

Installation

The installation and troubleshooting of electric cooling fans are to be carried out by a qualified electrician according to the applicable local, state, province and federal codes. Inspect for any damage that may have occurred during transit. Check all bolts, screws, set screws, etc. Retighten as required. Before installing rotate the blade to be sure it does not rub. Adjust if necessary. Before installation read the entire manual carefully.

This guide is pertinent only to electric fans furnished by Falk and manufactured by Multifan Inc. (can be verified from nameplate on the electric fan). In the event the electric fan furnished by Falk is of a special nature (manufactured by an alternate fan manufacturer), please contact Falk for appropriate electric fan installation and maintenance instructions.

General Safety Information

Warning: To reduce the risk of fire, electric shock, or personal injury, observe the following:

1. Use this electric fan only in the manner intended by the manufacture. If you have any questions, contact Falk.
2. Before servicing or cleaning the fan, switch the power off at the service panel and lock out to prevent the power from being switched on accidentally.
3. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and Occupational Safety and Health Act (OSHA).
4. Fan motor must be securely and adequately grounded.
5. All working parts should be grounded.
6. When cleaning electrical equipment always use an approved cleaning agent. See CLEANING in NOTES section, Page 2.
7. For general ventilation and cooling use only. DO NOT use if hazardous or explosive materials and vapors are present.

Guidelines For Installation

Before connecting the electric fan, check if the information on the fan motor name plate is in accordance with the actual main supply voltage, phase and frequency.

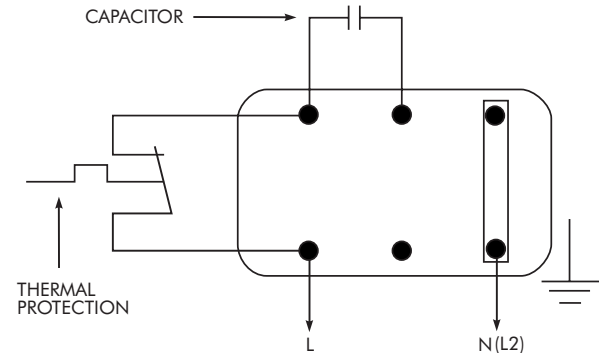
Warning: To reduce the risk of fire, electric shock, or personal injury, observe the following:

1. Switch off the main power supply and lock out before installing, servicing or making connections to the fan.
2. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
3. The fan should be securely mounted. Recheck the mounting hardware and tighten as necessary.
4. The fan motor must always be grounded! The installation of a motor protection switch is recommended. See figure 1 for wiring diagrams.
5. Mount the motor guard if removed. The motor guard must be installed at all times during operation to prevent injury to personnel by rotating fan blade.
6. Use liquid tight electrical fittings and conduit.

