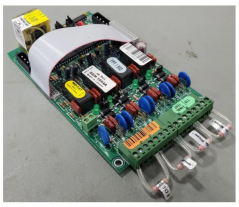
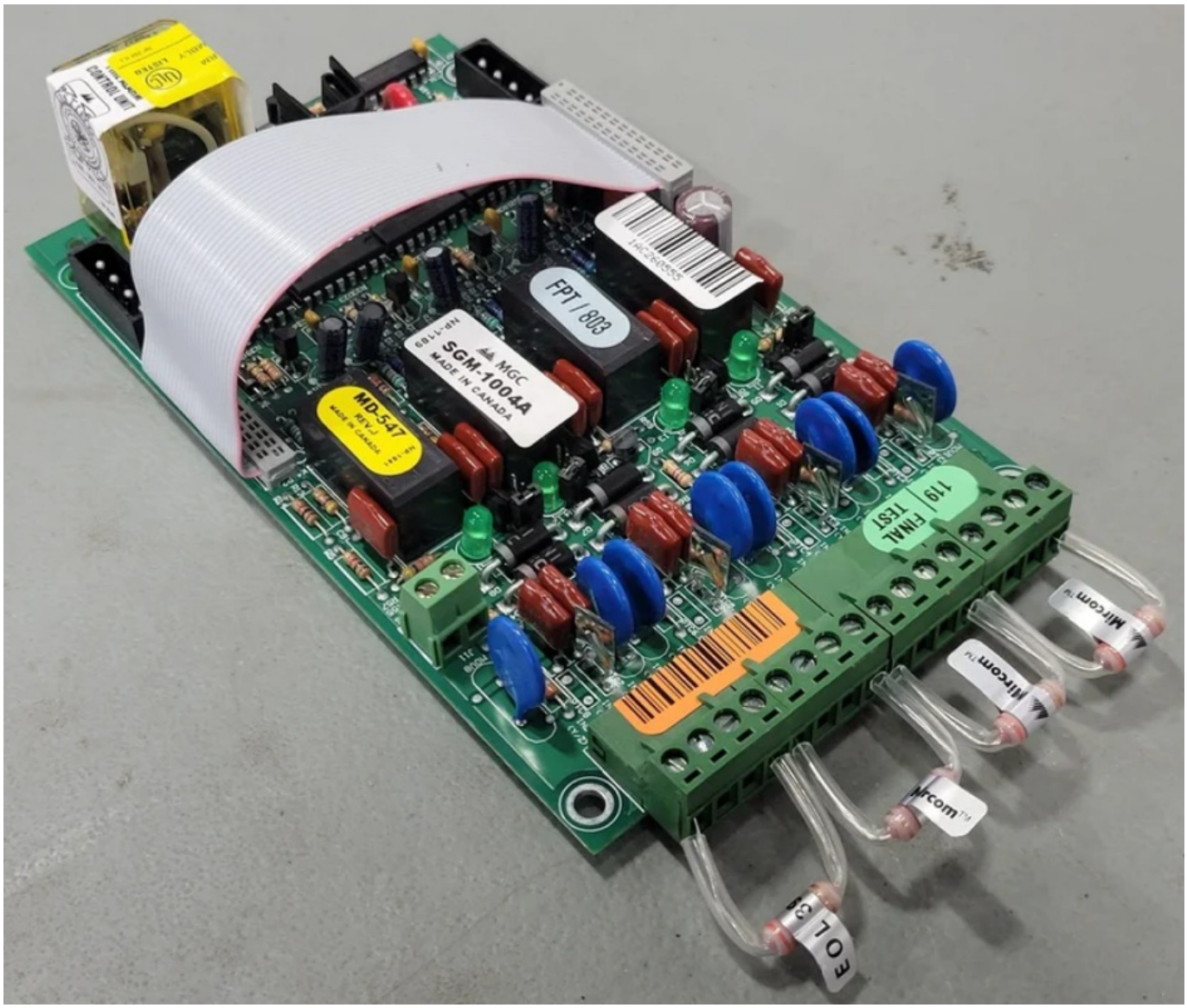


