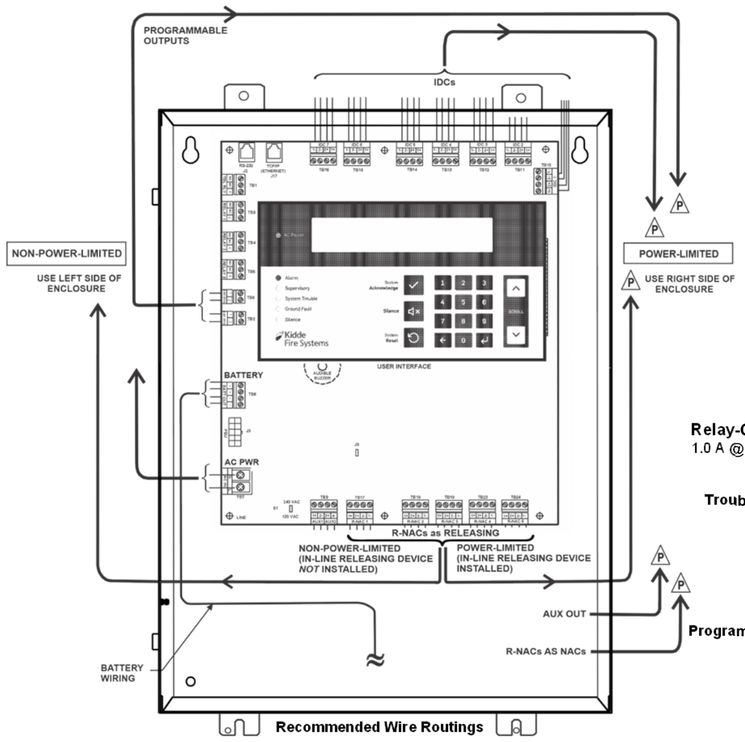


NOTE: MAINTAIN 1/4-INCH SEPARATION BETWEEN POWER-LIMITED AND NON-POWER-LIMITED WIRING. Refer to Design, Installation, Operation, & Maintenance Manual (DIOM), P/N 06-237919-001, for complete guidelines.

Legend:
Supervised (S) Power-Limited (P)

Initiating Device Circuits (IDCs) TB10, TB11, TB12, TB13, TB14, TB15 or TB16
Supervisory, Abort, Manual Release, Waterflow, Detectors
(see wiring examples at right)

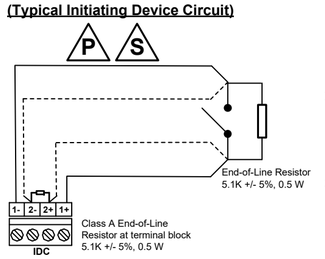
End-of-Line Resistor: 5.1K ± 5%, 0.5 W
28 VDC Max.
70 mA Max.

Class B wiring shown in solid lines. Additional wiring for Class A shown in dashed lines (EOL device at terminal block).

See Design, Installation, Operation, & Maintenance Manual (DIOM), P/N 06-237919-001, for wiring impedance limitations and additional wiring specifications.

For complete installation instructions, refer to the applicable Installation Instructions for each device. If hard copy is not provided, installation instructions are available on the Kidde Fire Systems Distributor Extranet site.

Supervisory, Abort, Manual Release, Waterflow Circuit
(Typical Initiating Device Circuit)



NOTE:
Class A wiring for all input and output circuits is not approved or recognized as compliant by Underwriter's Laboratories (UL) Standard 864. Class A wiring is approved by Factory Mutual (FM).

