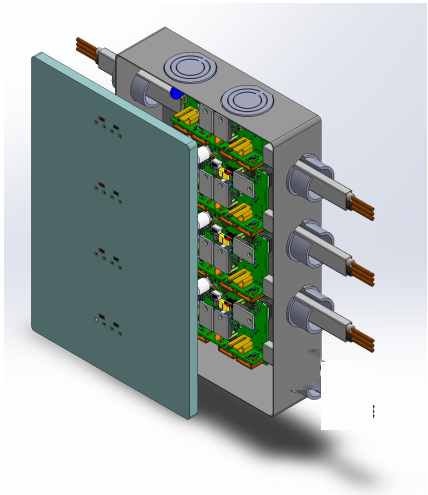
AllSafe™

MODEL: AllSafe™ Intelligent Junction Box
All-In-One Multiple Circuit Protection
with Optional Power Monitoring & Control
SPECIFICATION SHEET

Unparalleled All-In-One GFCI, AFCI, Overcurrent & Surge Protection in an Intelligent Junction Box.
Optional Monitoring & Data Acquisition of Voltage and Current.

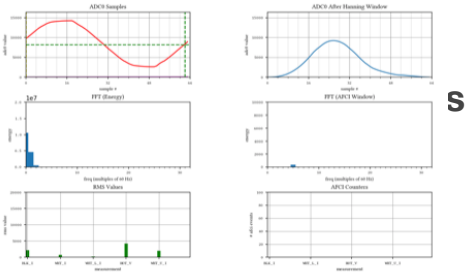


Unparalleled All-In-One, GFCI, AFCI, Overcurrent and Surge Protection in a Junction Box

Self Test & Reset Buttons

Unparalleled Real Time Power Monitoring, Remote Control & Reporting

Optional: Communication Port Access to API-generated monitoring, reporting & control



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Multiple Reporting Modes

AMPS	15 Amp/20 Amp, 125-Volt (Rated at 20 Amps, configurable at assembly to 15A or 20A) ; 240 Single Phase.
WIRING TYPE	3 wire
WIRING	AllSafe™ Intelligent Junction Box has one line voltage input wiring. Optional: communications port and cable (future wireless option) for connection to user's computer for API controlled real time monitor display, and for data storage
CONFIGURATION	3 Output Circuits
FUNCTION TYPE	
GRADE	Residential, Commercial, Industrial, Military, Hospital
GROUNDING TYPE	Grounded
INDOOR/OUTDOOR	Indoor/Outdoor
STATUS LIGHTS	Bi-colour LEDs indicate fault conditions
MISWIRING	If black not connected power is not supplied. Optional LED is off when power not provided. **Applies??**
MOUNT LOCATION	In ceilings, storage units, closets, behind walls or beside the Breaker Panel
NUMBER OF PRONGS	
RECEPTACLE VOLTAGE	125V code *240V Single Phase*

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OPTIONAL: PLC Compatibility. Single Outlet, Direct Wire (supporting use of conduits), customization (Up to 250 different command lines), Communications, Dry Contacts for turning on/off or emergency stop. ***(verify)***

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ALL-IN-ONE ELECTRICAL SAFETY INTELLIGENT JUNCTION BOX – An Alternative To GFCI/AFCI Receptacles

Unparalleled GFCI, AFCI, Over-current & Surge Multi-Circuit Protection

The AllSafe™ Intelligent Junction Box is effectively a digital breaker with optional remote power control and monitoring and all the AllSafe™ functionality.

Ideal as a comprehensive electrical safety solution, including reducing the need to upgrade existing breakers and receptacles.

Brainwave's Intelligent Junction Box provides an additional alternative to receptacles and breakers. With exceptional All-In-One Safety.

Ground Fault Circuit Interrupters (GFCI) protect against electrical shock.
Arc Fault Protection Interrupters (AFCI) protect against electrical fires (protection is usually required for each circuit. These can be installed as receptacles or as circuit breakers in the Breaker Panel.

Brainwave's GFCI, AFCI, Over-current and Surge Protection electronic - rather than electromechanical - resulting in faster response to power faults.
AllSafe™ technology activates and provides power only if no electrical fault is detected.
The decision to supply power to the appliance, equipment or device is made for every AC cycle, making it extremely fast & sensitive to external power conditions.

Control, monitoring and reporting functions are on an ***individual load or current basis.***

Basic model provides All-In-One protection, Monitoring and Control for 3 downstream circuits.

Misc. Note: Power strip/Adaptor without outlet(s) enabling 6+ downstream circuits control through Low Voltage Wiring And/or wireless (Bluetooth) or Dry Contacts

Note: for GFCI and AFCI (overcurrent & surge?) in-wall and downstream protection, User can install AllSafe™ in-wall electrical receptacles. VERIFY

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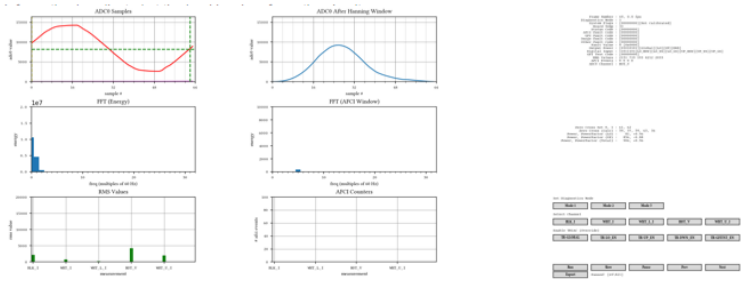
ADVANCED REAL TIME POWER MONITORING & CONTROL
Intelligent Power Data Acquisition of Voltage and Current
PLC Compatibility

APPLICATIONS: The AllSafe™ Intelligent Junction Box monitors and controls power electronically. It can be placed in ceilings, storage units, behind walls or beside the breaker panel if convenient.

