

Winkhaus blueMatic AV2-B

Operating Instructions



made in
GERMANY

**General
Information****1****Important
Information****2****Product
Description****3****Assembly****4****Operation /
Programming****5****Maintenance
and Care****6****Troubleshooting****7****Specifications****8****Notes**

All information in this product manual has been compiled and reviewed with the utmost care.

The information in this product manual is intended as a guide to specification, manufacture or installation of the product and in no way forms the basis of any guarantee. It is the responsibility of the person specifying the products to ensure they have selected products fit for purpose.

The information and graphic images provided correspond to the current status of the development and manufacture of this product.

Every effort has been made to guarantee accuracy of the information in this product manual, for the purpose of customer satisfaction, and product improvement, Winkhaus (UK) Ltd. reserve the right to make changes to the product and information without notice.

Due to advances in technology, or amendments to legal regulations or other compulsory changes Winkhaus (UK) Ltd do not guarantee the accuracy and completeness of the information.

The intellectual property of all data included in this document is 100% property of Winkhaus (UK) Ltd. The data must not be copied or reproduced without the written permission of Winkhaus (UK) Ltd.

Table of Contents

1	Important information	4
1.1	General information	4
1.2	Intended use	4
1.3	Use contrary to the intended purpose	5
1.4	Symbol explanations	6
1.5	Important safety information	6
2	Product Description	7
3	Assembly	10
3.1	Installation Overview	10
3.2	Dimension drawing	11
3.3	Keep routing drawing	12
3.4	Lock routing drawing	13
3.5	Battery case and optional “Snib switch” routing drawing	14
3.6	Handle routing drawings	15
3.7	Wiring diagram	16
3.8	Assembly order	17
4	Operation / Programming	18
4.1	Operation	18
4.2	Locking and unlocking of blueMatic AV2-B	18
4.3	Programming	19
4.3.1	Programming the remote control	19
4.3.2	Deleting / Un-programming Remote Controls	20
4.3.3	Replacing the remote control battery	21
4.4	Power of control unit	21
4.4.1	Warning message “change battery”	22
4.4.2	Warning “flat battery”	22
5	Maintenance and services	23
6	Troubleshooting	24
7	Technical data	25
7.1	Remote control	25

General Information

1

Important Information

2

Product Description

3

Assembly

4

Operation / Programming

5

Maintenance and Care

6

Troubleshooting

7

Specifications

8

Notes

1 Important information

1.1 General information

Dear customer!

We would like to thank you for the trust and confidence you have put in us by purchasing our quality product.

Please carefully read this Operating Manual to become acquainted with the installation and use of this security lock and to avoid malfunctions and safety hazards.

1.2 Intended use

The blueMatic AV2-B Security Lock and recommended Winkhaus Components are suited for the following areas of application:

- Maximum relative humidity 95%
- Ambient temperature - 10 ... + 60°C.

The entire door furniture has been explicitly designed to be used in conjunction with genuine Winkhaus parts. Other parts, not recommended by Winkhaus, may adversely effect the given properties of the security lock. We shall assume you use the lock as intended.

Access control systems and accessories included in the standard Winkhaus scope of delivery have been inspected for proper performance. If you use components of another manufacturer and if you have any doubts about the suitability of the component, you will have to contact the respective manufacturer about its fitness for use.

In order to ensure use as intended:

- Relevant, pertinent information and instructions have to be passed on to the respective people;
- Trained professionals are to install door furniture, keeps and accessories according to the respective installation instructions. Doors to be installed with local building regulation requirements.

The stipulations of use as intended have been met, once the Winkhaus fittings are:

- Installed according to their defined purpose and installation specifications;
- Used as intended;
- Maintained and cared for at regular intervals as instructed;
- Not used when they show signs of excessive wear;

The supplier/manufacturer shall not be held liable for bodily or material damage incurred as a result of operation or utilisation contrary to the intended use.

General
Information

1

Important
Information

2

Product
Description

3

Assembly

4

Operation /
Programming

5

Maintenance
and Care

6

Troubleshooting

7

Specifications

8

Notes

1.3 Use contrary to the intended purpose

The security system has not been designed to absorb or compensate for changes in shape or changes in the sealing mechanism resulting from temperature fluctuations or modifications to the building.

Waterproof doors or doors designed to contain aggressive corrosion-promoting air require special door furniture.

Misuse - thus use contrary to the intended purpose of the product - of a security lock system is evident in particular if:

- Notices pertinent to use as intended are not being followed.
- Foreign and/or unauthorised objects are installed in the opening, the lock system or the keep and thus prevent proper use.
- The lock system or centre keep has been tampered with, which in effect leads to a change in design, mode of operation or function.
- The door is drilled in the area of the locking houses or the keep once the lock has been installed.
- The locking components are employed contrary to their intended purpose, as a means to hold the door opened.
- The lock components are installed improperly or are tampered with, e.g. By painting over moveable parts such as the bolt or the latch.
- Loads exceeding those of normal manual force are transmitted via the safety key onto the lock system.
- The handle is turned counterclockwise or if a force greater than 150 N is exerted on the handle.
- The required gap of the door has been increased or decreased, which would for instance result from readjusting the hinge plates or from lowering the door.
- If auxiliary lifting tools or other tools are used to open or close the lock.
- The handle and key are used at the same time.
- The lock is opened /closed with objects not intended for that purpose.
- The size of the door opening deviates from the specifications prescribed.
- Different input variables as mentioned in the technical data are used.
- Use of non-specification batteries.

General
Information

1

Important
Information

2

Product
Description

3

Assembly

4

Operation /
Programming

5

Maintenance
and Care

6

Troubleshooting

7

Specifications

8

Notes

1.4 Symbol explanations

Symbols and cues are used to identify important information in this operating manual.

Cues such as DANGER or CAUTION indicate the degree of hazard. Symbols serve to visually emphasise the message.

It is imperative that you do follow the measures listed to avoid safety hazards!



DANGER!

Danger of life or danger of serious injuries.



WARNING!

Danger of material damage.



NOTE!

Other useful information and tips.



ENVIRONMENTAL PROTECTION!

Notices on complying with regulations on environmental protection.

1.5 Important safety information

Safety information described in this section is to be diligently adhered to regarding the installation and use of the blueMatic AV2-B Multi-Point lock. You are to heed the safety information provided without exceptions!

