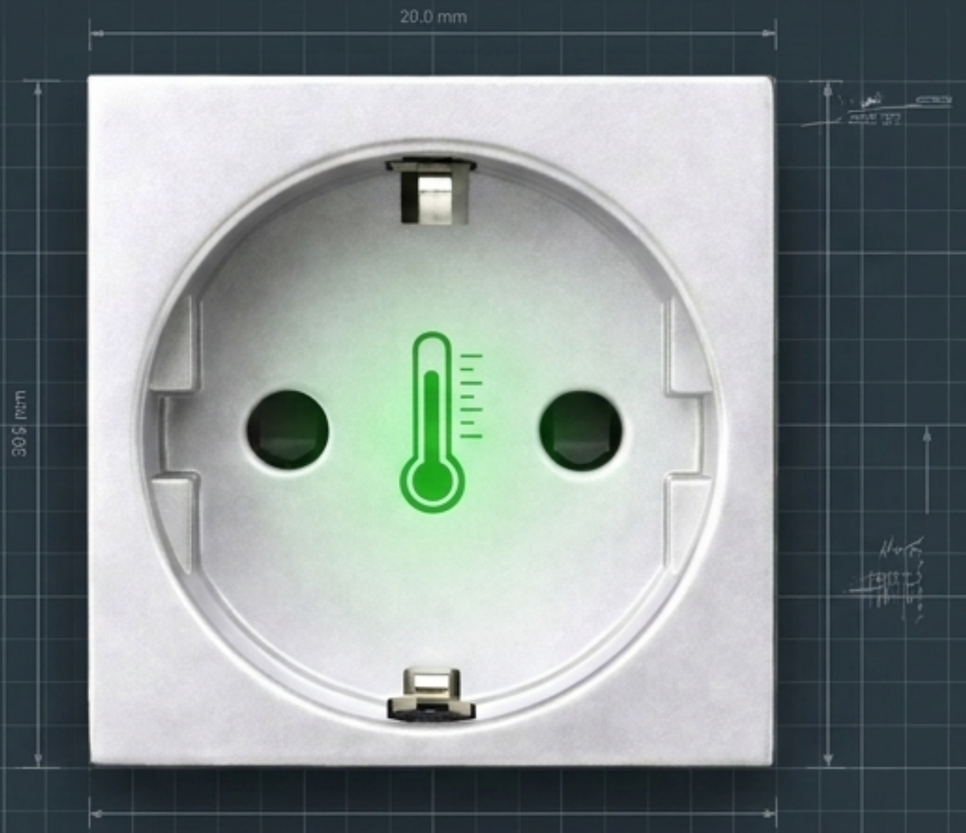
The Antidote to Electrical Overconfidence

Active thermal protection designed to save people from the blind trust they place in aging infrastructure.



