SECURITRON
M8 Managed Power Control Module

SECURITRON M8 Managed Power Control Module User Guide

Contents

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SECURITRON M8 Managed Power Control Module

Specifications:

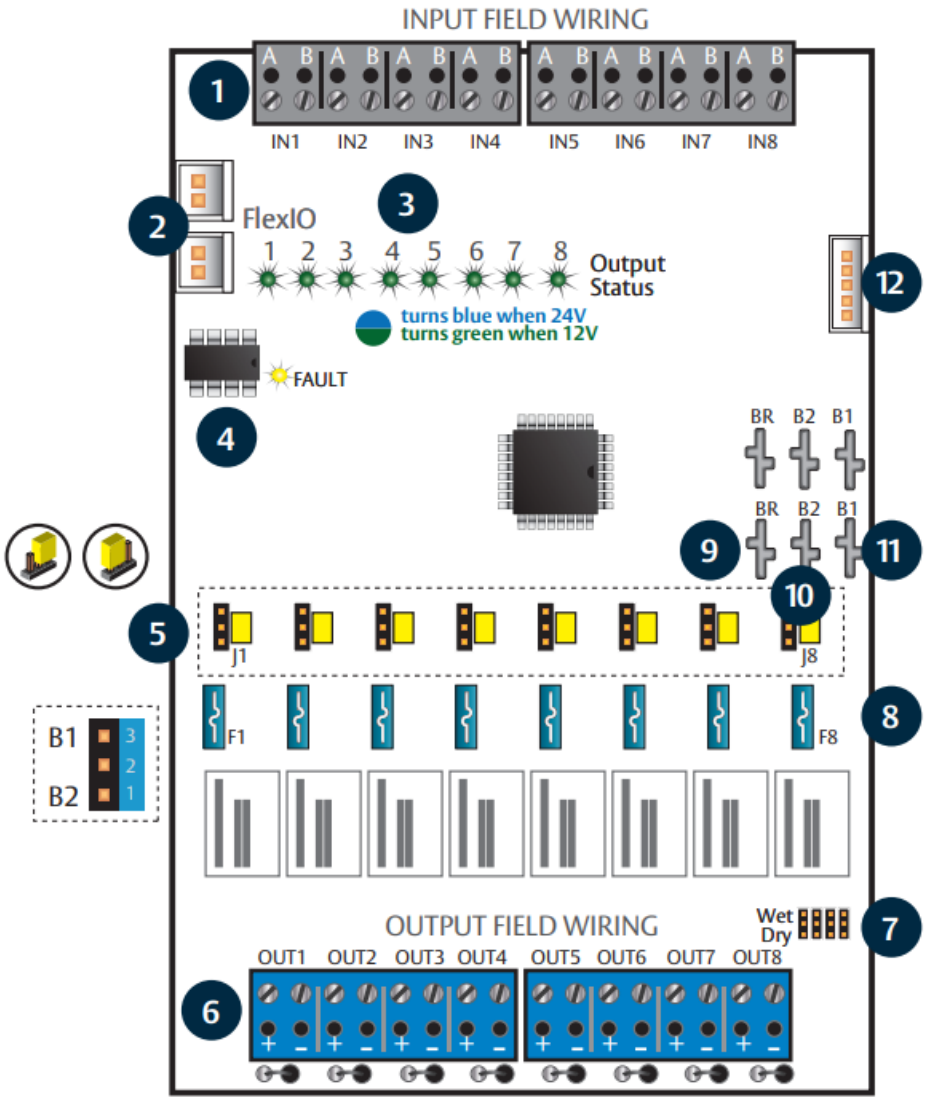
- **Product Name:** M8 Managed Power Control Module
- **Connectors:** 2 FlexIO connectors
- **Features**: Passes FAI and Fault signals, FlexIO bus connectivity

Product Usage Instructions

- **Input Field Wiring:**
  Each input on the M8/M8P has an A terminal and a B terminal. Connect the inputs as per the specified configuration.
- **Output Field Wiring:**
  Each output on the M8/M8P has a + and – marked adjacent to the terminal to indicate polarity. Connect the outputs accordingly.
- **Diodes and Protection:**
  The outputs of the M8/M8P have built-in reverse protection diodes. Ensure proper diode installation for magnetic loads like maglocks, door strikes, solenoids, etc.

