

Roto Drive&Control

Electronic components
for windows and doors

Catalogue
for timber, PVC and aluminium profiles

A close-up photograph of a window's internal drive mechanism, showing the metal arms and gears of the Roto Drive&Control system. The window frame is white, and the glass reflects a blue sky and green foliage.

Power Unit Wireless
delivery availability
upon request



german made

What does that mean?



The company Roto with headquarters in Leinfelden-Echterdingen near Stuttgart is a German group of companies. Roto has grown robustly – organically and consistently.

Our common values represent an identity that has enabled Roto, as a German company, to become a service leader. The value structure of our company is based on three pillars:

- Continuity, consistency and reliability
- Experience, ambition to succeed and vision
- Knowledge, ability and German engineering skills

As a technological pioneer, Roto develops intelligent product solutions that feature impressively precise technology and long service life.

Production and environmental management as well as logistics, irrespective of the manufacturing country, are based on German values such as reliability, thoroughness and vision.

German precision in design and development as well as quality and process management guarantee that we can provide outstanding performance and high-quality services – worldwide.

The consistent implementation of German values in quality specifications and standards ensures that our partners and customers can place their trust in us. This is “german made”.

Company



The company Roto, based in Leinfelden-Echterdingen near Stuttgart, is a German group of companies that is wholly owned by families descended from the company's founder, Wilhelm Frank.

The group comprises three independent divisions which develop and produce hardware systems, roof windows and stairs for the construction industry and offer sophisticated services relating to windows and doors.

The Roto name has represented an inventive spirit and technological progress in compatible components for the construction industry since 1935.

The Roto Group is active all over the world with an extensive business portfolio and around 5000 employees.

Roto works on the basis of clear management and conduct principles to secure the position of the group as a success story and to ensure continued success.

Roto is inspired by the needs and expectations of customers, whether you are a builder, planner, architect, manufacturer or retailer of windows and doors, or manufacturer or specialist retailer for roofing.

Roto | Window and Door Technology

Worldwide



Europe



Roto Frank Austria GmbH

Kalsdorf (AT)



Roto Frank Belarus

Minsk (BY)



Roto Frank S.A.

Nivelles (BE)



Roto Frank GmbH

Dietikon (CH)



Roto Frank Fenster- und Türtechnologie GmbH

Leinfelden / Velbert (DE)



Roto Frank Ehitusrautised OÜ

Tallinn (EE)



Roto Frank S.A.

Lliçà de Vall (ES)



Roto Frank Ferrures S.A.S.

Saint Avold (FR)



Roto Elzett Certa Kft.

Lövő / Sopron (HU)



Roto Frank Italia

San Donà di Piave (IT)



Roto Frank Lithuania

Vilnius (LT)



Roto Frank Latvijā

Jūrmala (LV)





Roto Frank
Warsaw (PL)



Roto Romania S.R.L.
Bucharest (RO)



OOO Roto Frank
Noginsk (RU)



Roto Frank Ltd. Sti.
Istanbul (TR)



**Roto Frank Okucia
Budowlane Sp. z o.o.**
Kiev (UA)



Asia



**Roto Frank Building
Materials Co. Ltd.**
Beijing (CN)



Roto Frank Indonesia
Jakarta (ID)



**Roto Frank Asia – Pacific
Liaison Office India**
Mumbai (IN)



**Roto Frank Asia-Pacific Pte.
Ltd**
Singapore (SG)



**Roto Frank Asia-Pacific Pte.
Ltd.**
Hanoi (VN)



America



Roto Frank Latina SA
Buenos Aires (ARG)



Roto Frank Brasil Ltd.
San Jose (BR)



Fermax Componentes Ltd.
Colombo (BR)



Roto Fasco Canada Inc.
Mississauga, Ontario (CA)



Roto Frank Chile
Santiago (CL)



Roto Frank of America Inc.
Chester (US)



= Sales = Production / sales

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1 Information

1.1 General

INFO

All dimensions stated in millimetres. Other values are specified.

The following markings are used in this document.

1.1.1 Product features

Symbol	Meaning
	Cropping range
	Hardware axis
	Description
	Width
	DIN left / right
	Backset
	Integrated corner drive
	Rebate clearance
	Rebate depth
	Colour description
	Colour code
	Sash rebate width
	Sash rebate height
	Fixed handle height
	Centred / variable handle height



Symbol	Meaning
	Height
	Information
	Length
	Material
N ^o	Material number
	Installation type
	Surface
	Opening angle
	Position
	Profile system
	Frame groove
	Number of welded-on strikers
	Number of locking cams
	Type of locking cams
	Number of screws
	Type of screws
	Floating mullion
	System
	Depth



Symbol	Meaning
	Packaging unit

1.1.2 Abbreviations

Abbreviation	Meaning
A	Amperes
AC	Alternating current voltage
HA	Hardware axis
°C	Degrees Celsius
CTL	Catalogue
DC	Direct current voltage
DIN L / R	DIN left / right
T&T	Tilt&Turn hardware
SRW	Sash rebate width
SRH	Sash rebate height
S.kg	Sash weight
I	Current level
IMO	Installation instructions
kg	Kilograms
VT	Vertical tilting
KU	Couplable
M	Metres
mA	Milliamperes
Max.	Maximum
mm	Millimetres
MTS	Magnetic thermostat sensor
CL	Centre lock
MVS	Magnetic locking sensor
N	Newtons
Nm	Torque in newton metres
Not sh.	Not shown
P	Performance
SEC	Security
U	Voltage
V	Volts
W	Watts

1.1.3 Copyright protection

The contents of this document are copyright-protected. This content can be used when working with the hardware. Any other use is not permitted without written permission of the manufacturer.

1.2 Roto Drive & Control

Roto Drive & Control offers a variety of motor and sensor solutions for window and door elements.



Roto E-Tec Drive

The concealed drive for windows

- Fully integrated into the window hardware
- Continuously adjustable tilt distance
- Reliable, quiet motor operation
- Immediate commissioning thanks to preinstalled components
- Can be activated via Smart Home systems



Roto E-Tec Control

Wired sensors for security technology and room climate

- Security technology
- Ventilation and temperature control
- Control for extractor hoods
- Cable junctions for the window



Roto Com-Tec

Radio-based solutions for networked home automation

- Always informed of whether the windows are open, closed or tilted
- Smart Home ready via EnOcean wireless protocol
- Three versions for different requirements



Roto Safe E

Electromechanical multipoint lockings for doors

- Quiet and powerful motor for effortless opening and locking
- Extremely short unlocking time
- Plug & play connection for simple and error-free installation
- Extensive accessories including access control systems, cable junctions and deadbolt switch contacts

i

1.3 Storage conditions



Protecting components against dirt and dust

Always keep the containers closed, and always cover open hardware containers or goods stored open (i.e. with a layer of cardboard).

Protecting components against mechanical damage

Only transport and handle the containers using suitable means of transport or conveyance (forklifts, lifting devices and roller belts, etc.). Only stack pallets and cardboard boxes (during transport) to the maximum height specified in the printed instructions on the packaging.

Protecting components against direct moisture and wet

The packaging must remain dry and the components must not get wet. This applies to storage and transport, as well as for unloading and loading procedures. Where appropriate, plastic protective sheets or similar are to be used during outdoor transport (i.e. on-site transport) when raining.

Only store components in suitable closed rooms and not outdoors. Condensation must absolutely be avoided during the entire duration of transport and storage.

If containers nevertheless get wet...

Immediately unpack the components from the wet containers, dry the components and check for damage (signs of corrosion). In any case, repack the usable components when dry with new packaging material

1.4 Environment



Environmental compatibility of the hardware components

Our objective is to succeed in manufacturing our hardware components with the lowest possible consumption of energy and operating resources, and we strive to produce extremely durable hardware components. To achieve this, we conserve natural resources, minimise energy consumption and use raw materials in an environmentally friendly manner.

Environmental impact resulting from the hardware

The surface quality of our treated surfaces is abrasion-resistant. No environmental pollution is caused by hardware components when the stipulated use is complied with.

Environmental compatibility of the packaging

We use recyclable disposable packaging made of reinforced cardboard, steel strapping, PVC packaging tape, PE sheeting, timber frames, single-use wooden pallets, cable ties, elastomer cord as well as reusable packaging, reusable boxes from Schäfer, pallet crates and EURO wooden pallets.

Environmental compatibility of disposal

Our hardware is made of materials which enable environmentally friendly material utilisation and can be disposed of as mixed scrap.

Returning packaging material

Our packaging with the INTERSEROH logo is accepted free of charge by every INTERSEROH disposal partner. The directory of your local disposal partners can be requested nationwide from the telephone exchange of ISD INTERSEROH GmbH in Cologne using the following telephone number: +49 2203 9147-322. The Roto INTERSEROH number is 25582.



1.5 Gütegemeinschaft Schlösser und Beschläge e.V.

Everything you need to know about the correct use and maintenance of hardware for windows and balcony doors can be found in the current directives issued by Gütegemeinschaft Schlösser und Beschläge e.V.



VHBH

Hardware for windows and balcony doors –
Guidelines/advice on the product and on
liability



VHBE

Hardware for windows and balcony doors –
Guidelines/advice for end-users



TBDK

Attachment of supporting fitting components
for turn-only and tilt&turn fittings with defini-
tions for turn-only and tilt&turn fittings and their
possible installation positions

1.6 Certifications

1.6.1 Quality management

The certification in accordance with the international standard DIN EN ISO 9001 certifies that Roto plans, documents and appropriately implements the entire development, production and sales process systematically. Starting with development and design through to quality planning, production and assembly right through to sales and customer service.

The certification is an external indication of the quality awareness practised at Roto:

- Roto's objective is to ensure continuous product and service improvements for the benefit of its customers.
- Roto offers its customers innovative, environmentally friendly and technically sophisticated architectural hardware technology.
- Roto products are supplied punctually worldwide with constant guaranteed quality.
- Roto's comprehensive view regards all business activities – including all the activities within the company – to be the key to achieving long-term corporate success.
- Roto employees are supported in their personal development and fulfil Roto's high quality requirements in their day-to-day work. Their work is performance and goal-oriented.



1.6.2 International Technology Centre (ITC)

Roto has owned a modern International Technology Centre (ITC) at its Leinfelden headquarters since October 1996. This facility is available for both our own material and product testing as well as for inspecting finished products made by Roto market partners.



The ITC is accredited in accordance with DIN EN ISO / IEC 17025 and has the expertise required to perform tests in areas including mechanical technological testing of facade elements such as windows, doors and hardware, as well as metallic materials.

Achieving accreditation in accordance with DIN EN ISO / IEC 17025 represents the highest distinction for a test institute in the private sector. The requirements for this are an extensive quality management system, trained personnel, high-quality test rigs and measuring instruments, as well as continuous external monitoring by the accreditation authorities.

1.7 Declaration of Conformity

1.7.1 Roto E-Tec Drive

**Einbauerklärung
für eine unvollständige Maschine
nach der EG-Richtlinie 2006/42/EG (Anhang II B)**

***Declaration of incorporation
for a partly completed machinery
in accordance of EC – Directive 2006/42/EC (annex II-part B)***

Hersteller <i>manufacturer</i>	Roto Frank AG Wilhelm-Frank-Platz 1 D-70771 Leinfelden-Echterdingen
Wir bestätigen, dass die Konformität des nachstehend bezeichneten Produktes: <i>We confirm herewith, that the conformity of the following designated product:</i>	
Produktbezeichnung <i>product designation</i>	E-Tec Drive
Typenbezeichnung <i>type designation</i>	-
Seriennummer, Baujahr <i>serial number, year of manufacture</i>	siehe Typenschild <i>according to identification plate</i>

alle grundlegenden Anforderungen der Maschinenrichtlinie 2006/42/EG erfüllt, soweit es im Rahmen des Lieferumfangs möglich ist. Ferner erklären wir, dass die speziellen technischen Unterlagen, gemäß Anhang VII Teil B dieser Richtlinie, erstellt wurden.
all essential requirements of the Machinery Directive 2006/42/EC are met, as far as it is possible, according to the scope of supply and services. We also declare, that the relevant technical documents, referred to in annex VII, part B of this directive, have been created.

Folgende grundlegende Anforderungen kommen zur Anwendung:
2006/42/EG, Anhang I, allgemeine Grundsätze;
2006/42/EG, Anhang I 1, grundlegende Sicherheits- und Gesundheitsanforderungen
*The following basic requirements are applied:
2006/42/EG, annex I, general principles;
2006/42/EG, annex I 1, general health and safety requirements*

Die unvollständige Maschine entspricht zusätzlich den Bestimmungen der Richtlinie 2004/108/EG über elektromagnetische Verträglichkeit. Die Schutzziele der Richtlinie 2006/95/EG über elektrische Betriebsmittel werden eingehalten.
The partly completed machinery also complies with the provisions of Directive 2004/108/EC relating to electromagnetic compatibility. The safety objectives of directive 2006/95/EC on electrical resources are respected.

Bevollmächtigter für die Zusammenstellung der relevanten technischen Unterlagen gemäß Anhang VII B ist die Firma Roto Frank AG, Anschrift siehe oben.
Authorized representative to compile the relevant technical documents referred to in annex VII B, is the company Roto Frank AG, address see above.

Wir verpflichten uns, den Marktaufsichtsbehörden (auf begründetes Verlangen), die technischen Unterlagen zu der unvollständigen Maschine per E-Mail oder Post zu übermitteln.
We obligate ourselves, to submit the national authorities (on a well-founded request), the relevant information about the partly completed machinery by e-mail or post.

Die unvollständige Maschine darf erst dann in Betrieb genommen werden, wenn ggf. festgestellt wurde, dass die Maschine oder Anlage, in welche die unvollständige Maschine eingebaut werden soll, den Bestimmungen der Richtlinie 2006/42/EG über Maschinen entspricht und die EG Konformitätserklärung gemäß Anhang II Teil A ausgestellt ist.
The partly completed machinery must not be put into operation, if determined necessary was, that the machine or installation, in which the partly completed machinery has to be installed, should comply with the provisions of Directive 2006/42/EC on machinery and the EC declaration of conformity is issued in accordance with Annex II part A.

Roto Frank AG 
Wilhelm-Frank-Platz 1
70771 Leinfelden-Echterdingen

Leinfelden-Echterdingen, 29.04.13

Ort, Datum <i>place, date</i>	 Vorstand <i>member of the board of directors</i>	
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1.7.2 Roto E-Tec Control



EU-Konformitätserklärung EU Declaration of Conformity

Hersteller:
manufacturer: **Roto Frank Fenster- und Türtechnologie GmbH**
Wilhelm-Frank-Platz 1
D-70771 Leinfelden-Echterdingen

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Produkt-/ Typbezeichnung:
name of product/ type: **MVS/MTS-Kontaktelemente (siehe Anhang 1)**
MVS/MTS-contact elements (see annex 1)

Seriennummer, Baujahr
serial number, year of manufacture: **siehe Typenschild**
according to identification plate

Die Gegenstände dieser Erklärung erfüllen die einschlägigen, nachstehend benannten Harmonisierungs-
rechtsvorschriften der Union.
The items addressed by this declaration satisfy the relevant harmonization legislation of the European Union.

EU-Richtlinie <i>EU Directive</i>	Norm <i>Standard</i>
2014/30/EU Elektromagnetische Verträglichkeit (EMV) <i>Electromagnetic Compatibility (EMC)</i>	EN 50130-4: 2015-04 EN 61000-4-2: 2009-12 EN 61000-4-3: 2011-04 EN 61000-4-4: 2013-04 EN 61000-4-5: 2015-03 EN 61000-4-6: 2014-08 EN 61000-4-11: 2016-10 EN 61000-6-3: 2011-09
2011/65/EU (RoHS) 2011/65/EU (RoHS II) 2015/863/EU (RoHS III)	EN 50581: 2013-02

Leinfelden-Echterdingen, 23.11.2020

Ort, Datum
place, date

Hartmut Schmidt
Direktor Produktinnovation
VP Product Innovation



Anhang 1 Annex 1

Artikel-Nr. <i>product-ID</i>	Artikelbezeichnung	<i>name of product</i>
292101	MVS-KONTAKTELEMENT VDS B 6M	MVS-CONTACT VDS B 6M
292114	MVS-KONTAKTELEMENT VDS C 6M	MVS-CONTACT VDS C 6M
292118	MTS-KONTAKTELEMENT 6M	MTS-CONTACT 6M
335077	MTS-KONTAKTELEMENT 10M	MTS-KONTAKTELEMENT 10M
335078	MVS-KONTAKTELEMENT VDS B 10M	MVS-CONTACT VDS B 10M
335079	MVS-KONTAKTELEMENT VDS C 10M	MVS-CONTACT VDS C 10M
336318	MVS-KONTAKTELEMENT LSN VDS B 6M	MVS-CONTACT LSN VDS B 6M
384016	MVS-KONTAKTEL-SET o.VDS 6M SILBER	MVS-CONTACT-SET wo.VDS 6M SILVER
485530	MVS-KONTAKTEL-SET o.VDS 4-ADR. 10M SILBER	MVS-CONTACT-SET wo.VDS 4-wire 10M silver
635289	MVS-KONTAKTELEMENT VDS B RUND 6M	MVS-CONTACT VDS B ROUND 6M
737983	MVS-KONTAKTELEMENT VDS B RUND 10M	MVS-CONTACT VDS B ROUND 10M
791950	MVS-KONTAKTELEMENT VDS C RUND 6M	MVS-CONTACT VDS C ROUND 6M
791951	MTS-KONTAKTELEMENT RUND 6M	MTS-CONTACT ROUND 6M
794823	MVS-KONTAKTELEMENT-SET RUND 3M SCHRAUBB	MVS-CONTACT-SET ROUND 3M
814899	MVS-KONTAKTELEMENT VDS B 20M	MVS-CONTACT VDS B 20M
858477	MVS-KONTAKTELEMENT VDS B RUND 6M	MVS-CONTACT VDS B 6M
858478	MVS-KONTAKTELEMENT VDS B RUND 10M	MVS-CONTACT VDS B ROUND 10M
891372	CONTROL-UNIT KONTAKTELEMENTE	CONTROL-UNIT CONTACT-ELEMENTS
891373	KABEL 6POL F CONTROL-UNIT PG MK 6	CABLE 6PIN CONTROL-UNIT PG MK 6
896748	MVS-KONTAKTELEMENT VDS B RUND 20M	MVS-CONTACT VDS B ROUND 20M
899191	MVS-KONTAKTELEMENT VDS C RUND 10M	MVS-CONTACT VDS C ROUND 10M



1.7.3 Roto Com-Tec Sensor



EU-Konformitätserklärung EU Declaration of Conformity

Hersteller:
 manufacturer

Roto Frank Fenster- und Türtechnologie GmbH
 Wilhelm-Frank-Platz 1
 D-70771 Leinfelden-Echterdingen

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Produkt-/ Typbezeichnung:
 name of product/ type:

Com-Tec Sensor Basic Set	[815892]
<i>Com-Tec Sensor Basic Set</i>	
Com-Tec Sensor Comfort Set	[816928]
<i>Com-Tec Sensor Comfort Set</i>	
Com-Tec Sensor Comfort S Set	[816929]
<i>Com-Tec Sensor Comfort S Set</i>	
Com-Tec Sensor Basic VE25	[820701]
<i>Com-Tec Sensor Basic VE25</i>	
Com-Tec Sensor Comfort VE25	[820702]
<i>Com-Tec Sensor Comfort VE25</i>	
Com-Tec Sensor Comfort S VE25	[820703]
<i>Com-Tec Sensor Comfort S VE25</i>	

Seriennummer, Baujahr:
 serial number, year of manufacture:

siehe Typenschild
according to identification plate

Die Gegenstände dieser Erklärung erfüllen die einschlägigen, nachstehend benannten Harmonisierungsrechtsvorschriften der Union.
The items addressed by this declaration satisfy the relevant harmonization legislation of the European Union.