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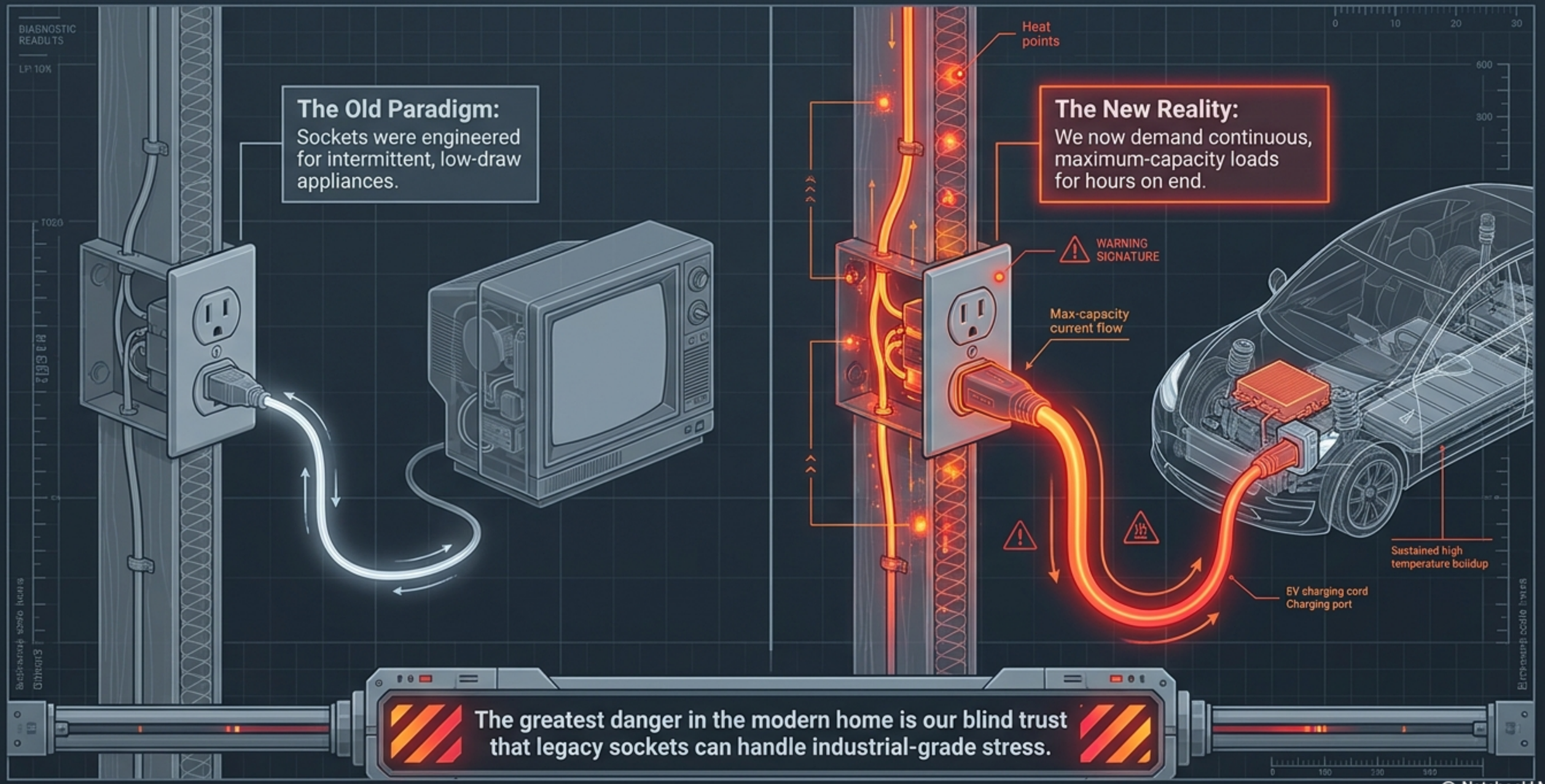
21st-Century Demands on 20th-Century Infrastructure



