

## activPilot Control

The new generation of locking sensors.



in  
windows

Product Catalogue 01/2012



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# 1 Recognitions from over 150 years of development work: 2 a new system of fittings

## 3 **activPilot: The new standard of turn-tilt fittings**

4 Developing a new system of fittings from the initial drafts to market maturity is a time-consuming process. It is not just a question of creative ideas, precise calculations and countless series of tests, but also of intensive monitoring of people and markets, evaluating current trends and ongoing analysis of general technical developments. We even question tried and trusted approaches to be able to leverage all this information, and apply our years of experience to create targeted, premium solutions that offer fitters and users a whole new range of opportunities. Both from an economical and functional point of view. It is this constant drive towards precision that has made Winkhaus one of the leading enterprises in the field of window and door technology. This is evident by the large number of industry standards that Winkhaus has established in over 150 years.

## 5 **From established standards to the next generation standard**

6 In designing activPilot we created all the solutions needed for the next-generation window fitting standard within a single system. An intelligent, clearly-structured modular system with far less components than was previously typical, activPilot meets all your requirements from a modern range of fittings. activPilot is suitable for any shape of window, any window material and any level of automation, from manual mounting to fully automated serial production. The high level of flexibility, the attractive auxiliary functions, the new locking system and the functional design all ensure that your business is perfectly geared today to meet your customers' needs and future requirements.

## 7 **Modular design**

8 activPilot optimises window construction. For the window builder, less components and multifunctionality mean uncomplicated and fast processing and rational mounting. Pre-mounted components and the unique design furthermore ensure that additional functions and safety classes can be achieved easily by retrofitting. activPilot thus sets the scene for sustainably cutting your production, warehousing, logistics and administration costs.

## 9 **New locking system with octagonal locking bolts**

activPilot enhances comfort. The functionally perfect locking mechanism not only guarantees precise entry of the locking bolt into the frame keep, but also a perfect seal. This is ensured by the excellent air gap tolerance of 9.8 to 14 mm and the new octagonal locking bolt which allows easy manual adjustment of the contact pressure. Even adjusting forces and the non-positive and positive system fit of the components give this fitting the required stability and long-term functionality.

## **Add-on functions**

activPilot gives you the ability to react flexibly to customer requests. Innovative multi-purpose components make it easy to retrofit features at any time. The use of a duo and/or tri functional element makes it simple to add a fail safe device with integrated limiter support and balcony door catch. The variable tilt device supports different sash tilt angles and thus fast, easily adjustable ventilation settings.

## **Design**

activPilot offers you and your customers real added value. Surprising details, discreet accents, ergonomic design and comprehensive functions characterise the overall concept of the fitting system. In short, its attractive design will be a crucial factor when it comes to your customers making a purchase decision. activPilot also offers other convincing arguments such as outstanding durability, easy-to-clean surfaces, intuitive operation and, last but not least, aesthetically pleasing windows.

## **Effective security**

Thanks to the unique modular system, any window can be modified to achieve the required security standard – easily, quickly and cost-efficiently. There is no need for custom parts. Depending on the number and type of keeps, various security levels are achievable using the same platform.

At our works, comprehensive and strict tests – along with ongoing functional monitoring – ensure maximum security for customers. Approval marks and certificates by independent test authorities confirm our results. You can therefore rely on activPilot meeting customer requirements for a secure fitting system. Locking bolts are made of high-strength steel; even standard types guarantee effective basic security. Depending on the number and type of keeps, the fitting system can be enhanced for compliance with stricter security classes – including burglar protection to DIN V ENV 1627-1630, resistance class 2 / DIN EN 1627-1630, RC2.

## **Your partner for service**

Our services are solution-orientated, reliable and precisely geared to match your requirements – just as you would expect from your partner. We are always at your service. With application engineers on site, professional help from our product data service, and innovative software solutions to help optimise your workflow we safeguard and extend your capacity to act. On top of this, our comprehensive product information system and sophisticated logistics service guarantee fast delivery at all times.

## Quality standard

The Winkhaus group successfully passed a group certification of production sites according to DIN ISO 9001:2008.

The group certification ensures that we use the same criteria and procedures in all Winkhaus subsidiaries und thus we can always offer consistent quality for our customers.



## Product liability

To ensure compliance with German product liability laws (article 4 ProdHaftG), please observe our manufacturer's information on turn-tilt fittings for windows and glazed doors. Failure to observe releases the manufacturer from any liability. Please consult your Winkhaus contact person for further information on this topic.

Information on Winkhaus product services as well as specifications and instructions for end users have been specially summarised in the "Product Information and Processing Instructions" brochure.

Please also observe the guidelines issued by Gütegemeinschaft Schlösser und Beschläge e.V. (Association for Quality Control of Locks and Fittings).

This information can be obtained at the following Internet addresses: <http://www.winkhaus.de> (Products & Services/ Notices about products and liability) or <http://www.beschlagindustrie.de/ggsb/richtlinien.asp>

## activPilot Control

In Germany, about 380,000 burglaries happen per year. From a statistical point of view, this means there is a break-in every two minutes, with burglars mainly entering through windows or patio doors. It's not only luxury mansions which are affected by such crimes – family homes and flats in apartment buildings are too. Only one in five cases of burglary is solved. Protecting property requires more effective burglary resistance and surveillance systems. Winkhaus offers an unrivalled solution – activPilot Control.

### Locking surveillance based on magnetic contacts:

Unobtrusive closing sensors reliably report which windows and glazed doors are open or locked. At the same time heating and air-conditioning controls are supported.

The locking sensors are system-independent intrusion detectors designed for surveillance which can be combined with all standard alarm systems.

The magnet signal contacts have been approved by VdS Schadenverhütung GmbH and certified to VdS class B.

### Locking surveillance based on RFID contacts:

Winkhaus has developed a new dimension in window surveillance systems with a pioneering technological design for window fittings – the fitting-integrated lock sensor with RFID transponder technology. Unique on the market, this window fitting replaces the standard magnetic alarm contact in such systems by an RFID-controlled lock sensor.

This technology significantly increases the protection from sabotage and manipulation of the locking control device. The RFID signal contacts have been approved by VdS Schadenverhütung GmbH and certified to VdS class C.

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### activPilot Concept

**The turn-tilt fitting for PVC-U windows.**

A modular system that combines the solutions of a future standard. A new closing system, attractive value-added functions and functional design.



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### activPilot Select

**The new fully concealed turn-tilt fitting.**

The fitting system features fully concealed shear, turn and corner hinges housed in the rebate. When installed as a standard model, this elegantly designed turn and tilt fitting is able to bear sashes weighing up to 100 kg. With just two additional components, it can easily support sashes weighing up to 150 kg.



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### activPilot Comfort PADK

**Turn-tilt fittings with parallel action.**

Allround security thanks to innovative technology. The convenient approach to a healthy indoor atmosphere and improved illegal entry protection in parallel position.



## activPilot Comfort Ergo

### The ergonomically controlled turn-tilt fitting.

Actuating the handle tilts and returns the sash. Due to this intelligent controlled action, there is no need to pull the window sash to the front.



## easyPilot

### Fittings for turn windows.

Simple, rational and easy to handle. Perfectly geared to the needs of international fitters thanks to innovative, country-specific solutions.



## duoPort SK

### Slide-tilt fittings.

The slide-tilt doors delivered with the duoPort SK series support sash weights of up to 200 kg, with perfect functionality and elegant design. They can be operated conveniently by simply pressing the handle in combination with a pull-in shear device.



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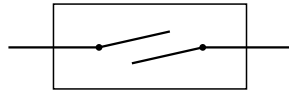
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# 1 Basic technical features

## 1. Composition of reed switch

A reed switch consists of ferromagnetic switch tongues which are melted down in a glass tube (hermetically sealed). In the melting process the glass body is filled with nitrogen. In case of high-voltage applications the glass tube is evacuated (vacuum).



The two switch tongues overlap with a tiny distance to each other. If a magnetic field acts on these "paddles" they move towards each other and the switch closes. When the magnetic field is removed, the paddles return to their original position and the switch opens.

The contact area of the switch tongues is metal-coated (usually rhodium or ruthenium). These hard contact surfaces are important for achieving high switch performances. Service life amounts to between 10 million and 1 trillion ( $10^{12}$ ) switch cycles, depending on the load.

## 2. Selection of measuring devices

For testing the locking sensors we recommend you to use standard digital multimeters incl. a continuity tester or our test device VS.TS. Continuity tests with bulbs are unsuited, as they damage the reed contact.