FIGURE 1

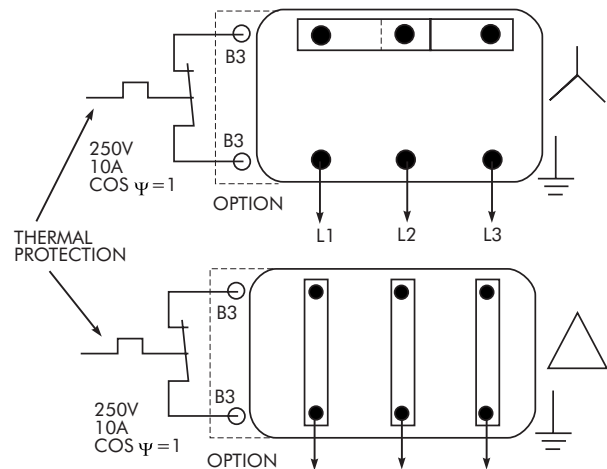
SINGLE PHASE TYPE - E

1 PHASE 220V - 50Hz
1 PHASE 240V - 50Hz
1 PHASE 110V - 60Hz
1 PHASE 220V - 60Hz
1 PHASE 240V - 60Hz



THREE PHASE TYPE - D

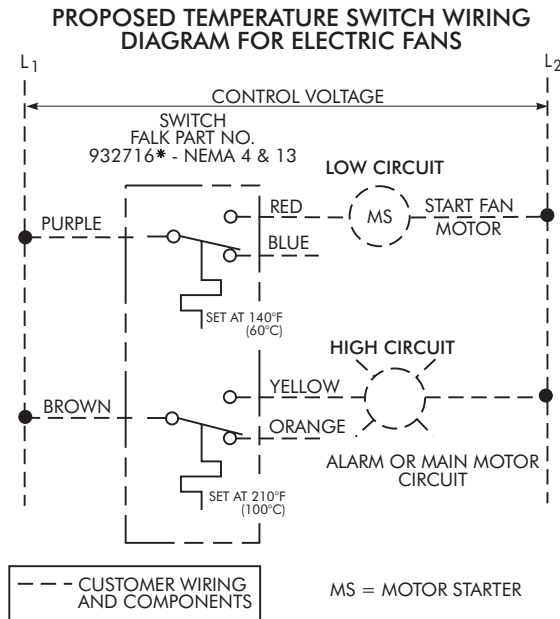
3 PHASE	Δ / \star
3 PHASE 220/380V - 50Hz	
3 PHASE 230/400V - 50Hz	
3 PHASE 240/415V - 50Hz	
3 PHASE 220/380V - 60Hz	
3 PHASE 208/360V - 60Hz	
3 PHASE 265/460V - 60Hz	



- A temperature switch is provided to control oil sump temperature. See Figure 2 for proposed wiring. There are two separate circuits in the temperature switch. The low circuit is to operate the electric fan. It is recommended the fan motor be operated by the temperature switch through a motor starter relay (consult applicable local and national electrical codes). The high circuit is provided to operate either a high temperature alarm or main motor shutdown.

- Remove proper condensation plug. See Figure 3 below. Do not discard! Plug is to be used during cleaning.

FIGURE 2



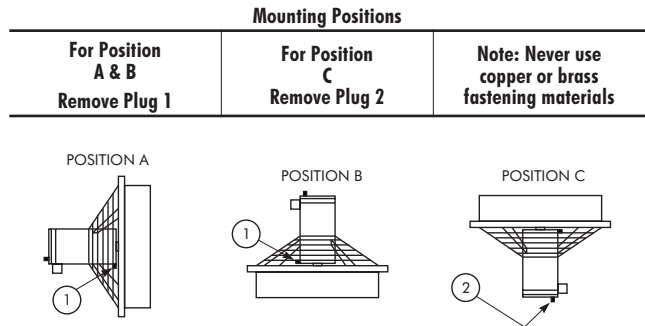
*AC RATING - INDUCTIVE LOAD - 50% PF
DC RATING - INDUCTIVE LOAD - L/R = 0.26

AC VOLTS	AMP	DC VOLTS	AMP
125	15	6-12**	15
250	15	24**	5
480	15	125	0.05
		250	0.03

* MAXIMUM CONTINUOUS CURRENT
** Reference only.

- Connect power to the motor using an approved wiring method. See figure 1 for connection diagrams.
- Before starting the fan, double-check to ensure there are no obstructions that could interfere with proper fan operation and airflow. Verify proper fan rotation, resulting in air flow directed at the adjacent face of the gear drive.

FIGURE 3



NOTES:

AIR SUPPLY AND TEMPERATURE — Sufficient air supply over the motor must be assured in all circumstances. Limits of operating ambient temperature are 14°F to 113°F (-10°C to 45°C).

RESTRICTION ON USE — Fan blade material is Polypropylene which is unsuitable and/or not recommended for certain chemicals. The following is a partial list of unsuitable chemicals for guideline purposes.

Chloro-Sulphonic Acid Mixture of HNO ₃ -HCL	Nitric Acid Esters	Chloroform 1:2
Mixture of HNO ₃ -H ₂ SO ₄	Benzene	Dichloroethylene
Sulfuric Acid, fuming	Gasoline	Trichloroethylene
Carbon Tetrachloride	Toluene	Diethyl Ether
		Chlorine, Liquid

CLEANING — When cleaning fan, both condensation holes (Figure 3, Items 1 and 2) are to be temporarily plugged. If this is not done, guarantee is void. When cleaning electrical equipment, always use an approved cleaning agent.