

# Installation manual

## Drives and control units for roller shutters and sun predection systems

Interactive full version

BECKER
for you. forever.

# WHERE DO YOU WANT TO GO?

## Roller shutters

## Sun protection

## Radio technology

## Important safety instructions

# Roller shutters

# Sun protection

# Radio technology

# PREFACE

## Using the installation manual

The installation manual describes the commissioning of Becker tubular motors for the roller shutter and sun predection sector, as well as the commissioning of individual Becker control units.

This manual is intended for installers trained by Becker-Drive GmbH.

Be sure to observe the safety instructions for the installation and commissioning of tubular motors and control units on pages 218–219 at the end of the installer manual. Failure to comply may result in serious injury.

The installer manual does not replace the installation and operating instructions supplied with the Becker products.

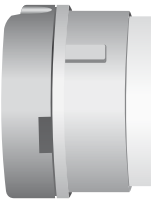
For operation of the system or maintenance, the information in the installer manual as well as the installation and operating instructions supplied with the product must be observed. Becker-Drive accepts no liability for damages caused by improper handling.

Subject to technical modifications.

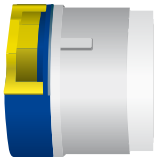
# GENERAL

## Roller shutter drive types

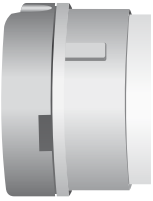
**Type M:**
Mechanical limit switching



**Type R(+):**
(1997-2009)
Electronic limit switching; sensitive obstacle detection



**Type Pico R+:**
(1999-2007)
Electronic limit switching; lower point to upper stop; for mini tube



**Type RF(+):**
(2000-2002)
Radio receiver 40MHz/ AM; sensitive obstacle detection

**Type PRF+:**
(from 2003)
Centronic radio receiver; point to point programming

**Type PR+:**
(from 2005)
Electronic limit switching; point to point programming

**Type RP(+):**
(from 2009)
Electronic limit switching; point to point programming; sensitive obstacle detection

**Type PROF+:**
(from 2009)
Centronic radio receiver; point to point programming; sensitive obstacle detection

**Type RO(+):**
(from 2010)
Electronic limit switching; sensitive obstacle detection

**Type B01:**
(from 2012)
B-Tronic radio receiver; point to point programming; sensitive obstacle detection

# Roller shutter drive types

**Type C01:**
(from 2013)
Centronic radio receiver; point to point programming; sensitive obstacle detection; reversal

**Type E01:**
(from 2014)
Electronic limit switching; point to point programming; sensitive obstacle detection; reversal

**Type E03:**
(from 2016)
Electronic limit switching; point to point programming; sensitive obstacle detection

**Type E02:**
(from 2016)
Electronic limit switching; sensitive obstacle detection; (functions same as RO+)

**Type E14:**
(from 2017)
Electronic limit switching; point to point programming

**Type EVO 20:**
(from 2018)
Speed control; point to point programming, sensitive obstacle detection; reversal

**Type N01:**
(from 2020)
EnOcean radio receiver; point to point programming, sensitive obstacle detection; reversal

**Type D01:**
(from 2020)
DECT radio receiver; point to point programming, sensitive obstacle detection; reversal

**Type C01 PLUS:**
(from 2021)
Centronic and CentronicPlus radio receiver; point to point programming, sensitive obstacle detection; reversal

**Type EVO PLUS BT:**
(from 2021)
Speed control; Centronic and CentronicPlus radio receiver; point to point programming, sensitive obstacle detection; reversal

# GENERAL

## Which type of roller shutter drive has been installed?

The limit positions of the latest generation of drives with electronic limit switching can be deleted and reset via the existing operator control. To do this, proceed as follows:

First, run the drive for 6 seconds in the UP or DOWN direction.

Then perform the travel movements described alongside to erase the end positions. If the drive clicks twice afterward, it is one of the types RO+, E01, E02, E03, or E14. If the drive performs an up-and-down movement instead of clicking, it is the EVO 20 R type.

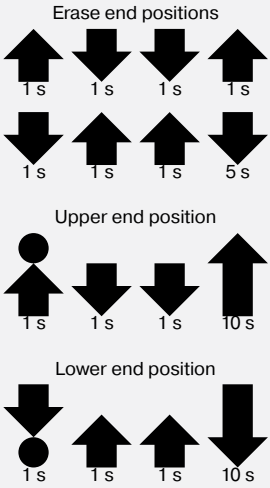
Then program the upper and lower end positions again using the sequence described alongside. The drive confirms each programming step with a single click.

If the drive does not confirm with a single click, the installed type is E02 or RO+.

If the drive stops sensitively when blocked in the closing direction and reverses, it is the E01 type.

If the drive stops without reversing, it is the E03 type.

If the drive responds insensitively to the blockage, it is the E14 type.



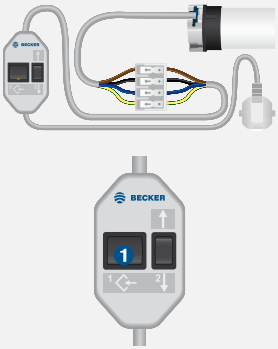

All other drives can be identified using the adjustment set. The wires of the drive connection cable are connected to the wires of the adjustment set with matching colors.

Press the programming button ❶ for 2 seconds.

If the drive produces a loud noise and the tube does not turn, the drive is a type M. Replace the programming unit immediately with one that is suitable for an M drive.

If the drive clicks twice, the drive is a type R(+) or PicoR+.

If the drive clicks once or shows no reaction, it is one of the types RP(+), RO+, PR+, RF(+), PRF+, PROF+, or B01.



Drive the motor about 3 revolutions and press the programming button again for 2 seconds (a second click indicates that a second end position has now been set). Then drive the motor about 1.5 revolutions in the opposite direction and perform the erase sequence:

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷ d
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive continues to click only once after pressing the programming button, drives with an integrated radio receiver of type N01, type DECT (from 2020), or type C01 PLUS (from 2021) are installed. If the drive shows no reaction, drives with an integrated radio receiver of type RF(+) (up to 2002), type PRF+ (2003–2009), type PROF+ (from 2009), C01 (from 2013), or type B01 (from 2012) with bidirectional radio are installed. The drive type can be identified by pairing the corresponding hand transmitter.

If the drive clicks twice, the installed types are RP(+), RO(+), or PR+.

Press the programming button again ❶.

If the drive clicks twice again, it is an RO(+) drive (from 2010 onwards).

If the drive clicks once, it is a RP(+) or PR+ drive. You have now programmed a limit position. Turn the drive 3 revolutions from the limit position.

If the drive runs without stopping, it is a PR+ drive (from 2003 onwards).

If the drive shows a stop-and-go movement, it is the RP(+) type (from 2009).


# DRIVE TYPE M (M04)

## Type plate

❶ Type designation: e.g. R8-17-M04

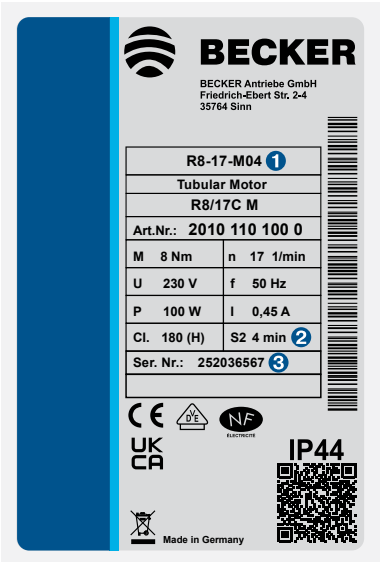
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 8-17 | Rated torque-output speed |
| M | Mechanical limit switching |
| 04 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 252036567

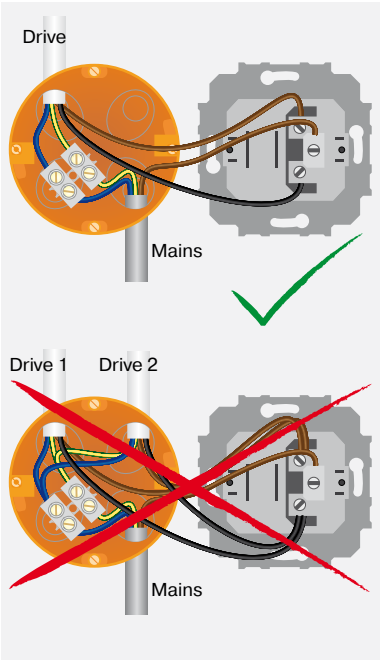
| | |
|---|---|
| 25 | Year 2025 |
| 20 | Calendar week |
| 36567 | Consecutive number |




## Connection

Drives with mechanical limit switching must not be connected in parallel to a control point. Discharge of the capacitor could damage the limit switches. This would cause the limit positions to be “overrun”.

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



# Information

Before installation, make sure that the drive adapter safety catch has engaged (is screwed tight).

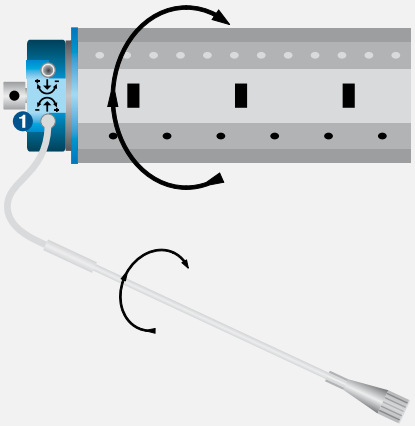
Mark the position of the drive adapter on the tube and drill a 4 mm hole at this point.

Secure the drive adapter against axial displacement in the tube using a screw or a rivet.

The arrow on the drive head indicates the direction of redation at ❶. The limit position is set on the corresponding adjuster, for example, with the flexible setting tool (item no. 4933 200 002 0).

Turning in the + direction increases the range; turning in the - direction reduces it.

The barrel must not be turned more than 38 revolutions in one direction.

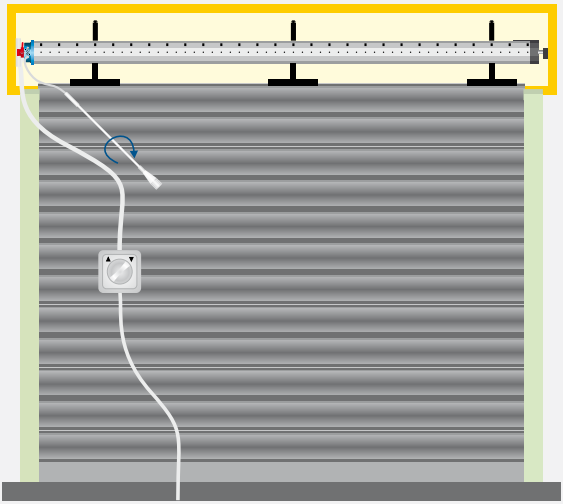


# DRIVE TYPE M (M04)

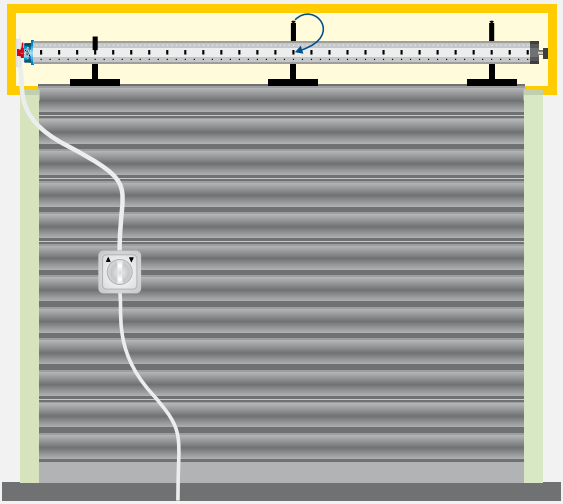
## Setting the limit positions

### 1. Setting the lower limit position

After the tube is installed, run the drive downwards until it switches off automatically. Using the flexible setting tool, turn the corresponding adjuster in the + direction (clockwise) until the tube is in a suitable position for connecting the roller shutter to the tube.



Switch off the DOWN direction and connect the roller shutters to the tube (mount the springs).

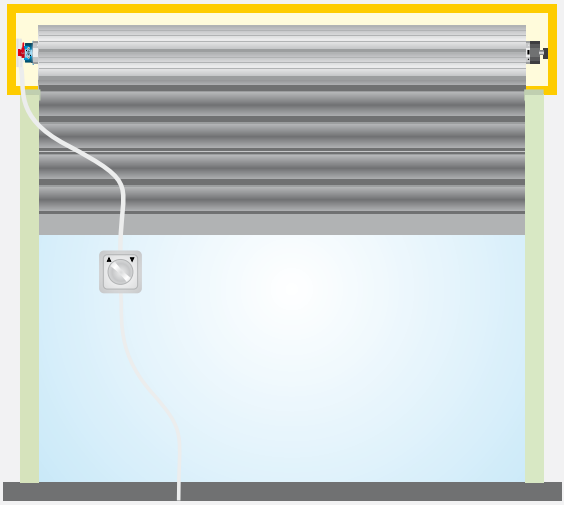


## 2. Setting the upper limit position

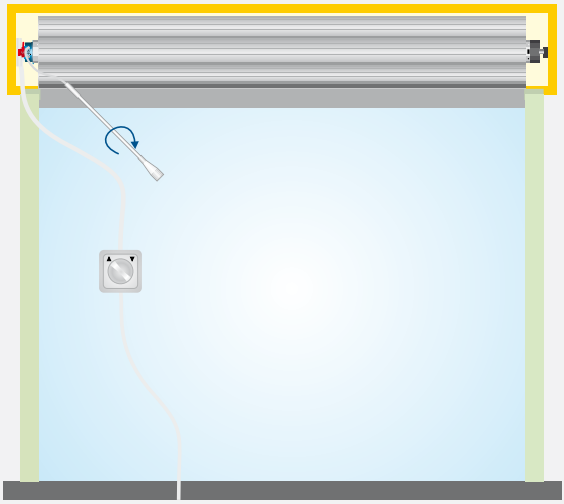
Run the roller shutter upwards until the drive switches off automatically via the limit switch for the upper limit position.

Note: When delivered (from the factory), the limit switch range is preset to 2 revolutions in the UP and DOWN directions.

While the shutter is opening, the drive switches off after 4-5 revolutions.



Turn the corresponding adjuster in the + direction (clockwise) until the roller shutter is in the upper limit position.



# DRIVE TYPE M17

## Type plate

❶ Type designation: e.g. R4-17-M17

| | |
|---|---|
| R | Size of drive (tube diameter) R - 45mm |
| 4-17 | Rated torque-output speed |
| M | Mechanical limit switching |
| 17 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

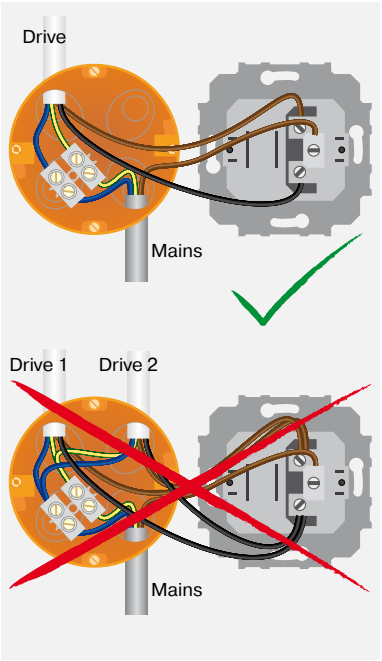
❸ Serial number: e.g. 250560520

| | |
|---|---|
| 25 | Year 2025 |
| 05 | Calendar week |
| 60520 | Consecutive number |


## Connection

Drives with mechanical limit switching must not be connected in parallel to a control point. Discharge of the capacitor could damage the microswitches.

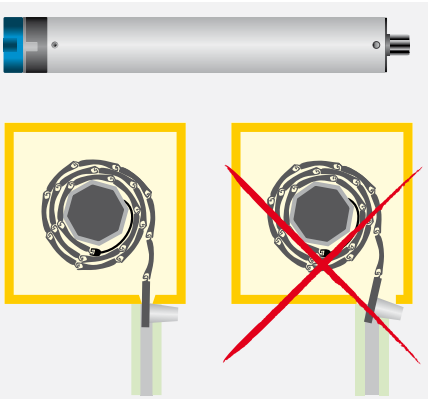
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



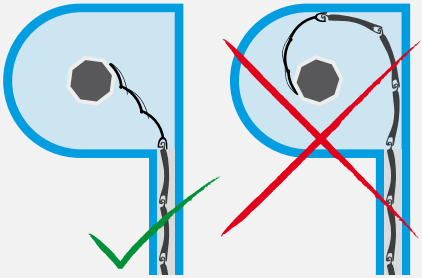
# Information

M17 drives with mechanical limit switching detect both limit positions automatically.

In order for the drive to detect the upper limit position, a defined stop must be present (angled strip or mechanical stop).



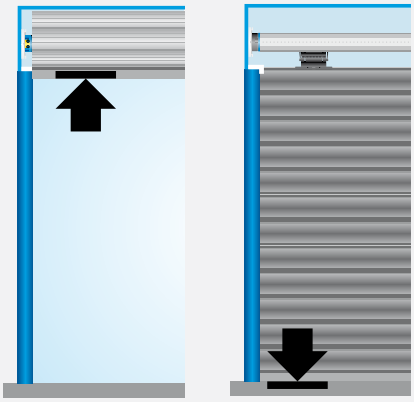
To detect the lower limit position, fixed shaft connectors must be installed. In this case, the fixed shaft connectors must snap into place and the roller shutters must be pressing down on the window ledge.



The upper end position is automatically detected by the increase in torque when the stoppers, angle bar, or concealed stops are reached.