## 3. VdS testing

VdS Schadenverhütung GmbH (association of damage prevention) controls the opening sensors according to the VdS 2120 guideline.

This guideline includes requirements placed on opening detectors (e. g. magnetic contacts) of classes A, B and C. The requirements can be divided into:

- Protection from environmental influences
- Functional security
- Operating safety
- Protection from sabotage
- Constitution
- Function
- Interfaces to burglary/attack alarm system

Contacts of class B and C are subject to special requirements concerning sabotage protection and monitoring. They are generally equipped with a sabotage line. The classes are distinguished as follows:

Class A:

No or only little sabotage protection, generally no sabotage line

Class B:

Increased protection requirements against sabotage, sabotage lines are available

Class C:

High protection requirements against sabotage (e. g. external magnetic fields, reconstruction of surveillance criteria, covering) sabotage lines available.

## 4. System dependency

VdS-approved opening and locking sensors that can be used in any burglar alarm system due to their technology and interface are called "system free".

VS.B. ... and VS.BK. ... locking sensors are system independent. The VS-RFID ... locking sensor is not system free due to the required supply of voltage and needs to be specially approved by VdS in addition to the VdS certification of the installed burglary alarm system.

## 5. Definition of locking surveillance, opening surveillance

Definition of locking surveillance (acc. to VdS 2311):

"Monitoring of doors, windows etc in closed state to attain inevitability (e. g. with keep contacts)"

Window or door states are distinguished according to whether windows or doors are

- a) open or
- b) closed (not locked) or
- c) closed (locked).

In short: a closed window is not necessarily locked (secured.)

The opening surveillance is defined as monitoring of the open or closed condition. This does not imply the information whether the window / door is locked. On the other hand, locking surveillance means that it is explicitly controlled whether the window or door is locked (secured).



## 6. Laying cables

We recommend you to lay the locking sensor cables in empty conduits.

Furthermore it is recommended to loop the cable at the window frame in order to allow for later adjustment.

## 7. Cable extension or replacement of defective locking sensors

When exchanging a defective locking sensor you must not cut or modify the existing line on the window. The line and the locking sensor must be completely replaced. It is not allowed to connect a new locking sensor to the old cable.

For this reason we recommend you to lay the cable in an empty conduit.

If the exchange is not possible you may need to lay new cables for the new locking sensor on the wall or the window up to the connection point.

### Reasons:

1. The cable is part of the component group certified and constructed to the VdS guidelines. This component group must not be modified or manipulated afterwards. A subsequent alteration will automatically void the VdS approval.

2. The component group "locking sensor" complies with the IP67 requirement. When it is extended at will, this requirement is usually not satisfied any longer. This means that the approval would also be void.

3. Product liability: The cable is an integral part of the locking sensor and must not be modified afterwards. Extending the cable means a modification of the product. This product modification will entail the manufacturer's exemption from product liability.

## 8. RFID function

RFID stands for Radio Frequency Identification, i. e. radio identification via contactless data media (transponder technology).

A transponder is fitted to the window sash whereas the suitable locking sensor is housed in the frame. The two elements form a unique "couple" communicating via radio with an individual coding. When the window sash is closed and locked, the transponder is passed over the lock sensor and the sensor detects its presence. This identification is confirmed to the burglar alarm system by closing the signal contact. If a different transponder comes near the contact, the system detects it is different and immediately sets off the alarm with the signal contact remaining open.

## 9. Mounting position

Fitting-controlled sash-side contactors have been approved by VdS Schadenverhütung GmbH as combined locking and opening surveillance system used with the keeps VS.B.06, VS.B.25, VS.BK.06 and VS-A/C-RFID.06. For installation please observe the guidelines for burglary alarm systems. The mounting position is not imperatively specified for fitting-controlled contactors in windows. The VdS does not recommend to mount the locking sensor on the sash side. If the locking sensor is to be placed on the sash side nevertheless, this must be agreed with the installer of the alarm system in any case. The opening surveillance must not be positioned on the sash side if a rigid contactor on the sash is used.

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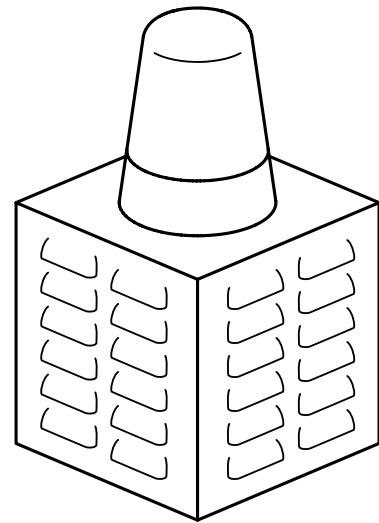
## Product description alarm keep

### General

As yet reed contacts for window surveillance have primarily been installed visibly on the window sash and frame. Winkhaus activPilot locking sensors for alarm and surveillance systems are integrated into the window fitting and thus they cannot immediately be perceived.

### Application area

The activPilot Control product range is suitable for electronic monitoring of windows and doors. According to VdS, the locking sensors are intended for use as intrusion detectors without system dependency. Model VS-A/C-RFID is not system free.



#### Contact keeps VS-A/C-RFID.06

- Combined opening and locking surveillance in burglary alarm systems of class C, VdS no. G 108093

#### Contact keeps VS.B.06 and VS.B.25

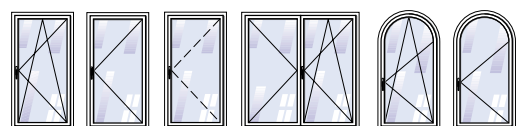
- Combined opening and locking surveillance in burglary alarm systems (EMA) of class B, VdS no. G 106511

#### Contact keeps VS.BK.06

- Combined opening and locking surveillance in burglary alarm systems of class B, VdS no. G 110505
- With additional status enquiry "tilt" (K) when used horizontally at the bottom.

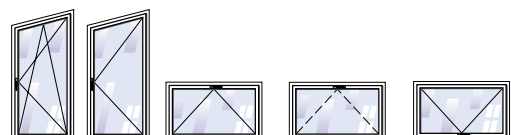
### System advantages

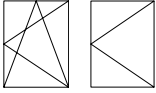
- Can be easily integrated into the standard Winkhaus activPilot turn-tilt fitting.
- Integration into other fitting systems is possible (on request)
- Adjustable via elongated holes
- The locking sensors are suitable for conventional window designs.



### Overview of system components

For the status enquiry of the window a switch contact is needed as follows: frame-side contact keep and sash-side contactor.





Klasse C

## Locking sensor VS-A/C-RFID.06 (VdS class C)

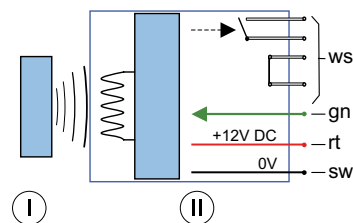
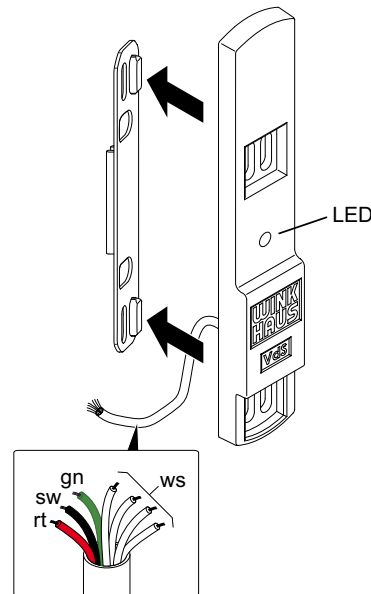
- RFID locking sensor VS-A/C-RFID.06 for combined opening and locking control
- VdS-approved locking sensor with locking contact and sabotage loop for alarm and monitoring systems VdS no. G 108093, environmental class III
- Integrated LED to indicate triggered alarm signals
- Scope of delivery: 1 contact keep, 3 adapters and 2 fixing screws
- Utilisation in combination with one of the RFID contactors E1.VS-RFID, MK.VS-RFID.250-1 or VS-RFID-G-05.5/4

### Technical data

- Nominal supply voltage: 12 V  $\pm$  3 V
- Current consumption with 12 V:  $\leq$ 10 mA
- Activate the input signal (12 V DC)
- Alarm contact (potential free)
- Switch voltage: max. 48 V DC
- Switching current: max. 50 mA
- Contact resistance: 25  $\Omega$
- Temperature range: -25 °C to +55 °C
- Protection class: IP67 according to DIN EN 60529
- External dimensions: length 104 mm, width 18 mm, height 8.5 mm