MGC SGM-1004S 4 NAC Output Module Installation Guide

MGC SGM-1004S 4 NAC Output Module



Contents

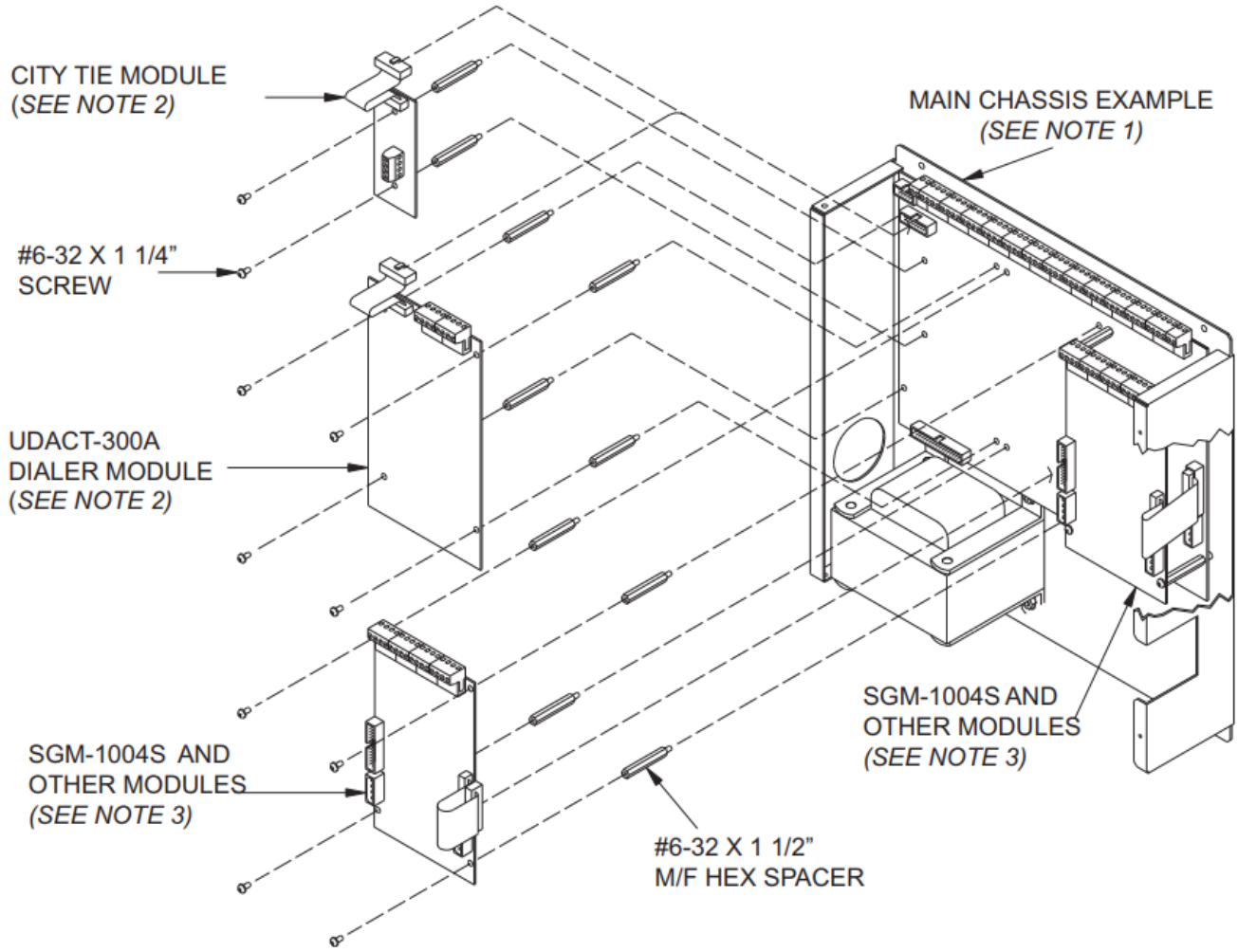
Module Mounting Locations

The SGM-1004S is a 4 NAC output module that provides synchronization and various modes of operation including signal silence mode (silencing audible signals but not visual signals), suite isolator mode, and bell cut mode. A maximum of 3 SGM-1004S can be installed in each node. Each SGM-1004S can provide its own audible and visual synchronization (the four outputs of one SGM-1004S are synchronized).

Mount the SGM-1004S in the same locations as other adder modules. Refer to Figure 1 below for mounting locations.

Note: Only the last circuit adder module should have a jumper plug on its continuity jumper; the continuity jumper on all the other adder modules must be open.

