



WIRELESS FIRE ALARM STANDARDS EXPLAINED

Fire Alarm standards in Australia for Wireless Systems have recently changed with AS1670.1:2018 no longer referencing AS4428.9, many of the older systems certified to this standard can no longer be used.

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New Wireless Fire Alarm installations in Australia must conform to both the AS ISO 7240.25 and the Australian Radiocommunications Compliance Requirements (Short Range Devices).

[NOTIFIER's SWIFT Wireless System](#) is fully approved to AS ISO 7240.25, Complies with AS / NZS 4268 – Radio Equipment Systems

AS ISO 7240.25 references three areas in which the wireless networking technology and system design must conform:

- **Site attenuation**

When designing the system, attenuation caused by the signal passing through walls and other solid parts of the building must not affect the ability of the system in signalling potentially dangerous situations. Given the variable nature of the environments, no specific figures for field strength are quoted. The **SWIFT mesh platform**, with its multiple paths between each device and the gateway, ensures that the communication messages are routed around the building in the most efficient manner, ensuring maximum signal strength at each location.

- **Alarm signal integrity**

The second requirement of AS ISO 7240.25 is the ability of the detector or call point to communicate reliably with the control panel to initiate the alarm. **Multi-path mesh technology** ensures that there is always at least one communication link between each device and the gateway.

- **Interference immunity**

AS ISO 7240.25 requires that communication paths are not susceptible to interference from either inherent or external sources. **Multi-channel frequency hopping** diversity technology and a high number of channels ensure that this requirement is met.

- **Short Range RF Devices and Australian Compliance**

Wireless fire devices must operate in accordance with the Radiocommunications (low interference potential devices, or LIPD) Class Licence 2015. They must additionally comply with the requirements of the Radiocommunications (short-range devices, or SRD) Standard 2014. This Standard adopts and modifies AS/NZS 4268:2017 Radio equipment and systems – Short range devices – Limits and methods of measurement.

Clause 6.1 of AS/NZS 4268:2017 states that:

“Evidence of transmitter compliance to this standard may be demonstrated by providing a complete ETSI or FCC test report. Australia and New Zealand requirements, for example, frequency assignments or transmitter power levels may be different to international requirements and compliance with any differences shall be addressed and documented.”

- **Human Exposure Standard 2014**

Falling within this Standard’s scope are radiocommunications transmitters operating in the frequency band 100kHz to 300GHz (inclusive) with integral antenna. The wireless device must not expose the user to electromagnetic radiation at a level greater than the basic restrictions for occupational exposure when the device is used in its normal position of use and in its normal mode of operation.

Conclusion

Wireless Fire Alarm System needs to meet the AS ISO 7240.25 and the National Short Range RF Device Technical Regulation to meet Australian compliance.

NOTIFIER’s SWIFT Wireless Fire System is approved to AS ISO 7240.25, Complies with AS / NZS 4268 – Radio Equipment Systems – Short Range Devices & Human Exposure Standard. [Click here](#) to learn more about SWIFT.

For more information

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