

# EAF 180

## AIR FLOW GUARD WITH TWO RELAYS

The air flow guard EAF 180 is intended to detect air flow in a duct or similar. The guard has two relays that can be set separately. Exceeding/undershooting the set alarm limit controls the relay. For example, you can set the first relay to be a filter monitor and the second relay to alert if the fan is not working.



Dimensions: 140 x 95 x 90 (mm)  
Measuring element inside the channel 200 mm

## TECHNICAL INFORMATION

Operating voltage	24 VAC $\pm$ 15%, 50-60 Hz
Power consumption	3 VA
Area of operation	0,6 - 15 m/s
Operating temperature	0 ... 70°C
Temperature error	max 0.2%/°C
Air humidity	max 90% RH
Outgoing message	2 x Relay (250 VAC/2 A)
Encapsulation	IP 44, blue/black plastic

## INSTALLATION

The sensor must be installed in the duct in a place where the air flow is uniform and the arrow on the sensor bracket points in the direction of the air flow. The sensor can be installed either in a vertical or horizontal channel.

The sensor must be placed at least as far as the protective distance indicated in the picture from various air handling devices (e.g. curves). If there is a heating/cooling radiator or a humidifier in the duct, the air flow sensor must be installed in the supply air duct before them.

### ATTENTION

The sensor must not be installed directly in the outdoor air. For corrosive conditions, use the product EAF 180 E. Also note that there is enough space for connecting the cables. In normal use, the sensor is maintenance-free.

## ADJUSTMENT

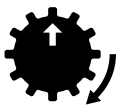


Fig 1

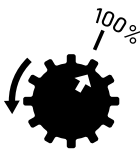


Fig 2

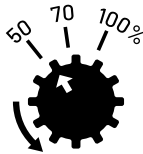


Fig 3

Allow the fan to reach the correct operating temperature and air volume by waiting 5 min before starting the adjustment actions.

Start the adjustment by turning the roller towards the max position until the relay switches on and the indicator lights up as shown in Fig 1.

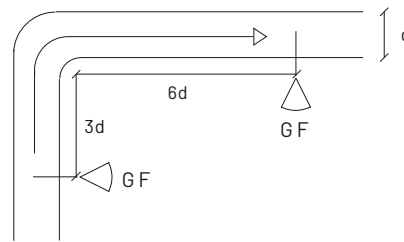
Then turn the roller back towards the min position until the relay switches on and the indicator light goes out. This position corresponds to the nominal speed (100%). Figure 2.

Adjust the desired switching point for the relay so that a drop of one scale interval corresponds to an alarm at the level of 70% and a drop of two corresponds to an alarm at the level of 50%. Figure 3.

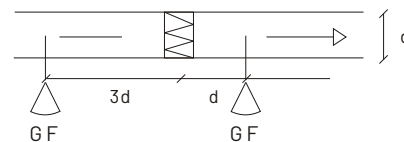
### NOTE

In systems where the guard is used to control the fan, the adjustment is made easier by connecting a temporary bypass wire to the relay terminals.

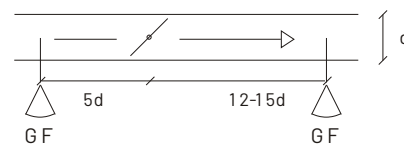
### CURVE



### FILTER



### ADJUSTMENT DAMPER



## ACTION

### Power supply

The voltage to the guard is switched on and off at the same time as the fan.

The voltage to the guard is constantly on.

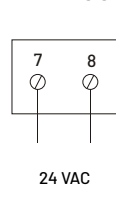
### Alarm function

When the fan starts, the relay pulls and the guard starts. After about 1 min, a relay (alarm) is triggered if the air speed is not sufficient. The guard also alerts when the fan is turned off or when there is power failure.

When starting the fan, it takes 20-60 seconds before the relay pulls and the guard starts. The guard also alerts when the fan is turned off or when there is power failure.

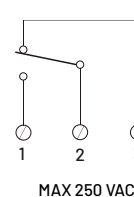
## CIRCUIT DIAGRAM

EAF 180L



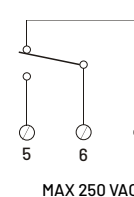
24 VAC

1



MAX 250 VAC

L2



MAX 250 VAC

### NOTE

The relay contact is drawn in a de-energized state. (Alarm)