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United States Patent [19]  
Kinney et al.

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[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

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[51] Int. Cl.<sup>5</sup> ..... 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

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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

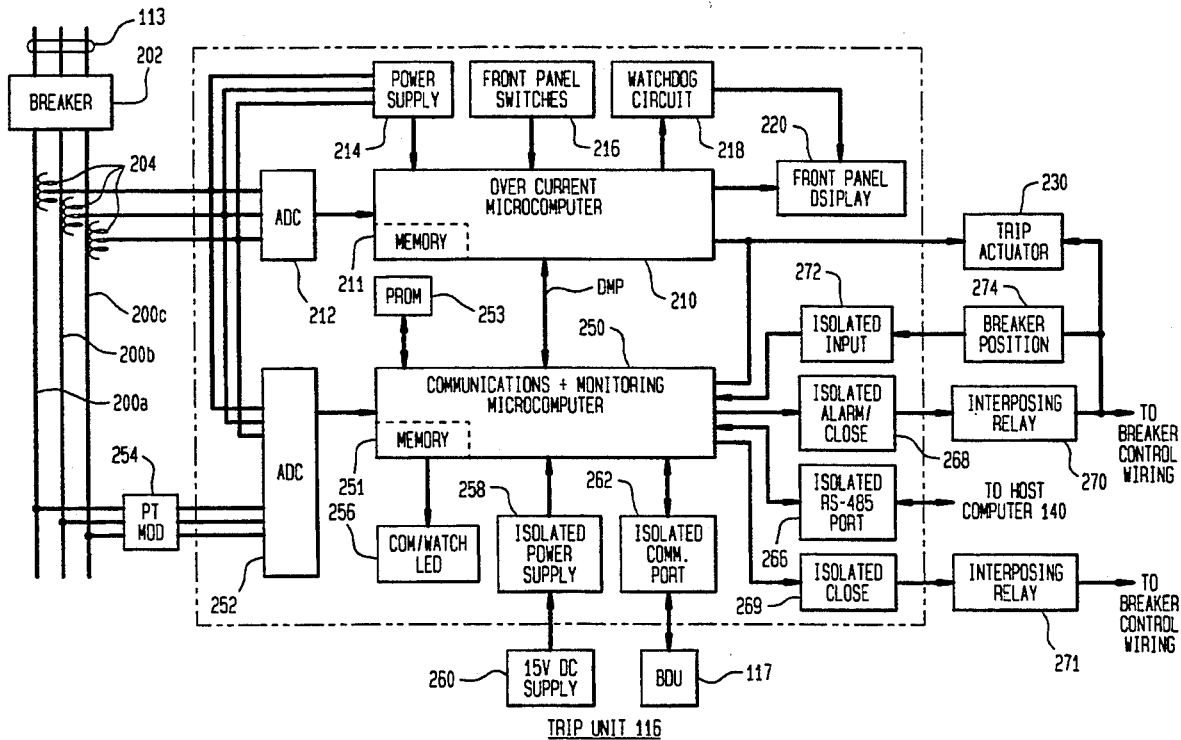


FIG. 1

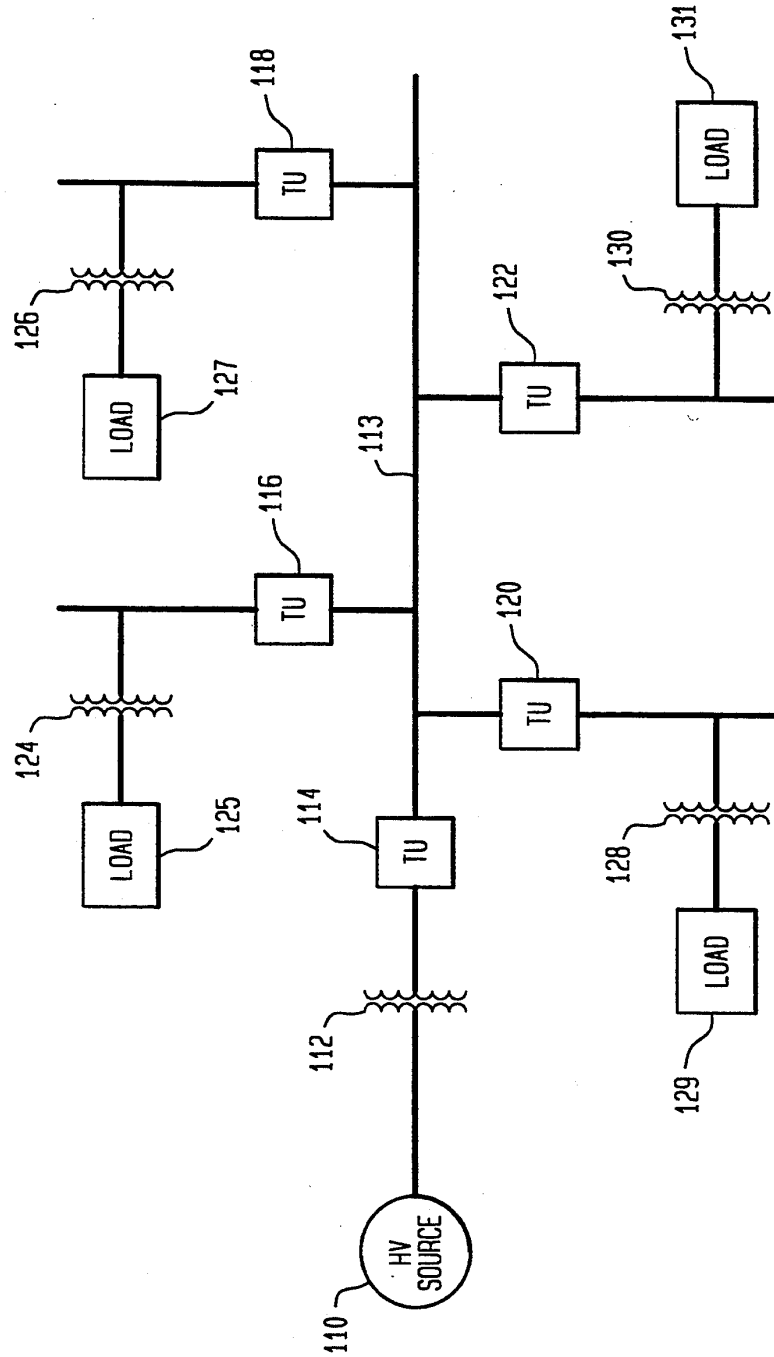


FIG. 1a