Figure 1 Module Mounting Locations

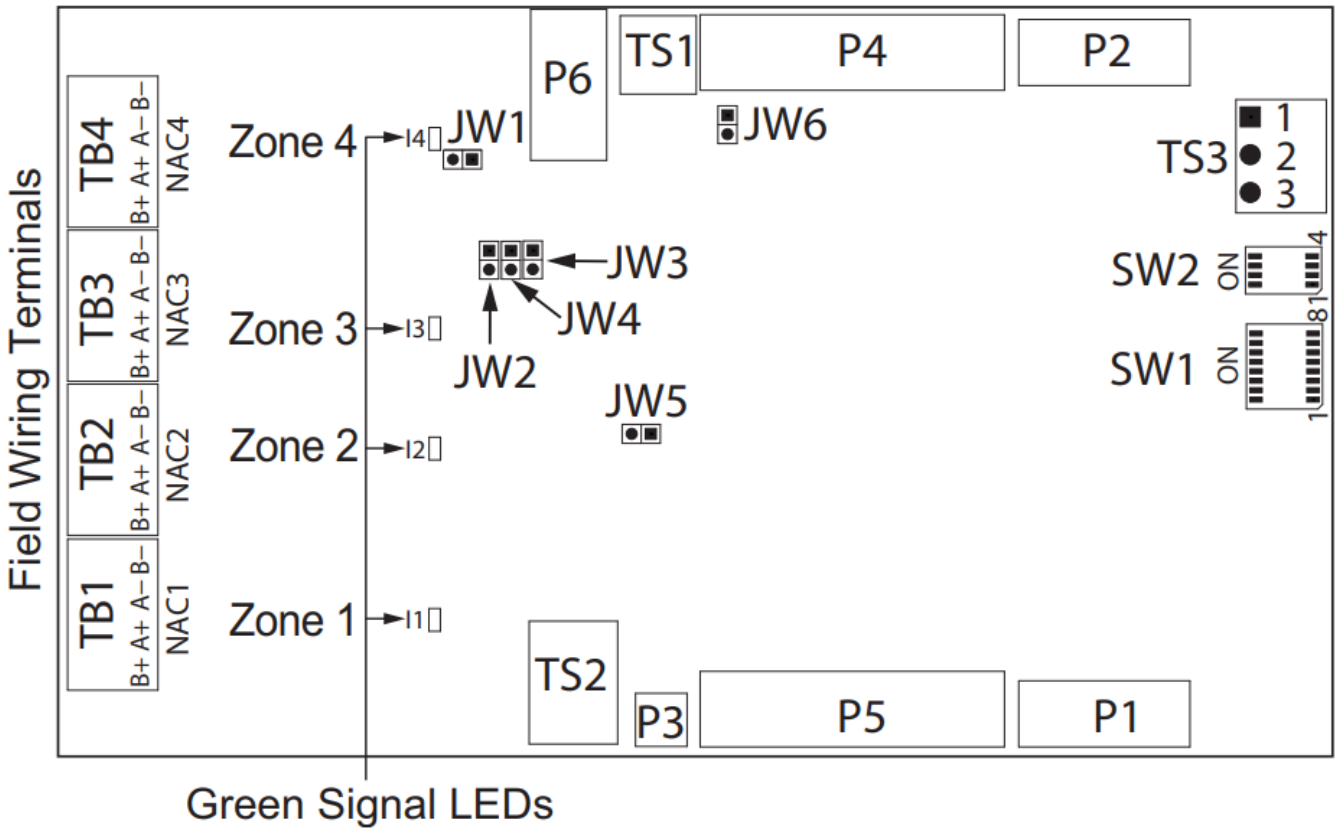


Notes:

1. Front plate is not shown.
2. Position reserved for city tie module or UDACT-300A.
3. Other modules may be: FNC-2000 Network Controller Module, DM-1008A Detection Adder Module, SGM-1004S Signal Adder Module, RM-1008A Relay Adder Module, ALCN792MISO, ALCN-4792MISO, ALCN 960MISO Loop Adder Modules

Terminal and Jumper Locations

Figure 2 Signal Adder Module SGM-1004S



Terminal and Jumper Descriptions

Component	Description
TB1 – TB4	Field wiring terminals
TS1	Connect to an alarm relay (see “Suite Isolator Mode”) or to a bell cut relay (see “Bell Cut Mode”)
TS2	Connect to an output for signal silence (see “Signal Silence Mode”)
TS3	The default is pins 2 and 3 closed. Do not change
P1	Power cable to next adder module
P2	Power cable to P8 on FACP main board (P6 on FA-1000) or to previous adder module
P3	Factory use only
P4	Data cable to P6 on FACP main board (P5 on FA-1000) or to previous adder module
P5	Data cable to next adder module
P6	Factory use only
JW1 – JW4	Jumpers for Suite Isolator Mode. See “Suite Isolator Mode” below
JW5	Watchdog jumper (normally closed)
JW6	Continuity jumper. Closed if this is the last adder module. Remove this jumper if this is not the last adder module installed
SW1	See “DIP Switch 1” below
SW2	See “DIP Switch 2: Bell Cut Select” below

