



50W 24Vdc 100V-Line Amplifier

EVAC50W24V

Head Office

Wellington

PO Box 35-063
Naenae
17 Eastern Hutt Rd
Wingate
Lower Hutt
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 0640
359 Onehunga Mall
Onehunga
Auckland
Tel (09) 633-0226
Fax (09) 633-0228

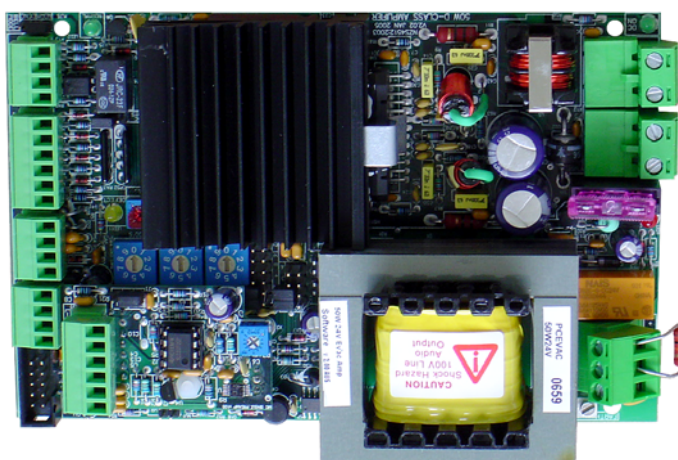


ISO 9001: 2000

International Standards
Certifications
QAC/R61/0051

Product Overview:

- The EVAC50W24V is one of a range of 100V-Line Amplifiers manufactured by Pertronic Industries.
- Generates the 'Alert' and 'Evacuation' tones with verbal messages as specified by NZS4512:2003.
- Any of the standard tones may be replaced with one of 43 custom tones, which may be programmed by using the LED base address dials and program mini-jumpers.
- Capable of driving up to 50W (27.4Vdc supply) into connected 100V PA loud speakers, eg. Pertronic PSS1, PSSB401 and PSSB501.
- The 100Vrms 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 (100V line monitoring only) the amplifier draws less than 35mA of current.
- An optional microphone input board is available which can be used for public address (PA) or 'Fire Microphone' operation.



Specifications:

Mechanical:

Board Dimensions PCB: 150 x 97mm. Height 50mm from bottom of PCB.
Mounting Holes: 130 x 89mm.

Electrical:

Operating voltage: 20 - 29Vdc, nominal 27.4Vdc
Quiescent current Bells: 30mA RS485: <30mA @ 27.4Vdc
Operating Current: 2.5A @ 27.4Vdc nominal with 50W load.
Power Output: 50W @ 100V line: 27.4Vdc supply – overload and short-circuit protected

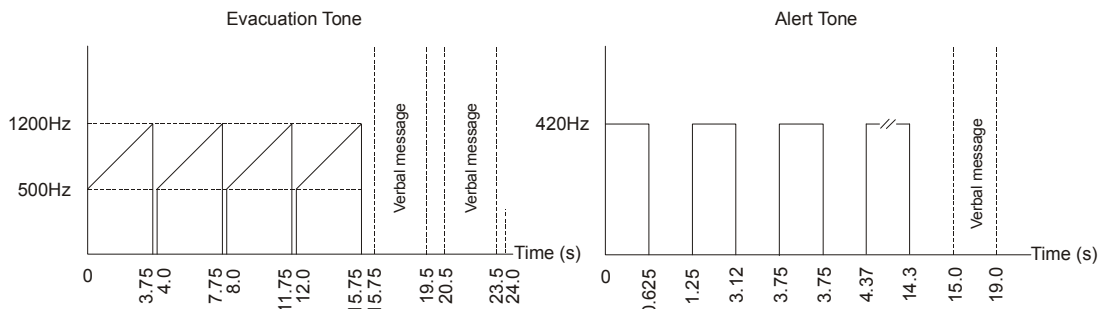
Monitoring:

Fully monitored for open, short circuit or overload (10kΩ, 1W EOL resistor)

Tones:

42 tones available including Evacuation, Alert tones and voice messages, as specified by NZS4512:2003 (refer to addendum). Programmed by using the LED base address dials and program mini-jumpers.

NZS4512:2003 Tone Characteristics:



Product Codes:

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

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 10kΩ 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: 100V line monitoring faults are transmitted to the fire alarm panel in two ways:
 i) A fault message via the RS485 bus.
 ii) Unbalancing the panel Bell circuit, causing a 'Bell' fault at the panel.
 A 10kΩ 1W EOL resistor is used as the end-of-line device.

Fault Conditions:
 (i) DC Power missing.
 (ii) DC power off normal.
 (iii) 100V 10kΩ EOL fault.
 (iv) RS485 Communication fault.
 (v) Amplifier overload.

Indicators:
 (i) **DC ON LED:** turns ON when power is supplied to the amplifier.
 (ii) **Fault LED:** Turns ON when a fault 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 100Vrms line is activated.

50W Amplifier Layout and Terminals:

