



US005311392A

United States Patent [19]
Kinney et al.

[11] Patent Number: 5,311,392
[45] Date of Patent: May 10, 1994

[54] DUAL PROCESSOR ELECTRIC POWER TRIP UNIT

[75] Inventors: Michael A. Kinney; Stephen F. Gillette, both of Raleigh, N.C.

[73] Assignee: Siemens Energy & Automation, Inc., Alpharetta, Ga.

[21] Appl. No.: 753,286

[22] Filed: Aug. 30, 1991

[51] Int. Cl.⁵ H02H 3/08

[52] U.S. Cl. 361/93; 361/96; 361/87

[58] Field of Search 361/21, 23, 25, 31, 361/42, 47, 50, 76, 87, 88, 96, 62, 67, 93

[56] References Cited

U.S. PATENT DOCUMENTS

4,470,092 9/1984 Lombardi 361/23
4,689,712 8/1987 Demeyer 361/96

4,710,845 12/1987 Demeyer 361/96
4,811,154 3/1989 Trenkler et al. 361/93
4,870,351 9/1989 Milkovic 324/142
4,996,646 2/1991 Farrington 364/483
5,031,178 7/1991 Hartman 371/29

Primary Examiner—A. D. Pellinen
Assistant Examiner—S. Jackson

[57] ABSTRACT

A low voltage electric power monitoring and circuit breaker system includes two processors. The first processor activates the circuit breaker when an overcurrent condition is detected and the second processor monitors the current sensed by the first processor and activates the circuit breaker for overcurrent conditions which should have caused the first processor to activate the breaker. If a current of this magnitude is detected, the second processor activates the circuit breaker as a backup protection for the first circuit breaker.

