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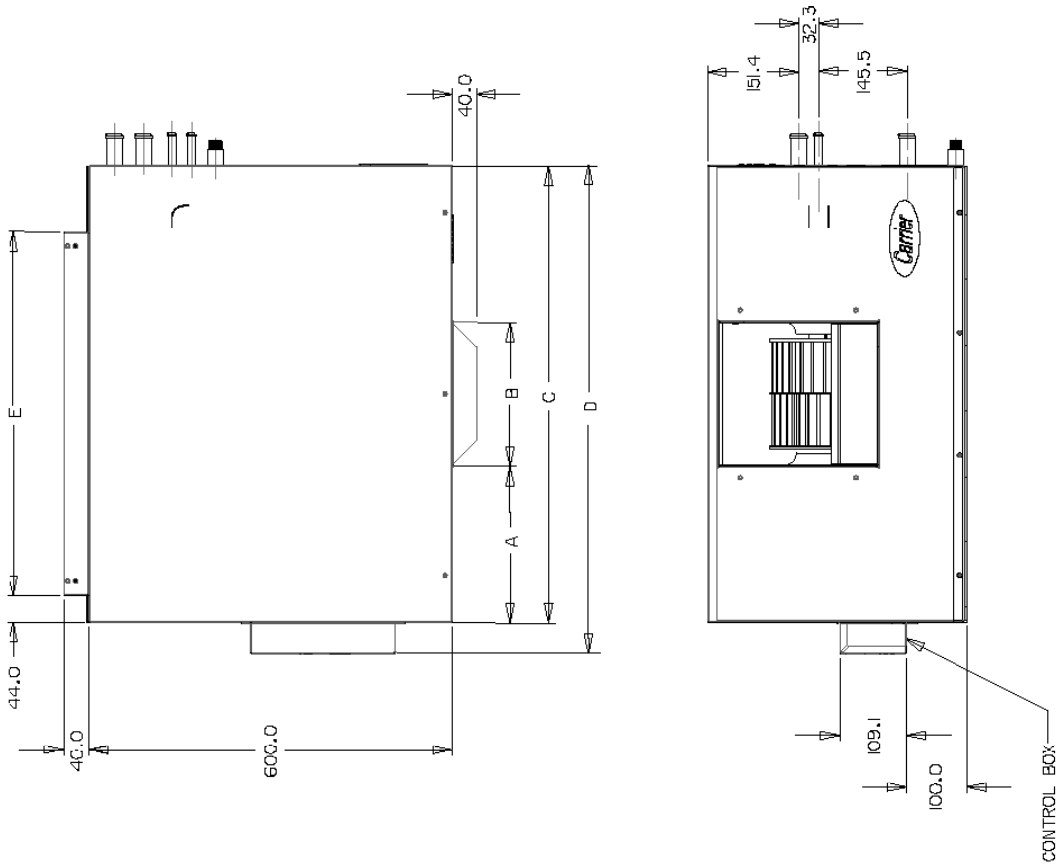
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**TABLE-1 PHYSICAL DATA**

MODEL: 40LMA			024	040	060	080	
Power Source		V-Ph-Hz	240 - 1 - 50				
Min. / Max. Voltage		V	207 - 253				
Operating Weight		kg	36.3	50.6	55	104.5	
Coil	Chilled Water	Type		Copper Tube, Aluminium Fin			
		Face Area	m <sup>2</sup>	0.19	0.29	0.33	0.43
		Number of Rows		4 OR 6	4 OR 6	4 OR 6	4 OR 6
		Fin Type		Lanced Sine Wave Plate Fins			
		Fins per meter		472			
	Hot Water (Optional)	Type		Copper Tube, Aluminium Fin			
		Face Area	m <sup>2</sup>	0.19	0.29	0.33	0.43
		Number of Rows		1			
		Fin Type		Double Wavy Plate Fins			
		Fins per meter		472			
Nominal Air Flow		l/s	450	650	900	1250	
Fan Motor	Type		Permanent Split Capacitor				
	Quantity		1				
	Power Output	watts	315	462	750	800	
	Speed		3 Speeds				
Connection	Supply		25.4mm (1")				
	Return		25.4mm (1")				
	Drain		19mm (3/4") Male BSP				
Dimension	Width	mm	754	1090	1224	1556	
	Depth	mm	600				
	Height	mm	425				



