

QUARTAS-2000s

Four Pipes Aspirating Smoke Detector

AVA PREVENT

The Quartas 2000 series offers industry-leading aspirating smoke detection technology, combining exceptional performance with cost-efficiency, specifically engineered for high ceilings and expansive open spaces, ensuring enhanced detection coverage and reliability in such specialized applications.



- Alarm Sensitivity Range: 0.005~20% obs/m
- Four Alarm Levels
- 7 Relay Outputs
- Optional 16 Relay Outputs (4A Version)
- 3 in 1 Control/Display/Programmer Front Panel
- RS485 Network
- Support Modbus RTU Open Protocol
- Listings / Approvals



The Quartas utilizes a **high-power Blue LED** as its detection light source, ensuring exceptional sensitivity to small smoke particles during the incipient stage of a fire. The short wavelength of 470 nm blue light is highly responsive to smaller particles, making the Blue LED an optimal choice for detecting particles across a wide range of sizes, from the smallest to the largest.

Employing Large Volume "**Three-Dimension**" detection, Quartas utilizes a specially engineered smoke chamber structure, resulting in a significantly large total scattered light signal. This enables a more accurate representation of the actual concentration of smoke in the air.

The Quartas **Smart Smoke Level** (SSL) algorithm automatically activates upon power-up of the device. Operating continuously, 24/7, it gathers data on background particle levels. The algorithm calculates the average background particle level and uses it as the reference point (zeroing) for detection, ensuring consistent performance and minimizing nuisance alarms.

- **Display Mode:** The Display Mode delivers real-time data including smoke value, Normalized flow value as a percentage, Flow Raw value, Device address, Active Events & codes. It provides 20 segment smoke level bargraph, 4 Fire Alarm Indicators, 4 Faults Indicators and the Isolator Indicator
- **Programmer Mode:** In Programmer Mode, users can configure all functional parameter settings such as alarm threshold adjustments, Fan speed alterations, and address changes.
- **Control Mode:** The Control Mode enables users to execute various actions including Reset, Isolate/De-isolate, Silence, and LED Test.



Quartas 3 in 1 Front Panel

For Detail Information Please refers to QUARTAS-2000s Manual

Specification

Smoke Detection Principle

- Forward Light Scattering Mass Detection

Smoke Detection Range

- 0.001~25% obs/m

Alarm Sensitivity Range:

- 0.005~20% obs/m

Major Components:

- 4x Sampling Pipes
- 4x Aspirators
- 4x Flow Sensors
- 1x High Sensitivity Smoke Detector
- 1x Filter

Pipe Length (Linear)*:

- 4 x 100m

Pipe Length (Branch)*:

- 4 x 240m

EN54-20 Class A/B/C*:

- 40/60/100

Sampling Pipe

- Material: ABS/UPVC
- OD: 25mm

Alarm Levels and Time Delay

- Alert (0~60 sec.)
- Action (0~60 sec.)
- Fire-1 (0~60 sec.)
- Fire-2 (0~60 sec.)

Environment Smoke Learning

- 24hours, 365days Non-Stop Smoke Background Level Learning

Flow Detection Principle:

- Heat Mass Detection

Flow Monitoring

- Pipe Flow Normalize to 100%
- Flow High and Flow Low Fault
- Adjustable Flow Detection Sensitivity

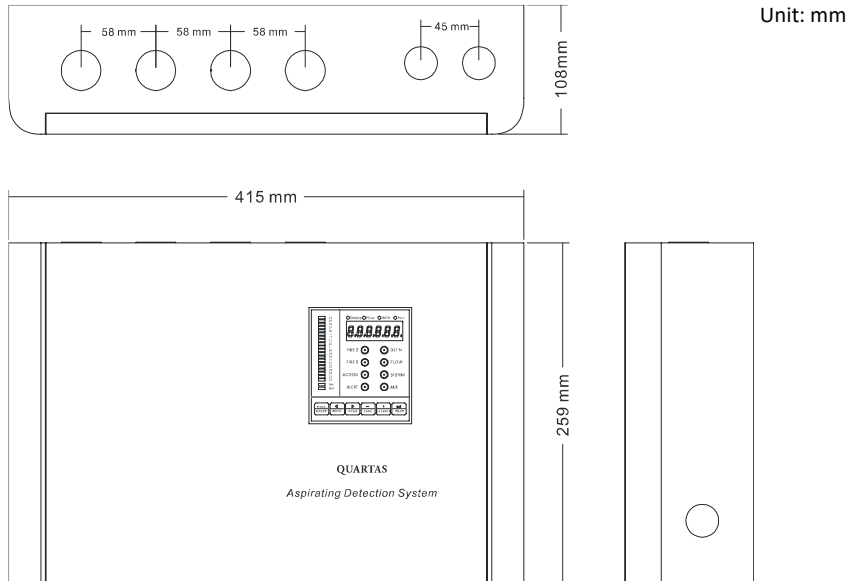
**Note: Per EN54-20 Class A Sensitivity. Please refer to AVA design manual for the details about pipe length and the number of sampling holes.*

