

BVID-SE AE929 Series Reflective Imaging Beam Smoke Detector

General

At present, in large space buildings or important industrial buildings, traditional beam smoke detectors are widely used, which are generally composed of detectors and reflectors. However, it is very difficult to install, align and debug the traditional beam detector, and it is difficult to adjust the detector to



align the reflector at the height of the building. In addition, in many applications, the false alarm and fault problems are prominent, and many reasons can cause this result, such as the vibration of building structures or the deformation of insects.

The AE929 series BVID-SE reflection imaging beam smoke detector developed by the company is mainly composed of single/double wavelength emission imaging detector and reflector. One imaging detector can correspond to multiple reflectors. The imaging detector has a certain field of view angle, which makes it easier for the detector to align with the reflector.

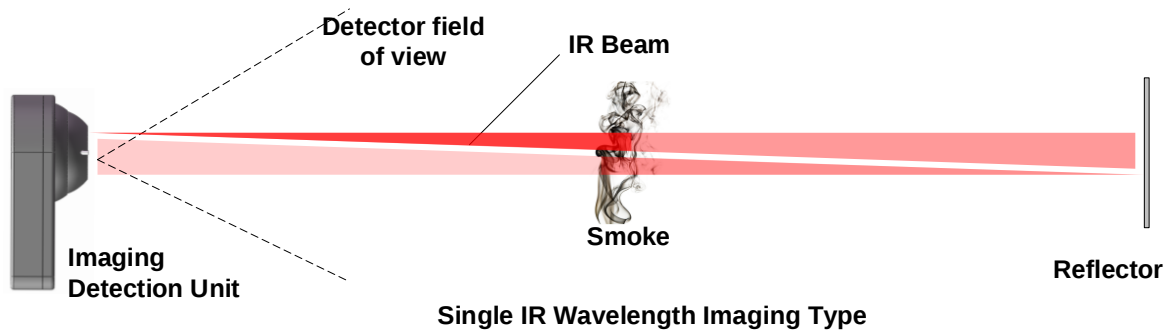
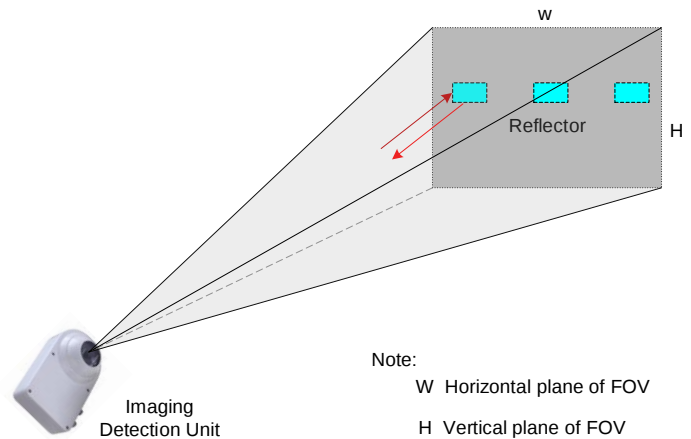
Salient Features

- Easy Installation, easy Alignment
- Receiver consists of a CMOS imaging unit
- Single IR wavelength or dual IR/UV wavelength
- Supports one-to-many layout
- High tolerance to false alarm due to building movement
- CE and CCCF certification

Features

- Single IR wavelength products detection range 6~100m, up to 125
- Wide field of view with 11°X8° ,
- Highly resistant to building movement , tolerates $\pm 3.5^\circ$ movement
- Resistant to strong light sources up to $\pm 9^\circ$, does not alarm when saturated by sun

- strong resistance to building structure deformation and reflector deflection
- no need for accurate alignment , quickly complete alignment using a laser pen
- Wireless WiFi debugging, without climbing, easy installation, operation, maintenance, and use
- Fast adaptive parameter adjustment and identification
- Optional heater kit available for the receiver and reflector
- Automatic drift compensation
- Has certain resistance to dust, steam, and solid object intrusion for IR/UV type.



Specifications

Table 2.1 BVID-SE Technical parameters

Product Model	Regular type		Explosion-proof type
	AE929-IR/UV -06 +4RB	AE929-06 +4RB	AE929Ex-06+4RB
FOV (°)	11X8		
detection distance (m)	Typical 50 Maximal 60	Typical 100 Maximal 125	Typical 100 Maximal 125
Detection form	One to one, IR&UV dual wavelength	One to one/two/three, IR single wavelength	One to one/two/three, IR single wavelength
Number of reflector	6~30m—1 piece; 30~60m—4 pieces;	10~30m—1 piece; 30~60m—2 pieces; 60~100m—4 pieces	10~30m—1 piece; 30~60m—2 pieces; 60~100m—4 pieces
Debugging	Wireless WiFi or wired network		
Output	Prealarm / fire alarm / fault relay passive contact output, SPST passive contact 2A at 30 VDC or 1A at 250 VAC		
Reset control	Power off reset or output module control		
Working voltage	Rated voltage DC24V $\pm$ 15%, Applicable voltage DC18V~32V		
Rated power	$\leq$ 7W		
Working temperature	-25°C ~ +60°C		