### Connection type for VS-A/C-RFID.06

- 6 m connecting cable integrally cast, white, 7 x 0.14mm<sup>2</sup>, diameter 4.3 mm



I : Contactor (transponder)

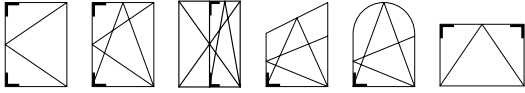
II: Locking sensor (receiver unit)

#### Wiring assignment

- ws = white – signal contact + sabotage loop
- gn = green – activation (+12V DC)
- rt = red – supply voltage (+12V DC)
- sw = black – earth (0V)

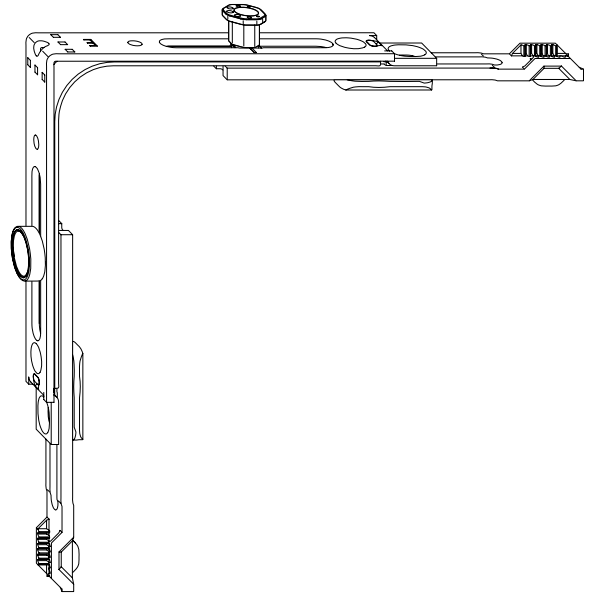
Article description	Article No.	Cable length	VdS approval	VPA1		VPA2		VPA3	
				Qty.	Type	Qty.	Type	Qty.	Type
VS-A/C-RFID.06	4983720	6 m	C	1	BL	20	KK	480	EK


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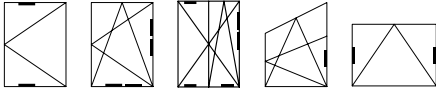


## Corner drive E1.VS-RFID

- Corner drive with RFID contactor
- RFID contactor for RFID locking sensor VS-A/C-RFID.06
- Safety locking pin as a manually adjustable octagonal bolt
- Central fastening as standard
- Automatic and manual assembly possible



Article description	Article No.		VPA1 Qty.	Type	VPA2 Qty.	Type
E1.VS-RFID	4936079	4	100	KK	800	EK



## Interlocking rod MK.VS-RFID.250-1

- Interlocking rod with RFID contactor
- RFID contactor for RFID locking sensor VS-A/C-RFID.06
- Central fastening as standard
- Extendable interlocking rod, can be combined with Winkhaus standard gearing

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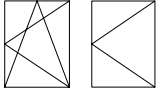
Magnetic  
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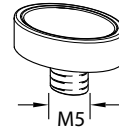
Article description	Article No.	🔩	VPA1		VPA2		VPA3	
			Qty.	Type	Qty.	Type	Qty.	Type
MK.VS-RFID.250-1	4936131	2	20	BD	100	KK	800	EK



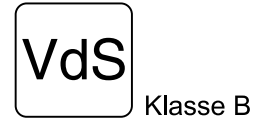
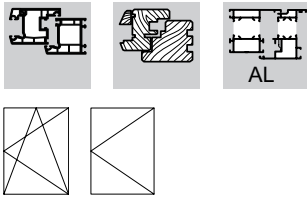
## Contactors

### VS-RFID-G ...

- RFID contactor for RFID locking sensor VS-A/C-RFID.06
- Fitting-independent RFID contactor for drive rod fittings
- For airgaps of 10 to 15 mm

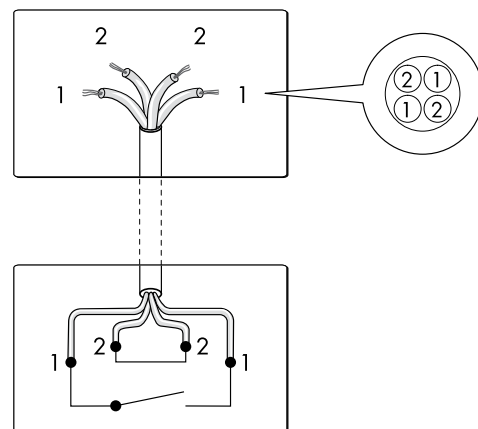
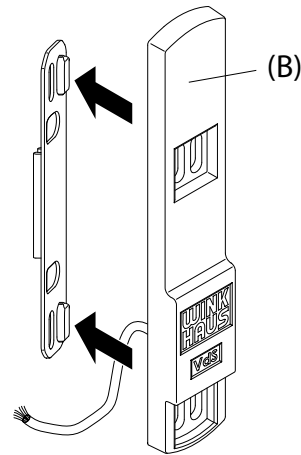


Article description	Article No.	Bolt height	Thread length	Airgap from / to	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
VS-RFID-G-05,5/4	4936134	5,5	4	10 - 15	20	BL	200	KK	1600	EK



## Contact keeps VS.B.06 and VS.B.25 (VdS class B)

- VS.B.06 and VS.B.25 contact keeps for combined opening and locking surveillance
- VdS-approved contact keep with locking contact for alarm and monitoring systems VdS no. G 106511, environmental class III
- Scope of delivery: 1 contact keep, 3 adapters and 2 fixing screws
- Utilisation in combination with one of the magnetic contactors E1.VS.KG, MK.VS.150.KG or MK.VS.250.KG



For safety reasons all wires are white

### Technical data

- Switch voltage: max. 48 V DC
- Switching current: max. 0.5 A
- Transport current: max. 1.0 A
- Contact resistance: max. 150 m Ω
- Switch performance: max. 10 W pure ohmic load
- Temperature range: -20° C to +70° C
- Protection class: IP67 according to DIN EN 60529
- Service life: min 10<sup>7</sup> switch cycles
- External dimensions: length 104 mm, width 18 mm, height 8.5 mm

### Connection type for VS.B.06

- 6 m connecting cable integrally cast, white, 4 x 0.14mm<sup>2</sup>, diameter 3.5 mm

### Connection type for VS.B.25

- max. 25 m connecting cable integrally cast, white, 4 x 0.22 mm<sup>2</sup>, diameter 3.5 mm

Article description	Article No.	Cable length	VdS approval	VPA1		VPA2		VPA3	
				Qty.	Type	Qty.	Type	Qty.	Type
VS.B.06	4983721	6 m	B	1	BL	30	KK	720	EK
VS.B.25	4983722	25 m	B	1	BL	10	KK	240	EK

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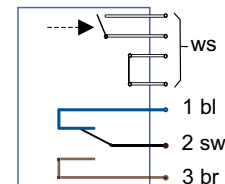
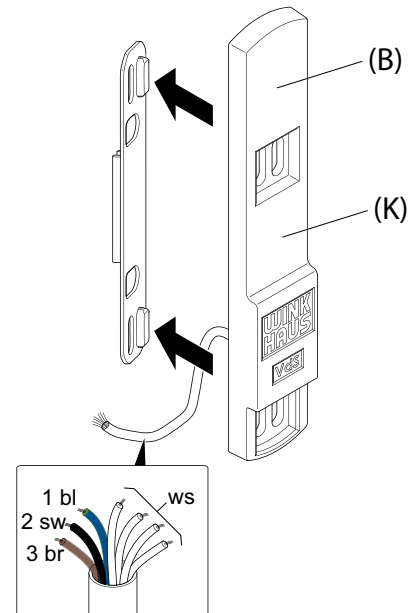
9 Function test locking sensors



Klasse B

## Contact keep VS.BK.06 (VdS class B)

- Contact keep VS.BK.06 for combined opening and locking surveillance
- VdS-approved contact keep with closing contact (B) and sabotage loop for alarm and surveillance systems, VdS no. G 110505, environmental class III
- With additional status enquiry "tilt" (K) when used horizontally at the bottom.
- Scope of delivery: 1 contact keep, 3 adapters and 2 fixing screws
- Utilisation in combination with one of the magnetic contactors E1.VS.KG, MK.VS.150.KG or MK.VS.250.KG
- Note: Switching the fitting from the closed position to the tilt position is impossible without interrupting the contacts. The tilt surveillance is not VdS approved.



