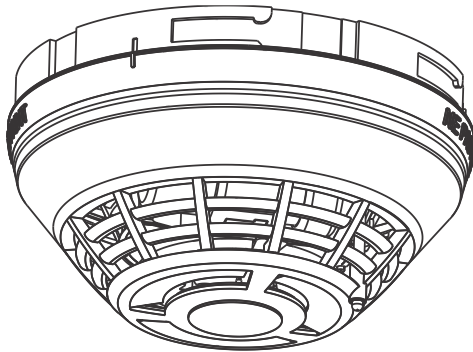


# KC2-OS and KC2-OS-CD Optica Conventional Smoke Detector Installation Sheet



## Description

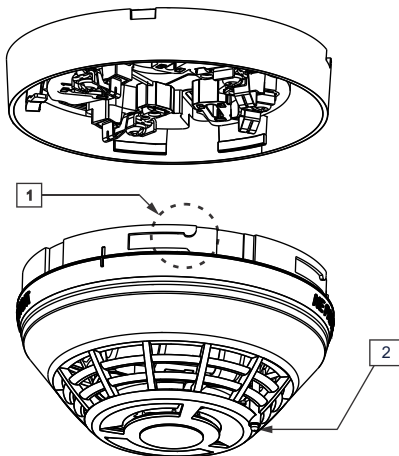
Optica KC2-OS and KC2-OS-CD conventional smoke detectors use an advanced photoelectric sensing chamber to discriminate between smoke from a fire and nuisance smoke from non-fire sources before signaling an alarm/active condition.

KC2-OS detectors support remote maintenance reporting (CleanMe) on FX conventional control units that provide this feature. KC2-OS-CD detectors do not.

The LED indicator (Figure 1) displays the following states:

- Normal: Flashes green every 30 seconds
- Alarm: Solid red
- Trouble (KC2-OS): Flashes yellow every 5 seconds
- Trouble (KC2-OS-CD): Flashes green every 5 seconds

Figure 1: KC2-OS and KC2-OS-CD features



- (1) Self-locking tab
- (2) LED indicator

## Installation

### Notes

- This detector does not operate without electrical power. As fires frequently cause power interruption, discuss further safeguards with the local fire protection specialist.
- This detector does not sense fires in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector.
- To ensure proper operation, store the detector within the recommended ranges. Allow the detector to stabilize to room temperature before applying power.
- The dust cover (supplied) must remain on the detector during installation and be removed prior to commissioning and service. The dust cover is not a substitute for removing the detector during new construction or heavy remodeling.
- Do not use smoke detectors with detector guards unless the combination has been evaluated and found suitable.
- In Canada, install according to CAN/ULC-S524 *Standard for the Installation of Fire Alarm Systems*, CSA C22.1 *Canadian Electrical Code*, and the local authority having jurisdiction.
- Upon completion of the original installation and following any modifications or additions to the system, perform a calibrated sensitivity test per NFPA code.

### To install the detector:

1. Install and wire the base, as described on the installation sheet supplied with the base.
2. Attach the detector to the base by rotating the detector clockwise until it snaps into the locked position.

## Testing

Before testing, notify the proper authorities that the fire alarm system is undergoing maintenance and will be temporarily out of service.

### Cautions

- Under limited circumstances, a relay base may activate when the detector loses power or is removed from the base.
- To prevent erratic operation of a relay base, once the detector is removed from the base it must remain powered down (off the base) for at least 20 seconds before re-attaching it.

### To perform an initial installation test:

1. Remove the detector from its base and verify that the proper trouble signals and messages are reported.
2. If wired for Class A operation, verify that the detector continues to operate first with IDC\_IN disconnected, and then with IDC\_OUT disconnected. Refer to the installation sheet for the base.
3. Place a momentary ground fault on the initiating device circuit to verify operation of ground fault detection circuitry.
4. Perform a sensor function test, as described below.



### To perform a sensor function test:

1. If supported by the control unit, ready the initiating device circuit for testing. Refer to the control unit's technical reference manual for instructions.
2. Activate the smoke sensor using No Climb Products model Smoke Centurion/M8, FireTech Smoke or Smoke Sabre smoke aerosol spray, a smoke generator, or the Testifire detector tester per the manufacturer's instructions.

### Maintenance

To ensure proper operation, plan maintenance (regular or selected) of the detector in accordance with the AHJ and all applicable governing laws, codes, or standards. Refer to CAN/ULC-S536 *Standard for the Inspection and Testing of Fire Alarm Systems* and NFPA 72 *National Fire Alarm and Signaling Code*.

Refer to application bulletin P/N 3102650 for additional information and cleaning instructions.

### Specifications

Operating voltage	6.5 to 33 VDC
Current	
Standby	88 $\mu$ A at 18 VDC 145 $\mu$ A at 33 VDC
Alarm	60 mA (max.) if not limited by control unit
Remote LED output	0.225 mA average (50 msec ON, 1 sec OFF)
Reset voltage	2.5 V, maximum
Reset time	1 second, minimum
Vibration level	10 to 35 Hz, with an amplitude of 0.01 in.
Sensitivity	0.5 to 4.36 %/ft. obscuration (1.63 to 13.62 %/m)
Air velocity	0 to 4,000 ft./min (0 to 20.32 m/s)
Environmental compensation	Automatic
Response time index (evaluated by FM Approvals)	Quick
Wall mounting: distance from ceiling	12 in. (305 mm) max.
Compatible bases	KC2 series standard and relay bases
Compatible detector testers [1]	Testifire 1000, Testifire 2000
Operating environment	
Temperature	32 to 100°F (0 to 38°C)
Relative humidity	0 to 93% noncondensing
Storage temperature	-4 to 140°F (-20 to 60°C)

[1] Requires the SIGA2-TSTSPACER Testifire adapter assembly.

### Regulatory Information

FCC compliance	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Compatibility identifier	S10A R2
Industry Canada compliance	This Class A digital apparatus complies with Canadian ICES-003.

### Contact information

For contact information, see [www.kidde-esfire.com](http://www.kidde-esfire.com).