



0KB3 (Compact Smoke Detector)

0KB3 / CPC-4

— Compact Integrated Fire Detection System —

The ideal solution for early fire detection inside of machines



CPC-4A (Controller for 0KB3 with address display)

System Overview

This system is composed of a CPC-4 controller and one or more (20 max.) 0KB3 photoelectric smoke detectors that provide high sensitivity smoke detection for use inside tight enclosures such as large-scale computers, semiconductor tools or any tight electrical spaces requiring high sensitivity smoke detection.

Main Features

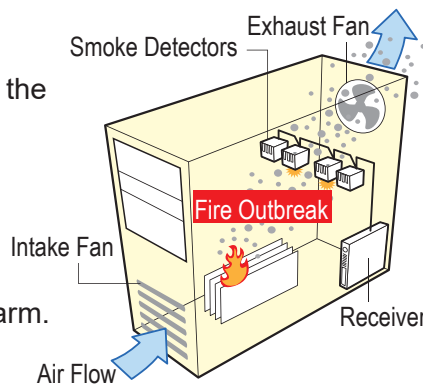
- Compact design allows installation in limited spaces in a variety of applications.
- High sensitivity and high air flow resistance (Effective up to 8m/s).
- Generate a voted "AND" Fire Alarm (two detectors simultaneous activation) or a "SINGLE" Fire Alarm (one detector activation).
- Operating temperature up to 60 degree C.
- Automatic sensitivity compensation ensures smoke detection performance against dust accumulation.

Installation Example

- Install the CPC-4 Controller at a convenient location with the 0KB3 smoke detector installed in tight spaces where smoke detection is required. The Fire Alarm and Trouble signals are transmitted via dry contacts to a fire alarm panel or external equipment.

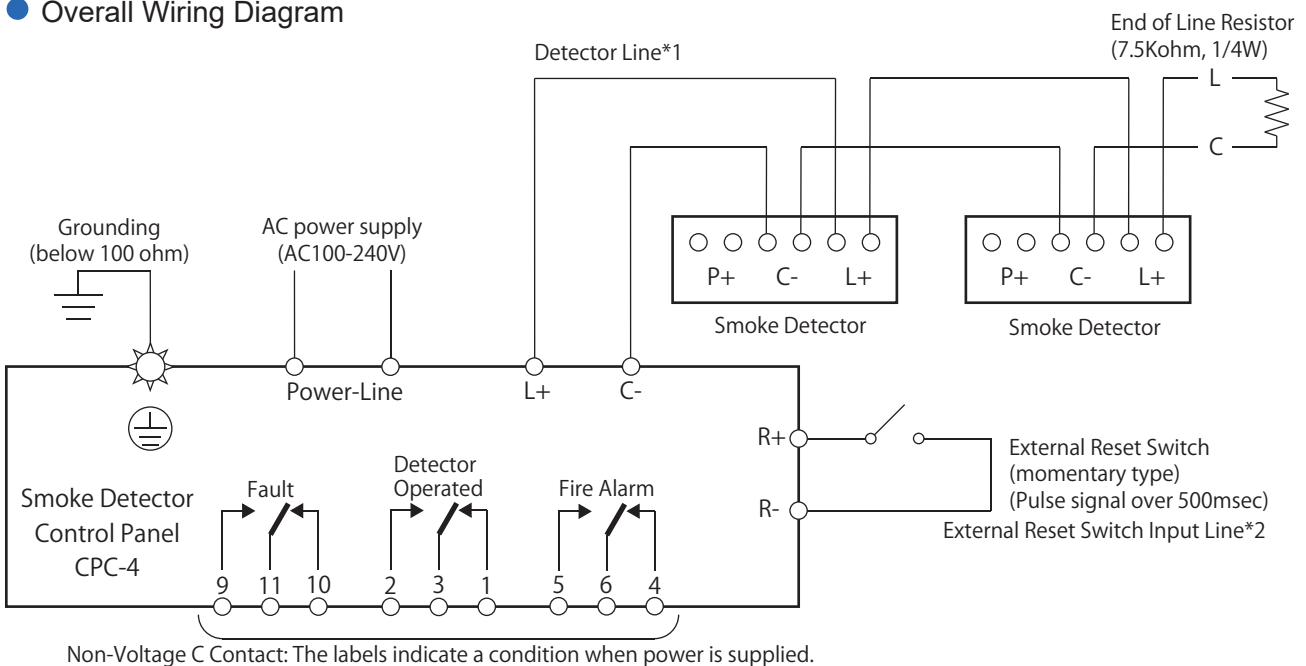
- Where a ventilation fan is utilized, the 0KB3 should be installed near the exhaust fan.

