Human Detector systems guard exhibits and pieces of art in collections and museums

“The value of an object is usually only appreciated once the object has been lost.”

Arthur Schopenhauer
Human Detector systems

Human Detector systems guard and protect exhibits and pieces of art

The Human Detector system can be quickly installed and represents a powerful, compact security and monitoring system for the deployment in car show rooms, private collections and museums. It effectively protects works of art and exhibits from physical contact, theft or vandalism. The Human Detector reliably detects if a person touches the monitored object *2 and controls monitoring cameras as well as alarm systems. Our Human Detector technology can be implemented into existing systems.

The Human Detector offers unique protection for mobile cultural assets. The compact modules can be installed on exhibits within minutes. Alert messages are transmitted via radio for distances of up to 300 metres, irrespective of the location of the monitored exhibit. *3. The Human Detector does not need any networking or a separate power supply. Integrated batteries or an external power supply allow for long term operation. The Human Detector features three physical sensor systems, working independently from each other. The capacitive sensor monitors the outer layer of the object to be protected. The device reliably detects physical contact of surfaces and exhibits at an early stage. *2.

Physical contact with any objects, such as tapping of walking sticks or opening of doors and flaps in antique furniture are reliably detected. The optional radar sensor monitors the area around the exhibit. Anyone reaching into the monitored area is detected. In addition the Human Detector features a port for the connection of various alarm sensors, such as pressure and motion sensors.

Small Collections and Exhibitions

... are protected with the Human Detector in a simple and fast manner. An acoustic alarm is triggered, if a visitor touches an exhibit. The intensity of the sound can be adjusted. The alarm signal can be transferred onto a video surveillance or alarm system if required. A signal in a central location is therefore made possible.

The Human Detector provides first class protection against theft, vandalism and unintentional damage. The system is best deployed for the protection of pictures, statues, sculptures, display cabinets, furniture, and mechanical exhibits as part of small collections and exhibitions. The fast and simple installation of the Human Detector module enables the quick adaptation to changes within the exhibition.

Exhibitions in Museums

... can be protected with the Human Detector in a sustainable manner. For this purpose a Human Detector is installed on the object to be protected. If required, an acoustic alarm is triggered when an exhibit is being touched, and the Human Detector centre is being informed via radio. If a visitor touches the object an acoustic alarm is triggered (which can be switched off) and the Human Detector centre is informed via radio. A video camera pans onto the exhibit and records the incidence, if required. In a museum, the Human Detector offers cost-effective protection against theft, vandalism and the well-known "groppers". The systems are equally suitable for permanent, as well as temporary exhibitions.

Private and Corporate Collections

... are protected against damages and theft by the Human Detector.

There has been an on-going trend to invest into art and collectibles. These “treasures” are in the possession of private individuals as well as corporations. Works of art are often exhibited in rooms, which are open for receptions or festivities. The likelihood of exhibits being damaged at such occasions is high.

The Human Detector modules can be places in concealed locations on the exhibit to be protected. If a guest enters the secured area, a discreet acoustic alarm is triggered. A video recording can be taken, if required. The Human Detector can be operated over a period of several months with the help of high-performance batteries. Networking via radio is possible at any time, even retroactively.

Do you have a particular assignment or task in mind? We would be delighted to provide more information and to design a protection plan for you.

Please also refer to the following information:

Human Detector - Protection of automobiles
Human Detector - Sale Support

These are found under www.human-detector.com
Complete protection via multi-sensor technology

The surveillance of works of art and exhibits poses a complex task. The reason for this is the variety of objects and the desire to implement protection by using only one product. The **Human Detector** comprises several sensors. These sensors provide for the nearly complete monitoring of exhibits in exhibitions and collections. Additional sensors can be added if necessary.

**Capacitive Surface Sensor**

The surface sensor detects human contact on metallic objects and surfaces. Even the slightest touch is reliably detected. Depending on the adjusted sensitivity, the approach is detected long before an object is touched. Pictures, statues and sculptures, as well as technical objects, are therefore effectively protected.

