

ELMO

TECHNICAL DATASHEET

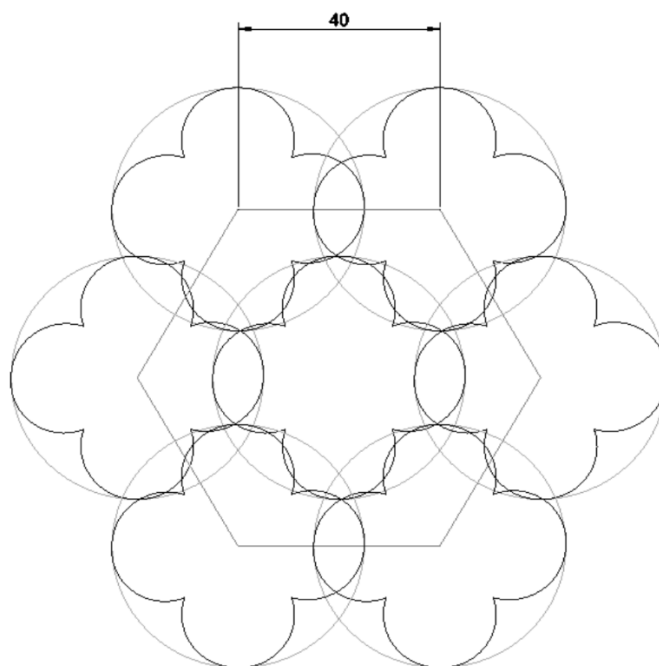
Elmo Detection is a new innovative sensor based on the millimeter wave technology. It transmits radio signals in the millimeter wave range that are reflected from its surroundings. It analyses the reflected signals and calculates the distance and direction of moving objects within its field of view.

Elmo is installed above the monitored area typically in the ceiling level. The device supports different configurations with view angles 90°, 180°, 270° and 360°. The detection range allows installation with a spacing up to 40 meters where each detector covers up to 1600 m². The enclosure has been carefully designed to work in harsh environments such tunnels and outside spaces and yet allow the passage of the signal without distortion or attenuation. The device is powered conveniently over the communications network with Power over Ethernet technology.



FEATURES AND BENEFITS

- Tracks people and vehicles in all directions with up to 20 meters distance and with 40m spacing between the detectors.
- IP67 classification allows installation in harsh environments.
- Provides accurate detection and tracking even in low-visibility conditions, including complete darkness, thick fog, or smoke.
- Can be used in various applications for monitoring movement for, security, safety and tracking in: Health care, Retail, Infrastructure and Marine applications.
- Respects the privacy of the people being monitored.



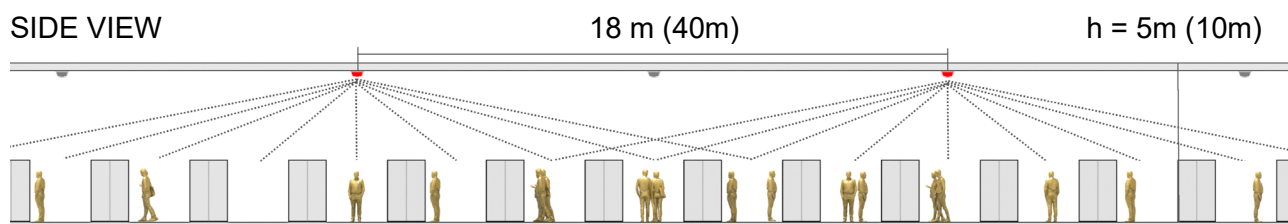
Elmo® includes 4 sectors, which enables Elmo® to monitor 360°

