



## Intelligent Perimeter Protection



### Key-Features

- Voltage free perimeter protection for soil<sup>1</sup> | fence<sup>2</sup> | roof<sup>1</sup> | building walls<sup>3</sup> | tops of walls<sup>4</sup>
- For new installations or retrofitting to existing installations
- Tamper resistant
- Adjustable sensitivity
- Ideally suited to hilly ground and perimeter with natural vegetation
- Original aesthetics of object remain
- Zone lengths up to 800m
- Unaffected by weather conditions (e.g. rain | storm | lightning | snow | light changes)
- Especially suitable for areas with high-voltage power-lines, radar and microwaves
- Number of zones easily expandable
- Easy handling and installation

### Typical Applications

- Intrusion detection for industrial plants and private residences
- Warehouses, gas-, oil-, petrol depots
- museum, hotel or shopping malls
- Airports | border
- Perimeter protection at nature reserves or in potentially explosive environments
- Roof-, balcony-, terrace protection

### General Description

Each property is unique. No perimeter is identical. It is therefore essential that the security system adapt to each object individually. ArgusLine supports you to achieve this. Modular components allow a comprehensive, flexible approach to your protection. No matter if ArgusLine applied as large sectors or as a sensitive ground system, from over climbing to digging protection, monitoring of roofs, open perimeters or fence systems – everything works just with one and the same alarm unit. The operation of the ArgusLine is easy and intuitive. The installation saving time, money and there are nearly no costs for operation or maintenance.

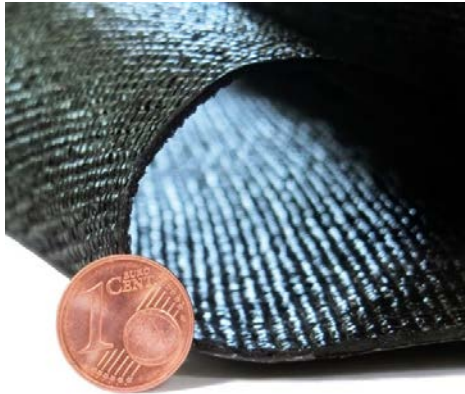
### Functional Principle

If a disturbance occurs at the perimeter, the light density within the fiber optic changes and instantly triggers an alarm signal. The ArgusLine optical security system offers many advantages, it is unaffected by electromagnetic radiation produced by thunderstorms or lightning and is invisible, undetectable and is voltage free.

The right step for your safety



## Ground Protection



### Key-Features

- Paving stones | floor plates | soil | gravel layer | lawns
- Microbe-resistant, allows drainage, Durability >20 years
- Natural appearance and estate appearance is unaffected
- Ideal for hilly ground and terrain that is difficult to oversee
- Hidden – no localization by metal- | capacitive- | induction detectors
- Vandalism resistant
- non-sensitive to environmental influences (e.g. rain | storm | lightning | snow | light changes)
- time-efficient and easy to install

### Typical Applications

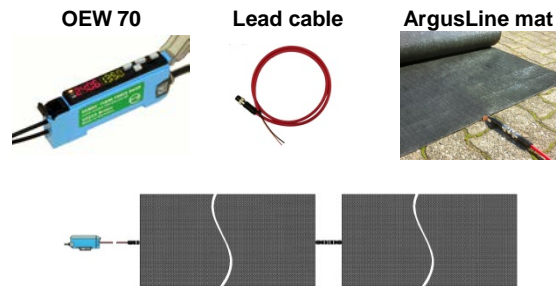
- Intrusion detection for industrial plants and private estates
- Warehouses, gas-, oil-, petrol depots
- museum, hotel or shopping malls
- second line of protection inside the perimeter
- also suitable for moist and wet areas

### General Description

No fence system or barrier is completely secure. Visible protection systems arouse interest, not so the ArgusLine floor system. The floor

surveillance is installed hidden in the ground (invisible to intruders) and paves the way to a very high degree of safety, preventing any kind of vandalism. The natural aesthetics of the perimeter and estate can be maintained.