LEDs

There are four green LEDs (labeled I1, I2, I3, I4) on the board, one for each signal zone. The LED illuminates or flashes following the signal rate sent to its zone. It is off when the system is normal and it illuminates when a signal zone is activated. The LED does not reflect what is happening on the signal zone, just that it is receiving data to activate that signal zone.

DIP Switches

DIP Switch 1

	SW1	**SW2**	**SW3**	**SW4**	**SW5**	**SW6**	**SW7**
No sync	OFF	OFF	OFF	OFF			
Mircom/Amseco	**ON**	OFF	OFF	OFF			
Secutron/Gentex	OFF	**ON**	OFF	OFF			
System Sensor	OFF	OFF	**ON**	OFF			
Wheelock	OFF	OFF	OFF	**ON**			
No function					OFF	OFF	
Signal silence					**ON**	OFF	
No function							OFF
Bell Cut							**ON**

Note: Leave SW6 and SW8 OFF.

DIP Switch 2: Bell Cut Select

DIP switch 2	**SW1**	**SW2**	**SW3**	**SW4**
None	OFF	OFF	OFF	OFF
NAC 1	**ON**	–	–	–
NAC 2	–	**ON**	–	–
NAC 3	–	–	**ON**	–
NAC 4	–	–	–	**ON**

Field Wiring

Refer to the field wiring instructions for the SGM-1004A in the respective fire alarm panel manual.
FleX-Net™ FX-4000: LT-894MP, MMX™-4000: LT-894MPSEC, FleX-Net™: LT-894, MMX™: LT-894SEC, FX-2000: LT-657, FA-1000: LT-600, FX-6000MNS-CH: LT-6683
Use the table below for the corresponding SGM-1004S terminal designations.

SGM-1004A	SGM-1004 S NAC1	SGM-1004A	SGM-1004 S NAC2	SGM-1004A	SGM-1004 S NAC3	SGM-1004 A	SGM-1004 S NAC4
Ind 1+ (Y/Z)	B+	Ind 2+ (Y/Z)	B+	Ind 3+ (Y/Z)	B+	Ind 4+ (Y/Z)	B+
Ind 1+ (Z)	A+	Ind 2+ (Z)	A+	Ind 3+ (Z)	A+	Ind 4+ (Z)	A+
Ind 1– (Z)	A–	Ind 2– (Z)	A–	Ind 3– (Z)	A–	Ind 4– (Z)	A–
Ind 1– (Y/Z)	B–	Ind 2– (Y/Z)	B–	Ind 3– (Y/Z)	B–	Ind 4– (Y/Z)	B–

Note:

The terminal blocks are depluggable for ease of wiring.
The SGM-1004S NACs are either all power limited or all non-power limited. See “Synchronization” on page 4.
All power limited circuits must use type FPL, FPLR, or FPLP power limited cable.
See “NAC Ratings” on page 6 for the ratings.

Note:

FleX-Net™ FX-4000, MMX™-4000, FleX-Net™, MMX™, FX-2000: Maximum voltage drop should not exceed 3.3 volts for Class A and 3.7 volts for Class B.
FX-6000MNS-CH: Maximum voltage drop should not exceed 3 volts.
FA-1000: Maximum voltage drop should not exceed 3.3 volts.

Synchronization

Use DIP Switch 1, SW1 to SW4, to set the SGM-1004S to no sync (the panel provides synchronization) or to sync according to a manufacturer’s protocol.
If the panel is set to Temporal 3, and the DIP Switch 1 is set to No sync, then the field wiring terminals are not power-limited. All the field wiring terminals on each SGM-1004S must be either all power-limited or all non-power limited.
If DIP Switch 1 is set to a manufacturer protocol, then the field wiring terminals are power-limited.

! Attention:

If the field wiring terminals are power-limited, attach the included label NP-8308 to the field wiring terminals.
If the field wiring terminals are not power-limited, discard the included label NP-8308.
Maintain a separation of 1/4” (6.4 mm) minimum between power-limited and non-power-limited wiring at all times.
Reserve the left side of the enclosure for all non-power-limited wiring.