### Technical data

- Switch voltage: max. 48 V DC
- Contact resistance: max. 150 m Ω
- Temperature range: -20° C to +70° C
- Protection class: IP67 according to DIN EN 60529
- Service life: min 10<sup>7</sup> switch cycles
- External dimensions: length 104 mm, width 18 mm, height 8.5 mm

### Technical data surveillance (B)

- Switching current: max. 0.5 A
- Transport current: max. 1.0 A
- Switch performance: max. 10 W pure ohmic load

### Technical data status enquiry "tilt" (K)

- Switching current: max. 0.25 A
- Transport current: max. 1.2 A
- Switch performance: max. 3 W pure ohmic load

### Connection type for VS.BK.06

- 6 m connecting cable integrally cast, white, 7 x 0.14mm<sup>2</sup>, diameter 4.3 mm

### Wiring assignment

ws = white (signal contact + sabotage loop)

bl = blue

sw = black

br = brown

For safety reasons all wires of the four surveillance cables are white. The wire ends are marked in order to distinguish them.

Article description	Article No.	Cable length	VdS approval	VPA1		VPA2		VPA3	
				Qty.	Type	Qty.	Type	Qty.	Type
VS.BK.06	4983723	6 m	B	1	BL	20	KK	480	EK



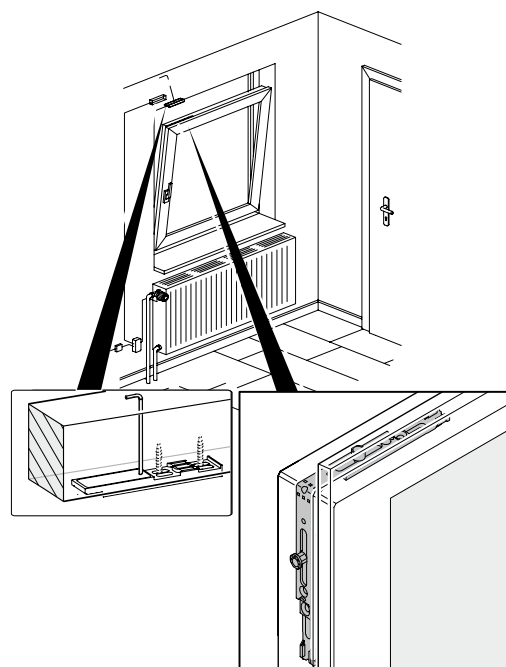
## Product description climate keep

### General

Switch unit, e. g. for avoiding loss of energy when the window is open while the heating is on.

To this effect a switch contact integrated into the fitting is used. In combination with suitable radiator thermostat valves or control units this contact allows the radiator activity to be reduced when a window or patio door is opened.

The suitable radiator thermostat valves, radiator control units and radiator power supply units can be obtained from specialist dealers of sanitary equipment.



### Application area

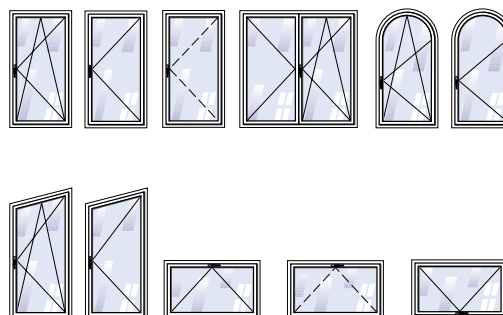
- Heating and climate control according to the motto "Open window – switch off heating"
- For controlling ventilating systems
- For simple state enquiry
- Query option of position "open" or "closed"



Note: For controlling ventilation systems using the VS.K climate keep we recommend you to apply a rigid contactor. So you can be sure that the system can only be activated when the window is in the tilt position.

### System advantages

- Can be easily integrated into the standard Winkhaus activPilot turn-tilt fitting.
- Integration into other fitting systems is possible (on request)
- Adjustable via elongated holes
- The locking sensors are suitable for conventional window designs.



General product information **1**

Basic technical features **2**

RFID locking sensor **3**

RFID contactor **4**

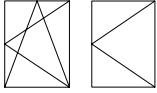
Magnetic locking sensor **5**

Magnetic contactor **6**

Mounting jig / Test device **7**

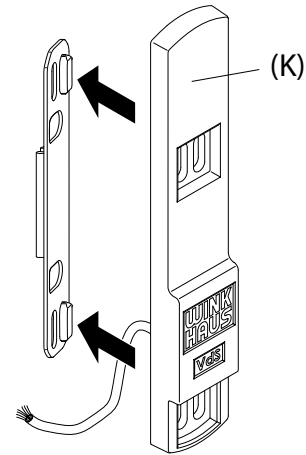
Installation Instructions **8**

Function test locking sensors **9**



## Contact keep VS.K.06

- Contact keep VS.K.06 for climate control, e. g. energy-efficient window ventilation or control of ventilating systems
- Contact keep with changeover contact (K) for energy-efficient window ventilation
- For the status enquiry of the window a switch contact is needed as follows: frame-side contact keep with integrated reed contact and sash-side fitting-independent magnetic contactor
- Scope of delivery: 1 contact keep, 3 adapters and 2 fixing screws
- Used in combination with one of the magnetic contactors E1.VS.KG, MK.VS.150.KG, MK.VS.250.KG, VS.KG... or VS.KGS...



### Technical data

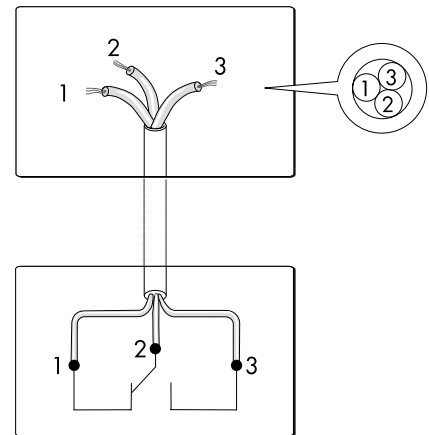
- Switch voltage: max. 48 V DC
- Switching current: max. 0.25 A
- Transport current: max. 1.2 A
- Contact resistance: max. 150 m Ω
- Switch performance: max. 3 W pure ohmic load
- Temperature range: -20° C to +70° C
- Protection class: IP67 according to DIN EN 60529
- Service life: min 10<sup>7</sup> switch cycles
- External dimensions: length 104 mm,  
width 18 mm,  
height 8.5 mm

### Connection type for VS.K.06

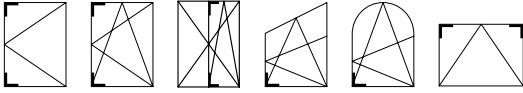
- 6 m connecting cable integrally cast, black, 3 x 0.14mm<sup>2</sup>, diameter 3.5 mm

#### Wire colours:

- 1 = blue
- 2 = black
- 3 = brown



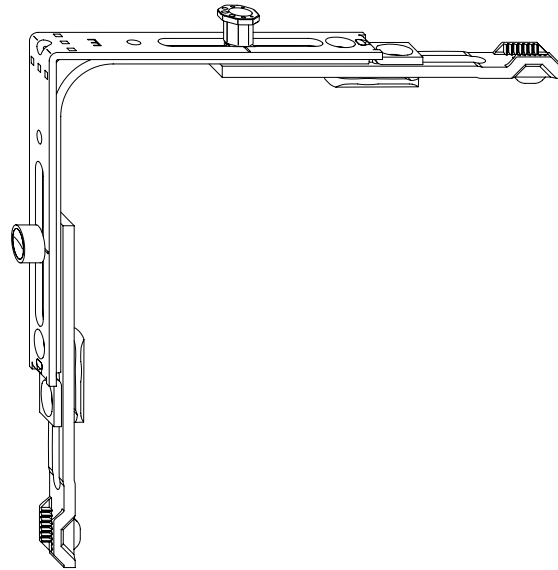
Article description	Article No.	Cable length	VdS approval	VPA1 Qty.	Type	VPA2 Qty.	Type	VPA3 Qty.	Type
Contact keep VS.K.06	4983724	6 m	-	1	BL	30	KK	720	EK



## Corner drive

### E1.VS.KG

- Corner drive with magnetic contactor
- Magnetic contactor for magnetic locking sensors VS.B..., VS.BK.06 or VS.K.06
- Safety locking pin as a manually adjustable octagonal bolt
- Central fastening as standard
- Automatic and manual assembly possible