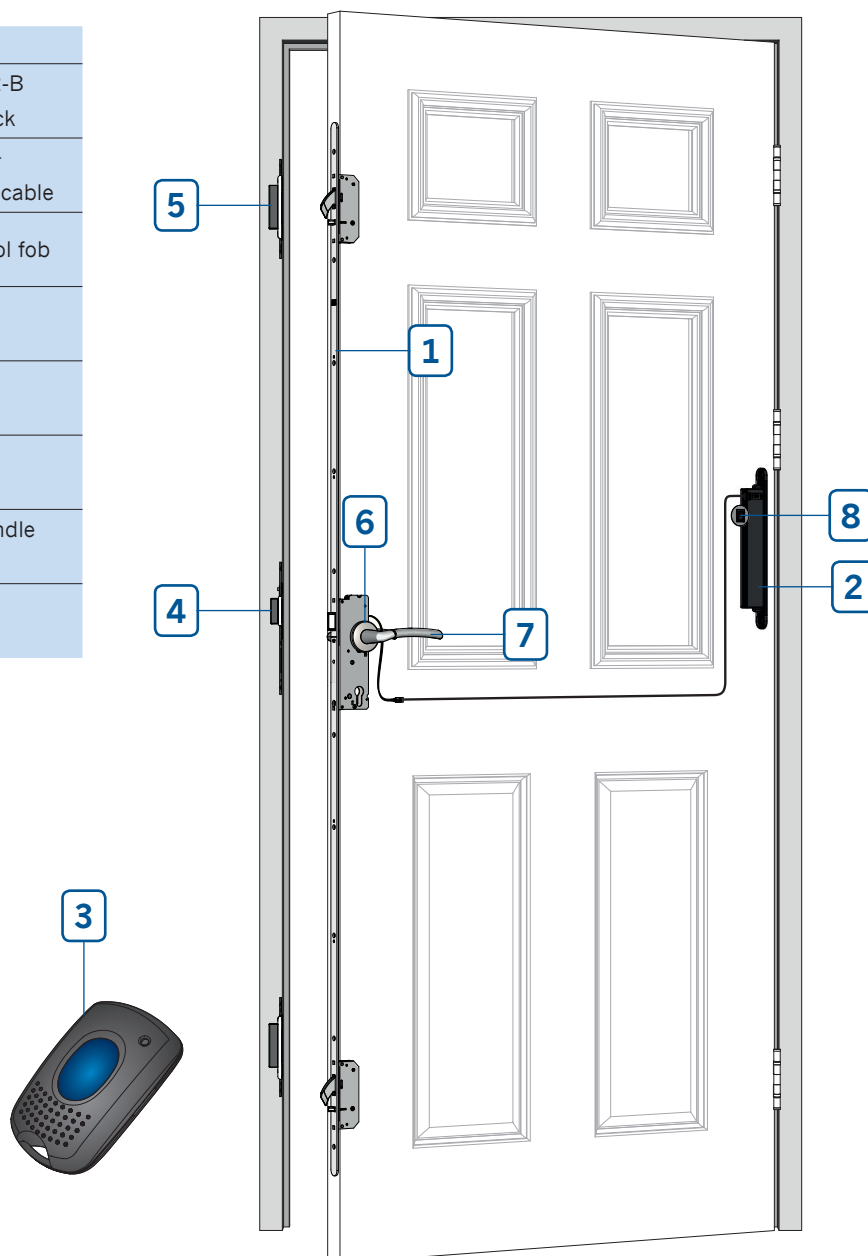
- Read the operating manual and keep it easily accessible for future reference. After installing the door pass it on to the end customer.
- The manufacturer shall not be held liable for damage caused by use contrary to the intended purpose of the product.
- For security reasons, the lock has been designed to be used in conjunction with genuine Winkhaus parts. Using other parts may adversely effect the given properties of the security lock.
- Arbitrary modifications, changes or makeshift repairs are not permitted due to concerns for safety. You must only use genuine Winkhaus parts for replacements.
- The manufacturer shall only be held liable for security related properties of the power lock as stipulated within the bounds of statutory regulations, if the manufacturer himself or another instructed, authorised agent has carried out the maintenance and upkeep work or made the changes.
- Winkhaus STV shall not be liable for any type of damage caused by inadequate repair or changes made.

2 Product Description

Battery operated automatic multi-point locking system - Locks automatically as soon as the door is closed!!

- Unlocking by remote control - No key necessary to unlock the door.
- Up to 10 remote control fobs per door.
- The remote control device has a rolling code which means that it 'scrambles' every time it is used so that the signal cannot be intercepted.
- 4 x AA batteries giving 2-3 years operational life - Easily replaced.
- No Electrician or Access Control engineer is required for the installation.

	Description
1	blueMatic AV2-B multi-point lock
2	Battery case + control unit + cable
3	Remote control fob
4	Hook keeps
5	Centre keep
6	AV2-B spindle
7	Lever rose handle (optional)
8	Snib Switch (optional)



