

Air Shield instruction guide

MAN-0136, Revision 1

Introduction

Net Safety Monitoring's Air Shield is designed to allow continual removal of debris and dust from the flame detectors' lens surface. It may be used in applications where particulate matter and dust build-up on the detector lens/window surface is a constant nuisance. Along with routine maintenance and cleaning of the detector lens and VI reflector surface, controlled air flow across the detector face, aids in the reduction of debris accumulation. The Net Safety Air Shield is available in 316 Stainless Steel.

The model number of the Air Shield is:

- AIR-SHIELD-002 - Air Shield assembly

Specifications

Maximum operating pressure = 80 PSIG (5.5 bar)

Air consumption @ 80 PSIG= 37 SCFM (1039 SLPM)

Force (lbs) @ 12"=2.2 lbs

Sound level (measured at 3')=83 dBA

Installation

NOTICE

Always use properly regulated and filtered oil free (free of contaminants) instrument air.

Oil filters should be rated for a pressure of at least 250 PSIG (17.2BAR). It is recommended that filters have a minimum of 25 micron filtration

Steps in fitting the Net Safety Air Shield to Net Safety UVS or UV/IRS flame detectors:

1. Prior to fitting the Air Shield, ensure that external systems connected to the flame detector are in bypass in order to avoid any unwanted false alarms.
2. Inspect the packing to ensure that all of the Air Shield parts are fully intact and present. Component parts include: Mounting bracket fitted to the Air Shield blade, two (2) #6 lock washers, and two (2) #6-32 x 1/4 screws for fitting the Air Shield assembly to the flame detector. Refer to [Figure 1](#) for a picture of the Air Shield.
3. Rotate the flame detector enclosure (housing) assembly so that the VI reflector is in the 9 'O' clock or 3 'O' clock position. **Do not change or misalign reflector position relative to the reference yellow dot on electronic module face.** Refer to the respective flame detector manual for information on the VI reflector positioning with the yellow dot.

4. Position the flat surface of the Air Shield assembly with the flame detector face, so that the Air Shield is in the 12 'O' clock position (top position) as shown in [Figure 2](#).
5. Align the blade slots with the mounting holes on the flame detector enclosure face. With the aid of a 2 mm or 5/64" hex wrench, use the supplied locking washers and mounting screws to fit the Air Shield assembly into place as shown in [Figure 2](#).
6. Adjust the Air Shield so that it is mounted in the vertical position (top position) as seen in [Figure 2](#). Tighten the Air Shield assembly to the flame detector.
7. The Air Shield assembly requires an air line with ¼" NPT male (¼" MNPT) pipe fitting (not supplied). This is attached to the Air Shield assembly ¼" FNPT entry, by using Teflon tape or pipe joint compound. **Note:** Determine the proper diameter of the air line and air line type for the application. Consider air source and air quality for the air line.
8. Initiate air flow and test. The Air Shield assembly position can be adjusted by the two screws located on the back of the Air Shield assembly. Tighten screws when proper position has been achieved.
9. Prior to returning the system to normal operation (discontinuing bypass), clean detector lens surface with the Net Safety cleaning kit supplied with the flame detector.

Figure 1 - AIR-SHIELD-002 product picture



Safe Operating Practices

Important

Prior to installing the air line to the Air-Shield and flame detector assembly, ensure that the air is turned off.

After installation of the air line, ensure all parts are tightly fitted as loose parts may become projectiles when the air is turned on.

Always wear proper protective eyewear when servicing the air line and flame detector with the Air shield fitted.

Always inspect the Air Shield for attached debris (ice, particles, etc.) that may become a projectile when the air supply is turned on.

Exercise caution when directly in the path of the air flow from Air Shield as accumulated debris can become projectiles.

Never use compressed air to blow on the skin or clothing, as this may result in serious injury if the air goes below the skin and enters the blood stream.

Figure 2 Air-Shield-002 Mounted to Flame Detector

