

DH-HY-ASD420B

Aspirating Smoke Detector



System Overview

DH-HY-ASD420B Aspirating Smoke Detector (hereinafter referred to as the device) is designed to monitor smoke in the early stage. Integrated with dual-wave length smoke identification technology, MEMS airflow sensing detection technology, and an intelligent environmental self-learning algorithm, this device analyzes sampled air in the laser detection chamber through the sampling pipe network distributed in the protected area. Once the surrounding smoke concentration reaches the alarm threshold, it will promptly send out a visual and audible alarm signal to remind the user to take immediate measures, transmit the fire alarm information to the IoT platform and simultaneously link the relay to output a control signal.

- **Precise detection:** immune to moisture or dirt particles thanks to infrared and blue light dual-wave length laser particle identification technology
- **24/7 auto-learning:** environment dynamic self-learning algorithm enables the environment adaptation in the monitored region
- **Intelligent monitoring:** advanced MEMS airflow sensing technology is capable of monitoring pipe fault and blockage
- **Dual detection:** verifying smoke and gas (supports standard Figaro CO sensor and other customized smoke)
- **Test function:** one-click button to test key components
- **User-friendly interaction:** a 7-inch color touch panel for displaying smoke concentration. Configuring parameters directly from the user interface without physical access to the device
- **Detection chamber auto-cleaning:** continuous airflow allows the self-cleaning in laser detection chamber
- **Large monitoring area:** Max. length of a sampling pipe is 120, the maximum number of sampling holes is 30, and the monitoring area surpasses 2000 m²
- **Easy maintenance:** intelligently monitoring sensor life, conveniently replacing the old sensor
- **United calibration:** based on smoke concentration detection, the smoke chamber is 100% calibrated
- **Smart IoT:** connect to the IoT platform via the Ethernet port, RS-485, 4G, and CAT1
- **Diversified operation modes:** supports the independent operation and connection to remote CRT software or IoT platform through RS-485
- **Customized events:** support customized events covering alarm and fault. Conveniently integrated into the third-party devices
- **Records query:** supports a total of 200,000 records
- **Remote control:** remotely reset through the switch interface or IoT platform to quickly address the alarm

Function

Laser sensing technology, more sensitive and reliable

Industrial grade blue laser ensures better stability, more sensitive detection of small particle smoke

Visualized concentration and standard calibration

A 7-inch color touch screen offers a clear visualization of the live data, and the concentration can be viewed at a glance. The detection chamber is 100% calibrated

Dual light detection, particle identification

Precise responses to minimal amounts of dust and moisture by infrared and blue light dual wavelength laser particle identification technology. It is highly efficient and reduces false alarms

Multiple alarms, wide application

Up to 4 alarm levels per detector (2 pre-signals and 1 or 2 alarms). Adjustable sensitivity (high, medium, and low) can be flexibly applied for various scenarios

Smart IoT, remote supervision

The built-in wireless module enables remote supervision on the IoT platform. Notifications can be sent to your mobile phones in real-time

Scene

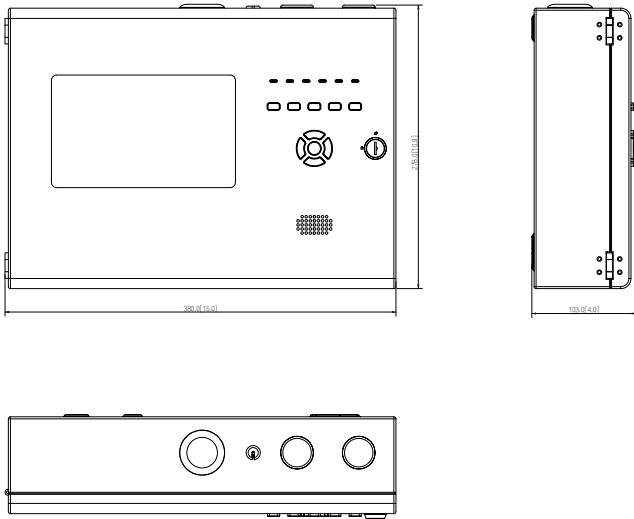
The device can be widely used in:

- (1) Places that require early detection, reserve time to evacuate crowds or ensure uninterrupted services and businesses, such as hospitals, schools, nursing homes, theaters, and banks.
- (2) Places with high-speed airflow interference, such as computer room, clean room, air conditioning monitoring, and air conditioning pipeline detection.
- (3) Places that are low temperature, small, toxic, and harmful, and full of regulated personnel, such as cold storage, prisons, pipe corridors, military facilities, cable trenches, and rail transit.
- (4) Hidden applications such as museums, historical buildings, and ancient buildings.
- (5) Ordinary spacious places, such as logistics warehouses, gymnasiums, and airports.
- (6) Places with high electrical pressure and strong electromagnetic interference, such as new energy charging stations, computer rooms, and cable trenches.

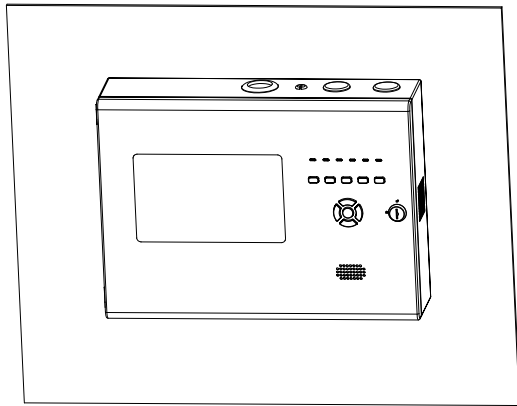
Technical Specification

Model	DH-HY-ASD420B
Dimensions (L*W*H)	380 mm*103 mm*278 mm
Operation	7-inch color touch screen
Installation	Wall mount
Detection Sensitivity	0.001%–3% obs/m
Alarm Levels	Alert, action, alarm 1, alarm 2
Sampling Pipe	2×120 m
Sampling Address	2 sampling pipes, 2 suction pumps, 2 sampling tubes, 1 detection chamber
Monitoring Area	> 2000 m ²
Sampling Tube Apertures	Inner: 21 mm; outer: 25 mm
Addressing Function	Support
Number of Sampling Holes	2×20 (Recommended)
Relay	7 channels, 30VDC 2A
Event Records	200,000
Airflow Sensor	3
Communication Interfaces	RS-485, Ethernet, 4G
Supply Voltage	24V DC (a standard power box with backup function is required)
Power Consumption	<24W (default setting)
Operating Temperature	-30°C to +60°C (-22°F to +140°F)
Operating Humidity	≤ 90% RH (non condensing)
Protection	IP30
Alarm Method	Visual and audible alarm; notifications on IoT platform, message, telephone
Certifications	GB 15631–2008

Dimensions (mm/inch)



Installation



Ordering Information

Type	Part Number	Description
Smoke Alarm	DH-HY-ASD420B	Aspirating Smoke Detector