General
Information

1
Important
Information

2
Product
Description

3
Assembly

4
Operation /
Programming

5
Maintenance
and Care

6
Troubleshooting

7
Specifications

8
Notes

General
Information

1

Important
Information

2

Product
Description

3

Assembly

4

Operation /
Programming

5

Maintenance
and Care

6

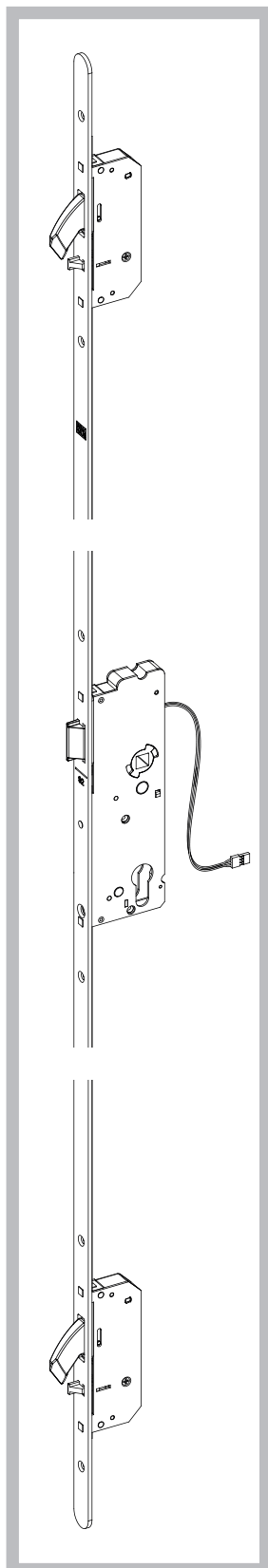
Troubleshooting

7

Specifications

8

Notes

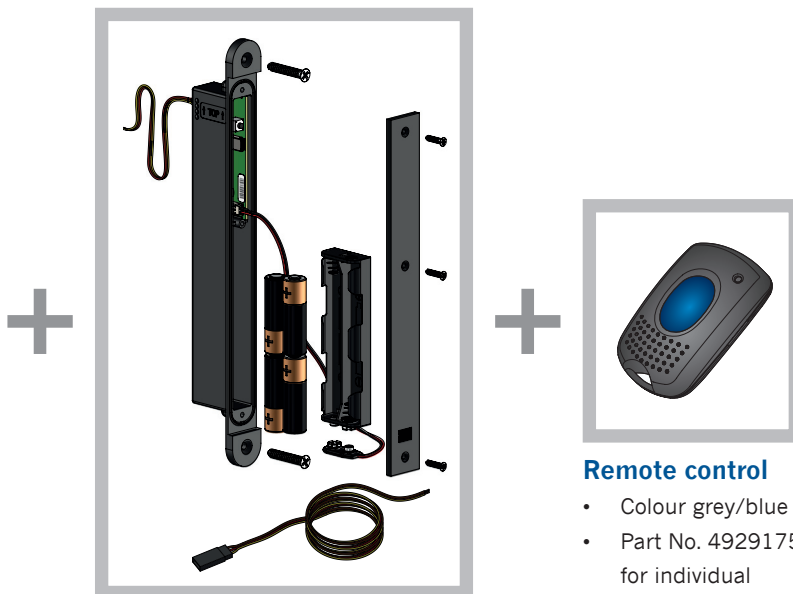


1 + 2 + 3

blueMatic AV2-B Multi-Point lock Sets

Without Deadbolt

Part Number	Description
5024507	AV2B-SET F1660/35 92/8 M2 LH Without Deadbolt
5024506	AV2B-SET F1660/35 92/8 M2 RH Without Deadbolt
5024505	AV2B-SET F2070/35 92/8 M2 LH Without Deadbolt
5024504	AV2B-SET F2070/35 92/8 M2 RH Without Deadbolt
5024503	AV2B-SET F2070/45 92/8 M2 LH Without Deadbolt
5024501	AV2B-SET F2070/45 92/8 M2 RH Without Deadbolt
5024499	AV2B-SET F2070/55 92/8 M2 LH Without Deadbolt
5024498	AV2B-SET F2070/55 92/8 M2 RH Without Deadbolt
NPI 15-524	AV2B-SET F2062/45 92/8 M2 LH Without Deadbolt
NPI 15-523	AV2B-SET F2062/45 92/8 M2 RH Without Deadbolt



Battery case + control unit + cable

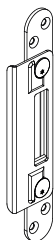
- Connection Cable 3m

**NOTE!**

Batteries are not included!
High-quality alkaline batteries
recommended.

Remote control

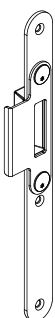
- Colour grey/blue
- Part No. 4929175
for individual
Remote control
- CR2032 battery
(1773064)



4 Hook Keeps

Keeps for PVCu, Aluminium, Timber and Composite doors

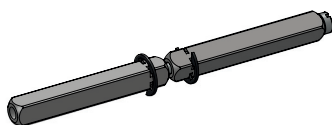
- Flat plate keeps (F20, F24, Uni keeps)
 - Single pocket and extension keeps
 - Radius end and square end
- U-Rail keeps (U26, U24 and U20)
 - Single pocket and extension keeps



5 Centre Keeps

Keeps for PVCu, Aluminium, Timber and Composite doors

- Flat plate keeps (F20, F24, Uni keeps)
- A range of different length latch strikes
Radius end and square end
- RH and LH
- U-Rail keeps (U26, U24 and U20)
 - RH and LH



6 AV2-B spindle

Part Number	Description
5011064	AV2-B spindle



7 AV2-B Handles & Escutcheons

Part Number	Description
5011060	Bergen Handle Set 44mm*
5011061	Bergen Security Escutcheon Set
5011062	Marseille Handle Set 40-50mm*
5011063	Marseille Security Escutcheon Set

* Must use AV2-B Spindle

* If fitting handles with a fixed backplate/rose, a standard split spindle set can be used



8 AV2-B Snib Switch

Part Number	Description
5020981	AV2-B Snib Switch, Cable and Rosette

- “Switching to green” allows for entrance into the property by simply pressing down the external handle