- To maximize reliability, install two units and a system to confirm fire with a voted "AND" alarm.



Wiring Diagram

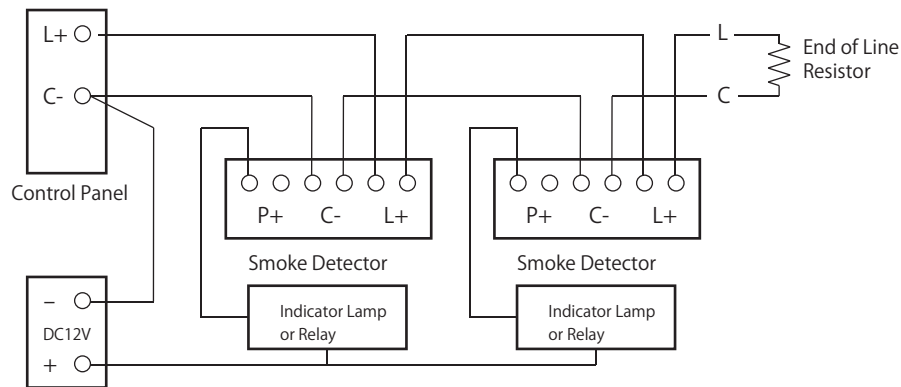
- Overall Wiring Diagram



*1 It is recommended to use either AE cable or CPEV cable with conductor diameter over 0.65mm. It is recommended to use shielded CPEV-S cable where electromagnetic noise causes disturbance. Connect the shielded part of cable to the earth terminal.

*2 After connection, please operate the detectors and confirm that the Smoke Detector Control Panel will be restored from operating condition to normal monitoring condition by External Reset Switch input.

● Wiring Example for 0KB3 connection to an alarm light or external relays



Specifications

Smoke Detector

Model Name	0KB3
Rated Voltage	DC19V between L-C (Supply from Controller)
	DC12V between P-C
Rated Current	Between L-C: 5mA, Between P-C: 100mA
Current Consumption	Standby: 50 μ A, Alarm: 5mA
Detection Method	Light Scattering Type
Sensitivity	4% / m Obscuration (Equivalent to class 1 or more in Japan Fire Service Law)
Applicable Controller	CPC series
Other Features	Auto Sensitivity Compensation, RoHS compliant, KC mark certified
Applicable Temperature	-10°C ~+60°C
Material	Polycarbonate
Weight	55g (Body: 38.5g, Base: 16.5g)
Dimensions	40W x 40D x 45.3H (mm) includes detect base

Controller

Model Name		CPC-4	CPC-4-24	CPC-4A	CPC-4A-24
Detector Address Display		No Detector Address Displayed		Detector Address Display	
Rated Voltage		AC100~240V 50/60Hz	DC24V/AC24V 50/60Hz	AC100~240V 50/60Hz	DC24V/AC24V 50/60Hz
Rated Current	Standby	1.4VA (AC100V) 2.1VA (AC240V)	0.9VA (DC24V) 1.6VA (AC24V)	1.6VA (AC100V) 2.8VA (AC240V)	0.9VA (DC24V) 1.8VA (AC24V)
	Alarm	3.2VA (AC100V) 4.8VA (AC240V)	2.2VA (DC24V) 3.4VA (AC24V)	3.2VA (AC100V) 4.7VA (AC240V)	2.9VA (DC24V) 3.5VA (AC24V)
External Wiring Resistance		20 Ω or less (between Controller and remote mounted Smoke Detector)			
Detector Power Voltage		DC19V			
End of Line Resistor		7.5K Ω , 1/4W		Not necessary	
Connectable Model		0KB3, 0KB (old model), 0IB (old model)		0KB3 *Old models are not applicable	
Max. No. of Detector		20 units max			
Alarm Sound		Buzzer			
Relay Contact Point (C, N/C, N/O)		"Fault", "Fire Alarm", "Detector Operated" Contact Point Ratings: DC30v, 1A / AC125V, 0.3A (resistance load)			
Trouble Alarm		Short Circuit, Cable Break, Detector Missing		Short Circuit, Cable Break Detector Missing (Detector address display), Periodic self-diagnosis abnormality (detector address display)	
Other Features		RoHS compliant, ETL approved (UL STD 61010-1), KC mark/EMC certified (CPC-4-24 only)			
Applicable Temperature Range		0°C ~+60°C			
Material		Anodized Aluminum, Trivalent Chrome Plated Steel			
Weight		Approx. 570g		Approx. 580g	