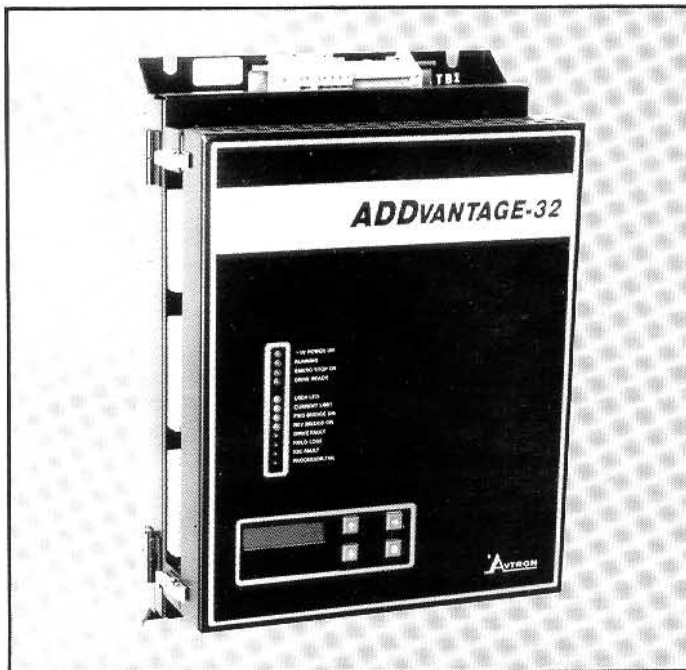


ADVANCED DIGITAL CONTROL FOR COORDINATED DRIVE SYSTEM RETROFIT APPLICATIONS



APPLICATION

The Avtron ACM Module is designed to provide modern, digital control to existing drives. It may be interfaced to virtually any DC or AC drive. Optional modules allow controlling MG sets and, for certain drives, replacing obsolete PC cards and firing existing SCRs.

Applications include single section speed or draw control, coordinated multi-section speed or tension control, and winder control. As a system component, the ACM easily interfaces to a variety of programmable logic controllers, operator stations, and programming stations. It is software configurable by control blocks, and incorporates extensive drive and process diagnostics.

- MODERNIZES DRIVE SYSTEMS
- USES NEW OR EXISTING DC OR AC DRIVES
- CONTROLS SPEED OR TENSION
- IMPROVES SPEED REGULATION TO 0.001%
- PROVIDES ADVANCED DRIVE AND PROCESS DIAGNOSTICS
- CAN BE INSTALLED ONE SECTION AT A TIME DURING SHORT OUTAGES

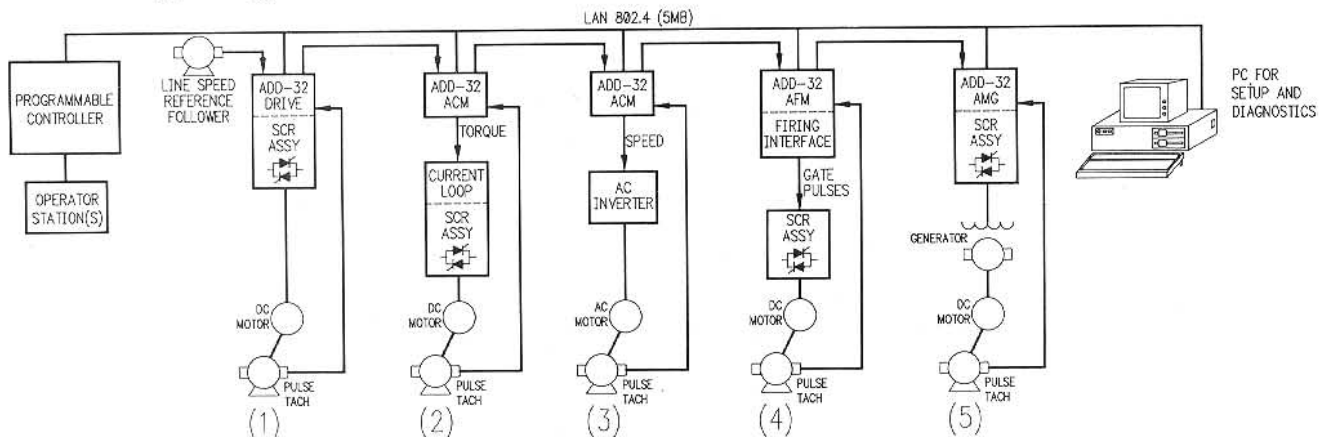
BENEFITS OF THE ACM

Systems utilizing the ACM accomplish many objectives:

- Process performance improves because existing drives can be regulated to $\pm 0.001\%$.
- Start-ups are faster because the drive system does not change setpoints as it warms up.
- Less operator interaction for speed, draw, or tension monitoring is needed because the drives don't drift.
- Grade changes can be made faster. Also, there is less off-grade product.
- Production speeds can increase because better drive tracking allows process control systems to implement speed optimization programs.
- Progressive draw can be added.
- Maintenance can be reduced by eliminating obsolete or failure-prone circuitry.

Avtron ADDvantage-32™ ACM System Flexibility

THIS DIAGRAM SHOWS DIGITAL CONTROL INTERFACE, RESPECTIVELY FROM LEFT TO RIGHT, FOR (1) NEW DIGITAL DRIVE, (2) EXISTING DC DRIVE, (3) AC DRIVE, (4) EXISTING DC DRIVE WITH CIRCUIT CARDS REMOVED BUT POWER COMPONENTS LEFT IN PLACE, AND (5) MG SET.



ACM FEATURES AT A GLANCE

The ACM is the core of an Avtron ADDvantage-32™ Advanced Digital DC Drive, and accordingly incorporates virtually all the diagnostics, configurability, and control functions of the ADDvantage-32™. The ACM can obviously be upgraded, in the field, to a full ADDvantage-32™ by adding the SCR base assembly. Initial ACM installation saves hardware and installation costs now while providing a future upgrade path to new power components.

When used with any other drives, interface to the power converter is simple using an analog voltage. The ACM allows the drive to be configured as a speed, current or torque reference, depending upon the application, and improves control regulation. Digital control performance is preserved since the analog interface is within a digitally closed loop.

The following summary briefly describes ACM hardware functionality. For information on software and a more detailed explanation, refer to Bulletin ADD-321, which describes the ADDvantage-32™ ACM features, and Avtron Specification # ADD-32.8, which fully describes features and functions of the ACM module.

- Standard Hardware Configuration includes:

- 32 Bit Microprocessor Control Module
- Power Supply/Analog Interface Module
- FAX-32 Digital Coordination Module
- MAXI System Board
- Pulse Generator Power Supply
- RS-485 Serial Link Power Supply
- Built-in Keypad/Display Maintenance Station (Displays Plain English Messages)
- LED Fault Indicators

- Standard I/O Complement includes:

- 14 Digital Inputs
- 4 Digital Outputs
- 6 Analog Inputs
- 4 Analog Outputs
- 2 Bidirectional Incremental Pulse Generator Inputs
- 1 Coordinated Reference Frequency Output
- 1 RS-485 Multi-drop Serial Link
- 1 IEEE 802.4 LAN

- Standard Diagnostic Features include:

- 4 Channel Signal Analyzer
- 12 LED Diagnostics Indicators
- 16 Event Fault FIFO

- Standard Drive Protective Features include:

- Tach Loss
- Overspeed
- Zero Speed Detection