General
Information

1
Important
Information

2
Product
Description

3
Assembly

4
Operation /
Programming

5
Maintenance
and Care

6
Troubleshooting

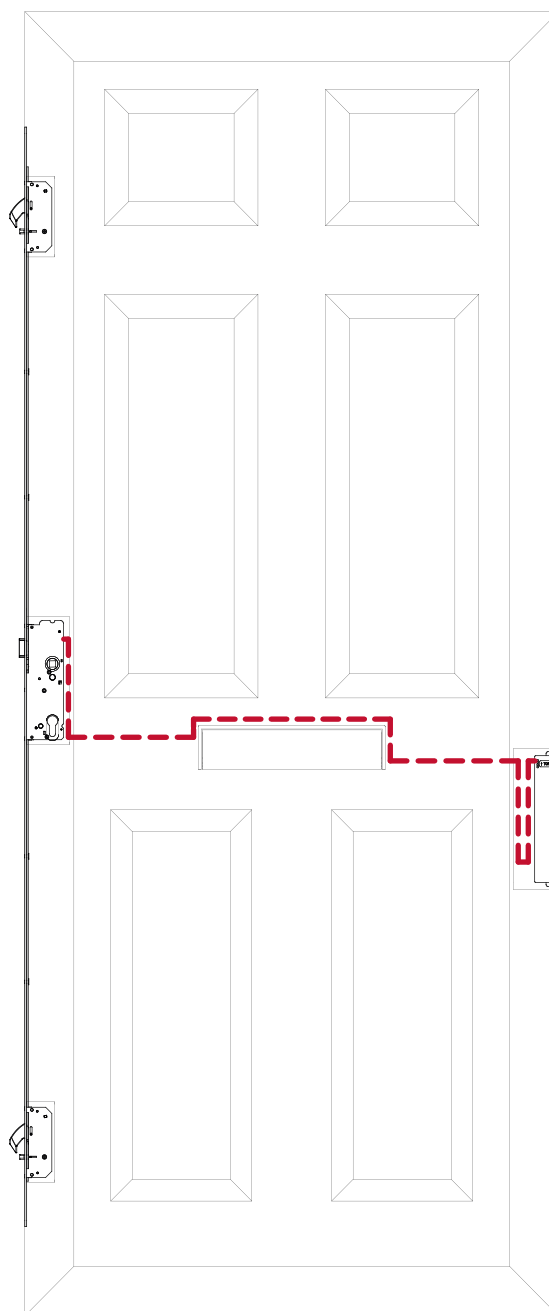
7
Specifications

8
Notes

3 Assembly

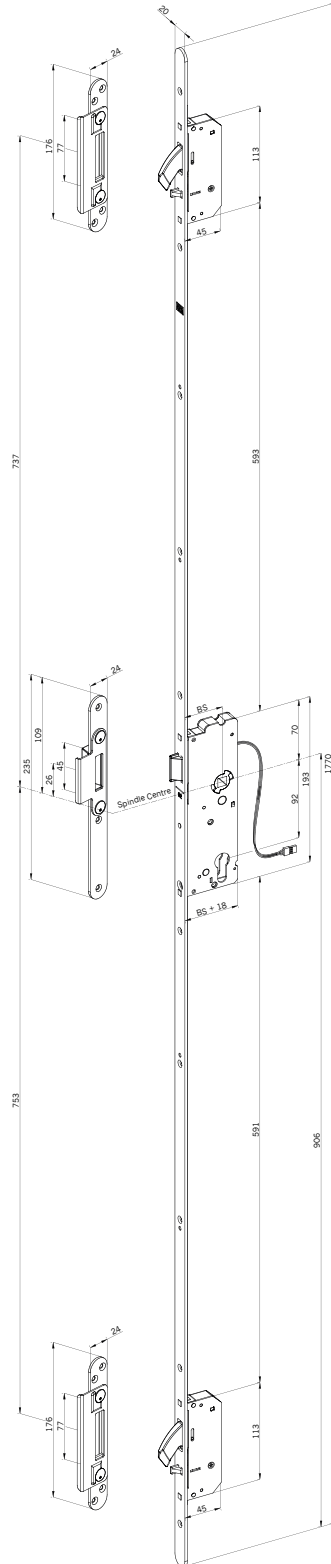
3.1 Installation Overview

Possible cable routes, maximum cable length = 3m



NOTE! Battery case is positioned on the hinge side, for easy programming of remote control and battery change!