EU-Richtlinie <i>EU Directive</i>	Norm <i>Standard</i>
2014/53/EU Funkanlagenrichtlinie <i>Radio Equipment Directive (RED)</i>	ETSI EG 203 367 V1.1.1 (2016-06) ETSI EN 300 220-2 V3.1.1 (2016-11) ETSI EN 301 489-1 V2.1.1 (2016-11) ETSI EN 301 489-3 V1.6.1 (2013-08) EN 61000-3-2: 2014 EN 61000-3-3: 2013 EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 +A2:2013 EN 62479:2010
2011/65/EU (RoHS) 2015/863/EU (RoHS III)	EN 50581:2013-02

Leinfelden-Echterdingen, 16.08.2019

Ort, Datum
 place, date

H. Schmidt

Hartmut Schmidt
 Direktor Produktinnovation
member of board, director product innovation

EU-DOC Com-Tec Sensor Basic, Comfort, Comfort S V1.0 V1.0

1.8 Roto Con Orders

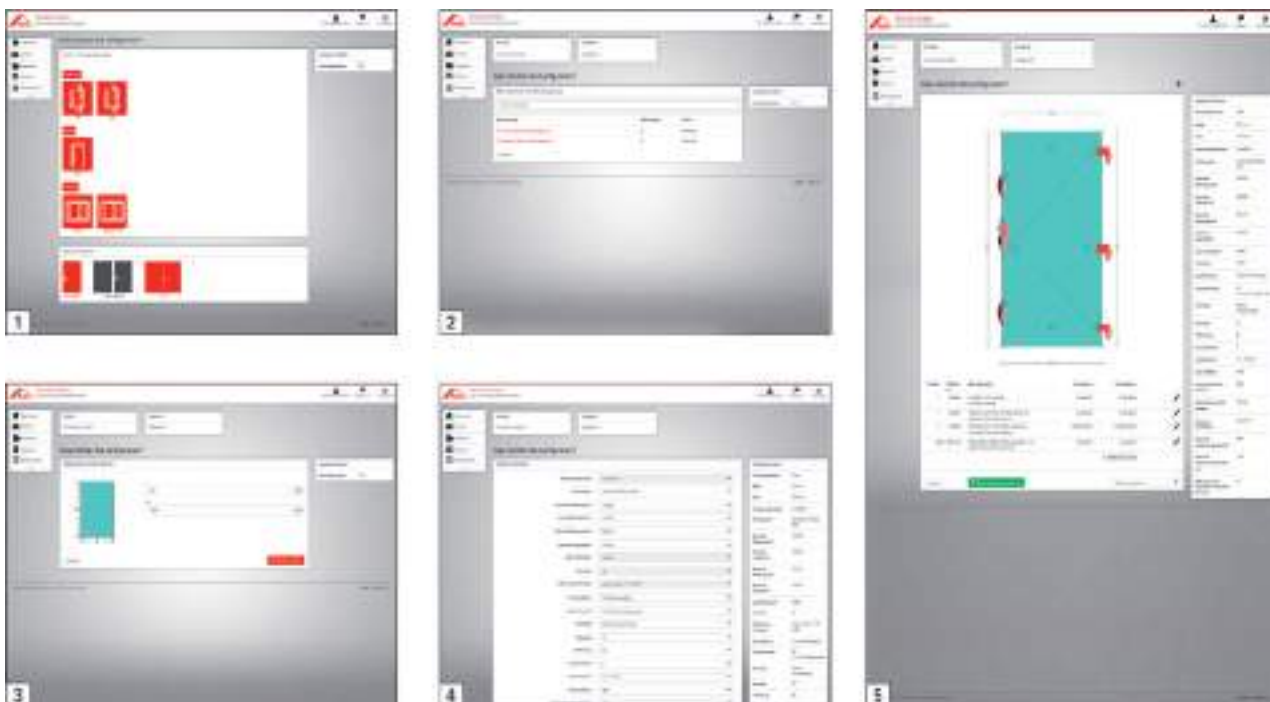


Just four steps for a finished parts list

Roto Con Orders is the perfect solution for window and door manufacturers, and for dealers. This is because with the high-performance online hardware configurator, an individual configuration of window and door hardware can be generated very easily and in an extremely short time – for all common shapes and opening types. Just a few mouse clicks and a couple of numeric entries, and the individual parts list including a technical illustration of the hardware itemising is finished. The list can be changed, adapted or personalised as desired. It can be exported in various data formats, enabling it to be used for individual offers or orders. Benefit from this efficient Roto online tool, save time during configuration, management and ordering – with Roto Con Orders.

Hardware configuration has never been this easy

With intuitive menu guidance, you generate an optimum parts list in just four steps:



1. Selection of the product group
2. Selection of the design template
3. Entry of sizes
4. Individual detailed settings and adaptations
5. **Result:** output of a detailed data sheet with a technical illustration and a complete parts list with editable order numbers, descriptions and individual and total prices.



Intelligent additional functions simplify your processes



Roto Con Orders makes it easy for you to simplify and accelerate your processes. A large number of useful functions are available to help you do this:

- Store your own company addresses and logos in the header of your offers
- Create and manage customer-specific projects
- Generate individual customer hardware templates
- Integrate a discount structure system
- Material master management
- Due to its responsive design, it can be used on all devices such as PCs, tablets, and smartphones

Get started straight away thanks to web-based solution

Roto Con Orders is a web-based solution that you can access around the world and around the clock. You only require a computer with a web browser and Internet access for this purpose. To work with the online hardware configurator, please register once with your e-mail address in the portal for dealers and manufacturers at:



www.roto-frank.com

1.9 Roto media portal



Simple and quick

The Roto media portal is where all media is available, such as catalogues, installation instructions, brochures and interactive installation videos. Access to this portal is optimised for PCs, laptops and mobile devices.

The clear user interface and the numerous search options ensure that all available media can be found simply and quickly. Content can be read directly in the Roto media portal or downloaded for later.

The Roto media portal can be accessed via the “Downloads” link in the “Service” main menu item on the Roto website or directly using the links below.



www.roto-frank.com

Media for Roto Drive&Control

This catalogue offers an overview of the Roto Drive&Control product range. All other media relating to Roto Drive&Control can be accessed via the Roto media portal. The links below provide direct access.



www.roto-frank.com | Roto Drive&Control

i 1.10 Further Roto products

1.10.1 Roto Window

Tilt&Turn – Tilt&Turn hardware systems for windows and balcony doors

Timber and PVC



Roto NX

The Tilt&Turn hardware system for windows and balcony doors shaping the industry once again



Roto NT

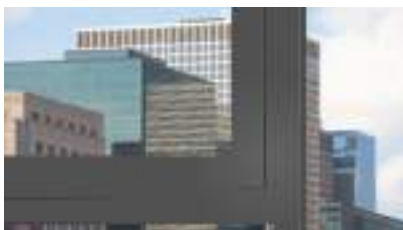
The world's biggest selling Tilt&Turn hardware system for windows and balcony doors

Aluminium



Roto AL

Universal hardware for aluminium windows and balcony doors



Roto AL Designo

Concealed hardware for aesthetic aluminium windows and balcony doors

Outward Opening – Hardware systems for outward opening windows



Roto FS Kempton

Stainless-steel friction stays for outward opening windows



Roto PS Aintree

Parallel stainless-steel friction stays for outward opening windows



Roto FRH Uni

Fully reversible hinges for outward opening windows

1.10.2 Roto Sliding

Roto Patio – High-quality sliding windows and doors



Roto Patio Fold

Premium hardware for Fold&Slide systems with a large surface



Roto Patio Life

Comfort hardware for large sliding doors



Roto Patio Lift

Hardware for versatile use in Lift&Slide systems



Roto Patio Alversa

Universal hardware for minimum effort in Parallel Sliding and Tilt&Slide systems



Roto Patio Inowa

Intelligent hardware for tightly sealed sliding systems

Roto Inline – Basic sliding windows and doors



Roto Inline

The hardware system for basic sliding windows and sliding doors



1.10.3 Roto Door

Roto Safe – The modular multipoint locking system for doors



Roto Safe H

Mechanical multipoint lockings for lever-handle-operated doors



Roto Safe C

Mechanical multipoint lockings for cylinder-operated doors



Roto Safe E

Electromechanical multipoint lockings for doors



Roto Safe P

Mechanical multipoint lockings for escape and panic doors

Roto Solid – Comprehensive range of door hinges



Roto Solid S

Screw-on hinges for doors



Roto Solid B

Butt hinges for doors



Roto Solid C

Concealed hinges for doors

Roto Eifel – Thresholds for doors and balcony doors



Roto Eifel

Tailor-made range of thresholds for tightly sealed accessible doors and balcony doors

1.10.4 Roto Equipment

Drive&Control – Electronic components for windows and doors



Roto E-Tec Drive

The concealed drive for windows



Roto E-Tec Control

Wired sensors for security technology and room climate



Roto Com-Tec Sensor

Wireless sensors integrated in hardware for home security

Handles – Handles for all opening types



Roto Swing

The modern handle line



Roto Line

The classic handle line



Roto Samba

The classic yet modern handle line



Roto Freestyle

Solutions for all opening types

Fix&Glazing – Installation and glazing solutions for windows and doors



Roto Glas-Tec

Customised solutions for safe glazing



1.11 Contact

Roto Frank

Fenster- und Türtechnologie GmbH

Wilhelm-Frank-Platz 1

70771 Leinfelden-Echterdingen

Germany

Phone +49 711 7598 0

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Roto E-Tec Drive





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Technical data

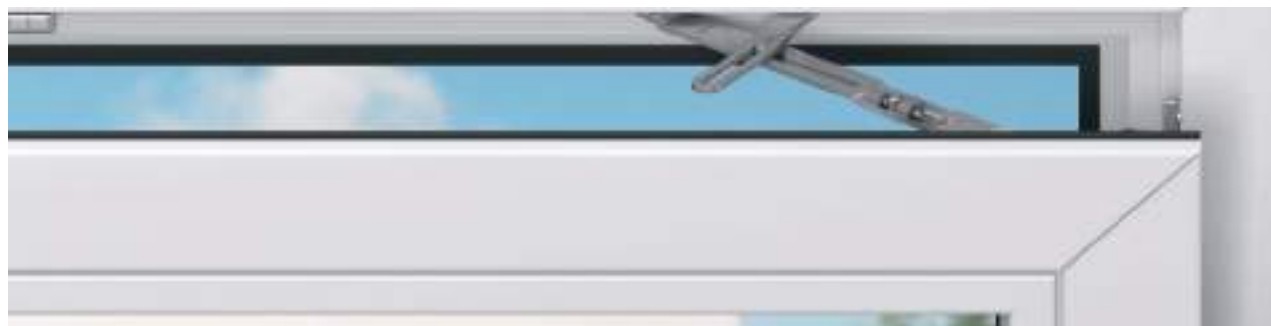
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2 Roto E-Tec Drive

Concealed drive for windows



Simple, convenient, concealed

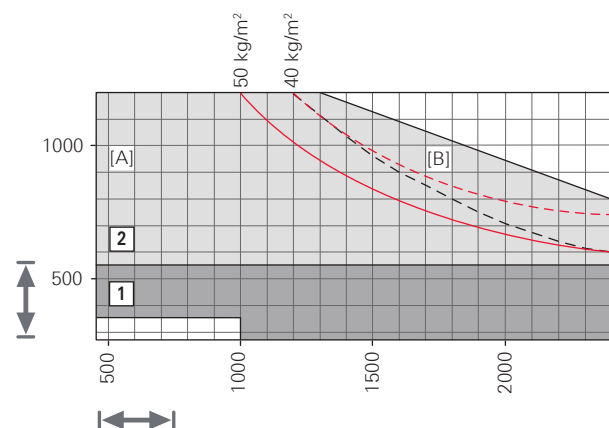
The concealed electronic opening and locking system is fully integrated into the window and therefore is not visible from the inside or outside. The atmosphere in the home is not affected by this. When used with extendable systems, the possibilities are almost limitless. This means that the window can simply and conveniently be moved into continuously variable tilt positions. When closing, the Roto E-Tec Drive locks the window fully again.



2.1 Application diagrams

2.1.1 Tilt-Only sash

2.1.1.1 Roto NX | Hinge sides P and T / Roto NT | Hinge sides K, A and E5



[A] = Without wind sensor

[B] = With wind sensor

--- = Wind sensor limit

[1] = Restrictor and cleaning stay type 1

[2] = Restrictor and cleaning stay type 2

= Impermissible application range

The specifications in the application diagram refer to the glass weight in kg/m².

1 mm/m² glass thickness \approx 2.5 kg

Max. operating torque: 7.5 Nm (\approx displacement force \approx 750 N)

Max. sash area (SRW x SRH): 1.44 m² at a wind speed of 10 m/s; larger formats (only with wind sensor) available upon request

INFO

- Roto E-Tec Drive S.kg_{max.} 60 kg.

The sash weight varies depending on the hardware. For this reason, the application diagram of the hardware must be observed.

- Screw fixing in steel reinforcement only.
- Installation only in connection with restrictor and cleaning stays or tilt stays.



ATTENTION

Deformed drive components may cause property damage.

Failure to comply with the recommended sash dimensions can lead to deformation and a loss of the function of the Roto E-Tec Drive.

- Comply with recommended sash dimensions in accordance with the application diagram.

Failure to comply with the recommended sash dimensions voids the guarantee and warranty for the Roto E-Tec Drive.

INFO

- Maintain a rebate clearance of 12 to 14 mm at the top.
- With low Tilt-Only sashes, ensure that the Roto E-Tec Drive can turn freely above the sash rebate.
- Central gasket systems are preferred (smaller sash rebate heights with a larger projection distance are possible).
- With SRH < 600 mm, reduce the tilt distance to 80 mm. If the tilt distance is restricted by the hardware, the tilt distance of the Roto E-Tec Drive must also be restricted (programming necessary, e.g. Control Unit).
- Ensure the hardware is running smoothly.

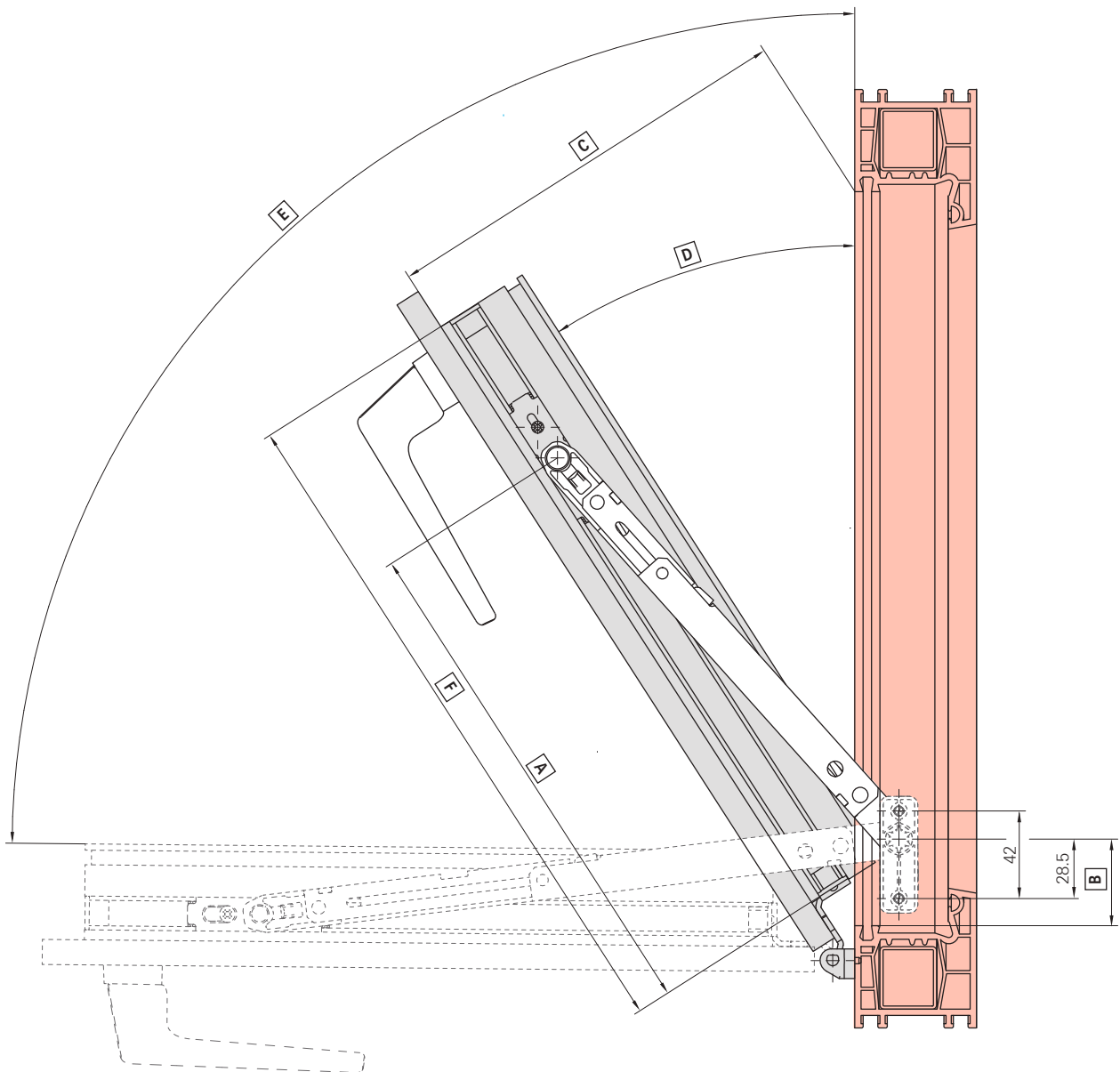
INFO

Observe directive TBDK for tractive force values as a function of the sash weights.

Further information can be found at www.beschlagindustrie.de.