Electrical Supervision:

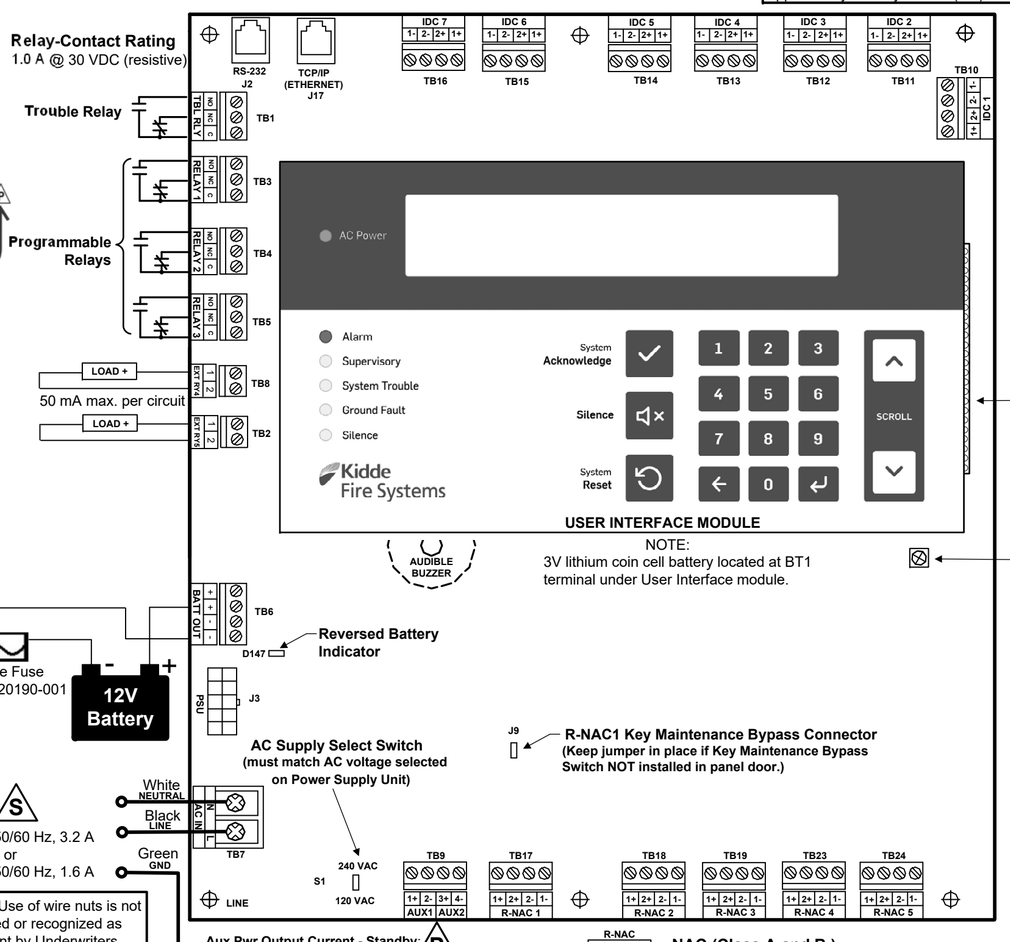
1. A short circuit from any field-wiring terminal (except AC Power Input Terminals and Form-C Relay Terminals) to earth ground will create a "Ground-Fault" trouble condition.
2. An open circuit in the wiring for the inputs (Initiating Device Circuits), the outputs (NACs and release circuits), and the battery-charging circuit will create an "Open" trouble condition.
3. A short circuit between conductors in the wiring for the outputs (NACs and release circuits), and the battery-charging circuit will create a "Short" trouble condition.

