

Installation Instructions - AUTOMATIC SPEED CONTROLLER

Providing just the necessary (power) current to meet demands for precise ventilation, FISCHBACH-AUTOMATIC-CONTROLLERS are specially developed to control FISCHBACH-DISC-ROTOR MOTORS in FISCHBACH-FANS applied to ventilating and air conditioning systems as well as to ventilating and air conditioning units.

1. Description

The FISCHBACH Automatic Controller is contained in robust painted steel casing complete with necessary air gaps and protected to IP21. The unit is ready for connection complete with integrated contactor, on/off push button, connections for the thermal contacts from the motor and secondary fuses on the out-put, or in case of types FRA 200/3 and FRA 400/3 instead of fuses one or two protective motor relays adjustable according to the nominal current of the motor or each stator of double motor.

2. Operation and Function

Operation of the fan is via the on/off key of the Automatic Controller this brings in the main contactor which is interlocked with the thermal contact in the fan motor.

The light on the switch indicates when the fan is in operation.

Ancillary item such as electrovalves or damper motors can be switched via the Automatic Controller with a 230v supply available on terminal 6 (max. 2 amps).

3. Mounting Instructions

Sufficient ventilation must be ensured at all times, with a gap of at least 100 mm between the controller and any wall or surrounding objects. All controllers have air vents in the casings which must not be obstructed. The casings which must not be obstructed. The FRA 400/3 has the addition of a cooling fan and care should be taken not to obstruct the outlet.

The FISCHBACH Automatic Controller should only be mounted vertically.

The maximum ambient temperature should not exceed 32°C. If the Automatic Controller is installed in a cabinet then sufficient ventilation air must be available at a maximum of 40°C.

4. Electrical Wiring of FISCHBACH Automatic Controller and FISCHBACH Fans.

Wiring must be in accordance with the wiring diagram supplied and indicated on the name plate. Wiring must also comply with any National Standards and Local Authority regulations.

Prior to start up, please check all terminal connections for tightness. Fans and controllers are matched, please check appropriate catalogue or quotation for correct matching.

As an additional safety feature the FRA 400/3 is provided with a thermal contact. This is connected in series with the thermal contacts in the motor.

Fuses

When connecting the FISCHBACH AUTOMATIC CONTROLLERS on line, special fuses must be provided in order to compensate for possible peak load arising when starting up. Therefore, it is advisable to use slow or automatic fuses corresponding to 1,8 to 2,0 times the speed controller's nominal amps.

Output fuses or protective motor relays for types with nominal current equal or higher than 20 A as well as fuses for control circuit are already integrated in FISCHBACH AUTOMATIC CONTROLLER.

5. Maintenance

Periodic maintenance will considerably increase the life of the FISCHBACH AUTOMATIC CONTROLLERS. Therefore, it is advisable to maintain the controller according to use at regular intervals, but at least every 6 month.

- check if collector shaft and rollers are free running and have
- sufficient contact pressure.
- replace worn-out collector rollers, clean off collector shafts
- **Attention:** Do not oil or grease
- clean off dust from the windings and contact path using a light dry brush or a soft cloth
- Terminal connections to be tightened

6. Guarantee

The guarantee for FISCHBACH products with FISCHBACH DISC ROTOR MOTOR and FISCHBACH AUTOMATIC CONTROLLERS is valid, provided the aforementioned instructions are complied with. The guarantee is invalid if using AUTOMATIC CONTROLLERS which have not been supplied by FISCHBACH. Please see installation guide on the specification label and the accompanying maintenance instructions supplied with all FISCHBACH units.

7. Group control

When the FISCHBACH AUTOMATIC CONTROLLER is to be used for controlling several fans or units. The total current consumption of the combined fans must not exceed the maximum permissible current load of the controller. Each fan has to be fused separately.

Attention - important instruction!

The wiring to the AUTOMATIC CONTROLLER is to be made according to the wiring diagrams overleaf. When maintaining and repairing the AUTOMATIC CONTROLLERS, please disconnect them from the supply voltage.

We recommend that an isolator is fitted prior to the controller with a minimum gap of 3 mm between poles.

When set into operation or in case of any malfunctions please follow check list.