The lower limit position is detected automatically due to the increase in torque when the fixed shaft connector snaps into place.

No installation runs or programming operations are required.



# DRIVE TYPE PICOR+

## Type plate

❶ Type designation: e.g. P 9/16 R+

| | |
|---|---|
| P | Size of drive (tube diameter) P - 35mm |
| 9/16 | Rated torque-output speed |
| R | Electronic limit switching for roller shutters |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

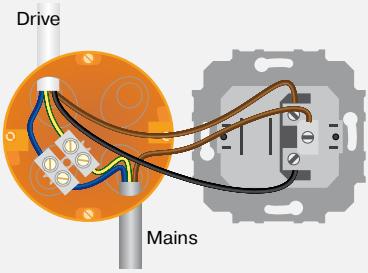
❸ Serial number: e.g. 03 28 56789

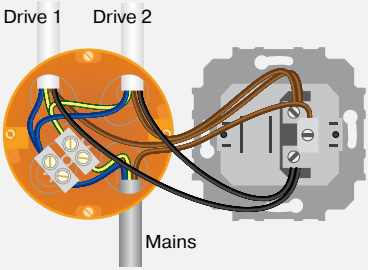
| | |
|---|---|
| 03 | Year 2003 |
| 28 | Calendar week |
| 56789 | Consecutive number |


## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.

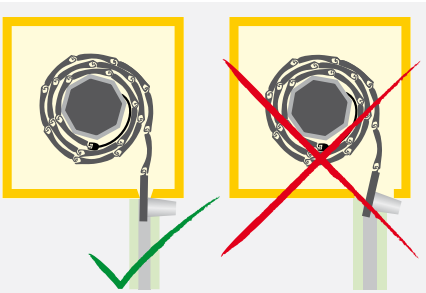


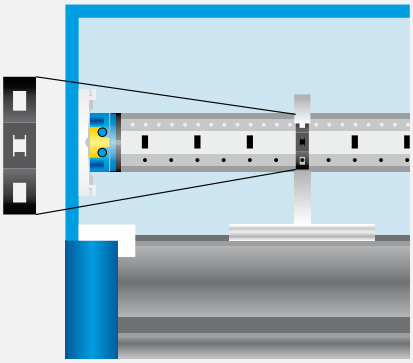
# Information

PicoR+ drives with electronic limit switching detect and program the upper limit position automatically.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



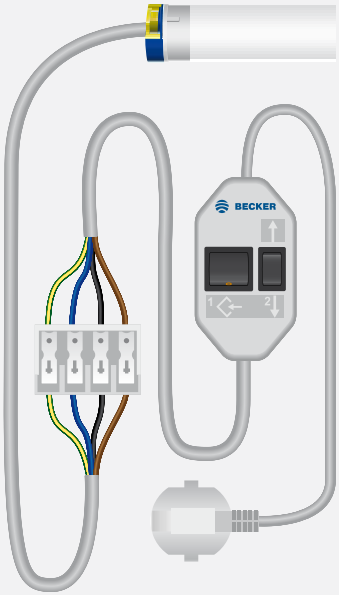
The springs are attached to the mini tube using tube clamps. This stops the springs from rubbing against the drive.



The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit.

Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



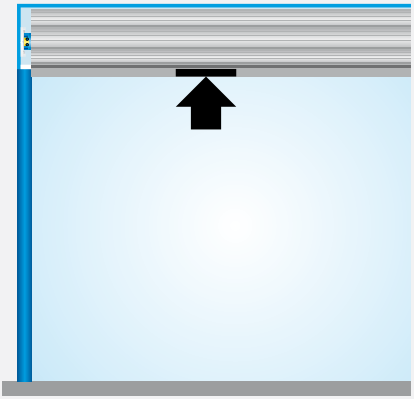
# DRIVE TYPE PICOR+

## Programming the limit positions

### 1. Programming the upper limit position

First, run the roller shutter towards the upper limit position until the drive switches off automatically.

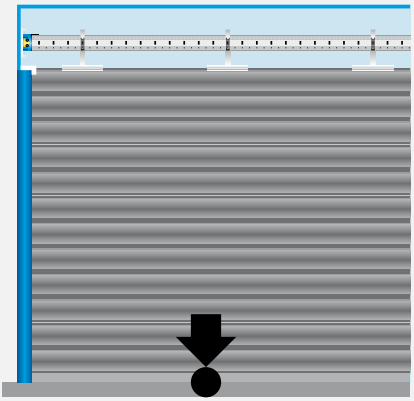
Note: For safety reasons, the drive uses less force when opening the shutter for the first time (installation run). If the force is borderline, the drive may stop before reaching the upper limit position. After resetting (deletion of the limit positions), the drive is restarted until it reaches the upper limit position.



### 2. Programming the lower limit position

Then run the roller shutter to the desired lower limit position.

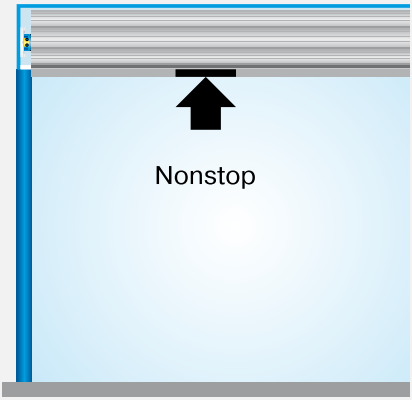
(If anti-lifting devices or rigid safety springs are installed, run the roller shutter downwards until the drive stops automatically.)



## 3. Programming the travelling distance

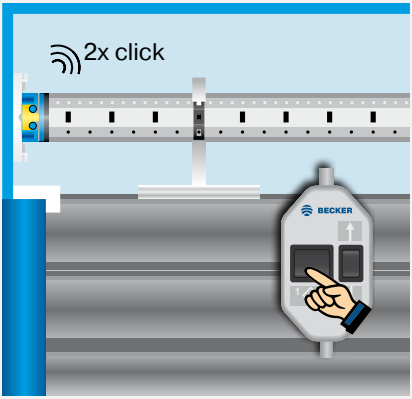
Run the roller shutter towards the upper limit position again, without stopping, until the drive switches off automatically.

This time, the drive learns the distance between the limit positions and automatically concludes the programming phase.




## 4. Deleting the limit positions using the programming unit

Press the programming button until the drive clicks twice.



# DRIVE TYPE R(+)

## Type plate

❶ Type designation: e.g. R 8/17 R+

| | |
|---|---|
| R | Size of drive (tube diameter) R - 45mm |
| 8/17 | Rated torque-output speed |
| R | Electronic limit switching for roller shutters |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

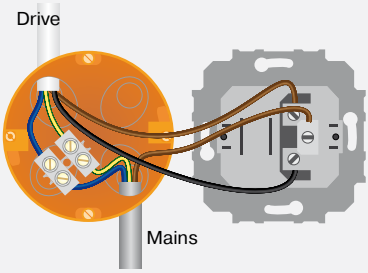
❸ Serial number: e.g. 05 48 50542

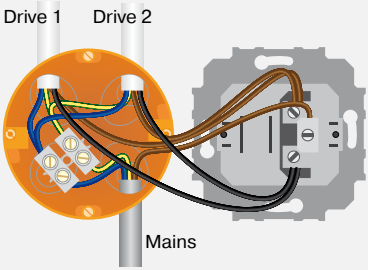
| | |
|---|---|
| 05 | Year 2005 |
| 48 | Calendar week |
| 50542 | Consecutive number |


## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

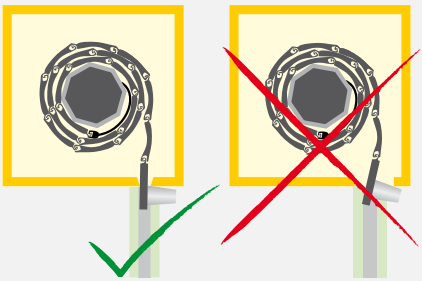
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



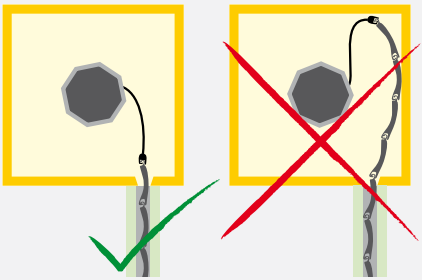
R(+) drives with electronic limit switching detect and program both limit positions automatically.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs type R

No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion. The springs should be mounted 30 cm apart from one another.

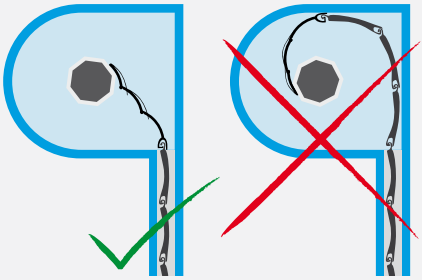


## Installation with lift-up predection type R+

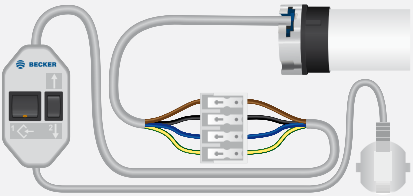
The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit.



Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



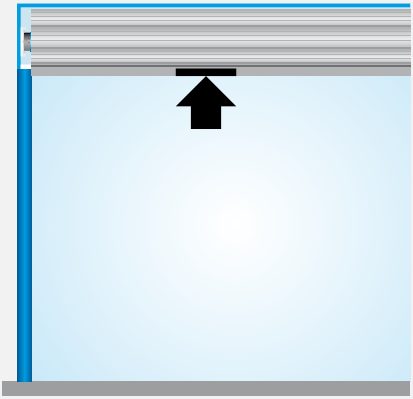
# DRIVE TYPE R(+)

## Programming the limit positions when installing with springs

### 1. Programming the upper limit position

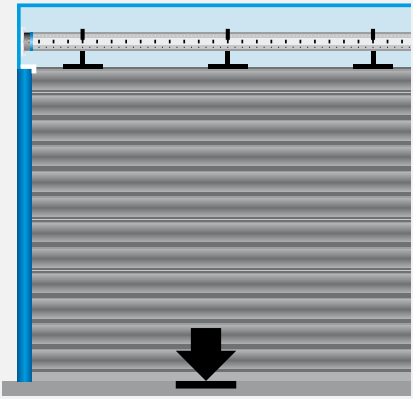
First, run the roller shutter towards the upper limit position until the drive switches off automatically.

Note: For safety reasons, the drive uses less force when opening the shutter for the first time (installation run). If the force is borderline, the drive may stop before reaching the upper limit position. After resetting (deletion of the limit positions), the drive is restarted until it reaches the upper limit position.



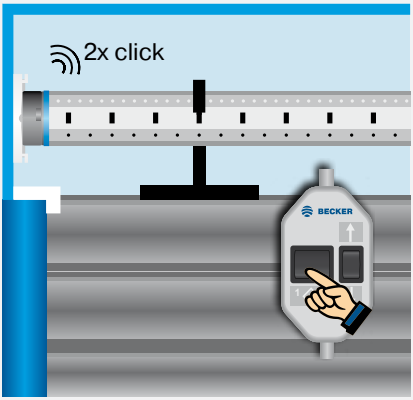
### 2. Programming the lower limit position

Then run the roller shutter towards the lower limit position until the drive switches off automatically.



### 3. Deleting the limit positions using the programming unit

Press the programming button until the drive clicks twice.

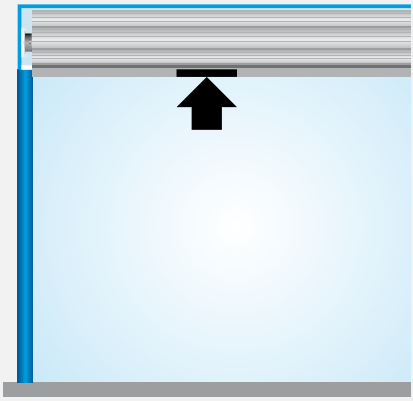


# Programming the limit position when installing with anti-lifting devices

## 1. Programming the upper limit position

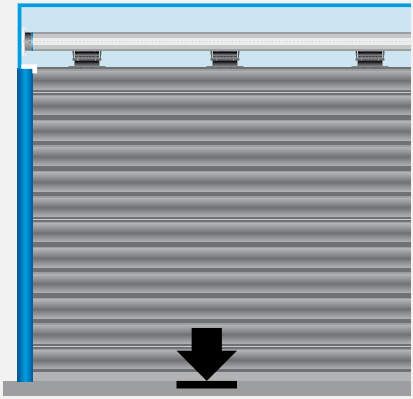
First, run the roller shutter towards the upper limit position until the drive switches off automatically.

Note: For safety reasons, the drive uses less force when opening the shutter for the first time (installation run). If the force is borderline, the drive may stop before reaching the upper limit position. After resetting (deletion of the limit positions), the drive is restarted until it reaches the upper limit position.



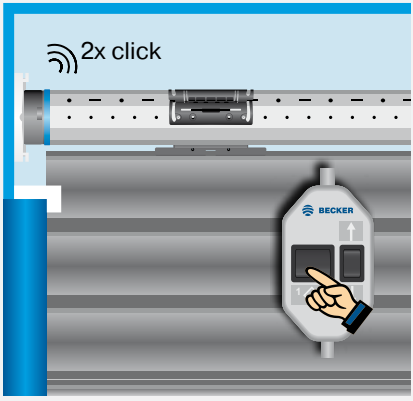
## 2. Programming the lower limit position

Then run the roller shutter towards the lower limit position until the drive switches off automatically.



## 3. Deleting the limit positions using the programming unit

Press the programming button until the drive clicks twice.



# DRIVE TYPE RO+ (E02)

## Type plate

❶ Type designation: e.g. R 8/17RO+

| | |
|---|---|
| R | Size of drive (tube diameter) R - 45mm |
| 8/17 | Rated torque-output speed |
| R | Electronic limit switching for roller shutters |
| O | Sensitive obstacle detection |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

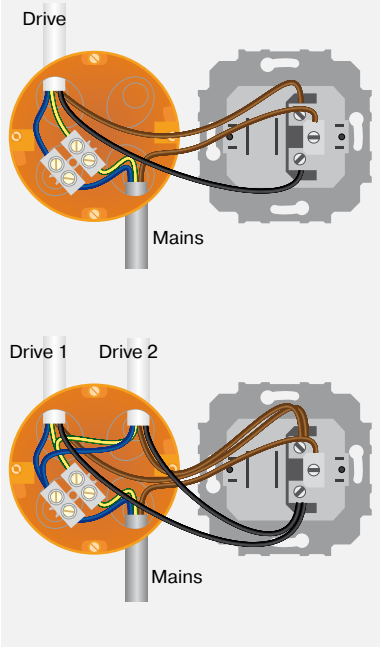
❸ Serial number: e.g. 12 43 60105

| | |
|---|---|
| 12 | Year 2012 |
| 43 | Calendar week |
| 60105 | Consecutive number |


## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

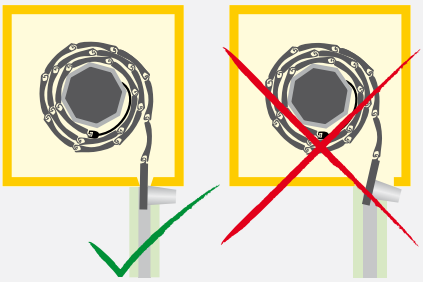
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



# Information

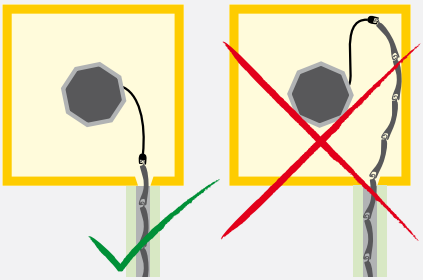
RO+ (E02) drives with electronic limit switching detect and program both limit positions automatically.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs

No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion. The springs should be mounted 30 cm apart from one another.

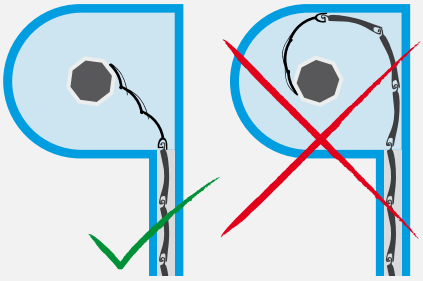


## Installation with anti-lifting devices

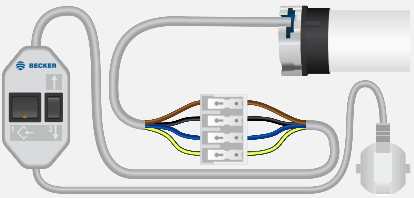
The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit. Alternatively, the limit positions can be deleted using the available operator control by running through a deletion sequence.



Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



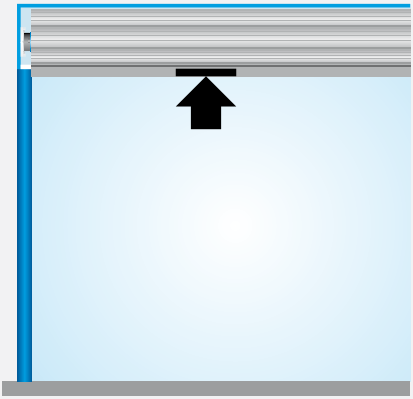
# DRIVE TYPE RO+ (E02)

## Setting the limit positions using the programming unit

### 1. Programming the upper limit position

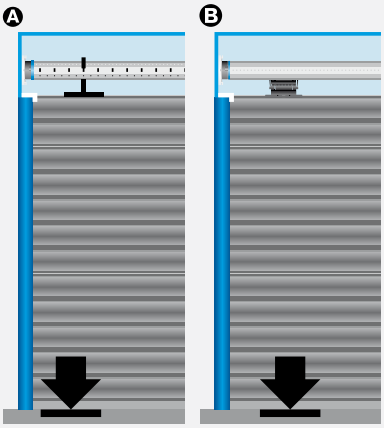
First, run the roller shutter towards the upper limit position until the drive switches off automatically.