Restrictor and cleaning stay

Roto NX | Hinge sides P and T, Roto NT | Hinge sides K, A and E5



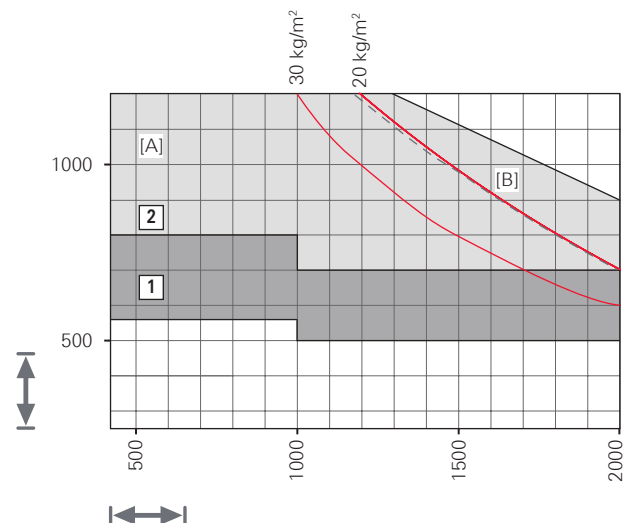
- [A] Position of sash bearing
- [B] Position of frame bearing
- [C] Tilt distance restrictor position
- [D] Opening angle restrictor position
- [E] Opening angle cleaning position
- [F] Sash rebate height (SRH)



SRH	Type	[A]	[B]	[C]	[D]	[E]
290 – 400 mm	1	250 mm	45 mm	180 – 245 mm	33°	90°
401 – 560 mm	1	280 mm	75 mm	205 – 275 mm	27°	67°
561 – 700 mm	2	525 mm	170 mm	225 – 277 mm	22°	88°
701 – 850 mm	2	575 mm	220 mm	244 – 292 mm	19°	72°
851 – 1200 mm	2	625 mm	270 mm	261 – 363 mm	17°	62°



2.1.1.2 Roto NX | Designo hinge side (HA 13)



[A] = Without wind sensor

[B] = With wind sensor

--- = Wind sensor limit

[1] = Restrictor and cleaning stay type 1

[2] = Restrictor and cleaning stay type 2

□ = Impermissible application range

The specifications in the application diagram refer to the glass weight in kg/m².

1 mm/m² glass thickness \approx 2.5 kg

Max. operating torque: 7.5 Nm (\approx displacement force \approx 750 N)

Max. sash area (SRW x SRH): 1.44 m² at a wind speed of 10 m/s; larger formats (only with wind sensor) available upon request

INFO

- Roto E-Tec Drive S.kg_{max.} 60 kg.

The sash weight varies depending on the hardware. For this reason, the application diagram of the hardware must be observed.

- Screw fixing in steel reinforcement only.
- Installation only in connection with restrictor and cleaning stays or tilt stays.



ATTENTION

Deformed drive components may cause property damage.

Failure to comply with the recommended sash dimensions can lead to deformation and a loss of the function of the Roto E-Tec Drive.

- Comply with recommended sash dimensions in accordance with the application diagram.

Failure to comply with the recommended sash dimensions voids the guarantee and warranty for the Roto E-Tec Drive.

INFO

- Maintain a rebate clearance of 12 to 14 mm at the top.
- With low Tilt-Only sashes, ensure that the Roto E-Tec Drive can turn freely above the sash rebate.
- Central gasket systems are preferred (smaller sash rebate heights with a larger projection distance are possible).
- With SRH < 600 mm, reduce the tilt distance to 80 mm. If the tilt distance is restricted by the hardware, the tilt distance of the Roto E-Tec Drive must also be restricted (programming necessary, e.g. Control Unit).
- Ensure the hardware is running smoothly.

INFO

Observe directive TBDK for tractive force values as a function of the sash weights.

Further information can be found at www.beschlagindustrie.de.

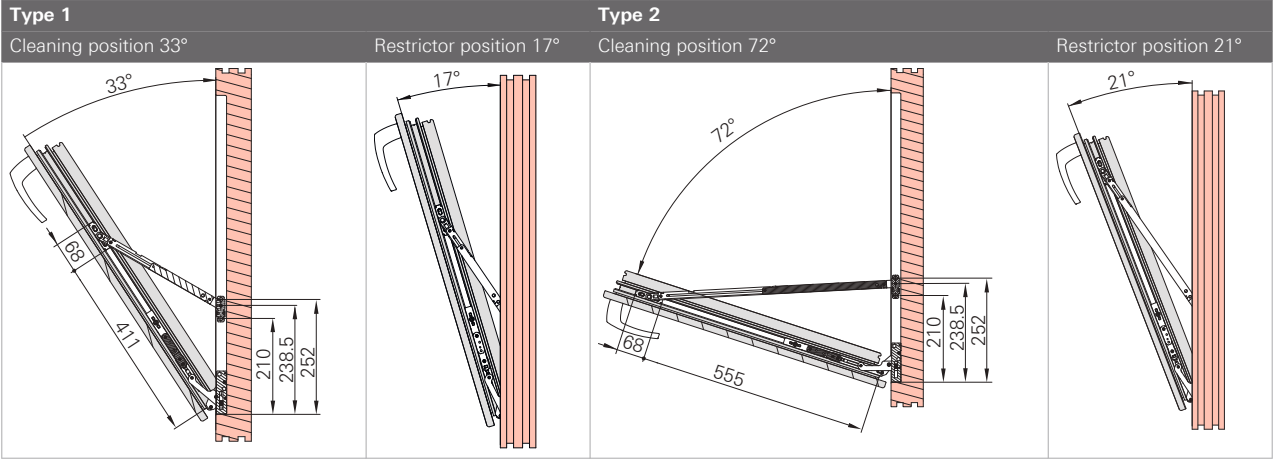


Restrictor and cleaning stay

Roto NX | Designo hinge side (HA 13)

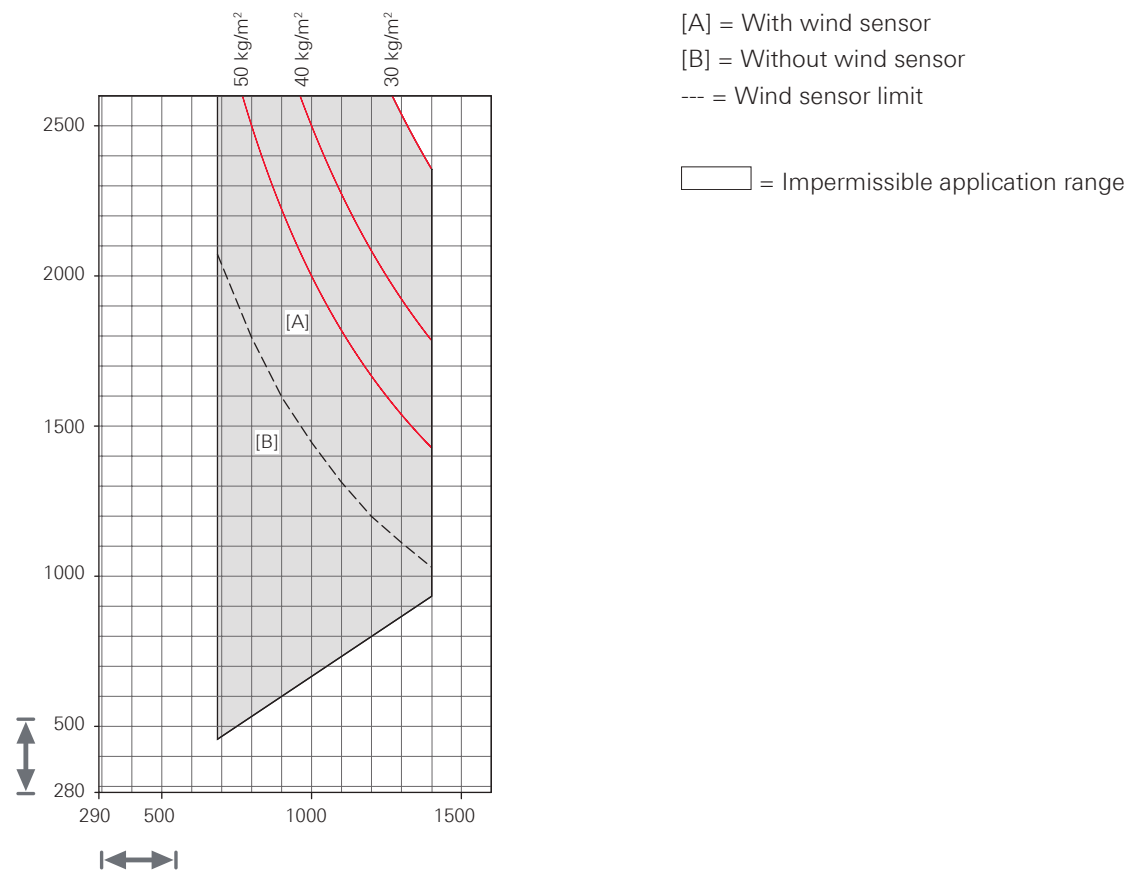
SRH for type 1 = ≥ 481 mm

SRH for type 2 = ≥ 625 mm



2.1.2 TiltFirst

2.1.2.1 Roto NX | Hinge sides P and T / Roto NT | Hinge sides K, A and E5



The specifications in the application diagram refer to the glass weight in kg/m².

1 mm/m² glass thickness \approx 2.5 kg

Max. operating torque: 7.5 Nm (\approx displacement force \approx 750 N)

Max. sash area (SRW x SRH): 1.44 m² at a wind speed of 10 m/s; larger formats (only with wind sensor) available upon request

INFO

- Roto E-Tec Drive S.kg_{max.} 100 kg.

The sash weight varies depending on the hardware. For this reason, the application diagram of the hardware must be observed.



ATTENTION

Deformed drive components may cause property damage.

Failure to comply with the recommended sash dimensions can lead to deformation and a loss of the function of the Roto E-Tec Drive.

- Comply with recommended sash dimensions in accordance with the application diagram.

Failure to comply with the recommended sash dimensions voids the guarantee and warranty for the Roto E-Tec Drive.



INFO

- Maintain a rebate clearance of 12 to 14 mm at the top.
- With low Tilt-Only sashes, ensure that the Roto E-Tec Drive can turn freely above the sash rebate.
- Central gasket systems are preferred (smaller sash rebate heights with a larger projection distance are possible).
- With SRH < 600 mm, reduce the tilt distance to 80 mm. If the tilt distance is restricted by the hardware, the tilt distance of the Roto E-Tec Drive must also be restricted (programming necessary, e.g. Control Unit).
- Ensure the hardware is running smoothly.

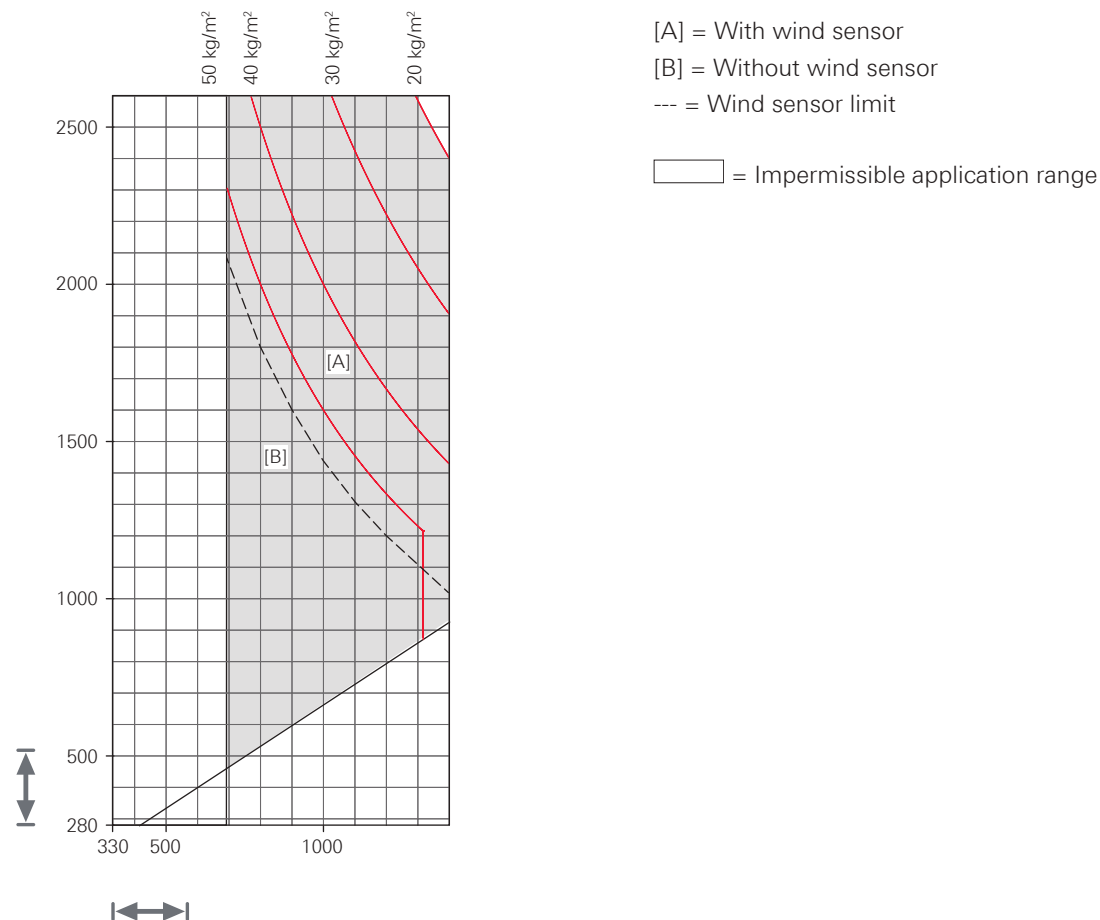


INFO

Observe directive TBDK for tractive force values as a function of the sash weights.

Further information can be found at www.beschlagindustrie.de.

2.1.2.2 Roto NX | Designo hinge side (HA 13)



The specifications in the application diagram refer to the glass weight in kg/m².

1 mm/m² glass thickness \approx 2.5 kg

Max. operating torque: 7.5 Nm (\approx displacement force \approx 750 N)

Max. sash area (SRW x SRH): 1.44 m² at a wind speed of 10 m/s; larger formats (only with wind sensor) available upon request

INFO

- Roto E-Tec Drive S.kg_{max.} 100 kg.

The sash weight varies depending on the hardware. For this reason, the application diagram of the hardware must be observed.



ATTENTION

Deformed drive components may cause property damage.

Failure to comply with the recommended sash dimensions can lead to deformation and a loss of the function of the Roto E-Tec Drive.

- Comply with recommended sash dimensions in accordance with the application diagram.

Failure to comply with the recommended sash dimensions voids the guarantee and warranty for the Roto E-Tec Drive.



INFO

- Maintain a rebate clearance of 12 to 14 mm at the top.
- With low Tilt-Only sashes, ensure that the Roto E-Tec Drive can turn freely above the sash rebate.
- Central gasket systems are preferred (smaller sash rebate heights with a larger projection distance are possible).
- With SRH < 600 mm, reduce the tilt distance to 80 mm. If the tilt distance is restricted by the hardware, the tilt distance of the Roto E-Tec Drive must also be restricted (programming necessary, e.g. Control Unit).
- Ensure the hardware is running smoothly.



INFO

Observe directive TBDK for tractive force values as a function of the sash weights.

Further information can be found at www.beschlagindustrie.de.

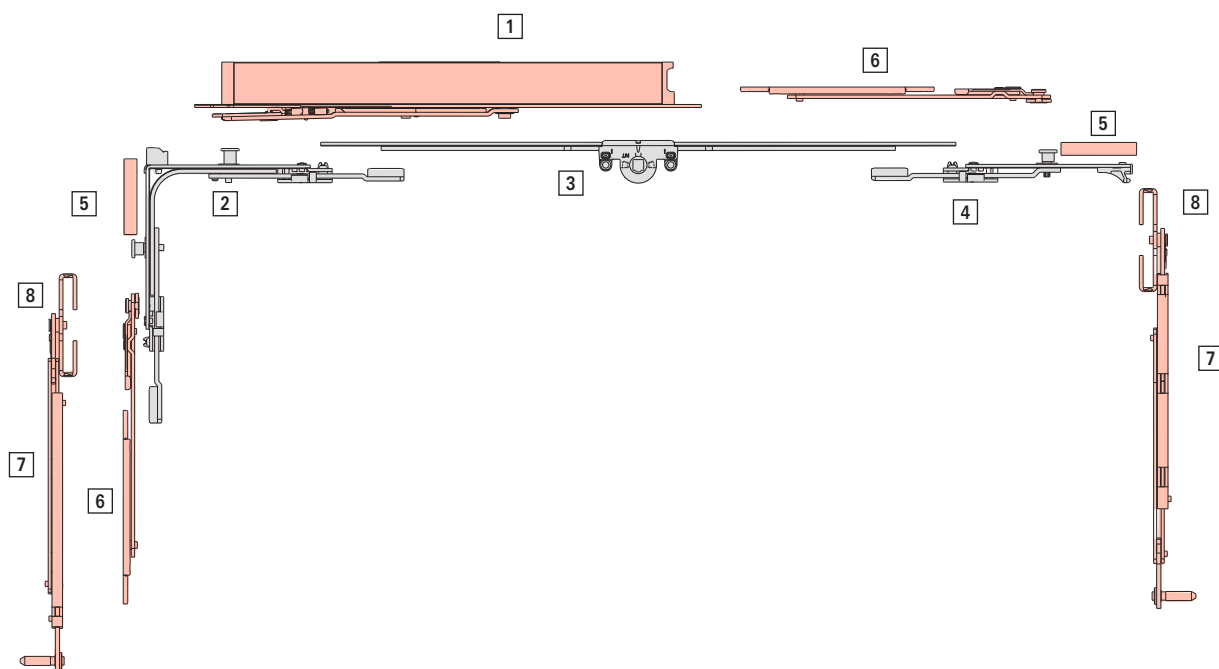
2.2 Hardware overviews

INFO

All hardware overviews shown in this chapter are for illustration purposes only. Please refer to the applicable installation instructions for exact specifications and installation advice.