3.2 Dimension drawing



Dimensions shown for AV2-B 2070/BS M2

General Information

1 Important Information

2 Product Description

3 Assembly

4 Operation / Programming

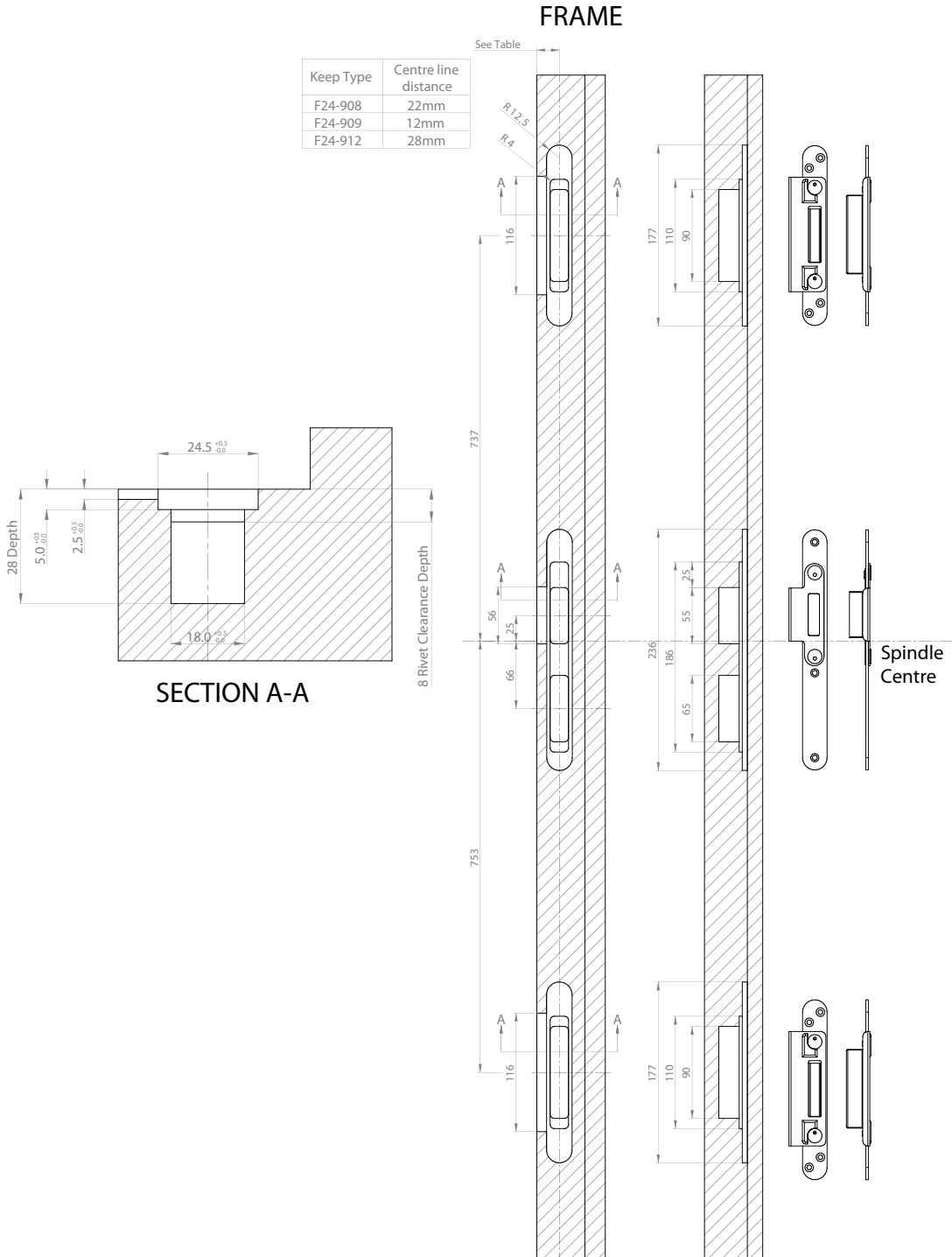
5 Maintenance and Care

6 Troubleshooting

7 Specifications

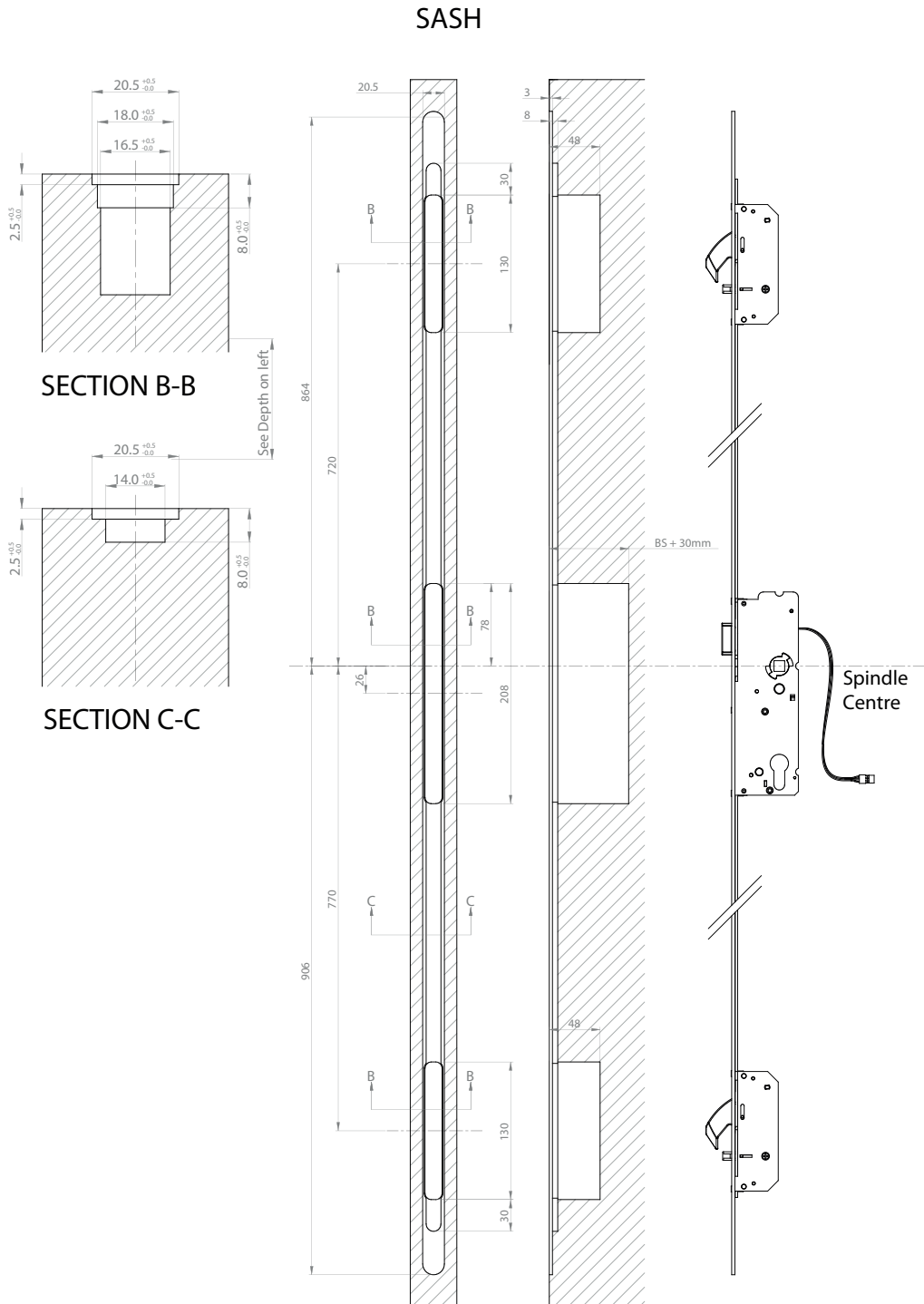
8 Notes

3.3 Keep routing drawing



Routing dimensions for F24-9xx Single pocket keeps on timber frame

3.4 Lock routing drawing



Routing dimensions for AV2-B 2070/BS M2 lock on timber/composite sash

General Information

1 Important Information

2 Product Description

3 Assembly

4 Operation / Programming

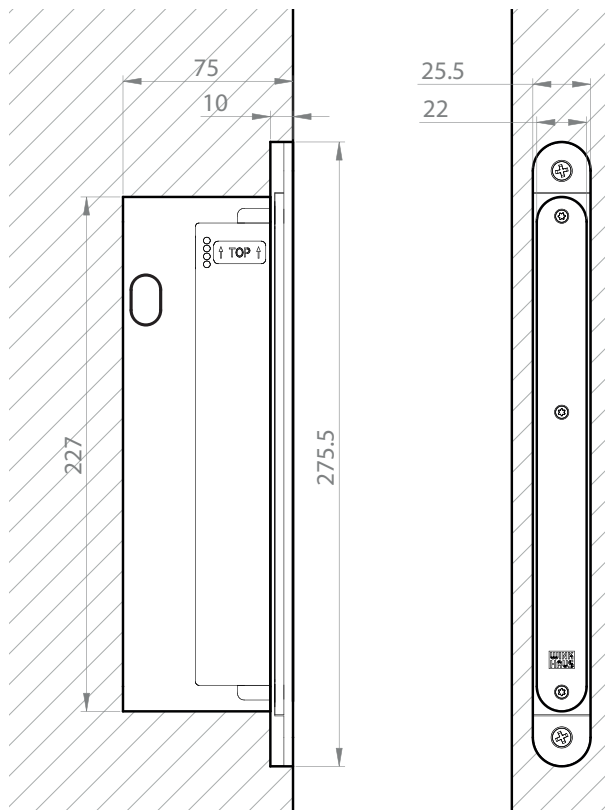
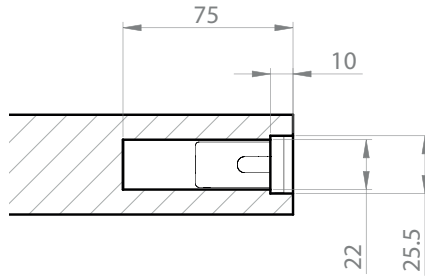
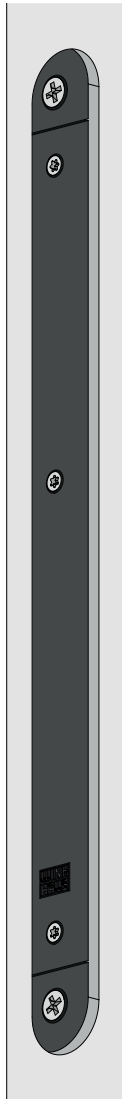
5 Maintenance and Care

6 Troubleshooting

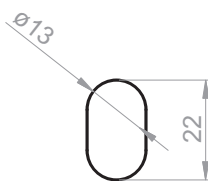
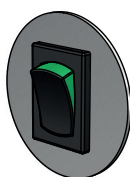
7 Specifications

8 Notes

3.5 Battery case and optional “Snib switch” routing drawing



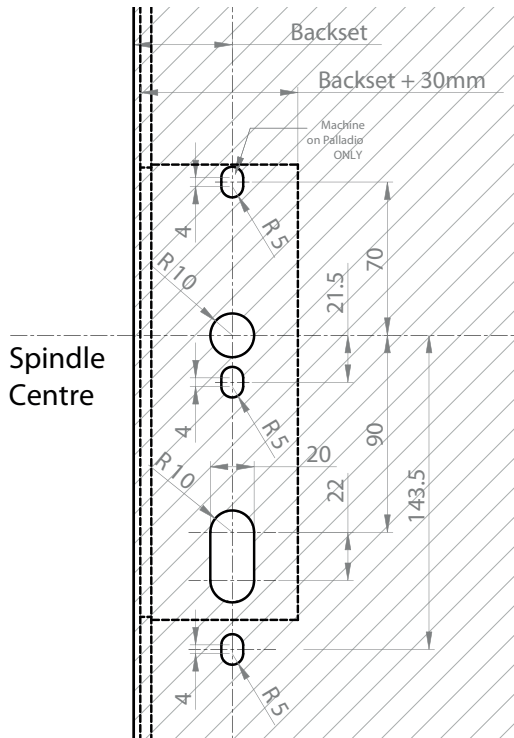
Routing dimensions for battery case on timber sash