Operation

There are four modes of operation for this module.

Basic Mode

The basic mode of operation does not involve any bell cut relay or suite isolators connected to the signal zones, and no signal silence. For this case, leave jumpers JW1, JW2, JW3 and JW4 off, leave SW5, SW6 and SW7 of DIP Switch 1 off, leave the switches of DIP Switch 2 off, and do not connect anything to terminal blocks TS1 or

TS2.

Bell Cut Mode

This mode provides bell cut operation which allows the silencing of bells or horns.

1. Connect TS1 to a bell cut relay (for details see LT-666 QRM-1001 Bell Cut Module Installation and Operating Instructions).
2. Set SW7 of DIP Switch 1 ON.
3. Use DIP Switch 2 to select which of the four NACs will silence its bells and horns when the bell cut relay is active. You can select more than one NAC.

Suite Isolator Mode

This mode is used when suite isolators are connected to the signal circuits.

1. Connect TS1 to a common alarm relay. See Figure 3.
2. Set SW7 of DIP Switch 1 OFF.
3. Place a jumper according to the table below.

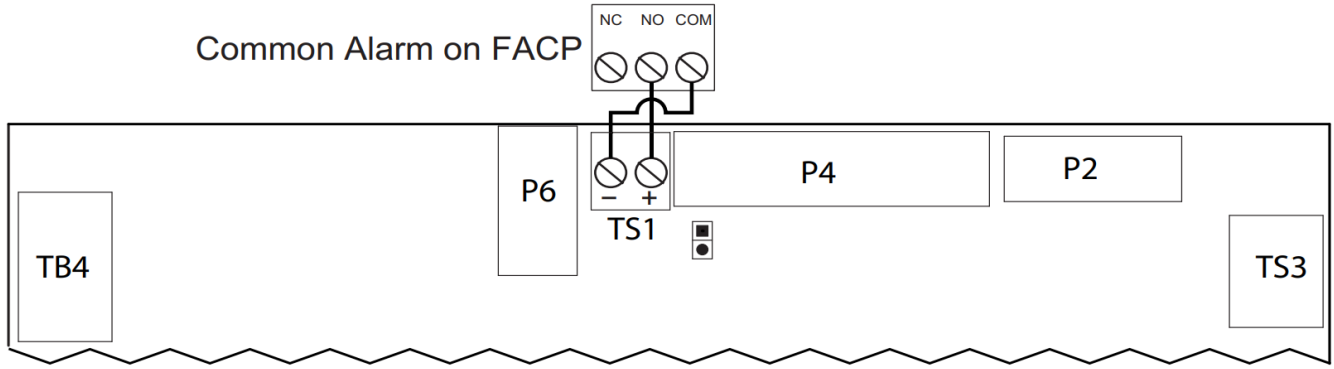
Place jumper on	JW1	JW2	JW3	JW4
If there is a suite isolator on	zone 4	zone 3	zone 2	zone 1

! Attention: Discard jumpers on zones that are not configured for suite isolators.

Refer to LT-875 CSIS-202A Supervised Signal Isolator Module Installation Instructions or LT-879 CSIS-202A1 Supervised Signal Isolator Module Installation Instructions.

For further information on bell cut relays or suite isolators, please refer to the specific fire alarm panel manual or the isolator instruction manual.