Note: For safety reasons, the drive uses less force when opening the shutter for the first time (installation run). If the force is borderline, the drive may stop before reaching the upper limit position. After reversing a short way, the drive is started again until it reaches the upper limit position.



### 2. Programming the lower limit position

Run the roller shutter downwards until the drive switches off automatically due to the back-pressure of the springs Ⓐ or blocking by the anti-lifting device Ⓑ.



## 3. Deleting the limit positions using the programming unit

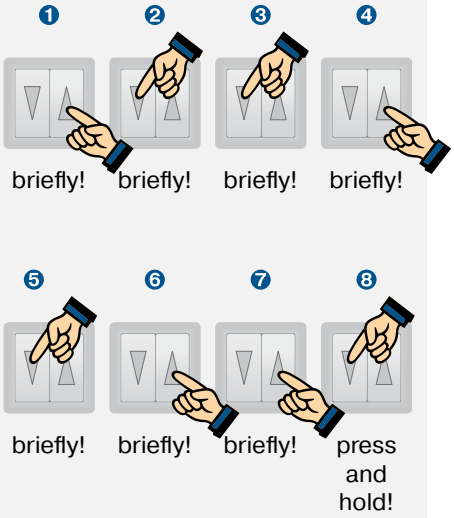
- Press and hold the programming button ❶
- Press and hold the ⬇ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.


## 4. Deleting the limit positions using any operator control

Run the drive for 6 seconds in the UP or DOWN direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite rapidly until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be executed after every short drive command.



# DRIVE TYPE RP(+)

## Type plate

❶ Type designation: e.g. R 8/17RP+

| | |
|---|---|
| R | Size of drive (tube diameter) R - 45mm |
| 8/17 | Rated torque-output speed |
| P | Point to point programming |
| R | Electronic limit switching for roller shutters |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

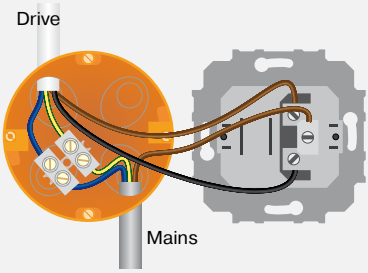
❸ Serial number: e.g. 09 01 102030

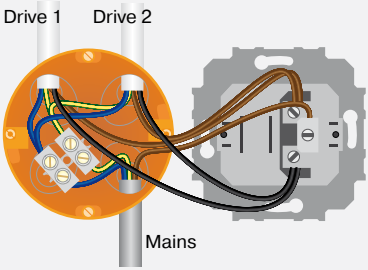
| | |
|---|---|
| 09 | Year 2009 |
| 01 | Calendar week |
| 102030 | Consecutive number |


## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

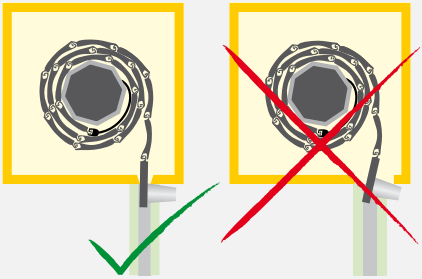
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



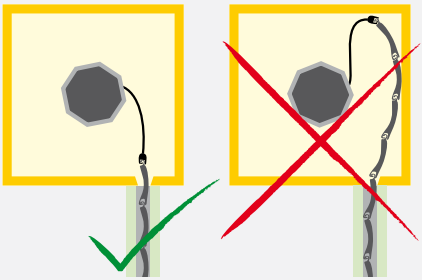
RP(+) drives with electronic limit switching detect and program both limit positions automatically. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position automatically, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs - Type RP

No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion.The springs should be mounted 30 cm apart from one another.

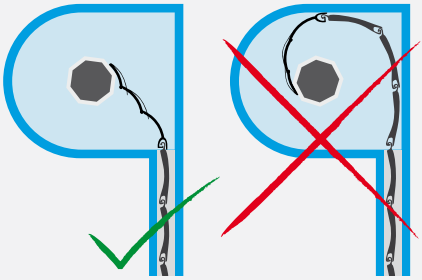


## Installation with anti-lifting devices - Type RP+

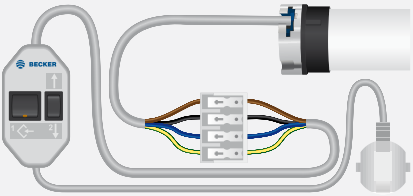
The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit.



Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



# DRIVE TYPE RP(+)

## Setting the limit positions using the programming unit

### 1. Programming the upper limit position

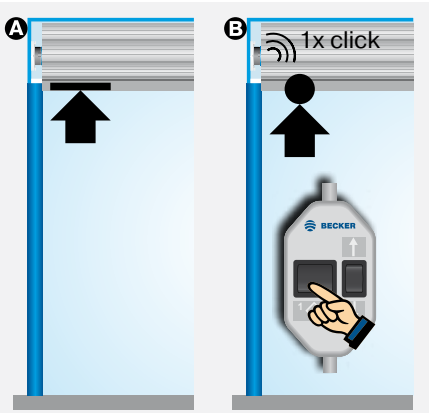
Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

**Ⓐ To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

**Ⓑ To upper point**

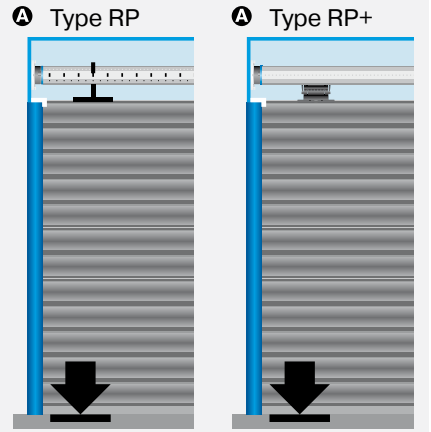
Travel the roller shutters to the desired upper position and press the programming button on the programming unit until the drive clicks once.




### 2. Programming the lower limit position

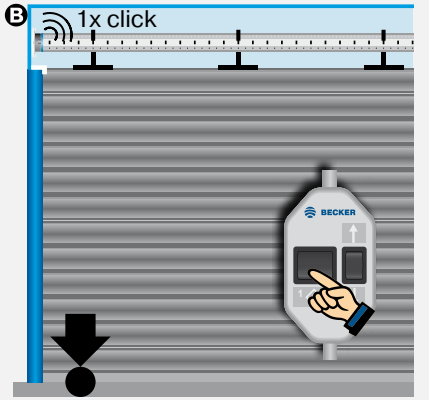
**Ⓐ To lower stop**

Run the roller shutter downwards until the drive switches off automatically due to the back-pressure of the springs (RP) or blocking by the anti-lifting device (RP+).




**Ⓑ To lower point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.



## 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

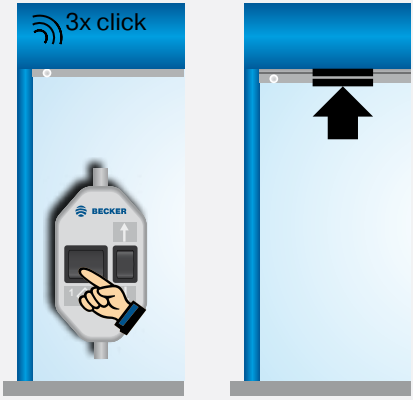
Note: For safety reasons, the drive uses less force when opening the shutter for the first time (installation run). If the force is borderline, the drive may stop before reaching the upper limit position. After reversing a short way, the drive is started again until it reaches the upper limit position.

The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.


## 4. Activating the cyclic shading solution length adjustment (optional)

Press the programming button on the programming unit for 10 seconds to activate the cyclic shading solution length adjustment. The drive confirms the action by clicking three times.

After the programming is completed (3 complete opening and closing movements), the roller shutters stop shortly before reaching the upper limit position and only runs up to the stop every 32nd time (correction run).



# DRIVE TYPE E03

## Type plate

❶ Type designation: e.g. R8-E03

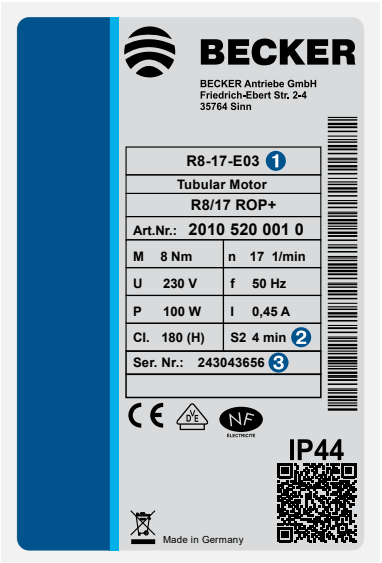
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 03 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 243043656

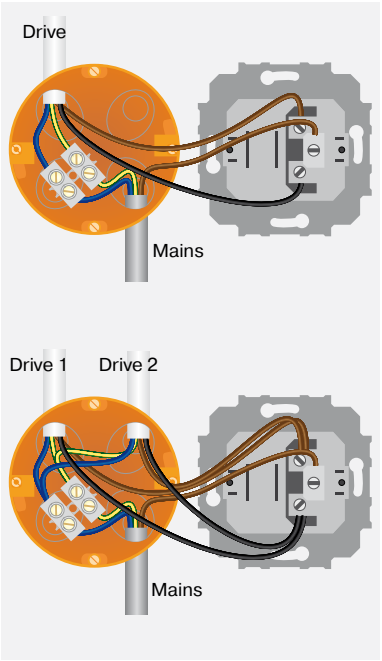
| | |
|---|---|
| 24 | Year 2024 |
| 30 | Calendar week |
| 43656 | Consecutive number |




## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

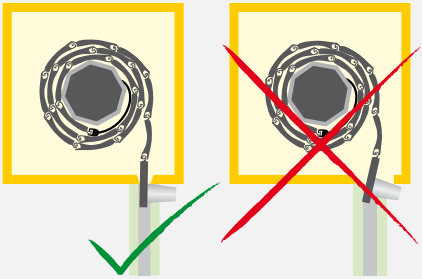
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



# Information

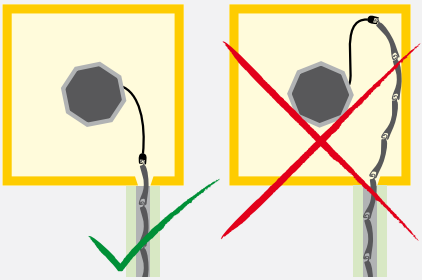
E03 drives with electronic limit switching detect and program both limit positions automatically. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position automatically, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs

No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion. The springs should be mounted 30 cm apart from one another.

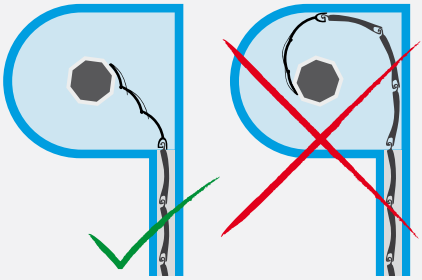


## Installation with anti-lifting devices

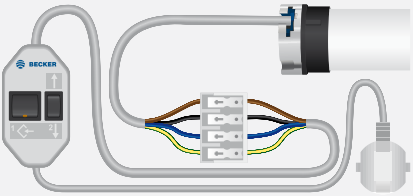
The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit.



Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



# DRIVE TYPE E03

## Setting the limit positions using the programming unit

### 1. Programming the upper limit position

Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Travel the roller shutters to the desired upper position and press the programming button on the programming unit until the drive clicks once.

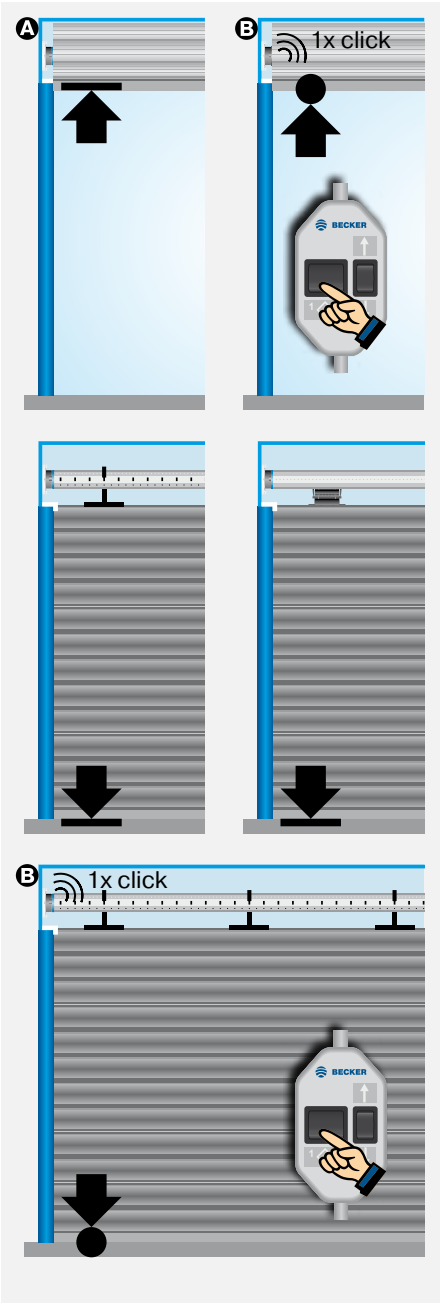
### 2. Programming the lower limit position

Ⓐ **To lower stop**

Run the roller shutter downwards until the drive switches off automatically due to the back-pressure of the springs or blocking by the anti-lifting device.

Ⓑ **To lower point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.



## 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

Note: For safety reasons, the drive uses less force when opening the shutter for the first time (installation run). If the force is borderline, the drive may stop before reaching the upper limit position. After reversing a short way, the drive is started again until it reaches the upper limit position.

The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.


## 4. Activating the anti-freeze mechanism at the top (optional)

Run the roller shutter towards the upper limit stop and keep the UP button pressed.

Also press the programming button until the drive clicks three times.

You can also activate the upper anti-freeze mechanism by pressing the programming button for 10 seconds with the roller shutter in any position. The drive confirms the action by clicking three times.

After the programming is completed (3 complete opening and closing movements), the roller shutters stop shortly before reaching the upper limit position and only runs up to the stop every 32nd time (correction run).

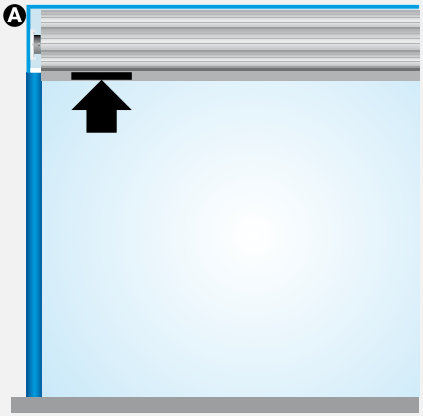
# DRIVE TYPE E03

## Setting the limit positions using the operator control

### 1. Setting the upper limit position using the operator control

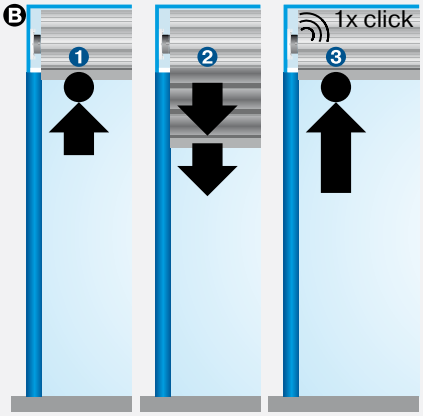
Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.




Ⓑ **To upper point**

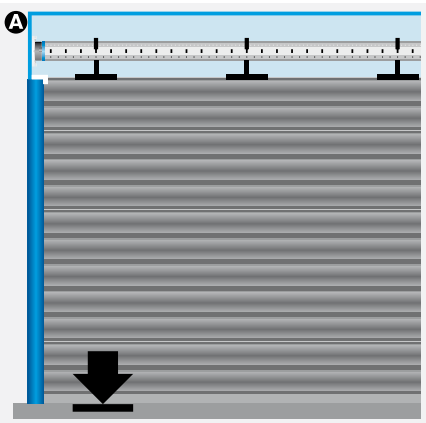
Run the roller shutter to the upper limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back up until the drive stops automatically and clicks once ❸.



## 2. Setting the lower limit position using the operator control

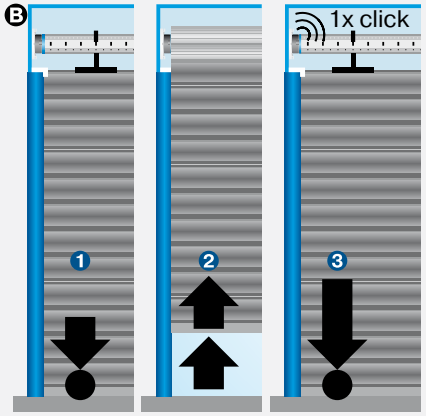
Ⓐ **To lower stop**

Run the roller shutter towards the lower stop until the drive stops automatically.




Ⓑ **To lower point**

Run the roller shutter to the lower limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back down until the drive stops automatically and clicks once ❸.