ArgusLine mats are available in different sizes from 2,5m to 25m, with a standard width of 1,20m. Connectable gateway-mats enable a flexible installation for sector areas up to 50m.



The very low height of 1.7mm allows for new indoor and outdoor applications.

### Installation

The appropriate installation of ArgusLine mats for paving or floor plates take place between base course layer and a 3-5cm sand or gravel layer.



The ArgusLine mats are suitable for direct burial beneath lawns or gravel layers in a depth of 7-10cm.

### Technical Specification

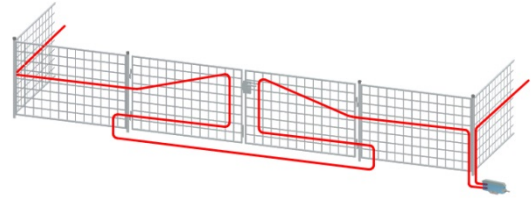
Max. install lengths	50 m
Standard length	2,5   5   10   15   25m
Width   height	1,20 m   ca. 1,7 mm
Weight per m <sup>2</sup>	ca. 350 g
Temperature range	-40 to +85 °C
Resistance Chemically, microbiological, hydrolytic	EN 14030, EN 12447
Durability natural soil (4<pH<9, <25°C)	20 years



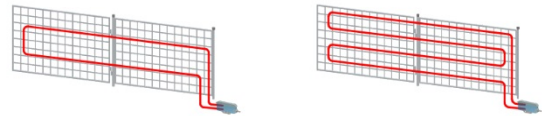
## Fence and Building Envelope



The optical fiber is installed to the fence or gate and directly connected to the OEW 70 alarm signaling unit.



After a breakthrough a repairing by splicing is once acceptable and should be carrying out by an expert.



In case of mounting the ArgusLine fiber at four different heights for an improved security system, sectors of 200 meters can be achieved.

## Key-Features

- Cost-effective perimeter protection
- Sectors length up to 800m
- Temper-proof
- Detecting extensive fence motion
- New installation and retrofitting
- No subsequent costs through trimming of vegetation
- Especially for areas with high voltage power lines | radar | microwaves
- Insensitive to environmental conditions (e.g. rain | storm | lightning | snow | light changes)
- Additional natural privacy is maintained

## Typical Application

- Material-, gas-, oil- and fuel storage or site protection
- Estate close to nature reserves
- solar plants
- offshore | chemistry | substations

## General Description

Any attempt of manipulation will lead directly to an alarm. The ArgusLine provides protection against breakdown and massive deformations with a maximum sector length of 800m for

- Fence
- Building envelope

## Installation

Vegetation does not affect the system and can be utilized as an additional natural concealment.

If the fences are made of double rod gratings with a standard length of 2,5m it is recommended to clamp the fiber at 0,25m | 1,25m | 2,25m. For installation cable ties have been proven effective at customer side. The cable ties should hold and fix but not squeeze the fiber off.



For easily clamping of fiber, we offer a wide range of different solutions as standard cable ties, stainless steel cable ties or an easy-to-install anti-climb-protection.



## Alarm Signaling Unit – OEW 70



### Key-Features

- Compact, intelligent signaling unit for direct connection to all commercial alarm systems
- Freely adjustable sensitivity
- Potential-free switching contact, normally open (NO) or normally closed (NC) can be selected
- external reset input
- adjustable alarm duration
- top hat rail mounting by TS35 or TS15 according to EN 50022
- Embedded software automatically suppresses weather-related factors
- connection of up to 15 slave alarm units without additional power supply

### Typical Application

- E.g. ground | fence | tops of walls | building perimeter
- Estates with on-site service
- Recommended for all optical REMBE industry applications according to IEC 31/1043 (DIN EN 60079-28)

### General Description

The opto electrical signaling unit (OEW 70) sends, receives and processes the optical signal in real time.

