

PHOTOELECTRIC SMOKE DETECTOR

FDK SERIES

FEATURES

- (1) Small monitoring current of 45 μ A
- (2) 2-wire system
- (3) Alarm response lamp (LED)
- (4) Simple mounting
- (5) Very easy maintenance
- (6) Very low profile
- (7) Conventional type
- (8) Approved by Japan Fire Equipment Inspection Institute

DESCRIPTION

The FDK series photoelectric smoke detectors detect combustion products (smoke) generated by a fire, and transmit an alarm signal to the fire alarm control panel. The photoelectric smoke detector can detect a fire in an earlier stage than a heat detector. Generally, this detector is installed in the spaces such as basements, ordinary floors, corridors, staircases, elevator shafts.

OPERATING PRINCIPLE AND FUNCTION

The photoelectric smoke detector is composed of a light source, light sensing element, light shielding element and detecting chamber. The light source (a light-emitting diode) emits light at intervals of about 3.5 seconds, which does not reach the light sensing element (photo diode) under normal conditions because of the light shielding mold. If smoke enters the detecting chamber, the light from the light source is scattered by smoke particles and reaches the light sensing element. The light reaching the light sensing element varies with smoke density and if it exceeds the predetermined level, the detector operates and automatically holds its operation.

The detector then transmits the alarm signal to the fire alarm panel and the response lamp of the detector turns on.

SPECIFICATIONS

Model no.	FDK246	FDK246-X
SENSITIVITY	Ordinary type	
TYPE	Ordinary	With remote indication circuit
RESPONSE LAMP	LED (Red)	
RATED VOLTAGE AND CURRENT	24VDC, 100mA	
ALLOWABLE RANGE OF VOLTAGE	15V to 30VDC	
QUIESCENT CURRENT	Approx. 45 μ A	
ALLOWABLE RANGE OF AMBIENT TEMPERATURE	-10 to 50°C	
MATERIAL	Main body:ABS resin Base:Polycarbonate resin	
WEIGHT	Approx. 120g	Approx. 140g

The detectors are also available in different models, i.e. FDK346 (Class 3 sensitivity), FDK146 (Class 1 sensitivity).