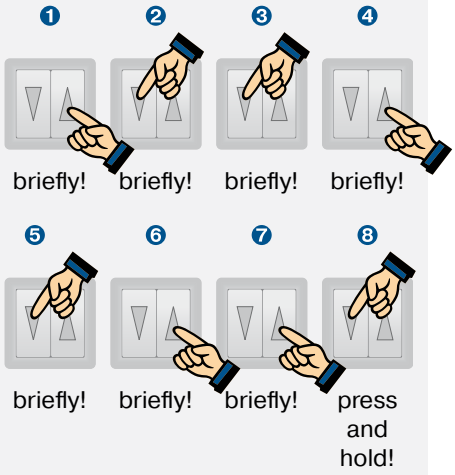



## 3. Deleting the limit positions using any operator control

Run the drive for 6 seconds in the UP or DOWN direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be executed after every short drive command.



# DRIVE TYPE E14

## Type plate

❶ Type designation: e.g. R8-17-E14

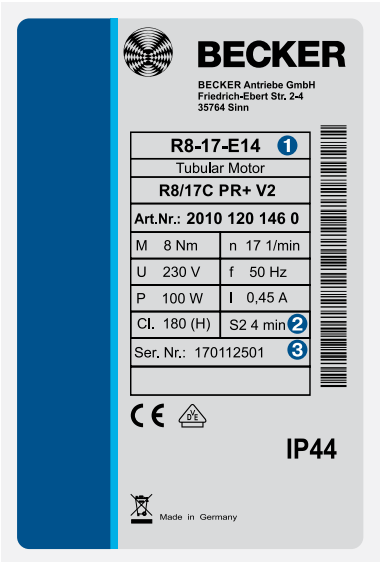
| | |
|---|---|
| R | Size of drive (tube diameter) R - 45mm |
| 8-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 14 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 170112501

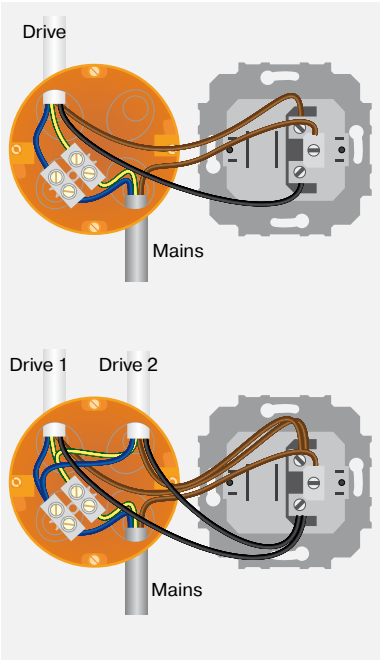
| | |
|---|---|
| 17 | Year 2017 |
| 01 | Calendar week |
| 12501 | Consecutive number |




## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

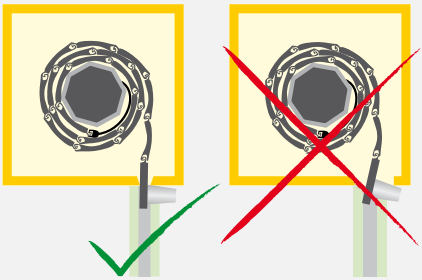
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



# Information

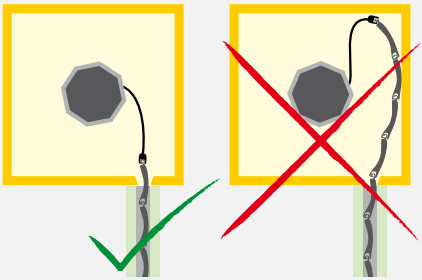
E14 drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs

No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion. The springs should be mounted 30 cm apart from one another.

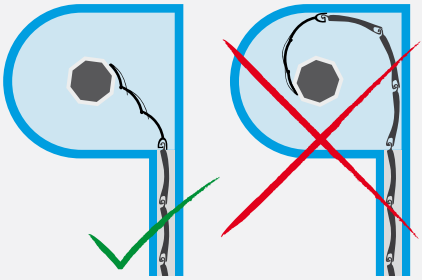


## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit.



## Setting the limit positions

The limit positions can be set in 2 different ways:

❶. Programming unit

❷. Operator control unit

# DRIVE TYPE E14

## Setting the limit positions using the programming unit

### 1. Setting the upper limit position using the programming unit

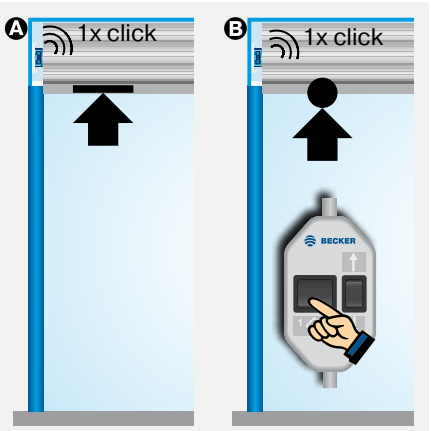
Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.



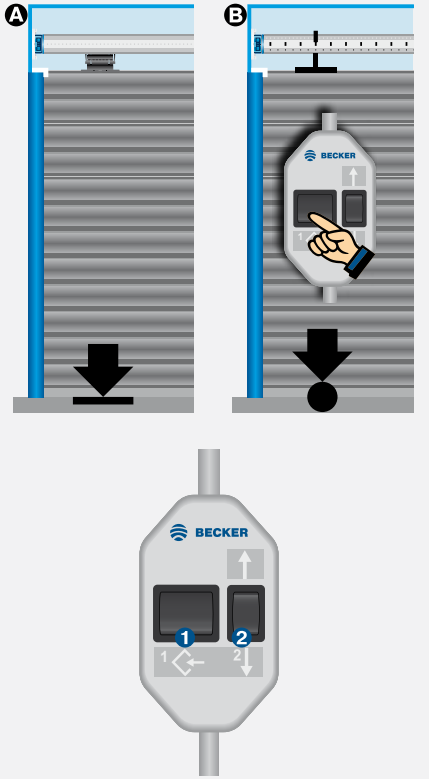

### 2. Setting the lower limit position using the programming unit

Ⓐ **To lower stop**

When using anti-lifting devices (fixed mountings), run the roller shutter downwards until the drive stops automatically.

Ⓑ **To lower point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.




### 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.

# Setting the limit positions using the operator control

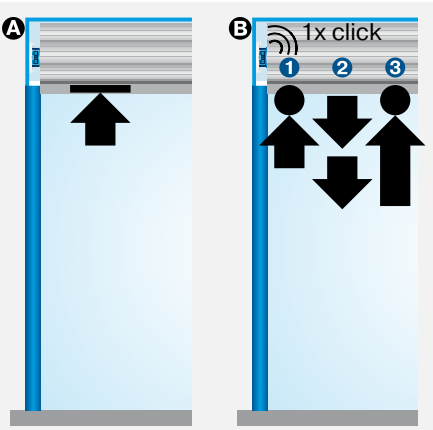
## 1. Setting the upper limit position using the operator control

**Ⓐ To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

**Ⓑ To upper point**

Run the roller shutter to the upper limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back up until the drive stops automatically and clicks once ❸.



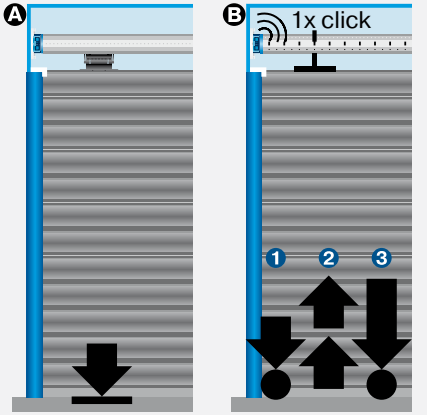

## 2. Setting the lower limit position using the operator control

**Ⓐ To lower stop**

When using anti-lifting devices (fixed mountings), run the roller shutter downwards until the drive stops automatically.

**Ⓑ To lower point**

Run the roller shutter to the lower limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back down until the drive stops automatically and clicks once ❸.

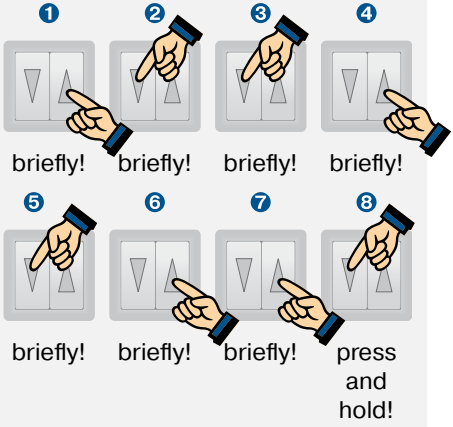



## 3. Deleting the limit positions using any operator control

Run the drive for 6 seconds in the UP or DOWN direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be executed after every short drive command.



# DRIVE TYPE PR+

## Type plate

❶ Type designation: e.g. R 8/17 C PR+

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8/17 | Rated torque-output speed |
| C | Plug-in connecting cable |
| P | Point to point programming |
| R | Electronic limit switching for roller shutters |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

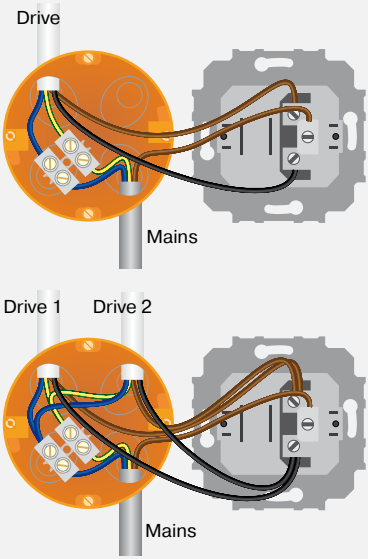
❸ Serial number: e.g. 08 40 961630

| | |
|---|---|
| 08 | Year 2008 |
| 40 | Calendar week |
| 961630 | Consecutive number |


## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

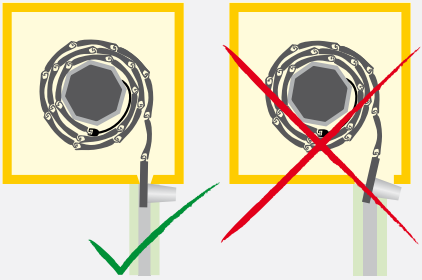
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



# Information

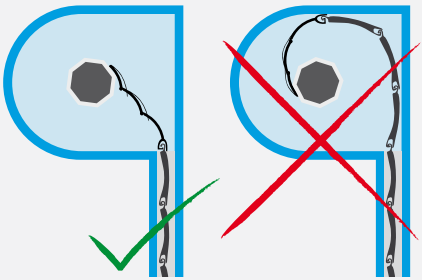
PR+ drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



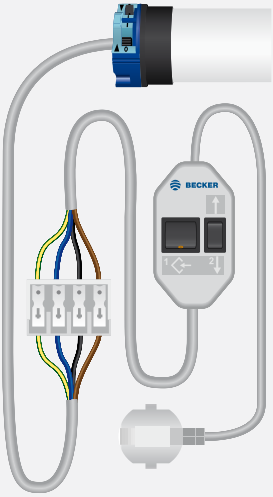
## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.



The limit positions can be set using the programming unit or the switch on the drive head.

Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



# DRIVE TYPE PR+

## Setting the limit positions with the switches

### 1. Deleting both limit positions with the switches

Set both switches to O and execute a short drive command.

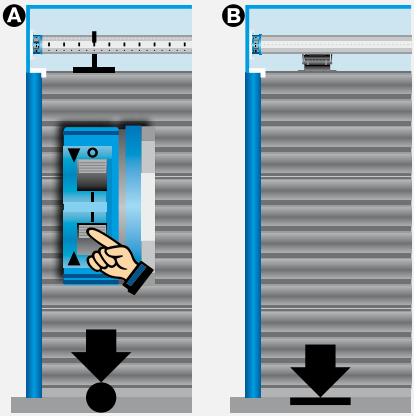
### 2. Setting the lower limit position with the switches

Ⓐ **To lower point**

Run the roller shutter to the desired position and switch the corresponding switch from O to I.

Ⓑ **To lower stop**

Set both switches to I. When using anti-lifting devices (fixed mountings), run the roller shutter downwards until the drive stops automatically.



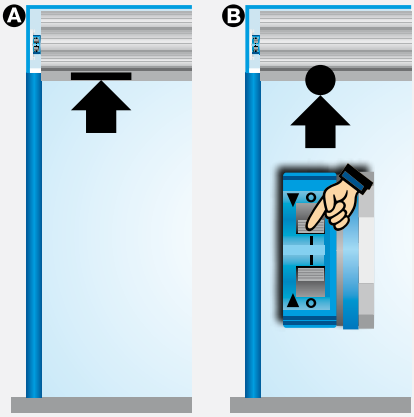

### 3. Setting the upper limit position with the switches

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter to the desired upper position and switch the corresponding switch from O to I (in the case of anti-lifting devices, this is only possible with a programming unit).



# Setting the limit positions using the programming unit

## 1. Setting the lower limit position using the programming unit

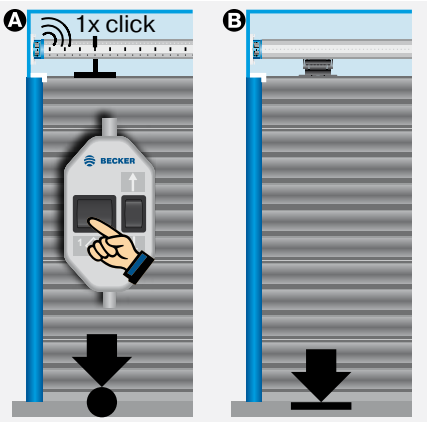
Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit. Set both switches to the programming setting (▌).

Ⓐ **To lower point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.

Ⓑ **To lower stop**

When using anti-lifting devices (fixed mountings), run the roller shutter downwards until the drive stops automatically.



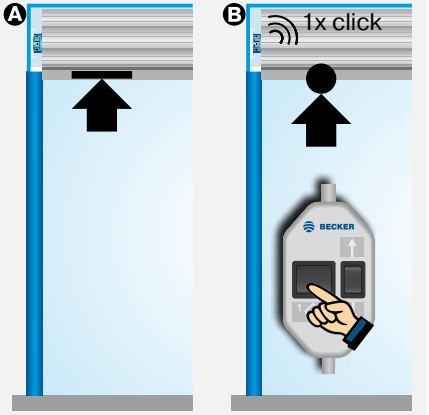

## 2. Setting the upper limit position using the programming unit

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Travel the roller shutters to the desired upper position and press the programming button on the programming unit until the drive clicks once.




## 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.

# DRIVE TYPE E01

## Type plate

❶ Type designation: e.g. R8-E01

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 01 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

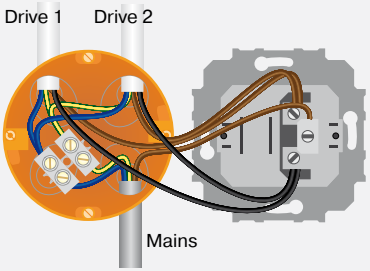
❸ Serial number: e.g. 243061007

| | |
|---|---|
| 24 | Year 2024 |
| 30 | Calendar week |
| 61007 | Consecutive number |

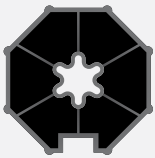

## Connection

Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.




For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.

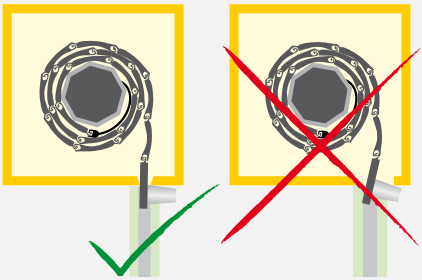

Drive adapter


Drive adapter with obstacle detection

# Information

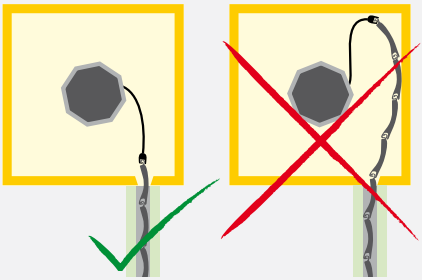
E01 drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs

No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion. The springs should be mounted 30 cm apart from one another.

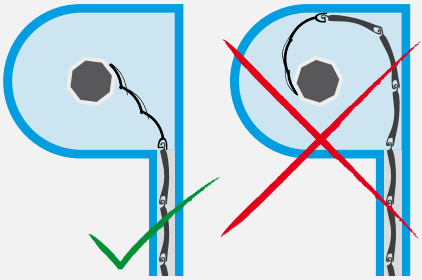


## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

The limit positions can be set using any operator control.

Limit positions are deleted using the programming unit.



## Setting the limit positions

The limit positions can be set in 3 different ways:

❶. Switch located on drive

❷. Programming unit

❸. Operator control unit

# DRIVE TYPE E01

## Setting the limit positions with the switches

### 1. Deleting both limit positions with the switches

Set both switches to O and execute a short drive command.

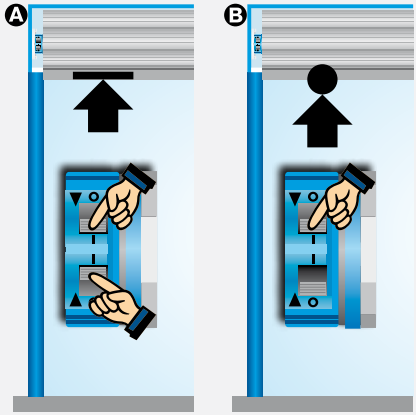
### 2. Setting the upper limit position with the switches

Ⓐ **To upper stop**

Set both switches to I and run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter to the desired upper position and switch the corresponding switch from O to I.