General product information **1**

Basic technical features **2**

RFID locking sensor **3**

RFID contactor **4**

Magnetic locking sensor **5**

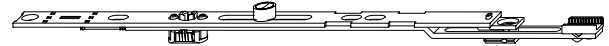
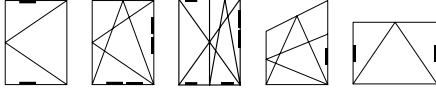
Magnetic contactor **6**

Mounting jig / Test device **7**

Installation Instructions **8**

Function test locking sensors **9**

Article description	Article No.		VPA1		VPA2		VPA3
			Qty.	Type	Qty.	Type	
E1.VS.KG	4966405		100	KK	800	EK	




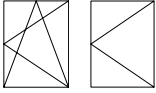
## Interlocking rod MK.VS.250.KG

- Interlocking rod with magnetic contactor
- Magnetic contactor for magnetic locking sensors VS.B..., VS.BK.06 or VS.K.06
- Central fastening as standard
- Extendable interlocking rod, can be combined with Winkhaus standard gearing
- Face plate length 250 mm

### Interlocking rod MK.VS.150.KG

- Designed as described above, but with face plate length 150 mm

Article description	Article No.		VPA1		VPA2		VPA3	
			Qty.	Type	Qty.	Type	Qty.	Type
MK.VS.250.KG	4966406		20	BD	100	KK	800	EK



## Other contactors

- Magnetic contactor for magnetic locking sensor VS.K...

### Contactor VS-KGS.04

- Magnetic contactor 14 mm wide
- Reduced installation height (4 mm); it enables installation for 12 mm airgap
- Mounted on the fitting's face plate
- Construction size 4 mm

### Contactor VS.KGS.06

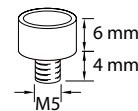
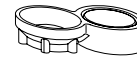
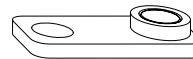
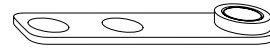
- Magnetic contactor 16 mm wide
- Mounted into the fitting groove
- Construction size 6 mm

### Contactor VS.KGS.04

- Fitted to the face plate by means of a countersunk screw M5 x 6 mm, DIN ISO 7046 (not included in the scope of delivery)
- Construction size 4 mm

### Contactor VS.KG.06-4

- Fitting-independent magnetic contactor for drive-rod fittings.
- Bolt height 6 mm
- Thread length 4 mm



Article description	Article No.	Airgap from / to	VPA1		VPA2		VPA3	
			Qty.	Type	Qty.	Type	Qty.	Type
VS.KGS.04	4966407	10 - 15	10	BL	500	KK	12000	EK
VS.KGS.06	4966408	10 - 15	10	BL	500	KK	12000	EK
VS.KG.04	4977756	10 - 15	10	BL	500	KK	12000	EK
VS.KG.06-4	4966410	12 - 17	10	BL	500	KK	12000	EK

General product information 1

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RFID contactor 4

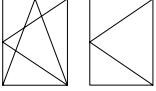
Magnetic locking sensor 5

Magnetic contactor 6

Mounting jig / Test device 7

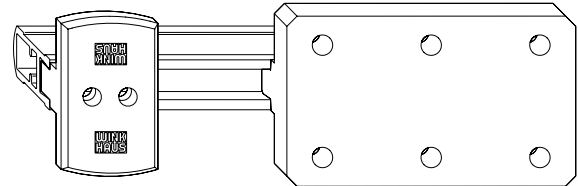
Installation Instructions 8

Function test locking sensors 9



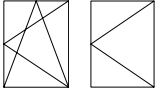
## Drilling jig locking sensor

- Drilling jig for Winkhaus locking sensors VS-A/C-RFID.06, VS.B.06, VS.B.25 and VS.BK.06



**Article description**  
LEHRE VS A/C RFID

**Article No.**  
4937653

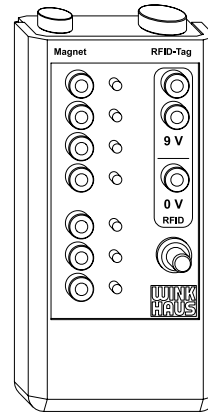


## Test device VS.TG

- Suitable for testing Winkhaus locking sensors:
- VS-A/C-RFID.06
- Contact keeps VS.B.06 and VS.B.25
- Contact keeps VS.BK.06 (VdS class B)
- Contact keep VS.K.06
- and older models of locking sensors (e. g. VS-AB 06)

### Technical data

- Voltage supply: 9V block battery
- Connection: 4 mm quick-release banana plugs (or 4 mm measuring line with test probes)
- Dimensions: 12 x 70 x 22 mm
- Scope of delivery: VS.TG test device, 9 V block battery, 7 pieces of quick-release banana plug



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**Article description**  
VS.TG

**Article No.**  
4980699

# 1 Installation Instructions

## 2 Introduction

These mounting instructions specify the installation and the electrical connection of the Winkhaus locking sensors to a window or patio door.

Any person involved in mounting fittings must have read and understood this fitting guide. Particularly the following section "Safety Instructions" must be observed.

After installation of the locking sensors these mounting instructions should be kept at the window for the electrician to find it or it should be submitted directly to the electrician.

## 3 Safety instructions / Installation conditions

In order to guarantee the proper function of locking sensors, mounting must be carried out in accordance with the manufacturer's instructions. Installation may only be performed by skilled and safety-conscious staff.

Generally it is important to observe the stipulations of VdS Schadenverhütung GmbH (VdS guidelines) regarding burglary alarm systems.

Furthermore please make sure that the electrical connection and performance data of the individual components are compatible and that they are adhered to even while the system is used.

Please verify the following details:

- Is the burglary alarm system in line with valid stipulations and classifications (A, B, C to VdS)?
- Are there precise mounting and installation instructions for the burglary alarm system?
- Are the conductor cross sections of the connection cables compatible and can the connection be implemented in accordance with the installation instructions?

## 4 Special instructions

The locking sensor must not be used in steel windows, because magnetic interference fields might affect its function. Please make sure that only the supplied fixing screws are used.

## 5 Scope of supply

The package contents is always restricted to one type of locking sensors as well as fixing screws and adapters FT1, FT4 and FT5.

## 6 Intended use

Sash-side contactors in combination with keeps VS.B. ..., VS.BK.06 and VS-A/C-RFID.06:

The locking sensor is exclusively intended for the surveillance of windows and patio doors in burglary alarm systems.

This locking sensor has been approved by VdS Schadenverhütung GmbH (damage prevention). For installation please observe the guidelines for burglary alarm systems. In the VdS guideline for burglary alarm systems VdS 2311:1998-12, article 10.1.1 ABC choice of detectors, it reads:

"The choice and use of detectors must be made with the aim to ensure a safe detection and operation without giving false alarms while considering the monitoring role, ambient conditions and the installation instructions of the system supplier / manufacturer."

Winkhaus locking sensors and contactors are exclusively intended for the use described above. Any other utilisation is improper utilisation. We do not assume any liability in case of improper installation or mounting and if third-party or non-approved system components are used! Moreover, the VdS approval is void in this case.

Sash-side contactor in combination with locking sensor VS.K.06:

The locking sensor signal is intended for controlled ventilation. As an example, this may include the control of power supply units switching off the heating when the window is open.

## 7 Installation positions

Fitting-controlled sash-side contactors have been approved by VdS Schadenverhütung GmbH as combined locking and opening surveillance system used with the keeps VS.B.06, VS.B.25, VS.BK.06 and VS-A/C-RFID.06. For installation please observe the guidelines for burglary alarm systems. The mounting position is not imperatively specified for fitting-controlled contactors in windows. The VdS does not recommend to mount the locking sensor on the sash side. If the locking sensor is to be placed on the sash side nevertheless, this must be agreed with the installer of the alarm system in any case. The opening surveillance must not be positioned on the sash side if a rigid contactor on the sash is used.



## Assembly of contactors

### Magnetic / RFID contactors

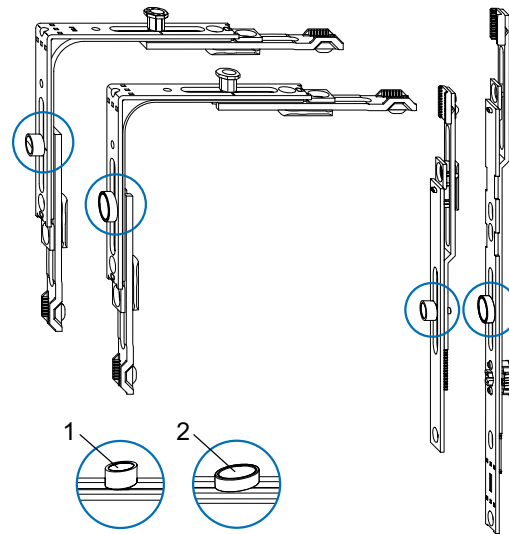
#### Installation positions

See figure: Winkhaus activPilot fittings with contactors

The process to follow when mounting the sash-side contactors is the same as for standard activPilot fitting parts.



