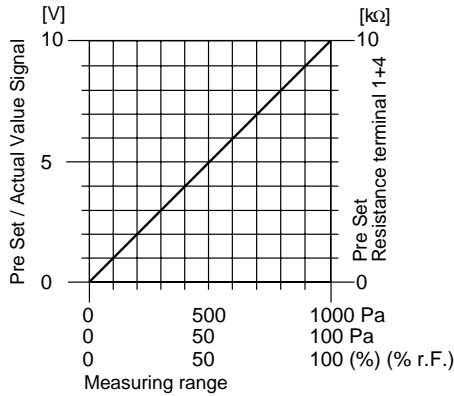


CHECK LIST FISCHBACH AUTOMATIC CONTROL

Example: 500 Pa pressure correspond to 5 V on terminal 1 and 3 (see diagram).

Caution: When checking the pressure sensor (DV) do not blow into the hose stem. The check can only be done with a suitable measuring instrument by which the air pressure is measured parallel to the voltage measuring (adjusting instructions).

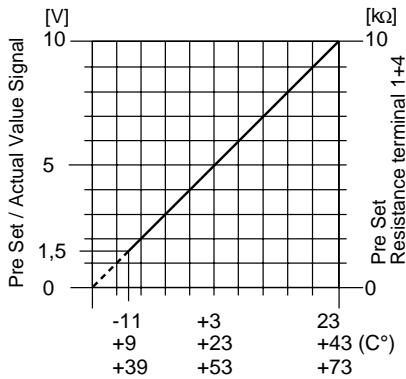


The FISCHBACH-AUTOMATIC-CONTROL regulates to 100 % voltage if the signal of the pressure sensor (DV) on terminal 3 is smaller than the signal of the pre set respectively to voltage 0 if the signal is stronger than the signal of the pre set. The signals of pre set and pressure sensor (DV) correspond if the fan or unit builds up a pressure which proportionally produces 0...1000 Pa to 0...10 V at the output of pressure sensor (DV) being fixed by pre set. Tension between pressure sensor and pre set may only be within the operating range max. ± 0.2 V (proportional).

3.7.2 Actual value sensor (Temperature)

With a 24 V DC supply to terminal 1-2, terminal 1-3 of the Sensor has a range 1.5-10 V DC (See Diagram). When installing a duct temperature sensor it is important that there is a minimum airflow over the probe or false readings can result. The minimum airflow can be achieved by setting the potentiometer P5 on the control box.

3.7.3 Actual Value Sensor (Humidity)



With a 24 V DC supply to terminals 1-2, terminal 1-3 has a range 3-9 V corresponding to humidity range 30-90 % RH (see dotted area on diagram below).

3.8 Actuator

Should after having checked Actual Value Sensor to 3,6 and 3,7 the readings 1 - 4 do not balance with readings 1 - 3 then the actuator in the control box must be checked.

3.8.1

Therefore, the alternating current has to be measured at the connecting terminal. If signal at terminals 1 and 3 is stronger than at terminals 1 and 4 then there should be a 230 V AC supply at terminals

10-N as the actuator would react on the electronic up to 100 %. If the signal at 1+3 is lower than at 1+4, then there should be a 230 V AC supply at terminal 9-N.

3.8.2

Should the actuator still fail to react to clockwise or anti-clockwise control then there is a mechanical fault with the gearing or a motor defect. Then it has to be checked if the gear is blocked or brushes stuck. If necessary, repair parts or alternatively, change gear.

4. Fan Testing

Check fan is rotating in correct direction. Take fan amps and volts and compare to catalogue figures for performance check. Check inlet temperature to ensure recommended maximum temperature is not exceeded.

4.1 Connection

Check power supply to controller and output voltage from controller. Should direction of rotation be incorrect interchange connection Z_1 and Z_2 on a single phase. Interchange U and V on 3 Phase.

4.2 Resistance

There are two resistance checks:

- Resistance of windings
- Resistance to earth

4.2.1

The values printed below are measured at 20°C winding temperature

4.2.2

The resistance to earth is measured from connections U, U_2 , Z_1 , Z_2 and U, V, W. In each case the resistance must be at least Meg Ohme.

4.3

Should there be deviation in the winding resistance or an earth fault then the motor must be replaced.

4.4 Performance

Take running amps and volts and check performance against catalogue figures.

4.4.1

A low amp reading can result from low voltage, fan rotating in reverse, high pressure drop (low volume)

230V, 1N~			400V, 3N~	
Type	Main winding U1-U2	Start winding Z1-Z2	Type	U-V-W
E 1	26,4	52,8	D 1	7,2
E 15	12,3	32,6	D 2	5
E 25	7,2	18,5	D 2.5	2,7
E 35	4,4	10,0	D 3.5	2,6
E 65	4,8	6,8	D 5	1,2
E 80	2,2	4,8	-	-

4.4.2

With a high amp reading (in excess of motor nameplate) the following should be checked.

- Over voltage
- Running on only two phase (loud droning noise)
- Mechanical blockage or bearing damage.
- Fan operating in restricted area of performance curve (very low resistance).

4.5

Providing there are no malfunctions as listed above the fan is virtually maintenance free. Any grease or dust deposits should be removed from the impellor.