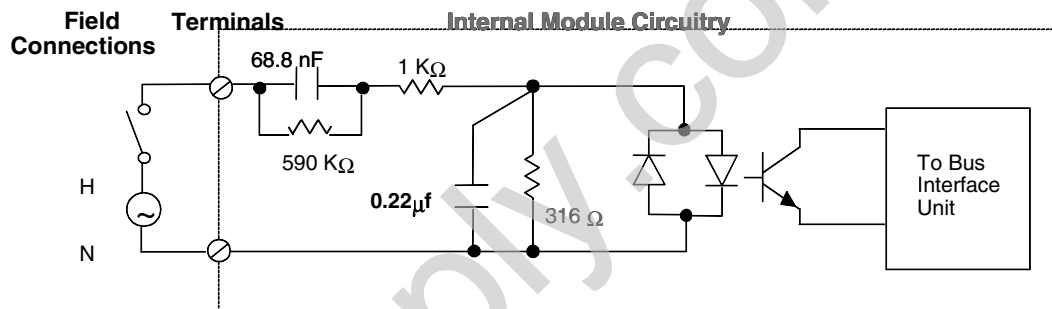


Module Operation

A network of resistors and capacitors establishes input thresholds and provides input filtering. Optoisolators provide isolation between the field inputs and the module's logic components. Data from all 16 inputs is placed into a data buffer. The module's circuit LEDs show the current states of the 16 inputs in this data buffer.

Parallel-to-serial converters change input data from the data buffer into the serial format needed by the Bus Interface Unit.

After checking the Board ID and verifying that the module is receiving appropriate logic power from the Bus Interface Unit (which is reflected by the state of the module's Power LED), the Bus Interface Unit then reads the filtered, converted input data.



Module Specifications

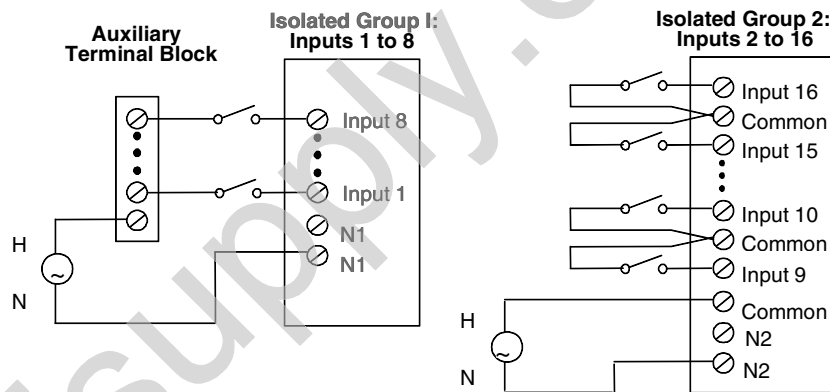
| Module Characteristics | |
|--|---|
| Rated Voltage | 240 VAC |
| Input Voltage Range | 0-265 VAC (47-63 Hz) |
| User Input Current | 8.2 mA per point @ 240 VAC |
| Isolation: User input to logic, User input to frame ground, Group to group | 250 VAC continuous, 1500 VAC for 1 minute. No isolation between individual points in a group. |
| Indicators | 1 LED per point shows individual point status PWR LED indicates backplane and user power are present |
| Current Drawn from Bus Interface Unit Power Supply | 77 mA maximum |
| Input Characteristics | |
| Input Impedance | typical (reactive) 38.5K @ 60Hz, 46.3K @ 50 Hz |
| On state voltage Off state voltage | 155 VAC to 265 VAC 0 VAC to 40 VAC |
| On state Current Off state Current | 4.0mA to 10mA 0mA to 1.5mA |
| On response time Off response time | 20ms maximum 20ms maximum |

Wiring Examples with Auxiliary Terminal Blocks

An Auxiliary Terminal Block may be used to provide additional wiring terminals. Auxiliary Terminal Blocks have all terminals connected together internally. The Auxiliary Terminal Block with box terminals has 13 terminals, each of which accommodates one AWG #14 (avg 2.1mm² cross section) to AWG #22 (avg 0.36mm² cross section) wire, or two wires up to AWG #18 (avg. 0.86mm² cross section). The Auxiliary Terminal Block with barrier terminals has nine terminals, each of which can accommodate one or two wires up to AWG #14 (avg 2.1mm² cross section).

Example Connections for Wiring Two Isolated Groups

For an I/O Terminal Block with Box Terminals, an Auxiliary Terminal Block with Box Terminals can be used for power connections for one of the groups. Two external power supplies are used to provide isolation between inputs 1-8 and 9-16. Because all terminals on an Auxiliary Terminal Block are common, it can only be used for one group when isolation is needed. For the other group, an external terminal strip or the common terminals on the base might be used.



For an I/O Terminal Block with Barrier Terminals or an I/O Terminal Block with Wire to Board Connectors, an Auxiliary Terminal Block can be used for one isolated group as shown on the left above. An external terminal strip must be used for the other group.

Example Connections for Wiring Without Isolation

If two isolated groups are not needed, an Auxiliary Terminal Block might be used for the H connections for all 16 points. The following example shows a Terminal Block and Auxiliary Terminal Block with Barrier Terminals.