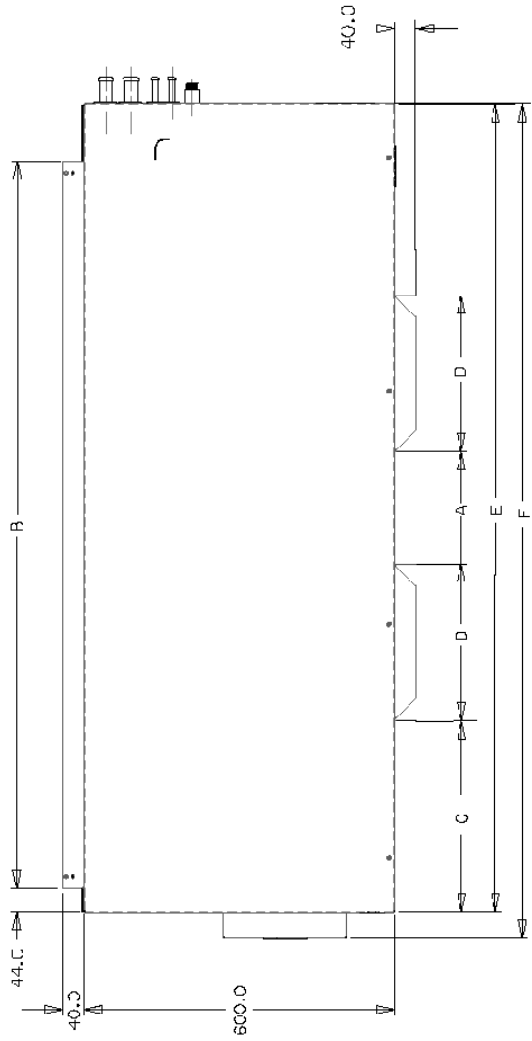
# PHYSICAL DIMENSION



Model Size	A	B	C	D	E	F
40LMA024 (4 Rows)	259.5	235	754	805.2	601.9	47.7
40LMA024 (6 Rows)	259.5	235	754	805.2	601.9	79.6
Model Size	A	B	C	D	E	F
40LMA040 (4 Rows)	393.5	303	1090	1141.2	942.3	47.7
40LMA040 (6 Rows)	393.5	303	1090	1141.2	942.3	79.6

**FIG.1** 40LMA024/040 (4 or 6 Row) Dimensional Drawing

# PHYSICAL DIMENSION



Model Size	A	B	C	D	E	F	G
40LMA060 (4 Rows)	229	1071.9	262.5	235	224	275.2	47.7
40LMA060 (6 Rows)	229	1071.9	262.5	235	224	275.2	79.5

Model Size	A	B	C	D	E	F	G
40LMA080 (4 Rows)	218	1402.9	369	300	1556	1607.2	47.7
40LMA080 (6 Rows)	218	1402.9	369	300	1556	1607.2	79.5

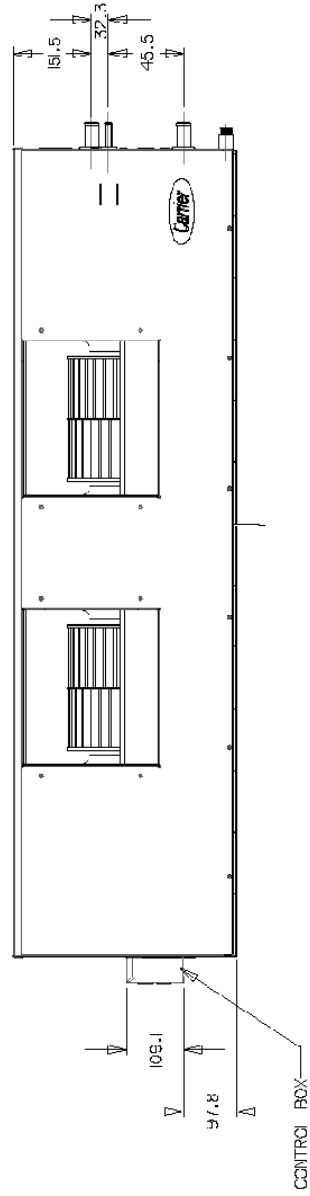
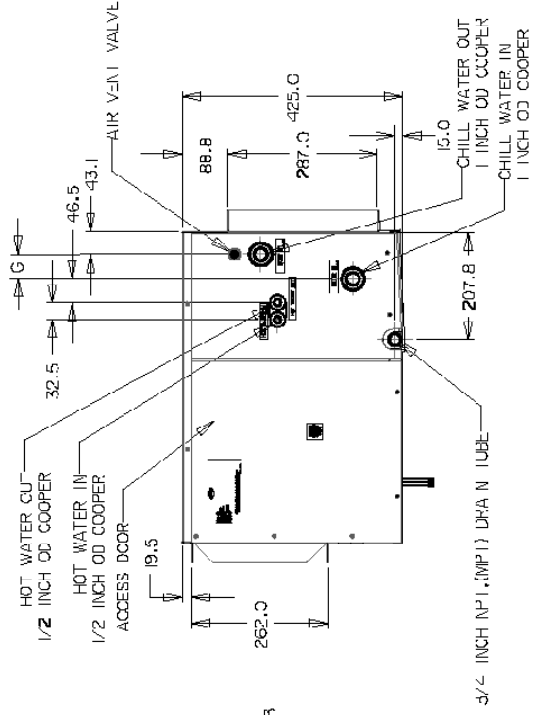