INSTALLATION

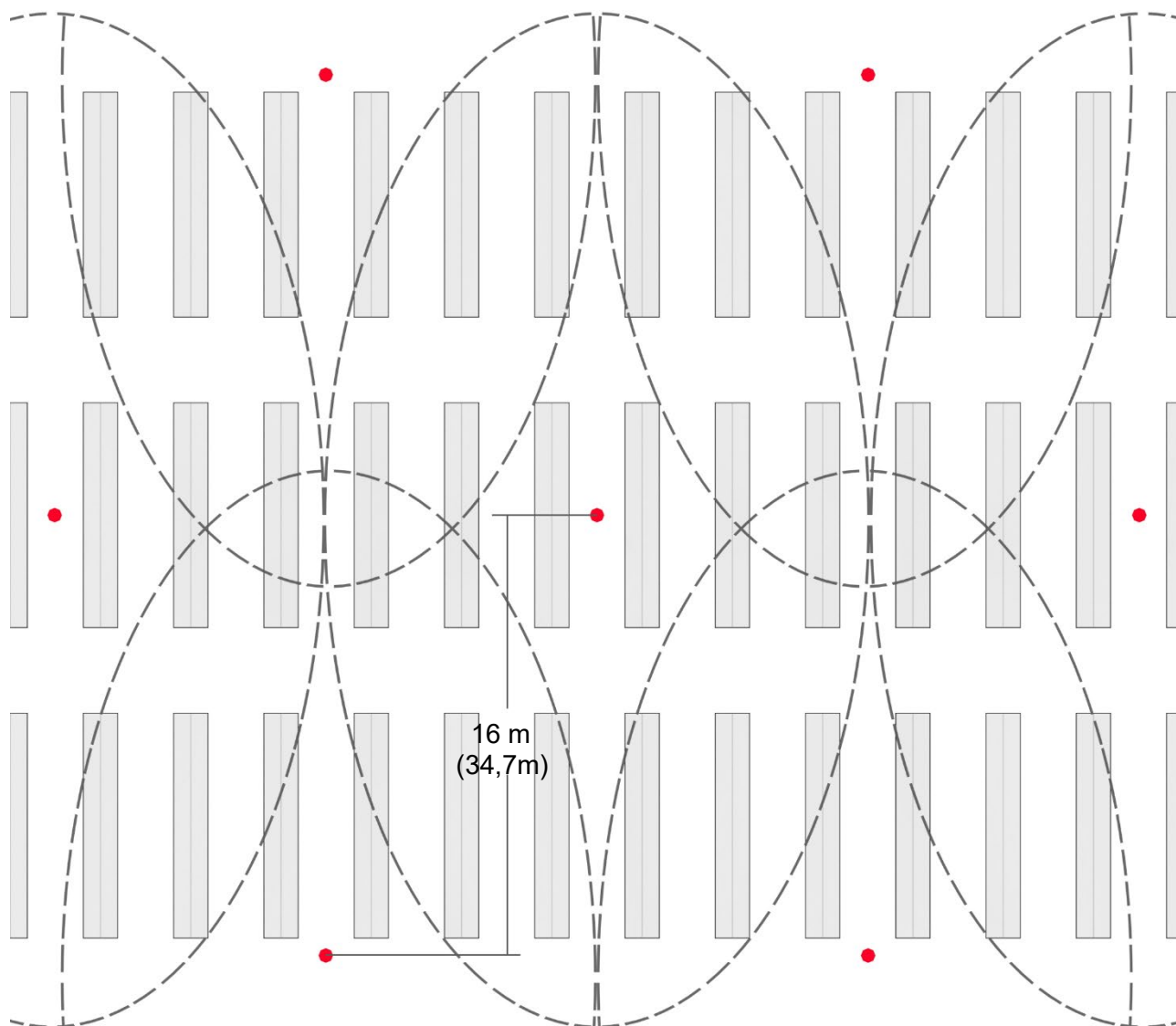
The optimal positioning of Elmo sensors depends heavily on the properties of the environment. While one sensor can detect motion at distances up to 20 meters, it requires direct line-of-sight to the target. Therefore, in a space with shelves or other obstacles the effective range is more limited.

