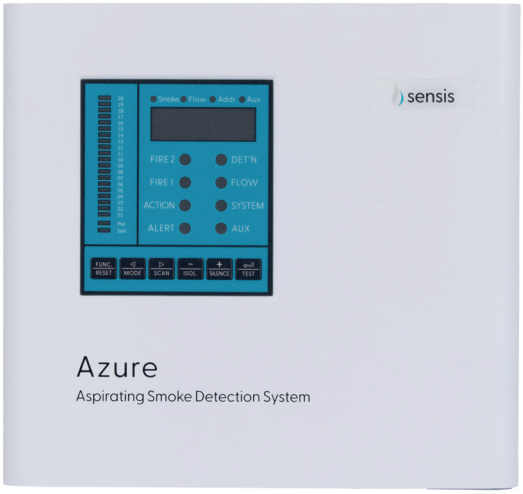
Product overview

The Azure 500s series offers industry-leading aspirating smoke detection technology, combining exceptional performance with cost-efficiency, specifically engineered for compact enviroments.

The Azure 500s utilises 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, Azure 500s utilises 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.



Features

- **Very early warning smoke detection** – Alarm sensitive range of 0.005~20% obs/m, covering a maximum area of up to 1860 m^2.
- **High Power Blue LED** – High Power Blue LED is a brighter light source with a shorter wavelength, which improves the response to smaller particles for earlier detection than conventional infra-red light sources.
- **Smart Smoke Level (SSL)** – Operates 24/7 to continuously monitor the background environmental value and establish a reference point for smoke concentration and alarm threshold to improve reliability and reduce false alarms.
- **3-in-1 display** – Optimised user interface with 3-in-1 display providing real-time smoke levels (20 segment bargraph), 4 fire alarm indicators, 4 fault indicators and an isolator indicator.
- **Display modes** – Delivers real-time data including smoke value, normalised flow value (%), device address and event log. Configure all functional parameter settings from the device, such as alarm thresholds, fan speed and device address.
- **Signal output** – 7 relays (configurable) at 2 A @ 30 Vdc.

Applications

Airports, Atrea, Building voids, Clean rooms, Cold storage, Data centres, Food factories, Heritage buildings, Lift shafts, Manufacturing, Telco, Warehouses, Wash down

Approvals

EN54-20 and FM approved.

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Technical specification

Performance	
Smoke detection principle	Forward light scattering mass detection
Smoke detection range	0.001~25% obs/m
Alarm sensitivity range	0.005~20% obs/m
Area coverage	1,860 m^2
Aspirator speed	1 ~ 10
Pipe length (linear) [1]	100 m (328 ft)
Pipe length (branched) [1]	240 m (787½)
EN54-20 Class A/B/C [1]	30/60/60
Alarm levels and time delay	
Alert	(0~60 seconds)
Action	(0~60 seconds)
Fire-1	(0~60 seconds)
Fire-2	(0~60 seconds)
Smart Smoke Learning (SSL) operation	24 hours, 365 days non-stop environmental 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
Mechanical specification	
Sampling pipe material	ABS/UPVC
OD	25 mm (1")
IP rating	IP51
Net weight	2.5 kg (5.5 lb)

Electrical specification	
Relay output	7 relays on termination board (configurable)
Rating	2 A @ 30 Vdc
General purpose inputs	4 x GPIs (configurable)
GPI functions [2]	Reset/Isolate/Silence/Test/ Scan/Mains Fault/Battery Fault/Power FaultSensitivity Mode 1/Sensitivity Mode 2/ UDI-1/UDI-2/UDI-4/UDI-*
Communication (500s model)	
Network	RS-485 network
Max. no. of devices	250
Repeater	Built in
Max. cable length between two adjacent devices	1.2 km (3,937 ft)
Protocol	Support modbus RTU open protocol
Event logs	
Number of events	183,000
Event type	Alarm/Fault/Operation/ Smoke/ Flow/Auxiliary Gas Sensors
Operating conditions	
Ambient temp.	0~40°C (0~104°F)
Tested	-30°C~+55°C (-22~131°F)
Sampling air temp.	-20~60°C (-4~140°F)
Humidity	10~95% RH non-condensing
Operating voltage	24 ±4.8 Vdc | 216 mA – 366 mA

[1] Per EN54-20 Class A Sensitivity. Please refer to Sensis design manual for the details about pipe length and the number of sampling holes. The SensisFlow air sampling pipe network design tool can be used to calculate the maximum transport time and sampling hole sensitivity.

[2] UDI: User Defined Input

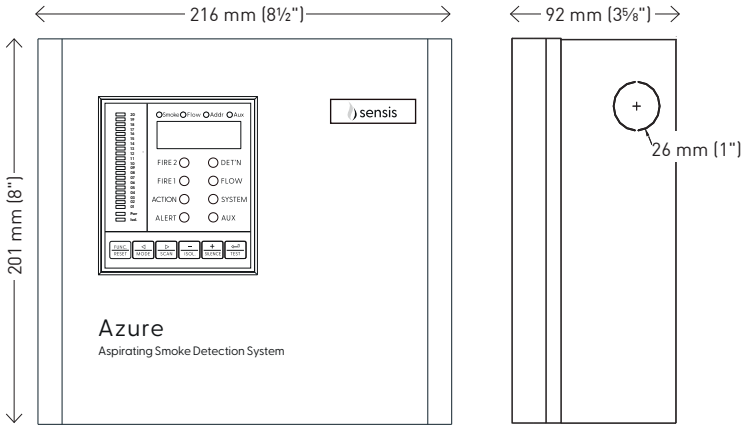
Part numbers

Part number	Description
116-4500-100	Sensis Azure 500s (single pipe)

Accessories

Part number	Description
116-4800-000	Sensis Network Interface Module (NIM-1200)
116-4800-001	Sensis Network Control Panel (NCP-1215) with display for floor plans
116-4800-003	RS485 to USB Converter for programming and commissioning
116-4800-004	Sensis Azure Dual Stage Filter (replacement filter)

Dimensions



Internal structure