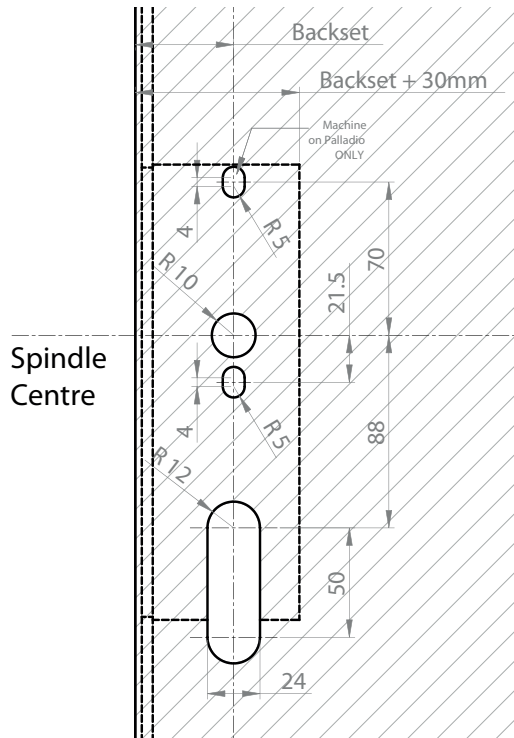
Routing dimensions for optional “snib switch” on timber sash

- General Information
- 1** Important Information
- 2** Product Description
- 3** Assembly
- 4** Operation / Programming
- 5** Maintenance and Care
- 6** Troubleshooting
- 7** Specifications
- 8** Notes

