ACOUSTIC DETECTOR AD-350

Installation instructions

Ord. number 13130

Function

AD-350 is an acoustic microprocessor controlled detector that senses only a limited frequency range between about 3 and 7 kHz. The integrated changeover relay becomes energised when sound is detected in this frequency range. The relay remains energised during the detection period plus the time that is set on the integrated timer.

Range of use

AD-350 is designed for the control of lighting. It switches lights on when sound is detected in the stated frequency range. Lights are kept on so long as sound is detected (steps, talk, etc) plus the set time of the time delay. Since the working principle of the detector is based on sound it is able to “listen round corners” and in rooms that have screening furnishings.

Consequently, acoustic detection enables the control of lighting and fans in areas where it has not previously been technically possible or economically viable by other means.

AD-350 can also be used as a complementary detector in installations using passive IR-detection.

Detection area

The size of the detection area can vary in relation to the acoustic conditions. If in doubt, carry out practical tests as guidance for dimensioning. Reality is often **better** than theory.

Installation hints AD-350

Make a trial installation

It can be suitable to investigate the acoustic conditions by placing a loose, powered detector in the area. By opening and closing doors in the adjacent areas it is advisable to check that sensitivity is not set too high.

Installation

Connect AD-350 as illustrated below. Voltage supply is to be 12 V DC. AD-350 can be connected in parallel with one or more IR-detectors.

A green LED indicates when the board is powered. AD-350 has an activating period of about 30 seconds while the circuits become stabilised.

(See figure 1)

Relay output

The relay has potential-free switching outputs that can be loaded by maximum 1 A/30 V AC.

Always use separate contactor.

Sensitivity setting

Detection of high-frequency sound is indicated by a **yellow diode**. Test the detector by creating “normal sound” for the area. For satisfactory functioning set the sensitivity as low as possible with the potentiometer “**Sensitivity**”. (See figure 2)

Also test sensitivity to sound from adjoining areas so as to minimise the risk of spurious detection.

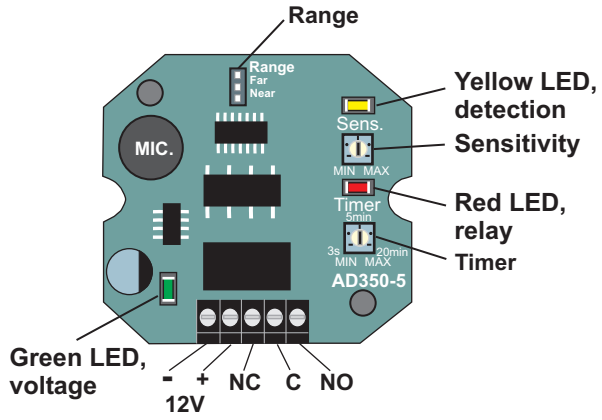

Figure 2. Printed board assembly with potentiometers and terminals

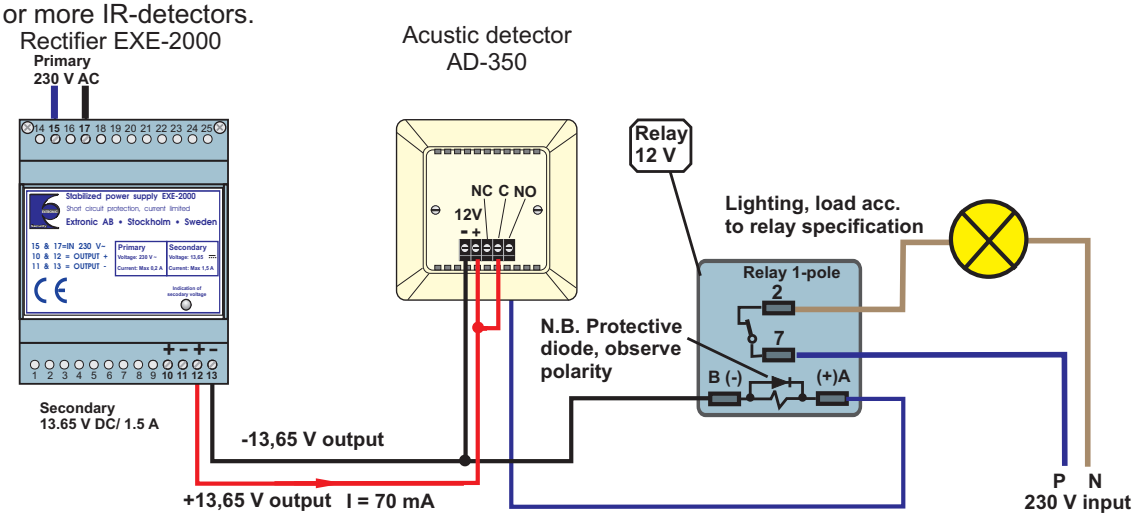

Figure 1. Connection of AD-350 MIC.

Time setting

Time setting is adjustable from about 3 seconds to about 20 minutes. The set time begins to run when detection has ceased.

Time setting is made with the potentiometer "**Timer**". A suitable time should be set in relation to the length of quiet periods.

The relay is released at the end of the time delay.

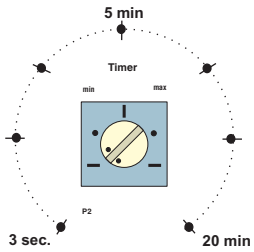

Figure 3. Guide values for time setting

Technical specification

Voltage:	12 V DC
Current:	18 mA at rest, 40 mA max.
Max. load:	30 V /1 A
Sizes:	84 x 84 x 35 mm.
Encapsulation:	Plastic encapsulation for recessed mounting in 67 mm standard electrical point or for surface mounting.
Colour:	White

Important!

Correct preparation and installation are very important for satisfactory operation. We therefore recommend study of the manual "Presence detection". It describes the technique, a number of application examples and hints for connecting.

The order number of the manual is 35100.

Note!

Ensure that the lighting fittings are suitable for the repeated switching on and off required by the system. Arrange the project suitably in consultation with your supplier of lighting fittings.