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Product Model	Regular type		Explosion-proof type
	AE929-IR/UV -06 +4RB	AE929-06 +4RB	AE929Ex-06+4RB
Working humidity	≤ 95% RH, up to 100% in a short time, applicable to condensation environment		
Protection level	IP66	IP43	IP66
Casing form	Aluminum alloy casing	White ABS hemispherical shell	Explosion proof aluminum alloy
Overall dimensions	L256mm×W86mm×H165mm	L224mm×W86mm×H165mm	L174mm×W145mm×H192mm
Reflector	Single 122mmxw90mm, can be spliced 1 ~ 4, including angle adjuster (for one to many use)		
Weight	1.52Kg	0.72kg	2.6Kg
Installation	Wall mounting and hoisting		

Detection Performance

Detection Range	6~100m, up to 125m for Single IR wavelength product 5~50m for dual IR/UV wavelength product
Alignment method	Laser assisted, manual alignment, easy alignment with large adjustment and viewing angles
building movement	Adaptive compensation for natural changes in route caused by building movement
Contamination Compensation	Compensates for gradual build-up of contamination on the optical surfaces
Optical Wavelength-detection	850nm near infrared or/and 405 UV
Dust, steam and intrusion of solid objects	High tolerance for dual IR/UV wavelength product
Matching method	One to one / One to multi space stereo detection
Signal output	Individual Alarm and Fault Relays 1A@30VDC

Programmable User Settings

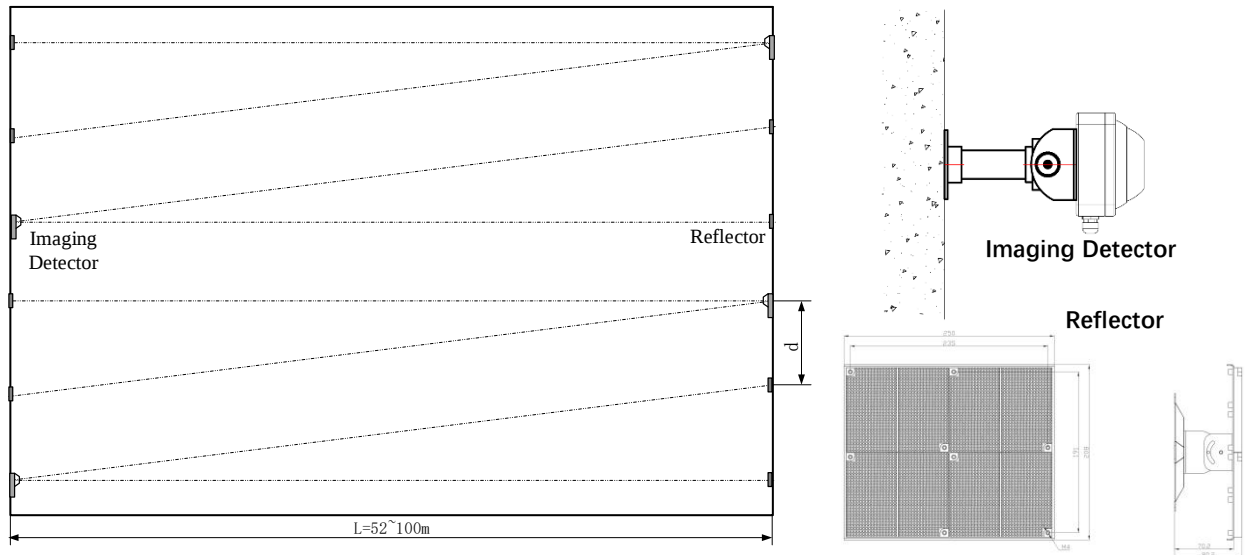
Alarm response threshold levels	20% (0.97dB) – Fastest response to smoke
	35% (1.87dB) – Default value
	50% (3.01dB) – High immunity to false alarms
	85% (8.23dB) – Highest immunity to false alarms, slow response to smoke. Configured via the integrated user interface
Delay to Alarm	1~30 seconds adjustable, for momentary partial obstruction of the beam path

Design Parameters

Separation distance between receiver and reflector	6~100m, up to 125m for Single IR wavelength product (Use 4 reflectors when the separation distance is greater than 40m) 5~50m for dual IR/UV wavelength product
Beam path clearance	0.3m in diameter from center line between detector and reflector
Detector dimensions	224mmW×165mmH×86mmD (see diagram)

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Reflector dimensions	For Single IR wavelength products, up to 50m separation distance— Single reflector 125mm×104mm× 10mm For Single IR wavelength products, up to 125m separation distance and for dual wavelength products—Four reflectors arranged in a square patter 250mm×208mm× 10mm
Installation spacing of reflectors	≤10m, As long as the reflector is within the field of view, one or more reflectors can be used
Housing color	White RAL9016



Field Wiring

Cable gauge and type	2 cores + 6 cores, dedicated, 0.5 to 1.5mm (24 to 14 AWG) System compatible with fireproof and non-fireproof cable meeting local installation standards
Cable entry	Two PG7 connector

Test and Maintenance

Alarm test	Using dedicated filters for optical alarm testing
Simulation test	Simulate using debugging software through WIFI wireless network

Ordering Information

Model	Descroption
AE929-06+1RB	Single IR wavelength products, 5~50m, with one reflector
AE929-06+4RB	Single IR wavelength products, 50~100m, with four reflectors
AE929-IR/UV-06+4RB	Dual IR/UV wavelength products, 5~50m, with four reflectors
AE929Ex-06+1RB	Single IR wavelength products, 5~50m, with one reflector
AE929Ex-06+4RB	Single IR wavelength products, 50~100m, with four reflectors