

Product Introduction

The Conventional Reflective Beam Detector operates on the principle of infrared beam obscuration. The detector and transmitter are integrated into a single unit, and an infrared beam is projected toward a retro-reflective mirror mounted opposite the detector.

When smoke enters the beam path, part of the infrared light is absorbed or scattered, causing a reduction in received signal strength.

The detector analyzes this change through a built-in microprocessor and determines whether a fire condition exists.

The detector is designed for large open areas and high-ceiling environments, such as warehouses, shopping malls, exhibition halls, factories, museums, and other wide-span applications where point-type detectors may be impractical.

CATEGORY	PARAMETER
Operating Voltage	20~28 V DC
Current Consumption Standby	6 mA
Commissioning	23 mA
Alarm	15 mA
Beam Sensitivity (DIP switch)	Level 1: 2.6 dB (High); Level 2: 3.8 dB (Medium); Level 3: 5.8 dB (Low)
Beam Path Length (DIP switch)	Span 1: 8-20 m; Span 2: 20-40 m; Span 3: 40-70 m;Span 4: 70-100 m
Beam Path Angle	±0.40° (average of left and right deflection)
Alignment Method	Laser beam pointer + digital display guide
LED Indicators	Red (Fire), Yellow (Fault), Green (Alignment)
Reset Time	< 2 seconds
Relay Output	Fire relay & Fault relay (NO / NC)
Relay Contact Rating	2.0 A @ 30 VDC
Ingress Protection	IP30 (IP66 with glue seal for permanent fixing)
Temperature Range	-10 C~50 C
Environment Humidity	≤95% RH (no condensation)
Size	191.2 x 127.7 x 95.5 mm

MODEL FGS-102

Product type
Conventional reflective beam detector

Published range
8 m to 100 m

Operating voltage
20 to 28 V DC

Source
FG Fire Alarm product page
Published data sheet image
Accessed 11 Aug 2026

Document note
The technical content on this page is the published product data image for FGS-102. It was placed into PDF format without changing the listed technical parameters.