Acoustic Sensor (AD342) Datasheet

The Extronic AD342 Acoustic sensor combines audible and infrasound detectors in one single component as an active part in lighting control and is compatible with a DALI system.

This audible sound sensor is used for near field presence/movement detection and the infrasound detector is for recognizing e.g. the opening of a door, within the allocated range.

A built-in sensor responds to low frequency (LF) pressure changes such as door openings and high frequency (HF) sounds such as speech and walking.

The sensor is ideal for enclosed spaces such as corridors, stairwells and single floor parking garage. Using sound detection means the relating luminaire circuit will switch on prior to anyone entering the area.

The 342 is suited for areas that may require a large number of PIR sensors or that are difficult to equip using traditional movement sensors.

Presence Detection Coverage Examples

As shown in the example below, one sensor can cover three to five stairwells however this is dependant on the size of the area and the density of any material present in the walls and ceilings, such as insulation or soundproofing.

342 Sensor
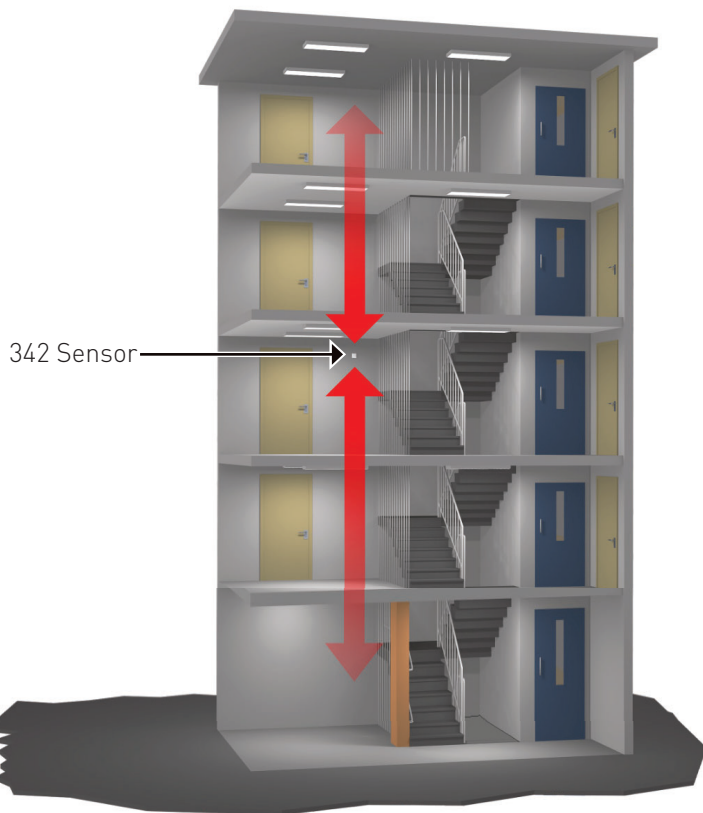
An office layout is shown in the example, right. Each sensor has around a 25 meter radius although this depends on factors such as the density of the carpets and walls and also furnishings within the area, all of which can decrease the HF range.

Air locks within the area will decrease the LF range.

Be aware ambient sounds such as metallic roofing or a rotating fan can cause false detection although this can be avoided by decreasing the sensitivity in the sensor settings or installing additional units.

Key Features

- Combines audio and infrasound detectors.
- DALI compatible.
- Frequency Range: HF - 2-20 kHz
  LF - 1-3 Hz
- Area of coverage: HF - 25m radius
  LF - Approximately 2000 m³
- Detection outside line of sight.
- Separate LF and HF settings.
- Early detection.
- Ideal for corridors, stairwells and garage areas.