The following figures illustrate positioning of Elmo sensors in a typical retail store with 2 meter-high shelves. As can be seen in the figures, the spacing between the sensors depends on the installation height. When going from installation height of 3.5 meters to 5 meters, the distance between the sensors can be doubled from 9 to 18 meters. Installation height can be up to 10 m.

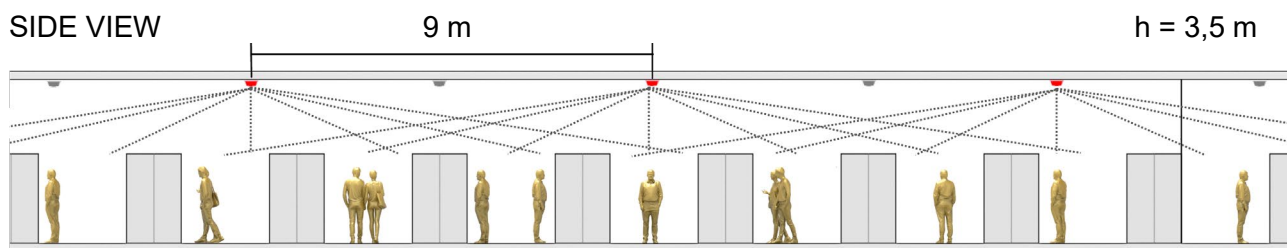
SIDE VIEW



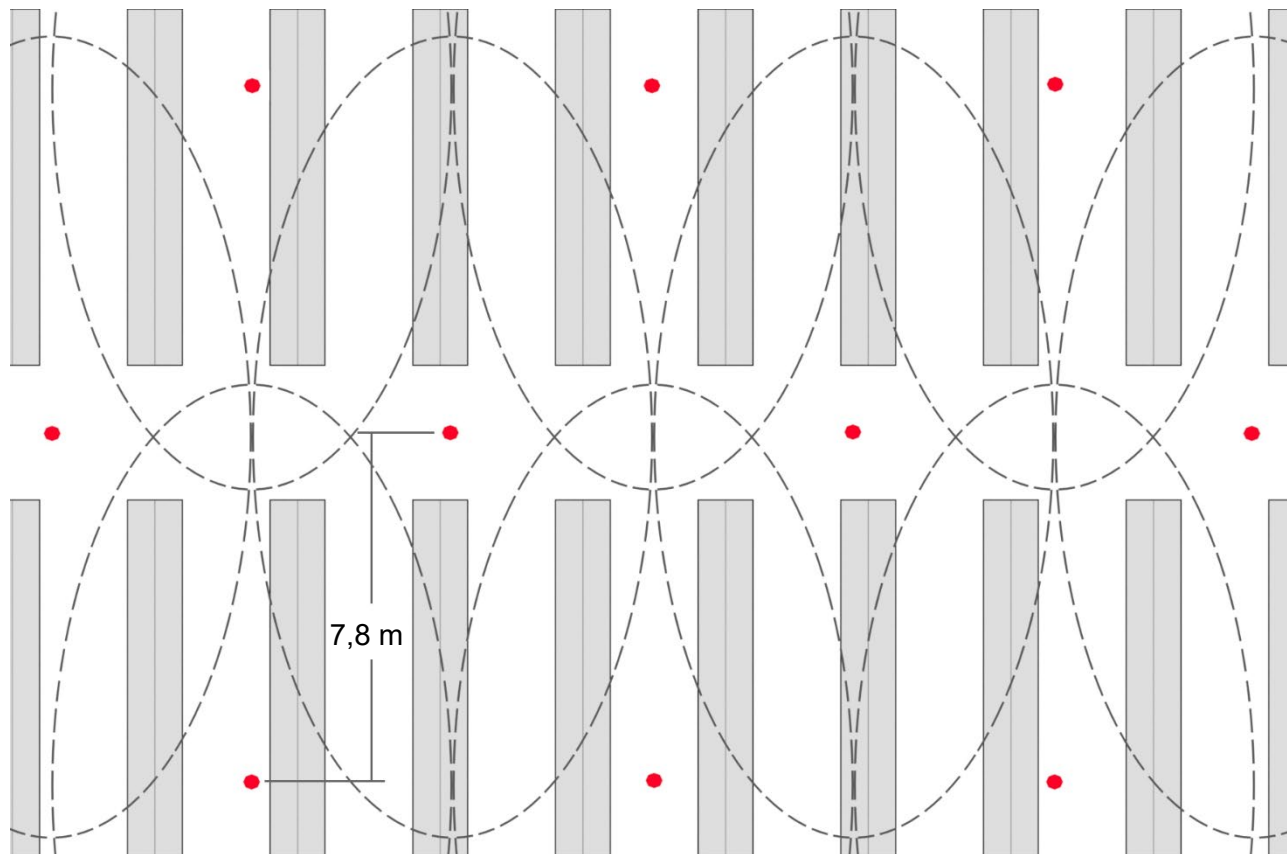
TOP VIEW – Elmo Detector grid $18 \times 15,6\text{ m}$ with ceiling height 5 m .



