

# Is he allowed to do that?

*Protect your manholes  
against unauthorised access!*



*We develop solutions together:  
innovative, reliable, future-proof*

## Why is manhole cover monitoring so important?

Manholes leading to underground supply systems are essential for their maintenance. Without these modern infrastructures our daily life as well as the economic system would collapse.

In particular, this concerns:

- Telecommunications networks
- Water supply networks
- Gas supply networks and
- Electricity networks

This makes these systems vulnerable to sabotage and terror attacks.

## Supply networks are vulnerable

Every unsecured manhole represents an easy potential target.

In supply networks a very small action at a single point can inflict a huge amount of damage to property and people.

In telecommunications networks there is an added danger of espionage.

## Lockable manholes

cannot permanently prevent access, at best they can delay it.

Especially in secluded areas it is easy to gain access to supply networks without being noticed.

## The solution: Manhole cover monitoring with LANCIER Monitoring

Thanks to permanent monitoring and quick reporting whenever a manhole cover is opened any countermeasures necessary to protect the networks can be initiated immediately.

## LANCIER Monitoring GmbH - Innovative thanks to experience

LANCIER Monitoring GmbH has been a leader in its area of surveillance technology for over 50 years.

Based on this long experience our engineers continuously strive to develop new ideas for effective, easy-to-use monitoring systems and devices.

Close contact to users and universities helps them to solve current problems with the latest expertise. They are supported perfectly by a laboratory equipped with state-of-the-art technology.

Users are national and international cable network operators, energy suppliers and big industry.

The name LANCIER Monitoring is known globally for innovative solutions, reliability and quality.

- Over 50 years experience
- Global presence
- In-house R&D
- Certified quality management



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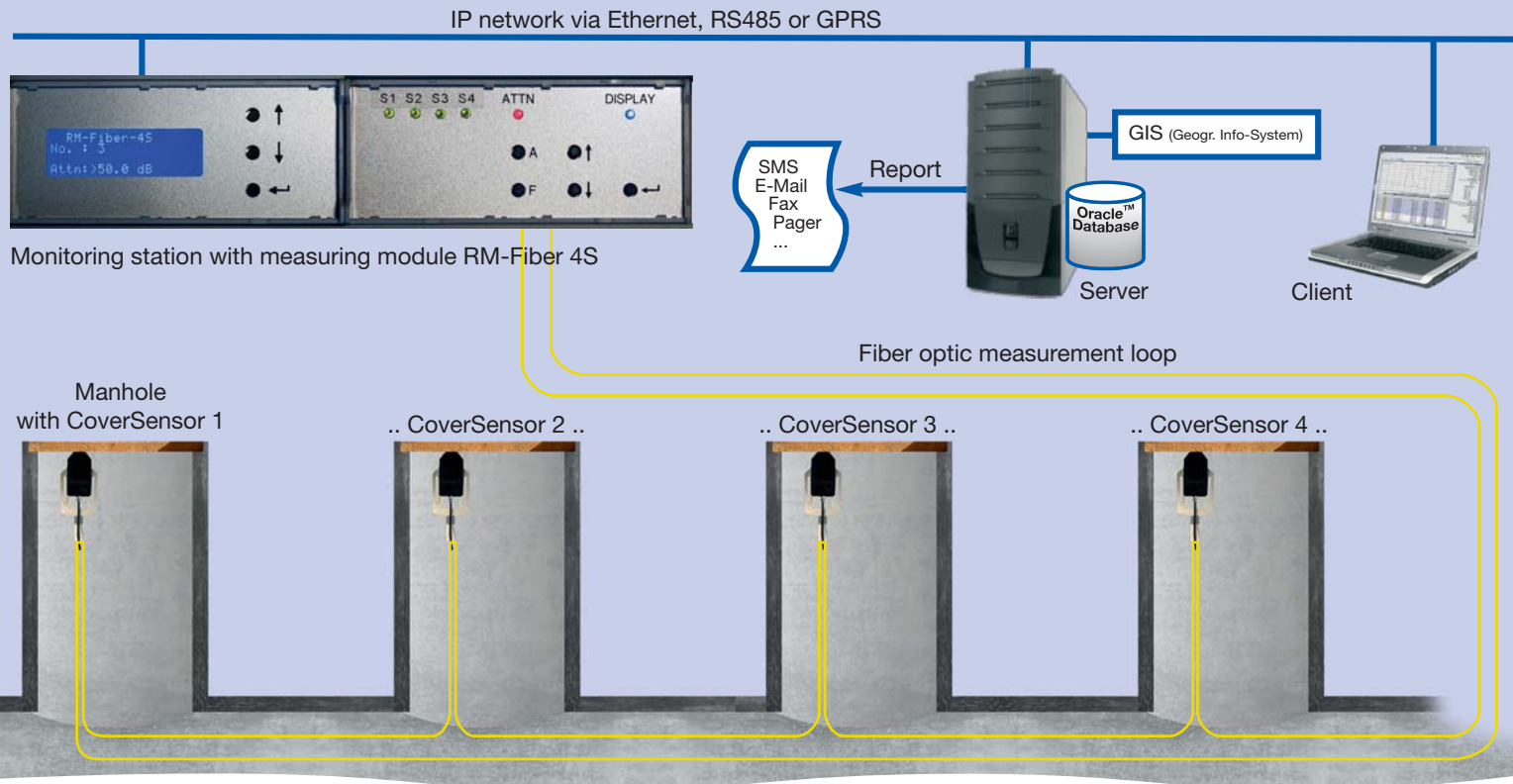
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## Manhole cover monitoring with automatic alarm systems

