

OVERVIEW

The MCIO board is a microprocessor based circuit with 8 fully supervised, field selectable N/O or N/C inputs with YELLOW supervision status & RED point status LED's, and 12 signal level relays or optional 4 Amp solid state relay outputs. All outputs have GREEN relay status LED's, 4 field adjustable time delays, a RS485 serial communications port, and an 8 bit dipswitch to be used for serial addressing or function selection. It can be operated as an intelligent control unit in a stand-alone configuration, or as an I/O device receiving its control from a larger control system via the RS485 port. It will be made available on an OEM basis.

STAND ALONE MODE

The MCIO board can be used as a local monitoring and control unit in alarm or building control systems. Operational characteristics of stand-alone applications will be developed from specifications provided by the control system user. The microprocessor would run a program specifically designed to meet the requirements of the application. The program would cycle through a sequence of events determined by the inputs and time delays.

Possible applications include panic alarms, door alarms, direction sensing and counting of pedestrian traffic through an active infrared sensing area (tailgate detection), automatic HVAC and lighting control, and interlocking door control systems.

Input contacts initiate internal sequences and time delays such as, door prop sequences or latching alarms with automatic resets. Typical inputs are door contacts, motion sensors, request to exit devices, and access control contacts.

Outputs are activated as the result of the inputs and the internal sequences. Typical outputs are lock control relays, indicator LED's, sounders, and alarm status relays.

REMOTE CONTROL MODE

The MCIO board can be used as an addressable slave I/O port controlled from a RS485 communications system. The MCIO would report the status of all inputs when polled by the system and set its outputs as directed by the system. Typical inputs and outputs would be the same as in the stand-alone mode. The microprocessor would act as an addressable latching serial to parallel converter in this mode.

HYBRID MODE

The MCIO board can be used to provide intelligent monitoring and control of various systems using the RS485 port to report and control the status of the control program running in the microprocessor. This reduces the processing load of the larger system by deferring the lower level operational sequence control to the MCIO board.

The microprocessor would run a program specifically designed to meet the requirements of the application, and in addition to monitoring and controlling the 8 on-board I/O's, would communicate operational status through the RS485 port.



TECHNICAL SPECIFICATIONS

Power	12 VDC @ 500 max
Inputs	8 fully supervised inputs monitoring N/O or N/C contacts 1 Kohm = normal, 500 ohm or 2 Kohm = active, else = supervision fault Red indicator LED's follow the state of all inputs Yellow indicator LED's follow the supervision state of all inputs
Function select	8-bit dip switch to be used for serial address or function selection
Outputs	12 signal level reed relays or solid-state relays rated @ 4 A Green Indicator LED's follow the state of all outputs
Time delays	4 field adjustable time delays Adjustment ranges are determined by specific applications
Communication	1 RS485 half duplex, serial port, NRZ format, 8 bits, no parity, ASCII characters with checksum. Baud rates and protocol will meet requirements of controlling system.
Physical Dimensions	5.70 inches x 7.45 inches x 1.25 inches
Terminations	Removable terminal strips or fixed terminal strips
Mounting	To be determined by specific applications