342 Sensors
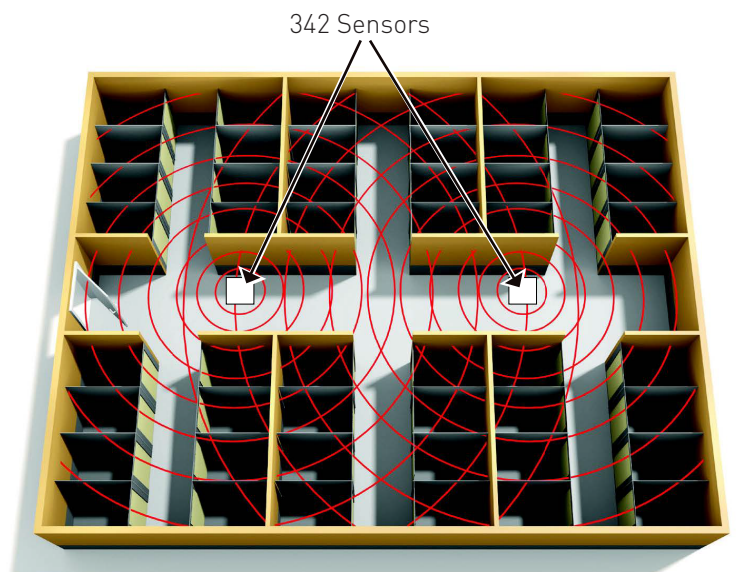
Technical Data

Connections

DALI:	2-way connector block
Wire section:	0.5 mm² – 1.5 mm² solid or stranded
Cable rating:	All cables must be mains rated.

Electrical Data

DALI supply input:	13 V – 22.5 V
DALI consumption:	15 mA (max)

Sensor

Presence detector:	Sound detector for audible and infrasonic sound

Mechanical data

Max recommended mounting height:	10 m
Area of coverage:	HF - 25m radius
	LF - Approximately 2000 m³
Dimensions:	84 mm × 84 mm × 58 mm
Material (casing):	UL94V-HB ABS
Finish / Colour:	Semi-matt / White RAL 9003
Weight:	93 g
IP rating:	IP20

Operating and storage conditions

Ambient temperature:	0 to +50 °C
Relative humidity:	Max. 90 %, non-condensing
Storage temperature:	–10 °C to +60 °C

Conformity and standards

EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 60950
Environment:	Complies with WEEE and RoHS directives.

Software compatibility

Designer:	v5.2 or later
Toolbox:	2.2.12 or later

Dimensions (mm)

84
84
58
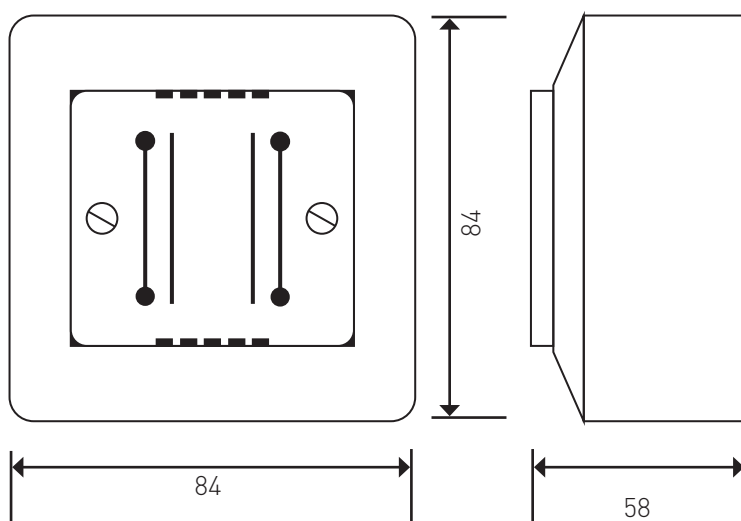
Connections and controls

LF / infrasonic sensitivity dial (for door openings)

SND (Sound sensor)

HF sensitivity dial (for speech and walking)

AD-441

LF   Min   Max   LF

HF   Min   Max   HF

Infra sound (LF)

Audible sound (HF)

LedInd On/Off

S   -   +

LED On/Off switch

LF sound indicator

HF sound indicator