


# ZC Series

## MXLV Speaker/ Non-Coded N.A.C. Circuit Cards (ZC1-8B, ZC2-8B, ZC2-4AB, ZC3-4AB)

## Power Limiting Option Modules (PLC-4, PL864-25A, PL864-70A, PL864-25S)

### ENGINEER AND ARCHITECT SPECIFICATIONS

- Fully Supervised Notification Appliances
- Speaker, Strobe, Non-Coded Horns, Chimes
- Style Y or Style Z (Class A or B)
- Fully Mappable and Controllable
- 70V or 25V Audio Signal Capability on Each Card
- 1, 2, or 3 Audio Channel versions
- Plugs into OMM-1 or OMM-2 Cardcage
- Optional Power Limiting Modules (U.L. 864)
-  Listed, U.L.C. Listed

### Description

The ZC Cards are a series of optional MXLV modules which provide various configurations of notification appliance circuits, such as speaker, strobe, non-coded horn, bells or chimes.

There are versions of the ZC cards that allow the selection of single, dual or three channel audio operation, as well as Style Y or Style Z zone configuration options. All of the ZC cards can support either 25V or 70V audio signals. 24VDC polarity reversal type circuits can also be used for strobe, horn, chime or bell applications.

The ZC cards zones are individually fused but not power limited. When power limiting is required, the PLC-4 card and appropriate PL864 modules must be provided to meet U.L. 864 power limiting requirements.

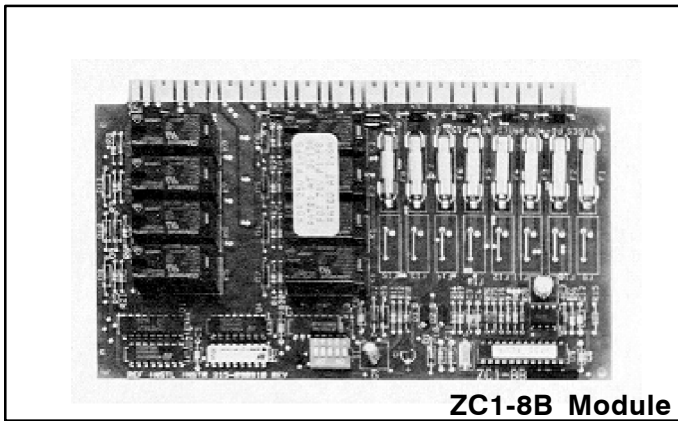
The ZC cards plug into a slot in either the OMM-1 or OMM-2 cardcages. Each ZC card occupies one of the eleven available sub-module addresses of the MXLV's OCC-1 controller module. The zones are completely configurable and mappable using MXL's AccuLINK programming software (CSGM). These outputs are fully supervised and are controllable automatically through MXL's control by event logic or manually via the VSM-1 switch modules in the MXLV command console.

ZC series cards may be used in non-MXLV applications for use as non-coded NAC circuits.

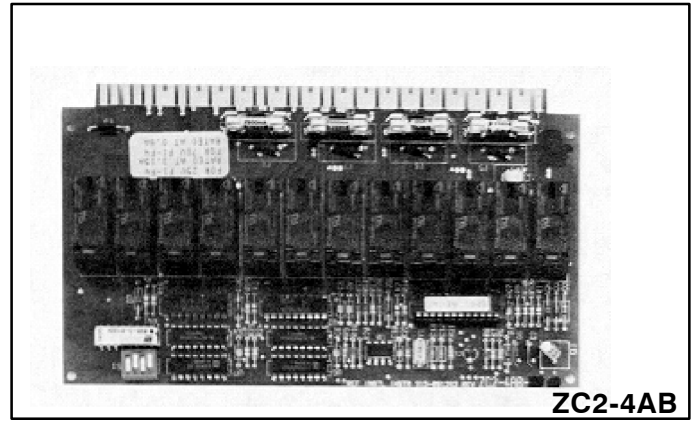
This equipment is approved for operation over the temperature range of 0°C to 49°C.

