

IONIZATION SMOKE DETECTOR

FDS SERIES

SURFACE MOUNTING TYPE



RECESS MOUNTING TYPE

**FEATURES**

- Conventional type
- Small monitoring current of $45\mu\text{A}$
- 2-wire system
- Alarm response lamp (LED)
- Voltage stabilizer
- Simple mounting
- Low profile
- Non-alarm verification type
- Approved by Japan Fire Equipment Inspection Institute

DESCRIPTION

The FDS series ionization smoke detectors offer a high standard of performance and quickly respond to visible and invisible combustion products generated by fire in its incipient stage. They are suitable for a wide range of applications in office buildings, hotels, etc. The operating principle of these detectors are as follows. Basically, the ionization smoke detector consists of an open sampling chamber (i.e. accessible to ambient air), a sealed reference chamber and electronic circuit for alarm evaluation. Air in both ionization chambers is ionized by small amount of americium 241, and with D.C. voltage applied to the electrodes, a weak electric current flows within the ionization chambers. When combustion products enter the sampling chamber, the current falls and the sampling chamber voltage rises, whereby the reference chamber voltage falls. This disturbance of the balance between the two ionization chambers is evaluated by means of the electronic circuit as an alarm signal, which is transmitted to the control panel.

SPECIFICATIONS

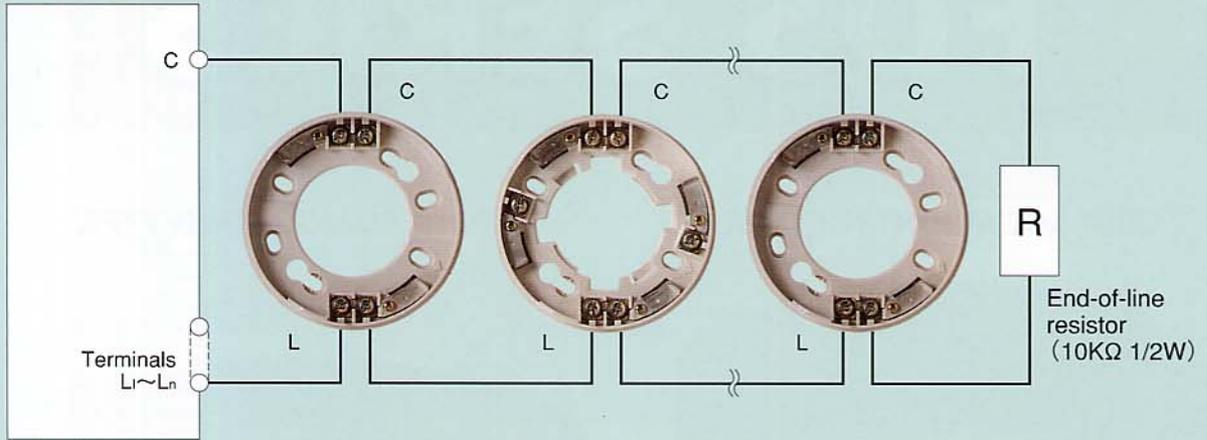
Model No.	FDS240	FDS340
SENSITIVITY	Class 2	Class 3
RATED VOLTAGE AND CURRENT	24VDC, 100mA	
ALLOWABLE RANGE OF VOLTAGE	15V to 30VDC	
QUIESCENT CURRENT	Approx. $45\mu\text{A}$	
RESPONSE LAMP	LED (Red)	
AMBIENT TEMPERATURE	-10 to 50°C	
MATERIALS	Head : ACS resin (Light gray) Base : Polycarbonate resin (Light gray)	
WEIGHT	Approx. 137g	

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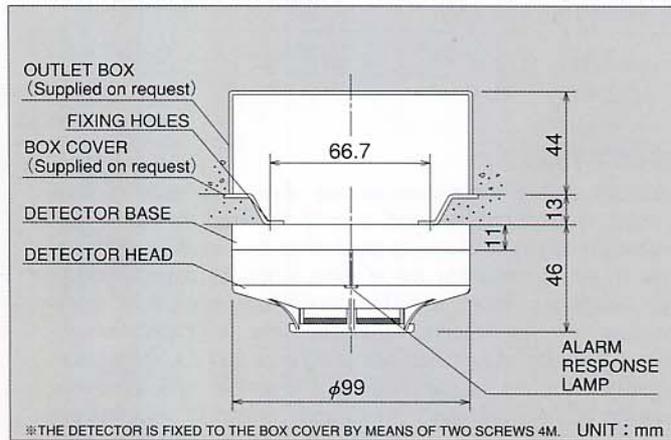
TYPICAL WIRING DIAGRAM

Conventional fire alarm control panel

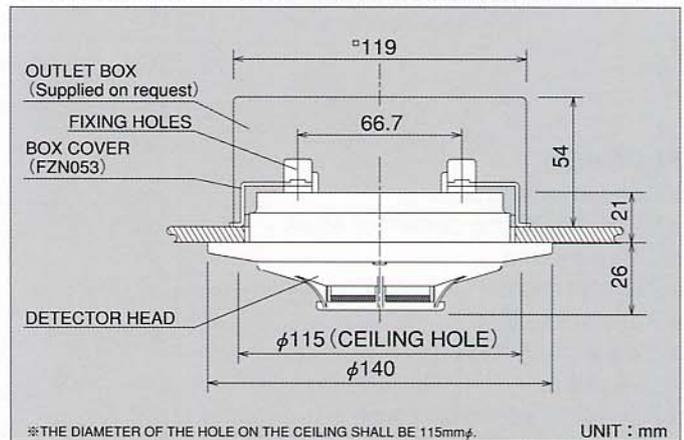


- External wire resistance : Less than 50Ω/Loop
 - Max. permissible number of detectors to be connected : 30 smoke detectors per line
- Wire connection : Remove the insulation of the wire ($\phi 0.2 \sim 2.0\text{mm}$) by 10mm from its end, insert the bare wire into the terminal and tighten the screw.

TYPICAL MOUNTING (SURFACE MOUNTING TYPE)



TYPICAL MOUNTING (RECESS MOUNTING TYPE)



SENSITIVITY CLASSIFICATION

CLASS	SMOKE DENSITY
CLASS 2	10%/m
CLASS 3	15%/m

Note) The smoke density is based on the light obscuration rate.

COVERAGE AREA PER DETECTOR

CEILING HEIGHT	SENSITIVITY	
	Class 2	Class 3
Less than 4m	150m ²	50m ²
4m to 20m	75m ²	N.A.

ORDERING INFORMATION

Model No.	DESCRIPTION	Model No.	DESCRIPTION
FDS240	Class 2 detector head	FZB013-2	Detector base : Surface mounting type
FDS340	Class 3 detector head	FZB053-2	Detector base : Recess mounting type

- These instructions do not purport to cover all the details or variations in the equipment described, nor provide for every possible contingency to be met in connection with installation, operation and maintenance.
- Specifications are subject to change without notice. Contact Nohmi before relying on above specifications.
- Actual performance is based on proper application of the product by a qualified professional.
- Should further information be desired or should particular problems arise, which are not covered sufficiently for the purchaser's purposes, the matter should be referred to Nohmi or a distributor in your region.

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