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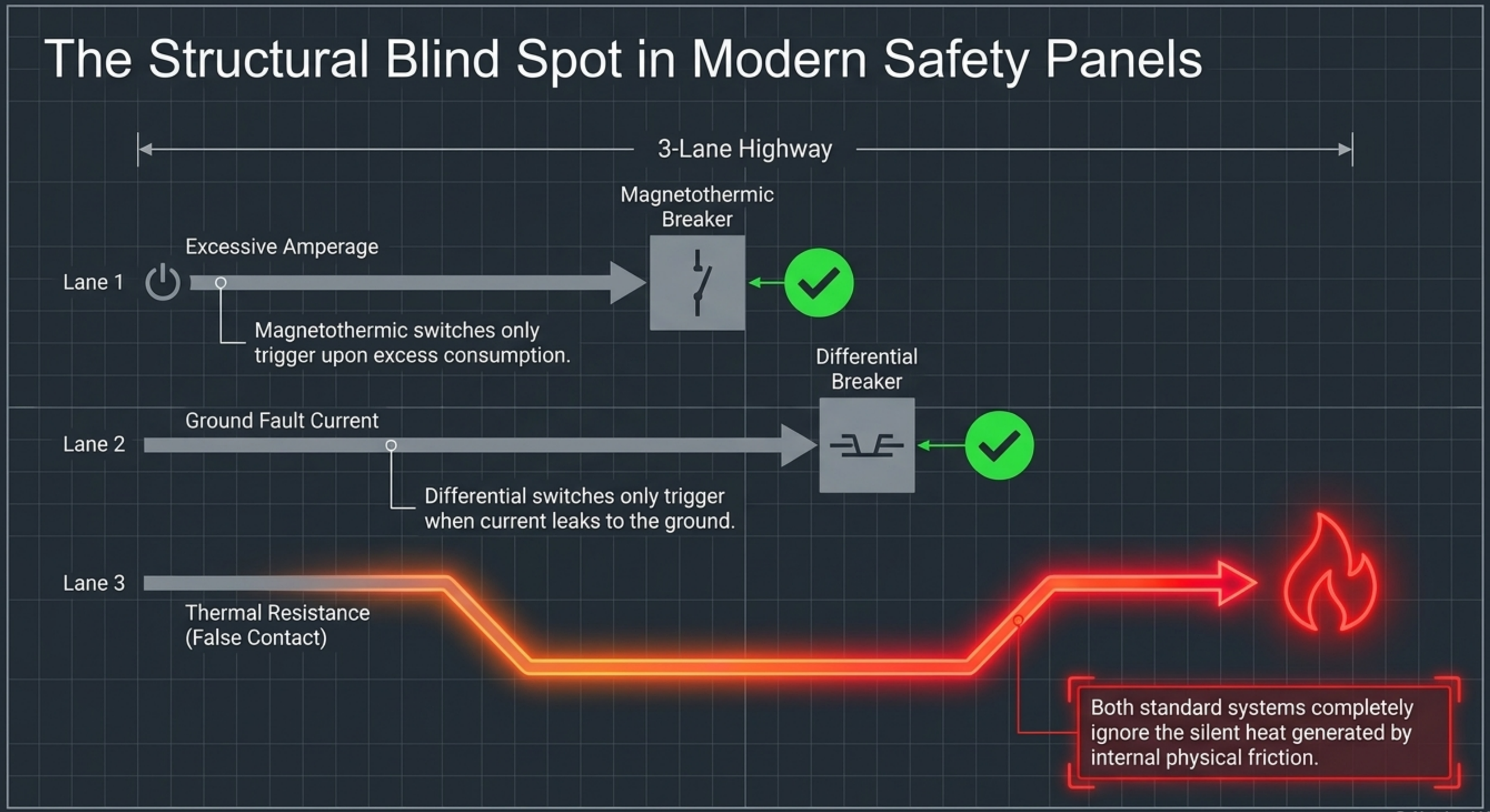
The Structural Blind Spot in Modern Safety Panels



