Fibre Optic Perimeter Surveillance
Alarm System Monitoring

Introduction
Our fibre optic perimeter surveillance and alarm monitoring system applies fibre optic sensing and optical communications technology to build high-tech security systems. The optical cables are shallow buried in the soil, gravel and turf around fences and walls. The system collects and analyses the data, monitoring the designated area in real-time.

It has the advantage of low energy dependence, high environmental tolerance, anti-electromagnetic interference, resistance to corrosion, construction and maintenance, low cost, and is suitable for high-end residential, airports, power plants, refineries, military bases, borders, prisons, mines, warehouses, factories and other large and medium emphasis protected areas.

Features
- low energy dependence
- high environmental tolerance
- anti-electromagnetic interference
- resistance to corrosion
- construction and maintenance
- low cost
- suitable for high-end residential, airports, power plants, refineries, military bases, borders, prisons, mines, warehouses, factories and other large and medium emphasis protected areas.

Due to continuous improvement, all product specifications are subject to change without prior notice.
Advantages
The system uses optical interferometry and optical vibration sensor technology. As opposed to the traditional intrusion prevention products, it has many advantages, as follows:

- Passive, low energy consumption, environmentally friendly
- No power requirements with the exception of the control centre. The system has no power requirements, and no electricity supply in the entire zone.
- Optical fibre is stable, corrosion resistant, suitable for humid climates, and even a variety of underwater applications.
- The protected zone uses fibre optic cable as the external probe.
- The system is anti-detection, tamper-proof and lightning proof.
- All kinds of intrusions can be effectively monitored in real time.
- Its security level is high, false alarm rate is low.
- Intelligent intrusion patterns use discrimination, helping to eliminate interference factors.
- Different levels of alarm can be customised according to customer requirements.

Multi-alarm Association

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Technical Principles

Under steady conditions, the light propagation in the fibre is constant (Figure 1), the same intensity of light can be found in the probe points.

When the cable is vibrated, there is a slight deformation of the laser beam in the optical fiber transmission path, which changes the interference pattern (Figure 2), and the light intensity. The changing intensity is converted into sound output, so that we can hear the percussion.

Anti Jamming Technology

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of zones</td>
<td>2-16 (modular)</td>
</tr>
<tr>
<td>Zone Type</td>
<td>Hanging steel mesh, around the railing, underground, inwall, underwater</td>
</tr>
<tr>
<td>Vibration sensor cable laying length</td>
<td>0 - 20km (recommended 150 - 300m)</td>
</tr>
<tr>
<td>Zone Positioning</td>
<td>Each zone is an anchor point</td>
</tr>
<tr>
<td>Alarm Response Time</td>
<td>&lt;2 second</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Adjustable</td>
</tr>
<tr>
<td>Association output</td>
<td>Relay contact switch</td>
</tr>
<tr>
<td>Power consumption</td>
<td>≤25W</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>AC220V±20%</td>
</tr>
<tr>
<td>Equipment Indoor Operating Temperature</td>
<td>-10°C to +50°C</td>
</tr>
</tbody>
</table>

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