FIG.2 40LMA060/080 (4 or 6 Row) Dimensional Drawing

## 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 shall be installing, repairing or servicing the air conditioning equipment.

When working on air conditioning equipment, observe precautions in the literature and labels attached to the unit and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available for all brazing operations.

### WARNING !!!

Before performing service or maintenance operations on system, turn off main power switches to indoor unit and outdoor unit. Electrical shock could cause personal injury.

### PRELIMINARY CHECK:

Below is the check list which should be checked before the installation starts. The installer should be familiar with each of the following requirements before the actual installation:

- Space requirement and clearance
- Ceiling or mounting strength
- Piping connections
- Condensate drain connection
- Power supply and wiring
- Air duct connections

### RIGGING AND UNPACKING:

Carton should not be removed from unit until reaching final location to avoid damage. Inspect unit for shipping damage and file claim with transportation agency if necessary, check nameplate voltage against available power supply. For special installation, consult local building and electrical codes.

### LOCATION, MOUNTING AND ISOLATION:

Unit shall be installed for horizontal discharge only. For ceiling application, suspend horizontally using field supply hanging bracket (do not drill hole on top/side panel to hang unit).

Do not restrict service areas. Refer Fig.3 for minimum recommended clearance space (for both ceiling and plant room application).

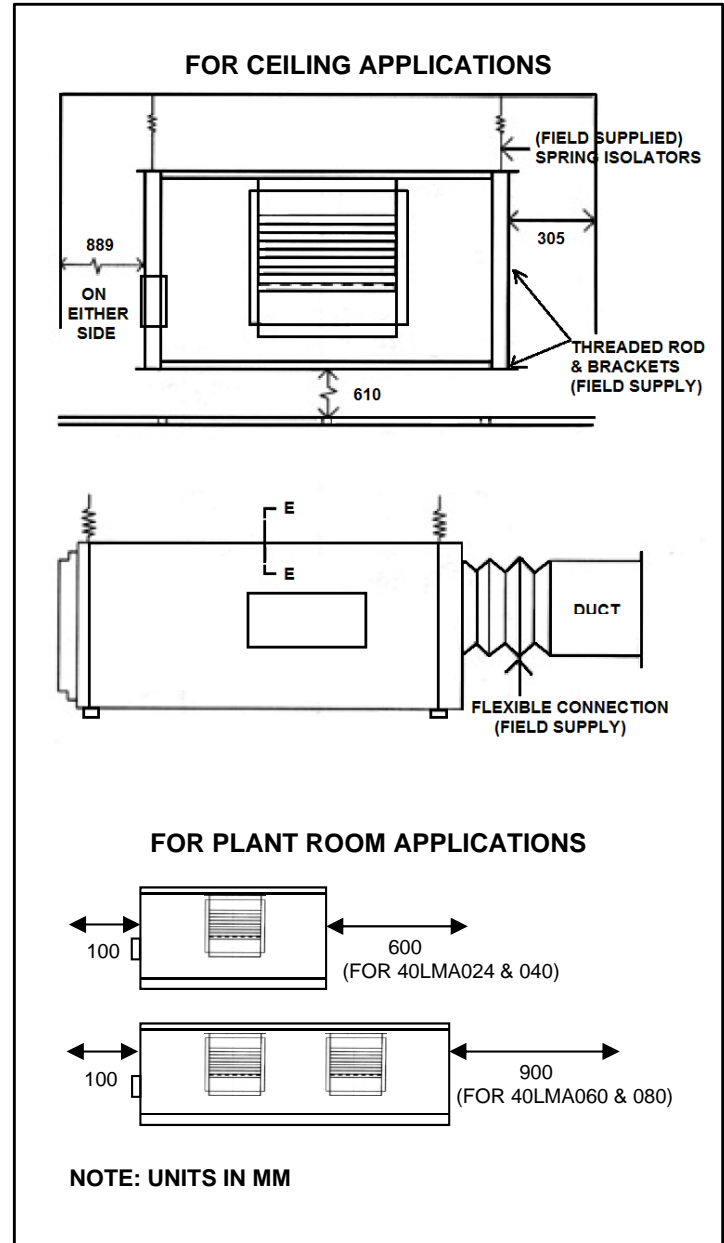


FIG.3 Unit Clearing and Mounting

**Note:** Clearance space beneath the unit may be levied provided the ceiling offers sufficient access to the unit for servicing and maintenance works.

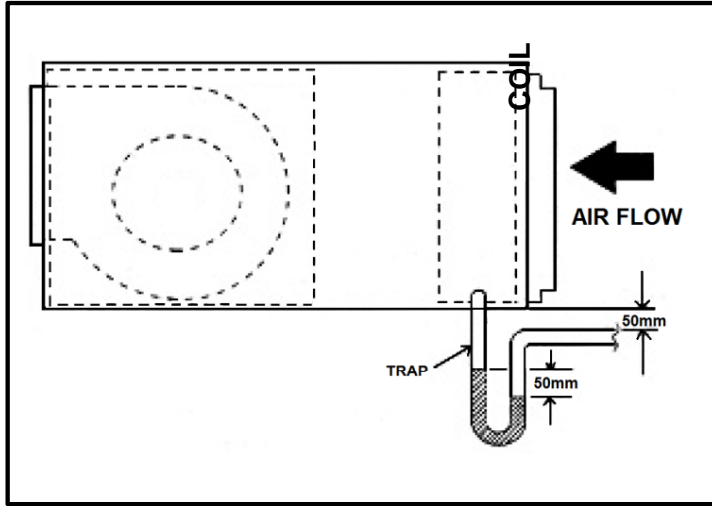
Select and adjust vibration isolators and suspension rods so that unit is uniformly suspended. See Table 1 for the approximate unit weight and ensuring that the ceiling strength is sufficient enough to support it.

Ductwork shall be installed and insulated in accordance with Carrier System Design Manual and applicable codes. Use flexible connections to minimize duct to unit alignment problems plus vibration and noise transmission. If possible, prevent the duct from covering the blower screws on the fan deck opening side to ease future service work.

## CONDENSATE DRAIN

During installation, suspend unit level. Plug the other drain pipe with the factory supplied condensate plug. Observe all local sanitary codes.

Drain must be trapped as shown in Fig.4.



**FIG. 4** Condensate Drainage

**Note:** In most application, it is recommended that an auxiliary drain pan be used. It should be a water tight pan installed beneath the coil section to catch overflow condensate due to clogged condensate drain. The auxiliary condensate pan drain should be minimum 12.7mm nominal pipe size, discharging at a point which can be readily observed.

Condensate drains should not be directly connected to a plumbing drainage system nor be made common to the unit condensate drain.