WITH SURFACE MOUNTING BASE



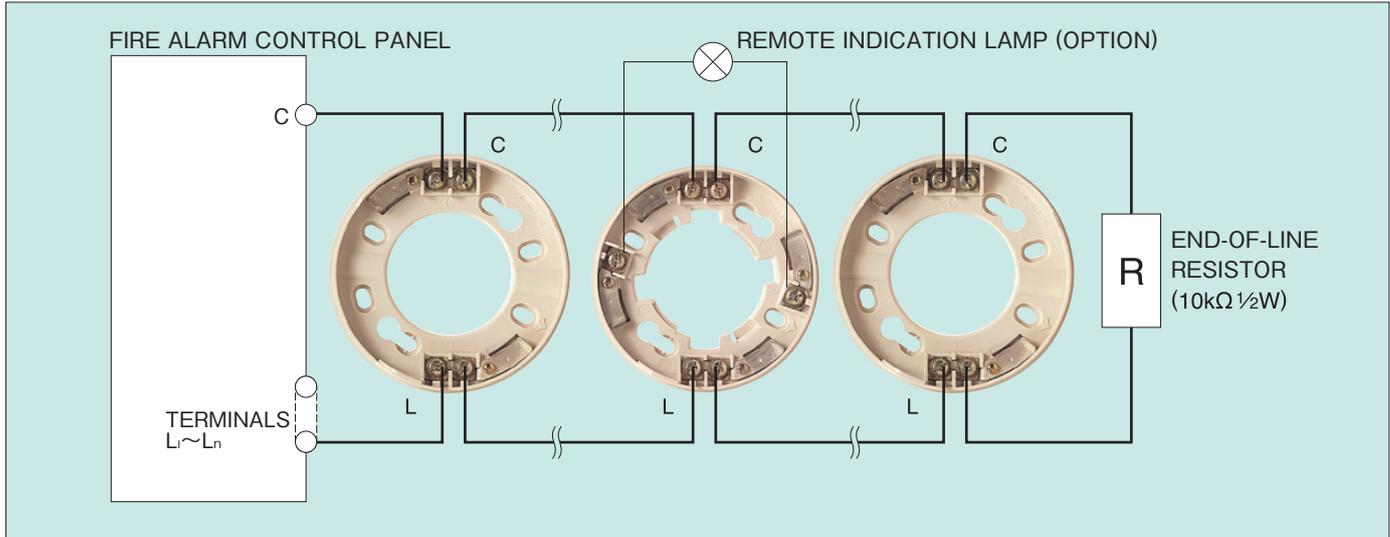
WITH RECESS MOUNTING BASE



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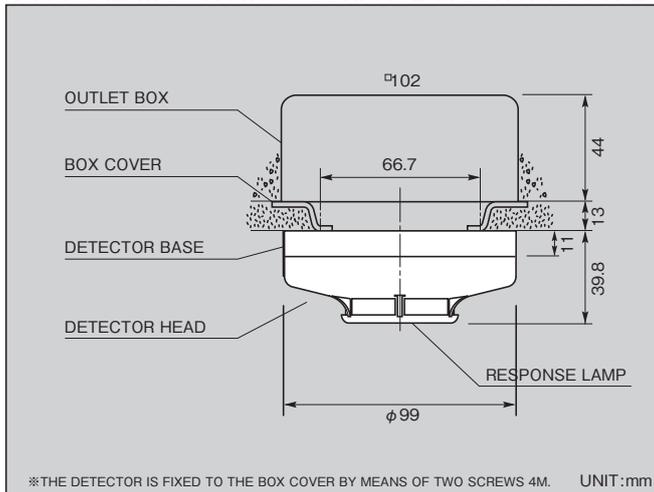
●HEAD OFFICE: 7-3, Kudan-Minami 4-chome, Chiyoda-ku, Tokyo 102-8277, Japan ●PHONE: (81)3-3265-0231 ●FAX: (81)3-3265-5348

TYPICAL WIRING DIAGRAM

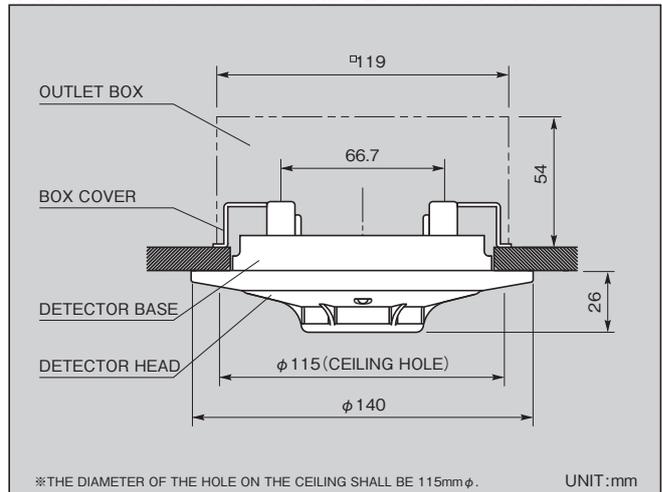


- Max, permissible number of detectors to be connected : 30 smoke detectors per line
- Wire connection : Remove the insulation of the wire ($\phi 0.5 \sim 2.0\text{mm}$) by 10mm from its end, insert the bare wire into the terminal (for bases FZB060-2 and FZB060-4) and tighten the screw (for bases FZB013-2 and FZB013-4).

TYPICAL MOUNTING (SURFACE MOUNTING TYPE)



TYPICAL MOUNTING (RECESS MOUNTING TYPE)



※NOTE : Cleaning of the detector head can be easily done after removing the labyrinth cover.

Height between floor and mounting surface	Area
Less than 4m	150m ²
4m~15m	75m ²

ORDERING INFORMATION

Model no.	DESCRIPTION	Model no.	DESCRIPTION
FDK246	Detector head: Ordinary type	FZB013-2	Detector base: Surface mounting type (Screw type terminal)
		FZB060-2	Detector base: Recess mounting type (Insertion type terminal)
FDK246-X	Detector head: Ordinary type with remote indication circuit	FZB013-4	Detector base: Surface mounting type (Screw type terminal)
		FZB060-4	Detector base: Recess mounting type (Insertion type terminal)

- 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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● URL : <http://www.nohmi.co.jp/english/>