



GENERAL MONITORS
Protection for life.

MODEL CC02A

Serial Communications Interface



Features

- Zero Two Series System Serial Communications
- User configurable
- RS-485 and RS-232 MODBUS RTU ports
- Master/Slave configuration
- Battery backup connection, watchdog, fault relay, communications error detection
- Communicates with multiple nodes

Benefits

- On-line access to all operational and setup data
- Flexibility and ease of operation
- Dual MODBUS master configuration or local host monitoring possible
- Increased fault tolerance from additional CC02A
- Protection against malfunction
- Cost effective solution for large systems

Description

The General Monitors CC02A Communications Card facilitates serial communications between each module in a General Monitors Zero Two Series System and an external host computer, allowing fast access to operational and setup data registers. It supports a Burst Read feature, which returns all registers of a module in a single transmission.

The module acts as an intelligent bridge between the Zero Two Series System communications bus and the host, implementing all necessary protocol conversions and error check routines. It maps user selected Zero Two Series System Serial module node addresses into the MODBUS node address space.

The CC02A presents an RS-485 based MODBUS RTU Slave interface to the host, while an additional and independent RS-232 based MODBUS RTU Slave interface supports simultaneous communication with a second or local host. The card can be programmed to act as Master or Slave on the Zero Two Series System communications bus.

A single CC02A is used as Master of a Zero Two Series System. An additional card configured as Slave until required will increase fault tolerance.

In the Zero Two Series chassis, the CC02A interfaces with the Fault, Accept and Master Reset bus. Accept, Reset, LED Test and Card Test commands can be transmitted to an individual Zero Two Series module. In Broadcast mode these commands are executed by all Zero Two Series modules simultaneously.

The CC02A supports LED Test, operates from a 10VDC to 35VDC power supply and detects low supply conditions. It has a Normally Energized Fault relay and a Fault Unaccept open-collector output. Communications errors are flagged by their corresponding exception codes in the MODBUS response.

Applications

- Refineries
- Oil Fields
- Gas Fields
- Offshore Platforms
- Fire and Gas Systems
- Pipelines
- Compressor and Pumping Stations



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System Specifications

MODBUS Port Interface

Driver: RS-485

Protocol: MODBUS RTU Slave

Baud Rate: (user selectable) 38400, 19200, 9600, 4800, 2400

Data Format: (user selectable) 8 Data bits (fixed), even, odd, no parity, 1,2 stopbits

Node Address Range: 1-247

Zero Two Port Interface

Driver: RS-485

Protocol: Proprietary Master or Slave

Baud Rate (fixed): 9600

Data Format: (fixed) 8 data bits, no parity, 1 stopbit

Node Address Range: 1-255

Control Port Interface

Driver: RS-232

Protocol: MODBUS RTU Slave

Baud Rate (fixed): 9600

Date Format (fixed): 8 data bits, no parity, 1 stopbit

Node Address Range: Node address = MODBUS node address

Environmental Specifications

Operating Temperature Range: 0°F to +150°F (-18°C to +66°C)

Storage Temperature Range: -40°F to +150°F (-40°C to +66°C)

Operating Humidity Range: 5 to 100% RH non-condensing

EMC Susceptibility: Conforms to EN50081-1, EN50082-1 10V/m max.

Mechanical Specifications

Height: 6.825 inches (173mm)

Width: 1 inch (25mm)

Depth: 9.9 inches (251mm)

Weight: 11.2 ounces (318 grams)

Electrical Specifications

Power Requirements: 10VDC to 35VDC

Current Consumption Max: 70mA @ 24VDC
140mA @ 12VDC

Open Collector Rating: 100mA

Relay Rating: SPDT 5A @ 125/250VAC, 3A @ 30VDC

Cable Parameters: Recommended screened and armored

Electrical Classification: General purpose, non-hazardous area

Warranty: 2 years

Standard Configuration: CC02A-1

Specifications subject to change without notice.

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