### **ZC1-8B - 1 Channel audio (25V or 70) / Strobe Zone Card**

The ZC1-8B is a plug in speaker or strobe zone card. It plugs into a slot in either the OMM-1 or OMM-2 cardcages. ZC1-8B contains (8) class B speaker or strobe circuits. The (8) zones can be divided into groups of 3,3, and 2; where each group can be either strobe or speaker circuits. Strobe circuits are limited to 1.8 amps @24VDC each. When used for 25V speaker circuits, each zone is rated at 45 Watts maximum. When used for 70V speaker circuits, each zone is rated at 70 Watts maximum. The maximum ZC1-8B card (all zones) wattage is 300 watts. For applications that require high speaker loads on a single zone, ZC1-8B cards are capable of up to (3) 100 Watt, 70V speaker zones when audio is supplied by (3) separate EL-410D amplifiers. For strobe or non-coded horn applications, the ZC1-8B card (all zones) is rated for a maximum card load of 14.4 amps @24Vdc. If power limiting of zones are required the PLC-4 and the appropriate PL864 (PL864-25A, PL864-70A, PL864-25S) current limiting module(s) is required.



**ZC1-8B Module**



**ZC2-4AB**

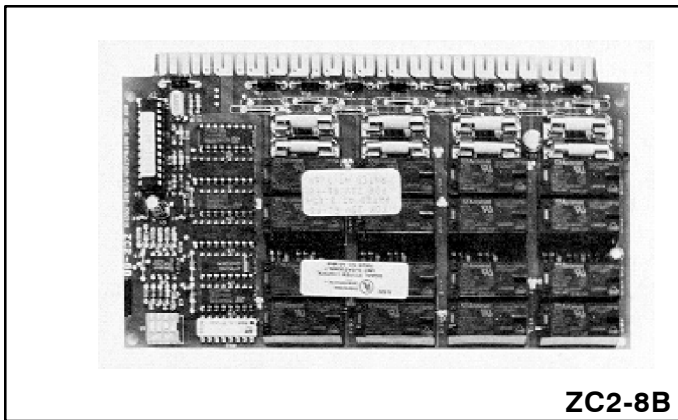
### **ZC2-8B - 2 Channel Audio (25V or 70V) Zone Card**

The ZC2-8B is a plug in 25V or 70V speaker zone card. It plugs into a slot in either the OMM-1 or the OMM-2 cardcage. ZC2-8B contains (8) Class B dual channel speaker circuits . When used for 25V speaker circuits, each zone is rated at 45 Watts maximum. When used for 70V speaker circuits, each zone is rated at 70 Watts maximum. The ZC2-8B total speaker load (wattage total for all zones) maximum is 100 Watts. For applications that require high speaker loads on a single zone, the ZC2-8B is capable of a single 100 Watt , 70V audio zone. If power limiting of zones is required the PLC-4 and the appropriate PL864 (PL864-25A, PL864-70A,

70A, PL864-25S) current limiting module(s) are required.

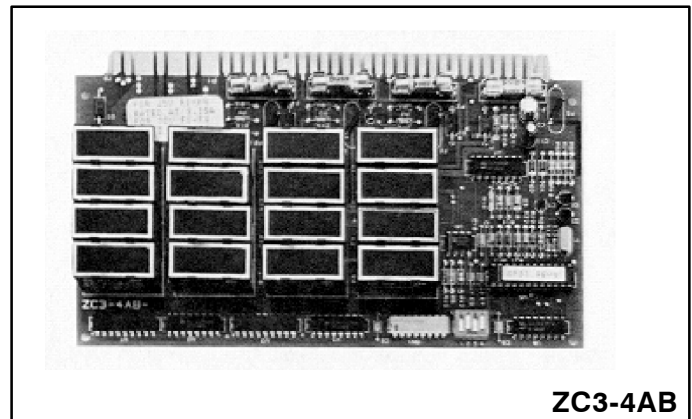
### **ZC3-4AB - 3 channel audio (25V or 70V) / Strobe Zone card**

The ZC3-4AB is a plug in speaker or strobe zone card. It plugs into either the OMM-1 or the OMM-2 cardcage. The ZC3-4AB contains (4) class A or class B three channel speaker circuits or Class A or B strobe circuits. Strobe/non-coded horn circuits are limited to 1.8 amps @24VDC each. When used for 25V speaker circuits, each zone is rated at 45 Watts maximum. When used for 70V speaker circuits, each zone is rated at 70 Watts maximum. The ZC3-4AB total speaker load (wattage total for all zones) maximum is 100 Watts. For applications that require high speaker loads on a single zone, the ZC3-4AB is capable of a single 100 Watt , 70V audio zone. If power limiting of zones is required the PLC-4 and the appropriate PL864 (PL864-25A, PL864-



**ZC2-8B**

PL864-25S) current limiting module are required.



