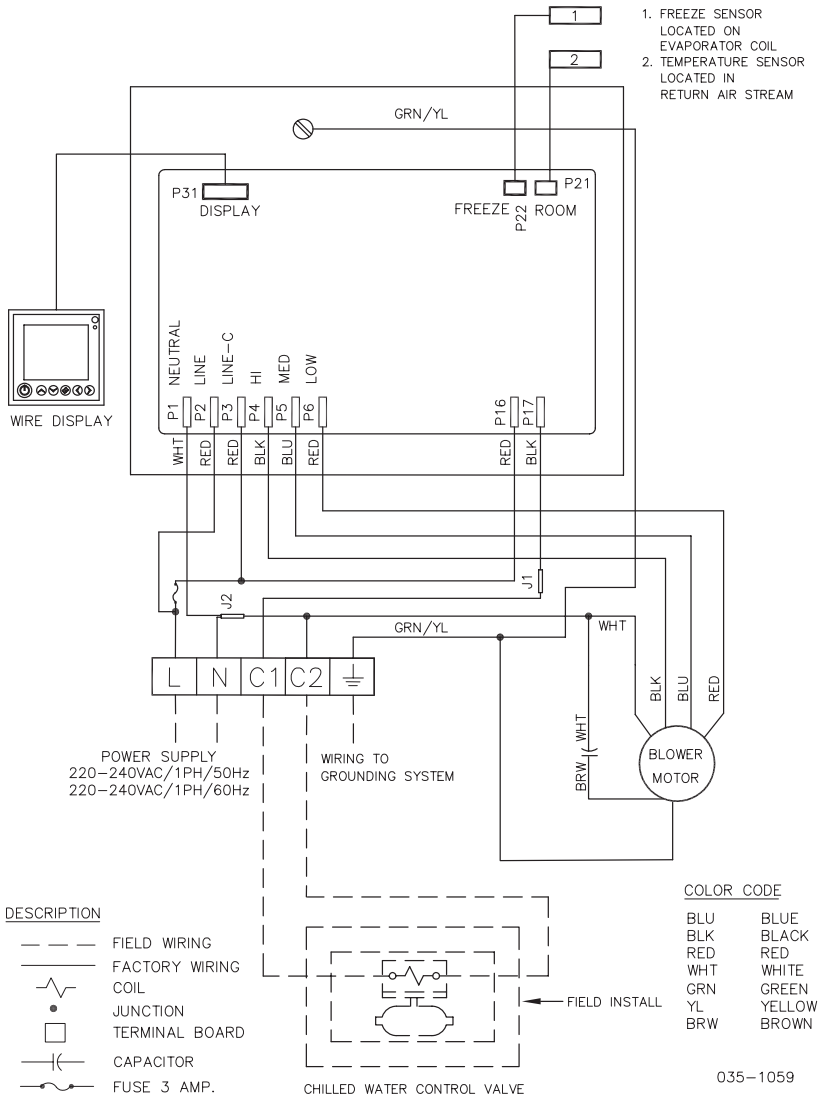
CFEB, CHILLED WATER FANCOIL UNIT WITH WIRELESS CONTROL COOLING ONLY





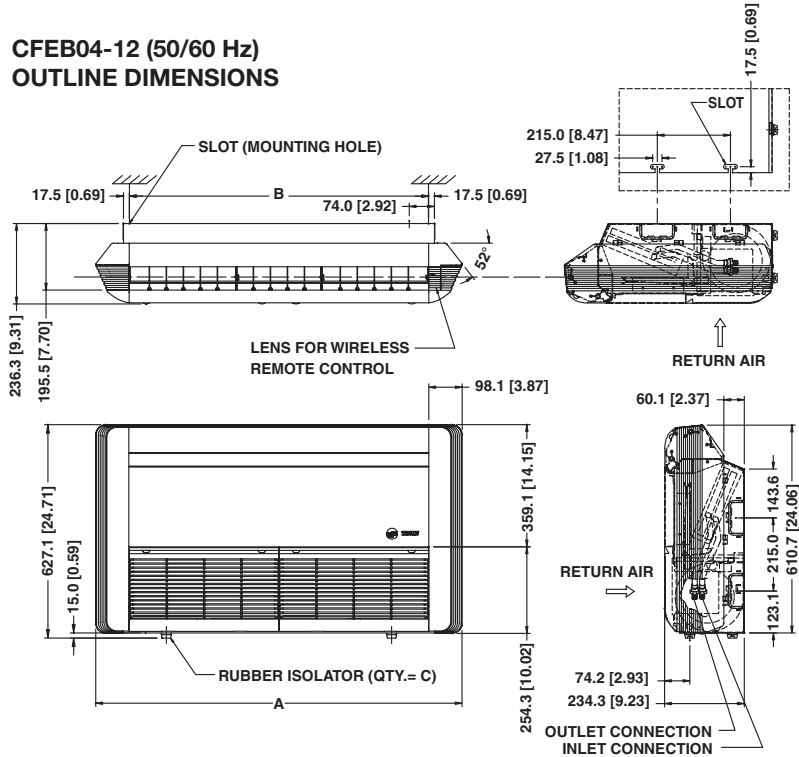
Typical Wiring Diagram

CFEB, CHILLED WATER FANCOIL UNIT WITH WIRED CONTROL COOLING ONLY



Dimensional Data

CFEB04-12 (50/60 Hz) OUTLINE DIMENSIONS



DIMENSIONAL DATA

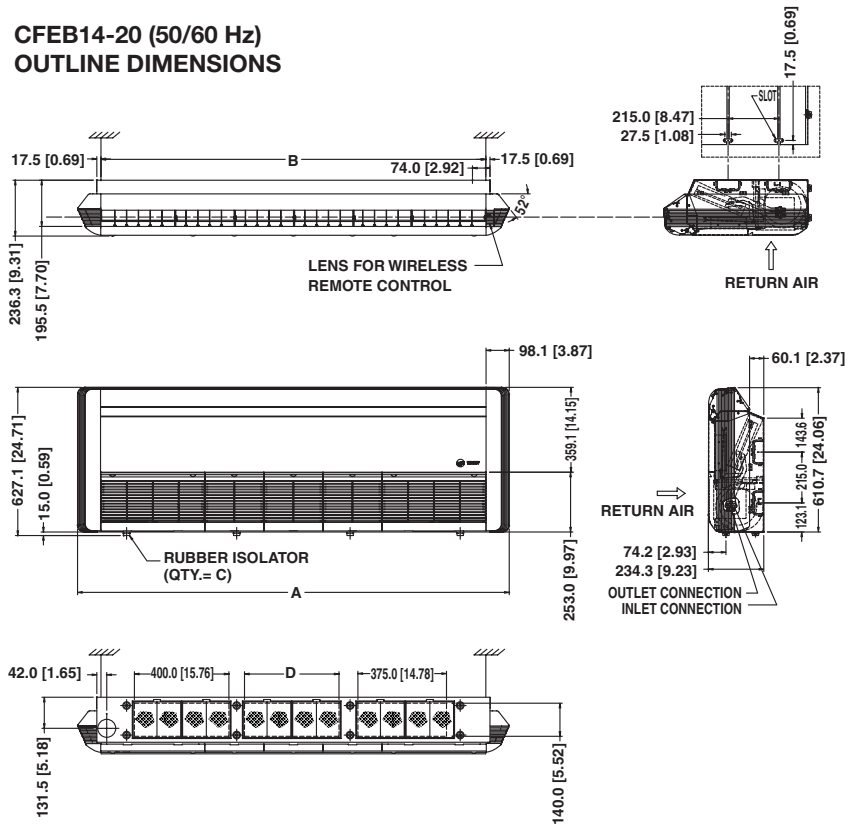
MODEL	CONN. SIZES		A		B		C
	INLET	OUTLET	IN.	(MM.)	IN.	(MM.)	
CFEB04 CFEB06	1/2 (13)	1/2 (13)	42.28	(1074.0)	34.61	(879.0)	4
CFEB08	3/4 (19.0)	3/4 (19.0)	51.13	(1324.0)	44.45	(1129.0)	4
CFEB10 CFEB12	3/4 (19.0)	3/4 (19.0)	61.97	(1574.0)	54.29	(1379.0)	6

NOTE 1) INLET AND OUTLET LINES HAVE MALE ADAPTER TYPE CONNECTIONS.

2) DIMENSIONS : MILLIMETERS [INCHES] 25.4 MM. = 1 IN.

Dimensional Data

CFEB14-20 (50/60 Hz) OUTLINE DIMENSIONS



DIMENSIONAL DATA

MODEL	CONN. SIZES		A		B		C		D	
	INLET	OUTLET	IN.	(MM.)	IN.	(MM.)	EACH	IN.	(MM.)	
CFEB14	3/4 (19.0)	3/4 (19.0)	71.81	(1824.0)	64.13	(1629.0)	8	15.76	(400)	
CFEB16 CFEB20	3/4 (19.0)	3/4 (19.0)	81.65	(2074.0)	73.98	(1879.0)	8	23.64	(600)	

- NOTE 1) INLET AND OUTLET LINES HAVE MALE ADAPTER TYPE CONNECTIONS.
 2) DIMENSIONS : MILIMETERS [INCHES] 25.4 MM. = 1 IN.



Notes



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Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this publication.