KC2-OS-CD Two-Wire Conventional Optical Smoke Detector

STANDARD FEATURES

- *Two-Wire Conventional Optical (Photoelectric) Smoke Detector*
- *Multi-criteria optical smoke sensing technology*
- *Compatible with Kidde Fire Systems AEGIS™ 2.0 and AEGIS™-XLT Conventional Control Units*
- *Advanced alarm verification feature reduces chance of nuisance alarms*

- *Self-diagnostic capability continually monitors operation*
- *Remote LED indicator available*
- *Low-profile design blends into the ceiling*
- *FM Approved*
- *cULus Listed*
- *California State Fire Marshal Listed*

DESCRIPTION

The KC2 Optical Smoke Detector is a conventional low-profile, self-diagnostic, two-wire detector which monitors its own sensitivity and operational status and is designed for the demands of commercial and industrial environments. The Optical Smoke Detector uses an advanced photoelectric sensing chamber to discriminate between smoke from a fire and nuisance smoke from non-fire sources before signaling an Alarm condition.

COMPATIBLE BASES

The KC2-OS-CD detector head attaches easily to either a KC2-SB Standard or KC2-RB Relay Base. Detector bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box.

- **Model KC2-SB/-SB4 Standard Base**: Connects the detector to circuit.
- **Model KC2-RB/-RB4 Relay Base**: Connects the detector to circuit and provides optional Relay functionality to the KC2 series detector. (The base's relay contacts automatically change state when detector goes into Alarm.)

TRIM SKIRT

A trim skirt is supplied with the KC2-SB4 and KC2-RB4 bases to help hide mounting tabs. The GSA-TS trim skirt may optionally be ordered for KC2-RB or KC2-SB bases if desired.
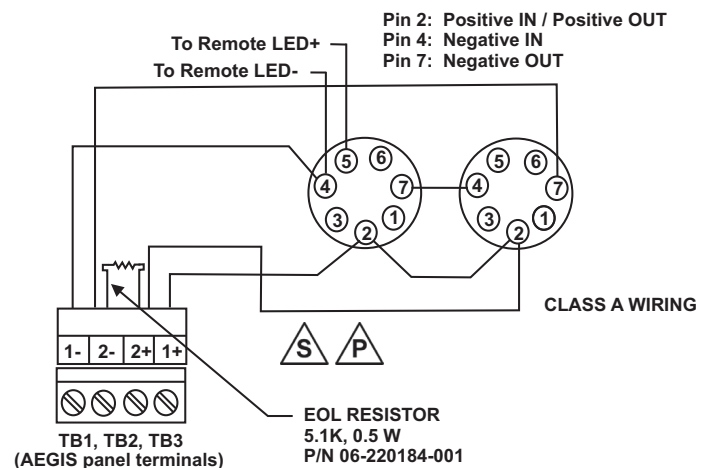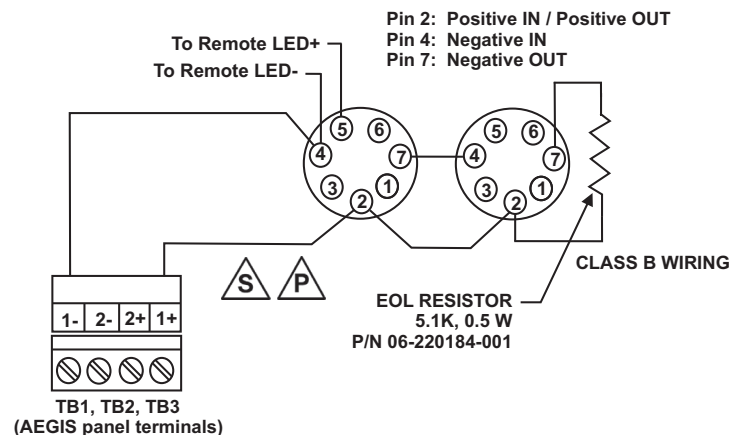
STATUS LED

KC2-OS-CD detectors use an LED to indicate the detector's condition. A flashing green LED every 30 seconds indicates Normal condition. A Trouble condition is indicated by a flashing green LED every 5 seconds. A steady red LED indicates an Alarm condition. An optional Remote LED Indicator is available for convenient viewing.