Important: The sash-side signal contact must not be used as a locking point. The function of the fitting must not be obstructed by the signal contact. With regard to burglar-proof windows, the sash-side signal contact must by no means replace a security locking point, but must be installed separately. During installation works it is important to heed the locking positions of the locking bolts.



Winkhaus activPilot fittings with contactors

1. Magnetic contactor
2. RFID contactor

#### Mounting the interlocking rod with contactor

If your window or patio door is equipped with a Winkhaus fitting offering the suitable dimensions, you can use the interlocking rods MK.VS.150.KG, MK.VS.250.KG or MK.VS-RFID.250-1.

In case of sufficient space you can fix the interlocking rod to various locations on the window or the patio door:

- between the top rod and the corner drive
- on the drive rod
- on the corner drive

As a circumferential, concealed window fitting is concerned here, the VdS does not stipulate a definite position of locking surveillance.



Note: All locking sensors and contactors are sensitive to impact. Please absolutely avoid vibrations and shocks. After receipt please check all components for transport damages. In order to ensure the exact positioning of the locking sensors, we recommend to complete the installation of the sash-side contactors beforehand. The installation position of the locking sensor depends on the chosen position of the sash-side contactor. The locking sensor must be installed in a way to protect the locking sensor and the cables from manipulation from the outside.

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RFID locking sensor **3**

RFID contactor **4**

Magnetic locking sensor **5**

Magnetic contactor **6**

Mounting jig / Test device **7**

Installation Instructions **8**

Function test locking sensors **9**

## 1 Installation of the locking sensor on the frame

### (Magnet / RFID technology)

- Drill clearance hole  $\varnothing$  9 mm for the cable (2).
- If necessary, pre-drill the fixing points.
- If required, fix the adapter to the locking sensor (1).



Attention! When mounting the locking sensor, please make sure that the cable is not damaged.



Important: Loop the cable to allow for later adjustment of the locking sensor (see 5)!



Note: The overview on the following page shows the suitable adapters for the individual frame profiles. (When using an adapter, please remove the bar (3) in order to allow for the cable to be easily laid.) Clip the adapter (4) to the locking sensor (1).

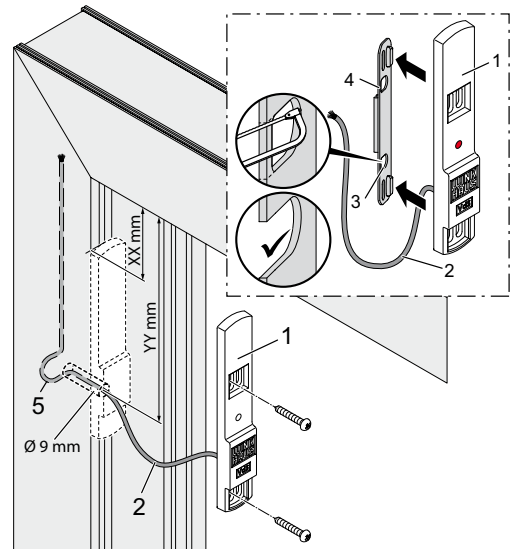


Note: For airgaps exceeding 16.5 – 20.5 mm please use a profile-independent adapter FT.RFID.N.4 for the locking sensor.

- Lead the cable through the  $\varnothing$  9 mm hole.
- Fix the locking sensor.
- Loop the cable (2) at the exit of the  $\varnothing$  9 mm drilling and lay the cable along the frame.

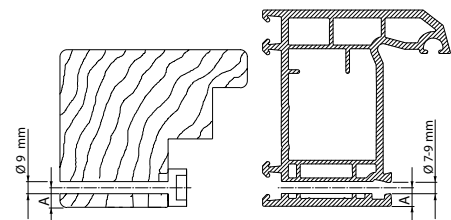


Note: When installing the locking sensor, please make sure that the window is already locked when the sensor conveys the locking signal. This means, the locking bolts must have entered the keeps 50 %.



Mounting diagram locking sensor ( with E1.VS ...)

XX = 37 mm ; YY = 120 mm



Cross section timber and PVC-U profile incl. drill position

Dimension: A = 6 mm

### Installation position of locking sensors if an E1.VS... corner drive is used



Note: The dimensions refer to the turn position and are applicable to Winkhaus fittings with an 18.5 mm / 37 mm stroke.

## Electrical connection

Connect the locking sensor according to the wiring diagram on the product page.

## Opening and locking surveillance (magnetic contacts)

Suitable for use are the keeps VS.B.../VS.BK.06 (burglar alarm system) and VS.K.06 (climate control). Actuation of the contact is performed when the fitting is unlocked in the turn or tilt position



Note: The tilt control device is not VdS approved.

## Tilt surveillance

Suitable for use are the keeps VS.B... and VS.K.06 (climate control). The contact is only actuated in the tilt position. For tilt surveillance the installation position must be at the bottom of the window. It is important to observe the installation and tolerance values also in the tilt position.



Note: Switching the fitting from the closed position to the tilt position is impossible without interrupting the contacts. The tilt surveillance is not VdS approved.

## Status enquiry

The fixed sash-side contactors VS.KG... and VS.KGS... are only used to make a state enquiry (to check whether the sash is in the frame). To this effect the keep VS.K.06 (climate control) can be used. The contact is actuated as soon as the window sash is moved into the turn or tilt position.



Note: Monitoring by means of a fixed contactor for combined opening and locking surveillance is not VdS approved.



Note: The locking sensor is suitable for groove positions of 9 to 13 mm and airgaps of 10 to 15 mm.

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Basic technical features **2**

RFID locking sensor **3**

RFID contactor **4**

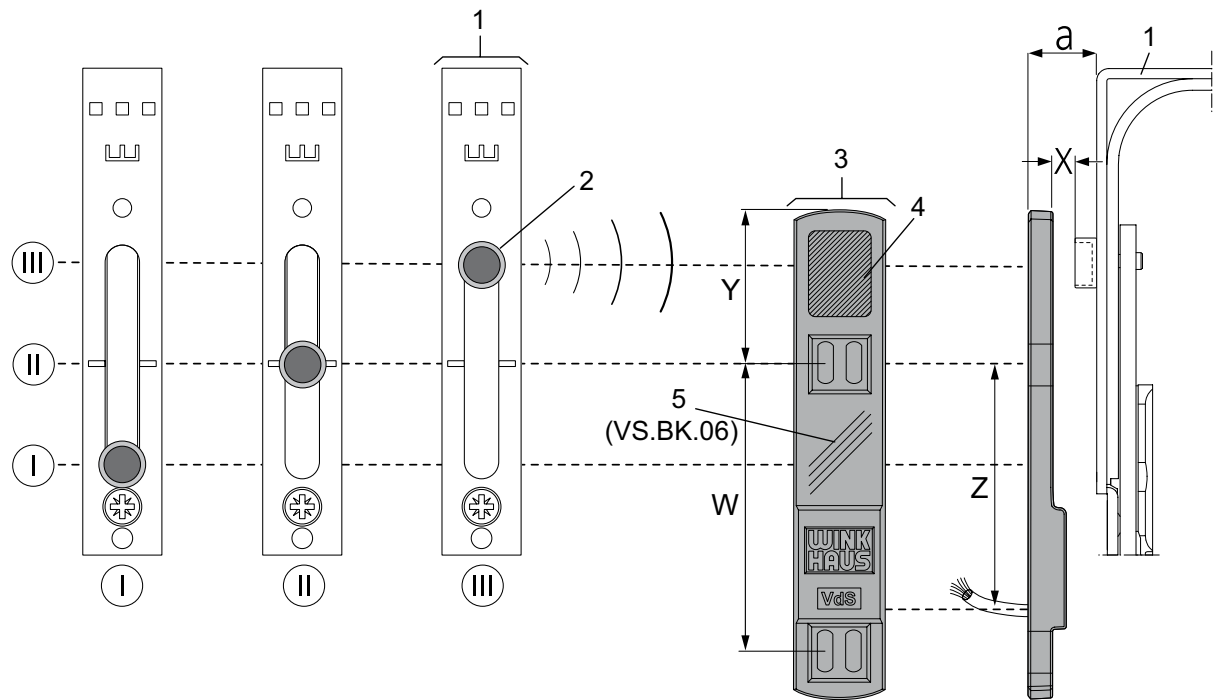
Magnetic locking sensor **5**

Magnetic contactor **6**

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#### Position of the contactor

#### Positions of the magnetic contactor

- I: Tilt
- II: Turn
- III: Lock

#### Components:

- 1 Corner drive
- 2 Contactor
- 3 Locking sensor
- 4 Receiver unit
- 5 Tilt sensor for VS.BK.06

#### Dimensions (for 9/13 mm groove position):

- W: 61.5 mm
- X: 0 to max. 5 mm
- Y: 34 mm
- Z: 49 mm (cable drilling position  $\varnothing$  9mm)
- a: Airgap

## Opening and locking surveillance (RFID contact)

The RFID system is based on the contactless data transfer between the window frame and the sash. The transponder is fitted to the window sash whereas the suitable locking sensor is housed in the frame.