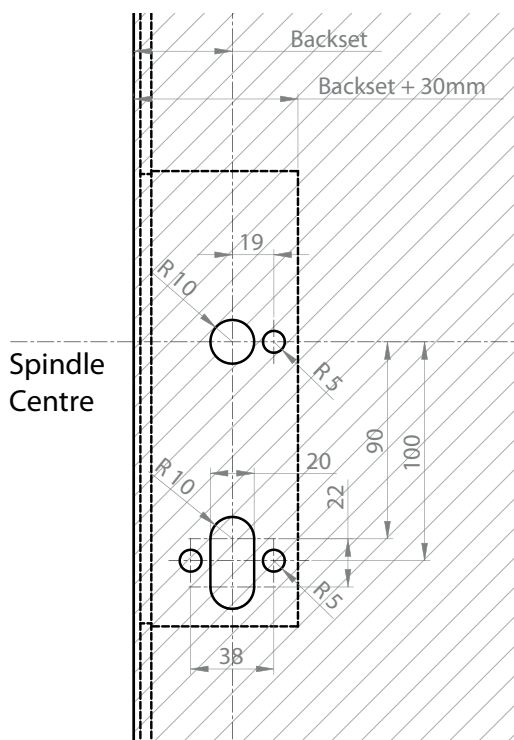
3.6 Handle routing drawings



Routing dimensions for Standard Handle + Euro Cylinder



Routing dimensions for Standard Handle + Armorshield



Routing dimensions for Rose Handle + Euro Cylinder

General Information

1 Important Information

2 Product Description

3 Assembly

4 Operation / Programming

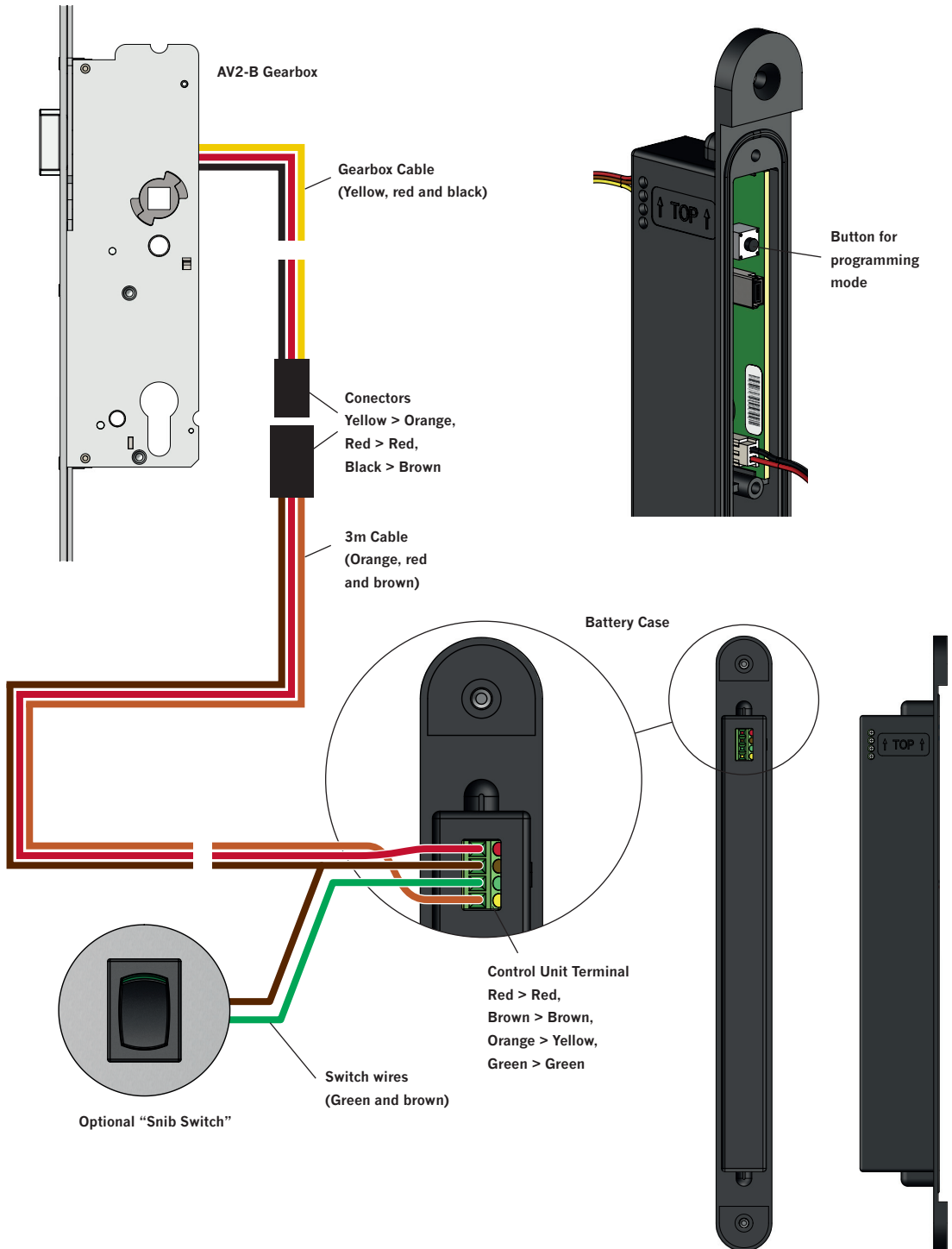
5 Maintenance and Care

6 Troubleshooting

7 Specifications

8 Notes

3.7 Wiring diagram



- General Information
- 1** Important Information
- 2** Product Description
- 3** Assembly
- 4** Operation / Programming
- 5** Maintenance and Care
- 6** Troubleshooting
- 7** Specifications
- 8** Notes

3.8 Assembly order

- Prep the sash and frame so the lock, keeps and battery case can be fitted correctly (Sections 3.3 - 3.5).
- Create a route for the cable through the door from the gearbox to the battery case (Section 3.1).
- Feed the loose end of the 3m cable through the door leaving the connector accessible on the lock side.
- Plug the connector on the 3m cable to the connector coming from the cable on the AV2-B gearbox.
- Fit the lock in the sash allowing for sufficient cable slack behind the gearbox (in case the lock needs to be removed later).
- Trim the 3m cable at the battery case end allowing for sufficient cable slack behind the battery case (in case the battery case needs to be removed later).
- Connect the 3 coloured wires of the 3m cable to the corresponding terminals on the control unit in the battery case (Section 3.6).



NOTE!

The batteries are not included!

You will need 4 x 1.5 V (AA) batteries. (Recommended: Alkaline batteries, min. 2600 mAh)

- Before the door is electrically operated, test to see if it operates mechanically!

Only for internal use:



NOTE!

The USB port in the battery case has no function

General
Information

1

Important
Information

2

Product
Description

3

Assembly

4

Operation /
Programming

5

Maintenance
and Care

6

Troubleshooting

7

Specifications

8

Notes

4 Operation / Programming

4.1 Operation

blueMatic AV2-B is a network-independent lock for single and double doors. It is most conveniently and easily operated via a remote control fob. It uses a complicated encryption so a key is not required. The door is opened from the outside via remote control (like the remote control on a car).

- The access control on wireless base works with a frequency of 2.4GHz.
- The maximum number of remote controls programmable is 10.
- The range is up to a maximum of 10m with a clear sight line.
- Security is a “rolling code” with over 18.4 billion billion combinations.
- If you push the remote control 32 times outside the range, you must push the remote control twice to re-synchronise the remote control and reader.
- When using a remote control for several doors - please check range to make sure remote control does not open several doors simultaneously)!

4.2 Locking and unlocking of blueMatic AV2-B

Locking:

- The door is automatically locked when the door is closed
- The hooks are automatically thrown thus, no un-authorized access from outside

Unlocking from outside:

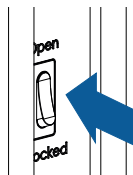
- Open from outside by remote control fob
- The door can be opened for up to 10 seconds by pushing the handle down, after 10 seconds, the door is blocked from outside again.

Unlocking from inside:

- Push the handle down

Snib convenience mode:

- Press the switch on the battery case to ‘Open’. This permanently engages the external handle giving access without the use of the remote control. For normal everyday use the switch must be on ‘Locked’.



NOTE!

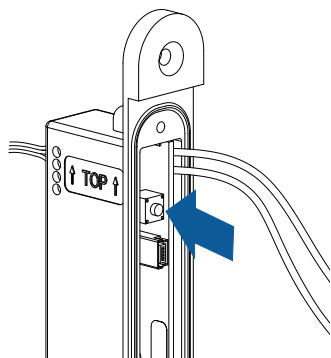
If low battery warnings are ignored, the door can be operated by key (if a Euro cylinder is fitted).

4.3 Programming

Inside the battery case there is a button to start the programming mode.

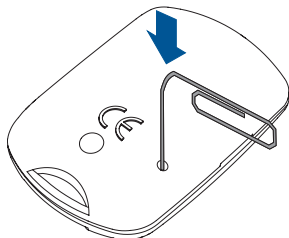
The button is easily accessible after removing the battery case cover.

Press the button for 3 seconds so that the programming mode is active. A beep confirms it is active.


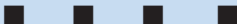




4.3.1 Programming the remote control

Use a pointed object (E.g. Paper clip) to push the button at the backside of the remote control (0.5 - 1 seconds). The remote control code will be sent and the reader programmed.



NOTE! Make sure the key is pressed until the specified tone is heard!

Activity	Beep 	Result
1) Push the programming button in the battery case for 3 seconds (See figure 3.3.1-1)	 Beeps for 8 seconds	Programming mode is activated for 8 seconds
2) Push the programming button on the remote control during programming mode (See figure 4.3.1-1)	 Beeps once	Remote control is programmed + programming mode is activated for 8 seconds more
3) Programming additional Remote control	 Beeps once	Remote control is programmed + programming mode is activated for 8 seconds more

After 8 seconds when the remote control is programmed, the beeping stops, the programming mode ends and the receiver is in its working mode.

General
Information

1
Important
Information

2
Product
Description

3
Assembly

4
Operation /
Programming

5
Maintenance
and Care

6
Troubleshooting

7
Specifications

8
Notes

4.3.2 Deleting / Un-programming Remote Controls



NOTE! Make sure the key is pressed until the specified tone is heard!

Deleting all remote controls

Activity	Beep	Result
1) Push the programming button at control unit for 3 seconds	 Beeps for 8 seconds	Programming mode activated
2) Push the programming button at control unit again for 3 seconds	 Beeps once	All remote control deleted + programming mode is activated for 8 seconds more

Subsequently, a new remote control needs programming.

General Information

1
Important Information

2
Product Description

3
Assembly

4
Operation / Programming

5
Maintenance and Care

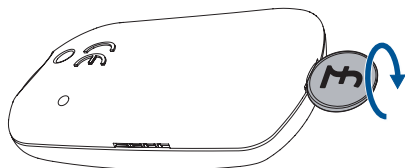
6
Troubleshooting

7
Specifications

8
Notes

4.3.3 Replacing the remote control battery

- When the red LED is off and the remote control is not functioning
→ Replace battery.
- Insert a small coin into the notch at the top of the device.