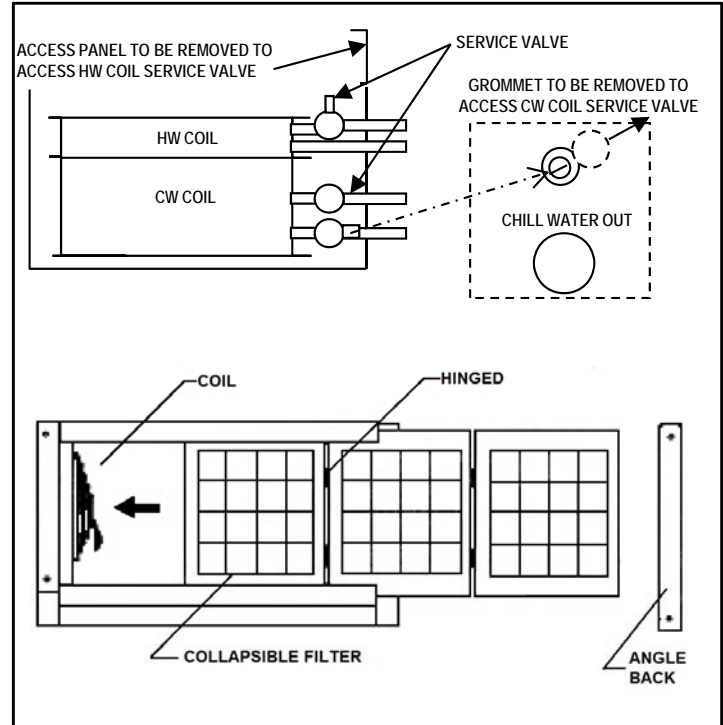
## PIPING CONNECTION

Refer to table 1 for connection's types and sizes. Install piping in accordance with all applicable codes. When all joints are completed, perform hydrostatic test for leaks. Vent all coils at this time. Check unit piping for signs of leakage. If leaks are found, notify Carrier representative before initiating any repairs. For Chill Water coil, the service valve is accessible from the outside by removing grommet and use screw driver to vent trapped air. For Hot Water Coil, remove the access panel to access service valve and then remove valve cap and release trapped air from system by purging the valve. Place back the valve cap and access panel or grommet after purging/venting. Following the hydrostatic test, insulate all piping to prevent sweating.

To ensure compliance with building codes, restore the structure's original fire resistance rating by sealing all holes with material carrying the same fire rating as structure.

## FILTER (OPTIONAL)

The base unit comes without filter. Optional Filter media together with add-on filter track shall be order upon request. The Filter media is designed with a collapsible type rectangular frame of dimension shown in Table 2 and shall be inserted or removed at the back of the unit with ease by removing the angle back (see Fig.5).



**FIG. 5** Filter and Service Valve Access

**TABLE 2: FILTER FRAME SIZE**

(All dimensions in mm)

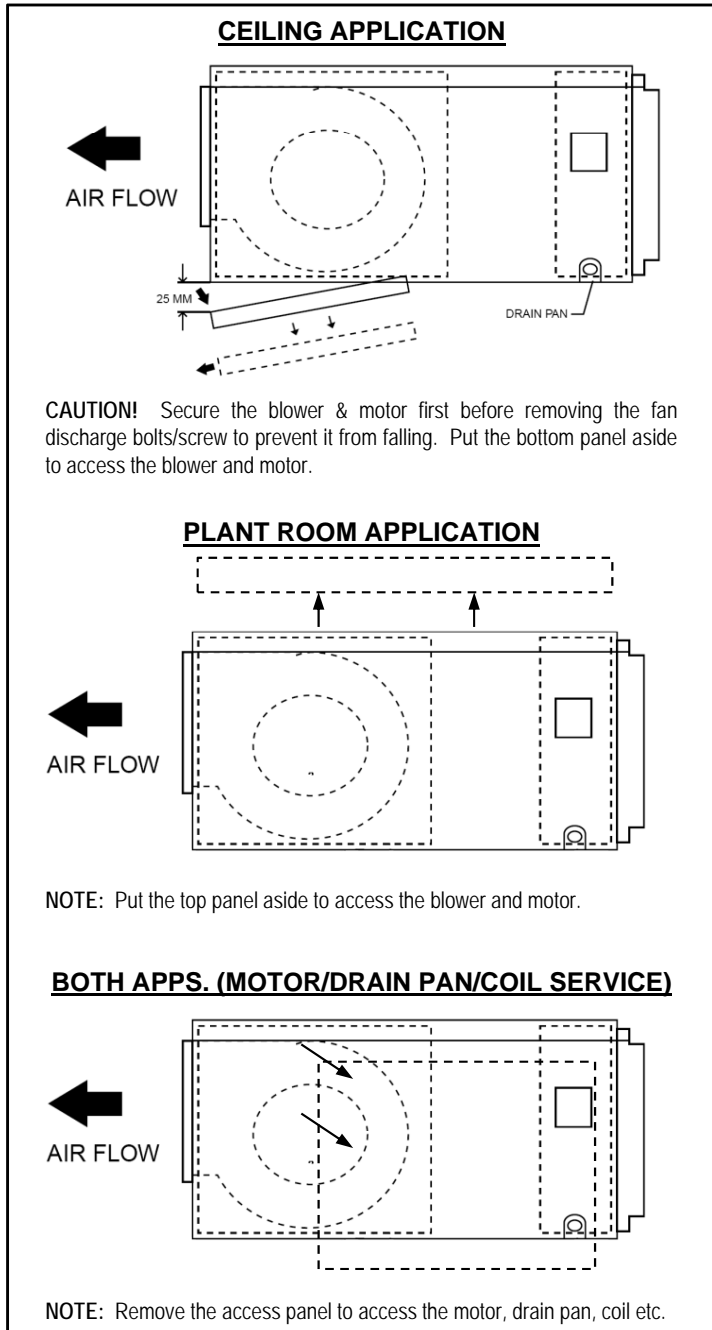
MODEL	LENGTH	WIDTH	THICKNESS
40LMA024	598	278	12 or 24
40LMA040	938	278	12 or 24
40LMA060	1067	278	12 or 24
40LMA080	1399	278	12 or 24

