

**Central Arizona IAEI**  
**Fire Alarm Electrical Checklist**

Based on 2007 NFPA 72, 2007 edition

Code Section	Code Requirement
<input type="checkbox"/> 4.4.1.2	All power supplies shall be installed in conformity with the requirements of <b>NFPA 70, National Electrical Code</b> , for such equipment and with the requirements indicated in this subsection.
<input type="checkbox"/> 4.4.1.3.1	Fire alarm power supply has a minimum of two independent and reliable power supplies.
<input type="checkbox"/> 4.4.1.4.1	Fire alarm power supply has a dedicated branch circuit.
<input type="checkbox"/> 4.4.1.4.2.1	Fire alarm dedicated branch circuit has mechanical protection.
<input type="checkbox"/> 4.4.1.4.2.2	Circuit disconnect has a <b>red</b> marking, is accessible only to authorized personnel, and is identified as " <b>FIRE ALARM CIRCUIT.</b> "
<input type="checkbox"/> 4.4.1.4.2.3	The location of the circuit disconnecting means is permanently identified at the fire alarm control unit.
<input type="checkbox"/> 4.4.1.4.3	The overcurrent device is capable of interrupting the maximum short-circuit current in each ungrounded conductor.
<input type="checkbox"/> 4.4.1.5.1	Fire alarm system has secondary power supply.
<input type="checkbox"/> 4.4.1.5.3.1	The secondary power supply is sized appropriately : 24hrs non-alarm condition followed by 5 minutes of operation/max load; voice/alarm = 24hrs non-alarm condition followed by 15 minutes of operation/max load.
<input type="checkbox"/> 4.4.1.6.1	The secondary power supply automatically provides power to protected fire alarm system within 10 seconds when primary power supply fails to provide the minimum voltage required for proper operation.
<input type="checkbox"/> 4.4.1.8.1	Batteries used as secondary power are permanently marked with the month and year of manufacture, using the month/year format.
<input type="checkbox"/> 4.4.1.8.3.1	Means provided to charge batteries and maintain at full charge.
<input type="checkbox"/> 4.4.1.8.3.4	Batteries are either trickle- or float-charged.
<input type="checkbox"/> 4.4.1.8.4.1	Batteries are protected against excessive load current by overcurrent devices.
<input type="checkbox"/> 4.4.1.8.4.2	Batteries are protected from excessive charging current by overcurrent devices or by automatic current-limiting design of the charging source.

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- 4.4.1.8.6** Batteries supervised for appropriate batteries, battery failure, charging failure and trouble indication.
- 4.4.4.1** Calculations provided for operating system at 85% of voltage provided.
- 4.4.4.1** Fire alarm devices are rated for ambient temperatures of 0°C (32°F) to 49°C (120°F)
- 4.4.4.1** Fire alarm devices are rated for a relative humidity of 85 percent and an ambient temperature of 30°C (86°F)
- 4.4.4.2.4** Equipment shall be installed in locations where conditions do not exceed the voltage, temperature, and humidity limits specified in 4.4.4.1.
- 4.4.4.3** Fire alarm equipment protected from damage by induced transients, circuits and equipment in accordance with the requirements of **NFPA 70, National Electrical Code**, Article 800.
- 4.4.4.4** Fire alarm wiring, cable, and equipment is installed in accordance with **NFPA 70, National Electrical Code**, and specifically with Articles 760, 770, and 800, where applicable. Optical fiber cables shall be protected against mechanical injury in accordance with Article 760.
- 4.4.4.5** **Grounding.** All systems test free of grounds.  
*Exception: Parts of circuits or equipment that are intentionally and permanently grounded to provide ground-fault detection, noise suppression, emergency ground signaling, and circuit protection grounding shall be permitted.*