



EXCLUSIVELY BY
EDUARD KRONENBERG GmbH

MADE IN GERMANY.

SMARELIO[®]

Protect

“SMARELIO Protect” is a completely new, **smart monitoring technology** for façade glass (insulating glass). The self-sufficient, wireless alarm module for insulating glass panes detects glass breakage, vibrations and inclination at the window and alerts the user immediately.

The **special feature** of the “SMARELIO Protect” module compared to other products is its **complete integration into the insulating glass unit**. It is inserted as part of the spacer during the production of the insulating glass. The sensor is equipped with a **radio module**, which allows information to be transmitted wirelessly to an alarm center (smart home).

Glass breakage and other **vibrations** caused by attempted break-ins are detected at an early stage by a sensor system on the module. The position of the window is also queried by the alarm module and can be supplemented by a window handle sensor.

The **energy supply** is realized via a combination of solar cells and electrical buffer storage, so that a completely wireless and self-sufficient operation of the alarm module is possible. Thanks to a **special energy management** system, the sensor can be operated completely **autonomously** for more than **3 weeks at a time**, even without light, when monitoring and communication with the alarm center is active. It has also been

designed in such a way that it can continue to operate even in low light. The alarm module is also charged in artificial lighting.

The condition of the glass is monitored cyclically with regard to **breakage** and **lever-out tests**. The alarm module communicates securely with almost any central control system via the EnOcean wireless standard. The sensor can be integrated into most alarm systems using a suitable interface. If there is no smart home or alarm system in the property, the Smarello app can be used as a control tool for the installed modules.

Integration into the edge seal is carried out using commercially spacer profiles with connecting elements and is exclusively and is exclusively available for the products of the manufacturer EDUARD KRONENBERG GmbH from a cavity of 12 mm.

The SMARELIO monitoring technology is **future-proof** and can be easily expanded to include **additional applications** and **functions**.

The EnOcean radio chip can also be used as a data memory. Among other things, information about components used during the manufacture of the window can be stored, which is later useful for facility management.

Technical data

- ➔ Wireless version
- ➔ Transmission frequency: 868.3 MHz in Europe
- ➔ Range: up to 30m indoor / 100m outdoor / possible extension with a repeater
- ➔ Security: rolling code with AES128
- ➔ Transmission cycle: approx. 100 seconds cyclic / immediately in case of strike and lever detection
- ➔ Operating time (without light): >3 weeks
- ➔ Time to operation after discharge: approx. 100 seconds at 600 lux
- ➔ Supply voltage: < 4V
- ➔ Power consumption: approx. 30µW, 75mW peak in transmit mode
- ➔ Temperature range: -20°C to 70°C / -4°F to 158°F
- ➔ Module size: 82x20x11mm (+/- 0.3mm)
- ➔ Fogging free materials / components
- ➔ Suitable for spacer widths from 12mm to 20mm



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