## UNIT ACCESS

Most internal parts of the unit should be accessible by removing access panel at coil side, base front or top side. Do not remove the base pan which is connected with the drain pipe unless necessary. To remove the panels for unit interior access, follow below steps (Refer to Fig.6):

- 1.) Remove the screws from the fan deck and panels.
- 2.) Pull out the panel as shown in fig.6 (depends on application).
- 3.) Slide out the panel to access.

To reinstall access panel, reverse the steps. Finally, slot the panel back in place with the screw through the holes on the deck and panels.



**FIG. 6** Mounting Access Panel

### WIRING

**BEWARE!** When making connections or working on unit, be sure that electrical disconnect is open, locked and tagged. Follow local codes describing conduit and shielding requirements.

The unit may be operated at either on of its three fan speeds. Refer wiring diagram (Fig.7) to relate color and number of wire to the respective speed required.

**REMEMBER** that although power is supplied to only one of the speeds, the remaining wires are live and must be isolated from unit body.

### CONFIGURATION

The unit is factory installed with coil connections located on either left or right hand side when viewed from air flow direction.

The control box is fixed opposite the coil side panel.

### START-UP

Follow start-up procedures described in condensing unit installation manual. Check 40LMA unit for correct fan operation. Condensate drainage must be confirmed and unit level adjusted if necessary for proper drainage. Check duct work or piping for any vibration and rectify the problem if exists.

### SERVICE

Ensure that electrical disconnect is open, locked and tagged while working on unit.

### MOTOR AND BLOWER REMOVAL:

1. Remove the panel by following the steps described previously (FIG.6).
2. Disconnect motor wires from terminal block in junction box at the side of the unit (opposite coil side).
3. If capacitor is to be removed, detach it from the control box by removing the capacitor bracket.
4. Remove the bolt/screw on left and right hand side of fan discharge. (If the flexible duct flange covering the bolt/screw, removal of the duct is necessary).
5. Slide the blower and motor out from bottom (for ceiling application) or from top (for plant room application).
6. Release the blower by unscrewing the screw on blower and motor shaft key.
7. Repeat step 5 & 6 (for double blower).
8. Dismantle the rest of the screw on the fan deck.
9. To dismantle the motor, loosen the bolts in the motor bracket

To reinstall blower, reverse the above procedures. Ensure that the fan deck insulation is not turn and exposing the internal surface. If this happens, replace insulation.

To install motor, reverse the above procedures. Ensure all screws are tightened securely and blower wheel is centered and can be turned freely by hand before switching on supply.

