



Technology:

- CMOS components for low power consumption and extensive use of Surface Mount components.
- Employing In-System-Programming technology for EEPROM and EPLD.

CPU and Memory:

- 32- bit HCMOS Motorola 68332 @ 20 MHz.
- 1 MegaBytes EEPROM. 1 MegaBytes Battery backed up RAM with 3 years of shelf life. Battery can be changed with live power on for uninterrupted operations.

Real Time Calendar Clock:

- Hardware Calendar Clock with year, month, day of month, day of week, hour, minute and second.
- Optional high accuracy, temperature compensated crystal oscillator, 20.0000 MHz +/- 2 PPM at -20 to 70 degrees Celsius.
- Battery backed up Real Time Calendar Clock with 3 years of shelf life. Battery can be changed with live power on for uninterrupted operations.

Microprocessor Supervisor:

- Watchdog Timer, Power Monitor, and Reset. Power Switching functions. Watchdog relay for system malfunction annunciator, indication and control overrides.

Power Requirement and On-board Power Supplies:

- Isolated unregulated 12VDC (1A) or 24VDC (1/2A) for electronics.
- Separate Power Supply for Digital Input Excitation.
- Switching mode, +5 VDC for digital electronic, +5 VDC, -12 VDC and +12 VDC for analog electronic.

Communications:

- RS232 ports: 4 Sync/Async user ports and 1 Async jumper selectable maintenance or user port.
- Baud Rate: 300 - 38.4 Kbaud.
- Hand shaking signals: DCD, RTS, CTS.
- Specifications: Meet all EIA/TIA-232-E and V.28 Specifications.
- Indicators: Transmit and Receive indicators for all user ports.
- Protocols: Multiple Protocol support and Redundant Communication.



System Status Indicators and RTU Ambient Temperature

- Power On indicator. Performance indicator. System normal indicator. Control malfunction indicator.
- Temperature Sensor provided.

Floating Point Math Support: Optional MC68882 Floating-point math coprocessor.

Operating Environment and Physical Dimension:

- Temperature Range: -40 to +85 degrees Celsius. Humidity: < 95%, non-condensing.
- 19.0 x 7.0 inches for 19" standard rack mount or panel mount.

Digital Inputs:

- Number of Inputs: 16 Optical Isolated Digital Inputs with Input indicator on each digital input.
- Isolation Rating: 1500 Vrms (Point Input to Logic).
- Hardware Digital Filter: Programmable 2-15 ms debounce timer, transition detection and interrupt capability.
- Accumulator: Any digital input can be configured as an Accumulator.
- Maximum Rate of Accumulator: 150 Hz.
- Types of point: Form A, Form C and BCD.
- SOE: Any Digital Input Point can be Configured as SOE with accuracy of 1 ms.
- Chatter Filter: Available for preventing malfunctioning inputs from filling up the SOE buffer.

Analog Inputs:

- Number of Inputs: 16 Analog Input Points with one shield for every 2 points: Bipolar, Differential input +/- 10.0V, +/- 5.0V, +/- 1.0V, +/- 1 mA, +/- 20 mA, 4-20 mA
- Accuracy: +/- 0.05% (DC voltage input).
- Temperature Coefficient: +/-5PPM per degree Celsius.
- Resolution: 15 bit plus sign.
- Auto Calibration Reference Points: -5.000VDC, 0VDC and +5.000VDC.
- CMRR (@0-60Hz): 90 dB.
- NMRR (@60Hz): 60 dB.
- Calibration: Analog input self calibration, Auto-correction of gain and offset errors.

Digital Outputs:

- Number of Outputs: 16 relay outputs with Output indicator on each digital output.
- Control Output Configurations: Isolated Discrete control output relays, Trip/Close, Raise/Lower, Set/Reset, Pattern Controls, Relay fail to OFF, Relay fail to last commanded position.
- Control Security: Single component failure protection, Master Trip/Close relays, relay driver input status check back for point selection confirmation, double point select-before-operate. Either a malfunction of the system (detected by the watchdog), or the failure of a point selection confirmation shuts down the control module.
- Remote/Local Switch: enable/disable controls.
- Control Functions: ON/OFF, Timed ON/OFF (Pulse Duration of 1 ms resolution), Variable duty cycle pulse output with variable repetition rate (Pulse Train of 1 to 254 or continuous 1 ms resolution), Pattern controls (a group of contiguous outputs).
- Contact Rating: 1 Amp at 110 VDC.
- Interposing Relay Connection: Relay output DB37 socket for ease of interposing relay connections.

High Speed Accumulators:

- Number of Inputs: 3 optically isolated inputs for Turbine, Generator and Motor RPM measurements.
- Maximum input: 20 kHz.
- Isolated rating: 1500 Vrms (Point Input to Logic).