**Seismic Sensor**

The vibration sensor measures the slightest vibration on the monitored object. These can occur when display cabinets are opened or parts of the monitored object are dismantled. The **Human Detector** is equipped with two independently working seismic sensors. Even the slightest vibration is therefore reliably detected.

**Radar Sensor (optional)**

The optional radar sensor monitors the area around the exhibit. Large volume exhibits could be protected on this way. The radar sensor is mounted in a separate enclosure and is connected by cable with the **Human Detector**.

**External Sensor Connection**

Additional alarm sensors can be connected to the **Human Detector**. Smoke detectors, door contacts, pressure alarm, motion and other sensors can therefore be incorporated.

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**Wide range of deployment options at a glance**

<table>
<thead>
<tr>
<th>Exhibit/object</th>
<th>Capacitive sensor</th>
<th>Seismic sensor</th>
<th>Radar sensor</th>
<th>Other sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paintings and pictures</td>
<td>Sensor foil or plate behind image, protection against physical contact</td>
<td>Protection against mechanical damages, e.g. cutting</td>
<td>Protection against tipping, impact damages, etc.</td>
<td>Combination with suspended sensor</td>
</tr>
<tr>
<td>Sculptures</td>
<td>Suitable for objects made of non-conductive material, such as bronze</td>
<td>Protection against mechanical damages and breaching in</td>
<td>Protection of large-scale objects</td>
<td>-</td>
</tr>
<tr>
<td>Display cabinets and showcases</td>
<td>Protection against mechanical damages and breaching in</td>
<td>Protection of the interior of large-scale display cabinets</td>
<td>Connection of door contacts, temperature- and climate control</td>
<td>-</td>
</tr>
<tr>
<td>Furniture</td>
<td>Sensor foil or wire in furniture, protection against physical contact</td>
<td>Protection against damage and opening of doors</td>
<td>Protection of large pieces of furniture, replaces barriers</td>
<td>-</td>
</tr>
<tr>
<td>Models and relief maps</td>
<td>Protection against physical contact of surfaces, theft of small components</td>
<td>Protection against impact damages and dismantling</td>
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</tr>
<tr>
<td>Exhibition platforms</td>
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<td>Protection against impact damages and storage of objects</td>
<td>Protection of large-scale pedestals</td>
<td>Connection of PIR-sensor detectors</td>
</tr>
<tr>
<td>Figurines and animal plastastics</td>
<td>Protection against physical contact and theft of small components</td>
<td>Protection against tipping, impact damages, etc.</td>
<td>Protection of large-scale pedestals</td>
<td>-</td>
</tr>
<tr>
<td>Frescos and carvings</td>
<td>Protection against physical contact and damage to surface</td>
<td>Protection against mechanical damages and theft</td>
<td>-</td>
<td>Connection of PIR-sensor detectors</td>
</tr>
<tr>
<td>Sacral art</td>
<td>Protection against physical contact and damage</td>
<td>Protection against mechanical damages and breaching in</td>
<td>Protection of altars, crèches, etc.</td>
<td>-</td>
</tr>
</tbody>
</table>

**Human Detector – Advantages at a glance:**

- Complete protection through multi-sensor surveillance
- Detects approaches before contact takes place
- Acoustic alarm on the exhibited object for security staff
- Ideal for permanent and temporary exhibitions
- Worldwide access and alert via smartphone
- Wireless network and voltage supply
- Can be integrated with existing alarm / surveillance equipment
- Control of movable surveillance cameras (PTZ)
- Extensive surveillance due to a radio range of 300 metres
- Straightforward installation of the **Human Detector** sensors
- Security made in Germany
The Human Detector can be operated in a range of different configuration stages. The possibilities range from the protection of individual objects with a local acoustic alarm to the protection of entire museums and collections. They can also be distributed over separate locations or several floors, if required.

**Operation without Networking**

The protection of objects and works of art from physical contact is often requested at exhibitions. It is usually sufficient to sound a short warning signal. Careless visitors are warned and security staff are made aware of the situation. The Human Detector modules are mounted to the objects to be protected and are not networked via radio. The system can also be networked at a later stage.