18 Claims, 14 Drawing Sheets

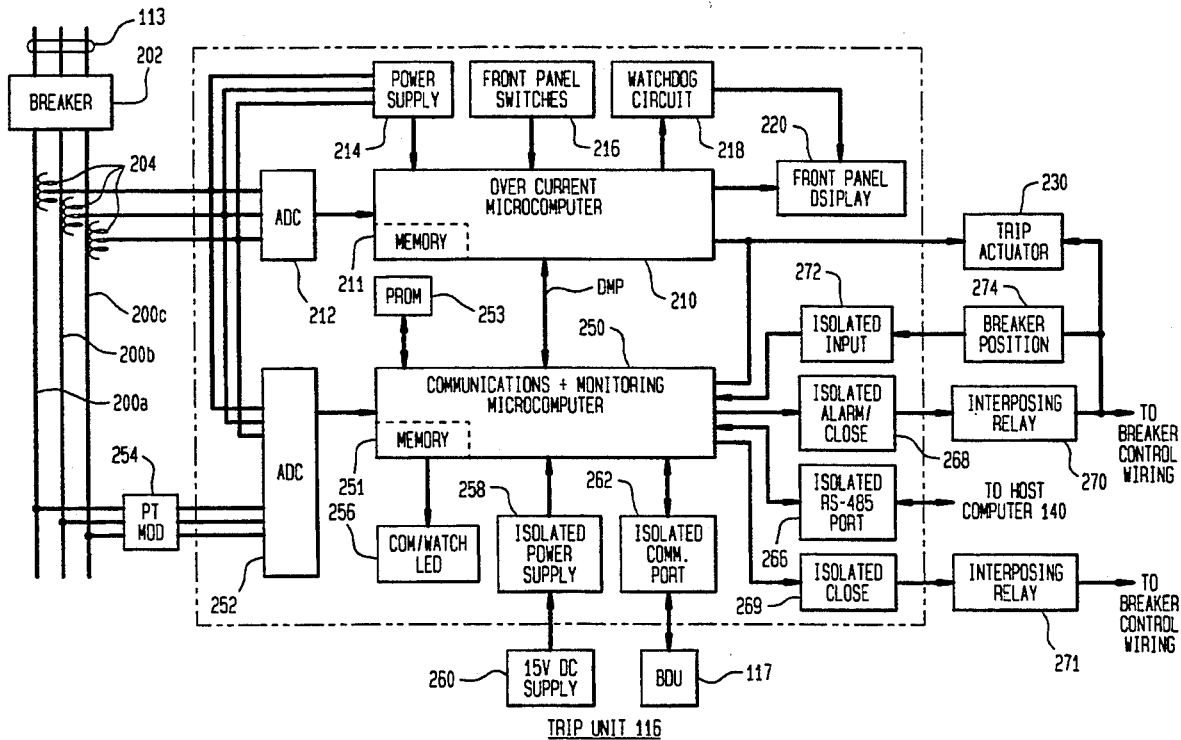


FIG. 1

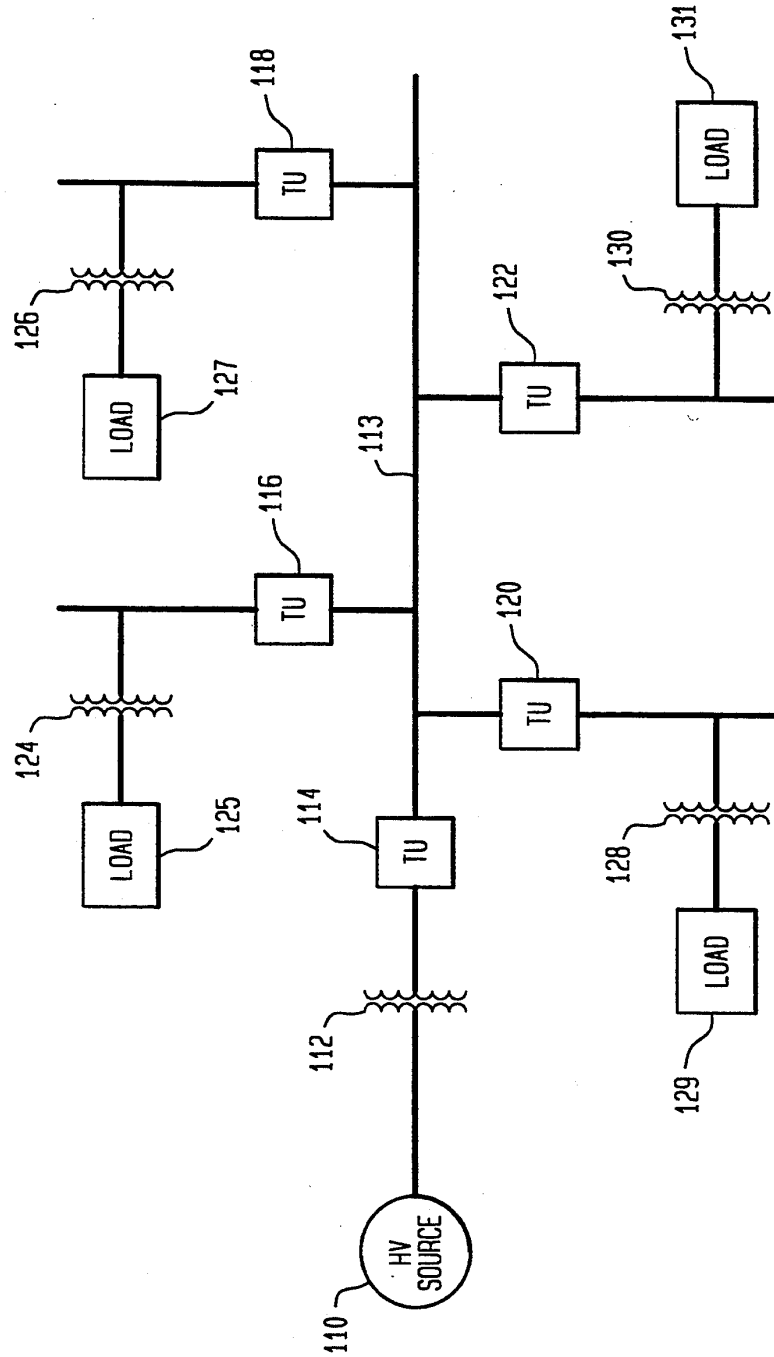