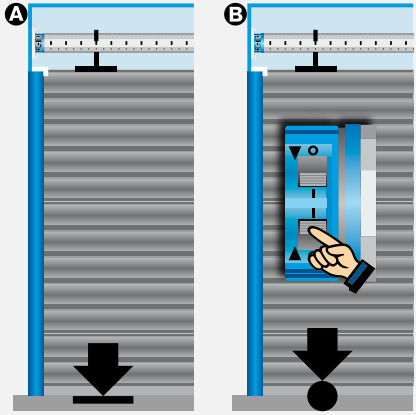

### 3. Setting the lower limit position with the switches

Ⓐ **To lower stop**

Run the roller shutter downwards until the drive switches off automatically.

Ⓑ **To lower point**

Run the roller shutter to the desired lower position and switch the corresponding switch from O to I (when programming the upper stop, both switches are at I, so this is not possible).



# Setting the limit positions using the operator control

## 1. Setting the upper limit position using the operator control

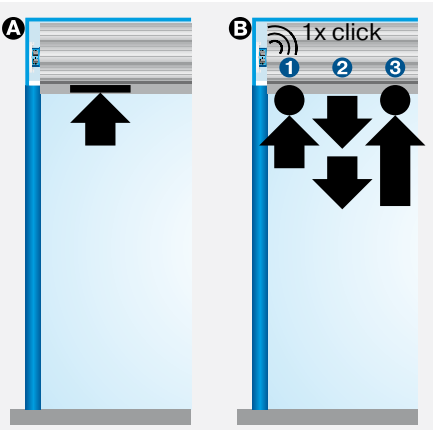
At least 1 switch located on the drive head must be in the position **I**.

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter to the upper limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back up until the drive stops automatically and clicks once ❸.



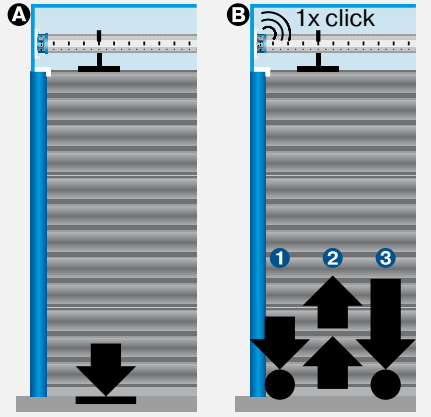

## 2. Setting the lower limit position using the operator control

Ⓐ **To lower stop**

Run the roller shutter towards the lower stop until the drive stops automatically.

Ⓑ **To lower point**

Run the roller shutter to the lower limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back down until the drive stops automatically and clicks once ❸.

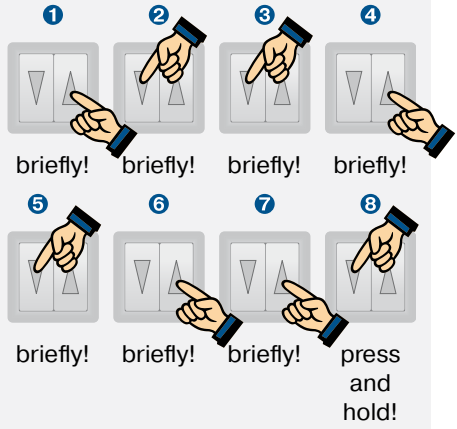



## 3. Deleting the limit positions using any operator control

Run the drive for 6 seconds in the UP or DOWN direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be executed after every short drive command.



# DRIVE TYPE E01

## Setting the limit positions using the programming unit

### 1. Setting the upper limit position using the programming unit

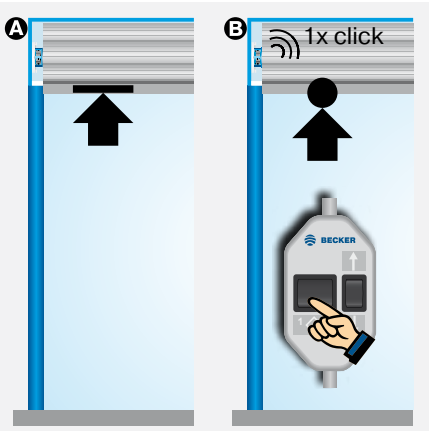
Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit. At least 1 switch located on the drive head must be in the position I.

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.



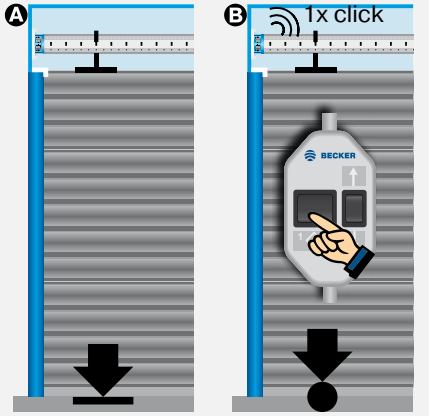

### 2. Setting the lower limit position using the programming unit

Ⓐ **To lower stop**

Run the roller shutter towards the lower stop until the drive stops automatically.

Ⓑ **To lower point**

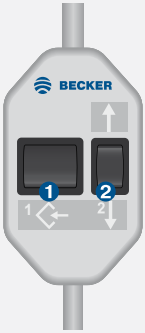
Run the roller shutter to the desired position and press the programming button on the programming unit until the drive clicks once.




### 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.



## Note:

The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.

## Activating special functions

### 4. Activating the anti-freeze mechanism at the top

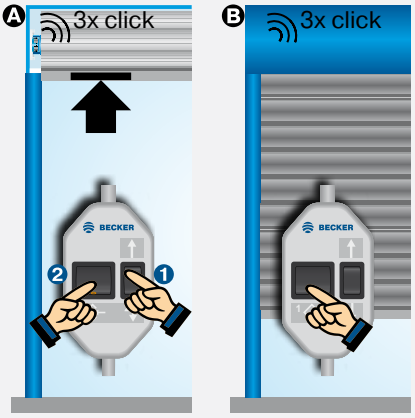
The upper anti-freeze mechanism can be activated in two ways:

Ⓐ In the upper limit position during the installation run

Keep pressing the travel button ❶ and also press the programming button ❷, until the drive clicks three times.

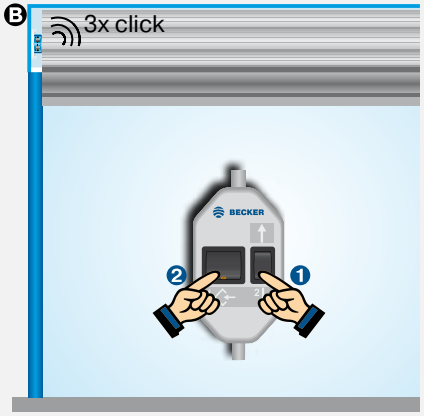
Ⓑ Between the limit positions following the installation

Press the programming button until the drive clicks three times after 10 seconds.




### 5. Activating the fly screen prediction function

Move the roller shutter out of the upper limit position and, within one second, press the travel button ❶ as well as the programming button ❷, until the drive clicks three times.



# DRIVE TYPE EVO 20 R (BT)

## Type plate

❶ Type designation: e.g. R8-EVO 20 R BT

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8 | Rated torque |
| EVO | Latest generation drive with variable speed |
| 20 R | Roller shutter application |
| BT | Bluetooth® receiver (optional) |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

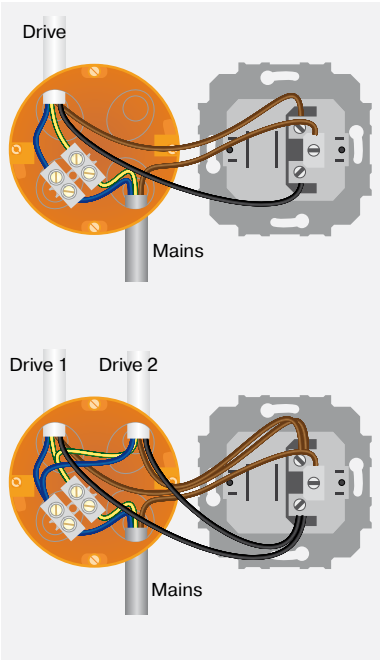
❸ Serial number: e.g. 244153038

| | |
|---|---|
| 24 | Year 2024 |
| 41 | Calendar week |
| 53038 | Consecutive number |


## Connection

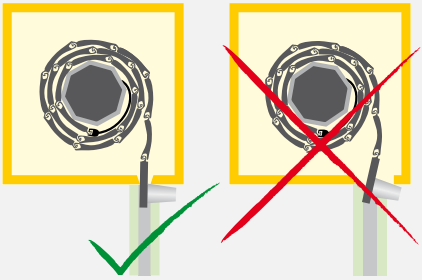
Multiple drives with electronic limit switches can be connected in parallel to one control point. The maximum number of synchronously controlled drives should not exceed 5, depending on the respective current consumption.

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous UP and DOWN commands.



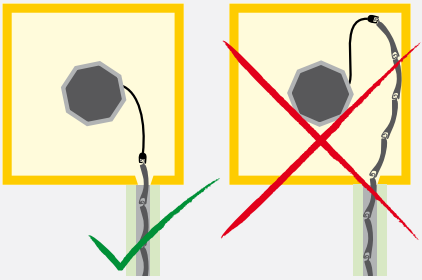
EVO 20 R (BT) drives with electronic limit switching detect and program both limit positions automatically. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position automatically, a defined stop must be present (angled strip or mechanical stop).



## Installation with springs

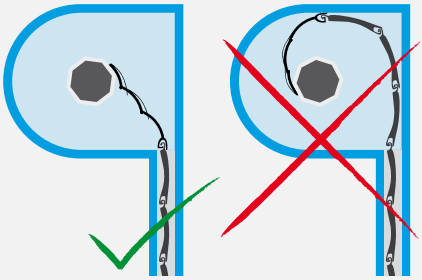
No more than one roller shutter slat should jut out over the intake guide. In the lower limit position, the springs must act against the tube's redary motion.The springs should be mounted 30 cm apart from one another.



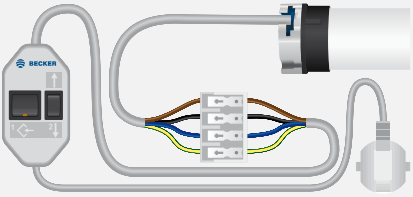
## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

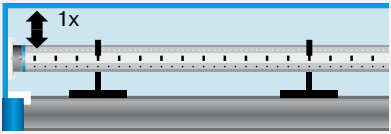
The limit positions can be deleted and re-adjusted by any operator control.



Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.




A programming procedure is 1x confirmed by one or more upward/downward movements of the drive.



# DRIVE TYPE EVO 20 R (BT)

## Setting the limit positions using the programming unit

### 1. Setting the upper limit position using the programming unit

Connect the wires in the connecting cable of the drive to the wires of the same colour in the Becker programming unit.

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive confirms once.

### 2. Setting the lower limit position using the programming unit

Ⓐ **To lower stop**

Run the roller shutter towards the lower stop until the drive stops automatically.

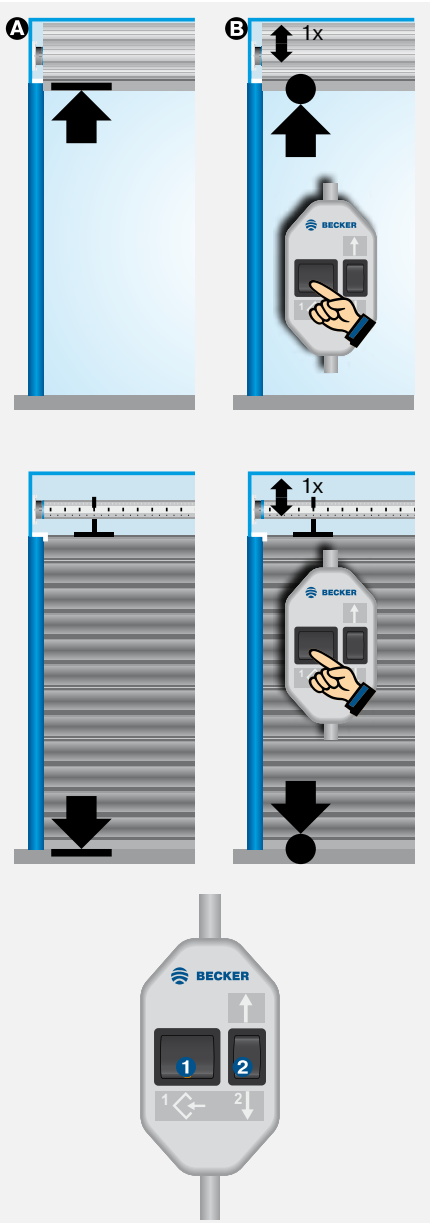
Ⓑ **To lower point**

Run the roller shutter to the desired position and press the programming button on the programming unit until the drive confirms once.

### 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- ⬇ Press and hold the button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.



## Note:

The drive indicates the lack of a limit position by briefly stopping (limit position status indicator).

Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions and moves to the standard operation travel profile.

# Activating special functions

### 4. Activating the anti-freeze mechanism at the top

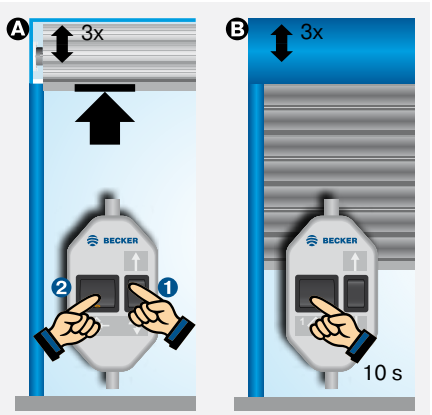
The upper anti-freeze mechanism can be activated in two ways:

Ⓐ The upper anti-freeze mechanism can be activated in two ways:

Once the upper limit position is reached, keep the travel button ❶ pressed down and also press the programming button ❷ until the drive confirms three times.

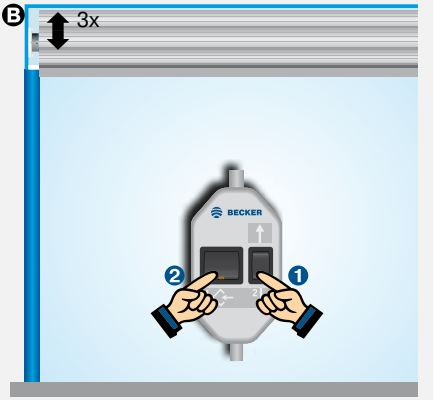
Ⓑ Between the limit positions following the installation

Press the programming button until the drive confirms three times after 10 seconds.




### 5. Activating the fly screen prediction function

Move the roller shutter out of the upper limit position and, within one second, press the travel button ❶ as well as the programming button ❷ until the drive confirms three times.



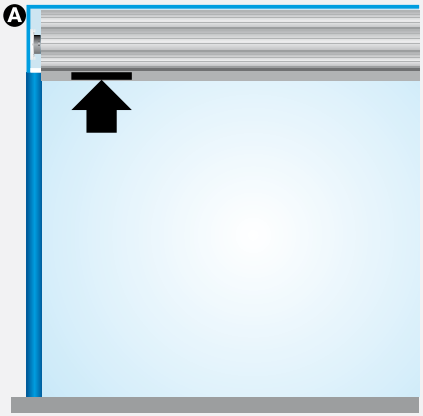
# DRIVE TYPE EVO 20 R (BT)

## Setting the limit positions using the operator control

### 1. Setting the upper limit position using the operator control

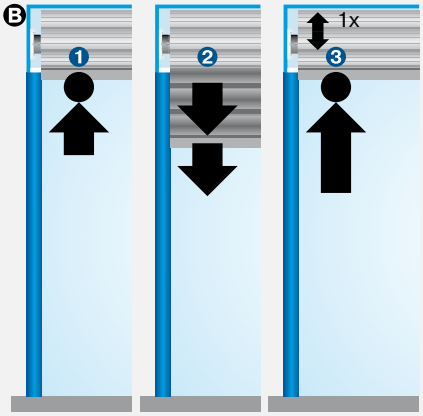
Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.




Ⓑ **To upper point**

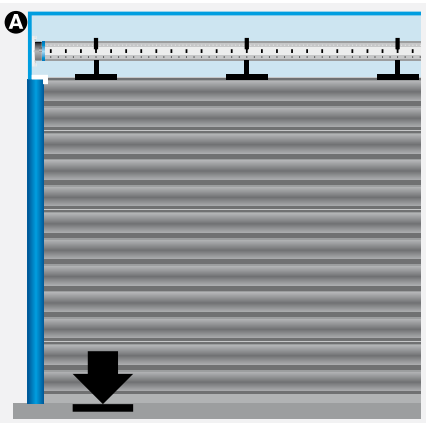
Run the roller shutter to the upper limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back up until the drive stops automatically and confirms once ❸.



## 2. Setting the lower limit position using the operator control

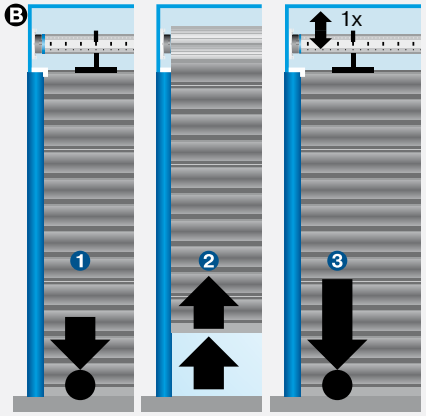
Ⓐ **To lower stop**

Run the roller shutter towards the lower stop until the drive stops automatically.




Ⓑ **To lower point**

Run the roller shutter to the lower limit position ❶. Then run the roller shutter downwards briefly twice ❷ then back down until the drive stops automatically and confirms once ❸.