**Operation with Networking**

The Human Detector modules are connected to the Human Detector centre via radio. It comprises a loud alarm siren, emergency power supply as well as ports for connecting external alarm- and surveillance devices. The radio transmission is of a high standard. Availability and condition of the batteries in the Human Detector modules are continuously monitored. Failure and attempted manipulation are therefore detected at an early stage.

The networked operation represents the ideal solution for deployment in collections and museums. The majority of visitors and interested parties are not disturbed by acoustic alarms at the individual exhibits. The recording of all alarm conditions and the subsequent processing of these is carried out at a central location. Security staff can be alerted in different ways. Recordings and configurations are carried out by a PC. Multilingual control software is included in the consignment.

**Intelligent Deployment of Video Technology**

The Human Detector centre controls up to 255 surveillance cameras and network recording devices from different manufacturers with the help of the acknowledged Pelco protocol. All unwanted actions, such as touching of statues, can therefore be recorded. Movable PTZ-cameras are precisely directed towards the required object. The monitoring and recording is carried out automatically and does not require additional staff.

**Alarm Messages and Pictures on your Smartphone**

Messages are sent to smartphones and computers via optionally connected network recording devices. In the case of an alarm an alert is sent via e-mail or SMS. Video images can be checked from anywhere in the world to enable you to decide on the required course of action. The exhibits can be monitored via smartphone or computer at any time, irrespective of an alarm occurring.
The Human Detector system at a glance:

**Human Detector sensor module**
- Compact sensor module for the protection of collections and museums
- Integrated seismic and capacitive sensors (adjustable sensitivity)
- Optional radar sensor for monitoring open spaces
- Connection terminals for external alarm systems (such as motion sensors)
- Isolated output NC (VDS compatible)
- Long term operation with powerful lithium batteries
- Integrated loud transmitter for alarm messages (adjustable duration)
- Secure, encrypted radio operation with a range of up to 300 metres *3
- Installation with screws, glue, ties or magnetic mounting plate
- Measurements sensor housing: 117w x 85h x 41d in mm
- Weight: 160 grams (including batteries)
- Operating voltage: 2 x lithium CR123 batteries or via external power supply
- Scope of delivery: Sensor module, 2 x CR123 batteries, installation instructions

**Human Detector centre**
- Centralized control for Human Detector module (max. 1000)
- Secure, encrypted radio operation and large range through separate aerial *3
- Embedded, powerful alarm siren
- RS-485 interface for controlling of external surveillance cameras and recording devices (PELCO)
- 8 x alarm output for controlling video recording devices, sirens, signal lights, etc.
- Installed rechargeable battery for emergency operation in case of power failure
- USB-interface for configuration, including configuration software in German/English
- Measurements housing for wall mounting: 139w x 210h x 58d in mm
- Weight: 460 grams (without power supply)
- Operating voltage: 230V/50 Hz AC
- Scope of delivery: Human Detector centre, power supply, configuration software (Win), installation instructions

**Radar sensor**
- Single-zone radar sensor *4
- Range: approx. 2.5m (adjustable)
- Measurements housing: 68w x 60h x 14d in mm
- Weight: 30 grams
- Operating voltage: 12V DC (connector for Human Detector)

**Recommended accessories:**
- Replacement batteries for Human Detector: Item: CR123
- 12V supply cable: Item: HD-12V
- Potential plate for loose installation: Item: HD-GND
- Connector cable with clips: Item: HD-AS
- Magnetic mounting plate: Item: HD-MAG
- PTZ-surveillance cameras on request
- NVR-network video recording device on request
- Alarm systems, sirens and accessories on request
- Paging systems on request

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Additional accessories are available on request. We would be very happy to provide advice for the integration of our Human Detector systems into your existing alarm- and video surveillance systems.

*1 The capacitive sensor can only be deployed in a dry environment (indoor).
*2 Capacitive sensors work with conducting materials, such as bronze, brass and steel.
*3 The range is variable depending on the type of building and fittings. Maximum distances can be achieved in open spaces.
*4 The optional radar sensor has an independent housing, therefore increasing the total power consumption. For operation an external power supply (mains) is required.

Technical specifications are subject to change without notice.