DATA SHEET DS93-01

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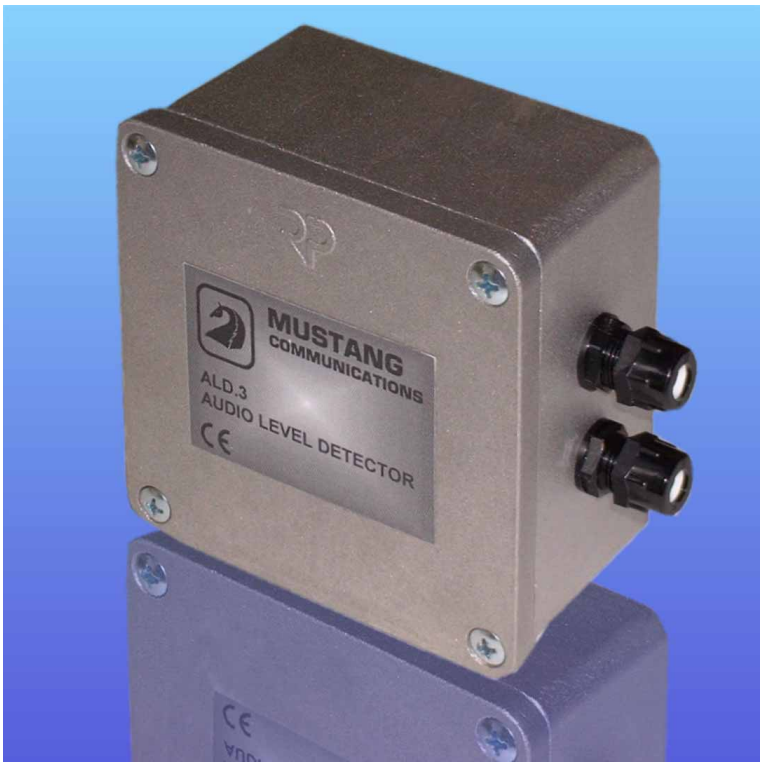
ALD.3 VOX AUDIO LEVEL DETECTOR

The ALD.3 is a particularly versatile unit, providing a method of detecting audio signals on a signal cable and, as a result, providing a secondary output function. This may be either a simple switching arrangement to control a separate amplification system, or a redirection of an incoming or outgoing signal, or a combination of both.
Practical applications are numerous as the unit can detect the full range of possible signal levels that are to be found in any audio amplification system. It is widely used to interconnect two independent PA systems, Voice Alarm systems, or even to enhance the facilities of audio systems in use by people with a hearing impairment. It also has applications in the intruder alarm market.
The circuit includes filtration to enable the ALD.3 to be used in systems using a 20kHz loudspeaker surveillance tone, without false triggering. As the ALD.3 is generally weather resistant, it may be located indoors or outside.

MAIN FEATURES

- Will detect full range of audio signals
- Fully adjustable detection levels
- Adjustable delay time
- 20kHz surveillance filter
- Phantom supply for microphones
- Complete isolation between systems
- Sealed output contacts
- Internal circuit isolated from case
- Reverse polarity protection
- Extremely robust cast metal case
- Weather resistant
- Easily concealed



Power supply requirements are not critical or demanding and would normally be supplied by the local amplification system. Most Mustang amplifier products feature an auxiliary 24V output which would be suitable.

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TYPICAL APPLICATIONS

- √ Shopping Complex - interrupt a local background music system in the event of an alarm message from a central PA system or Voice Evacuate system so that important messages may be heard, either through the music system or from nearby public areas directly.
- √ Enhance the facilities of an existing PA system to provide signal priorities, switching for remote restoration volume controls, lamps, etc.
- √ Factory extension - facilitate an existing PA system to interface with a new system, whilst maintaining signal priorities but without the need for extending any control cabling - just the loudspeaker cable.
- √ As a noise gate - energise a PA system only when the input signal reaches a certain level - useful for noisy environments
- √ As part of an intruder alarm system by using the ALD.3 to trigger a camera, or pre-recorded PA message or alarm generator whenever a remote microphone detects a noise in a sensitive area
- √ For the hearing impaired - enable a warning lamp or display to be operated in the event of a Voice Alarm/evacuate message being transmitted
- √ For the hearing impaired - interconnect a PA or Voice Alarm system with an otherwise unconnected induction loop system, taking priority over local, non-priority signals.

TECHNICAL SPECIFICATION

Audio input signal levels	Low impedance balanced microphone, phantom powered microphone, 0dB levels, 50V, 70V, 100V line, low impedance loudspeakers levels 2 ohm-16
Audio input configuration	Fully floating free of earth - bridge mode for either balanced or unbalanced signals
Audio input sensitivity ranges and loading	200uV - 50mV @ 600 ohms 50mV - 3.5V @ 47k ohms 2.0V - 100V @ 47k ohms
Delay adjustment range	Unit remains triggered from between 1 second and 8 seconds
Output switching	Floating, volt-free, sealed two-pole changeover contacts rated 240V @ 5A
DC supply requirement	24V DC nominal (limits 11V - 40V) Quiescent: 4.5mA (plus phantom requirement if in use - say 2mA) Triggered: 50mA (plus phantom requirement if in use - say 2mA)
Phantom supply voltage output	12V stabilised (except with DC supply below 13V), via transformer centre-tap; 1k ohm source. Note that full isolation from input to output is not possible if phantom supply is in use.
Surveillance tone rejection	Minimum 10dB @ 20kHz ref 1kHz
Audio input/output and switching connections	Block connections to take 2.5sq mm.
Cable entry	Two compression glands to take 5.0-7.0mm dia cables
Environmental protection	IP.65
Fixings	Two internal concealed 6mm dia holes to IP66
Net weight	530gm
Dimensions	105 x 105 x 63mm

QUALITY ASSURANCE

Guided by a policy of non-obsolescence, every part for the ALD.3 is carefully manufactured direct from raw materials to ensure total control of all aspects of quality and delivery. Every sub-assembly and finished unit is exhaustively and individually tested. All procedures meet our internal Quality Assurance standards, which in turn are maintained to ISO.9002.

CONTACT

We will be pleased to receive enquiries regarding application of the ALD.3, either by phone, fax, or email.

In the interests of continuous development, specifications are subject to change without notice.

CE Electromagnetic compatibility (EMC) directive 89/336/EEC and amendment directive 92/31/EEC

This equipment has been designed and manufactured to the highest standards. If connected and operated as set out in this manual, there should be no Electromagnetic Compatibility problems. If any aspect of operation gives rise to concern, then please contact the manufacturer for advice.