



333 Bayview Avenue
Amityville, New York 11701
For Sales and Repairs, (800) 645-9445
For Technical Service, (800) 645-9440
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GEMC-OUT8

Programmable Output Module

INSTALLATION INSTRUCTIONS

WI1707 08/10

GENERAL DESCRIPTION

The GEMC-OUT8 is an 8-channel active low interface accessory for use with GEMC-Series control panels. The GEMC-OUT8 may be used with all control panels, regardless of housing. It connects onto the remote panel Fire bus or models GEMC-BM (WI1701) or GEMC-BM/PS (WI1700) along with such other accessories as keypads and zone expansion modules. Up to 11 GEMC-OUT8 units may be used.

The GEMC-OUT8 provides 8 independent programmable active low unsupervised external outputs for controlling bells, door latches, lights, supplemental lights and other similar devices. The panel controls the activation of each external output. Refer to the GEMC-Series installation instructions (WI1653) or the installation instructions of the control panel in use for wiring requirements in UL-listed applications.

SPECIFICATIONS

Electrical Ratings

- Input Power:** 12.5 - 7.5VDC, 35mA standby maximum.
- Current:** Standby 35mA + current required for each active output.
- Output Power:** Active low outputs.
- Maximum Single Output Current:** 50mA power-limited circuits 14VDC maximum.
- Maximum Combined Output Current:** 400mA power-limited circuits 14VDC maximum.
- Note:** Output current must be deducted from either standby current or alarm current depending on the function of the output unless current is provided by a separate UL Listed Burglary / Signaling power limited power supply at 12 volts.

BOARD/MODULE ASSIGNMENT

The control panel must be able to identify the relay board or module. This is accomplished by the proper placement of jumpers on Jumper Block J1 (see Wiring Diagram on page 2 and table below).

MODULE NUMBER	EXTERNAL OUTPUT #	JUMPER BLOCK (J1)				PANEL CAPACITY
		J1-4	J1-3	J1-2	J1-1	
1	1 - 8	•	•	•	•	GEMC-32
1	1 - 8	•	•	•	ON	
2	8 - 16	•	•	ON	•	
3	17 - 24	•	•	ON	ON	
4	25 - 32	•	ON	•	•	
5	32 - 40	•	ON	•	ON	
6	41 - 48	•	ON	ON	•	GEMC-255 GEMC-128 GEMC-96
7	49 - 56	•	ON	ON	ON	
8	57 - 64	ON	•	•	•	
9	65 - 72	ON	•	•	ON	
10	73 - 80	ON	•	ON	•	
11	81 - 88	ON	•	ON	ON	

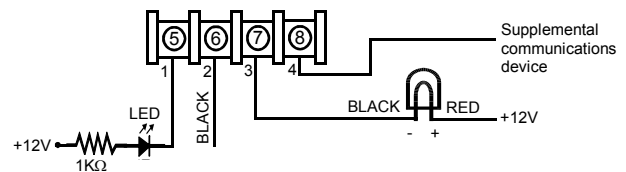
NOTE: • Indicates Jumper is OFF.

WIRING

Connect the wires to the control panel as shown in the Wiring Diagram. The maximum distance for a single GEMC-OUT8 wiring run is 1000 feet using #22AWG wire. The maximum distance for up to 5 GEMC-OUT8 modules connected to a single wiring run is 300 feet using #22AWG wire.

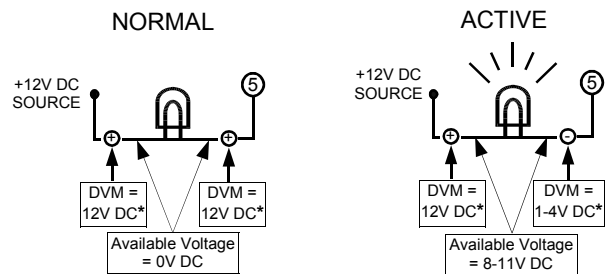
Examples:

1. Wire an LED to Output # 1 (Terminal 5).
2. Wire a light to Output # 3 (Terminal 7).
3. Wire Output # 4 (Terminal 8) to the negative trigger input of a Supplemental communications device.



OPERATION

The GEMC-OUT8 provides 8 "active low" open collector outputs. Each output will provide a "floating" ground for the load device. In a normal state, the output will float at approximately 12VDC relative to ground. When active, the output will drop to a low state of approximately 1-4VDC, effectively providing a ground for the load device, which will then activate. **Note:** In order to measure or test the state of an output, a load must be applied to the output. See Calculating Load Current.



Note: * Voltage measurements are relative to ground (negative DVM lead to module ground).

PROGRAMMING

Use PCD-Windows Quickloader Download software. **Note:** Outputs of the GEMC-OUT8 may not be programmed as SILENCE-ABLE.

