Maple Armor

PipeSense™ Series
Aspirating Smoke Detector

Specification

Features

- Optional SKUs for 1/2/4 pipes
- Independent detection chamber for each pipe
- Default pipe addressing, independent airflow sensor for each pipe
- High sensitivity laser detection technology with a wide sensitivity range
- Extra-long pipe length and abundant sampling holes
- 4-level programmable alarm level for each pipe
- Color LCD with intuitive UI.
- Micro-dust separation technology improves immunity to false alarms and extends the life of filter.
- RS485 interface and 9 relay outputs.
- Event log capacity up to 20,000.
- Modular-based design for easy maintenance and modularized replacement.
- Unique materials and mechanical design for the detection chamber to enhance pollution resistance and water condensation tolerance.
- Inverted installation supported.
- Filter replacement and maintenance reminders.
- HEPA external filter available
- Automatic compensation of sensitivity and airflow.
- GPIO function for remote reset control.

FM APPROVED

The FW2601 series aspiration smoke detector is a product with multiple unique features. This system offers abundant pipeline configurations, with each pipeline having an independent detection chamber to ensure reliable high-sensitivity detection. The default pipe addressing function and independent PT platinum airflow sensor for each pipe enhance the accuracy of detection and alarm. The advanced laser detection technology features high sensitivity, a wide sensitivity range, and good consistency in its whole lifecycle. The extra-long pipe and abundant holes along the pipe ensure extensive coverage and effective detection of the detector. Pipe addressing and independent four-level alarm for each pipe allow users to promptly identify the location of smoke occurrence and the risk level, enabling them to make optimal response decisions in a timely manner.

The FW2601 series provides an intuitive and user-friendly color LCD display, enabling efficient operation for both users an technical personnel. It utilizes micro-dust separation technology, which offers improved immunity to false alarms and longer filter lifespan. This series can record up to 20,000 events and offers multiple interfaces such as RS485 and 9 relay outputs, making it easy to integrate and interface with other systems.

The FW2601 series features a quick-detachable and modular structure, making the installation and maintenance process more convenient. The special design of the detection chamber and mechanical parts provides excellent condensation tolerance performance, which will ensure reliable operation of the system in low-temperature and humid environments. The system also features self-learning capabilities for particle and airflow, as well as an NMB high-suction fan to meet the transmission time requirements in conditions of different pipe lengths.

The FW2601 series is an ideal choice for places with high airflow, large open spaces (with ceiling heights exceeding 12m), places with aesthetic requirements, environments with high dust levels that may cause false alarms for spot-type detectors, clean rooms with high airflow, access- restricted areas, and other key locations with high personnel density, valuable assets, or strict requirements for continuous operation.

CERTIFICATE


CERTIFICATE OF CONFORMITY

FM Approvals

1. FIRE PROTECTION EQUIPMENT
2. Certificate No: FM24US0267
3. Equipment: (Type Reference and Name) FW2601 Aspirating Smoke Detector
4. Name of Listing Company: Maple Armor Fire Alarm Device Co, Ltd.
5. Address of Listing Company: 8866 Boul. du Quartier, Brossard, Quebec J4Y 0R2, Canada
6. The examination and test results are recorded in confidential report number: PR466703 dated 24 January 2025
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval Standards and other documents: FM 3230 2023
8. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
9. Approval Guide Listing Category: Alarm Signal Initiating Devices, Smoke Detectors