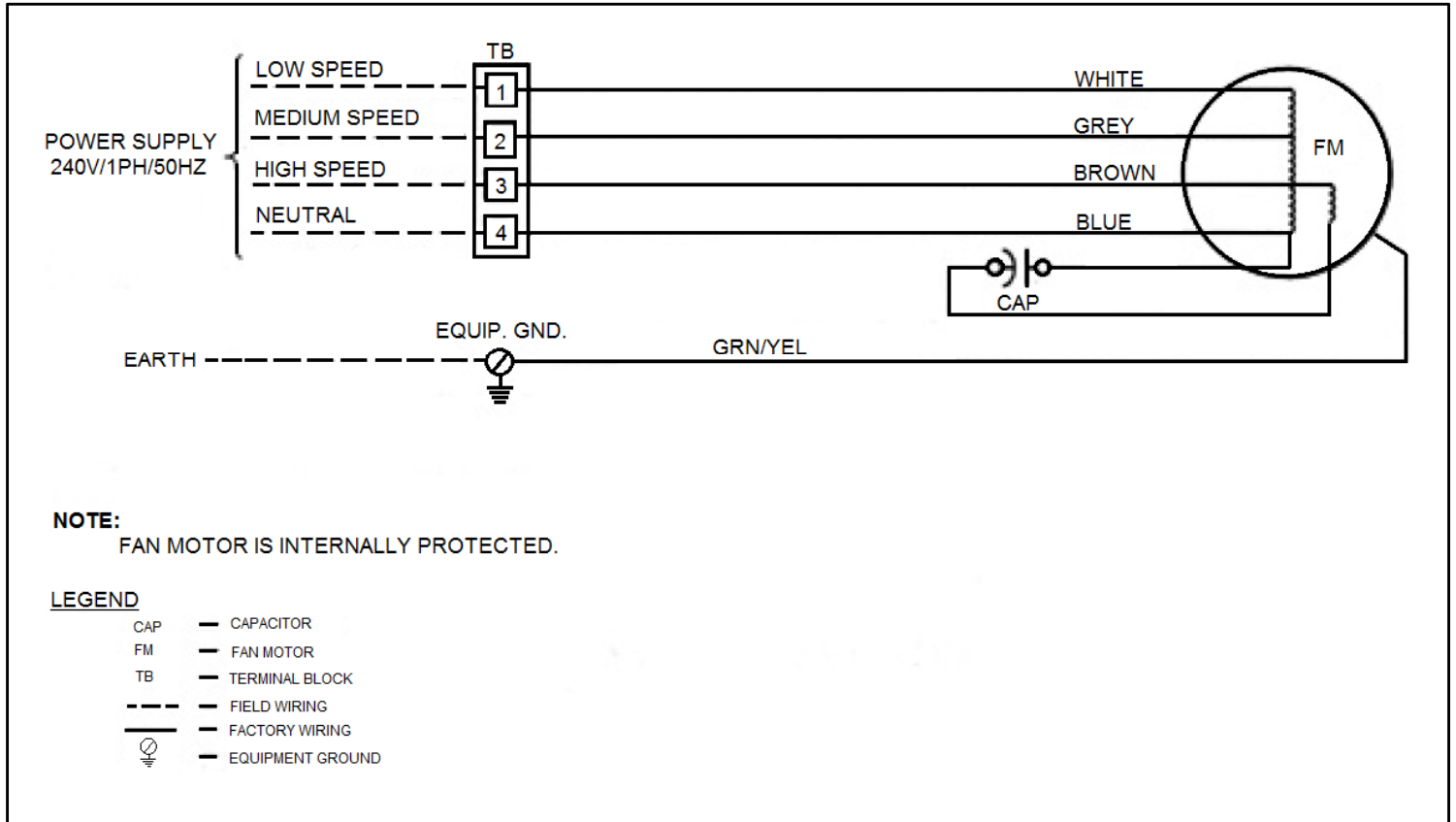
### DRAIN CHECK

If water drips from either drain pipe, drain line or trap may be clogged. Also drain pipe plug on opposite side of unit may have fallen loose, replace them.

Check drain pan water level by removing access panel. Remove particles obstructing flow from drain pan or drain line. Drain pan may also be removed from suspended unit. To do this, first remove the access panel as illustrated previously.

### FILTER CHECK

The filter should be checked on regular basic to prevent from clogging the air flow. Do not attempt to clean or reuse disposable filters, replace them with new. Refer Fig.5 for filter removal and installation access.



**FIG. 7** 40LMA 024,040,060,080 Wiring Diagram



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