



50W 24VDC 100VRMS Line Amplifier (EVAC50W24V)

Head Office

Wellington

PO Box 35-063
Naenae, 5011
Lower Hutt
17 Eastern Hutt Rd
Wingate
Lower Hutt 5019
Tel (04) 567-3229
Fax (04) 567-3644

www.pertronic.co.nz

sales@pertronic.co.nz
tech@pertronic.co.nz

Auckland Office

PO Box 15-867
New Lynn
Auckland 0640
359 Onehunga Mall
Onehunga
Auckland 1061
Tel (09) 633-0226
Fax (09) 633-0228



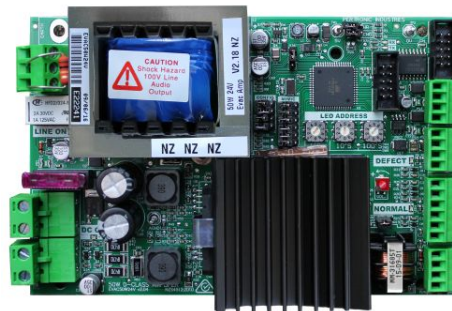
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Product Overview:

The Pertronic 50W Amplifier (**EVAC50W24V**) is an evacuation amplifier with integral evacuation tone and message generator also including fault detection. It is designed for use in emergency warning systems with supervised 100 Volt Line distribution systems. The amplifier delivers up to 50 Watts of audio power to the 100 Volt line. The **EVAC50W24V** is capable of generating up to three pre-configured tones.

Features:

- ▶ Generates the 'Alert' and 'Evacuation' tones with verbal messages as specified by NZS 4512:2010
- ▶ Any of the standard tones may be replaced with one of 47 custom tones, which may be programmed by using the LED base address dials and program mini-jumpers
- ▶ Capable of driving up to 50 W into connected 100V PA loud speakers, eg. Pertronic PSS1, PSSB401 and PSSB501
- ▶ The 100 Vrms output line is overload and short-circuit protected and is monitored by the amplifier circuit with the status transmitted to the panel
- ▶ Designed for flexibility of operation. All amplifier operations may be controlled through the connected panel RS485 mimic line, or alternatively, may be controlled through a set of signal (BELL) inputs
- ▶ May be powered directly from the panel power supply or from a separate DC source
- ▶ When not active (100 V line monitoring only) the amplifier draws less than 30 mA of current
- ▶ An optional microphone input board is available which can be used for public address (PA) or 'Fire Microphone' operation



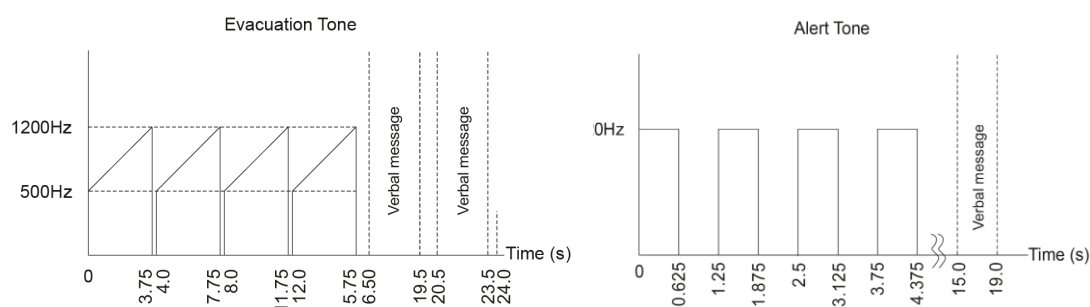
**Pertronic 50W, 24V Amplifier
EVAC50W24V**

Specifications:

Electrical:	Operating Voltage 19.2 to 28.8 Vdc Reference 27.4 Vdc	Quiescent Current 30 mA @ 27.4 Vdc RS485 control: additional 15 mA @ 27.4 Vdc	Alarm Current 2.5 A @ 27.4 Vdc - with 50 Wrms load
Power Output	50 W @ 100 Vrms Line : 27.4 Vdc Supply - overload and short-circuit protected		
Environmental:	Operating Temperature Range 0 to 30 °C		Humidity 10 to 95 % RH (non-condensing)
Mechanical: Board Dimensions Mounting Hole Patten	Dimensions 151 x 98 x 50 (L x W x D mm) 130 x 89 (L x W mm)		Weight 600 g

- ▶ Monitoring: Monitored for open and short-circuit and overload (10 kΩ, 2 W EOL resistor)
- ▶ Tones: 47 tones available including Evacuation, Alert tones and voice messages, as specified by NZS 4512:2010 (refer to addendum)
- ▶ Programmed: Uses the LED base address dials and program mini-jumpers

NZS 4512:2010 Tone Characteristics:



Product Codes	Description
EVAC50W24V	EVAC Amplifier, 50W 24V, SMD version
EVAC50PREA	Pre-Amp (Mic I/P) for EVAC50W24V Amplifier, SMD version

RS485 Operation: Addressed as an LED Mimic Display - select address 1 - 8.

