

Voice-Activated Relay

Model VAR1



Description The **VAR1** is a relay device that monitors audio activity over a wide range of input voltages and operates two sets of C-Form relay contacts in response to detected activity. The VAR1 can be used to detect voltages as low as signals directly from a microphone or as high as signals from 70V speaker systems. A low-level output of the detected audio, transformer-isolated from the input, is also made available for use with other equipment. The VAR1 can also be used as a balanced, low-impedance microphone pre-amp. The VAR1 is ideally suited to provide a set of contact closures for paging ports of lower cost telephone systems that do not have a set of AUX contacts to trigger paging equipment. An adjustable release delay (up to 25 seconds) keeps the paging system from dropping out in the middle of a page.

- Features**
- Monitors audio activity over a wide range of input voltages
 - Two sets of C-Form (both N.O. and N. C.) relay contacts respond to audio activity
 - Four levels of signals: microphone, 600-ohm line, 25V, and 70V speaker systems
 - Built-in balanced, low noise, high gain microphone pre-amp
 - Transformer-isolated, 600-ohm small signal level output of detected audio available
 - Works with self-amplified or central-amplified paging systems
 - Separate microphone pre-amp gain control
 - Adjustable release delay: 0.25s to 25s
 - Trigger threshold adjustment
 - Relay active indicator light
 - Accessories: PRS40C 12V DC Power Supply (sold separately)

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**Technical
Specifications**

LINE INPUT

Impedance: 600 ohms
Frequency Response: 100 Hz to 10 kHz
70V Input Impedance: 200k ohms
Output Level: 400 mVrms
25V Input Impedance: 75k ohms
Output Level: 420 mVrms

MIC PRE-AMP

Gain: 62 dB
Sensitivity: 750 microvolts, rms for 1Vrms out
Distortion: < 2%
Frequency Response: 200 Hz to 10 kHz
Output Signal-to-Noise Ratio: 55 dB

GENERAL

VOX Sensitivity: 20 mV to 150 mVrms @ 600 ohms Line input
Time Delay Range (approx.): 0.25 to 25 sec.
Relay Contact Rating: 2A/30V DC, 0.5A/120V AC
Power Requirements: External 12V to 24V DC @ 100mA (sold separately)
Dimensions: 5-3/8" W x 3-7/8" H x 1-3/8" D
Product Weight: 1 lb.

**Architect and
Engineer
Specifications**

The VAR1 Voice-Activated Relay shall be a DPDT relay device. It shall be activated when an audio signal is detected at the microphone pre-amp or at 70V, 25V, or 600-ohm line level inputs. A slide switch shall be provided to allow selection of pre-amp or the line inputs.

A VOX detect circuit shall be provided and shall include sensitivity and delay controls. The audio output shall be an isolated 600-ohm transformer. Line impedance shall be 600 ohms, with a frequency response of 100 Hz to 10 kHz. Sensitivity and delay shall be controlled via recessed poten-

tiometers. Time delay range shall be adjustable from approximately 0.25 to 25 seconds.

MIC Pre-amp shall provide 62 dB gain, with volume control via a recessed potentiometer. The frequency response of the MIC pre-amp shall be 200 Hz to 10 kHz. Output signal-to-noise ratio shall be 55 dB.

The VAR1 shall operate from a 12V to 24V DC power source (sold separately). Dimensions shall be 5-3/8" W x 3-7/8" H x 1-3/8" D. Weight of the unit shall be 1 lb.