



October 9, 2001

DN-6346 • H-116

HPX-751
HARSH™ Hostile-Area Smoke Head
Analog Addressable Detector
 Section: Intelligent/Addressable Devices

GENERAL

NOTIFIER's HARSH™ (Hostile-Area Smoke Head) HPX-751 smoke detector provides early warning smoke detection in hostile environments where traditional smoke detectors are not practical. Using a small air intake fan and a high-performance replaceable filter, air and smoke are drawn into a photoelectric sensing chamber, while unwanted airborne particulate and water mist are removed. This feature allows HARSH to operate in difficult applications, such as textile or paper mills, which due to environmental conditions tend to cause nuisance alarms with standard smoke detectors.

HARSH™ is a trademark of NOTIFIER.

FEATURES

- Analog intelligent communications.
- High-performance filter removes particulates down to 25 microns.
- Air delivery system is separately powered and fully supervised.
- Filter is easily field replaceable.
- Tolerant of external air velocity.
- Resistant to water vapor in applications where occasional hose-down cleaning is performed.
- Optional remote LED annunciator.
- Rotary DECADE address switches.
- Compatible with the AM2020, AFP1010, AFC-600, AFP-400, AFP-300, AFP-200, and AFP-100 (all software releases).
- Requires auxiliary 24 VDC from system or remote power supply.

SPECIFICATIONS

Size: 2.875" (73.025 mm) high, 3.375" (85.725 mm) high in base; diameter 4.0" (101.6 mm), 6.125" (155.575 mm) diameter in base.

Weight: 7.3 oz. (207 g).

Current draw, SLC: DETECTOR: 230 µA @ 24 VDC (without communication); 285 µA @ 24 VDC (one communication every 5 sec. with LED enabled).

Current draw, auxiliary 24 VDC (15 to 30 VDC filtered; ripple voltage may not drop below 15 volts): 6 mA standby; 60 mA when checking for smoke; 80 mA when checking for proper airflow. **For battery calculation purposes, average standby current is 27 mA.**

Operating voltage range: 15 – 32 volts DC peak.



California State Fire Marshal
7272-0028:206



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Operating temperature range: 0°C to 49°C (32°F to 120°F).

Relative humidity: 10% – 93%, non-condensing.

Air velocity: 4,000 ft/1219.2 meters per minute maximum.

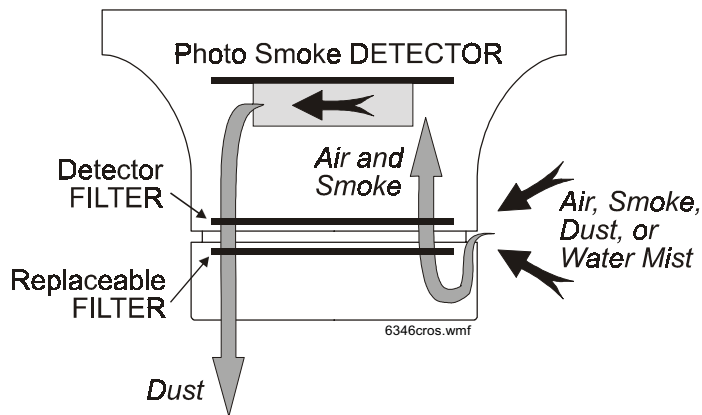
PRODUCT LINE INFORMATION

Model	Description
HPX-751	Hostile-environment smoke detector head.
HPX-751A	Canadian model.
B710HD	Flanged adapter base, 6.125" (155.575 mm) diameter.
RF-FTX	Replacement filter cover assembly, box of 6.
RA400Z	Remote LED annunciator, 3 – 32 VDC, fits U.S. single-gang electrical box.
M02-04-01	Test magnet.
M02-09-00	Test magnet with telescope stick.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



Operation overview diagram:

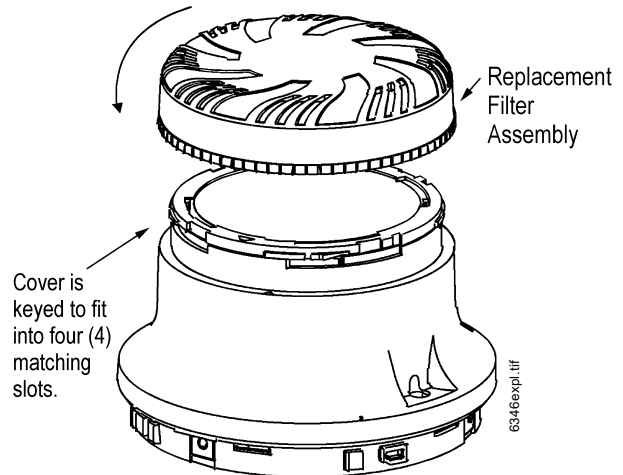
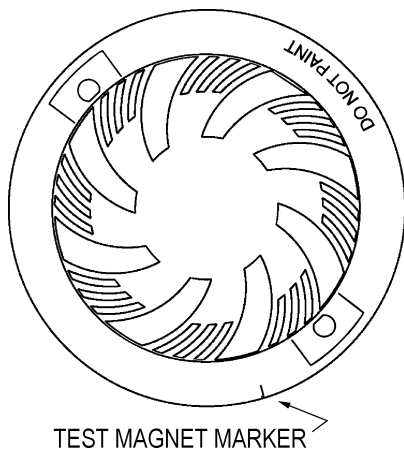


HARSH OPERATION OVERVIEW

Normal Operation — A miniature fan is pulsed on and off under microprocessor control to conserve power, yet provide good smoke response. The system uses two filters (one replaceable) that remove particulates while allowing smoke to pass.

Filter Supervision — Periodically, the filter system is tested for blockage using a special thermal air-flow sensor. In reasonably clean environments, the filter is expected to last at least as long as the smoke-entry test period required by NFPA 72. In very dirty environments, the filter may need replacement more frequently.

Filter Trouble Reporting — If HARSH determines that filter blockage is imminent, a warning trouble is indicated to the panel, followed by a return to normal. 72 hours after this warning, the detector will disconnect, giving a continuous trouble signal.



The HARSH detector contains both a permanent filter and a replaceable filter, a fan, and a photoelectric detector; to fit into a flanged adapter base.

WIRING DIAGRAM