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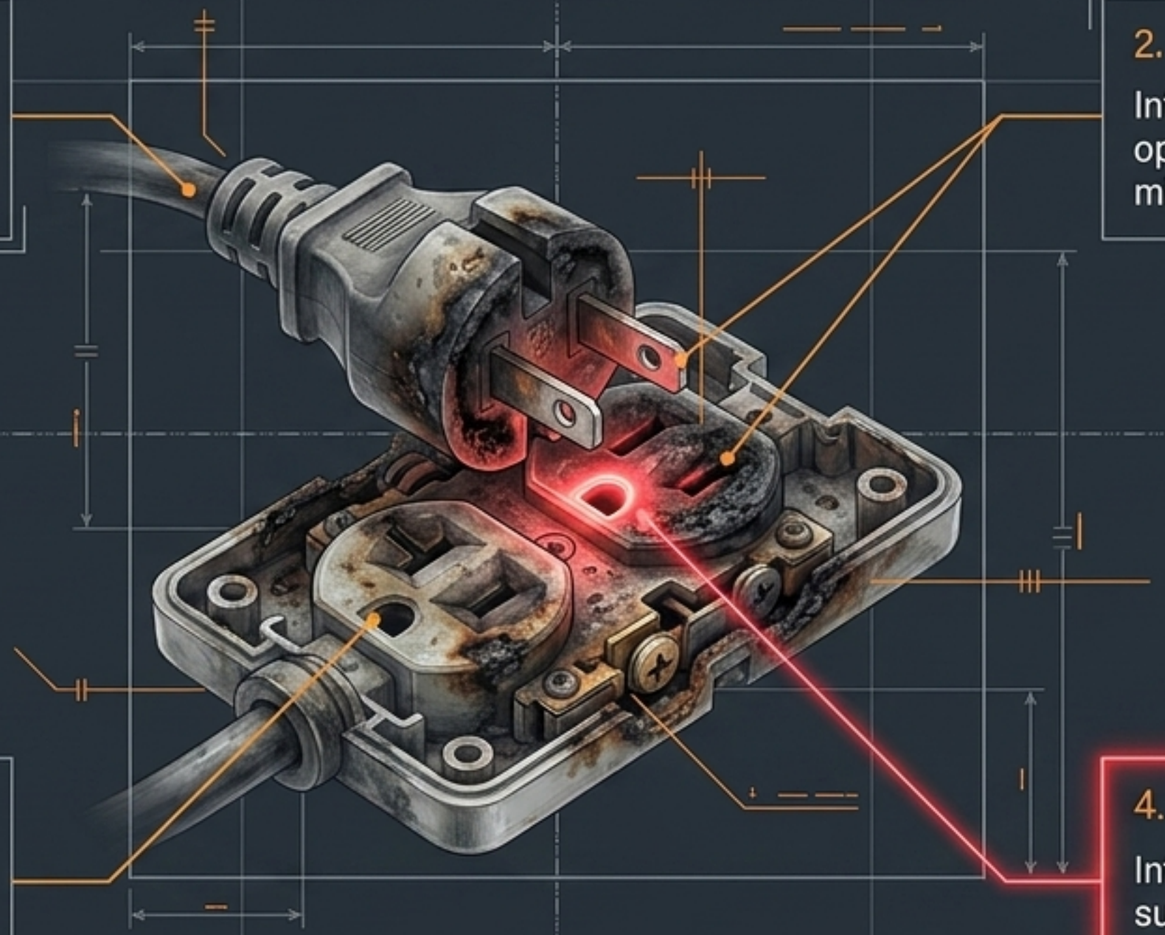
Anatomy of a Silent Failure

