



FEEDBACK CONTROL ECO-SPEED FANS

INSTALLATION INSTRUCTIONS

Electrical Connection

1. Fans are fitted with a terminal box on the fan case for power connection to 240V AC, 50Hz supply.
WARNING: Motor is not to be switched on and off using the input power supply. This will cause the motor to fail.
2. Fans are fitted with a second terminal box on the case for the fan control connections.
3. Controlling the fan should be done via the 0-10V or the 4-20ma output control cables available in the fan control terminal box.
4. Control systems that incorporate temperature sensors, pressure sensors, etc: and controllers to operate them with the compatible outputs 0-10V or 4-20ma should be capable of operating these fans.
5. **WARNING:** Incorrect connecting of control cables can result in permanent damage to the fan motor.
6. Cable connections:
Blue = Min Speed Override, This enables the fan to be switched of automatically when the input signal falls below the minimum set point.
Yellow = 4-20mA, output connection
White = Enable, This enables the fan to be switched off manually. It requires 10V to operate.
Black = 0-10V PWM, This is the control output of the fan.
Green = GND, This is the ground for the 10V and 4-20mA control.
Red = +10V, This is the 10V output from the fan.

Installation:

1. All fans are to be connected to 240V AC, 50Hz supply.
2. Install fans so access is available to the terminal boxes mounted on the fan case.
3. Refer to general fan installations below for further details.

Protection

Eco-speed feedback control fans are fitted with internal overload protection. To reset and restart electrically isolate the motor completely from the supply for a minimum of 10 minutes. Mains wiring should be protected against a short circuit by fuses at the switchboard.

Safety Considerations:

1. **WARNING:** Power cables may still be live when the fan impeller is not rotating.
2. Impeller speed may increase or decrease without warning.

WARRANTY:

- Fantech Pty Ltd warrants products of its manufacture when not misused or neglected to be free of defects in workmanship and/or materials. Our obligation under this warranty is limited to repairing or exchanging F.O.B. factory, any part, assembly or portion found to be defective within one year from the date of commissioning but not to exceed eighteen (18) months from date of shipment from our factory.
- The Company assumes no responsibility for labour costs involved in the removal of defective parts, installation of new parts or related service charges.
- The Company shall have the option of requiring the return of the defective part (transportation prepaid by the Buyer) to establish the claim.
- Warranty will be void if installation is not carried out by qualified personnel in accordance with these instructions and good trade practice.
- Fully detailed warranty conditions are contained in Fantech's Standard Conditions of Trading.

General fan installation instructions

Important Notes:

With all horizontally mounted axial fans it is preferable that the fan is installed with the motor mounted on top of the motor plate. ie. not suspended under the motor plate.

To obtain rated performance, the following recommendations should be followed:-

Duct Mounted Fans - General

1. inlet and outlet ductwork should be free from obstructions.
2. duct transitions should be 60° inlet/15° outlet.
3. avoid sharp bends on inlet or outlet.
4. do not use ductwork smaller in area than the fan.
5. flexible duct connections should be taut.
6. ductwork connections should be well aligned.
7. inlet cones must be fitted to free inlet applications.
8. ensure that the fan orientation is correct for the required air flow direction.

Rotation

Off-loading

During off-loading inspect fans for damage. If the casings, cowls or impellers are damaged, notify your local Fantech distributor immediately.

Fantech cannot be held responsible for any loss or damage incurred to goods during transport, off-loading or on site.

Site Storage

The fans must be stored in a clean, dry, protected and vibration-free area. The fan impellers should be rotated daily to prevent bearing damage.

Maintenance

Install fans and accessories to allow service access for maintenance and for the replacement of assemblies and component parts, without disturbance of other items of plant and building elements.

Most motors are fitted with sealed-for-life bearings which are maintenance-free. It is recommended that fans be inspected initially at 3-monthly intervals, to clean the blades and motor and to check for tightness of fastenings.

Where fans are used for kitchen exhaust or other applications where the air contains high amounts of dust, residue and other contaminants, fans should be cleaned and maintained at more frequent intervals appropriate for the application.

Electrical Supply

Read the fan serial plate to determine the number of phases and amperage drawn by the unit. Check that the available supply is suitable.

Earthing

All fans must be earthed in accordance with AS/NZS3000:2000 and local supply regulations.

Wiring

Wiring must be in accordance with AS/NZS3000:2000 and local supply regulations. Wiring diagrams are provided on all fans.

Direction Of Rotation

The correct rotation and direction of air flow is shown on each individual fan. All single-phase motors will rotate in the correct direction when correctly connected.

Starting Safety

Rotating fan impellers can be a danger to personnel.

The following precautions must be taken:-

1. electrically isolate the fan motor prior to undertaking any work.
2. regularly check impeller fasteners for tightness.
3. where fans are accessible to personnel or directly exposed to habitable areas, it is the responsibility of the installers to ensure that fans will have guards which comply with the latest Australian Standard AS4024.1 safeguarding of machinery.
4. prior to fan start-up, ensure loose debris will not be sucked into the fan. All ductwork should be clean.

ECO-SPEED WIRING