INSTALLATION

KC2 Standard and Relay bases mount to:

- North American single-gang box
- Octagon box 3-1/2 in. (89 mm) by 1-1/2 in. (38 mm) deep
- Octagon box 4 in. (102 mm) by 1-1/2 in. (38 mm) deep
- European single-gang box 75 mm with 60.3 mm fixing centers
- BESA box with 60.3 mm fixing centers
- Square box 4 in. (102 mm) by 1-1/2 in. (38 mm) deep (KC2-SB4 or KC2-RB4 base required)

Pin 2: Positive IN / Positive OUT
Pin 4: Negative IN
Pin 7: Negative OUT

To Remote LED+
To Remote LED-

CLASS B WIRING

EOL RESISTOR
5.1K, 0.5 W
P/N 06-220184-001

TB1, TB2, TB3
(AEGIS panel terminals)

Pin 2: Positive IN / Positive OUT
Pin 4: Negative IN
Pin 7: Negative OUT

To Remote LED+
To Remote LED-

CLASS A WIRING

EOL RESISTOR
5.1K, 0.5 W
P/N 06-220184-001

TB1, TB2, TB3
(AEGIS panel terminals)

TECHNICAL SPECIFICATIONS

Electrical/Environmental

Operating Voltage	6.5 to 33 VDC
Standby Current	88 µA at 18 VDC 145 µA at 33 VDC
Alarm Current	up to 60 mA maximum, if not limited by control unit
Remote LED Output Current	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.
Photoelectric Sensitivity	0.5 to 4.36 %/ft. obscuration (1.63 to 13.62 %/m)
Air velocity	0 to 4000 ft/min (0 to 20.32 m/s)
Environmental Compensation	Automatic
Response Time Index (evaluated by FM Approvals)	Quick
Operating Temperature Range	32°F to 100°F (0°C to 38°C)
Relative Humidity Range	0 to 93% noncondensing
Storage Temperature	-4 to 140 °F (-20 to 60 °C)
LED Indicator	Normal = Green every 30 seconds Alarm = Steady Red Trouble = Green every 5 seconds
UL Two-Wire Detector Compatibility Identifier	S10AR2
Compatible Bases	KC2-SB, KC2-SB4, KC2-RB, KC2-RB4
Wall Mounting: Distance from Ceiling	12 in. (305 mm) maximum

Physical

Color	White head and base
Detector Head Dimensions	4.375 in. D x 2.25 in. H (11.10 cm x 5.70 cm)
Base Dimensions	4.4 in. D x 0.75 in. H (11.18 cm x 1.90 cm)
Total Height (head and base)	2.625 in. (6.67 cm) H

ORDERING INFORMATION

KC2-OS-CD	Optical Smoke Detector, head only, two-wire
KC2-SB	Standard Base for KC2 Series Detectors with output for Remote LED, 4 in. diameter
KC2-SB4	Standard Base for KC2 Series Detectors with output for Remote LED, 4 in. diameter (with tabs for 4-in. square box; includes trim skirt)
KC2-RB	Relay Base for KC2 Series Detectors, 4 in. diameter
KC2-RB4	Relay Base for KC2 Series Detectors, 4 in. diameter (with tabs for 4-in. square box; includes trim skirt)
GSA-TS	Optional Trim Skirt for KC2 Series Bases
GSA-LED	Optional Remote LED Alarm Indicator (for use with KC2-SB and KC2-SB4 Standard Bases Only)
SIGA-RTA	Optional Removal Tool (attaches to standard telescoping pole)
SM200-12PKG	Canned smoke for functional testing of smoke detectors

NOTE: Refer to Kidde Fire Systems Datasheet Number K-70-300 for smoke detector compatibility.

Kidde Fire Systems

K-70-350 Rev AB
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