FIG. 1a

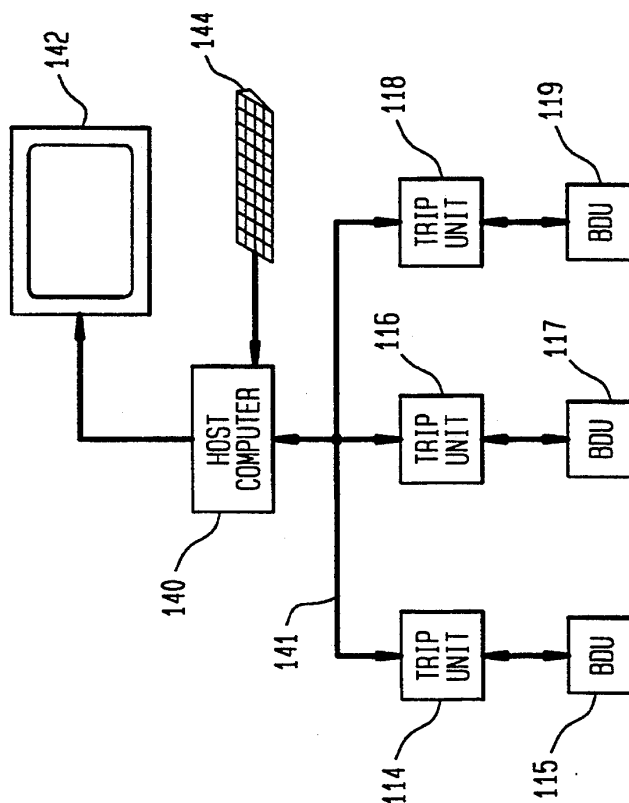


FIG. 2

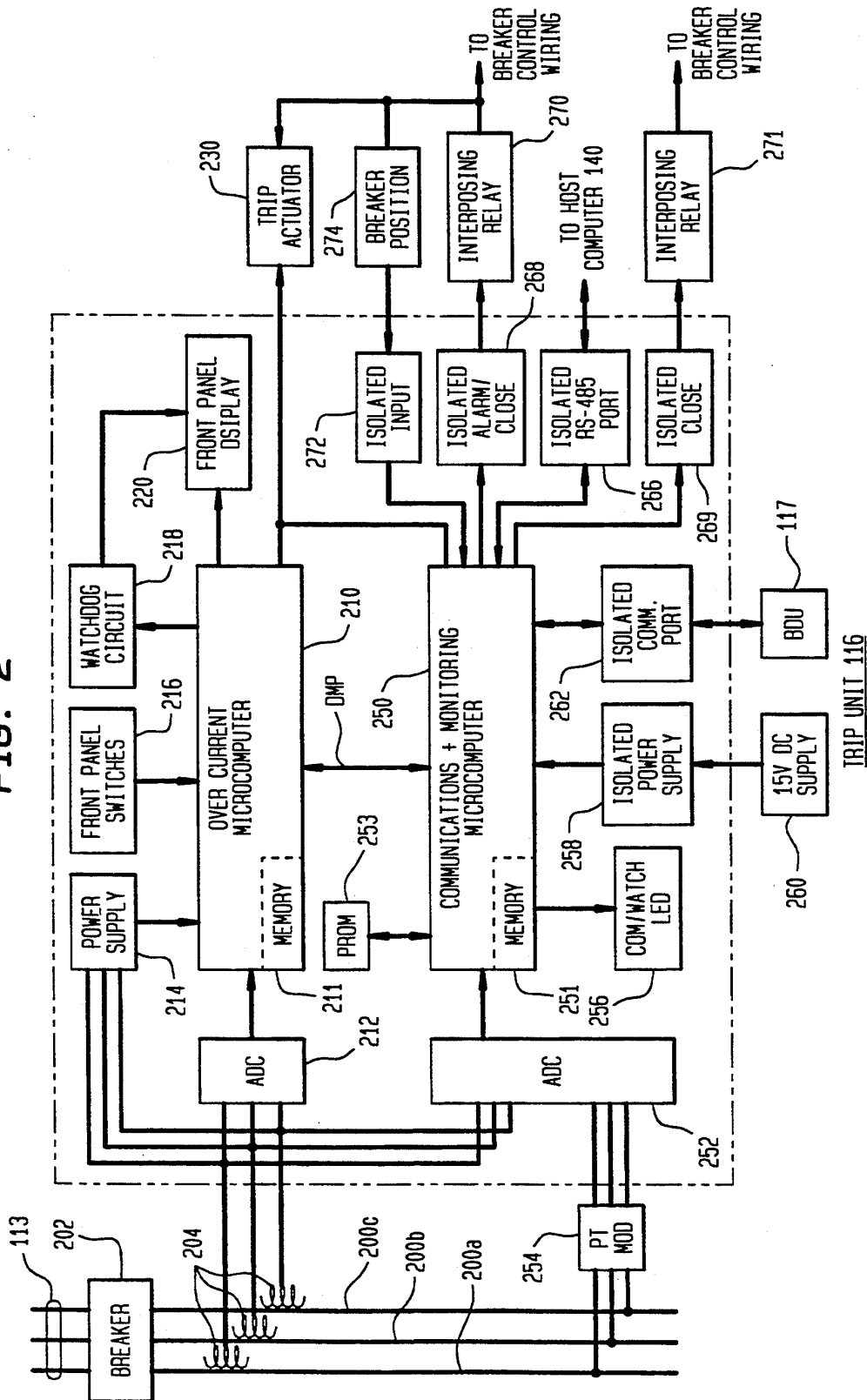