   Exception: Release circuits wired as non-power-limited.
4. Impedance values for open-circuit and short-circuit conditions are:
   open circuit: infinite ohms
   short circuit: zero (0) ohms

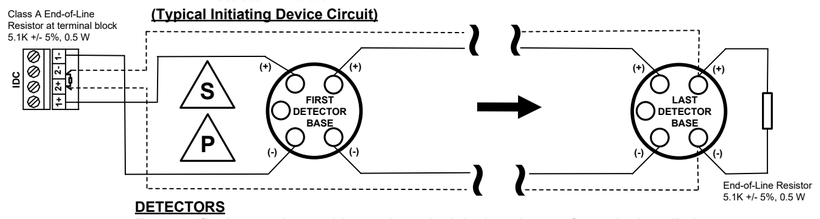
General Notes:

1. Wire sizes for all terminal blocks is 12 - 18 AWG.
2. Earth Ground offset voltage is -8.6 ± 0.2 VDC relative to system common. This is the nominal voltage with no Earth Ground leakage paths. Offset voltage is measured by connecting a DC voltmeter from system negative (Auxiliary Power terminal block TB9 Pin 2 (negative) or TB9 Pin 4 (negative) to Earth Ground (stud on back box). Positive ground fault offset trip voltage is -11.0 ± 0.2 VDC. Negative ground fault offset trip voltage is -7.4 ± 0.2 VDC.
3. Route non-power-limited wiring at least ¼ inch away from all power-limited wiring.
4. Do not attach power-limited and non-power-limited wiring to the same terminal block. See Typical Wire Nut Connection.
5. Terminal Block Screw Torque (includes all terminals except AC IN "Neutral" and "Line" at TB7—see below): 3.5 in-lbs (0.4 Nm) recommended, never to exceed 4.0 inch-pounds (0.5 Nm).
6. AC IN "Neutral" and "Line" at TB7 Torque: 7 in-lbs (0.8 Nm)
7. End-of-Line Resistor, 5.1K ± 5%, 0.5 W is P/N 06-129025-002.

Relay-Contact Rating
1.0 A @ 30 VDC (resistive)



Detector Circuit
(Typical Initiating Device Circuit)



DETECTORS
For specific detector base wiring and terminal designations, refer to the Installation Instructions for your detector model and matching base. If hard copy is not provided, installation instructions are available on the Kidde Fire Systems Distributor Extranet site.

Class B wiring shown in solid lines. Additional wiring for Class A shown in dashed lines (EOL device at terminal block).

Standby Voltage Range: 16-28 VDC

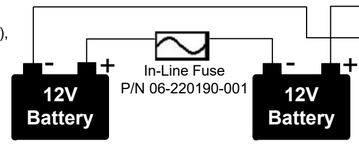
Maximum Line Impedance: 100 Ohms per circuit

Use the following detectors only:

Device Type	Model Nos.
Photoelectric Smoke Detector	KC2-OS-CD, SOE-24V
Photoelectric-Heat Detector	KC2-OSH-CD, SOE-24H
2-Wire Duct Detector	SD-2W
Heat Detector	KC2-H-CD
Detector Bases	KC2-SB, KC2-SB4, KC2-RB, KC2-RB4, NS6-224
Detect-a-Fire Heat Detectors	27x21-xx, 28021-5
Linear Heat Sensor	LHS

NOTE:
Class A wiring for all input and output circuits is not approved or recognized as compliant by Underwriter's Laboratories (UL) Standard 864. Class A wiring is approved by Factory Mutual (FM).

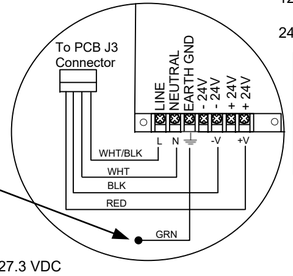
Battery Circuit TB6
Sealed, lead-acid batteries only. Maximum 70 AH.
Replace every 3 years or as recommended by battery manufacturer.
Charging-Circuit Voltage: 27.0 VDC (nom.)
Charging-Circuit Current: 5.2 A (max.)
Max. Battery Connection Cable Length: 100 ft. total
Battery Connection Cable Gauge: 12 AWG
Typical standby operating times are 24 and 90 hours.
See Design, Installation, Operation, & Maintenance Manual (DIOM), P/N 06-237919-001, for specific battery capacity calculations.



