

## FPU-32

## FEEDER PROTECTION UNIT

The FPU-32 is a microprocessor-based feeder protection unit that supports both IEC and IEEE inverse-time overcurrent curves. Overload, current-unbalance, phase-reverse, phase-loss, and earth-fault protection are also provided. The FPU-32 is compact in size to increase mounting options, making it ideal for new and retrofit applications. The operator interface, comprised of a four-line illuminated display, four LED's, and seven push-buttons, is used to observe metered data, to retrieve stored information, to reset trips and for programming. A TIA-232 interface allows access with a personal computer. Optional network communications provide an interface for a distributed control system.

## OVERVIEW

Protection: True measurements of sequence components and RMS values of current are used to provide overload, inverse- and definitetime overcurrent, inverse- and definite-time earth-fault, unbalance, phase-loss and phase-reverse protection.

Metering: Line currents (A, \%CT), positive-sequence current, negative-sequence current, current unbalance, used and trending thermal capacity, earth-leakage current, digital-input state, output-relay states, and communications state can be displayed.

Data Logging: Date-and-time stamped records of the last 100 trips are logged. Records include the trigger source, trip type, and metered data. Trip counts and running hours are also recorded.

Input/Output: The FPU-32 has three programmable output relays, a programmable digital input, and programmable analog output. A TIA-232 connection allows local access to metering and programming with a PC. Optional network communications include DeviceNet ${ }^{T M}$, Modbus TCP Ethernet, and TIA-485 with Modbus ${ }^{\oplus}$ RTU or A-B ${ }^{\circledR}$ DF1.

## SIMPLIFIED CONNECTION DIAGRAM



## FPU-32 FEATURES

- Four-line, eighty-character back-lit LCD; menu-structured displays
- Menu control, programming, and reset keys
- Status LED's
- Current inputs: 1 A \& 5 A; CT's terminated at interface module

- Earth-leakage input: 1 A, 5 A \& sensitive
- Five IEC and three IEEE inverse-time curves supported
- Analog output: 4-20 mA, programmable
- $24-\mathrm{Vdc}$ supply for digital input
- Standard TIA-232 interface; optional network communications
- $1 / 4$ DIN size, panel or surface mount
- Universal power supply, 120-240 Vac/Vdc
- Three Form C output relays, programmable
- Digital input, programmable
- Flash program memory; non-volatile set-point and data-logging memory
- Password-protected settings
- Plug-in wiring connections
- Conformal-coated PWB's
- Direct replacement for FPU-16