Specifications and more details found in the full manual here. (Downloadable pdf)

Overview



1. **Zone Inputs (INPUT 1–8)**

   These are the zone input terminal strips. These terminal strips are removable and accept wire sizes from AWG12 – AWG22. The terminals are labeled on the PC board near the terminal strip. See the Input Wiring section of the full manual for more information.

   - When using a dry contact input, the contact is connected across the A and B terminals. It is normal to measure a voltage across these two terminals. This voltage is current limited and will not damage the activation contact.
   - When using a voltage input, the voltage is connected to the B terminal. The activation voltage must be common grounded with the system voltage. The activation voltage must be between 12 and 24VDC nominal. Do not connect anything to the A terminal of the input.
   - When using an open collector (transistor) input, place a jumper across the A and B terminals and connect the open collector to the B terminal. Note that the input source must be common grounded with the M8 board's power source.

2. **FlexIO Connectors**

   These connectors pass the FAI and Fault signals to and from the M8 board and pass the FlexIO buss on to other accessory boards in the system.

3. **Output LEDs**

   (OUTPUT STATUS 1–8) — Green/Blue These LEDs indicate the voltage and status of the zone's output. LED numbers correspond with the zone number (e.g. LED 1 is the LED for Output 1).

These LEDs are dual color and indicate the voltage as follows:

- Blue Output is set for 24V
- Green Output is set for 12V
- Off Fuse or PTC open

When Powering Lock Devices:

- On Steady Door Locked (Fuse or PTC Intact)
- Slow Flashing (1 per second) Door Unlocked (Either due to Zone Input or FAI)
- Fast Flashing (4 per second) Fault Detected on Zone

When Set for Constant Output:

- On Steady Output Powered (Fuse or PTC Intact)
- Slow Flashing (1 per second) Output Unpowered (Due to FAI)
- Fast Flashing (4 per second) Fault Detected on Zone

4. **Fault LED (FAULT) — Yellow**
   This LED lights when the M8 detects a ruptured output fuse or other fault condition (including a tripped upper or lower limit exceeded) — See M8 Programming section of the full manual for more information). This fault condition also transmits to the main power supply.
5. **Buss Selection Yellow Jumpers (1–8) —**
   The M8 can accept up to two power supply inputs connected to B1 and B2. This jumper selects which of the two power supply inputs are used for the zone's output. If only a single power supply is being used, set this jumper for Position 1.
   - **B1** — This position selects the power supply connected to the B1 input of the M8 board.
   - **B2** — This position selects the power supply connected to the B2 input of the M8 board.
6. **Zone Outputs (OUTPUT 1–8) —**
   These are the zone output terminal strips. These terminal strips are removable and accept wire sizes from AWG12-AWG22. The terminals are labeled on the PC board near the terminal strip. See the Output Wiring section for more information.
   WARNING: The outputs of the M8 have built-in reverse protection diodes. If a delay is present on lock release, the diode can be removed from the circuit (see page 4).
7. **Zone 8 Wet / Dry Output Selection**
   (J25–J28)— Zone 8 of the M8 is able to be set as a dry contact output . Factory default setting is all four jumpers set to "Wet". To set the zone as a dry output, all four jumpers must be set to "Dry".
8. **Output Fuses (F1–F8) – Optional —**
   When using the fused version of the M8, these are the fuses for each zone output. Fuse numbers correspond with the zone number (e.g. F1 is the fuse for OUT1). When using the PTC version of the M8, the fuse will be replaced with a soldered-in PTC.
9. **BR Connectors (J5 & J6) —**
   The DC Common buss in the system. All DC boards in the system must have their BR fastons wired together for proper operation.
10. **B2 Connectors (J7 & J8) —**
    These fastons are for connection to the B2 voltage buss in the system. The voltage on the B2 buss comes from the main output of a power supply or the DC OUT faston of a B100 secondary supply in a dual voltage system. This voltage will be directed to any outputs whose Buss Selection Jumper is set in the B2 position. If the M8 is being used in a single voltage system, these fastons can be left unused.