Power Supply Unit Wiring J3
Attention! The control unit is supplied with one of two equivalent power supplies; one requires mounting brackets. Refer to Installation (Chapter 2) of Design, Installation, Operation, & Maintenance Manual (DIOM), P/N 06-237919-001.

Ground wire is supplied in system installation kit. Connect to lower Earth-Ground stud on left side of control unit enclosure.

120 VAC, 50/60 Hz, 3.2 A
or
240 VAC, 50/60 Hz, 1.6 A



Ground wire from installation kit. Connect to lower Earth-Ground stud on left-hand side of the enclosure

NOTE: Use of wire nuts is not approved or recognized as compliant by Underwriters Laboratories (UL). Wire nut use is approved by Factory Mutual (FM).

Aux Pwr Output Current - Standby:
For systems with 24-hour battery backup requirement: **AUX1 and AUX2 combined total output cannot exceed 2 A max.**

For systems with 90-hour battery backup requirement: **AUX1 and AUX2 combined total output cannot exceed 400 mA max.**

Aux Pwr Output Current - Alarm:
2 A maximum on each output

Auxiliary Output
Special Application
19.8 – 27.4 VDC

Release Circuits (Any R-NAC)
(typical for all circuits)

Operating Voltage: Special Application 19.4 – 27.3 VDC
Current: 2.4 A (maximum)

A Key Maintenance Bypass Switch must be used on all non-water based Release Circuits.

In-Line Releasing Device must be installed for power-limited wiring.

Use the following releasing devices only:

Device Type	Model Nos.
Actuator Assembly:	83-1310250-001 (FM only)

Initiator Assemblies: 31-199932-004, 93-002009-004 (FM only), 93-191001-001, 31-199932-012

Control Heads/Solenoids:
890181, 895630, 899175, 897494, 897494-530, 48650001,81-100000-001, 06-118384-001 (UL only), 38-509837-001, 38-509834-001, 70610412, 70610006, 70610343, 70985017, 70985065, 70985008, 70610630, 70610632, 10610707, WK-890181-200, 81-895630-200, 85-100724-100, 85-150724-150, 85-200724-200, 85-300724-300, 85-400724-400, 85-063724-100, 85-092724-150, 85-105724-200, 85-125724-300, 85-140724-400
FM only:
90-487100-001, 93-487100-001,87-120099-001, 87-120099-002, 60-120099-001, 60-120099-002, 87-120099-600, 06-118329-001, 38-400001-001,38-400001-003, 38-350800-001, D01550.1, D01500, D01510, D01535, D00050.1, D00052.1, D00075, D00060, D00062, 2000238815, D01021.1, D01022.1, D01023.1, D01023.2, D-0001292, 2000203619, 2000217978, 2000217979, D21070.1, D21070, D21072, D21073, D21074, D01550.5

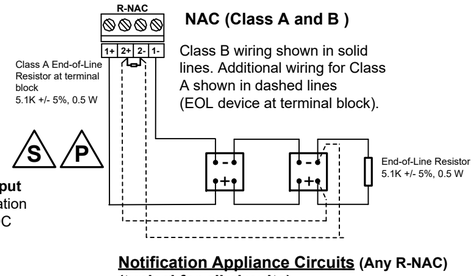
Pre-Action/Deluge Valves:
FM Release Panel Group 3 – Any FM Approved Solenoid Valve rated 22W and below. Group 3 includes Skinner® solenoid valve P/N 73212BN4TNLVN0C322C2, rated 22W.

To Terminal

Multiple conductors cannot be used on the terminal blocks. Multiple conductors are to be connected as depicted for Class A wiring.

NOTE:
Class A wiring for all input and output circuits is not approved or recognized as compliant by Underwriter's Laboratories (UL) Standard 864. Class A wiring is approved by Factory Mutual (FM).