**ZC3-4AB**

### **ZC2-4AB - 2 Channel audio (25V or 70V) / Strobe Zone card**

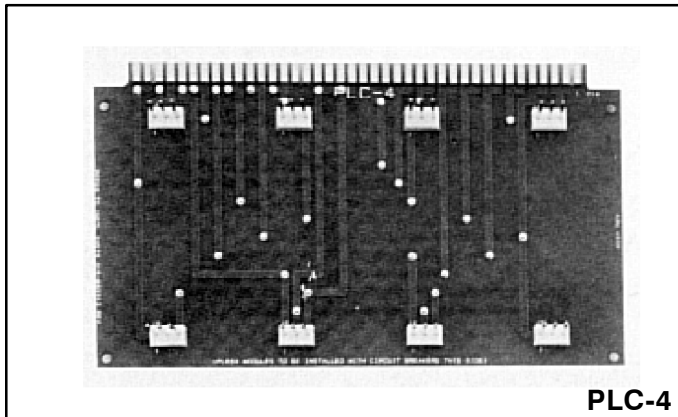
The ZC2-4AB is a plug in speaker or strobe zone card. It plugs into either the OMM-1 or the OMM-2 cardcage. The ZC2-4AB contains (4) class A or class B dual channel speaker circuits or Class A or B strobe circuits. Strobe/non-coded horn circuits are limited to 1.8 amps @24VDC each. When used for 25V speaker circuits, each zone is rated at 45 Watts maximum. When used for 70V speaker circuits, each zone is rated at 70 Watts maximum. The ZC2-4AB total speaker load (wattage total for all zones) maximum is 100 Watts. For applications that require high speaker loads on a single zone, the ZC2-4AB is capable of a single 100 Watt , 70V audio zone. If power limiting of zones is required the PLC-4 and the appropriate PL864 (PL864-25A, PL864-

Module	Audio Channels	Output Circuits	Zone Style	Audio Rating	Use
ZC1-8B	1	8	Y	25V or 70V	Speaker and/or strobe/horn
ZC2-8B	2	8	Y	25V or 70V	Speaker or strobe/horn
ZC2-4AB	2	4	Y or Z	25V or 70V	Speaker or strobe/horn
ZC3-4AB	3	4	Y or Z	25V or 70V	Speaker or strobe/horn

70A, PL864-25S) current limiting module are required.

#### PLC-4 Power Limiting Card

The PLC-4 is a plug in audio signal and 24Vdc power limiting option card. It plugs into a slot in either the OMM-1 or the OMM-2 cardcages. The PLC-4 has four available slots for mounting of the appropriate power limiting circuit modules (PL864-25A, PL864-70A, PL864-25S) . If power limiting of speaker or strobes zones on

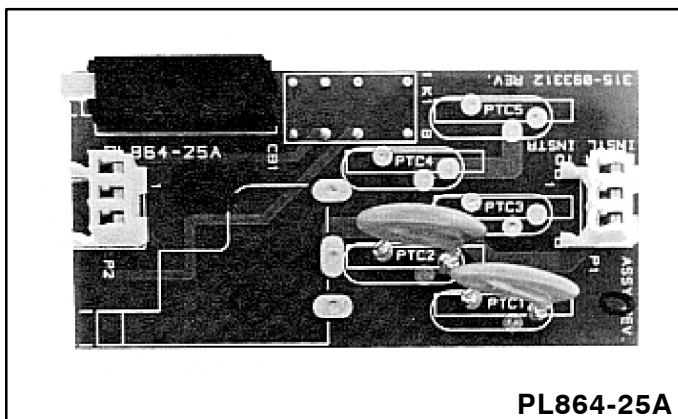


**PLC-4**

an MXLV system are required, the PLC-4 card must be used with the appropriate PL864 modules.

#### PL864-25A 25 Volt Audio Signal Power Limiting Module

The PL864-25A mounts on one of the four available slots on the PLC-4 card. When power limited 25 volt speaker zones are required on any versions of the

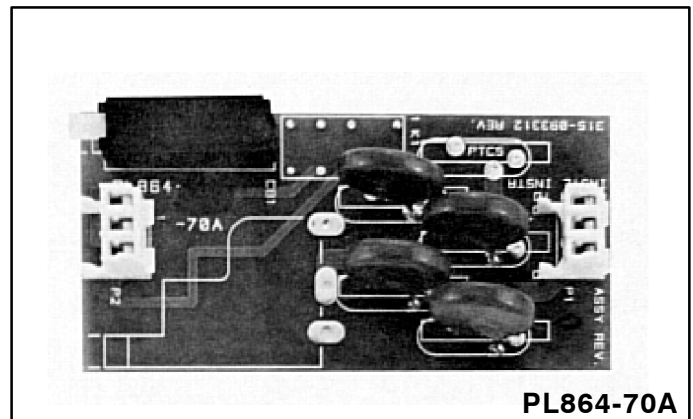


**PL864-25A**

MXLV zone cards (ZC1-8B, ZC2-8B, ZC2-4AB, ZC3-4AB), one PL-864-25A is required per EL-410D amplifier.