11. **B1 Connectors (J1 & J2) —**
    These fastons are for connection to the B1 voltage buss in the system. The voltage on the B1 buss comes from the main output of a power supply. This voltage will be directed to any outputs whose Buss Selection Jumper is set in the B1 position.
12. **SPI Connector (J13)—**
    This connector accepts the SPI cable which provides communication between the M8 and the NL4 board. This cable MUST be connected at all times for proper operation of the M8. The M8 must be connected to the NL4 board.

Wiring

Input Wiring

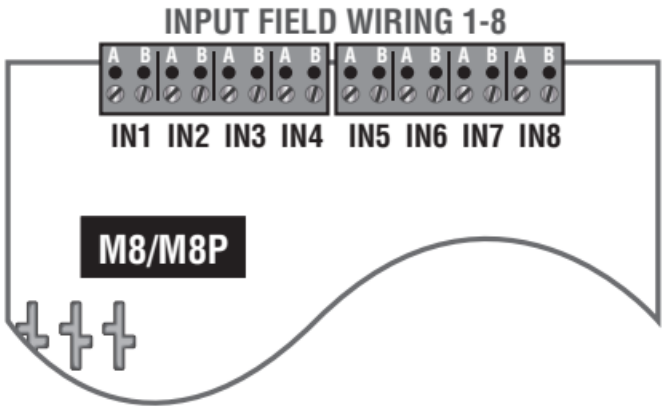
Each input on the M8/M8P has an “A” terminal and a “B” terminal.

- When using a dry contact to activate the input, the contact is placed across these terminals. It is normal to measure a voltage across these terminals when set for a dry contact input.
- When set for a voltage input, the voltage to activate the zone is placed on the “B” terminal. The “A” terminal is left disconnected. Note that the voltage used to activate the zone must be common grounded with the M8 board’s power source.
- To use a DC ground or an open collector (transistor) as an input, place a wire jumper across the “A” and “B” terminals and connect the ground/ open collector to the “B” terminal to activate the input. Note that the input source must be common grounded with the M8 board’s power source.

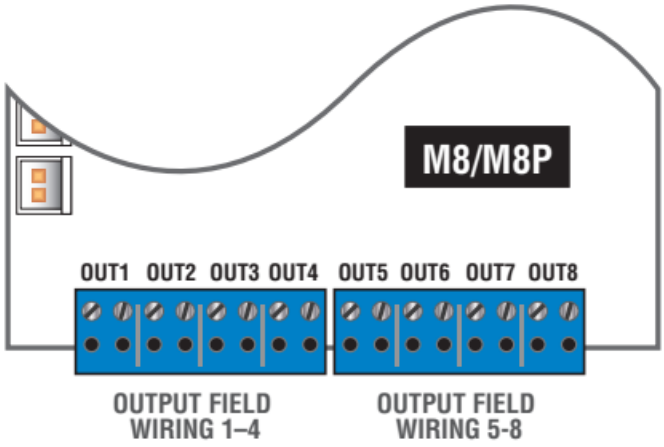
Output Wiring

Each output on the M8/M8P has a “+” and “-” marked adjacent to the terminal to indicate polarity.

WARNING: When powering magnetic loads such as maglocks, door strikes, solenoids, etc, each of these loads must have a reverse protection diode either built-in or external to the device.