NAC (Class A and B)

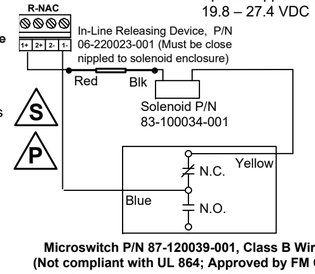


Class B wiring shown in solid lines. Additional wiring for Class A shown in dashed lines (EOL device at terminal block).

Notification Appliance Circuits (Any R-NAC)
(typical for all circuits)

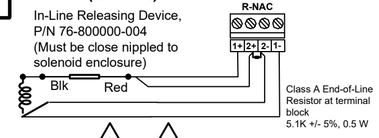
Regulated 24 VDC, 28 VDC max.
Wiring: Class A or Class B
NAC Current: 1.5 A (max.)
Voltage Drop: 2.0 V (max.)

Suitable for Synchronized and Non-Synchronized Notification Appliances.
Use polarized notification appliances only.
Maximum single notification-appliance current: 1.5 A



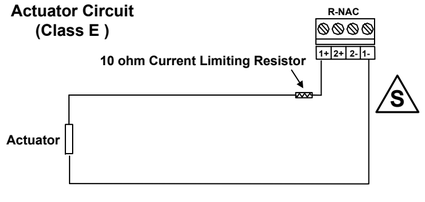
Microswitch P/N 87-120039-001, Class B Wiring
(Not compliant with UL 864; Approved by FM Only)
(Power-Limited only when In-Line Releasing Device used)
NOTE: Part numbers 90-487100-001, 93-487100-001, 87-120099-001, 87-120099-002, 60-120099-001, 60-120099-002, 87-120099-600 and 87-120099-602, when used with the control unit, must include solenoid P/N 83-100034-001 and microswitch P/N 87-120039-001.

Solenoid Circuit
(Class A)



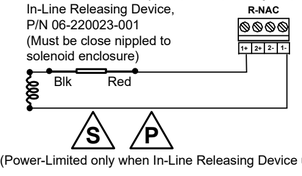
(Power-Limited only when In-Line Releasing Device used)

Actuator Circuit
(Class E)



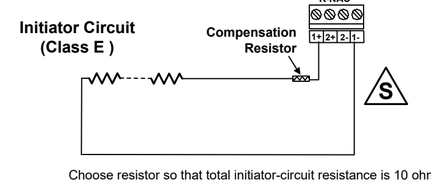
NOTE:
Class A wiring for all input and output circuits is not approved or recognized as compliant by Underwriter's Laboratories (UL) Standard 864. Class A wiring is approved by Factory Mutual (FM).

Solenoid Circuit (Class B when power-limited) (Class E when not power-limited)



(Power-Limited only when In-Line Releasing Device used)

Initiator Circuit
(Class E)



Choose resistor so that total initiator-circuit resistance is 10 ohms +/- 1 ohm. Exception: for 93-002009-004 initiators, choose the resistor so that total-circuit resistance (including field wiring) is at least 10 ohms, not to exceed 13.6 ohms.

NOTE: Using actuators and initiators is not approved or recognized as compliant by Underwriter's Laboratories (UL) Standard 864. Actuators and initiator release circuits are approved by Factory Mutual (FM).

Release-Notification Appliance Circuits (R-NACs) TB17, TB18, TB19, TB23 or TB24
Can wire Notification Appliances or Releasing devices (Actuator, Initiator or Solenoid) on any R-NAC. (See examples below.)

Class B or Class E wiring shown in solid lines. Additional wiring for Class A shown in dashed lines (EOL device at terminal block).

See Design, Installation, Operation, & Maintenance Manual (DIOM), P/N 06-237919-001, for additional wiring specifications.

For complete installation instructions, refer to the applicable Installation Instructions for each device. If hard copy is not provided, installation instructions are available on the Kidde Fire Systems Distributor Extranet site.

Kidde Fire Systems AEGIS™-PHX Installation Wiring Diagram

Part No. 06-237918-001 Rev AB

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