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(54) **Title: SMART SOCKET DEVICE AND SYSTEM**

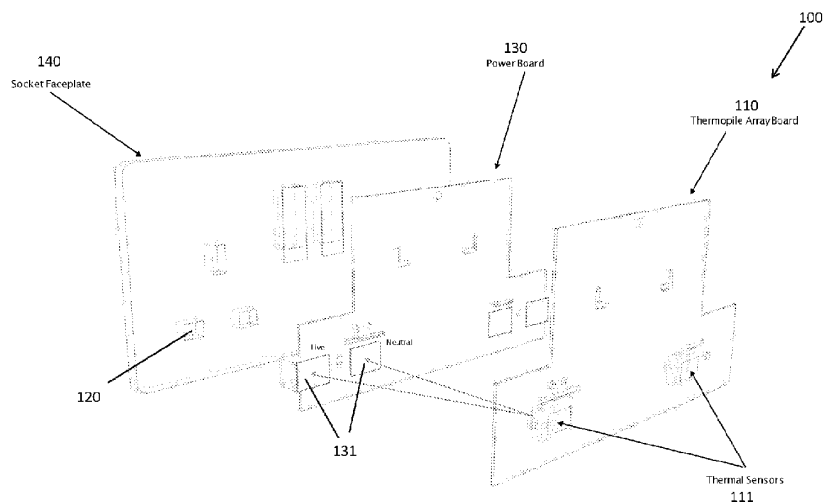


FIG. 1A

(57) **Abstract:** A smart socket device is described which includes a socket arranged to receive an electrical plug of an electrical appliance; a mains current connector for connection to a mains current supply cable; a PCB comprising a conductor arranged such that current flows through the conductor between the mains current connector and the electrical plug during use; a thermal sensor arranged to detect the surface temperature of the conductor of the PCB; a processor in communication with the thermal sensor, the processor configured to determine when the sensed surface temperature of the conductor exceeds a predetermined threshold; and a communications link configured to communicate with a remote device. The invention also includes an electrical safety system comprising the smart socket device configured to communicate with one or more remote devices. The invention also includes a safety module for insertion into an electrical socket device and a safety module for insertion into a smart socket device.

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