1. Environmental Degradation:

Humidity, physical impacts, and age slowly degrade the internal metal materials.

2. The False Contact:

Internal terminals lose their optimal grip, creating microscopic separations.



3. Electrical Resistance:

Electricity struggles to cross the physical gap, generating intense atomic-level friction.

4. Thermal Runaway:

Internal temperature silently surpasses 126°C with absolutely no visible external warning.

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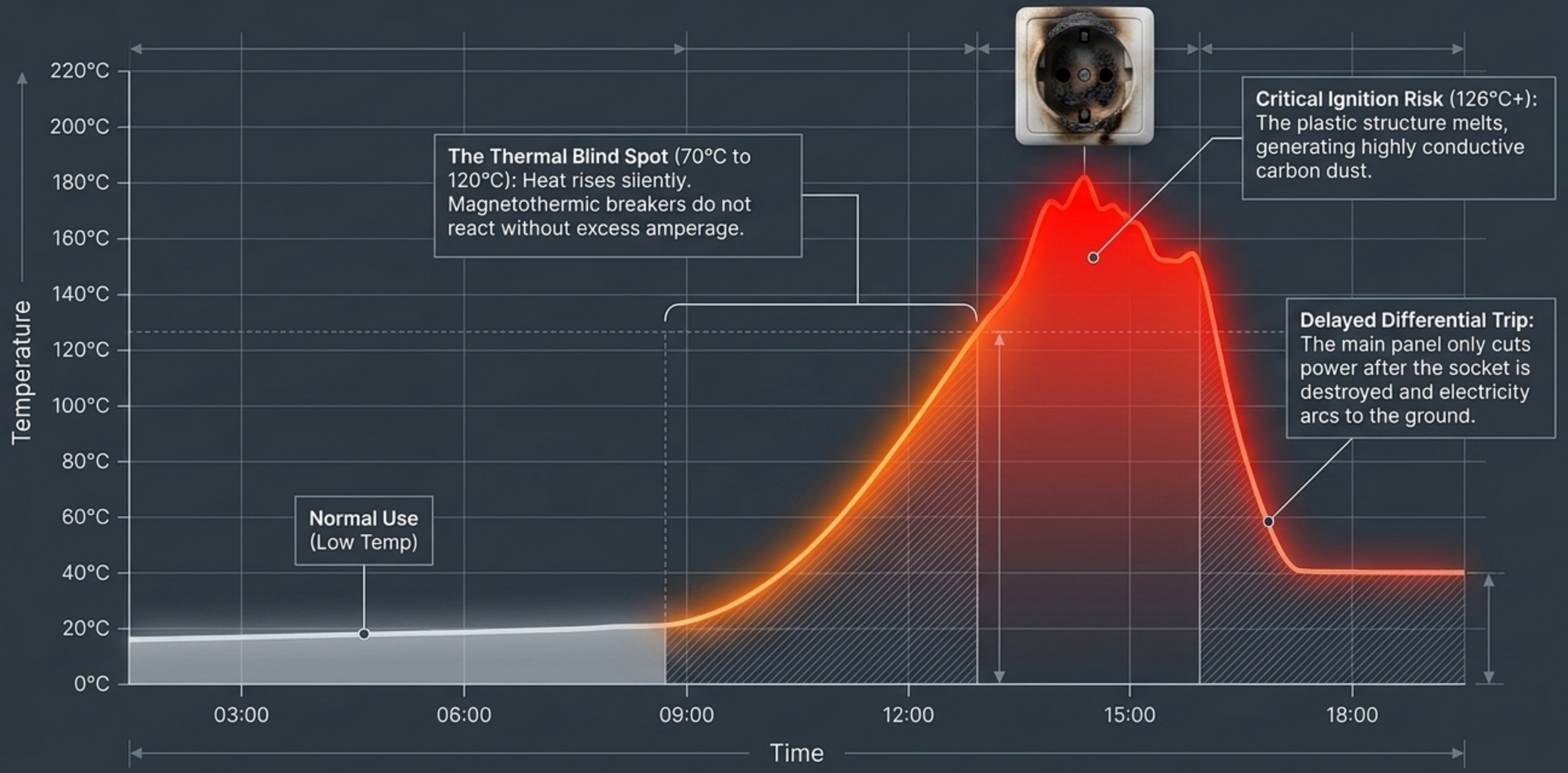
The Carbonization Gap