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

24 January 2025
Date

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE


中国国家强制性产品认证证书

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

CNAS

A 0379615

PipeSense CASE STUDY


VNET Data Center

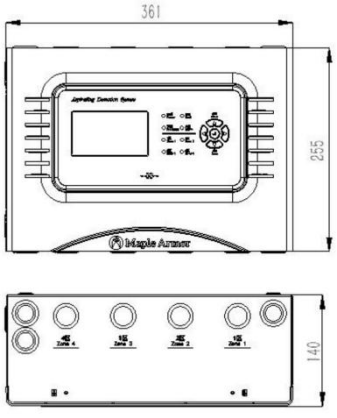

Cold Chain Smart Logistics Center in ShaoXing City

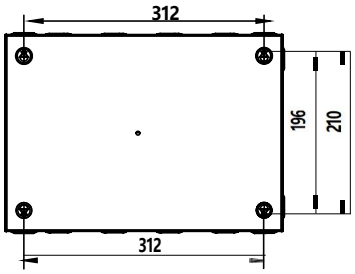

Xi Ning Airport


Integrated Transportation Hub and Supporting Projects in Wang Jing West, Beijing

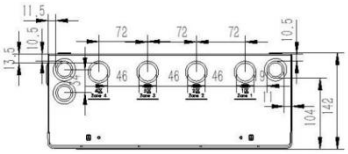
Industry	Project
Airport	Xi Ning Airport
Data Center	VNET Data Center, ZhangJiaKou
	VNET Shanghai Data Center
Tunnel	Integrated Transportation Hub and Supporting Projects in Wang Jing West, Beijing
	Shuozhoudong Station on the Jining - Datong - Yuanping Railway
Industrial Factory	Lingnan Cultural Entrepreneurship Industrial Park, Guangdong
	R&D Base of Photovoltaic Cells Infrastructure Project
	Ningbo JadeBird integrated base project for silicon - based anode materials of lithium - ion batteries
	GoodWe (Guangde) New Energy Industrial Park (Phase I)
	Tongling 480 million m²/year lithium - ion battery project.
Cold Chain Warehouse	Cold Chain Smart Logistics Center in ShaoXing City
	Cold Storage warehouse upgrade and reconstruction project of Beijing Huadu Yangguang Food Co., Ltd.

INSTALLATION

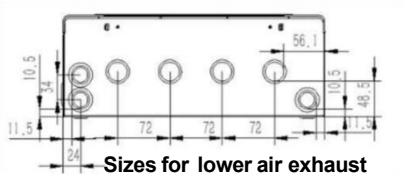




Spacing and Margins of Holes



Sizes for upper air intakes



Sizes for lower air exhaust

The detector is fixed on the wall using expansion bolts (using M4 screws). The spacing between the mounting holes is 312mm. The sampling pipe* that is compatible with the detector shall have an outer diameter of 25mm and an inner diameter generally of 21mm. Other external dimensions and detailed installation dimensions are shown in the diagrams.

*Sampling Pipe and its connecting accessories are usually universal PVC plastic products, which are readily available in the local market. If assistance is needed to procure pipes, please contact your local sales representative at Maple Armor.

SPECIFICATION

Environmental	
Operating Temperature	0～+38℃
Storage Temperature	-20～+65℃
Relative Humidity	≤95% (no condensation)
Electrical	
Operating Voltage	DC20V～26V
Monitor Current	0.9A, 1.4A, 1.9A (P1, P2, P4)
Alarm Current (maximum)	FW2601-P4：2.0A; FW2601-P2：1.5A; FW2601-P1：1.0A
Indicator	Power supply: green; Fault: yellow; Early warning: red; Fire alarm: red; FW2601-P4: Total of 4 zones: green/red. Green on:monitoring status; Red On: alarm status FW2601-P2: Total of 4 zones: green/red. Green on:monitoring status; Red On: alarm status FW2601-P1: Total of 1 zone: green/red. Green on:monitoring status; Red On: alarm status
Mechanical	
Exterior	Gray PLA9023
Shell material	Metal/Plastic
Weight	FW2601-P4：5.188kg ; FW2601-P2：4.198kg ; FW2601-P1：3.703kg
Dimensions	361×255×140mm
Detection	
Max. protection area	FW2601-P4：4000m² ; FW2601-P2：2000m² ; FW2601-P1：1000m²
Sampling pipe length	P4: 4 pipes, Max. 100m/pipe, FM3230 P2: 2 pipes, Max. 100m/pipe, FM3230 P1: 1 pipe, Max. 100m/pipe, FM3230
Sensitivity range	0.0001～20% obs/m
Relay output	9 configurable relays, capacity 2A
Max sampling holes	FW2601-P4: 80 holes in total; FW2601-P2: 40 holes in total; FW2601-P1: 20 holes in total
Approvals	
FM	Standard FM3230 Smoke Actuated Detectors for Automatic Alarm Signaling
CCC	Standard GB15631-2008 Specialty Fire Detectors