2.2.1 Tilt-Only hardware

2.2.1.1 SRW ≤ 1000 mm



Position	Description
[1]	Roto E-Tec Drive → <i>from page 50</i>
[2]	Corner drive → <i>from page 55</i>
[3]	T&T espagnolette – centred / variable handle height → <i>from page 55</i>
[4]	Tilt-Only sash espagnolette connector → CTL 104, 105
[5]	Striker → CTL 104, 105
[6]	Tilt stay → CTL 104, 105
[7]	Restrictor and cleaning stay frame component → CTL 104, 105
[8]	Restrictor and cleaning stay sash component → CTL 104, 105

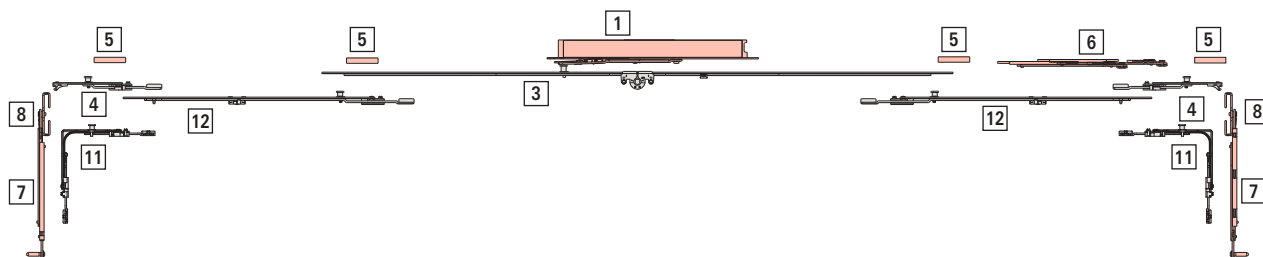
INFO

With SRH < 600 mm, the tilt distance must be limited to 80 mm.

If the tilt distance is restricted by the hardware, the tilt distance of the E-Tec Drive must also be restricted (programming required e.g. with a Control Unit).



2.2.1.2 SRW ≥ 1001 mm



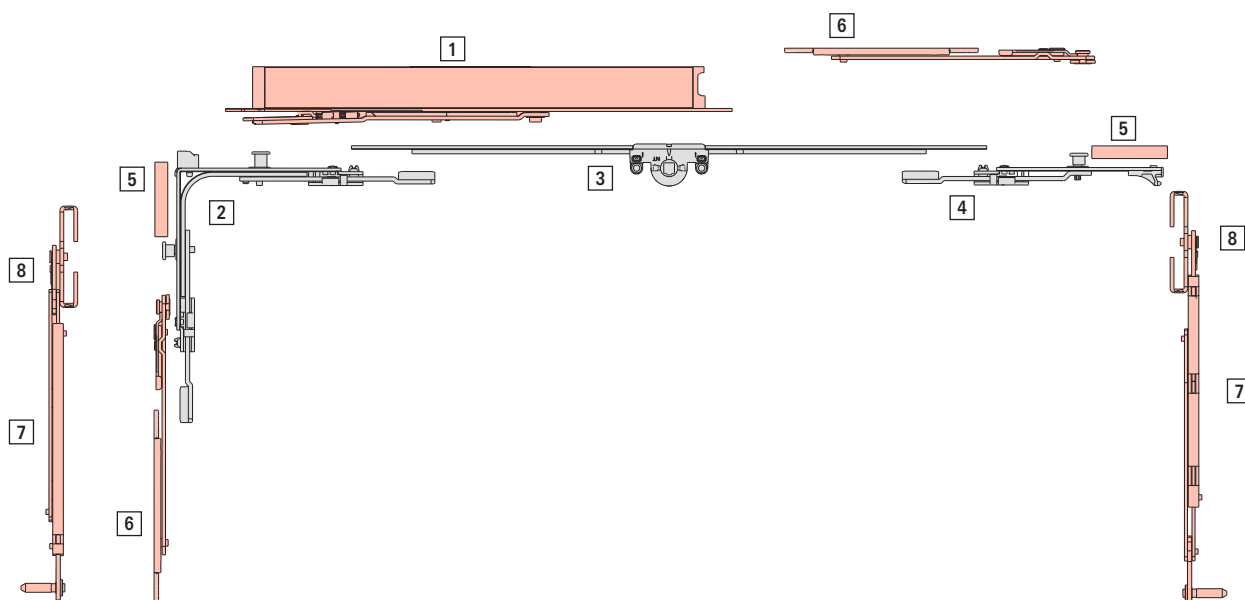
Position	Description
[1]	Roto E-Tec Drive → <i>from page 50</i>
[3]	T&T espagnolette – centred / variable handle height → <i>from page 55</i>
[4]	Tilt-Only sash espagnolette connector → CTL 104, 105
[5]	Striker → CTL 104, 105
[6]	Tilt stay → CTL 104, 105
[7]	Restrictor and cleaning stay frame component → CTL 104, 105
[8]	Restrictor and cleaning stay sash component → CTL 104, 105
[11]	Standard corner drive → CTL 104, 105
[12]	Standard centre lock → CTL 104, 105

INFO

With SRH < 600 mm, the tilt distance must be limited to 80 mm.

If the tilt distance is restricted by the hardware, the tilt distance of the E-Tec Drive must also be restricted (programming required e.g. with a Control Unit).

2.2.1.3 SRW ≤ 1000 mm – Designo hinge side (HA 13)



Position	Description
[1]	Roto E-Tec Drive → <i>from page 50</i>
[2]	Roto E-Tec Drive corner drive → <i>from page 55</i>
[3]	T&T espagnolette – centred / variable handle height → <i>from page 55</i>
[4]	Tilt-Only sash espagnolette connector → CTL 104, 105
[5]	Striker → CTL 104, 105
[6]	Tilt stay → CTL 104, 105
[7]	Restrictor and cleaning stay frame component → CTL 104, 105

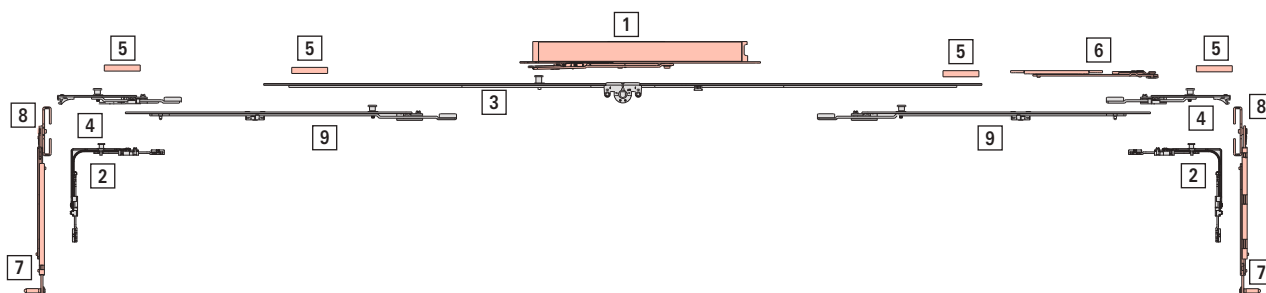
Position	Description
[8]	Restrictor and cleaning stay sash component → CTL 104, 105

INFO

With SRH < 600 mm, the tilt distance must be limited to 80 mm.

If the tilt distance is restricted by the hardware, the tilt distance of the E-Tec Drive must also be restricted (programming required e.g. with a Control Unit).

2.2.1.4 SRW ≥ 1001 mm – Designo hinge side (HA 13)



Position	Description
[1]	Roto E-Tec Drive → <i>from page 50</i>
[2]	Standard corner drive → CTL 104, 105
[3]	T&T espagnolette – centred / variable handle height → <i>from page 55</i>
[4]	Tilt-Only sash espagnolette connector → CTL 104, 105
[5]	Striker → CTL 104, 105
[6]	Tilt stay → CTL 104, 105
[7]	Restrictor and cleaning stay frame component → CTL 104, 105
[8]	Restrictor and cleaning stay sash component → CTL 104, 105
[9]	Standard centre lock → CTL 104, 105

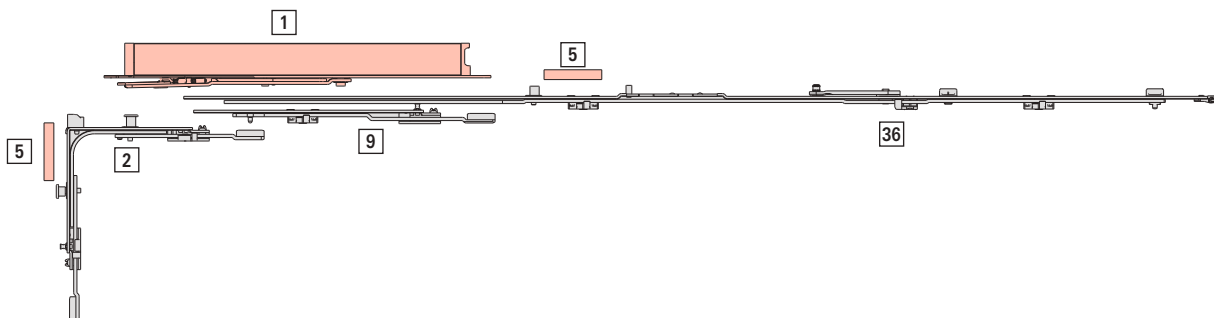
INFO

With SRH < 600 mm, the tilt distance must be limited to 80 mm.

If the tilt distance is restricted by the hardware, the tilt distance of the E-Tec Drive must also be restricted (programming required e.g. with a Control Unit).

2.2.2 TiltFirst hardware

2.2.2.1 Basic security



Position	Description
[1]	Roto E-Tec Drive → <i>from page 50</i>
[2]	Roto E-Tec Drive corner drive → <i>from page 55</i>
[5]	Striker → CTL 104, 105



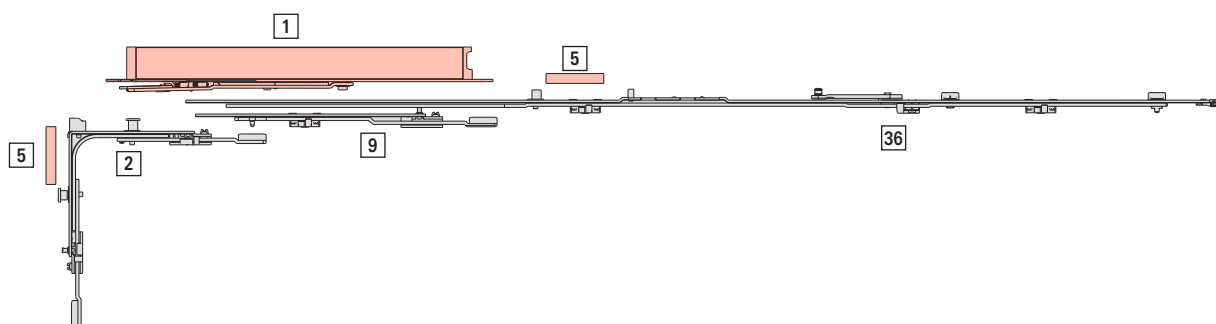
Position	Description
[9]	Standard centre lock → CTL 104, 105
[36]	Stay guide – basic security → CTL 104, 105

INFO

With SRH < 600 mm, the tilt distance must be limited to 80 mm.

If the tilt distance is restricted by the hardware, the tilt distance of the E-Tec Drive must also be restricted (programming required e.g. with a Control Unit).

2.2.2.2 Basic security – Designo hinge side (HA 13)



Position	Description
[1]	Roto E-Tec Drive → <i>from page 50</i>
[2]	Roto E-Tec Drive corner drive → <i>from page 55</i>
[5]	Striker → CTL 104, 105
[9]	Standard centre lock → CTL 104, 105
[36]	Stay guide – basic security → CTL 104, 105

INFO

With SRH < 600 mm, the tilt distance must be limited to 80 mm.

If the tilt distance is restricted by the hardware, the tilt distance of the E-Tec Drive must also be restricted (programming required e.g. with a Control Unit).

2.3 Drive unit



Product description

- Individual drive unit for use on properties.
- Spare part

Scope of delivery

- 1x drive unit
- 1x components pack:
 - Spacers for PVC profiles (2x each of 1 mm, 1.5 mm, 2 mm, 3 mm, 5 mm)
 - 4x screws for timber profiles
 - 4x screws for PVC profiles
 - 1x RJ45 connector

		Nº
Left	1 Piece(s)	899633
Right	1 Piece(s)	899634



2.4 Connection set

Power Unit



Product description

- Used as a connection module for the Roto E-Tec Drive.
- Can be connected directly to the household power supply and supplies the Roto E-Tec Drive with power via an integrated power supply unit.
- Individual or group operating push-buttons can also be installed for each cable.

Scope of delivery

- 1 Roto E-Tec Drive | Power Unit
- 1 RJ45 connecting cable, 6 m
- 1 set of installation and operation instructions

		Nº
Connection set	1 Piece(s)	817390

Power Unit Wireless



Product description

- Contains the same functions as the Power Unit.
- Can also be incorporated into Smart Home systems via EnOcean.
- EnOcean switches can be programmed directly.

Scope of delivery

- 1 Roto E-Tec Drive | Power Unit Wireless
- 1 RJ45 connecting cable, 6 m
- 1 set of installation and operation instructions

		Nº
Wireless connection set	1 Piece(s)	817391



2.5 Technical data

2.5.1 Roto E-Tec Drive

Technical data	
Power supply	24 V DC $\pm 5\%$ stabilised, 500 mA, SELV (safety extra-low voltage)
Temperature range	Operation: 0 °C to +60 °C Storage: -20 °C to +85 °C
Relative air humidity	5% to 90%, non-condensing
IP rating	IP20 in accordance with DIN EN 60529
Tilting / closing	> 150 N
Opening width	Approx. 120 mm
Hardware travel	16 - 36 mm (± 2)
Typical opening / closing times in [s]	Slow opening 110 s
TiltFirst and Tilt-Only windows	Slow closing 130 s Standard opening 70 s Standard closing 80 s
Current consumption	No-load operation: approx. 35 mA Locking / unlocking: max. 500 mA
Weight	450 g (with scissor stay)
Dimensions (W x D x H)	335 x 18 x 30 mm without scissor stay
Routing dimensions (W x D x H)	300 x 16 x 35 mm
Connection	FRJ45 plug connection, FCC68 data cable, colour-coded, cable length max. 6 m
Emission sound pressure level (LpA)	≤ 70 dB(A)
Test	20,000 cycles at 750 N in complete cycles (OPEN / CLOSE)

2.5.2 Roto E-Tec Drive | Power Unit

Technical data	
Power supply	100 - 240 V AC, 50 - 60 Hz, 0.6 A
Dimensions (L x W x H)	55.5 x 63.6 x 41 mm
Ambient conditions	
Operating temperature	0 °C to +60 °C
Relative air humidity	20 - 90%
Colour	RAL 7035 (Light grey)
IP rating	IP20
Conformity	
Approval	CE, EMC Directive (2014/30/EU), Low Voltage Directive (LVD) (2014/35/EU), RoHS Directive (2011/65/EU).

2.5.3 Roto E-Tec Drive | Power Unit Wireless

Technical data	
Power supply	100 - 240 V AC, 50 - 60 Hz, 0.6 A
Dimensions (L x W x H)	55.5 x 63.6 x 41 mm
Radio transmitter	
Radio frequency	868.3 MHz, ASK modulation
Protocol / standard	EnOcean Radio Protocol version 1, lead market Europe
Encryption	32-bit rolling code (RLC), 4-byte AES / UTE teach-in telegram
Ambient conditions	
Operating temperature	0 °C to +60 °C
Relative air humidity	20 - 90%



Technical data	
Colour	RAL 7035 (Light grey)
IP rating	IP20
Radio range	
Without obstacles	Up to 300 m (open areas)
Building	10 to 30 m
Conformity	
Approval	CE, Radio Equipment Directive (RED) (2014/53/EU), RoHS Directive (2011/65/EU).

EnOcean Equipment Profile (EEP)

EnOcean Equipment Profile (EEP)	Description
D2-06-20	Bidirectional communication with a Smart Home Gateway
A5-14-01	Roto Com-Tec Sensor Basic (unidirectional)
A5-14-09	Roto Com-Tec Sensor Comfort (unidirectional)
A5-14-0A	Roto Com-Tec Sensor Comfort S (unidirectional)
D5-00-01	EnOcean contact sensor (unidirectional)
F6-02-01	EnOcean wireless push-button, PTM210 / PTM215 (unidirectional)
D2-03-00	EnOcean wireless push-button, PTM215 (unidirectional)
D2-03-0A	EnOcean button (unidirectional)

INFO

The EnOcean radio modules with a frequency of 868.3 MHz comply with the Radio Equipment Directive 2014/53/EU (RED) and are permitted to be operated in all EU countries, Switzerland, Turkey and Norway.

2.6 Accessories

2.6.1 Connecting cable



				Nº
RJ45 connecting cable	6 m	Black	1 Piece(s)	387877

INFO

The cable is available in special lengths upon request. The maximum permitted cable length is 10 m.

2.6.2 Control Unit



Product description

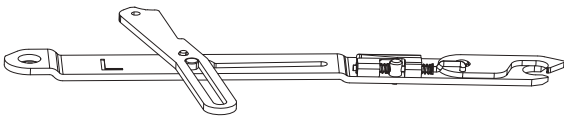
- Control unit and interface between hardware (E-Tec Drive) and software.
- Functional inspection is possible in the factory and on the construction site.
- Parametrisation (movement speed, automatic ventilation, projecting distance) through connection to PC / notebook.
- Graphical interface (through connection to PC / notebook).
- Fault analysis (through connection to PC / notebook).

Scope of delivery

- 1 Control Unit
- 1 power supply unit
- 1 USB cable
- 1 RJ45 coupling
- 1 USB stick with software

		Nº
Roto E-Tec Drive Control Unit	1 Piece(s)	779676

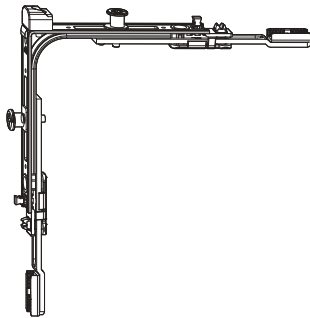
2.6.3 Retracting mechanism



			Nº
Retracting mechanism for Roto E-Tec Drive	Left	1 Piece(s)	833636
	Right	1 Piece(s)	833635



2.6.4 Corner drive



						Nº
Corner drive for Roto E-Tec Drive	110 / 110	1 / 1	V / S-P	Roto Sil	1 Piece(s)	779677

INFO

Connection of the Roto E-Tec Drive to mechanical hardware.

2.6.5 T&T espagnolette

Centred / variable handle height

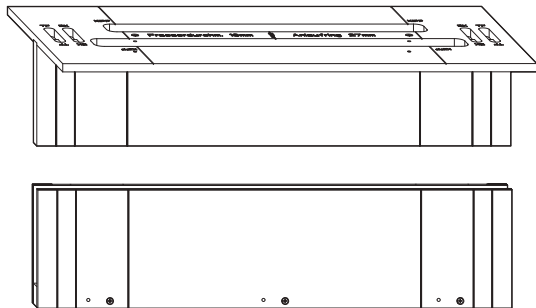


									Nº
15	290 – 1200	1001 – 2000	980	200 / 200	1	S-P	Roto Sil	1 Piece(s)	779679

INFO

Connection of the Roto E-Tec Drive to mechanical hardware.