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Mapping the Friction Points: The Five Risk Vectors

Sustained Overload: Electric Vehicles drawing maximum uninterrupted power for hours.

Cyclic Thermal Stress: Ovens and heavy appliances causing rapid heating and cooling metal fatigue.

Mechanical Wear: Constant plugging and unplugging loosening internal hardware.

Environmental Oxidation: Humidity acting as an invisible multiplier for electrical resistance.

Systemic Aging: Aesthetic home renovations masking 40-year-old degraded wiring.

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Spotlight Vector: The EV ‘False Economy’

The Shortcut: To avoid installing dedicated €2,000 EV charging stations, users confidently plug micro-hybrids into standard 16-amp sockets.

The Hidden Stress: This subjects the domestic installation to maximum, uninterrupted loads that standard plastic bases were never designed to endure.

Sustained EV charging is the fastest vector for melting plug casings and initiating internal wall fires.

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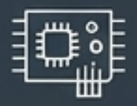
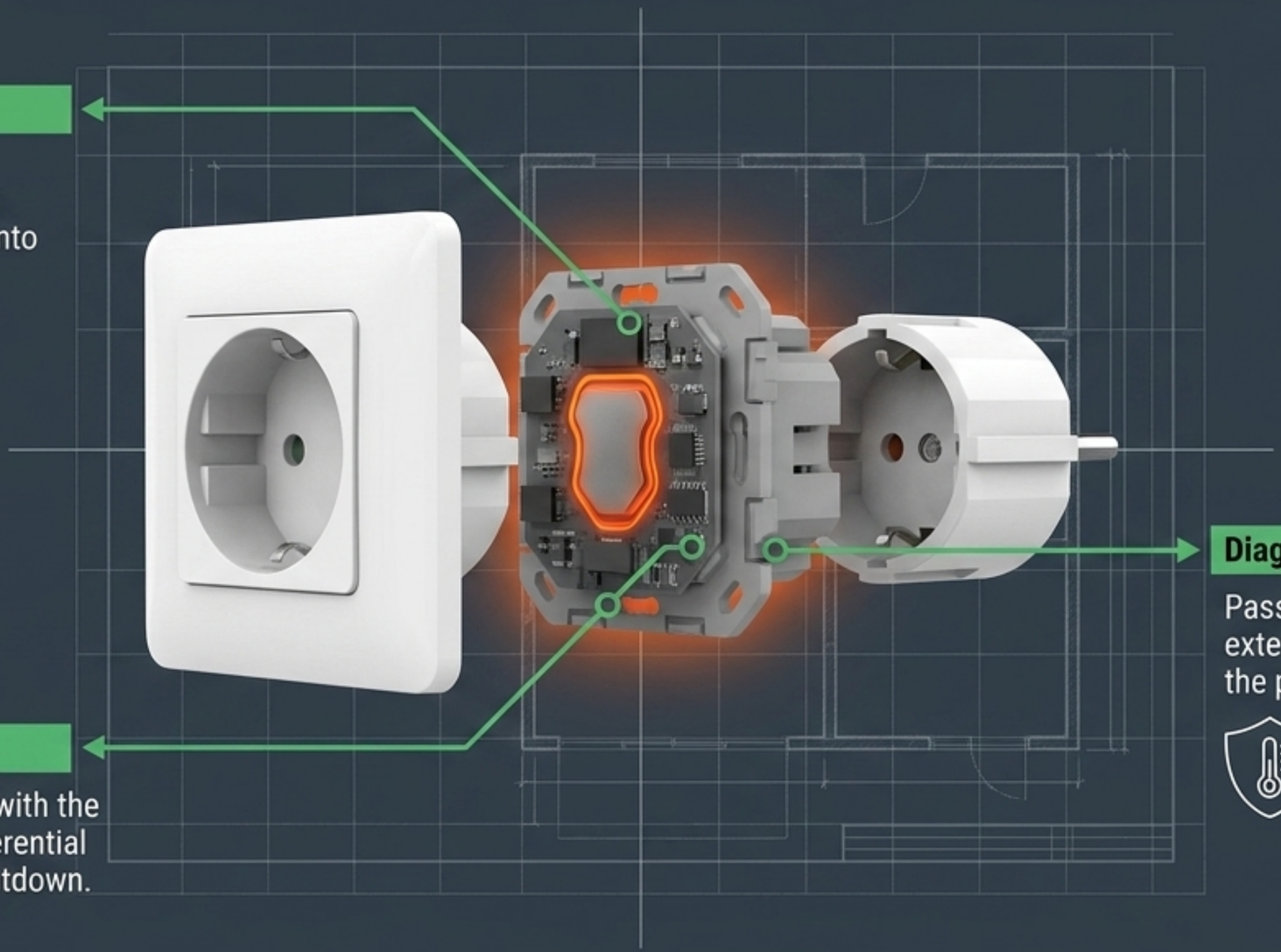
The Intervention: Active Thermal Auditing

Diagnostic Green

Integrated RRIE Module:
A patented European safety device engineered directly into Type F Schuko bases.





Technological Synergy

Communicates seamlessly with the home's existing Type A Differential switches to command a shutdown.

Diagnostic Green

Passive Protection: Requires no external power. It sits exactly at the point of physical friction.