With the optical fiber attenuation sensor **RM-Fiber 4S** fiber optic lines can be monitored in series using up to 4 CoverSensors for 4 manholes.

Measuring arrangements can be laid out in a loop or in one direction with a light source at the opposite end.  
**The CoverSensors work without any power supply.**



## How the CoverSensor works

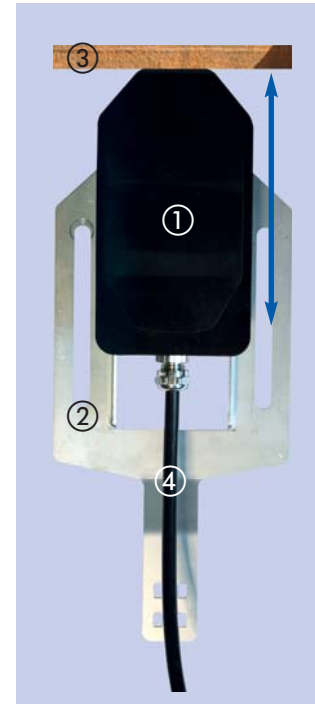
The LANCIER CoverSensor has been designed specifically to monitor the opening of manhole covers.

The CoverSensor ① is mounted on a slide ② under spring tension. It is firmly screwed to the manhole wall, so that it touches the manhole cover ③ in a ferromagnetic position. For this purpose the spring slide is pre-tensioned. This offsets any tilting movements of the manhole cover.

A glass fiber ④ acts as a measuring wire and loops through up to 4 CoverSensors.

Opening the manhole cover changes the fiber's characteristics, thus causing the affected manhole to be detected and reported by the LANCIER Monitoring system.

The alarm is triggered in a decentralised manner via relay outputs or a Modbus linked to a telecontrol system or via an IP network connected to the LANCIER Monitoring UMS system.



### The LANCIER CoverSensor

- Reports the opening of manhole covers.
- Has a short response time and thus enables quick checks, whether the opening has been authorised (for example for scheduled maintenance) or is unauthorised.
- Enables the exact localisation of the open manhole cover.
- Can be installed quickly and easily.
- Additional parameters, such as humidity, temperature, pressure, etc. can also be monitored.