Set LED number 'n' for Evacuation operation:

LED number switches n = 1 to 253 - **F100 Panel**;

n = 1 to 510 - **F120 Panel**.

When activated: LED 'n' will activate the Evacuation Tone.

LED 'n+1' will activate the Alert Tone.

LED 'n+2' will activate the selected Custom Tone.

Operation of 'Trial Evacuation' or 'Bells On' at the panel will activate the Evacuation tone and message.

Operation of 'BCO' or 'Warning System Isolate' at the panel will silence the amplifier.

When **BELL IN** is activated:

EVAC IN will activate the Evacuation Tone.

ALERT IN will activate the Alert Tone.

CUSTOM IN will activate the selected Custom Tone - these inputs are prioritised.

BELL OUT may be connected to the **BELL IN** terminals of other 50W amplifiers.

The last **BELL OUT** terminal of a single or chain of amplifiers is terminated with a 10 kΩ EOL resistor.

Global Controls: **EVAC SWITCH input:** when active, the Evacuation Tone is activated.

EVAC ALWAYS link: when inserted, all amplifier activations will produce the Evacuation Tone.

CUSTOM TONE SELECT jumpers: two jumpers (ENG and WR) used to configure the output tones.

100V Line Monitoring: 100 V line monitoring faults are transmitted to the fire alarm panel in two ways:

i) A defect message via the RS485 bus

ii) Unbalancing the panel Bell circuit, causing a 'Bell' defect at the panel

A 10 kΩ 2 W EOL resistor is used as the end-of-line device

Defect Conditions:

(i) DC Power missing

(ii) DC power off normal

(iii) 100 V 10 kΩ EOL defect

(iv) RS485 Communication defect

(v) Amplifier overload

Indicators:

(i) **DC ON LED:** Turns ON when power is supplied to the amplifier

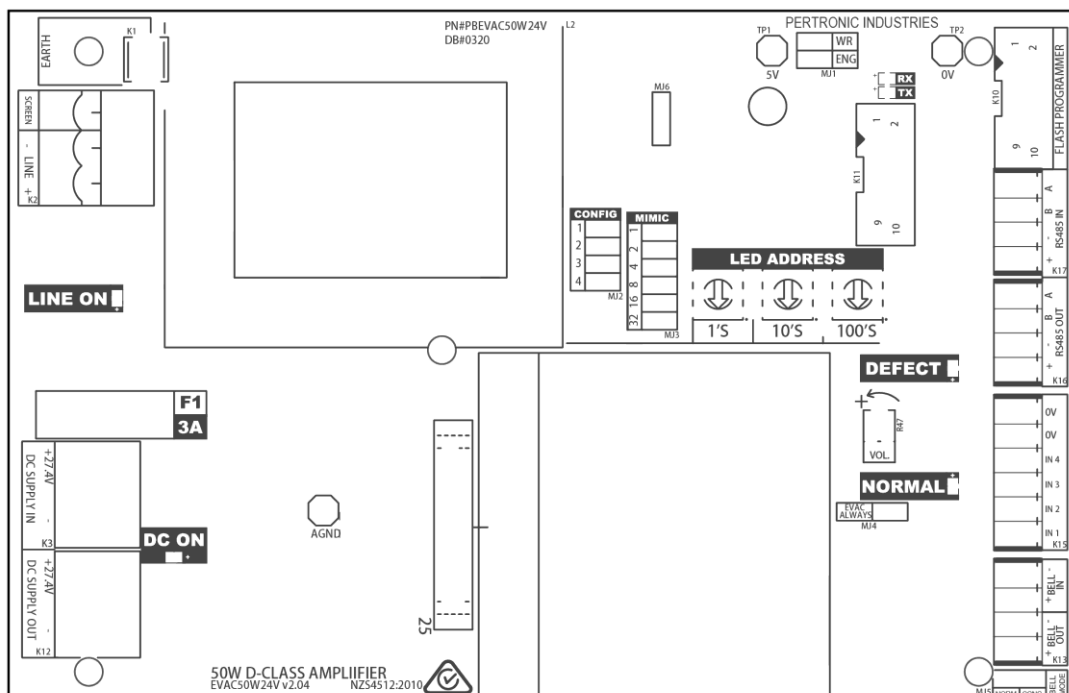
(ii) **Defect LED:** Turns ON when a defect occurs

(iii) **RX LED:** Turns ON when the amplifier is polled via the RS485 connection

(iv) **TX LED:** Turns ON when the amplifier replies via the RS485 connection

(v) **Line ON LED:** Turns ON when the amplifier 100 Vrms line is activated

50W Amplifier Layout and Terminals:



PERTRONIC INDUSTRIES LTD

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Tel (09) 633-0226 Fax (09) 633-0228

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