2.6.6 Routing jig



		Nº
Routing jig for Roto E-Tec Drive	1 Piece(s)	484650

Roto E-Tec Control





Screwed-on

Magnetic locking sensors (MVS)	61
Magnetic thermostat sensors (MTS)	66
Accessories	68

Concealed

Magnetic locking sensors (MVS)	74
Magnetic thermostat sensors (MTS)	77
Accessories	78

Set without VdS

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Cable junction

Contactless transformer	86
Cable junction, detachable	87
Cable junction, detachable, with alarm glass connection	88
Cover plates	89
Mounting casing	89

Extractor hood control (DAS)

Extractor hood control (DAS)	90
Mounting fixture for rebate magnet	91

3 Roto E-Tec Control

Contact elements for security technology and room climate



Energy and comfort – controlled electronically

What could be more important than directly assigning windows and doors with control and monitoring tasks that ensure greater security, savings and quality of life at home? The E-Tec Control products are the basis for intelligent and therefore efficient building systems technology.

Systematically integrating security

Through a high degree of mechanical basic security alone, Roto effectively wards off uninvited guests by means of various resistance classes. This is supplemented by wired alarm systems which meet every individual security requirement.

Using energy intelligently

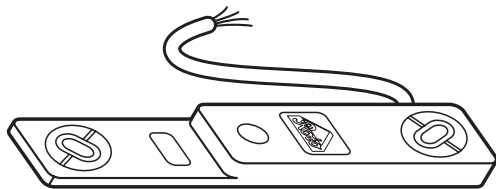
This is the case, for example, when the hardware activates the heating and temperature control according to requirements and achieves savings during automatic ventilation. Controlled, naturally tilt ventilation saves energy and is convenient. If night cooling is also used, the temperature control time can be reduced, which saves money and protects the environment. Roto shows you how it can be done.



3.1 Screwed-on

3.1.1 Magnetic locking sensors (MVS)

3.1.1.1 VdS – class B








Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with burglar alarm systems and surveillance systems.
- Screwed into the rebate, not visible when the element is closed.
- Suitable for burglar alarm systems in accordance with VdS class B.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic locking sensor contact element
- 2 screws

					Nº
6 m	95	18	8	1 Piece(s)	292101
10 m				1 Piece(s)	335078
20 m				1 Piece(s)	814899

INFO

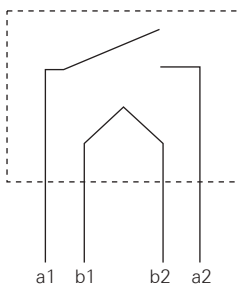
Contact elements with special cable lengths available upon request.

Technical data

Technical data	
Contact type	Reed contact, N/O contact, potential-free
Voltage	$U_{\max} = 100 \text{ V DC} / 70 \text{ V AC}$
Switching current	$I_{\max} = 500 \text{ mA}$
Switching capacity	$P_{\max} = 10 \text{ W} (= U \times I)$
Temperature range	-25 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 7035 (Light grey)
Cable	LIYY 4 x 0.14 mm ² , white



Wiring diagram

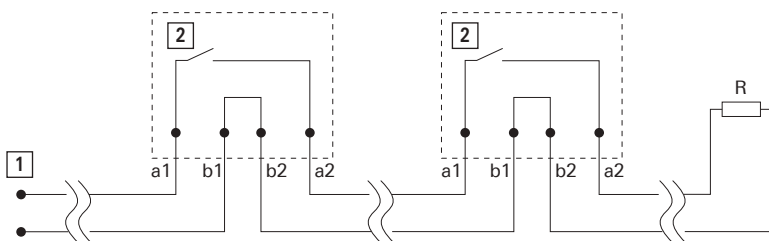


a1 Line contact
a2 Line contact
b1 Sabotage cable
b2 Sabotage cable

INFO

Do not switch any inductive or capacitive loads.

Wiring



[1] Central unit
[2] Line contact

a1 Line contact
a2 Line contact
b1 Sabotage cable
b2 Sabotage cable

Certificates

Certification		
VdS	G 102512	VdS class B
EN	EN-ST-000241,	EN grade 2 in acc. with EN 50131-2-6
ANPI	B-659-1001	–

INFO

The certificates only apply when Roto hardware components with magnets are used.

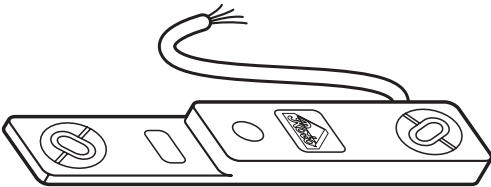
Technical data

Technical data	
Contact type	Reed contact, N/O contact
Voltage	$U_{max} = 100 \text{ V DC} / 70 \text{ V AC}$
Switching current	$I_{max} = 500 \text{ mA}$
Switching capacity	$P_{max} = 10 \text{ W} (= U \times I)$
IP rating	IP67 in accordance with DIN 40050



Technical data	
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 7035 (Light grey)
Cable	LIYY 4 x 0.14 mm ² , white

3.1.1.1.1 LSN data bus system



Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with burglar alarm systems and surveillance systems.
- Screwed into the rebate, not visible when the element is closed.
- Suitable for burglar alarm systems in accordance with VdS class B.
- Specially for LSN data bus systems.

Scope of delivery

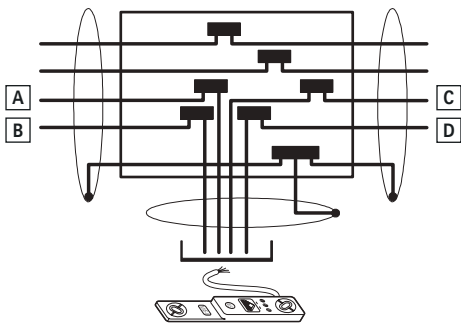
- Magnetic locking sensor contact element
- 2 screws

6 m	95	18	8	1 Piece(s)	Nº 336318

INFO

Contact elements with special cable lengths available upon request.

Wiring diagram



- [A] aLSN1: White
- [B] bLSN1: Brown
- [C] aLSN2: White
- [D] aLSN2: Yellow

INFO

Do not switch any inductive or capacitive loads.

Certificates

Certification		
VdS	G 104515	VdS class B



Certification



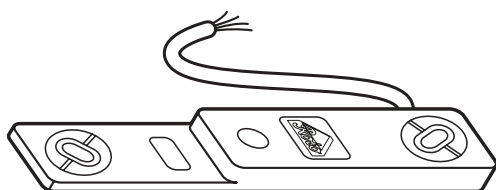
INFO

The certificates only apply when Roto hardware components with magnets are used.

Technical data

Technical data	
Contact type	N/O contact
LSN voltage	$U_{max} = 33 \text{ V DC}$
LSN current consumption	Approx. 0.4 mA
Temperature range	-25 °C to +70 °C, with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 7035 (Light grey)
Cable	LIY(St)Y 4 x 0.14 mm ² , white

3.1.1.2 VdS – class C



Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with burglar alarm systems and surveillance systems.
- Screwed into the rebate, not visible when the element is closed.
- Suitable for burglar alarm systems in accordance with VdS class C.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic locking sensor contact element
- 2 screws

					Nº
6 m	95	18	8	1 Piece(s)	292114
10 m				1 Piece(s)	335079

INFO

Contact elements with special cable lengths available upon request.

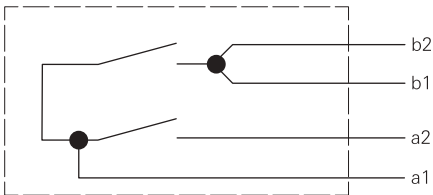
Technical data

Technical data	
Contact type	Reed contact, N/O contact, potential-free



Technical data	
External field contact	N/O contact
Voltage	$U_{\max} = 30 \text{ V DC} / 30 \text{ V AC}$
Switching current	$I_{\max} = 200 \text{ mA}$
Switching capacity	$P_{\max} = 3 \text{ W} (= U \times I)$
Temperature range	-25 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 7035 (Light grey)
Cable	LIYY 4 x 0.14 mm ² , white

Wiring diagram



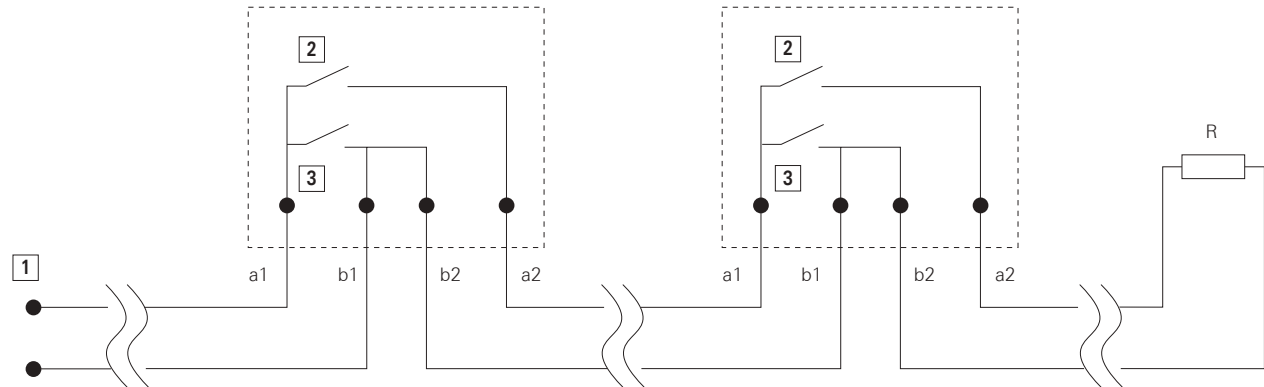
a1 Line contact
a2 Line contact

b1 Sabotage cable
b2 Sabotage cable

INFO

Do not switch any inductive or capacitive loads.

Wiring



[1] Central unit
[2] Line contact
[3] External field contact

a1 Line contact
a2 Line contact
b1 Sabotage cable
b2 Sabotage cable

Certificates

Certification		
VdS	G 102039	VdS class C
EN	EN-ST-000240	EN grade 3 in acc. with EN 50131-2-6

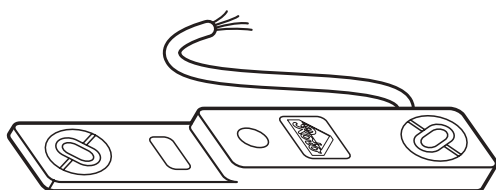
Certification



INFO

The certificates only apply when Roto hardware components with magnets are used.

3.1.2 Magnetic thermostat sensors (MTS)








Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with ventilation and temperature control systems.
- Screwed into the rebate, not visible when the element is closed.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic thermostat sensor contact element
- 2 screws

					Nº
6 m	95	18	8	1 Piece(s)	292118
10 m				1 Piece(s)	335077

INFO

Contact elements with special cable lengths available upon request.

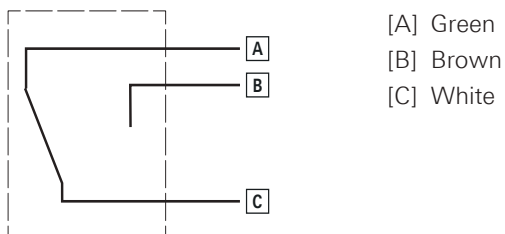
Technical data

Technical data	
Contact type	Reed contact, N/O contact, potential-free
Voltage	$U_{max} = 30 \text{ V DC} / 30 \text{ V AC}$
Switching current	$I_{max} = 200 \text{ mA}$
Switching capacity	$P_{max} = 3 \text{ W} (= U \times I)$
Temperature range	-25 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 7035 (Light grey)



Technical data	
Cable	LIYY 3 x 0.14 mm ² , white

Wiring diagram



INFO

Idle: white-green connection

Active: white-brown connection (due to magnetic field)

INFO

Do not switch any inductive or capacitive loads.

3.1.3 Accessories

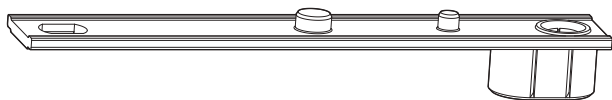
3.1.3.1 Magnets

3.1.3.1.1 Rebate magnet

Timber and PVC



Rebate magnet	Sash	Screw-on	Regardless of hardware	RAL 7035	1 Piece(s)	292120

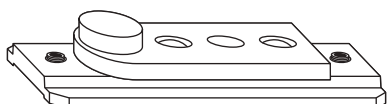


Mounting fixture for rebate magnet	Sash	RAL 7035	1 Piece(s)	572520

INFO

Optional component: the mounting fixture for the rebate magnet is only required if no screw position is available in the hardware. The mounting fixture extends the hardware.

Aluminium



Rebate magnet	Sash	Screw-on	Regardless of hardware	RAL 7035	1 Piece(s)	311431

3.1.3.1.2 Magnetic locking sensor VdS-B / magnetic thermostat sensor magnetic sleeve



Magnetic locking sensor VdS-B / magnetic thermostat sensor magnetic sleeve	Timber PVC Aluminium	Roto Sil	1 Piece(s)	384019

INFO




Only in conjunction with magnetic locking sensor (VdS – class B) and magnetic thermostat sensor contact elements.

For attaching and adhering with Loctite 431 on a hardware-coupled magnet with a large rebate clearance.



3.1.3.1.3 Clip-on magnet for centre locks



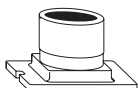
			Nº
Clip magnet for centre lock	Timber PVC	1 Set(s)	292119

INFO

Can be used for CL 400 and CL 600.

When installing the clip-on magnet on the underside of the sash, a suitable rebate run-up block must always be fitted.

3.1.3.1.4 Plug-in magnet



						Nº
Plug-in magnet	Aluminium	Sash	Insertable	Roto Sil	1 Piece(s)	337767

3.1.3.1.5 Adhesive magnet



						Nº
Adhesive magnet	Aluminium	Sash	Adhesive	Roto Sil	1 Piece(s)	311430

INFO

Can be used with 15 / 20 mm connecting rod groove.

3.1.3.2 Packers

3.1.3.2.1 Timber



					Nº
100	18	0.5	RAL 7035	1 Piece(s)	309245

INFO

Compensating packer







The installation packer for timber can also be used as a compensating packer to compensate for the rebate clearance. The compensating packer is stackable.

3.1.3.2.2 PVC



						Nº
Aluplast Ideal 2000 Aluplast Ideal 3000 Brüggmann AD 13 Brüggmann BluEvolution 82 Brüggmann MD 13 Dimex Contour Schüco Corona CT70 AD Schüco Corona SI82 MD Veka Softline 70 AD Veka Softline 70 MD Veka Softline 82 AD Veka Softline 82 MD Veka Swingline 70 Veka Topline AD 13	100	20	7	RAL 7035	1 Piece(s)	307949
Aluplast Ideal 4000 Aluplast Ideal 5000 Aluplast Ideal 6000 Aluplast Ideal 7000 Aluplast Ideal 8000 Roplasto 4K Roplasto 7001 AD Roplasto 7001 MD Schüco Corona AD Schüco Corona MD	100	20	7	RAL 7035	1 Piece(s)	307950
Deceuninck Zendow Gealan S3000 Gealan S7000 Gealan S8000 KBE 70 AD	100	20	7	RAL 7035	1 Piece(s)	307951
Inoutic AD 13 Inoutic Eforte Inoutic Favorite AD 13 Inoutic MD 100 Inoutic Prestige MD	100	20	7	RAL 7035	1 Piece(s)	308085
KBE AD	100	20	7	RAL 7035	1 Piece(s)	308084
KBE MD	100	20	7	RAL 7035	1 Piece(s)	308089
Trocal 88+ Trocal S900						
Kömmerling 88 Plus Kömmerling Eurodur 3S Kömmerling Eurofutur Classic Wymar 3000	100	20	7	RAL 7035	1 Piece(s)	308083



						Nº
Rehau S 735 MD Rehau S 788 Rehau S 799 Brillant Design (S 730) Rehau S 980 Geneo	100	20	7	RAL 7035	1 Piece(s)	308082
Salamander 2D Salamander 3D Salamander BluEvolution 92 Salamander Streamline 76	100	20	7	RAL 7035	1 Piece(s)	308091
Trocal InnoNova 70.A5 AD Trocal InnoNova 70.M5 MD	100	20	7	RAL 7035	1 Piece(s)	367228
Veka Alphaline 90 Veka Softline 82 AD Veka Softline 82 MD Veka Softline AD 9 Veka Topline AD 13 Veka Topline MD 13	100	20	7	RAL 7035	1 Piece(s)	308086

INFO

A packer is required for each contact element.







INFO

Compensating packer

The installation packer for timber can also be used as a compensating packer to compensate for the rebate clearance. This is stackable.

3.1.3.2.3 Aluminium



						Nº
V.01 V.02	100	20	5	RAL 7035	1 Piece(s)	311441

INFO

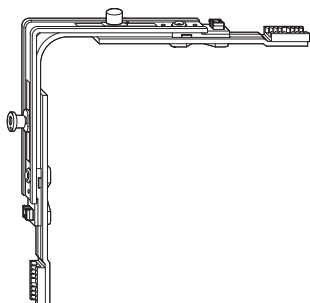
A packer is required for each contact element.

INFO

Compensating packer

The installation packer for timber can also be used as a compensating packer to compensate for the rebate clearance. This is stackable.

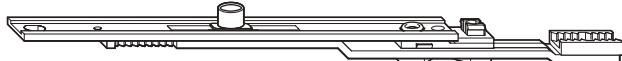
3.1.3.3 Standard corner drive



Corner drive for contact elements	1 magnet	Timber PVC	110 / 110	1	V	Roto Sil	1 Piece(s)	292121

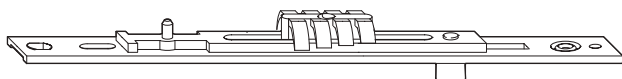
3.1.3.4 Espagnolette

3.1.3.4.1 Espagnolette extension



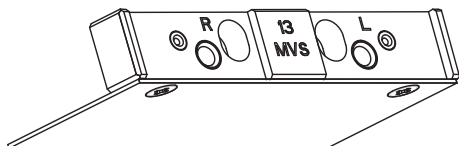
Espagnolette extension for contact elements	1 magnet	Timber PVC	200	Roto Sil	1 Piece(s)	445434

3.1.3.4.2 Espagnolette connector



Espagnolette connector for contact elements	1 magnet	Timber PVC	110	Roto Sil	1 Piece(s)	292123

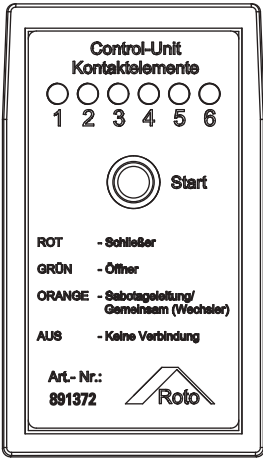
3.1.3.5 Drilling jigs



Drilling jig	Timber PVC	9	1 Piece(s)	378118
		13	1 Piece(s)	378117



3.1.3.6 Control Unit





Product description

- Test unit for checking the function of the installed contact elements.