ORDERING INFORMATION

MODEL	DESCRIPTION	UOM	MPQ	MOQ	COO
FW2601-P1	FireWatcher Aspirating Smoke Detector 1 pipe	EA.	1	1	China
FW2601-P2	FireWatcher Aspirating Smoke Detector 2 pipe	EA.	1	1	China
FW2601-P4	FireWatcher Aspirating Smoke Detector 4 pipe	EA.	1	1	China
FW2405	ASD-Monitor Networking Software, compatible with FW2352	EA.	1	1	China
FW2406	ASD-Calculator Sampling Pipe Design Software	EA.	1	1	China
FW2601-P4-02	Coarse Filter	EA.	1	1	China
FW2601-P4-03	Fine Filter	EA.	1	1	China
FW2352	RS485 Networking Card, Compatible with FW2405	EA.	1	1	China
FW2601-HEPA	HEPA filter cotton, optional external filter	EA.	1	1	China

Spare Parts

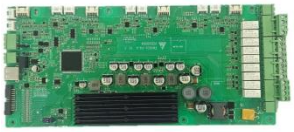
ASD Front panel component

The front panel component of the ASD product is the front panel of the PipeSense series products. It includes a display screen, a display driver circuit PCBA, a buzzer, and an operation key panel. Replace this component when the above -mentioned parts are damaged. This part varies according to the ASD models with different numbers of pipelines.

ASD Cabinet

The Cabinet of ASD product is the back-shell chassis of the PipeSense series products. Use this component when the chassis is damaged and needs to be replaced. This part varies according to the ASD models with different numbers of pipelines. The main differences lie in the number of openings on the chassis to accommodate the pipelines and their markings.

ASD product master board PCBA



The ASD product master board PCBA contains the main chip, all the electronic circuits for function operation, and the connection terminals. Repair or replace this component when the main circuit of the device malfunctions. The single-tube, double-tube, and four-tube models share the same hardware, but due to software differences, the part number of the component varies depending on the model.

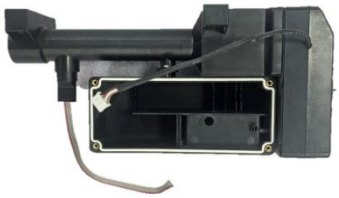
The data cable connecting the mainboard PCBA and the front panel (Universal))

The data cable connecting the main board PCBA and the front panel (Universal) is a data cable used to connect the ASD master board and the ASD front panel. This data cable is universal for all models. Replace this component when the data cable is damaged.

Laser sensor component (Universal)

The Laser sensor component (Universal) is a detection component of the pipeline detection module, which contains a laser sensor, its driving circuit and the corresponding structure. Replace this component when the sensor malfunctions or is damaged. This component is universal. The maximum number of replacements depends on the number of pipelines in the complete ASD machine.

Detection chamber structure with fan and air flow sensor (Universal)



The detection chamber contains an air sampling pump and an air flow sensor. This component does not include a laser sensor and the particle filter, although these two are part of this component in the complete machine. Repair or replace when the air sampling pump (fans) malfunctions or is damaged. This component is universal. The maximum number of replacements possible depends on the number of pipelines in the complete ASD machine.

HEPA two-stage particle filter (Universal)

The HEPA filter is to ensure that the ASD remains in optimal working condition. It is a two-stage filter consisting of a coarse filter and a fine filter to ensure that non-fire elements cannot enter the detection chamber. Replace this component as a whole when the ASD prompts to replace the filter cotton. One filer corresponds to one pipeline. The maximum number of possible replacements depends on the number of pipelines in the complete ASD machine.