

OPTIFENCE

FIBRE OPTIC PERIMETER PROTECTION FOR CHAIN-LINK FENCING



OPTIFENCE is a modern perimeter intrusion detection system based on fibre optic technology. It provides early warning of intrusion attempt with complete elimination of false alarms. OPTIFENCE can be installed on new or existing chain-link fences and other types of flexible structures. It uses a polymer fibre optic sensing cable alongside special optoelectronic analysers and is characterised by low cost, high endurance and extreme ease of installation and repair.

OPTIFENCE detects the disturbance of the fence fabric that takes place during an intrusion attempt. When the fence fabric is pushed or pulled, its wires exert miniature point forces on the optical fibre, which are detected by the analysers. The intruder does not have to disturb the optical fibre directly for an alarm to be triggered. This technique is different to vibration sensing and allows OPTIFENCE to be 100% free of false alarms.

The required degree of protection can be achieved at the planning stage by specifying the number of optical fibres deployed on the fence: A single pass of optical fibre offers reliable protection against climbing or forced intrusion by vehicle. More passes, in parallel, leave less space for the intruder to pass through without disturbing the fence and hence result to increased levels of protection with regard to cutting or disassembling of the fence fabric.

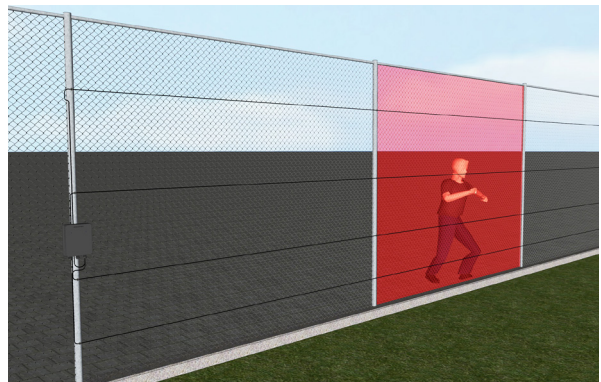
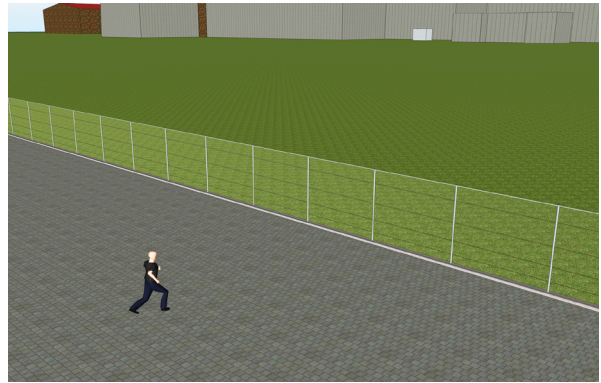
OPTIFENCE is suitable for low to medium risk facilities, especially facilities in secluded locations such as solar power stations. It has very strong advantages over other solutions in terms of functionality, reliability and budget.

Key points

- ▶ **Early and reliable detection of intrusion attempt**
- ▶ **No false or nuisance alarms** – for any reason
- ▶ **Operation completely unaffected** by weather conditions such as strong wind, rain, fog, snow, bright sun, etc.
- ▶ **Terrain-following** – no blind spots caused by altitude variations or perimeter shape, no additional analysers
- ▶ **No fence clearance** – the sensing element is mounted directly onto the fence fabric, hence not wasting space
- ▶ **Daisy-chaining** – the optical fibre can return to the same analyser or finish at the next one
- ▶ **Fibre optic technology** – immune to EMI/RFI, nearby lightning/thunder and strong electromagnetic fields
- ▶ **Built-in optical signal power meter** – indication of optical signal issues to help avoid future problems
- ▶ **LED indications:** DC POWER – STATUS – ACTIVITY – OPTICAL SIGNAL FAULT (independently for each zone)
- ▶ **Automatic calibration** – no need for user adjustments
- ▶ **Quick installation and repair** – no costly tools or instruments, no optical connectors, no sanding – the optical fibre is cut and inserted directly into the device
- ▶ **Designed and made in Greece by Perimetrica**

Applications

- Solar power plants
- Industrial plants – Warehouses – Workshops
- Remote and secluded locations
- Fuel depots – Water depots
- Cellular base stations
- Areas lacking CCTV for confirmation of alarms



Early warning – the intruder is detected before crossing the fence and descending into the premises

Technical characteristics

OPU-1 PROCESSOR

- Detection zones/loops:** 1 or 2 (model OPU-1S or OPU-1D respectively)
- Optical fibre length:** Up to 300 m per loop with redundancy for at least 2 splicings
- Outputs:** 1 or 2 alarm outputs, 1 tamper output (all outputs are dry contact, NO/NC selectable)
- Power supply:** 9-24 V DC (100 mA max) with reverse polarity protection
- Surge protection:** Electronic 3-stage protection networks on power supply and all dry contacts
- Calibration:** Automatic initial calibration and automatic silent recalibration during operation
- Sensitivity adjustment:** 9 presets + 1 position for manual parameter setting by laptop
- Ingress protection:** IP65
- Operational temperature:** -40 to +85 °C
- Physical dimensions:** 244 x 176 x 56 mm

SENSING OPTICAL FIBRE

- Jacket material:** Polyethylene (PE)
- Minimum bending radius:** 30 mm
- Operational temperature:** -40 to +80 °C