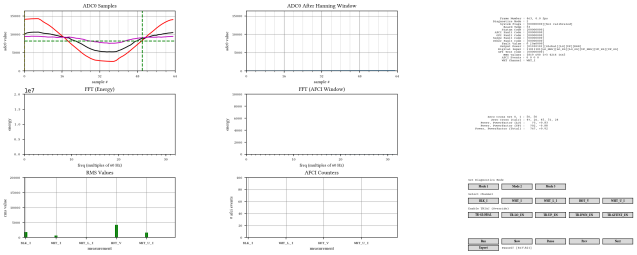
The system module API monitors signals in real time: including but not limited to frequency analysis and phase relationships. actual power consumed, reactive power, power factor (useful for early end-of-life detection), and fault reporting. **Information is collected for entire circuits.**

API Software collects and reports true energy use and equipment power use profiles, in real time or for subsequent analysis. All the data can be recorded & replayed back. API provides turn on or off, and power delivery of voltage and/or current for operation and optimisation.

Examples: The hot volts is being monitored. (e.g. can see FFT; arc related info is displayed.



Multiple Signals – Hot Volts & Currents including Power Factor Reporting



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DYNAMIC REAL TIME POWER SWITCHING
Delivering The Right Amount Of Power.
Where Needed. As Needed.

Using multiple circuits in the Intelligent Junction Box enables:

A first one-to-one module to monitor, protect and control the input can be configured to handle several hundreds of amps, in pairs, or to handle more than one phase.

In the case of multiple phases, a module can coordinate the reporting, monitoring and control of each module from a single source.

A series of other modules monitor, protect and control each and every output.

A system can be configured for almost limitless outputs.

The same module is used to coordinate the reporting, monitoring and control of each output module from a single source of the output modules

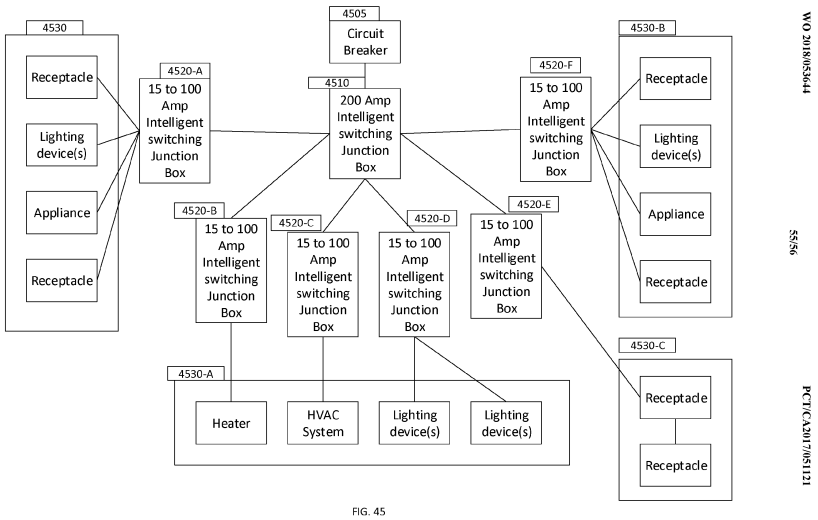

FIG. 45

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ADVANCED REAL TIME POWER SWITCHING
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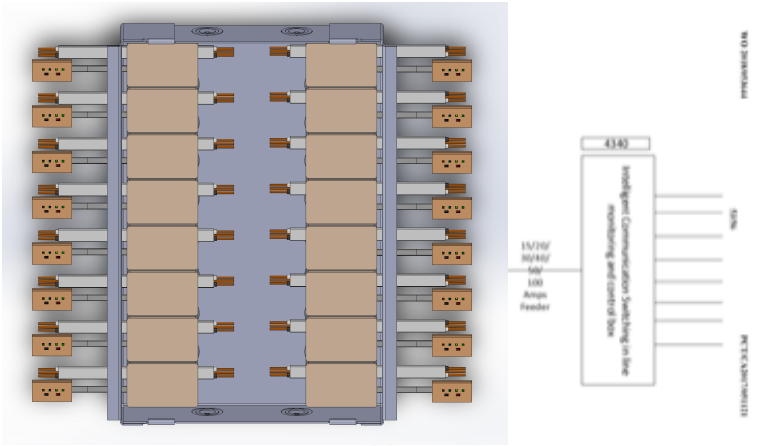
Advanced secure proprietary data & powerline communications technology enabling the usage of existing wiring in residential, institutional, commercial, and industrial buildings



Dynamic Power Switching eliminates the concept of multiple use circuits whereby one load is connected to one input.

For example, in one configuration, instead of having 12 receptacles on a circuit all connected in parallel, one can have a 1 to 12 Junction box with small dedicated wire runs for each receptacle, connecting the IJB to a larger one, thereby taking advantage of the maximum flexibility of a star topology.

With complete power line communications and priority tables, fully integrated power switching system becomes reality - the only limiting factor for power distribution is the gauge of the feeding wire offering:

- AllSafe™ All-In-One Protection on all the loads
- Direct communication with all appliances incorporating the AllSafe Module in their circuitry
- Even further enhanced safety when AllSafe receptacles are used:

  - Nothing powered unless needed
  - No electricity on the feeder wire unless needed
  - All loads protected at all times
  - Complete section of a building could be powerless until needed
  - For added security, a desktop computer hardwired into an IJB and equipped with bio sensors could be restricted to be powered only by authorized personnel.

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