#### PL864-70A 70 Volt Audio Signal Power Limiting Module

The PL864-70A mounts on one of the four available slots on the PLC-4 card. When power limited 70 volt speaker zones are required on any versions of the

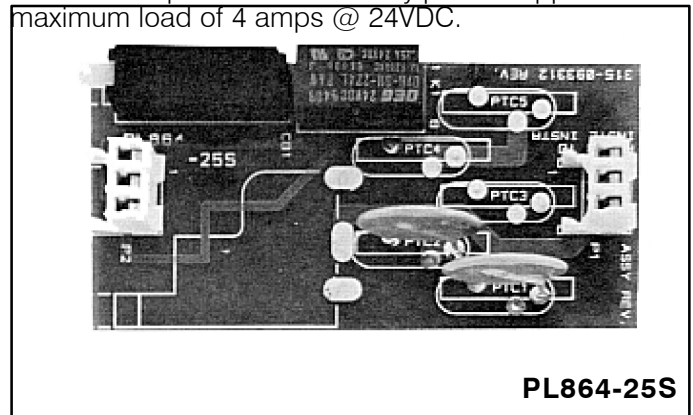


**PL864-70A**

MXLV zone cards (ZC1-8B, ZC2-8B, ZC2-4AB, ZC3-4AB), one PL-864-70A is required per EL-410D amplifier.

#### PL864-25S 24 Volt D.C. Strobe Circuit Auxiliary Power Supply - Power Limiting Module

The PL864-25S mounts on one of the four available slots on the PLC-4 card. When power limited strobe zones are required on any versions of the MXLV zone cards (ZC1-8B, ZC2-8B, ZC2-4AB, ZC3-4AB), one PL-864-25S is required for each auxiliary power supply. The PL-864-25S power limits auxiliary power supplies to a maximum load of 4 amps @ 24VDC.



**PL864-25S**

### Ordering Information

Model	Description	Part Number
ZC1-8B	Single Channel Audio / Strobe Zone Card (8 Class B Zones)	500-893957
ZC2-8B	Dual Channel Audio / Strobe Zone Card (8 Class B Zones)	500-893959
ZC2-4AB	Dual Channel Audio / Strobe Zone Card (4 Class A or B Zones)	500-893961
ZC3-4AB	Three Channel Audio / Strobe Zone Card (4 Class A or B Zones)	500-893963
PLC-4	Power Limited Card	500-893310
PL864-25A	25V Audio Power Limiting Module	500-893308
PL864-70A	70V Audio Power Limiting Module	500-893309
PL864-25S	24VDC Strobe Circuit P.S. Power Limiting Module	500-893761

