

AN100 SPARK DETECTION SYSTEM

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THE AN100 SPARK DETECTION AND EXTINGUISHING SYSTEM

A spark detection system is typically used in pneumatic particle transport systems where there is potential for combustion or explosions. These include wood chips, cellulosic fibers, sawdust, chemical dusts, combustible vapors and any other combustible material.

The **AN100** Spark Detection and Extinguishing System is a low cost, full featured single zone system capable of protecting a dust collector with a single main duct at the back end of a duct collection network. The main duct may be up to 44 inches in diameter. Multiple zone systems are also available from Hansentek.

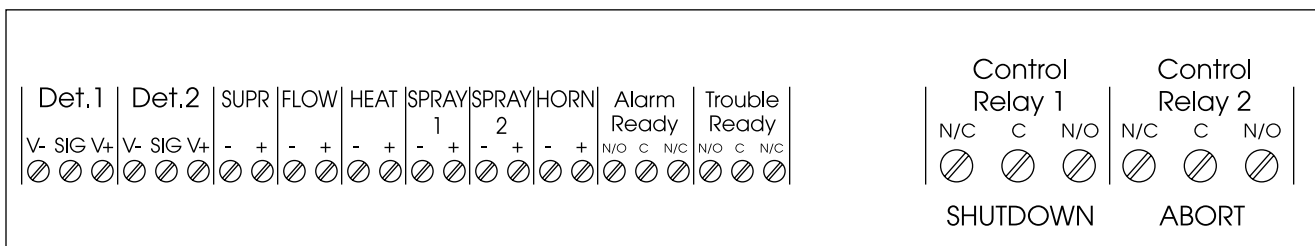
EASE OF INSTALLATION

The **AN100** is normally self-installed by plant personnel or by local tradespeople.

The basic configuration requires 115VAC to the Control Panel as well as cables from the control panel to the spray assembly, the detectors and the horn. It also requires a supply of water at 50 - 100 PSI capable of delivering at least 19 US gallons of water per minute.

The detectors come with a waterproof connector pre-wired onto a stub of cable. This requires only splicing to the cable stub and not the delicate wiring of the connector itself.

Facilities are also provided for the following features, each of which would require an additional wire pair: baghouse heat detection, water flow monitoring, process supervision, return air abort, conveyance shutdown, baghouse deluge, remote trouble indication and remote alarm indication.



HIGH SPEED

Spark Detection and Extinguishing Systems must be fast to respond since sparks can be conveyed through the dust collection ducts at very high speeds.

The AN100 is very fast! The system requires only 20 feet minimum separation between the detectors and the Spray Assembly for air speeds of up to 4000 feet per minute. The AN100 can detect sparks travelling up to 10,000 feet per minute.

DETECTORS

The **AN100** is equipped with two ultra sensitive, ultra high speed detectors which look for visible and near infra red radiation moving through the air ducts. These detectors are mounted opposite each other on the duct. They are designed for ease of installation and ease of maintenance.

Two quick release clips allow for easy removal to clean the lenses. It also features a quick disconnect, waterproof cable connector.

SENSITIVITY TESTING

Sensitivity testing of Detectors is a high cost, complex option for most Spark Detection and Extinguishing Systems. Not on the **AN100**! The **AN100** not only includes sophisticated sensitivity checking from the control panel but also offers an automatic sensitivity test where the detectors are tested every 6 hours. This is a true sensitivity test, which tests across the full width of the duct and through the lens.

A trouble condition is generated if a detector fails the self test – telling maintenance personnel that the lenses need cleaning.

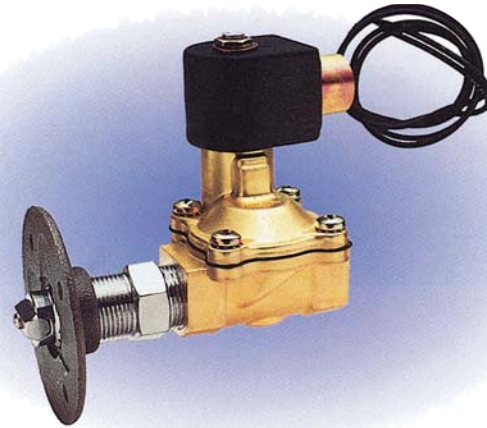
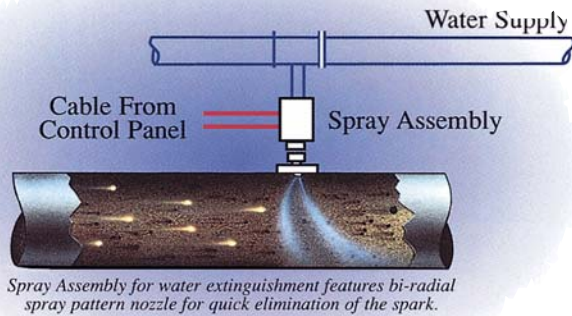


Quick Disconnect Cable - for ease of installation and maintenance.

EXTINGUISHER

The unique design of our extinguisher nozzle provides a bi-radial spray pattern, developing two curtains of water that any spark in the air stream must pass through. This design requires only a single nozzle for ducts up to 39 inches in diameter.

The nozzle has an anti fouling head to prevent blockage and flush mounts on the duct to prevent collecting debris such as dust masks.



BAGHOUSE DELUGE

A unique and powerful feature of the AN100 is a baghouse deluge system, which offers another measure of protection and safety. The AN100 can be programmed to monitor a heat detector in the baghouse or cyclone and initiate a water deluge on detection of heat.

OTHER FEATURES

- The AN100 can monitor water flow to the extinguisher and will generate a trouble condition if there is a detection and no water flow or a water flow and no detection.
- The AN100 can monitor any normally open contact device to supervise its condition. These devices may be broken bag detectors, plug up detectors etc. The system will generate a trouble condition when the supervised device activates.
- The AN100 provides contacts to shut down the air conveyance system on detection of a spark or baghouse heat condition.
- The AN100 provides contacts to abort the clean air return on detection of a spark or baghouse heat condition.
- The AN100 provides contacts to indicate both trouble and alarm conditions. These could be used to interface to a plant wide Fire Alarm System or a plant PLC.
- The AN100 includes a charger and battery condition monitor and may be fitted with back up batteries to provide up to 24 hours of power in the event of loss of AC mains.