QUARTAS-2000s

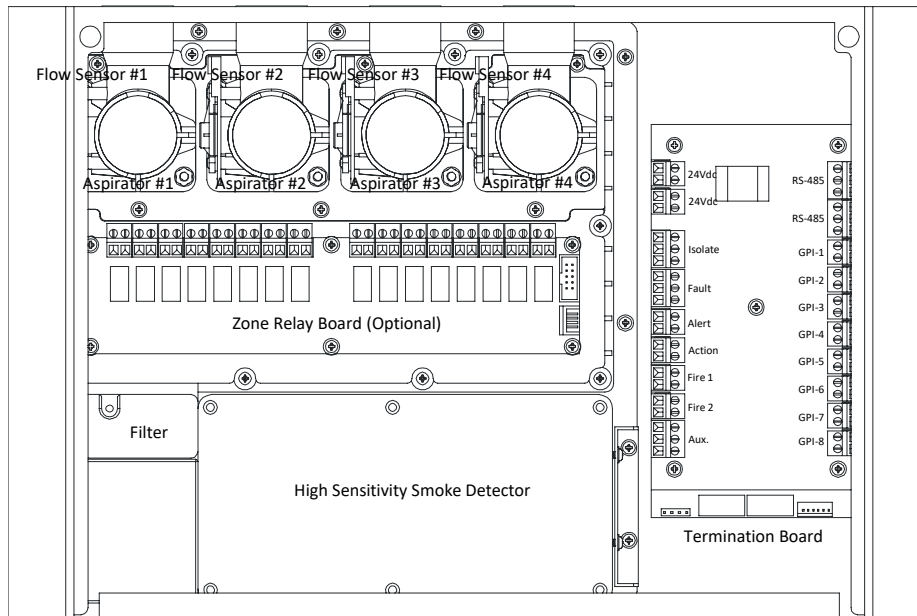
Four Pipes Aspirating Smoke Detector

AVA PREVENT

Dimensions



Internal Structure



Ordering Information

Part No.	Description
Quartas-2000s (1A)	Four pipes (Single Zone) Aspirating Smoke Detector
Quartas-2000s (4A)	Four pipes (Four Zones) Scanning Aspirating Smoke Detector

Relay Output

- 7 Relays on Termination Board (Configurable)
- Rating: 2A@30 VDC

Zone Relay Output (4A Version)

- 16 Relays on Zone Relay Board (Configurable)
- Rating: 2A@30 VDC

General Purpose Inputs

- 8xGPIs (Configurable)
- GPI Functions:
Reset/Isolate/Silence/Test/Scan/
Mains Fault/Battery
Fault/Power Fault
Sensitivity Mode 1/Sensitivity
Mode 2/UDI-1/UDI-2/UDI-4/UDI-5

*Note: UDI, User Defined Input

Communication

- RS-485 Network
- Maximum number of devices on Network: 250
- Built in repeater
- Maximum cable length between two adjacent devices: 1.2km
- Support Modbus RTU open protocol

Event Logs

- Number of Events: 183000
- Event Type:
Alarm/Fault/Operation/
Smoke/Flow/Auxiliary Gas
Sensors

Operating Conditions

- Ambient Temp.: 0~40 °C
- Tested : -30 °C ~ +55 °C
- Sampling Air Temp: -20~60 °C
- Humidity: 10~95% RH Non
Condensing

Power

- 24 ± 4.8 Vdc
- 385 mA ~ 1050mA

Dimension

- Length=415mm
- Width=249mm
- Height=108mm

IP rating : IP40

Weight

- Net Weight: 5.2kg

AVA PREVENT CO., LTD.

Specifications may be subject to change without prior notice.