# Compatible Notification Appliances

Horns / Horn Strobes			Speaker / Strobes	Low Profile Speakers	Low Profile Speaker / Strobes	Electro-Mech Horns	Electro-Mech Horns / Strobes
(3-Tone)	(8-Tone)	Strobes					
MC-F MC-S MC-C MC-S15-F MC-S15-S MC-S15-C MC-S17-F MC-S17-S MC-S17-C MC-S75-F MC-S75-S MC-S110-F MC-S110-S	MT-F MT-S MT-C MT-S15-F MT-S15-S MT-S15-C MT-S17-F MT-S17-S MT-S17-C MT-S75-F MT-S75-S MT-S110-F MT-S110-S	S15-FS S15-F S15-S S17-FS S17-F S17-S S75-FS S75-F S75-S S110-FS S110-FS S110-S	SH70-S15-F SH70-S15-S SH70-S15-C SH25-S15-F SH25-S15-S SH25-S15-C SH70-S17-F SH70-S17-S SH70-S17-C SH25-S17-F SH25-S17-S SH25-S17-C SH70-S75-F SH70-S75-S SH25-S75-F SH25-S75-S SH70-S110-F SH70-S110-S SH25-S110-F SH25-S110-S	SL25-F SL70-F SL25-S SL70-S SL25-C SL70-C	SL70-S15-F SL70-S15-S SL70-S15-C SL25-S15-F SL25-S15-S SL25-S15-C SL70-S17-F SL70-S17-S SL70-S17-C SL25-S17-F SL25-S17-S SL25-S17-C SL70-S75-F SL70-S75-S SL25-S75-F SL25-S75-S SL70-S110-F SL70-S110-S SL25-S110-F SL25-S110-S	HN-F HN-S HN-C HNH-F HNH-S HNH-C HNH-EP HNH-EP	HN-S15-F HN-S15-S HN-S15-C HNH-S15-F HNH-S15-S HNH-S15-C HN-S17-F HN-S17-S HN-S17-C HNH-S17-F HNH-S17-S HNH-S17-C HN-S75-F HN-S75-S HNH-S75-F HNH-S75-S HN-S110-F HN-S110-S HNH-S110-F HNH-S110-S
<b>Electronic Slow Whoop</b>	<b>Electronic S.W. / Chime</b>	<b>Vibrating Bells</b>	<b>Electronic Horns (Single Tone)</b>	<b>Electronics Horns (Single Tone w/ Strobe)</b>	<b>Chimes</b>	<b>Chimes / Strobes</b>	<b>Tri-Horn</b>
EW-F EW-S EW-C	EW-S15-F EW-S15-S EW-S15-C EW-S17-F EW-S17-S EW-S17-C EW-S75-F EW-S75-S EW-S110-F EW-S110-S	BT-F BE-F BS-F BF-F BT-LC BE-LC BS-LC BF-LC	EH-F EH-S EH-C	EH-S15-F EH-S15-S EH-S15-C EH-S17-F EH-S17-S EH-S17-C EH-S75-F EH-S75-S EH-S110-F EH-S110-S	EC-F EC-S EC-C CH-F	EC-S15-F EC-S15-S EC-S15-C EC-S17-F EC-S17-S EC-S17-C EC-S75-F EC-S75-S EC-S110-F EC-S110-S	TTH

## ZC1-8B Electrical Ratings

- Maximum wire size: 14 AWG twisted pair\*
- Minimum wire size: 18 AWG twisted pair\*
- Maximum loop resistance: Total Resistance for Each Zone  
70.7V RMS: 6.5 ohms max, 25W (0.35A)  
3.25 ohms max, 50W (0.71A)  
2.28 ohms max, 70W (1.0A)  
1.63 ohms max, 100W (1.4A)  
25.2V RMS: 3 ohms max, 37.5W (1.5A)  
2.5 ohms max, 45W (1.8A)
- Inputs Speaker 25.2 or 70.7V RMS  
Strobe 24 VDC
- Outputs Supervisory 1.5 VDC, 0.06mA  
Activated 25.2V RMS/24VDC, 45W max, 1.8A max  
70.7V RMS, 70W max, 1.0A max
- Fuses 25V 3.15A, 250V (P/N 105-291200)  
70V 1.6A, 250V (P/N 105291202)
- End of Line Resistor: 24K, ½W, ±5% (P/N 140-820405)
- Max card Output<sup>2</sup>: 25.2V RMS, 3.9A, 100W  
(Single source for 70.0V RMS, 1.4A, 100W  
all three inputs) 24 VDC, 7.2A, 180W

\* Use shielded wiring on strobe circuits when they are in the same raceway as audio wiring.  
<sup>2</sup> For separate sources for each of the three inputs, refer to the appropriate wiring diagram.

## ZC2-8B, ZC2-4AB, ZC3-4AB Electrical Ratings

- Maximum wire size: 14 AWG twisted pair\*
- Minimum wire size: 18 AWG twisted pair\*
- Maximum loop resistance: Total Resistance for Each Zone  
70.7V RMS: 6.5 ohms max, 25W (0.35A)  
3.25 ohms max, 50W (0.71A)  
2.28 ohms max, 70W (1.0A)  
1.63 ohms max, 100W (1.4A)  
25.2V RMS: 3 ohms max, 37.5W (1.5A)  
2.5 ohms max, 45W (1.8A)
- Inputs Speaker 25.2 or 70.7V RMS  
Strobe 24 VDC, 3 ohms max (1.5A)  
2.5 ohms max (1.8A)
- Outputs Supervisory 1.5 VDC, 0.06mA  
Activated 25.2V RMS/24VDC, 45W max, 1.8A max  
70.7V RMS, 70W max, 1.0A max
- Fuses 25V 3.15A, 250V (P/N 105-291200)  
70V 1.6A, 250V (P/N 105291202)
- End of Line Resistor: 24K, ½W, ±5% (P/N 140-820405)
- Max card Output: 25.2V RMS, 3.9A, 100W  
70.0V RMS, 1.4A, 100W

\* Use shielded wiring on strobe circuits when they are in the same raceway as audio wiring.



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