Scope of delivery

- 1 Control Unit
- 6-pin connecting cable

		Nº
Control unit contact elements	1 Piece(s)	891372

3.1.3.6.1 Connecting cable



			Nº
RJ45 connecting cable	6 m	1 Piece(s)	891373



3.2 Concealed

3.2.1 Magnetic locking sensors (MVS)

3.2.1.1 VdS – class B



Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with burglar alarm systems and surveillance systems.
- Concealed beneath a locking component.
- Suitable for burglar alarm systems in accordance with VdS class B.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic locking sensor contact element

			Nº
	6 m	1 Piece(s)	858477
	10 m	1 Piece(s)	858478
	20 m	1 Piece(s)	896748

INFO

The drive-in sleeve (→ *from page 79*) is mandatory for installation. It is designed to protect the electronic component.

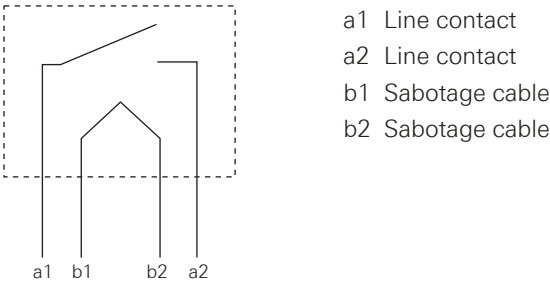
INFO

Contact elements with special cable lengths available upon request.

Technical data	
Contact type	Reed contact, N/O contact, potential-free
Voltage	$U_{\max} = 40 \text{ V DC} / 40 \text{ V AC}$
Switching current	$I_{\max} = 500 \text{ mA}$
Contact resistance	$R_{\max} = \max. 0.15 \text{ Ohm}$
Switching capacity	$P_{\max} = 6 \text{ W} (= U \times I)$
Temperature range	-40 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 9003 (Signal white)
Cable	LIYY 4 x 0.14 mm ² , white



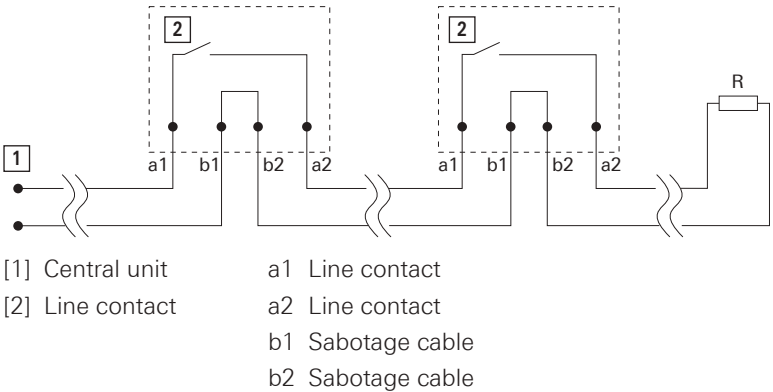
Wiring diagram



INFO

Do not switch any inductive or capacitive loads.

Wiring



Technical data

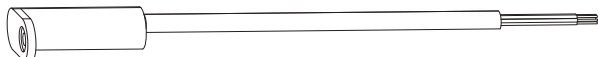
Certification		
VdS	G 113501	VdS class B
EN	EN-ST-000242	EN grade 2 in acc. with EN 50131-2-6

INFO

The certificates only apply when Roto hardware components with magnets are used.



3.2.1.2 VdS – class C



Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with burglar alarm systems and surveillance systems.
- Concealed beneath a locking component.
- Suitable for burglar alarm systems in accordance with VdS class C.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic locking sensor contact element

		Nº
6 m	1 Piece(s)	791950
10 m	1 Piece(s)	899191

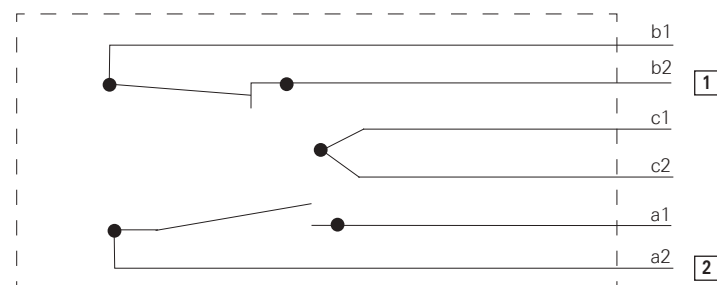
INFO

Contact elements with special cable lengths available upon request.

Technical data

Technical data	
Contact type	Reed contact, N/O contact, potential-free
External field contact	N/O contact
Voltage	$U_{\max} = 30 \text{ V DC / AC}$
Switching current	$I_{\max} = 200 \text{ mA}$
Switching capacity	$P_{\max} = 6 \text{ W (= U x I)}$
Temperature range	-40 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 9003 (Signal white)
Cable	LIYY 6 x 0.14 mm², white

Wiring diagram



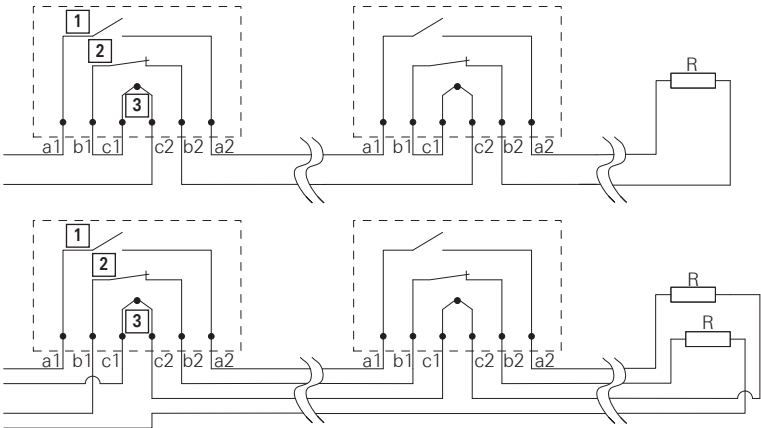
- | | |
|----------------------------|---------------------------|
| [1] Line contact | b1 External field contact |
| [2] External field contact | b2 External field contact |
| a1 Line contact | c1 Sabotage cable |
| a2 Line contact | c2 Sabotage cable |



INFO

Do not switch any inductive or capacitive loads.

Wiring



- | | |
|----------------------------|---------------------------|
| [1] External field contact | b1 External field contact |
| [2] Line contact | b2 External field contact |
| [3] Sabotage cable | c1 Sabotage cable |
| a1 Line contact | c2 Sabotage cable |
| a2 Line contact | |

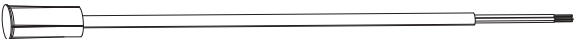
Certificates

Certification		
VdS	117017	VdS class C

INFO

The certificates only apply when Roto hardware components with magnets are used.

3.2.2 Magnetic thermostat sensors (MTS)



Product description

- The contact element can be used for combined opening and locking monitoring in conjunction with ventilation and temperature control systems.
- Concealed beneath a locking component.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic thermostat sensor contact element

		Nº
6 m	1 Piece(s)	791951

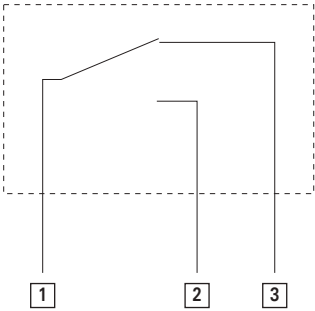
INFO

Contact elements with special cable lengths available upon request.

Technical data

Technical data	
Contact type	Reed contact, changeover contact, potential-free
Voltage	$U_{\max} = 30 \text{ V DC} / 30 \text{ V AC}$
Switching current	$I_{\max} = 200 \text{ mA}$
Switching capacity	$P_{\max} = 3 \text{ W} (= U \times I)$
Temperature range	-25 °C to +70 °C, with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	RAL 9003 (Signal white)
Cable	LIYY 3 x 0.14 mm ² , white

Wiring diagram



- [1] White
- [2] Brown
- [3] Green

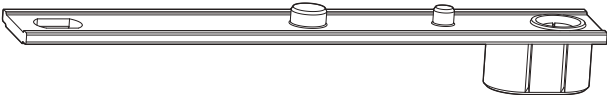
INFO

Do not switch any inductive or capacitive loads.

3.2.3 Accessories

3.2.3.1 Magnets

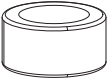
3.2.3.1.1 Mounting fixture for rebate magnet



				Nº
Mounting fixture for rebate magnet	Sash	RAL 7035	1 Piece(s)	572520



3.2.3.1.2 Ring magnet



					Nº
Ring magnet	10	5	3.5	1 Bag	737742

Scope of delivery: 10 pieces per bag



3.2.3.1.3 Locking cam magnet



					Nº
Locking cam magnet for Roto Patio Inowa	Aluminium	Sash	Insertable	1 Piece(s)	891671

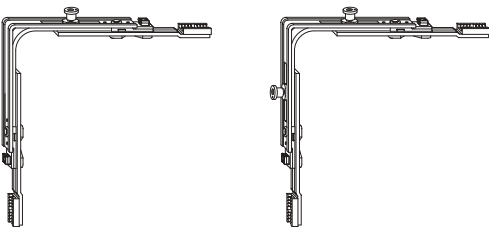
3.2.3.2 Drive-in sleeve



		Nº
Drive-in sleeve	1 Piece(s)	635288

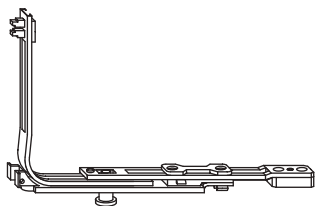
3.2.3.3 Corner drives

3.2.3.3.1 Standard



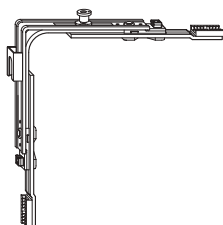
							Nº
Corner drive, standard, for contact elements	Timber PVC	110 / 110	- / 1	- / S-P	Roto Sil	1 Piece(s)	635285
			1 / 1	V / S-P	Roto Sil	1 Piece(s)	635286












3.2.3.3.2 Tilt&Turn



								Nº	
Corner drive, Tilt&Turn, for contact elements		Timber PVC	110 / 0	1	S-P	Roto Sil	1 Piece(s)	635287	

3.2.3.3.3 Floating mullion



										
Corner drive, floating mullion, for contact elements	Timber PVC	110 / 110	Second opening sash / welded-on striker	1	1	S-P	Top	Roto Sil	Piece(s)	738040
				1	1	S-P	Bottom	Roto Sil	Piece(s)	738041

3.2.3.4 Espagnolette

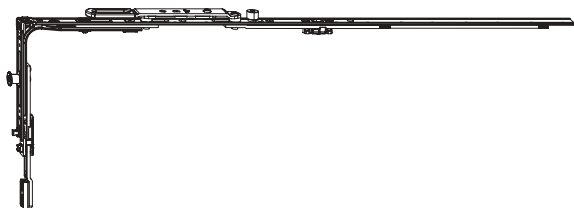
3.2.3.4.1 Fixed handle height



												Nº
15	Timber PVC	1 magnet	- 400	490	200	170	Y	- / 1	- / P	Roto Sil	1 Piece(s)	776839
		1 magnet	- 400	600	200	170	Y	- / 1	- / P	Roto Sil	1 Piece(s)	795323



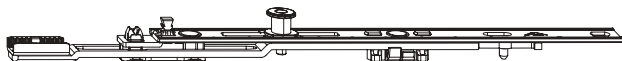
3.2.3.4.2 Lever-operated espagnolette












15	Timber PVC	1 magnet	– 400	490	195	Y	– / 1	– / P	Roto Sil	1 Piece(s)	776841
		1 magnet	– 400	600	195	Y	– / 1	– / P	Roto Sil	1 Piece(s)	795463











3.2.3.4.3 Espagnolette extension



								
Espagnolette extension for contact elements	Timber PVC	1 magnet	200	1	P	Roto Sil	1 Piece(s)	791750

3.2.3.4.4 Espagnolette connector




								
Espagnolette connector for contact elements	Timber PVC	1 magnet	110	1	P	Roto Sil	1 Piece(s)	772296

3.2.3.5 Strikers

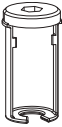
3.2.3.5.1 Strikers for Roto Patio Inowa



Timber PVC	891614

	Nº
Aluminium	891670

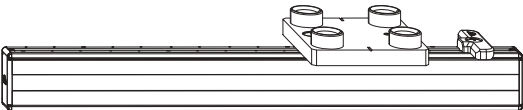
Adapter bush








		Nº
Adapter bush for Roto Patio Inowa	1 Piece(s)	891613

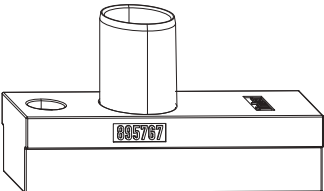
3.2.3.6 Drilling jigs




3.2.3.6.1 Drilling jig for magnetic locking sensor VdS-B, concealed



					Nº
Drilling jig for magnetic locking sensor VdS-B, concealed	Timber	13	24	Piece(s)	823249

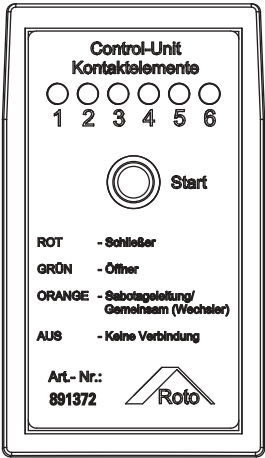
3.2.3.6.2 Drilling jig for Roto Patio Inowa



			Nº
Diagram A	Timber	Piece(s)	895767
	PVC	Piece(s)	895766
	Aluminium	Piece(s)	895013



3.2.3.7 Control Unit




Product description

- Test unit for checking the function of the installed contact elements.




Scope of delivery

- 1 Control Unit
- 6-pin connecting cable

		Nº
Control unit contact elements	1 Piece(s)	891372

3.2.3.7.1 Connecting cable

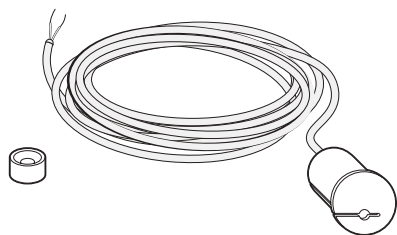


			Nº
RJ45 connecting cable	6 m	1 Piece(s)	891373



3.3 Set without VdS

Standard






Product description

- The contact element can be used for opening monitoring in conjunction with surveillance systems.
- Concealed in the rebate.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic locking sensor contact element
- 1 silver eccentric bush
- 1 ring magnet

			Nº
6 m	Silver	1 Set(s)	384016

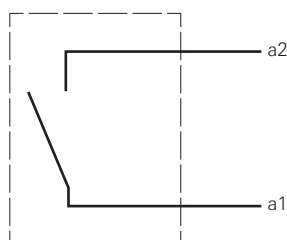
INFO

Contact elements with special cable lengths available upon request.

Technical data

Technical data	
Contact type	Reed contact, N/O contact, potential-free
Voltage	$U_{\max} = 48 \text{ V DC} / 48 \text{ V AC}$
Switching current	$I_{\max} = 500 \text{ mA}$
Switching capacity	$P_{\max} = 5 \text{ W} (= U \times I)$
Temperature range	-25 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	Silver
Cable	LIYY 2 x 0.14 mm ² , white

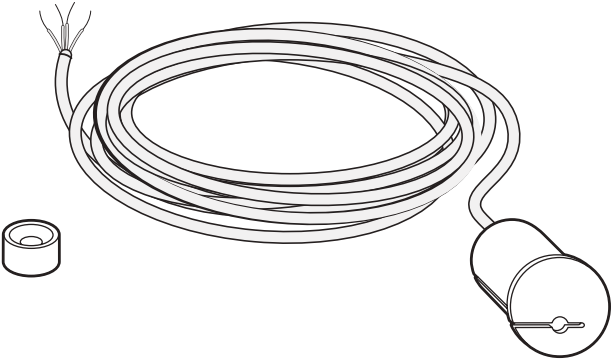
Wiring diagram



a1 Line contact
a2 Line contact



With sabotage cable



Product description

- The contact element can be used for opening monitoring in conjunction with surveillance systems.
- Concealed in the rebate.
- Also suitable for integration in data bus and Smart Home systems thanks to potential-free contact.

Scope of delivery

- Magnetic locking sensor contact element
- 1 silver eccentric bush
- 1 ring magnet

			Nº
10 m	Silver	1 Set(s)	485530

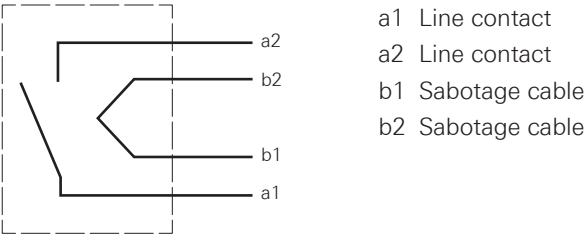
INFO

Contact elements with special cable lengths available upon request.

Technical data

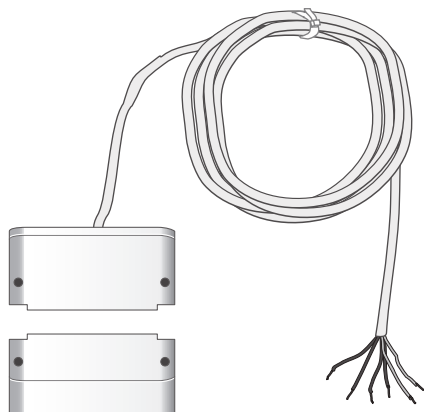
Technical data	
Contact type	Reed contact, N/O contact, potential-free
Voltage	$U_{max} = 48 \text{ V DC} / 48 \text{ V AC}$
Switching current	$I_{max} = 500 \text{ mA}$
Switching capacity	$P_{max} = 5 \text{ W} (= U \times I)$
Temperature range	-25 °C to +70 °C with fixed cabling
IP rating	IP67
Environmental class	III in accordance with VdS 2110
Housing colour	Silver
Cable	LIYY 4 x 0.14 mm ² , white

Wiring diagram



3.4 Cable junction

3.4.1 Contactless transformer



Product description

- Contactless activation of glass breakage sensors, opening detectors (magnetic contacts) and alarm wire loops at a burglar alarm central unit.
- The contactless transformer can be used to mount and operate passive glass breakage detectors without cable junctions on windows and sliding doors.
- The contactless transformer consists of a transmitter and receiver, which inductively couple a glass breakage detector to the wiring system of the burglar alarm system. The electronic evaluation system is integrated into the receiver of the contactless transformer.