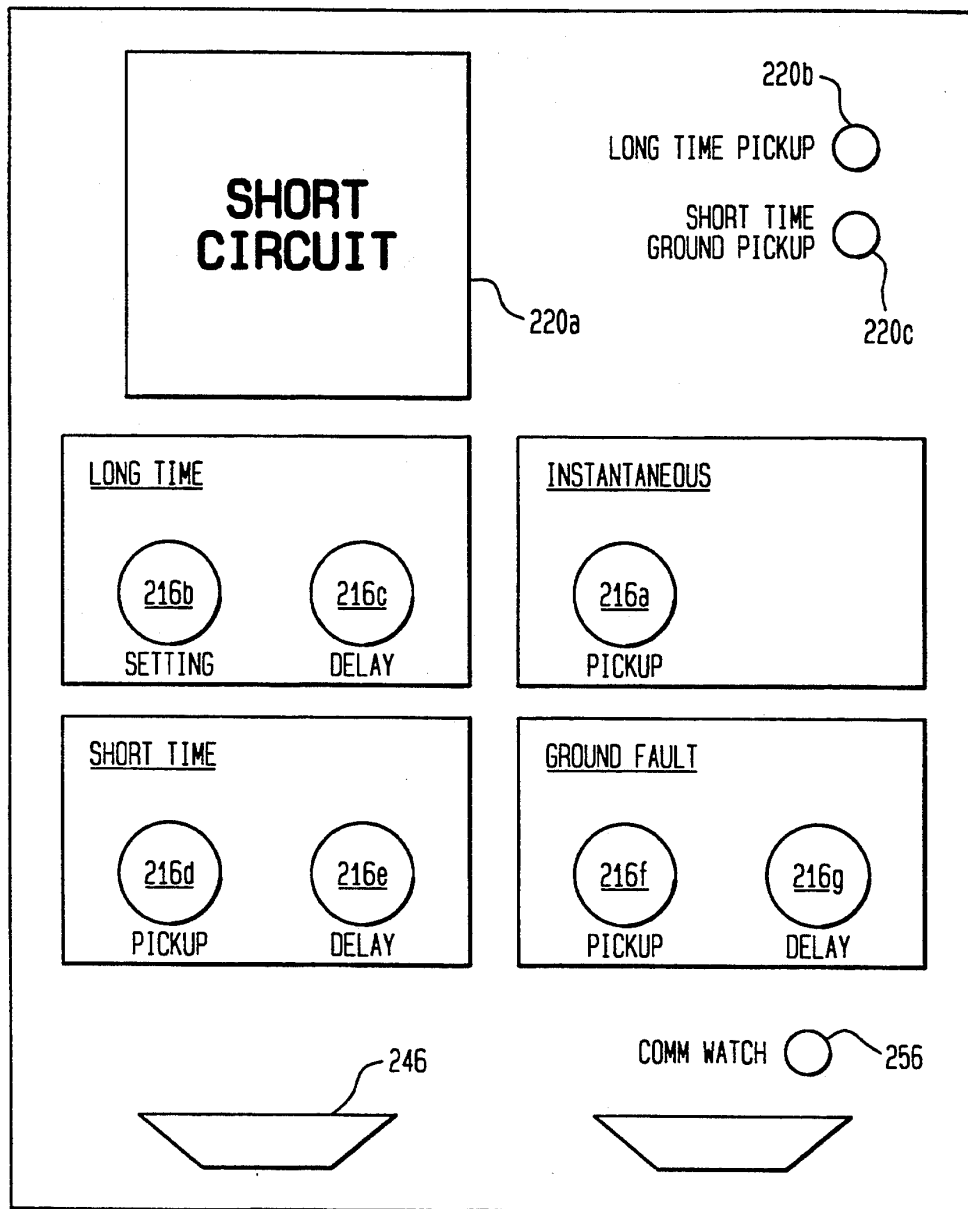


FIG. 2a



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.