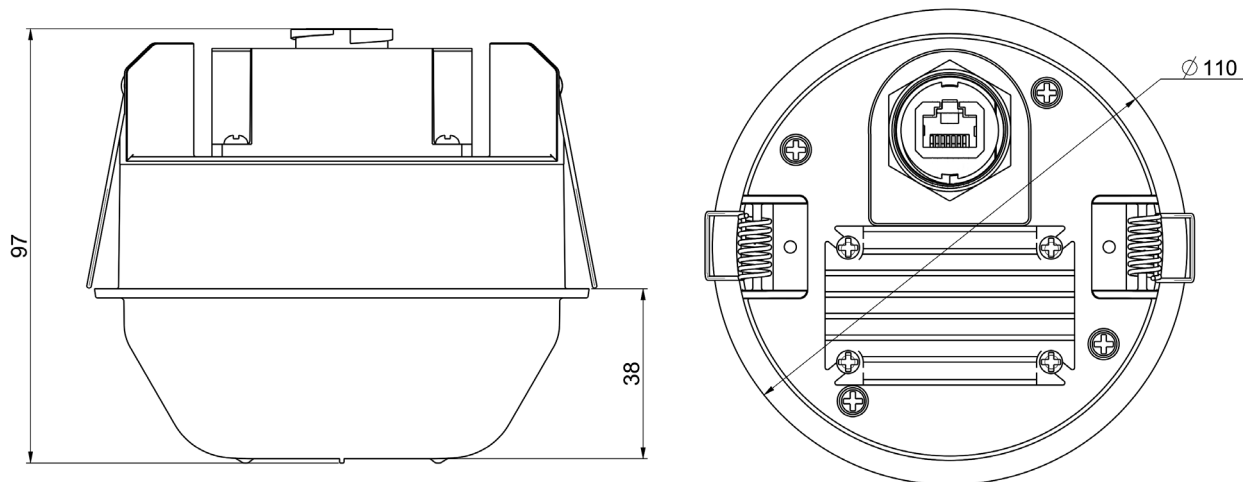
SIDE VIEW



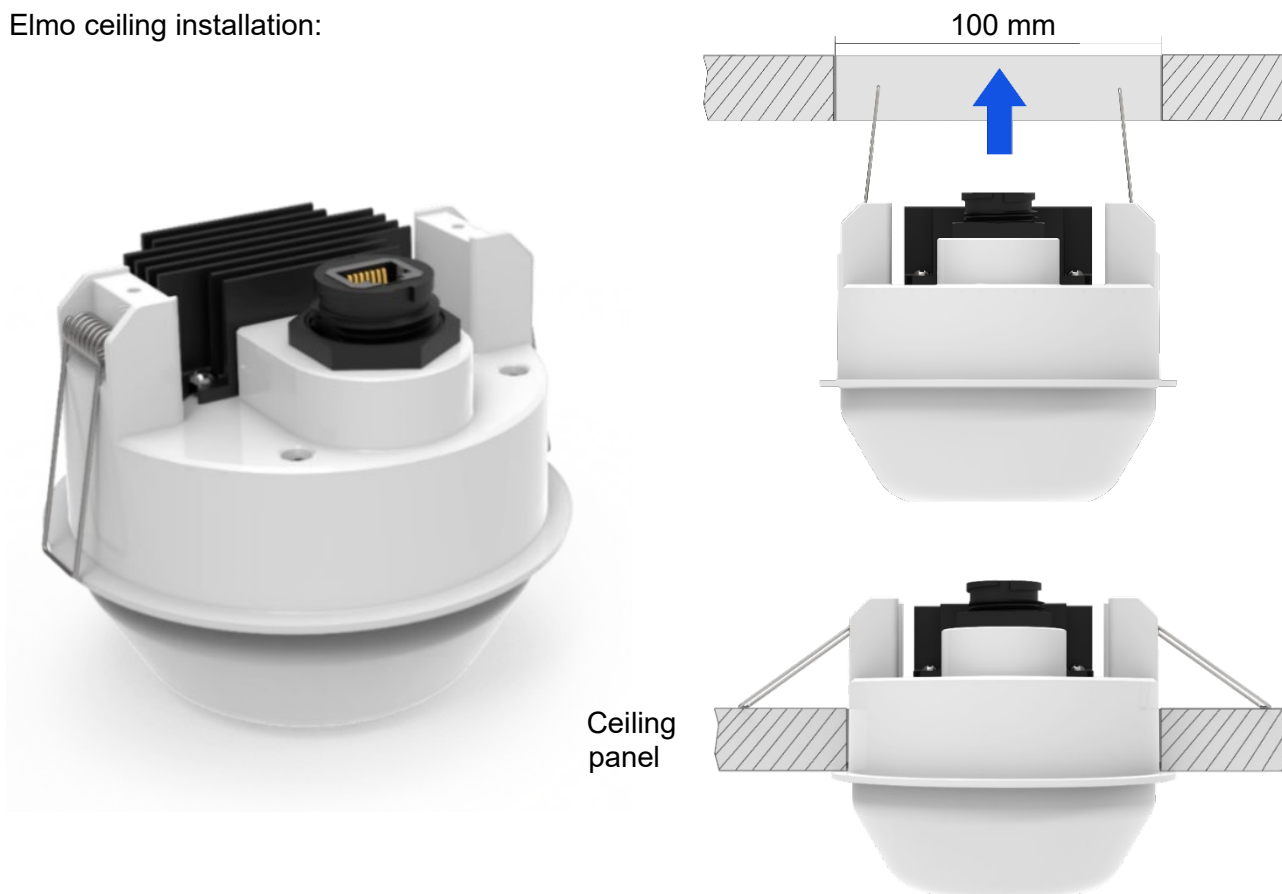
TOP VIEW – Elmo Detector grid 9 x 7,8 mm with ceiling height 3,5 m.



Elmo enclosure dimensions:



Elmo ceiling installation:



Patented / Patent Pending

TECHNICAL SPECIFICATIONS	
Dimensions	Diameter 110 mm, H= 97 mm
Installation hole size	Diameter 100 mm
IP rating	IP67 with appropriate cable gland
Power supply	IEEE 802.3af-2003 (PoE)
Power consumption	Max 8W
Connectivity	RJ-45 connector for 100BASE-TX Ethernet 2.4 GHz Wi-Fi (802.11b/g/n) Bluetooth® 5 (LE)
Operating frequency	60 – 64 GHz
Output power	+10 dBm
Angle of view	from 90° to 360° horizontal, 90 - 180° vertical
Detection range	Up to 20 meters
Installation spacing	Up to 40 meters depending on installation environment
Installation height	Up to 10 meters
Compliances	Directive 2014/53/EU
Applied standards	EN62311, EN62368, EN301489-1, EN301489-3, EN301489-17 EN305550-1, EN305550-2

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