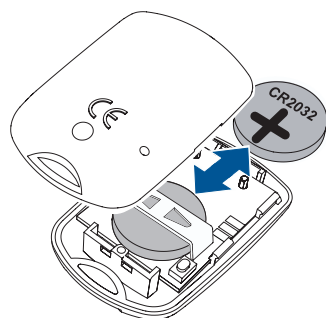


- Turn the coin diagonally and press the housing parts apart gently.
- Replace the battery
- Use only type CR 2032 batteries.



NOTE!

Make sure the battery is inserted in the correct way round.



CAUTION!

Keep the batteries out of reach of children!



ENVIRONMENTAL PROTECTION!

Be environmentally friendly and dispose of the batteries correctly!

4.4 Power of control unit

Power is from 4 x 1.5 V batteries (size AA), preferably alkaline batteries (Recommended: min. 2600 mAh).



NOTE!

Do not use rechargeable batteries *!

*Background: batteries have several voltage ratios and high alkaline batteries assure a lifetime of approximately 2 - 3 years.

General
Information

1

Important
Information

2

Product
Description

3

Assembly

4

Operation /
Programming

5

Maintenance
and Care

6

Troubleshooting

7

Specifications

8

Notes

4.4.1 Warning message “change battery”

If the batteries in the battery case go below a certain threshold voltage, each remote control beeps to notify the user that the batteries must be changed.

This warning message continues until new batteries are inserted and the threshold voltage is reached (see 4.4.2).



NOTE!

We recommend to change the batteries after the first warning, because the electrical function is still guaranteed!

If the battery in the remote control is low, when the button is pushed it will beep 3 times. This sequence will be repeated 2 times, 5 seconds after the previous sequence.

Activity	Beep	Result
1) Push remote control button	3 beeps	“Please replace remote control battery”



NOTE!

We recommend to change the remote control battery after the first warning

4.4.2 Warning “flat battery”

When a certain voltage is reached, the unlocking function is no longer controlled and there is a beeping sequence indicating the batteries are (almost) flat.

This beeping sequence continues until the batteries are replaced, or the batteries are too weak.

This sequence consists of 10 beeps, repeated every 5 seconds.

Activity	Beep	Result
1) Push remote control button	10 beeps	“Please change batteries immediately”



CAUTION! When the batteries are flat, no electrical function (releasing) is possible!

General Information

1

Important Information

2

Product Description

3

Assembly

4

Operation / Programming

5

Maintenance and Care

6

Troubleshooting

7

Specifications

8

Notes

5 Maintenance and services

- Tighten fixing screws on a regular basis and check for wear on the control unit. Replace any parts that are worn out or broken.
- The mechanical locking function and the ease in which the door locks should be checked regularly (at least once per quarter).
- At least once a year, or even more depending on the usage, examine all technical and mechanical functions and use Petroleum jelly to grease all moving parts that are accessible.
- To ensure corrosion of the fittings does not happen, take care, using only neutral cleaning products that do not contain abrasives.

General
Information

1
Important
Information

2
Product
Description

3
Assembly

4
Operation /
Programming

5
Maintenance
and Care

6
Troubleshooting

7
Specifications

8
Notes

6 Troubleshooting

Failure	Cause	Solution
Pushing the remote control button does not unlock the handle	<ul style="list-style-type: none"> Pushing the outside handle at the same time as pushing the remote control button 	<ul style="list-style-type: none"> Wait about 1 sec and try again
	<ul style="list-style-type: none"> Flat battery in the remote control 	<ul style="list-style-type: none"> See chapter 4.3.3
	<ul style="list-style-type: none"> Flat battery in the control unit 	<ul style="list-style-type: none"> See chapter 4.4.2
	<ul style="list-style-type: none"> Remote control was pushed more than 32 times outside the range 	<ul style="list-style-type: none"> Push the remote control button twice in range to re synchronise the remote control and reader.
	<ul style="list-style-type: none"> Connector is not plugged in and / or cables damaged 	<ul style="list-style-type: none"> Check plug / cable
	<ul style="list-style-type: none"> Door has been locked by key 	<ul style="list-style-type: none"> Unlock by key
	<ul style="list-style-type: none"> Handle pushed at the same time as remote control button a) Handle pushed then remote control button pushed b) remote control button pushed then handle pushed 	<ul style="list-style-type: none"> Wait 1 second then push remote control button again followed by the handle Wait 10 seconds then push remote control button again followed by the handle
The remote control LED does not flash	<ul style="list-style-type: none"> Remote control battery is flat 	<ul style="list-style-type: none"> See chapter 4.3.3

Failure	Cause	Solution
It is not possible to programme the remote control	<ul style="list-style-type: none"> Max quantity of remote controls is reached 	<ul style="list-style-type: none"> Max of 10 of remote controls is possible
	<ul style="list-style-type: none"> Operating error 	<ul style="list-style-type: none"> See chapter 4.3.1
	<ul style="list-style-type: none"> The wrong button on the remote control is being pushed 	<ul style="list-style-type: none"> See chapter 4.3.1
Locking / Unlocking is difficult	<ul style="list-style-type: none"> Sash to frame gap is incorrect 	<ul style="list-style-type: none"> Adjust sash to frame
	<ul style="list-style-type: none"> The sash is not plumb to the frame 	<ul style="list-style-type: none"> Adjust keeps / hinges
	<ul style="list-style-type: none"> Incorrect installation 	

7 Technical data

Voltage:	6 V DC (4 x 1,5 V AA Cells) Recommendation: Alkaline Batteries, min. 2600 mAh
Function duration (with 1 set of high quality Alkaline Batteries):	At least 2 years, or 10.000 cycles
Ambient temperature:	- 10 to + 60°C
Relative Humidity:	Max. 95%
Location:	Doors (Timber, Aluminium, PVC)
Radio frequency:	2.4 GHz
Number of programmable remote Controls:	Max. 10
Range:	Max. 10m (depending on line of sight)

7.1 Remote control

Number of functions:	1 Channel
Frequency:	2.4 GHz
Number of combination codes:	2 - 64 ("Rolling Code")
Power supply:	1 x 3V CR 2032 Batteries
Actuation control:	LED
Operating temperature:	- 20 to + 60°C
Range:	10m
Dimensions:	55 x 36 x 16mm
Weight:	17g (including Batteries)

General Information

1

Important Information

2

Product Description

3

Assembly

4

Operation / Programming

5

Maintenance and Care

6

Troubleshooting

7

Specifications

8

Notes

Winkhaus UK Ltd

2950 Kettering Parkway, Kettering,
Northants NN15 6XZ
Tel: +44 (0)1536 316000
Fax: +44 (0)1536 416516

www.winkhaus.co.uk
email: enquiries@winkhaus.co.uk