Input Wiring



Output Wiring

Diodes

- **Reverse Protection Diodes**

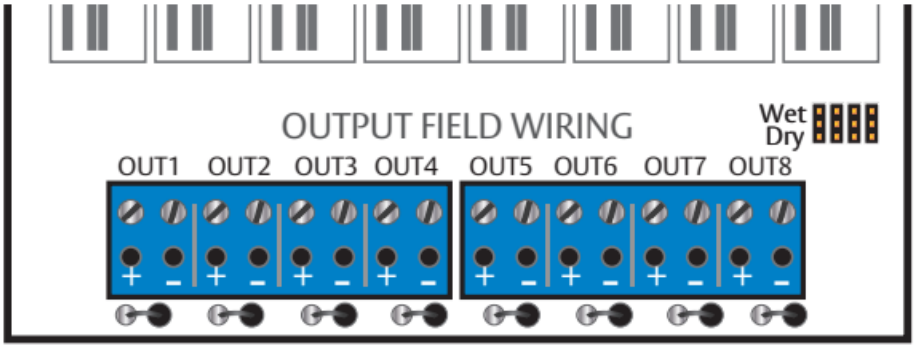
  The outputs of the M8/M8P have built-in reverse protection diodes.
- **M8/M8P Diode Removal**

  If a delay in lock release is present the diode from the corresponding output zone should be removed from the circuit as shown

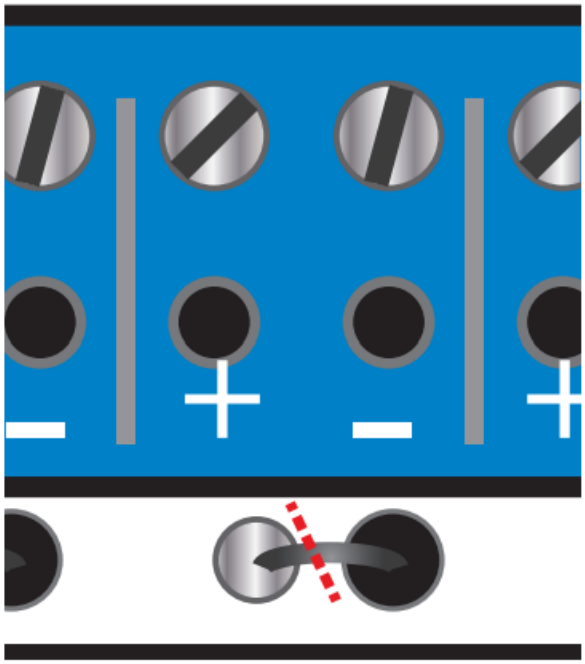
WARNING: Only remove the diodes from outputs requiring their removal!

The diodes on the M8 are on the top side of the board between the output terminals and the edge of the board. To remove the diode from the output circuit, simply cut and separate the exposed diode lead for the desired output zone — leave the diode body soldered to the PCB.

Programming & Accessing the M8
Programming of inputs, outputs, and other parameters is through the NL4 web browser interface. Consult the full AQL manual for programming and usage instructions of the M8 board.



M8/M8P Diodes



M8/M8P Diode Cut Detail

- techsupport.securitron@assaabloy.com
- securitron.com
- 800 626 7590

Printed in the U.S.A.

Patent pending and/or patent www.assaabloydss.com/patents

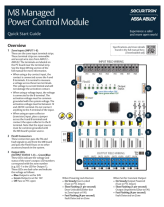
FAQ

Q: What do the Fault LEDs indicate?
A: The Fault LED lights up when a fault condition is detected by the M8, such as a ruptured output fuse or other fault conditions. Refer to the full manual for more information.

Q: How should I wire the BR, B1, and B2 connectors?
A: The BR connectors are for DC common buss wiring, while B1 and B2 connectors are for different voltage busses in the system. Follow the provided instructions for proper wiring.

Q: Why is it important to connect the SPI cable at all times?
A: The SPI cable provides communication between the M8 and the NL4 board, essential for the proper operation of the M8. Ensure it is connected for seamless functionality.

Documents / Resources

	SECURITRON M8 Managed Power Control Module [pdf] User Guide M8, M8 Managed Power Control Module, M8, Managed Power Control Module, Power Control Module, Control Module, Module

References

- Patents | ASSA ABLOY DSS
- User Manual