The transponder is integrated into the contactor and indicates the state of the window sash while a reader device is housed in the locking sensor. By means of electromagnetic waves the reader device can detect the transponder and in this way it identifies the state of the contactor.

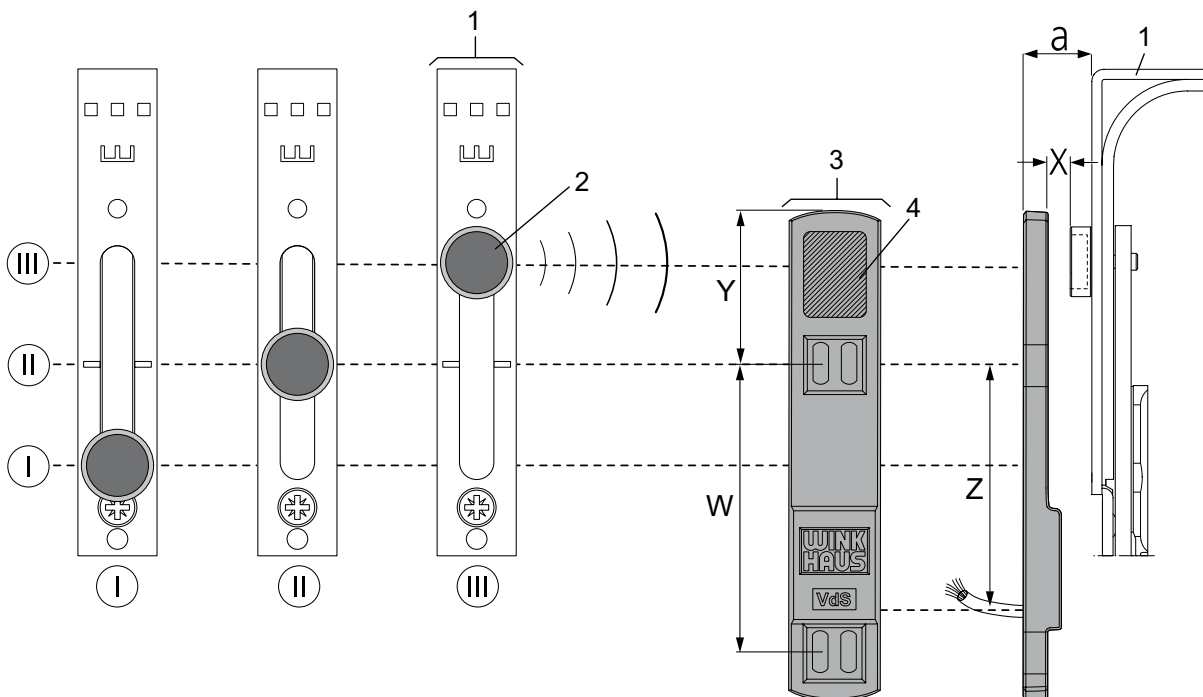
The two elements <transponder> and <reader device> feature an individual coding and form a unique "couple".

## Status enquiry

When the window sash is closed and locked, the transponder is passed over the locking sensor and the reader device detects its presence. In this position the burglary alarm system is informed about the states "closed" and "locked".



Note: The locking sensor is suitable for groove positions of 9 and 13 mm and an airgap of 10 to 15 (19) mm. If the airgap exceeds 15 mm, it is important to use an adapter FT.RFID.N.4 for the locking sensor.



### Positions of RFID contactor

#### Positions of RFID contactor

I: Tilt  
II: Turn  
III: Lock

#### Components:

1 Corner drive  
2 Contactor (transponder)  
3 Locking sensor  
4 Receiver unit

#### Dimensions:

W: 61.5 mm  
X: 0 to max. 5 mm  
Y: 34 mm  
Z: 49 mm (cable drilling position Ø 9mm)  
a: Airgap

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1

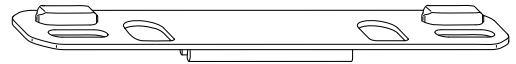
## Adapters locking sensors

2

### Profile-specific adapters (included in the scope of delivery):

3

#### FT1



4

Aluplast 2000 - 8000  
Brüggmann  
Deceuninck  
Dimex  
Gealan  
Internova 6000  
KBE  
KBE (9 mm groove pos.)  
Kömmerling  
LB. Profile  
Plustec  
Rehau  
Roplasto 6002 / 7001  
Salamander  
Schüco CT 60 / CT 70  
Trocal A5 / M5  
VEKA  
Wymar 2500 / 3000

5

6

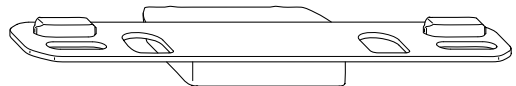
7

8

9

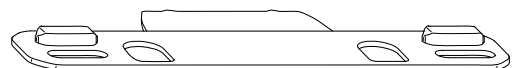
#### FT4

Trocal 2000 / 88+



#### FT 5

Inoutic



### Profile-independent adapters (must be ordered separately)

FT.RFID.N.4  
(Installation height 4 mm)  
Art-Nr.: 4938913



## Function test with test device VS.TG

See figure: Test device VS.TG

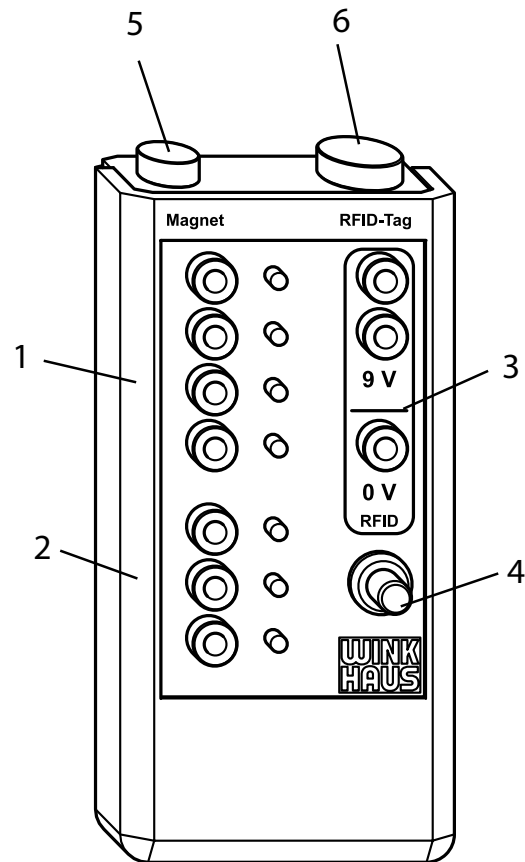
The VS.TG test device is used to check the Winkhaus locking sensors VS-A/C-RFID.06, VS.B.06, VS.BK.06, VS.K.06 and older models of locking sensors, such as VS-A/B 06.

1. Quadruple connector panel for connecting the four white connection lines of the locking sensors VS.B.06, VS.BK.06 and VS-A/C-RFID.06 etc.
2. Triple connector panel for connecting the connection lines (blue, black, brown) of the climate keeps VS.K.06 and VS.BK.06.
3. Triple connector panel, offset, for connecting the voltage supply ( $\pm 9\text{ V}$ ) and the arming ( $+9\text{ V}$ ) of the RFID locking sensor VS-A/C-RFID.06
4. On/off switch
5. Magnetic contactor
6. RFID Contactor

- By squeezing the open strand of the locking sensors, it can be inserted into the quick-release banana plug.



Remark: For test purposes the contactors 5 and 6 can also be used in place of the existing contacts. Important: If you use the RFID contactor (6) for the test, disconnect the locking sensor from the voltage afterwards.



