



THE PROTECTOR

by
THE FIRE KNIGHT



Smart Detection. Instant Response. Peace of Mind.

Backed by independent technical review and aligned with global compliance standards.

www.thefireknight.com.au



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Technical Specifications and Data

The Challenge

Residential and care environments remain highly vulnerable to fire. Traditional smoke alarms provide only warning, while sprinklers react late and often cause extensive water damage. The critical gap is rapid, intelligent suppression before a fire can spread.

The Solution

The Protector closes this gap. Combining multi-sensor detection, smart response logic, and targeted suppression, it acts in the earliest stages of fire development; limiting smoke, preventing escalation, and protecting both people and property.

Trusted & Proven

Backed by independent technical review and aligned with global compliance standards, The Protector offers a reliable, cost-effective solution for homes, retirement villages, and assisted care facilities. More than a product, it is peace of mind, engineered.



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Detection & Response

- Sensors:
 - Flame sensor
 - Rate-of-Rise (RoR) heat sensor
 - Gas sensors (CO, CO₂, methane)
- Response Logic:
 - Fire confirmed when:
 - RoR ≥ 0.5 °C/sec for 10 seconds, or
 - Flame detected continuously
 - Suppression activates when:
 - Both flame & RoR thresholds are triggered, or
 - One is sustained through the confirmation period
 - Failsafe: Automatic activation at 60 °C

Suppression Performance

- Discharge Duration: ~25 seconds
- Flow Rate: 10–12 L/min
- Coverage: Up to 5.5 m x 5.5 m (at 2.4–3.0 m ceiling height)
- Applications: Kitchens, bedrooms, hallways, living areas, offices, and small commercial spaces

Power Supply & Battery

- Primary Power: AC input (100–240 V) with automatic battery charging
- Backup Power: 4 × 5000 mAh rechargeable batteries (9–24 V DC input also supported)
- Battery Life: Replace every 3 years (2.5 years recommended)
- Smart Charging: Charging stops automatically once batteries are full
- Monitoring: Low-battery alerts integrated into live dashboard



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Connectivity & Control

- Remote Control: Manual suppression via software/app
- Monitoring:
 - Real-time alerts (sensor detection, battery, activation)
 - Optional back-to-base monitoring
 - Still image captured prior to discharge for review
- Integration:
 - Built-in LoRa for long-range radio communications
 - Compatible with third-party fire/security panels

Alerts & Notifications

- Fire Detection Alerts: Flame, rapid heat rise, CO, CO₂ (smoke), methane
- System Alerts: Low battery, snapshot log, system activation event
- On-Site Warning:
 - Internal audible alarm (100 dB)
 - Integrated emergency light activates during discharge for visibility

Note: The Protector is designed to detect hazardous fire conditions while ignoring everyday non-threats (e.g., cigarette lighters).