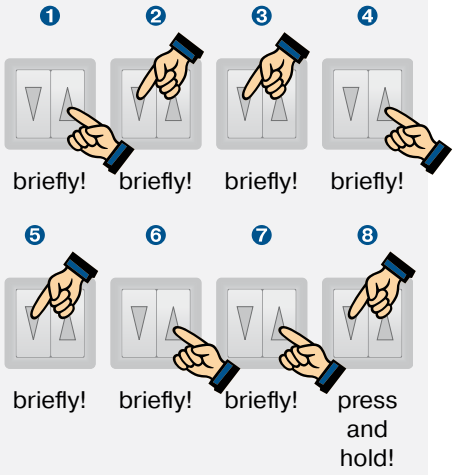



## 3. Deleting the limit positions using any operator control

Run the drive for 6 seconds in the UP or DOWN direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite until the drive confirms twice.

When using operator controls with maintained operation mode (e.g. a timer), a STOP command must be executed after every short drive command.



# DRIVE TYPE EVO 20 R (BT)

## Travel profiles

### 1. Selecting the travel profile

Run the shading solution to the central position.

Then run through steps ❶ to ❻ of the deletion sequence shown opposite until the drive confirms once.

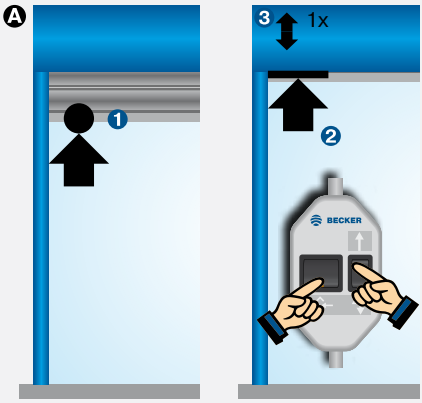
When using operator controls with maintained operation mode, a STOP command must be executed after every short drive command. The drive switches between the following profiles:

1. Standard operation
   The drive travels at a reduced speed before and after the limit positions (zone for slow travel).
2. Silent operation
   The drive constantly travels at a reduced speed.
3. Dynamic operation
   The drive constantly travels at a high speed.


### Modifying the zone for slow travel in the “Standard operation” travel profile

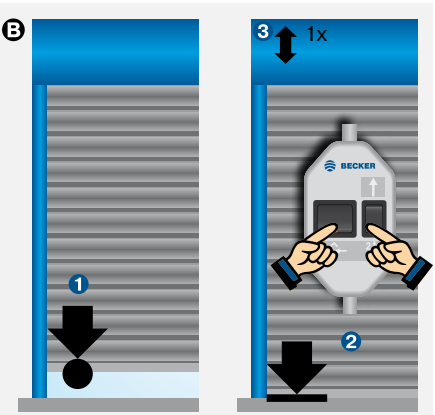
**Ⓐ Upper zone**

Approach the point where you want the upper zone to start ❶. Start the shading solution in the UP direction using the travel button and also press the programming button ❷ until the drive stops at the upper limit position and confirms once ❸.



### Ⓑ Lower zone

Approach the point where you want the lower zone to start ❶. Start the shading solution in the DOWN direction using the travel button and also press the programming button ❷ until the drive stops at the lower limit position and confirms once ❸.




## Programming via the Bluetooth® interface (drives with additional BT function)

The Becker Service app can be used to switch the special functions on and off, to change the travel profile, to modify the zone for slow travel and to select the speed for slow and normal travel.

To do so, follow the instructions in the app.


From Bluetooth® version 4.0

# DRIVE TYPE PRF+

## Type plate

❶ Type designation: e.g. R8/17 C PRF+

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8/17 | Rated torque-output speed |
| C | Plug-in connecting cable |
| P | Point to point programming |
| R | Electronic limit switching for roller shutters |
| F | Radio receiver |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

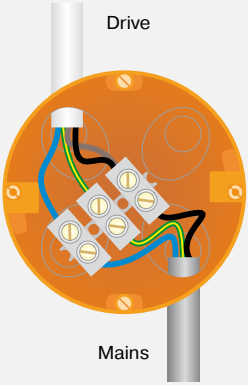
After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 08 49 20071

| | |
|---|---|
| 08 | Year 2008 |
| 49 | Calendar week |
| 20071 | Consecutive number |

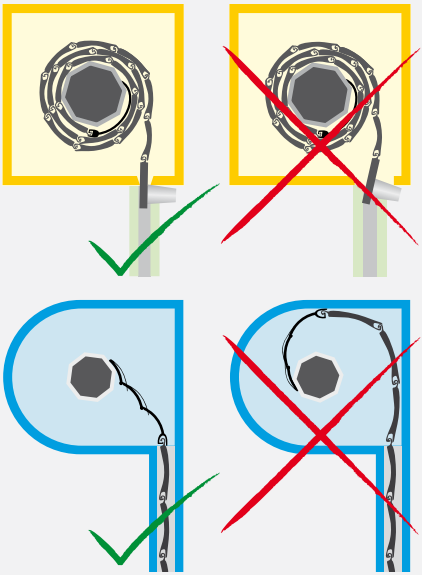

## Connection

Drives with electronic limit switching and integrated radio receiver are connected directly to the power supply. The brown wire and the black wire together are connected to the outer conductor L1.



PRF+ drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).

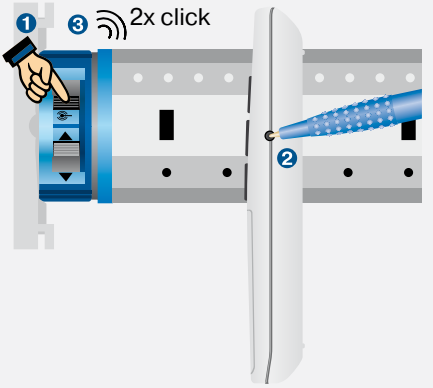


## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

## Programming the master transmitter

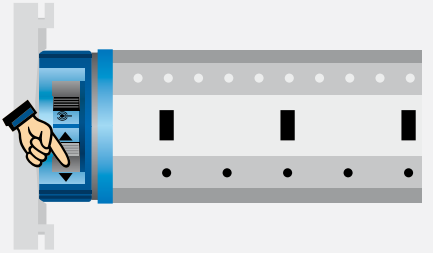
Set the drive to programming mode for 3 minutes by switching the power on or by setting the radio switch to the position ❶. Then press the programming button on the required master transmitter ❷ until the drive clicks twice ❸ (3 seconds when installing new drives, 10 seconds to overwrite a previously programmed master transmitter).




## Correcting the direction of redation

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

Attention: The direction of redation can only be changed as long as no limit positions have been programmed.



# DRIVE TYPE PRF+

## Setting the limit positions

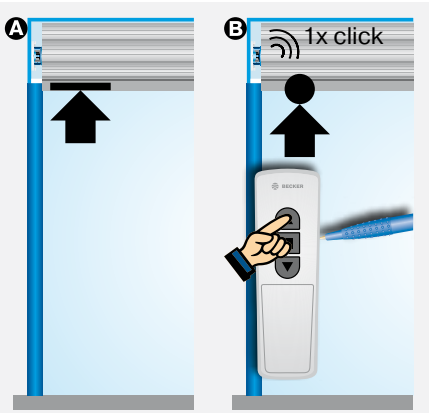
### 1. Programming the upper limit position using the master transmitter

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter towards the upper stop until the drive stops automatically.



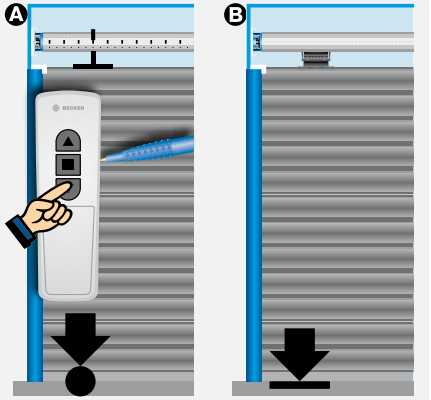

### 2. Programming the lower limit position using the master transmitter

Ⓐ **To lower point**

Run the roller shutters to thedesired position. Then press theprogramming button and the DOWNbutton until the drive clicks once.

Ⓑ **To lower stop (only with anti-lifting devices)**

Run the roller shutters downwardsuntil the drive switches offautomatically.




### 3. Deleting the limit positions using the master transmitter

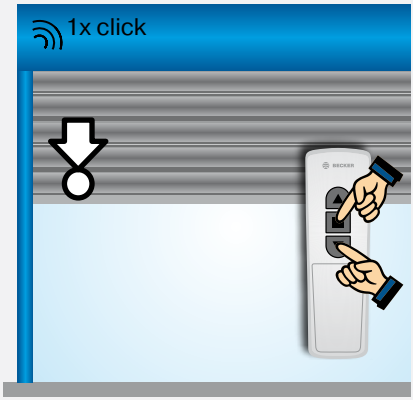
Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.

If the roller shutter is situated between the limit positions, both limit positions are deleted in the procedure. If the roller shutter is situated in one of the limit positions, only this position will be deleted.

### 4. Programming the intermediate position I

Move the drive to the desired intermediate position I and press the STOP and DOWN buttons until the drive clicks once.

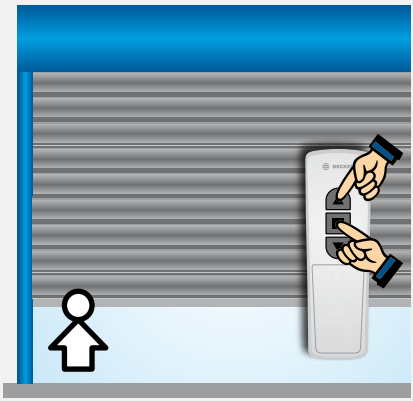
To move to the intermediate position I, press the DOWN button twice within one second (double-tap).




### 5. Programming the intermediate position II

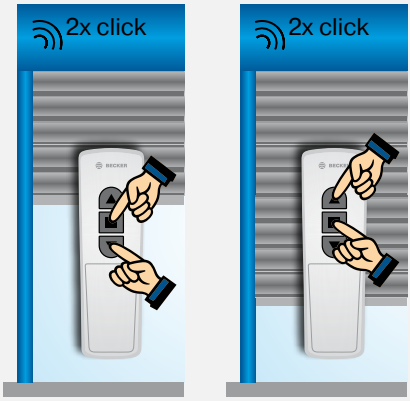
Move the drive to the desired intermediate position II and press the STOP and UP buttons until the drive clicks once.

To move to the intermediate position II, press the UP button twice within one second (double-tap).



### 6. Deleting the intermediate position I/Intermediate position II

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and DOWN buttons or STOP and UP buttons) until the drive clicks twice.



# DRIVE TYPE PROF+

## Type plate


❶ Type designation: e.g. R8/17 C PROF+

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8/17 | Rated torque-output speed |
| C | Plug-in connecting cable |
| P | Point to point programming |
| R | Electronic limit switching for roller shutters |
| O | Sensitive obstacle detection |
| F | Radio receiver |
| + | Suitable for anti-lifting device |

❷ Operating mode (short-period operation S2)

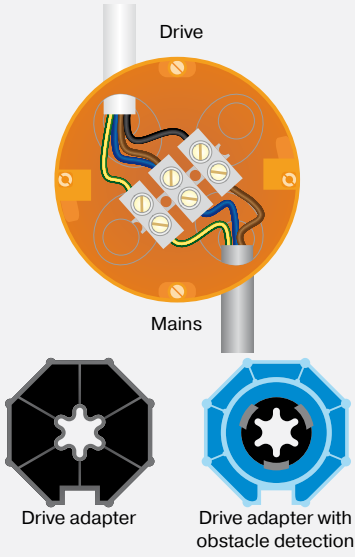
After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 10 18 60713

| | |
|---|---|
| 10 | Year 2010 |
| 18 | Calendar week |
| 60713 | Consecutive number |

## Connection

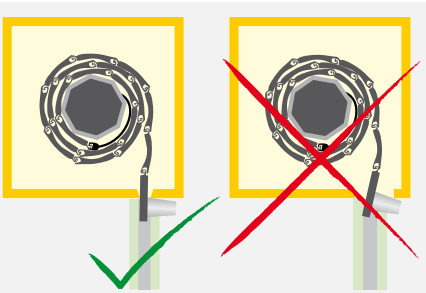
Drives with electronic limit switch and integrated radio receiver are connected directly to the power supply. The brown wire is connected together with the blue wire to the neutral conductor.




For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.

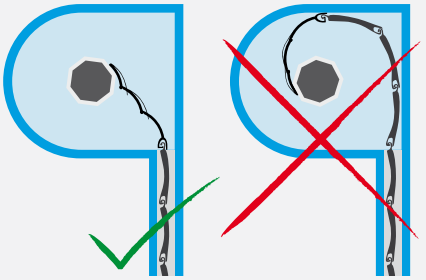
PROF+ drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



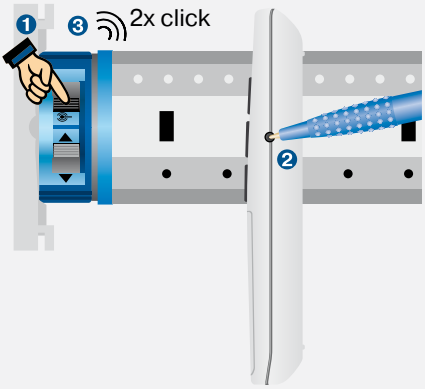
## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.



## Programming the master transmitter

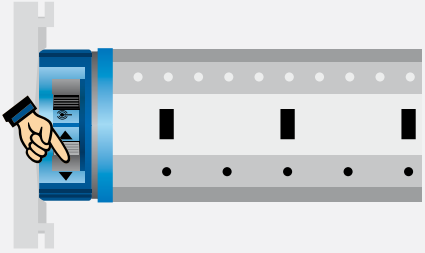
Set the drive to programming mode for 3 minutes by switching the power on or by setting the radio switch to the position ❶. Then press the programming button on the required master transmitter ❷ until the drive clicks twice ❸ (3 seconds when installing new drives, 10 seconds to overwrite a previously programmed master transmitter).




## Correcting the direction of redation

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

Attention: The direction of redation can only be changed as long as no limit positions have been programmed.



# DRIVE TYPE PROF+

## Setting the limit positions

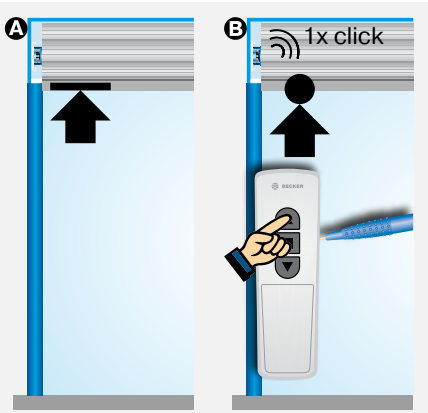
### 1. Programming the upper limit position using the master transmitter

**Ⓐ To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

**Ⓑ To upper point**

Run the roller shutter towards the upper stop until the drive stops automatically.



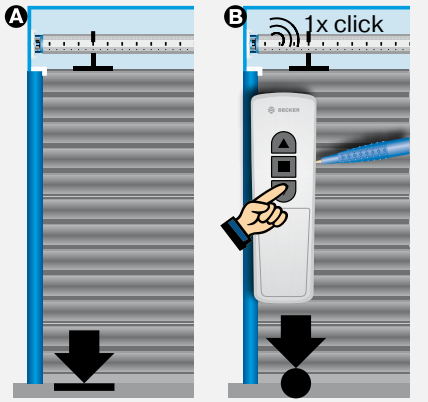

### 2. Programming the lower limit position using the master transmitter

**Ⓐ To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).

**Ⓑ To lower point**

Run the roller shutters to the desired position. Then press the programming button and the DOWN button until the drive clicks once.




### 3. Deleting the limit positions using the master transmitter

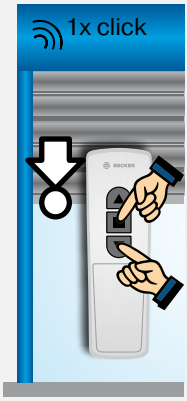
Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.

If the roller shutter is situated between the limit positions, both limit positions are deleted in the procedure. If the roller shutter is situated in one of the limit positions, only this position will be deleted.

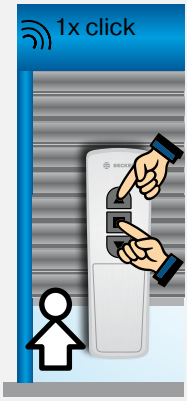
### 4. Programming the intermediate position/Ventilation position

Run the drive to the required intermediate position/ventilation position and press the STOP and DOWN buttons or STOP and UP buttons until the drive clicks once.

To travel to the intermediate position/ventilation position, press the DOWN button or UP button twice within one second (double tap).




Intermediate position




Ventilation position

### 5. Deleting the intermediate position/Ventilation position

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and DOWN buttons or STOP and UP buttons) until the drive clicks twice.

### 6. Activating the anti-freeze mechanism at the top (optional)

Run the roller shutter towards the upper stop. Then press the programming button until the drive clicks once. Then press the programming button, STOP button and UP button until the drive clicks three times.

Follow the same procedure to deactivate the anti-freeze mechanism at the top.



### Note:

The drive moves in dead-man mode during the installation run (initial opening and closing movement). The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.