Test device VS.TG

### Testing procedure opening and locking surveillance:

For testing the opening and locking surveillance the four white strands must be connected to the test device (block of four, 1). Then switch on the device. In case of VS-A/C-RFID.06 sensors please additionally make sure that the voltage (3) is applied in line with the colours of wires.

After the strands have been connected, the sabotage line is detected automatically and indicated by the lit LEDs. The order and arrangement of strands is selectable at will. When the signal line is closed (this means when the window is locked) the two remaining LEDs light up.



Note: The four white strands can be applied in any desired order.

### Testing procedure climate keep:

For the climate keeps test (changeover contact) the three coloured strands (black, brown, blue) must be connected to the test device (block of three, see 2).

After applying the strands the "normally open side" is detected and indicated by the lit LEDs. When the magnetic transmitter is connected to the keep the LEDs change over to the "normally closed side".



Note: The coloured strands can be applied in any desired order.

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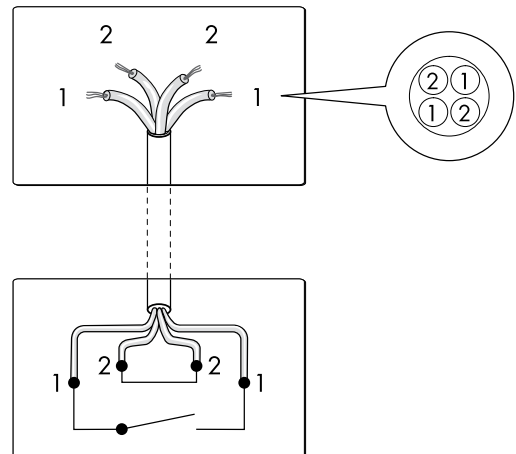
Function test locking sensors 9

## Function test of magnetic locking sensor with digital multimeter

- Connect two diagonally opposing strands to the test device.



Attention! Using a bulb continuity tester might damage the locking sensor. We recommend you to use standard digital multimeters incl. a continuity tester or our VS.TG test device.



Switch diagram Magnetic Locking Sensors

- Unlock and open the window.
- If continuity is indicated, the two strands no. 2 are connected (sabotage line).
- If no continuity is indicated, the two strands no. 1 are connected (signal line).
- Connect the strands no. 1 to the test device and close and lock the window.
- If the fitting magnet is mounted in the correct way, the test device shows continuity.



Important! If no continuity can be ascertained on a closed and locked window, please check the entry depth of the magnet transmitter into the locking sensor. One possibility to determine the depth is to press modelling material into the locking sensor.



Important! The function test should be performed by the manufacturer after mounting and a second time at the installation site before the window is foam-insulated and installed.



Important: Loop the cable to allow for later adjustment of the locking sensor (see 5)!



## Function test of RFID locking sensors with a digital multimeter

### Identify and control signal contact

- Close the window; locking sensor is voltage free (no operating voltage).
- Identify the sabotage line from the 4 white lines by measuring (no continuity).
- The remaining 2 white lines (open) are the signal lines.
- Apply operating voltage.
- The signal contact must close now.
- Arm the system (12V DC at signal input "scharf schalten").
- Open the window.
- Cancel the activation
- Alarm status LED must flash now.



Important! If no continuity can be ascertained on a closed and locked window, please check the entry depth of the RFID transmitter into the locking sensor. One possibility to determine the depth is to press modelling material into the locking sensor.

### Identification of the sabotaged window

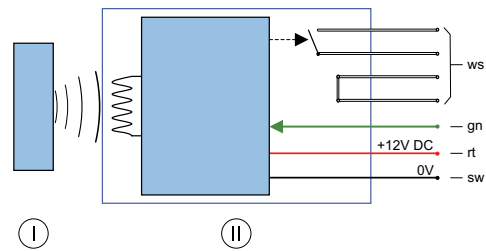
In the activated state a triggered alarm is stored by the locking sensor and it is indicated via LED after deactivation of the locking sensor.

In case this function is not requested, the input of the arming must permanently be 12V.

Example: The window is locked, the locking sensor's arming is activated. If, in this state, the window is opened for a short time (sabotaged), the alarm memory is set. After disarming the locking sensor, the alarm status LED is flashing. Thus the sabotaged window can be identified afterwards.



Important! The function test should be performed by the manufacturer after mounting and a second time at the installation site before the window is foam-insulated and installed.



### Wiring diagram RFID locking sensors

I : Contactor (transponder)

II: Locking sensor (receiver unit)

#### Wiring assignment

ws = white – signal contact + sabotage loop

gn = green – activation (+12V DC)

rt = red – supply voltage (+12V DC)

sw = black – earth (0V)

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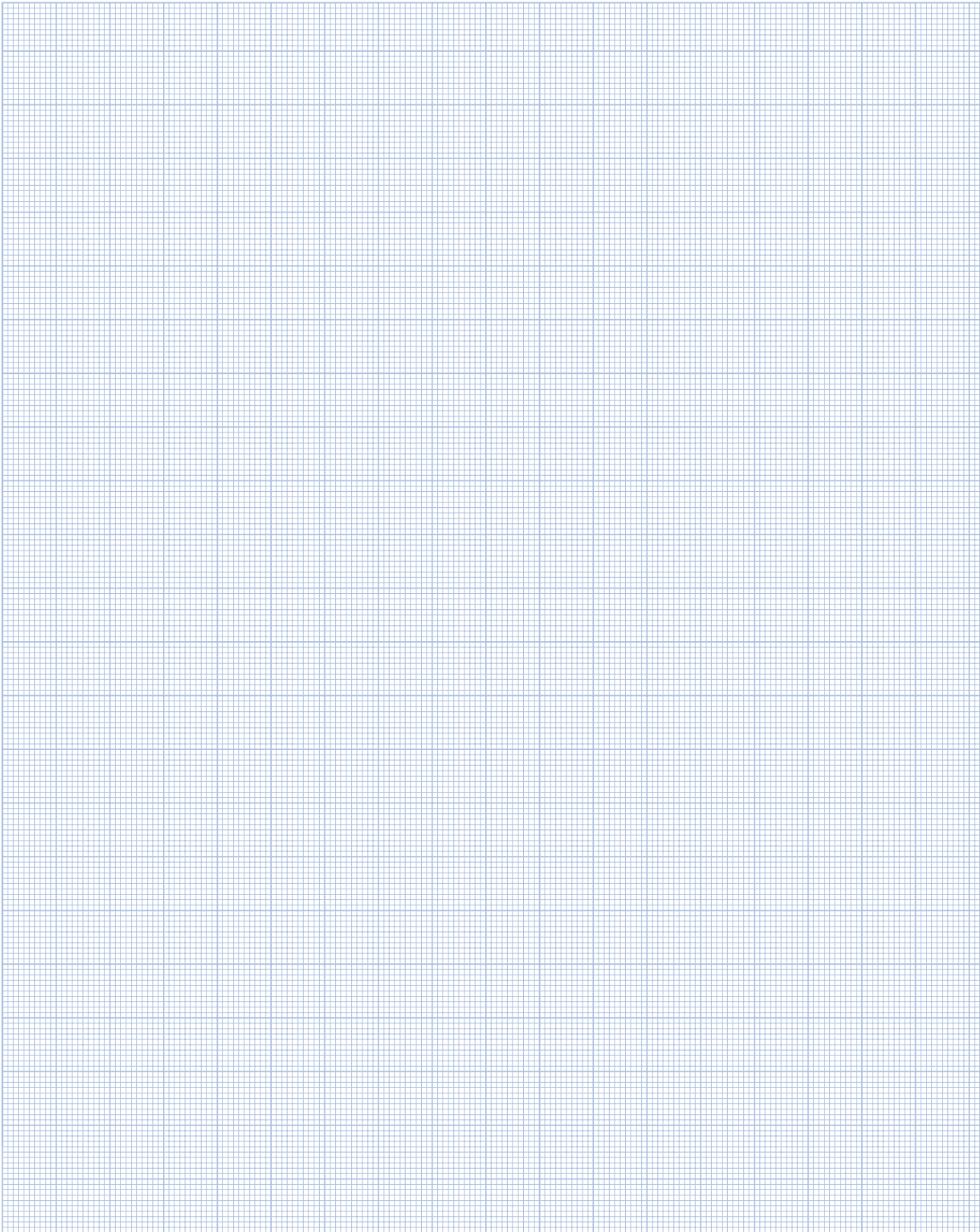
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**Notes**





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