CALCULATING LOAD CURRENT

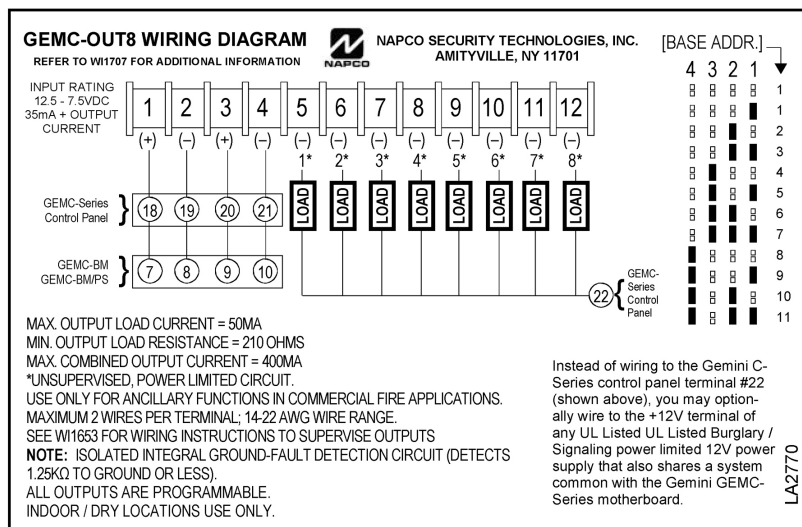
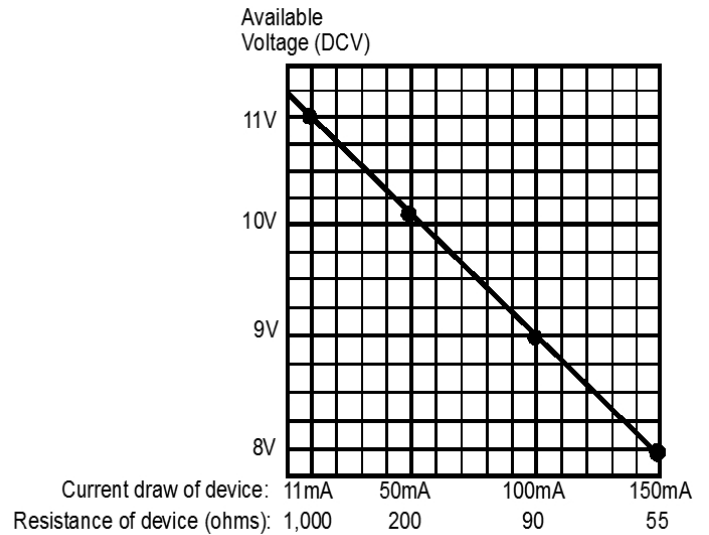
The voltage available to drive each load device is a function of the current draw of the device. This is due to a voltage drop across a 22Ω current limiting resistor in the circuitry of each output. Examples:

- For an output used to activate an LED with a 1000Ω resistor in series, the available voltage is 11V.
- If an output used to activate an strobe light which draws 100mA, the available voltage is 9.1V.

Use the chart at right to calculate the available voltage for the devices to be driven.

Notes:

Values displayed are based on a nominal supply voltage of 12VDC. Ensure that the device to be activated is rated for the calculated available voltage. If an auxiliary power supply is required, the negative terminal of the power supply must be connected to the terminal 2 of the GEMC-OUT8.

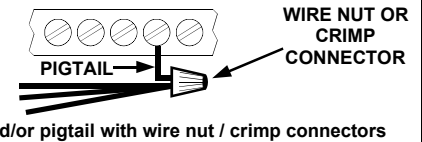
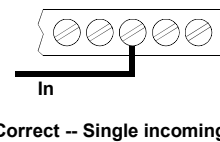
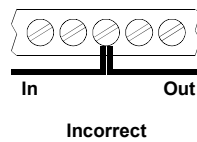


GEMC-OUT8 Wiring Diagram

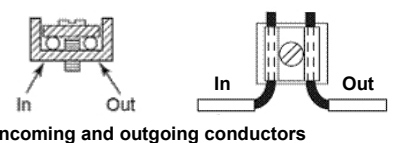
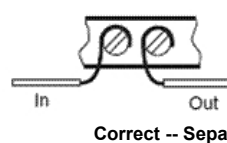
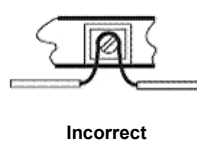
IMPORTANT WIRING METHODS



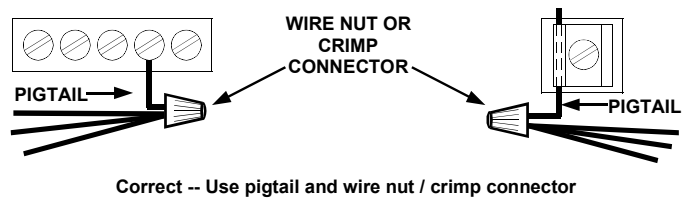
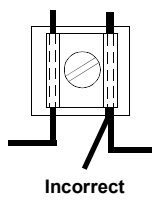
For single-conductor terminal blocks (like the type shown at left), to terminate more than one conductor to a terminal, use the wiring methods shown at right:



For "barrier" type terminal blocks (like the type shown at left), to terminate two conductors to a terminal, use the wiring methods shown at right:



To terminate more than two conductors or conductors of different wire sizes to a terminal, use the "pigtail" type wiring method as shown at right. Use insulated wire for the pigtail, and firmly secure the conductors to the pigtail using an appropriate wire nut or crimp connector for the number and gauge of conductors used.



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