In the case of deforming the fence fiber, damaging or entering the protected area, the ArgusLine immediately recognizes the

disturbance and sends this event via potential-free switching contact, directly to the alarm center. The alarm signaling unit provides easy to use and intuitive configurable functions. The smart software solution recognizes weather-related influences and automatically compensates for this, increasing detection sensitivity.

Depending on ArgusLine System the trigger threshold is customer configurable from grams to tons.

The OEW 70 master unit could installed in all established control cabinet without any problem by simply top hat rail mounting (TS35). Power is supplied by customers with an input voltage range of 12 to 24 V.



An extension up to 16 sectors is possible by a plug-in bus system, without additional power supply.

Each sector is individually configurable and dynamically detects entering, leaving or movement inside the perimeter. This is how ArgusLine adapts to your estate.

### Technical Specification

Light source	LED, 630 nm
Average life time (25°C)	100.000 h
Temperature rage	-25 to +55 °C
Rel. air humidity	35 to 85% RH
Power supply	12 to 24 VDC
Ripple	≤ 10 % (P-P)

#### Switching output

Typ   switch current	NO   ≤ 100 mA
Alarm time	Hold, 1 bis 9999 s
Alarm-Reset	Device   ext. input
Reaction time	50µs to max. 8ms

#### housing | lead

protection class	IP 50
dimensions (B x H x T)	ca. 10,5x34,6x71,9mm
material, weight	ABS   PC , ca. 20 g
Feed connection	M8   4 polig
top hat rail mounting	TS 35 by EN 50022 (NS35/15; NS35/7,5)





**Selected References**

Our customers situating in security-relevant areas and so we appreciate your understanding, that we could tell you more references only personally.

Project	Protection
First private estate Brilon, 2006	ground surveillance
FKFS Stuttgart	access control for car-test bench
Private estate Dortmund	balcony, fence
Dental surgery Eisenach	entrance and terrace
Venue Hotel Willingen	entrance surveillance

**ArgusLine - Live**

A private estate located at Sauerland region (Germany) is protected by ArgusLine ground surveillance system and was upgraded with an ArgusLine minefield in 2007.



As part of production capacity expansion and rebuilding of REMBE® location the ArgusLine was installed in 2010 as an access surveillance system.



You want to experience the ArgusLine here in Brilon? Call without obligation +49 2961 7405-0 to arrange a visit.

**We look forward to seeing you.**

**REMBE® Fibre Force GmbH**

The independent family enterprise, founded in 1973, employs a global workforce of around 180. REMBE® has its headquarters in Brilon, in the hills of the Sauerland region (Germany).

REMBE® provides customers in all industries with safety systems for their plants and equipment. All products are made in Germany and meet the requirements of national and international regulations. REMBE® customers include market leaders in numerous sectors, such as the oil and gas, food, wood, chemical, pharmaceutical and petrochemical industries. [www.rembe.de](http://www.rembe.de)

Within the Alliance, REMBE® Fibre Force GmbH was founded in 2006 in Brilon. The goal: developing, producing and distributing of fiber optic products of industrial applications.

In addition REMBE® Fibre Force has been particularly specialized in the optical perimeter protection and expands its activities in the private and industrial area steadily.

A high level of innovation, continuous quality optimization and an efficient production, dictate our daily business - always in close dialogue with our customers. In 2008, REMBE® Fibre Force were certificated by ISO 9001:2001.



**REMBE® Fibre Force GmbH**

Gallbergweg 21  
59929 Brilon | Germany

T +49 2961 7405-350  
F +49 2961 7405-359

[rff@rembe.de](mailto:rff@rembe.de)  
[www.fibreforce.de](http://www.fibreforce.de)

Visit us online at [www.fibreforce.de](http://www.fibreforce.de), to review the current specifications. All illustrations are for illustrative purposes and may differ from the actual design.