Scope of delivery

- 1 transmitter
- 1 receiver

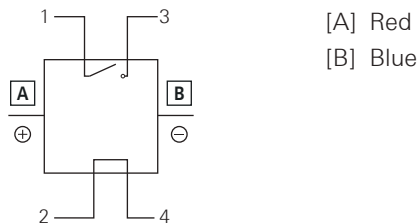
			Nº
Contactless transformer	4 m	1 Piece(s)	377622

Technical data

Technical data	
Operating voltage	9 - 15 V DC
Quiescent current consumption at 12 V	Approx. 7 mA (max. 12 mA)
Installation distance between transmitter and receiver	Max 10 mm
Maximum switching capacity	24 V DC, 200 mA, 300 mW
Temperature range	-25 °C to + 70 °C
IP rating	IP67
Environmental class	VdS environmental class IV
Housing colour	White
Housing dimensions	68 x 29.3 x 10 mm
Housing material	ABS
Cable	LIYY 6 x 0.14 mm ² , white



Wiring diagram



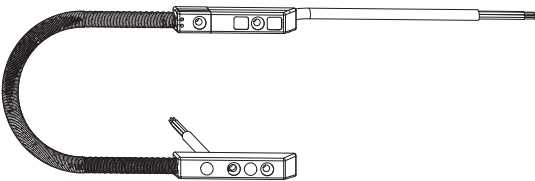
INFO

Electrically measure the power supply cables before connection.

Certificates

Certification		VdS class
VdS	G 195504	B

3.4.2 Cable junction, detachable



Product description

- 6-pin miniature cable junction for windows and balcony doors.
- Concealed in the window rebate.
- The sash can be unhinged because the cable junction is easy to detach using the plug connection in the rebate area.

Scope of delivery

- 1 cable junction
- 2 screws

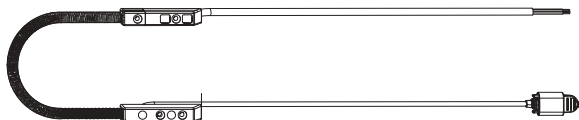
			Nº
Cable junction, detachable	6 m	1 Piece(s)	619586

Technical data

Technical data	
Cable	LiF9Y11Y, 6-pin version, Ø 4.9 mm, white
Core structure	Max. 3.0 A current load
Six cores	Red, white, brown, green, yellow and blue 0.34 mm ²
Cable length	4 m on the bush side 6 m on the connector side
IP rating	IP67
Voltage	Max. 48 V DC
Temperature range	-5 °C to + 50 °C (when moving) -25 °C to + 70 °C (when idle)



3.4.3 Cable junction, detachable, with alarm glass connection



Product description

- 6-pin miniature cable junction for windows and balcony doors.
- Concealed in the window rebate.
- The sash can be unhinged because the cable junction is easy to detach using the plug connection in the rebate area.
- Including alarm glass connection on the sash side.

Scope of delivery

- 1 cable junction
- 2 screws

				Nº
Cable junction, detachable, with alarm glass connection	6 m	1 Piece(s)	619587	

Technical data

Technical data	
Cable connector	LiF9Y11Y 6 x 0.14 mm ² Ø 4.9 mm, white
Cable bush	LiF9Y11Y 4 x 0.14 mm ² Ø 3.2 mm, white
Cable length	0.33 m on the bush side, outside the loop 6 m on the connector side
Current	Max. 0.5 A
IP rating	IP67
Voltage	Max. 48 V DC
Temperature range	-5 °C to + 50 °C (when moving) -25 °C to + 70 °C (when idle)
Environmental class	VdS 2110 III (VdS class C)
VdS approval number	VdS class C (G 108094)



3.4.4 Cover plates

The appearance is enhanced because the drill hole is concealed.



								Nº
Cover plate	Timber	16	126	3	For fixing the cable junction on the frame	Stainless steel	1 Piece(s)	619588

Scope of delivery

Quantity	Description
1	Cover plate
2	Screws M3 x 12 mm
2	Screws 3.5 x 25 mm

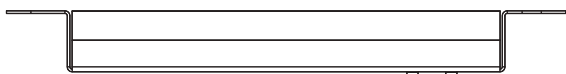


								Nº
Cover plate	PVC Aluminium	16	126	3	For fixing the cable junction on the frame	Stainless steel	1 Piece(s)	619589

Scope of delivery

Quantity	Description
1	Cover plate
2	Screws M3 x 12 mm
2	Screws M4 x 6 mm
2	Screws 3.5 x 25 mm

3.4.5 Mounting casing



							Nº
Mounting casing	20	185	25	Mounting box for frame component cable junction, without power supply unit; used for a small rebate clearance	Stainless steel	1 Piece(s)	619585

Scope of delivery

Quantity	Description
1	Mounting casing
2	Screws M3 x 12 mm
2	Screws M4 x 6 mm
2	Screws 3.5 x 25

3.5 Extractor hood control (DAS)

3.5.1 Extractor hood control (DAS)



Product description

- The Roto E-Tec Control | DAS extractor hood control regulates the correct use of an extractor hood.
- In the case of open fireplaces, such as hearths or gas single-storey heating, the extractor hood in the kitchen may only be switched on when a window is open. If all windows are closed, the DAS automatically interrupts the power supply, preventing a possible risk of asphyxiation due to carbon monoxide.

Scope of delivery

- 1 extractor hood control
- 1 contact element with 6 m cable
- 1 magnet
- 1 safety bracket
- 6 screws

			Nº
Extractor hood control set		1 Set(s)	765808

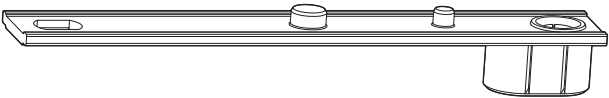
Technical data

Extractor hood control

Contact type	Reed contact, N/O contact, potential-free
Voltage	230 V AC
Switching capacity	230 V AC, 6 A, 1400 W
IP rating	IP20
Protection class	I
Housing colour	White
Weight	Approx. 350 g
Dimensions (L x W x H)	135 x 65 x 75
Contact element	
Switching distance	< 12 mm
Cable	LIYY 2 x 0.14 mm ² , white



3.5.2 Mounting fixture for rebate magnet



				Nº
Mounting fixture for rebate magnet	Sash	RAL 7035	1 Piece(s)	572520



Roto Com-Tec Sensor





Roto Com-Tec Sensor

See page 97

Positioning of the corner drive with Roto Com-Tec Sensor

See page 98

Technical data

Roto Com-Tec Sensor 101

Battery manufacturers 102

Magnet

Timber 103

PVC 103

Floating mullion 103

Accessories

Corner drive 104

Plug-in magnet 104

Support plate 105

Special screw 105

Control Unit 105

4 Roto Com-Tec Sensor

Wireless sensors integrated in hardware for home security



Roto Com-Tec Sensors are available in three versions for different requirements, for example to detect the basic opening state or the precise locking state. The Comfort S version also features shock detection and tilt detection, which detects burglary attempts. And encrypted data transmission, sabotage detection and a long battery runtime ensure greater durability and security on all three sensors.

The Roto Com-Tec Sensor is screwed into the corner drive and is integrated into the rebate, where it is concealed. This means that, unlike sensors which are adhered to the surface, it can accurately detect whether the window is just closed or is actually locked. It is also optimally protected, less susceptible to wear and seamlessly blends into the design of premium windows.



4.1 Roto Com-Tec Sensor



Basic



Use

- Opening detection

Scope of delivery

- 1 wireless sensor
- 1 stainless-steel screw
- 1 CR1632 battery
- 1 quick guide



Comfort



Use

- Opening and locking detection

Scope of delivery

- 1 wireless sensor
- 1 plug-in magnet
- 1 stainless-steel screw
- 1 CR1632 battery
- 1 quick guide



Comfort S





Use

- Opening and locking detection
- Shock and tilt detection

Scope of delivery

- 1 wireless sensor
- 1 plug-in magnet
- 1 stainless-steel screw
- 1 CR1632 battery
- 1 quick guide

		Nº
Basic	1 Piece(s)	815892
	25 Piece(s)	820701
Comfort	1 Piece(s)	816928
	25 Piece(s)	820702
Comfort S	1 Piece(s)	816929
	25 Piece(s)	820703



4.2 Positioning of the corner drive with Roto Com-Tec Sensor

INFO

Installation is possible anywhere that the standard corner drive (on the espagnolette side) can be installed.

Exception: Roto Safe

- Install the wireless sensor vertically on the espagnolette side. For the exception, see positioning of Tilt-Only windows and the Roto Com-Tec Sensor | Basic with support plate and Roto Safe → *from page 105*.
- The preferred installation position is at the bottom. Exception: Roto Com-Tec Sensor | Comfort S.
- The corner drive cam must be installed horizontally. For the exception, see positioning of Tilt-Only windows.

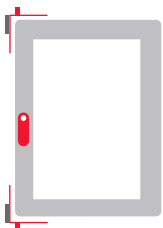


The possible positions for individual opening types are shown. In each case, only one Roto Com-Tec Sensor is installed per window.

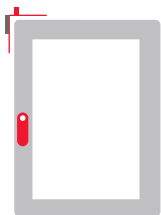
The wireless sensor is located on the vertically installed leg of the corner drive. Exception: Tilt-Only hardware with restrictor and cleaning stay and Roto Safe.



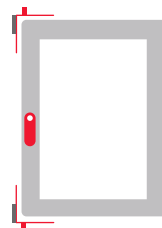
Roto NX / NT



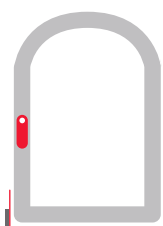
Tilt&Turn hardware



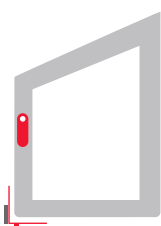
Tilt&Turn hardware with TiltSafe



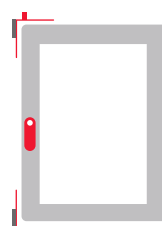
TiltFirst hardware



Tilt&Turn hardware for arched windows



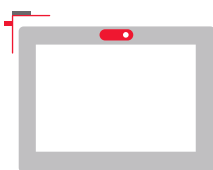
Tilt&Turn hardware for pitched windows



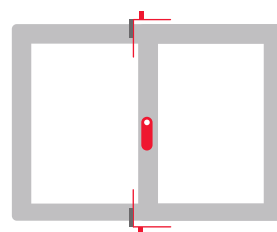
Turn-Only hardware



Tilt-Only hardware
Without restrictor and cleaning stay
Tilt stay(s) at the top



Tilt-Only hardware
With restrictor and cleaning stay
Tilt stay(s) at the top



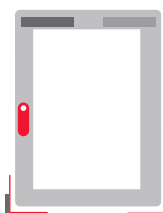
Floating-mullion hardware

INFO

A run-up block must be installed for the second opening sash.

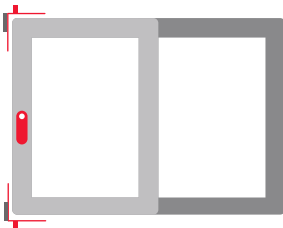
INFO

Installation is horizontal.



Tilt&Turn hardware with Roto E-Tec Drive

Roto Patio Alversa

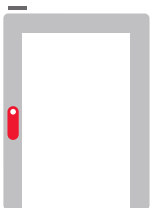


Parallel Sliding and Tilt&Slide system

INFO

Installation is not possible for diagram C with concealed hardware groove.

Roto Safe



INFO

Only Roto Com-Tec Sensor Basic can be installed.

No corner drive necessary.



4.3 Technical data

4.3.1 Roto Com-Tec Sensor

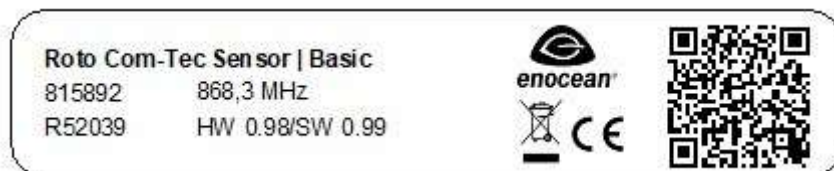
Technical data	
Dimensions (L x W x H)	132 x 17 x 8.5 mm
Weight	12 g (incl. battery)
Housing colour	RAL 7004 (Signal grey)
Power supply	1 lithium button cell 3 V, 125 mAh, type CR 1632
Battery runtime	Up to 3 years ^[1]
Ambient conditions	
Operating temperature	-10 °C to +55 °C
Air humidity	Max. 95% (non-condensing)
IP rating	IP54
Radio network	
Frequency	868.3 MHz, ASK modulation
Protocol	EnOcean Radio Protocol version 1, lead market Europe
Max. transmission capacity	+10 dBm (10 mW)
Data transmission	Unidirectional
EnOcean Equipment Profile (EEP)	Basic: A5-14-01 (default) or D5-00-01 Comfort: A5-14-09 Comfort S: A5-14-0A
Encryption	24-bit rolling code (RLC), 24-bit authentication code (CMAC) and data encryption with 128-bit AES Can be switched over to unencrypted communication.
Telegram	4BS Teach-In
Status message	The current window status is transmitted approx. every 6 hours
Radio range	
Without obstacles	Up to 300 m (open areas)
Building	10 to 30 m
Conformity	
Directives / standards	2014/53/EU (Radio Equipment Directive – RED) 2011/65/EU (RoHS Directive)

INFO

The EnOcean radio modules with a frequency of 868.3 MHz comply with the Radio Equipment Directive 2014/53/EU (RED) and are permitted to be operated in all EU countries, Switzerland, Turkey and Norway.

Type plate

The type plate is attached to the wireless sensor.



[1] Depending on the number of times that the window hardware is operated and the wireless sensor version. Recommended battery manufacturers → from page 102.

4.3.2 Battery manufacturers

We recommend the following battery manufacturers:

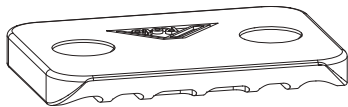
Manufacturer	Type
Camelion	CR1632
Energizer	
Jauch	





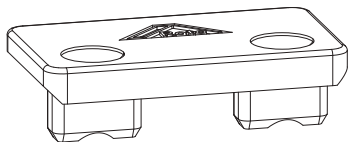
4.4 Magnet

4.4.1 Timber



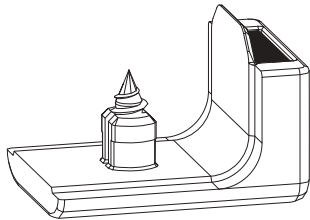
Eurofalz	13	24	12	PVC	RAL 7004	Signal grey	1	4x30	1 Piece(s)	820558
	13	24	12	PVC	RAL 7004	Signal grey	1	4x30	25 Piece(s)	820715

4.4.2 PVC



Aluplast Ideal 2000	13	PVC	RAL 7004	Signal grey	1	4x30	1 Piece(s)	820713
Aluplast Ideal 4000	13	PVC	RAL 7004	Signal grey	1	4x30	25 Piece(s)	820714
Gealan S3000								
KBE 76								
Kömmerling 76								
Kömmerling 88 Plus								
Kömmerling Eurodur 3S								
Plus Plan Plus Tec								
Rehau S 735 MD								
Rehau S 980 Geneo								
Roplasto 7001 MD								
Salamander 2D								
Salamander BluEvolution 92								
Trocal 76								
Veka Topline AD 13								
Wymar 3000								

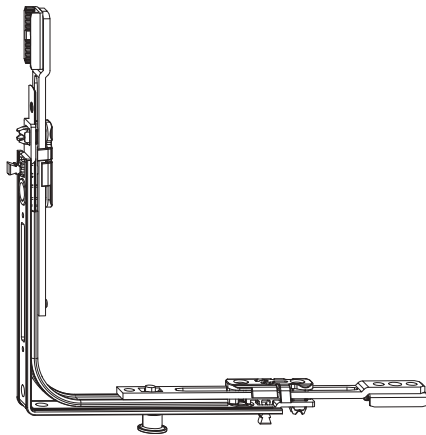
4.4.3 Floating mullion



Screw-on	PVC	RAL 7004	Signal grey	1	3x8	1 Piece(s)	820694

4.5 Accessories

4.5.1 Corner drive








Use

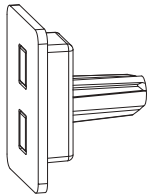
- Installing the Roto Com-Tec Sensor



Scope of delivery

- 1 corner drive

					Nº
Corner drive for Roto Com-Tec Sensor	1	V	Roto Sil	1 Piece(s)	815854

4.5.2 Plug-in magnet



		Nº
Plug-in magnet for Com-Tec corner drive	1 Piece(s)	822325
	25 Piece(s)	820704



4.5.3 Support plate





Use

- The installation position of the Roto Com-Tec Sensor can be chosen freely | Basic

Scope of delivery

- 1 support plate
- 1 screw

			Nº
Support plate for Roto Com-Tec Basic		1 Piece(s)	823147







INFO

The support plate can only be used with Roto Com-Tec Sensor | Basic.

4.5.4 Special screw



				Nº
Special screw	Stainless steel	4x30	400 Piece(s)	820976

4.5.5 Control Unit



Use

- Program the Roto Com-Tec Sensor.
- Show opening or locking position.
Show shocks (Roto Com-Tec Sensor | Comfort S)
- Show battery status and radio connection (signal strength).
- Functional inspection of all versions of the wireless sensor in the factory and on the construction site.

Scope of delivery

- 1 Roto Com-Tec Sensor | Control Unit
- 1 quick guide

			Nº
Roto Com-Tec Sensor Control Unit		1 Piece(s)	816907



Roto Safe E





Access systems

Fixed cabling	111
Radio-controlled solution	112

Cable junctions

Frame components	114
Sash components	115
Cable	116
Mounting casing	117
Cover plates	118
Retaining bracket	119

Magnetic contact

See page	120
----------	-----

Day / night changeover switch

See page	121
----------	-----

Power supply unit

See page	122
----------	-----

Control Unit

See page	123
----------	-----

5 Roto Safe E – Electromechanical multipoint lockings



Roto Safe E is the electromechanical multipoint locking system where a motorised drive assists the actuation of the main lock and additional lockings.

5.1 Access systems

There is a choice of three easy-to-use access systems for actuating electromechanical multipoint locking systems.

4in1 access control system | Fixed cabling

- When used with Roto Safe E multipoint lockings, the 4in1 access control system offers four different access options for conveniently opening the door.
- The door can be opened by entering a PIN code or using a fingerprint, Bluetooth-capable smartphone or RFID-capable medium.
- The intuitive app makes it possible to easily create users and assign individual access rights, either permanently or temporarily.

Finger scan | Fixed cabling

- The finger scan makes it possible to open Roto Safe E multipoint lockings using a fingerprint.
- The LED lighting ensures simple operation, even when it is dark. In conjunction with the stainless-steel front plate, the lighting gives the door element a premium appearance.
- The finger scan meets the highest security standards and also responds to children's fingers.

Hand-held transmitter | Radio-controlled solution

- With its range of up to 10 metres, the hand-held transmitter offers the convenience of opening the multipoint locking remotely without the need for a key.
- Radio receivers are installed as standard in the drive unit on Eneo CC multipoint lockings and are optionally available for Eneo A multipoint lockings.
- The 64-bit encoding with a rolling code system provides protection against tampering.