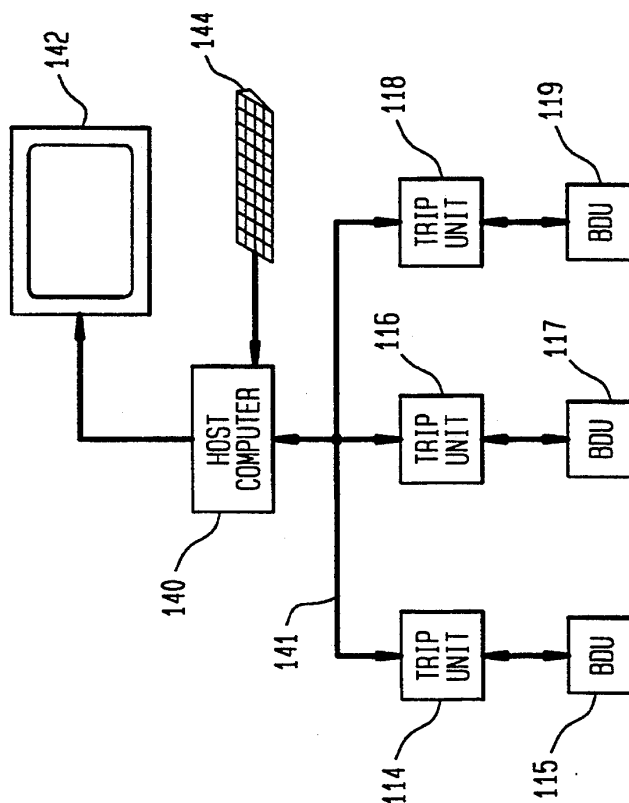


FIG. 2

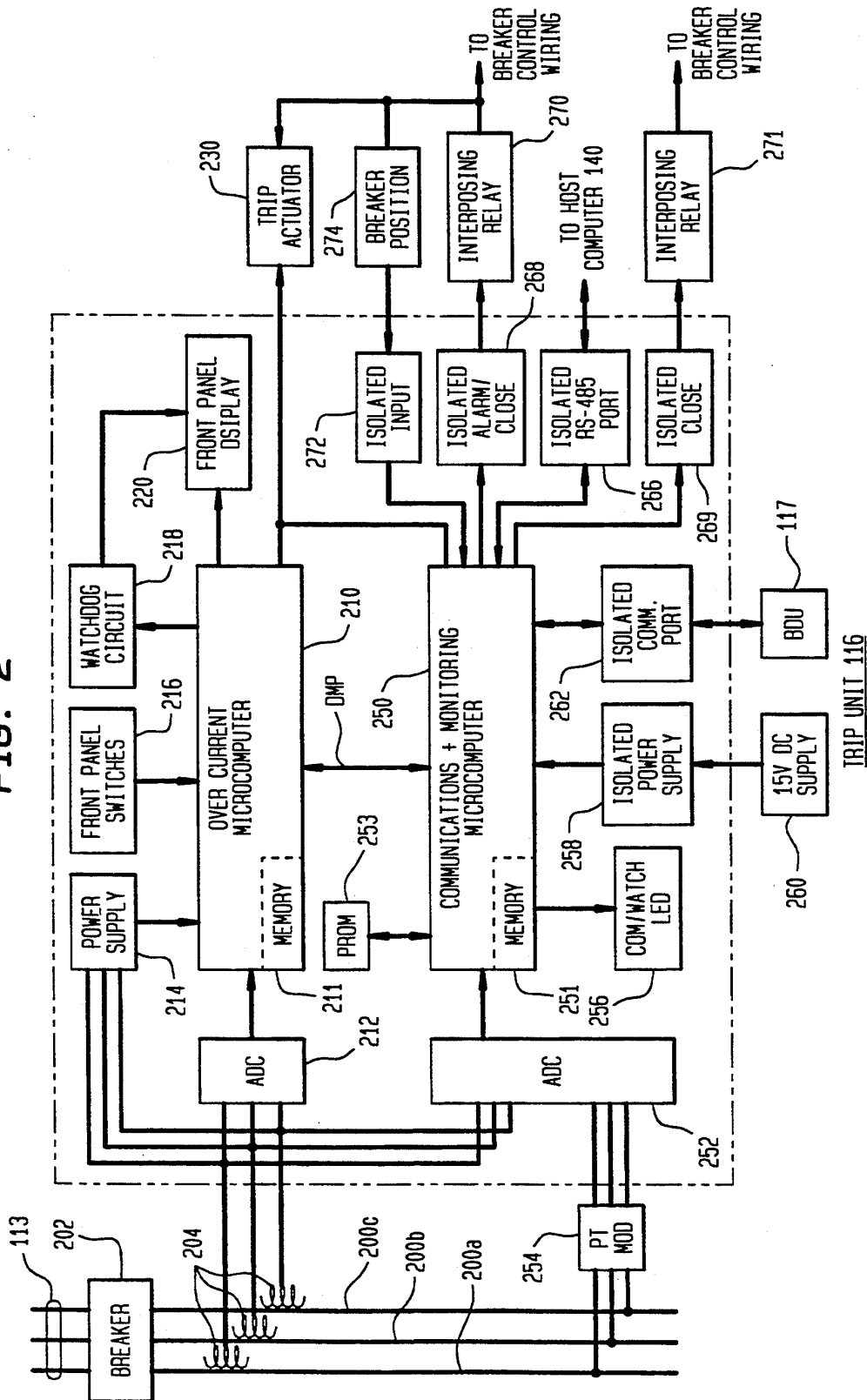
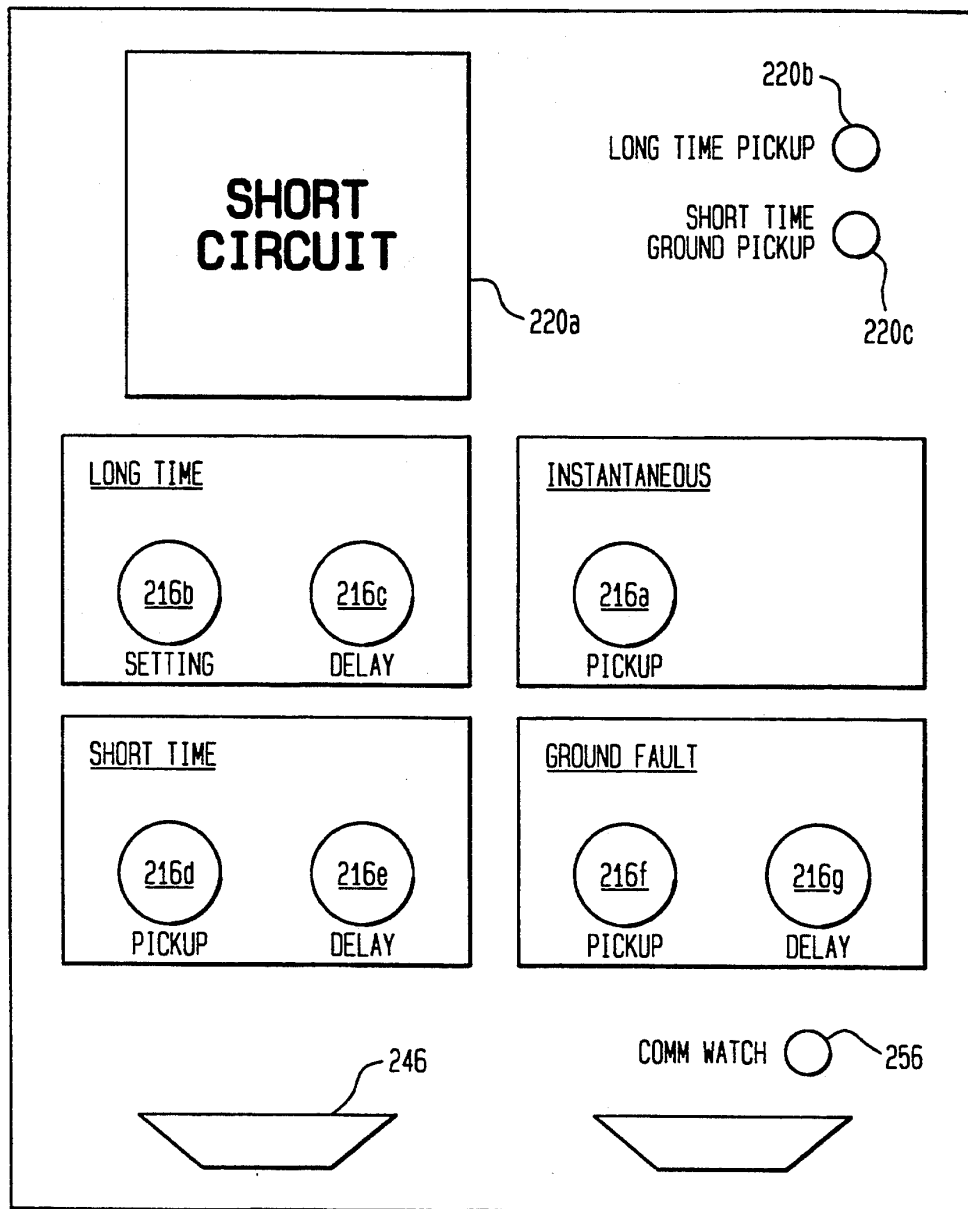


FIG. 2a



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