Figure 3 Suite Isolator Mode Wiring



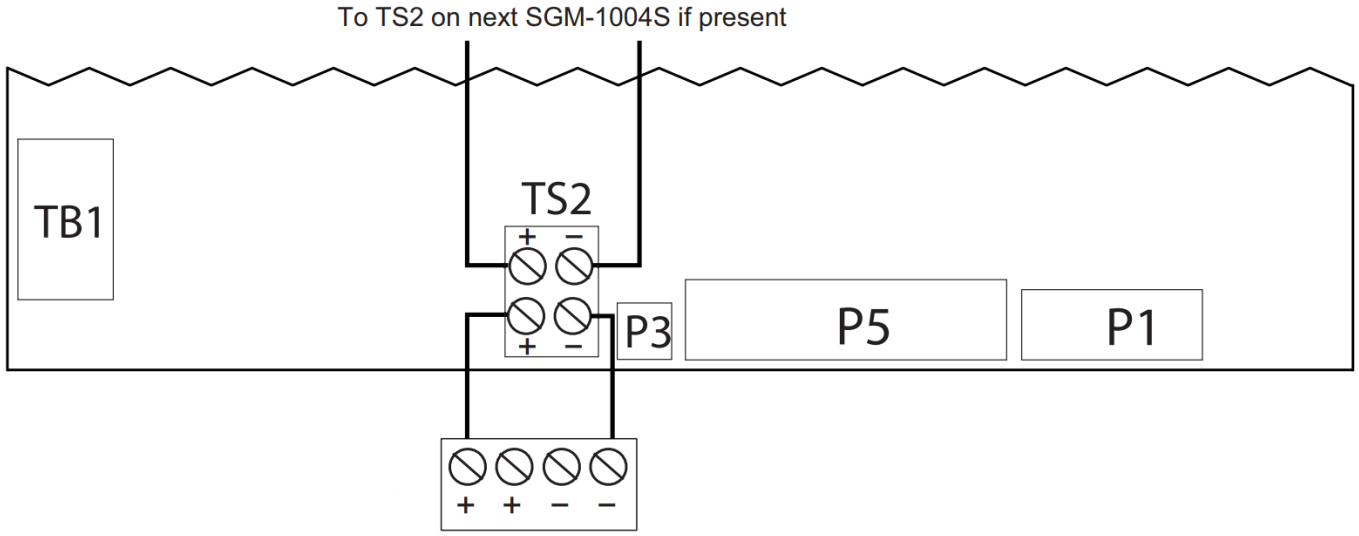
Signal Silence Mode

This mode is used if audible signals are required to be silenced but visual signals should continue to function when signal silence is activated on the panel.

1. Connect TS2 to a NAC output that is configured as a continuous silenceable signal (not strobe). See Figure 4.
2. Configure the NACs on the SGM-1004S that require horns to be silenced as non-silenceable strobes using the panel configurator.
3. Set DIP switch 1 for the strobe manufacturer (see “DIP Switch 1”).
4. Set SW5 of DIP Switch 1 ON.

When signal silence is active, the SGM-1004S changes its output signals from both horns and strobes active to only the strobes active.

Figure 4 Signal Silence Mode Wiring
NAC output on FACP configured as a continuous silenceable signal



NAC Ratings

Regulated 24V DC/FWR for FleX-Net™ series, MMX™ series, FleX-Net™ FX-4000 series, MMX™-4000 series, FX-2000 series (FX-2003-12DS, FX-2017-12ADS, FX-2017S-12ADS, FX-2009-12DS, FX-2009S-12DS, FX-2003-12XTDS only), FA-1000 series (MCC-1024-12A, MCC-1024-12ADS, MCC-1024-12S only). See compatibility documents LT-1023, LT-1023SEC and LT-1007 for more information:

Power limited where applicable: 24V DC/FWR regulated max. 1.7 A @49 °C per NAC circuit max. 5 A per SGM-1004S

Note: The NACs are regulated 24VDC when powered by the batteries, and regulated 24VFWR when powered by the AC mains.

Special application for connecting FHS-400/FH-400/FS-400 series notification appliances to these panels: FleXNet™ series, MMX™ series, FleX-Net™ FX-4000 series, MMX™-4000 series, FX-2000 series (FX-2003-12DS, FX-2017-12ADS, FX-2017S-12ADS, FX-2009-12DS, FX-2009S-12DS, FX-2003-12XTDS only), FA-1000 series (MCC-1024-12A, MCC-1024-12ADS, MCC-1024-12S only). See compatibility documents LT-1023, LT-1023SEC and LT-1007 for more information:
Max. voltage 33V DC/FWR
max. 2.1 A @49 °C per NAC circuit
max. 5 A per SGM-1004S

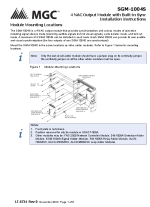
Note: The maximum voltage is 33 VDC when powered by the batteries, and 33 VFWR when powered by the AC mains.

Special application for connecting FHS-400/FH-400/FS-400 series notification appliances to FX-6000MNS-CH. See compatibility document LT-1023 for more information:
Max. voltage 33V DC
max. 2.1 A @49 °C per NAC circuit
max. 5 A per SGM-1004S

Current Consumption

Standby: 31 mA
Alarm: 96 mA

Documents / Resources

	MGC SGM-1004S 4 NAC Output Module [pdf] Installation Guide SGM-1004S, SGM-1004S 4 NAC Output Module, 4 NAC Output Module, Output Module, Module

References

- User Manual