5.1.1 Fixed cabling

4in1 access control system



Product description

When used with Roto Safe E multipoint lockings, the 4in1 access control system offers four different access options for conveniently opening the door.

The door can be opened by entering a PIN code or using a fingerprint, Bluetooth-capable smartphone or RFID-capable medium.

The intuitive app makes it possible to easily create users and assign individual access rights, either permanently or temporarily.

Product characteristics

- IP66 for optimum protection against moisture from outside
- Acrylic glass panel for a premium appearance
- Simple processing thanks to Plug&Play
- Adhesive fastening
- Cable length 1500 mm

4in1 access control system	99.8	55	19.8	Glass	Black	1 Piece(s)	Nº	896745

Finger scan



Product description

The finger scan makes it possible to open Roto Safe E multipoint lockings using a fingerprint.

The LED lighting ensures simple operation, even when it is dark. In conjunction with the stainless-steel front plate, the lighting gives the door element a premium appearance.

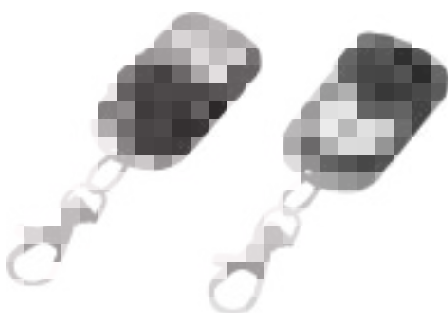
The finger scan meets the highest security standards and also responds to children's fingers.

Product characteristics

- IP65 for greater protection against moisture
- Line sensor for swiping fingers prevents latent fingerprints
- Stainless-steel front plate for a premium appearance
- Excellent storage capacity can hold up to 150 fingerprints
- Simple processing thanks to Plug&Play
- Cable length 1700 mm
- Two mounting options: adhesive fastening or mounted on the front

							Nº
Finger scan	75.4	44.6	29		Stainless steel	1 Piece(s)	838622

5.1.2 Radio-controlled solution



Product description

With its range of up to 10 metres, the hand-held transmitter offers the convenience of opening the multipoint locking remotely without the need for a key.

Radio receivers are installed as standard in the drive unit on Eneo CC multipoint lockings and are optionally available for Eneo A multipoint lockings.

The 64-bit encoding with a rolling code system provides protection against tampering.

Product characteristics

- Radio range of up to 10 metres
- 64-bit encoding with a rolling code system provides protection against tampering
- The protective cap prevents unintentional operation
- Simple programming
- Frequency: 433.92 MHz
- Radio licence for the following countries: A, B, CH, D, DK, E, F, FIN, GB, GR, I, IRL, IS, L, LT, N, NL, P, S, CZ

		Nº
Eneo hand-held transmitter	1 Piece(s)	769388



5.2 Cable junctions




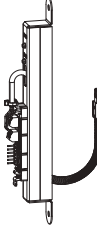



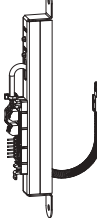
Cable junctions are required for supplying power to electromechanical multipoint lockings. They form a protected cable guide from the door leaf to the frame.

The modular system comprises two cable junctions on the frame and two on the leaf, which, when combined, offer ideal solutions adapted to the different rebate clearance situations.

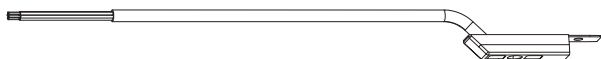
On the frame side, it is possible to choose between cable junctions with or without a power supply unit. On the leaf side, there is the choice between a cable junction with or without a casing.

The cable junctions can be used with all frame materials. Accessories such as cover plates and retaining brackets complete the product range.

The frame and leaf components for the cable junctions can be combined as follows:

Possible combinations	
Frame components	Leaf components
Variant 1 – rebate clearance 12 / 16 mm	
 See → from page 114	 See → from page 115
Variant 2 – rebate clearance 4 / 12 mm	
 See → from page 114	 See → from page 115
Variant 3 – rebate clearance 12 / 16 mm	
 See → from page 114	 See → from page 115
Variant 4 – rebate clearance 4 / 12 mm	
 See → from page 114	 See → from page 115

5.2.1 Frame components



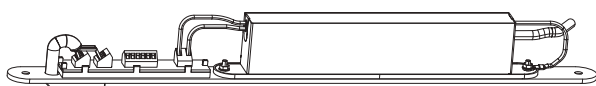
Product description

- 6-pin, detachable plug connection
- Connector side with 4 m cable
- Can be used with timber, PVC and aluminium profiles
- Moulded-on cable
- Bracket available
- Without power supply unit
- The join between the frame and sash has IP67 protection

Scope of delivery

- 1 cable junction

Frame component cable junction, without power supply unit	10.6	58	8.5	–	1 Piece(s)	820187		



Product description

- 6-pin, detachable plug connection
- Can be used with timber, PVC and aluminium profiles
- Moulded-on cable
- Built-in power supply unit
- Connector side with 3 m cable for connection to 230 V
- Plug & play
- Clamp strip for external access control systems
- Can be connected directly to 230 V power supply
- Earthed cover
- No ventilation slot required for timber
- The join between the frame and sash has IP67 protection

Scope of delivery

- 1 cable junction

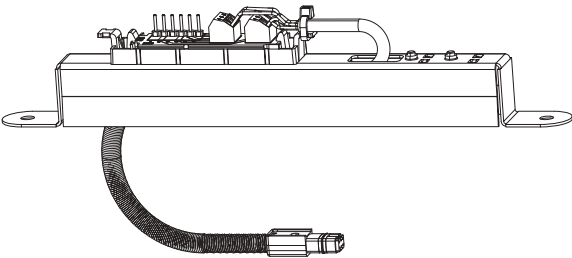
Frame component cable junction, with power supply unit	24	400	41.6	–	1 Piece(s)	817028		

Power supply unit

Technical data	
Cable	LiF9Y11Y, 6-pin version, Ø 4.9 mm, grey
Max. current	3 A
Max. voltage	48 V
Cores	0.34 mm ² – white, brown, green, yellow, grey, pink
IP rating	IP67 (when inserted and only the plug connection between sash and frame)
Temperature range	When idle: -25 °C to +70 °C When moving: -5 °C to +50 °C



5.2.2 Sash components



Product description

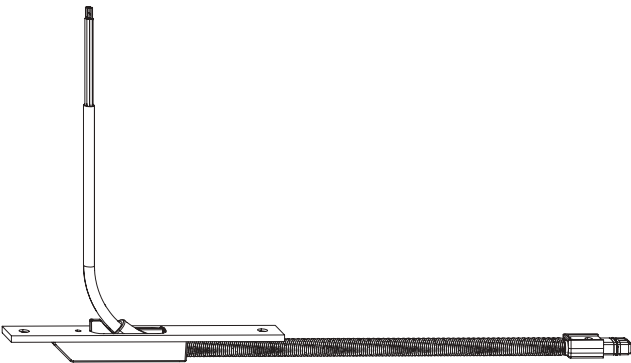
- 6-pin, detachable plug connection
- Can be used with timber, PVC and aluminium profiles
- Moulded-on cable
- Can be used with a limited rebate clearance
- Mounting box with plate
- 180° angle of rotation
- The join between the sash and frame has IP67 protection
- Bush side with loop fitted to mounting box (installation in U-shape)

Scope of delivery

- 1 cable junction
- 1 set of screws



Sash component cable junction, installation in U shape	20	230	45	180	1 Piece(s)	820194



Product description

- 6-pin, detachable plug connection
- Can be used with timber, PVC and aluminium profiles
- Moulded-on cable
- 180° angle of rotation
- The join between the sash and frame has IP67 protection
- Bush side with loop for lengthways installation

Scope of delivery

- 1 cable junction
- 1 set of screws
- 1 cover plate





Sash component cable junction, lengthways installation	10.6	58	8.5	180	1 Piece(s)	820255

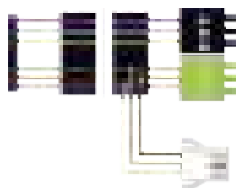






5.2.3 Cable

The plug-and-play system for the plug connections helps ensure rapid and error-free installation.






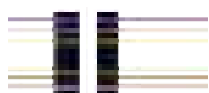
				Nº
Cable – type E	Pre-assembled cable with plugs for connecting the cable junction and the Eneo multipoint locking.	300 cm	1 Piece(s)	633291







				Nº
Cable – type EZ	Pre-assembled cable with plugs for connecting the cable junction, the Eneo multipoint locking and the access control system.	300 / 30 cm 500 / 30 cm	1 Piece(s) 1 Piece(s)	633292 739942



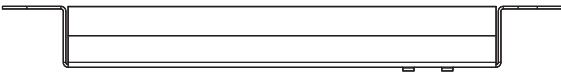
			Nº
Connector	Replacement plug (three-pin) for cable – type E and cable – type EZ, two parts (green and black)	1 Set(s)	494801



				Nº
Cable for cable junction	Pre-assembled 6-pin cable for connecting the cable junction to the power supply unit (material number: 817028) and external components	300 cm	1 Piece(s)	895769



5.2.4 Mounting casing



							Nº
Mounting casing	20	185	25	Mounting box for frame component cable junction, without power supply unit; used for a small rebate clearance	Stainless steel	1 Piece(s)	619585

Scope of delivery

Quantity	Description
1	Mounting casing
2	Screws M3 x 12 mm
2	Screws M4 x 6 mm
2	Screws 3.5 x 25



5.2.5 Cover plates

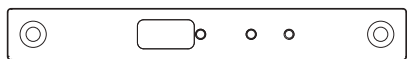
The appearance is enhanced because the drill hole is concealed.



								Nº
Cover plate	Timber	16	126	3	For fixing the cable junction on the frame	Stainless steel	1 Piece(s)	619588

Scope of delivery

Quantity	Description
1	Cover plate
2	Screws M3 x 12 mm
2	Screws 3.5 x 25 mm



								Nº
Cover plate	PVC Aluminium	16	126	3	For fixing the cable junction on the frame	Stainless steel	1 Piece(s)	619589

Scope of delivery

Quantity	Description
1	Cover plate
2	Screws M3 x 12 mm
2	Screws M4 x 6 mm
2	Screws 3.5 x 25 mm



									Nº
Cover plate	PVC Aluminium	24	190	3	F24	For fixing the cable junction on the frame with mount for retaining bracket	Stainless steel	1 Piece(s)	809632
					U6x24	For fixing the cable junction on the frame with mount for retaining bracket	Stainless steel	1 Piece(s)	817121

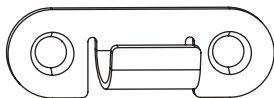




									Nº
Cover plate	Timber PVC Aluminium	20	126	3	F20	For fixing the cable junction on the sash side	Stainless steel	1 Piece(s)	860839



5.2.6 Retaining bracket

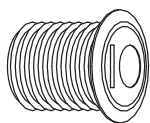
The retaining bracket prevents the cable junction from getting caught.




		Nº
Retaining bracket for cable junction	1 Piece(s)	775949



5.3 Magnetic contact



			Nº
Magnetic contact	Clip-on universal magnet, consisting of magnet and sleeve	1 Piece(s)	738182

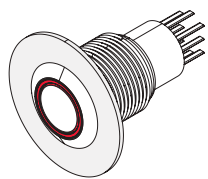
INFO

The retrofitable magnetic contact is used to trigger the electromechanical locking. Can be used in lever-operated espagnolettes and striker strips. Can also be drilled in when timber is used as the frame material (4 mm and 12 mm rebate clearance).





5.4 Day / night changeover switch



Day / night changeover switch	Timber PVC Aluminium	Switch with LED status indicator, for Eneo CC	Stainless steel	1 Piece(s)	739554

INFO


To display the day operation mode / night operation mode.






- **Day operation mode:** continuous access (no automatic locking)
- **Night operation mode:** access only possible after the multipoint locking has been unlocked electro-mechanically. The multipoint locking locks automatically once the door is closed.



5.5 Power supply unit

The power supply unit provides the electronic components with a reliable supply of the energy they need. Thanks to the compact dimensions, the power supply unit fits into narrow profile systems and enables efficient processing.



				
Eneo power supply unit	24 V	Top-hat rail	1 Piece(s)	796383

INFO




If a power supply unit has not been purchased from Roto Fenster- und Türtechnologie GmbH, it must comply with the relevant specifications and standards. See document→ [SUG_3](#).



5.6 Control Unit

The Eneo Control Unit is used to check for proper operation. This way, the door manufacturer can pass a tested door on to the next tradesperson involved.



			Nº
Eneo Control Unit	Test instrument with 1 m connecting cable	1 Piece(s)	495064
Adapter	Five-pin adapter with crocodile clips	1 Piece(s)	495189



6 Glossary

BACnet

Superordinate data bus system that is commonly used in commercial buildings. It is usually activated on the operational level KNX or LON.

Hardware-coupled magnet

Forms a functional unit together with the contact element, mounted on the sash connecting rod. Used for locking monitoring and combined locking and opening monitoring.

Bus

A transmission medium (usually two wires) for connecting many devices, which exchange data and signals with each other. The structure is similar to the computer network within a company. Data bus systems are frequently commissioned with a PC, which is used to program the assignment of the data packages. One advantage is the fast and simple electrical installation with straightforward rules and flexible assignment, which can also be changed via the Internet with the correct password and suitable software, depending on the system. This is supplemented by the enormous variety of functions in these applications, such as light, shading, alarm, temperature control, heating, remote maintenance, etc.

Bus-capable / bus-compatible

The requirement "bus-capable" or "bus-compatible" in texts for invitation of tenders refers to the data bus building management system, but without specifying a specific data bus system. In this case, standard contact elements are usually used. The electrician installs the couplers for the relevant data bus system. The VdS-B LSN and VdS-B LSNi magnetic locking sensor contact elements require VdS-certified alarm systems with the LSN Bosch data bus system or the further developed LSNi system. LSN and LSNi are not compatible with each other.

DAS

Extractor hood control

Safe

Multipoint locking systems. The "Safe" product range includes all locks and frame components for main and back doors (MVZ cylinder-operated multipoint lockings and electromechanical multipoint lockings).

Safe E

Main door lock with motorised drive. Electromechanical multipoint locking system, can be activated via Bluetooth, remote control, PIN code keypad or finger-print.

Ethernet

Superordinate data bus system

External alarm

See tilt monitoring

Rebate magnet

Forms a functional unit together with the contact element, mounted on the sash. Used for opening monitoring or locking monitoring (with floating-mullion sashes = double-sashed window).

The hardware creates a need to lock the floating-mullion sash first because the active sash with the hardware-coupled magnetic system can only be closed and locked after this has been done.

External field monitoring

The "external field monitoring" function checks whether the contact element has been tampered with using an external magnetic field and whether the burglar alarm system has to be replaced.

A special contact element with two contact circuits, which are connected to the burglar alarm system, is used here. While the first contact responds to the magnetic field of the magnet (locking and/or opening monitoring), the second contact only closes when an external magnetic field is present.

Each of these impulses triggers the alarm via the burglar alarm system. Six external field monitoring elements are combined in the "external field monitoring" contact circuit on the VdS-C magnetic locking sensor contact element.

Internal alarm

See tilt monitoring

Tilt monitoring

From an insurance point of view and according to VdS, tilted windows are considered to be open windows. Many users still also want their alarm system to be activated when their windows are tilted. To this end, two contact elements are integrated into the window, which distinguish between internal and external alarm notifications.

The alarm type [internal (tilt monitoring, presence) / external (locking monitoring, absence)] is switched over in the control cabinet of the alarm system. With an internal alarm, an alarm notification is usually only issued inside the building, and the person or people present in the building must respond accordingly. The external alarm usually notifies the police or security automatically. Depending on the required security class, the locking monitoring with hardware-coupled magnet needs a VdS-B or VdS-C magnetic locking sensor contact element. The tilt monitoring, which is horizontal at the bottom of



the window, usually requires a VdS-B contact element (never VdS-C or magnetic thermostat sensor) with rebate magnet.

KNX (formerly EIB, often known as KNX-EIB)

A commonly used data bus system for building management systems.

Combined locking and opening monitoring

Magnetic locking sensor contact element and hardware-coupled magnet for monitoring the locking and opening state of a sash via a two-core cable. The opening monitoring (locking has not taken place) blocks the activation of the alarm system.

After activation, the locking monitoring reports any change to the locking state and issues an alarm as required. Any tampering of the sabotage cables will also cause an alarm notification to be issued.

LCN (≠ LSN)

Local control network

LON

A commonly used data bus system for building management systems.

LSN / LSNi

Local security network / LSN improved module. Data bus system for VdS-certified alarm systems with the LSN Bosch data bus system or the further developed LSNi system. Magnetic locking sensor contact elements with compatible bus coupler are VdS-B LSN or LSNi.

MTS

Magnetic thermostat sensor for the building management system.

Is used to control heating and temperature control systems. The magnetic thermostat sensor contact element is a changeover contact, making it suitable for universal use.

MVS

Magnetic locking sensor. To control burglar alarm systems, with VdS-B and VdS-C certification.

Opening monitoring

Monitors the presence of the sash on the frame.

N/C contact

N/C or normally closed contacts are closed when idle and open upon activation. Wiring diagrams always show the idle state.

Potential-free contact

A potential-free contact establishes or terminates an electrically conductive connection. A potential to be

switched (voltage) is present at one of the connections, so that it can be switched to the other connection. The potential can be chosen freely, which is not possible with devices / components with fixed, prewired potential. Also see N/O contact, N/C contact, changeover contact.

Reed contact

The contact is activated by the effects of a magnetic field.

Sabotage cable (peak connection)

A peak connection is an electronic circuit where voltage is present. A burglar alarm system supplies power to and monitors the circuit. If the circuit is interrupted, for example because the cable connection is destroyed, the burglar alarm system issues an alarm. In the case of contact elements with a peak connection, two switching cables are securely connected. All contact element connections are identical.

N/O contact

N/O contacts or closure contacts are open when idle and close upon activation. Wiring diagrams always show the idle state.

VdS

Vertrauen durch Sicherheit (VdS – a German institute specialising in fire protection and security, formerly known as “Verband der Sachversicherer” (Association of Property Insurers))

VdS classes

With its classification, VdS defines the minimum requirements for a burglar alarm system which have to be adhered to in order for it to be certified.

VdS classes A

Class A burglar alarm systems only offer basic protection against burglary attempts. Roto does not offer class A contact elements.

VdS class B

Class B burglar alarm systems offer moderate protection against burglary attempts when activated and deactivated. The detectors have moderate sensitivity.

VdS class C

Class C burglar alarm systems offer increased protection against burglary attempts when activated and deactivated. The detectors have increased sensitivity. The security-relevant functions are extensively monitored.

Locking monitoring

Monitors the locking of the sash.



Changeover contact

Changeover contacts or changeover switches (commutators) change over the contact connection on activation. Wiring diagrams always show the idle state.





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