# DRIVE TYPE C01

## Type plate

❶ Type designation: e.g. R8-C01

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8-17 | Rated torque-output speed |
| C | Centronic radio |
| 01 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 240591500

| | |
|---|---|
| 24 | Year 2024 |
| 05 | Calendar week |
| 91500 | Consecutive number |


## Connection

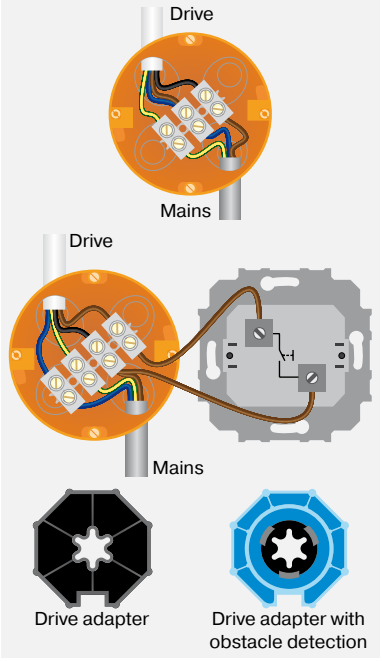
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.

### Connection with on-site operation with a single button

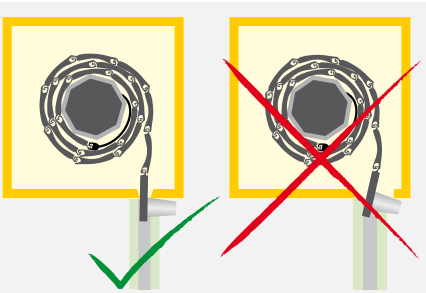
With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.

For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.



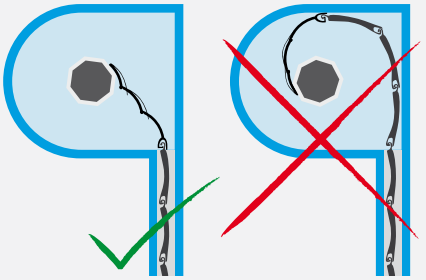
C01 drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



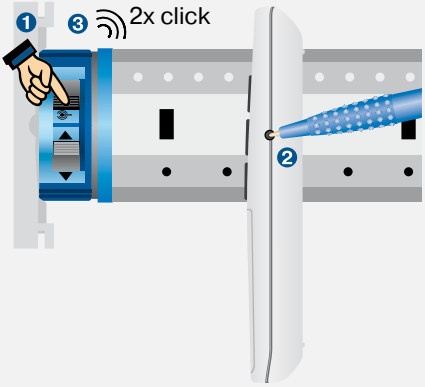
## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.



## Programming the master transmitter

Set the drive to programming mode for 3 minutes by switching the power on or by setting the radio switch to the position ❶. Then press the programming button on the required master transmitter ❷ until the drive clicks twice ❸ (3 seconds when installing new drives, 10 seconds to overwrite a previously programmed master transmitter).

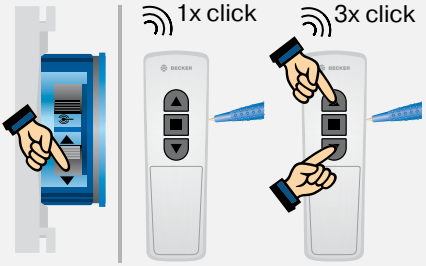



## Correcting the direction of redation

No limit positions may be programmed.

Via the switch on the drive: If the drive is redating in the wrong direction, reverse the direction switch on the drive.

Via the master transmitter: Press the programming button until the drive clicks once. Then press the programming button, UP button and DOWN button until the drive clicks three times.



# DRIVE TYPE C01

## Setting the limit positions

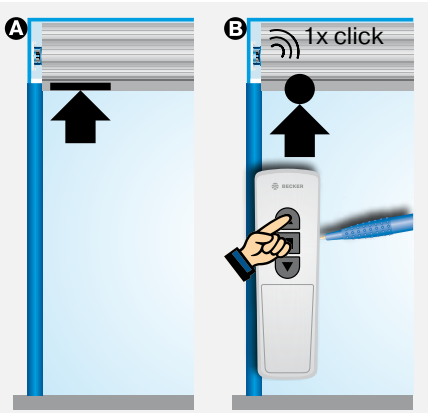
### 1. Programming the upper limit position using the master transmitter

**Ⓐ To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

**Ⓑ To upper point**

Run the roller shutter towards the upper stop until the drive stops automatically.



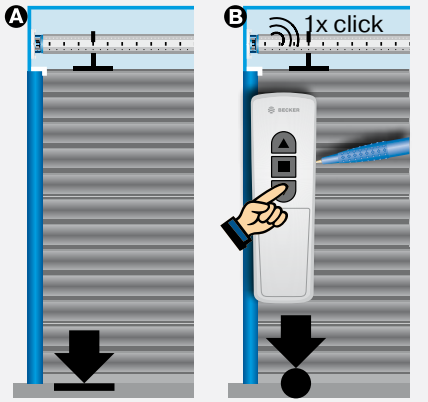

### 2. Programming the lower limit position using the master transmitter

**Ⓐ To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).

**Ⓑ To lower point**

Run the roller shutters to the desired position. Then press the programming button and the DOWN button until the drive clicks once.




### 3. Deleting the limit positions using the master transmitter

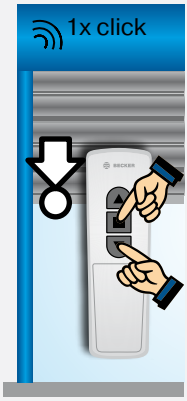
Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.

If the roller shutter is situated between the limit positions, both limit positions are deleted in the procedure. If the roller shutter is situated in one of the limit positions, only this position will be deleted.

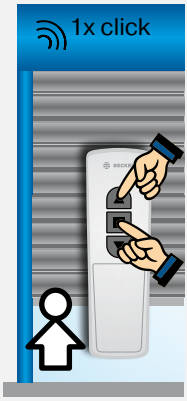
### 4. Programming the intermediate position/Ventilation position

Run the drive to the required intermediate position/ventilation position and press the STOP and DOWN buttons or STOP and UP buttons until the drive clicks once.

To travel to the intermediate position/ventilation position, press the DOWN button or UP button twice within one second (double tap).




Intermediate position



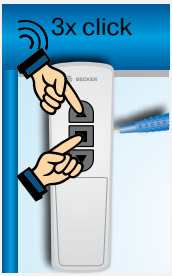

Ventilation position

### 5. Deleting the intermediate position/Ventilation position

Run the drive to the position to be deleted and repeat the programming until the drive clicks twice.

### 6. Activating the anti-freeze mechanism at the top (optional)

Run the roller shutter towards the upper stop. Then press the programming button until the drive clicks once. Then press the programming button, STOP button and UP button until the drive clicks three times.


### 7. Activating the fly screen predection function (optional)

Run the roller shutter to the upper limit position. Then press the programming button until the drive clicks once. Then press the programming button, STOP button and DOWN button until the drive clicks three times.



### Note:

The drive moves in dead-man mode during the installation run (initial opening and closing movement). The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.

# DRIVE TYPE C01 PLUS

## Type plate

❶ Type designation: e.g. R8-17-C01 PLUS

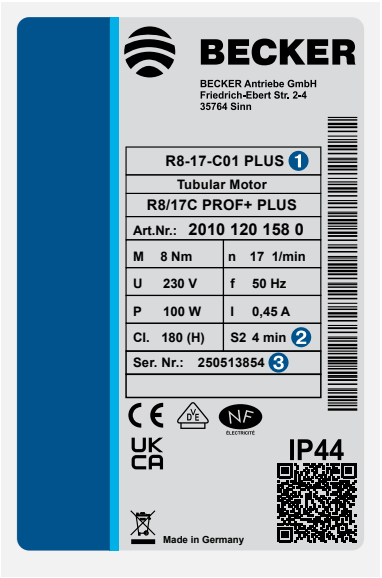
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8-17 | Rated torque-output speed |
| C | Centronic radio |
| 01 | Drive type |
| PLUS | CentronicPLUS radio |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 250513854

| | |
|---|---|
| 25 | Year 2025 |
| 05 | Calendar week |
| 13854 | Consecutive number |




## Connection

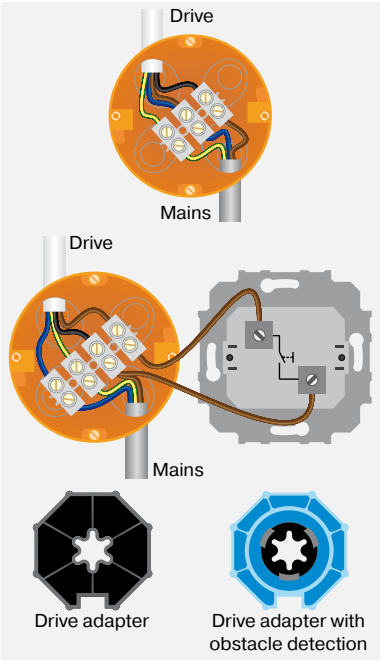
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.

### Connection with on-site operation with a single button

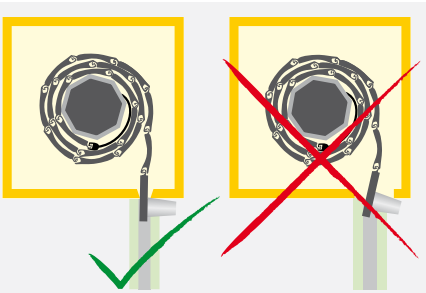
With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.

For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.



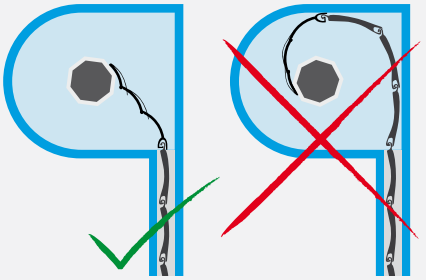
C01 PLUS drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



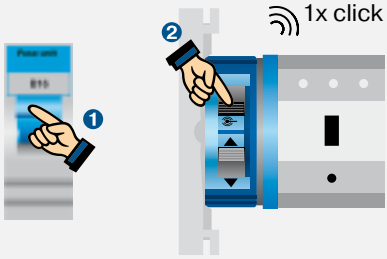
## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

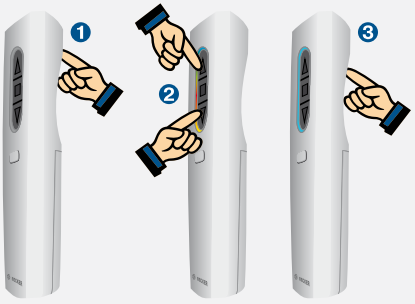


## Establishing programming mode

Set the drive to programming mode (for 3 minutes for Centronic or for 15 minutes for CentronicPlus) by switching the power on ❶ (drive clicks) or by setting the radio switch ❷ to the position. You can now program a Centronic master transmitter (see C01 drive type) or a CentronicPlus transmitter for further commissioning.




The drive can also be put into programming mode for a Centronic master transmitter by activating the setting mode on an already programmed CentronicPlus transmitter. To do so, start the search function on the transmitter by pressing the programming button ❶ for 3 seconds until the LED ring continually changes colour. Use the UP and DOWN buttons ❷ to select the desired drive (clicks once). Press the programming button again ❸ again for 1 second until the LED ring pulses light blue.



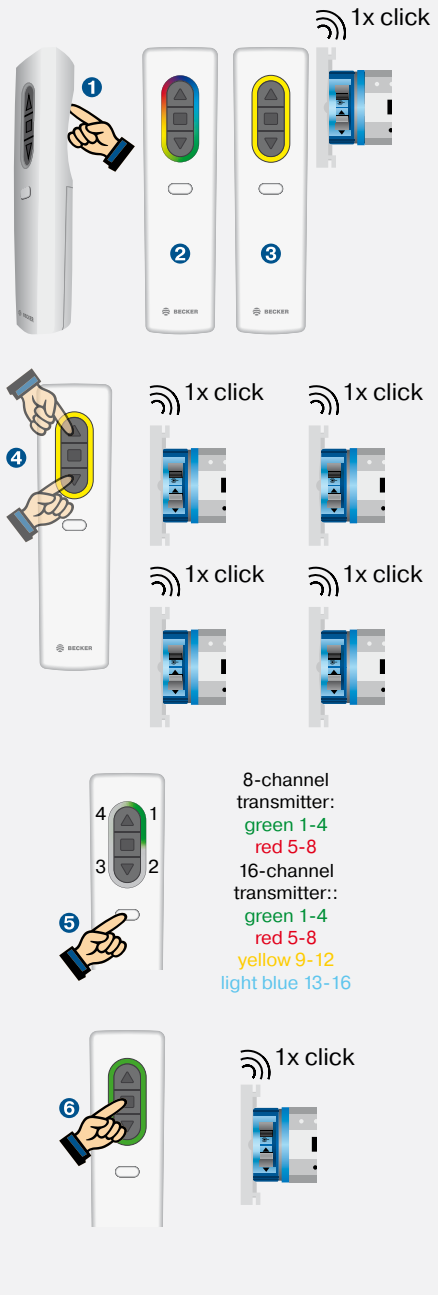
# DRIVE TYPE C01 PLUS

## Programming the transmitter and assigning a channel

### 1. Select a drive in programming mode

Pressing the programming button for 3 seconds ❶ prompts the transmitter to search for all drives currently in programming mode. The search process is indicated by the LED ring continually changing colour ❷. The transmitter automatically connects to the nearest drive (clicks once) and the LED ring lights up yellow ❸.

If multiple drives are in programming mode at the same time, the desired drive can be selected using the UP or DOWN button ❹.




### 2. Select transmission channel

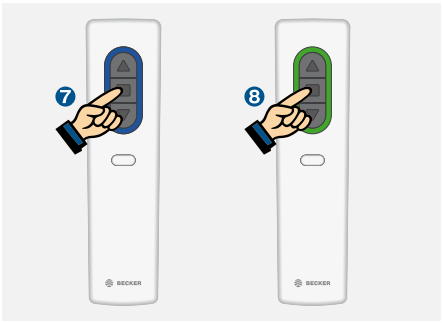
The function button ❺ can be used to select the desired transmission channel if a multi-channel transmitter is being used. In this case the LED ring is split into 4 fields, each of which is allocated different colour planes. In the example opposite, transmission channel 1 is selected.

### 3. Establish the network and activate the transmission channel

A new network is established by pressing the STOP button ❻. The selected transmission channel is active and can go on to operate the drive. The LED ring lights up green. The drive confirms the action by clicking once.

### 4. Deactivate/activate the transmission channel

Pressing the STOP button again deactivates the transmission channel ❼. The LED ring lights up blue. Commissioning (setting the limit positions, activating the special functions etc.) can also be performed when the transmission channel is deactivated. Pressing the STOP button again re-activates the transmission channel ❽.




## Switching on setting mode

Briefly pressing the programming button ❶ activates the setting mode. The LED ring pulses light ❷. The drive is now in dead-man mode.


## Note:

When programming a new transmitter in a new drive, a new network is established. Put all additional drives you want to be part of the network into operation with the same transmitter in order to prevent different networks from being established.

### Correcting the direction of redation

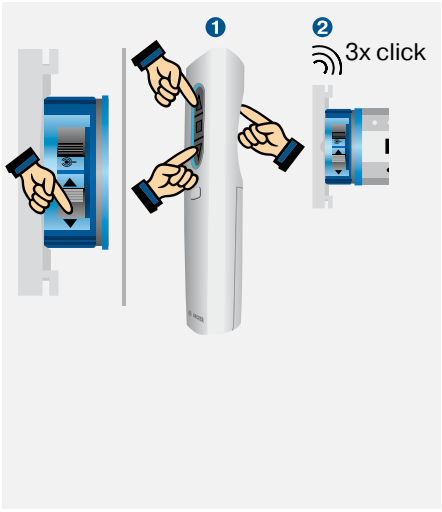
No limit positions may be programmed.

Via the switch on the drive:

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

With the transmitter (in setting mode):

When setting mode is activated, press the programming button, UP button and DOWN button ❶ until the drive clicks three times ❷. The LED ring displays a red/blue redation.



# DRIVE TYPE C01 PLUS

## Setting the limit positions (in setting mode)

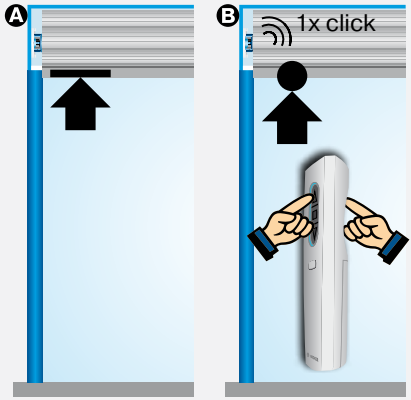
### 1. Programming the upper limit position (in setting mode)

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutter towards the upper stop until the drive stops automatically.



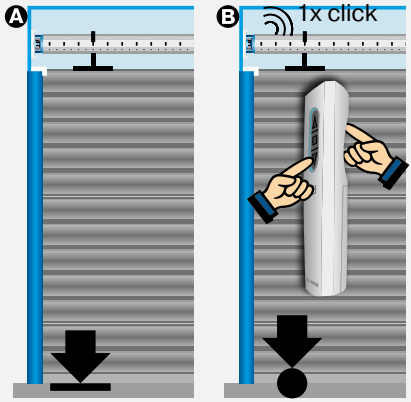

### 2. Programming the lower limit position (in setting mode)

Ⓐ **To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).

Ⓑ **To lower point**

Run the roller shutters to the desired position. Then press the programming button and the DOWN button until the drive clicks once.




### 3. Deleting the limit positions (in setting mode)

Press the programming button and the STOP button until the drive clicks twice after 6 seconds.

If the roller shutter is situated between the limit positions, both limit positions are deleted in the procedure. If the roller shutter is situated in one of the limit positions, only this position will be deleted.