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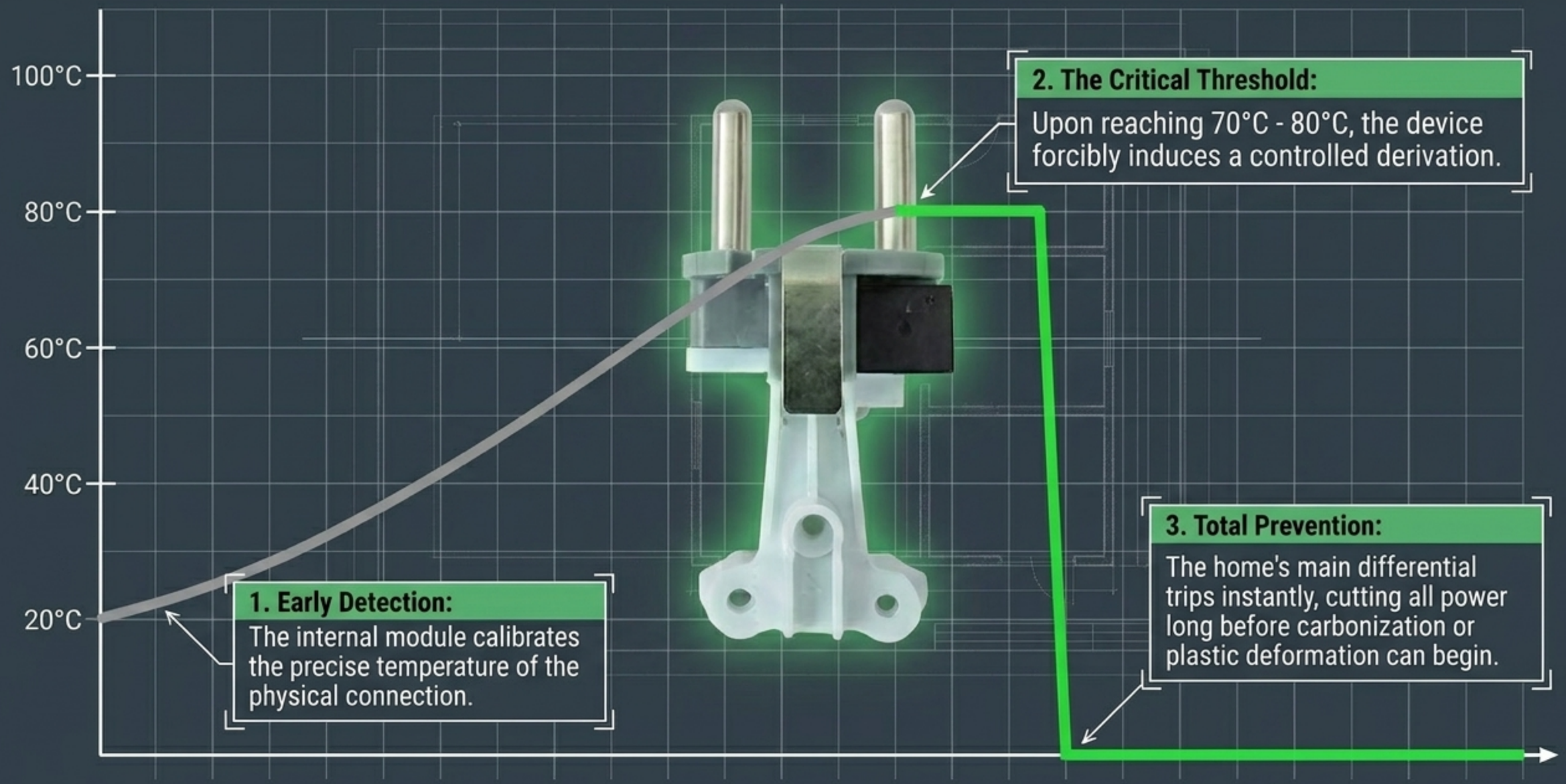
The 80°C Ceiling: Preemptive Isolation



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The Smart Expiration Date: Diagnostic Protocol

Event: The differential cuts the main power.

User Action: Wait for base to cool
-> Reset the main panel

If **Temporary Overload:**
The installation cools down.

Once the load is reduced, the socket functions normally with total security.

If **Physical Defect:**
Screws are loose, metal has oxidized, or hardware has expired.

The differential will trip repeatedly, physically refusing to provide power.

The system acts as a relentless referee, forcing the immediate replacement of degraded hardware before a disaster occurs.

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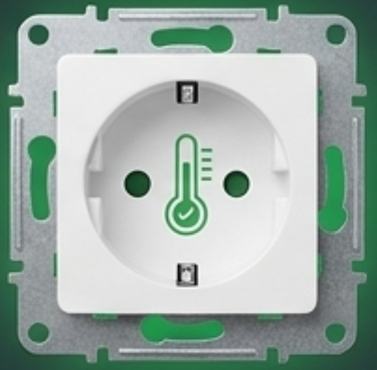
Architectural Standard Matrix

Standard Type F Base	Ace doo Protected Base
	
Overload Response: Permits continuous melting until catastrophic short circuit.	Overload Response: Intervenes preventively, cutting power exactly at 80°C.
Oxidation/Humidity Response: Passively ignores the extreme thermal resistance generated by corroded contacts.	Oxidation/Humidity Response: Detects microscopic atomic friction instantly and isolates the circuit safely.
End-of-Life Warning: Non-existent. The first visible symptom of failure is the fire itself.	End-of-Life Warning: Establishes a hard physical 'Expiration Date,' forcing replacement by repeatedly tripping the panel.

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Elevating the Infrastructure Standard

- We cannot rely on past-century sockets to sustain the continuous, high-draw rhythm of the modern electric home.
- Thermal protection is not an accessory—it is the only active radar system capable of diagnosing the physical health of connections behind the wall.
- Eliminate the blind spot. Demand active thermal protection at every critical friction point, and stop electrical fires before they are born.

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