

devices that replace individual meters, relays and switches in electrical distribution systems.

Eaton's Viscronic fan drive senses engine coolant temperatures and the engine's microprocessor determines not only whether the fan drive should be on to cool the engine, but also how fast the fan drive should be running — reducing noise and improving fuel economy.

Eaton is also working with commercial power-tool manufacturers to develop a microprocessor for power tool controls that can be programmed to customize tool performance as demanded by specific markets or customers. Similarly, a new line of Eaton inductive proximity sensors is readily customized to customer needs by reconfiguring the logic embedded in the sensor's application-specific integrated circuit.

Reacting to Changing Conditions Through electronics, sensed and analyzed information is also used for "actuation," or for giving

a product the ability to alter its state based on changing conditions in its environment. As an example, Eaton's new Series II hydrostatic pump, which will be in production in 1996, offers optimal advantages for mobile agricultural and construction equipment. A microprocessor and multiplexed controls give it the capability of interfacing with other vehicle electronic components.

The renowned Eaton Fuller mechanical transmissions have been both partially and fully automated. In both versions, an electronic module selects ideal shift points and shifts automatically, thus providing optimum efficiency and productivity. As part of a strategic alliance with Bosch, Eaton offers anti-lock braking and traction control systems — which utilize electronic logic — for both medium-duty and heavy-duty trucks.

Cutler-Hammer's Advantage motor starters incorporate electronic logic for more precise control of trip times and enhanced capability to control electric motors in industrial settings.

MEETING POWER DISTRIBUTION CHALLENGES

Cutler-Hammer is applying electronics to control and communicate with its power distribution components, from Series C Circuit Breakers, the industry's most advanced devices (lower left with other products identified clockwise), to the Digtrip Optimizer, which accesses, displays and configures information from the OPTIM trip units. Cutler-Hammer switchboards are free-standing steel enclosures which contain circuit breakers, metering equipment or fusible switches. The IQ Analyzer is a leading-edge power quality meter that can measure up to 50 electrical system parameters; the IQ Energy Sentinel is the industry's only submetering device that mounts directly onto circuit breakers to monitor both power and energy. The Digtrip electronic trip unit works in conjunction with circuit breakers to monitor and manage power consumption. From components to assemblies, Cutler-Hammer offers customers complete solutions to power distribution challenges.