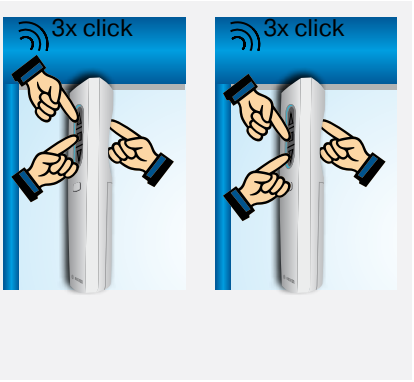
## Activating the special functions (in setting mode)

### 1. Activating the anti-freeze mechanism at the top (optional)

Press the programming button, STOP button and UP button until the drive clicks three times.

### 2. Activating the fly screen prediction function (optional)

Run the roller shutter to the upper limit position. Then press the programming button, STOP button and DOWN button until the drive clicks three times.




## Exiting setting mode

Pressing the programming button (3 seconds) ❶ deactivates the setting mode. The LED ring turns off ❷. The drive is now in normal mode.

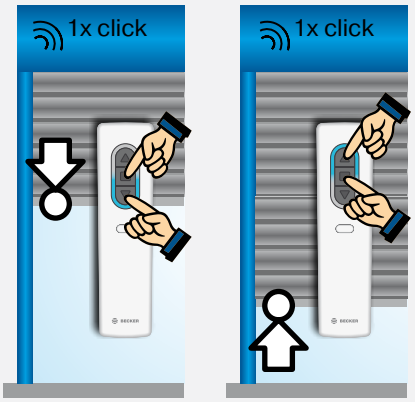

## Setting the intermediate positions

### 1. Programming the intermediate position/Ventilation position

Run the drive to the required intermediate position/ventilation position and press the STOP and DOWN buttons or STOP and UP buttons until the drive clicks once. To travel to the intermediate position/ventilation position, press the DOWN button or UP button twice within one second (double tap).

### 2. Deleting the intermediate position/Ventilation position

Run the drive to the position to be deleted and repeat the programming until the drive clicks twice.




**Note:**

In setting mode, the drive runs in dead-man mode. The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.

# DRIVE TYPE EVO PLUS BT

## Type plate

❶ Type designation: e.g. R8-17-EVO PLUS BT

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8-17 | Rated torque-output speed |
| EVO | Drive of the latest generation with variable speed |
| PLUS | Centronic and CentronicPLUS radio |
| BT | Bluetooth® receiver |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 250512003

| | |
|---|---|
| 25 | Year 2025 |
| 05 | Calendar week |
| 12003 | Consecutive number |


## Connection

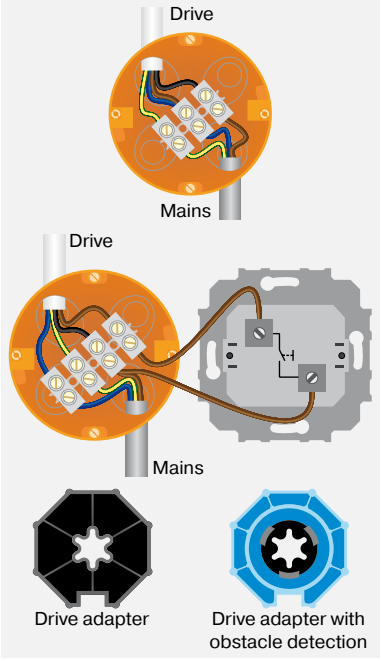
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.

### Connection with on-site operation with a single button

With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.

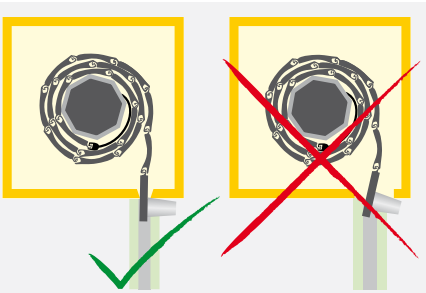
For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.



# Information

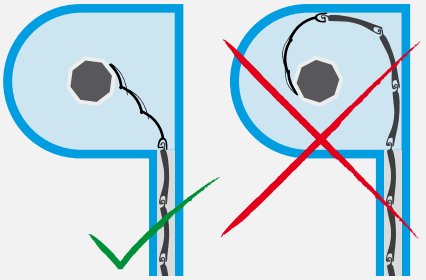
The drive with electronic limit switch EVO PLUS BT automatically detects and programs the end positions when stops are present. If stops are absent, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).



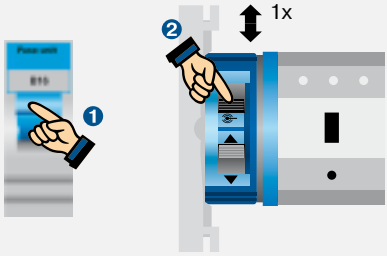
## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

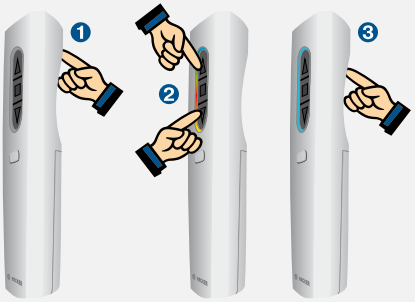


## Establishing programming mode

Activate the drive by switching on the power supply ❶ (Power On – simple up-down movement) or by operating the radio switch ❷ into the position Into learning mode (for Centronic: 3 minutes, for CentronicPlus: 15 minutes). You can now program a Centronic master transmitter (see C01 drive type) or a CentronicPlus transmitter for further commissioning.




The drive can also be put into programming mode for a Centronic master transmitter by activating the setting mode on an already programmed CentronicPlus transmitter. To do this, start the search process on the transmitter by pressing the programming button for 3 seconds ❶ until the LED ring continuously cycles through the colors. Select using the UP and DOWN buttons ❷ the desired Drive (1x up-down movement). Press the programming button again ❸ again for 1 second until the LED ring pulses light blue.



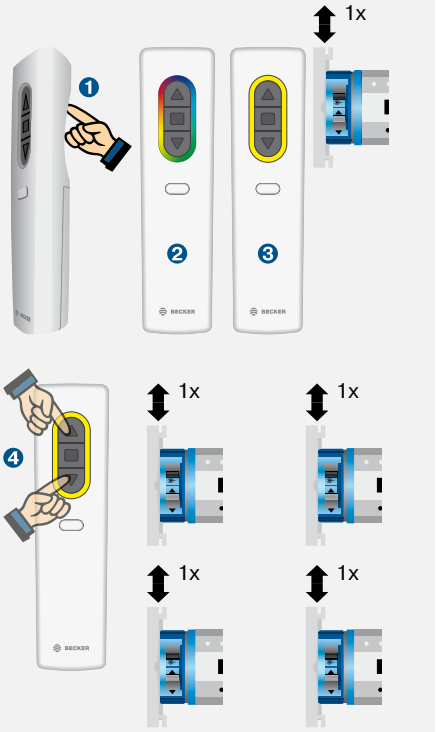
# DRIVE TYPE EVO PLUS BT

## Programming the transmitter and assigning a channel

### 1. Select a drive in programming mode

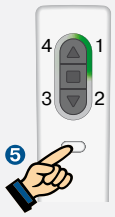
Press the programming button ❶ until the LED ring displays a continuous color change ❷. The transmitter searches for all drives in learning mode and automatically connects to the nearest drive (1x confirmation); the LED ring lights up yellow ❸.

If multiple drives are in programming mode at the same time, the desired drive can be selected using the UP or DOWN button ❹.




### 2. Select transmission channel

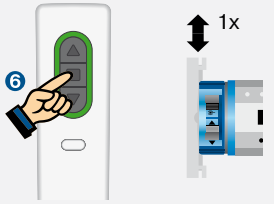
The function button ❺ can be used to select the desired transmission channel if a multi-channel transmitter is being used. In this case the LED ring is split into 4 fields, each of which is allocated different colour planes. In the example opposite, transmission channel 1 is selected.




8-channel transmitter:
green 1-4
red 5-8
16-channel transmitter::
green 1-4
red 5-8
yellow 9-12
light blue 13-16

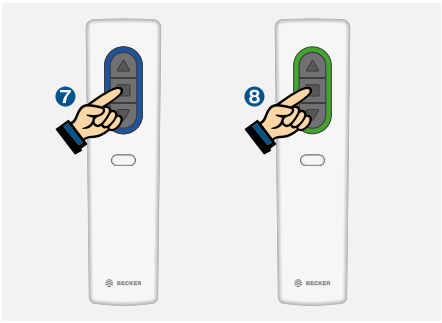
### 3. Establish the network and activate the transmission channel

By pressing the STOP button ❻ a new network is established. The selected transmission channel is activated and can later operate the drive. The LED ring lights up green. The drive confirms the process.



### 4. Deactivate/activate the transmission channel

Pressing the STOP button again deactivates the transmission channel ❼. The LED ring lights up blue. Commissioning (setting the limit positions, activating special functions, etc.) can also be carried out with the transmission channel deactivated. Pressing the STOP button again reactivates the transmission channel ❽.




## Switching on setting mode

Briefly pressing the programming button ❶ activates the setting mode. The LED ring pulses light ❷. The drive is now in dead-man mode.


## Note:

When programming a new transmitter in a new drive, a new network is established. Put all additional drives you want to be part of the network into operation with the same transmitter in order to prevent different networks from being established.

### Correcting the direction of redation

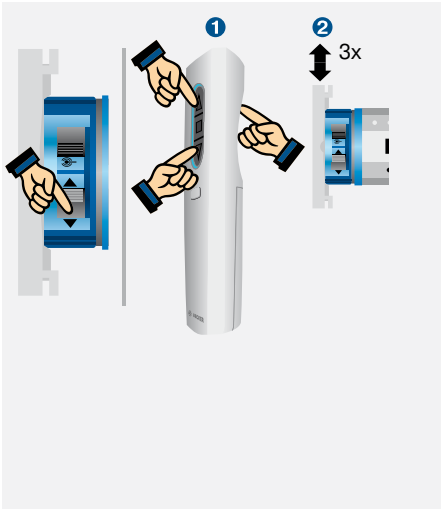
No limit positions may be programmed.

Via the switch on the drive:

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

With the transmitter (in setting mode):

When setting mode is activated, press the programming button, UP button and DOWN button ❶ until the drive confirms 3 times ❷. The LED ring displays a red/blue redation.



# DRIVE TYPE EVO PLUS BT

## Setting the limit positions (in setting mode)

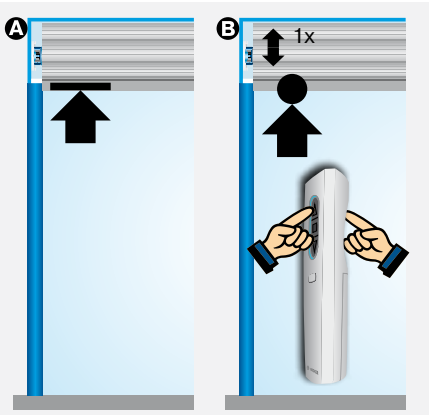
### 1. Programming the upper limit position (in setting mode)

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Move the roller shutter to the desired upper position. Then press the programming and UP buttons until the drive confirms once.



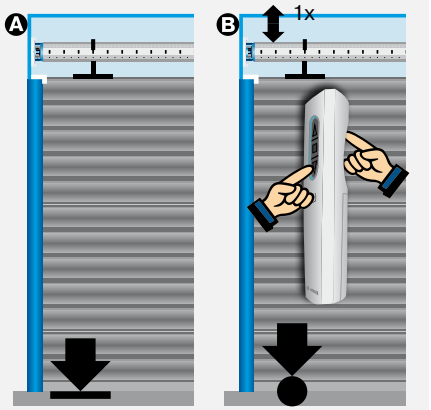

### 2. Programming the lower limit position (in setting mode)

Ⓐ **To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).

Ⓑ **To lower point**

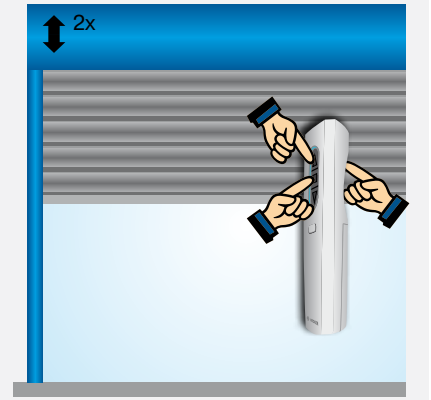
Move the roller shutter to the desired position. Then press the programming and DOWN buttons until the drive confirms once.




### 3. Deleting the limit positions (in setting mode)

Press the programming and STOP buttons until the drive confirms twice after 6 seconds.

If the roller shutter is situated between the limit positions, both limit positions are deleted in the procedure. If the roller shutter is situated in one of the limit positions, only this position will be deleted.



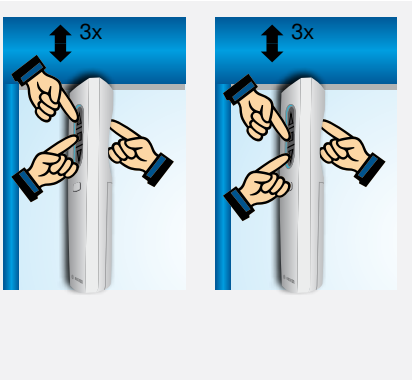
## Activating the special functions (in setting mode)

### 1. Activating the anti-freeze mechanism at the top (optional)

Press the programming, STOP, and UP buttons until the drive confirms three times.

### 2. Activating the fly screen prediction function (optional)

Run the roller shutter to the upper limit position. Then press the programming, STOP, and DOWN buttons until the drive confirms three times.




## Exiting setting mode

Pressing the programming button (3 seconds) ❶ deactivates the setting mode. The LED ring turns off ❷. The drive is now in normal mode.

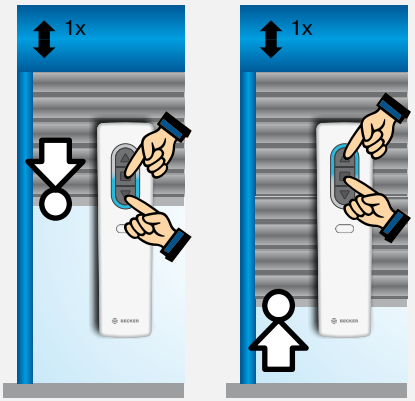

## Setting the intermediate positions

### 1. Programming the intermediate position/Ventilation position

Move the drive to the desired intermediate/ventilation position and press the STOP and DOWN buttons or STOP and UP buttons until the drive confirms once. To travel to the intermediate position/ventilation position, press the DOWN button or UP button twice within one second (double tap).

### 2. Deleting the intermediate position/Ventilation position

Move the drive to the position to be deleted and repeat the learning process until the drive confirms twice.




**Note:**

In setting mode, the drive runs in dead-man mode. The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.

# DRIVE TYPE EVO PLUS

## Travel profiles

### 1. Selecting the travel profile

Press the programming button ❶ until the LED ring displays a continuous color change ❷. The transmitter connects to the nearest drive (the drive confirms with a movement). If necessary, select the desired drive using the UP or DOWN button (LED ring shows green or blue) ❸.

Then briefly press the programming button ❹, the LED ring pulses light blue ❺.

Then press the function button ❻ until the LED ring indicates the set travel profile with a green light.

**UP button: Dynamic operation**

The drive constantly travels at a high speed.

**STOP button: Standard operation**

The drive travels at a reduced speed before and after the limit positions (zone for slow travel).

**DOWN button: Silent operation**

The drive constantly travels at a reduced speed.

## Programming via the Bluetooth® interface (drives with additional BT function)

The Becker Service app can be used to switch the special functions on and off, to change the travel profile, to modify the zone for slow travel and to select the speed for slow and normal travel.

To do so, follow the instructions in the app.


From Bluetooth® version 4.0

# DRIVE TYPE B01

## Type plate

❶ Type designation: e.g. R8-B01

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8 | Rated torque |
| B | B-Tronic radio drive |
| 01 | Drive type |

❷ Operating mode (short-period operation S2)

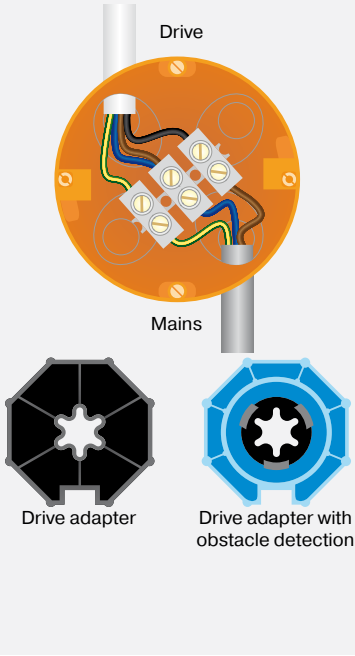
After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 14 43 60105

| | |
|---|---|
| 14 | Year 2014 |
| 43 | Calendar week |
| 60105 | Consecutive number |


## Connection

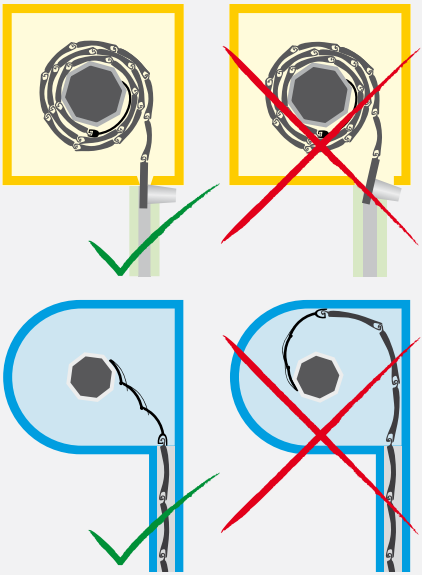
Drives with electronic limit switch and integrated radio receiver are connected directly to the power supply. The brown wire is connected together with the blue wire to the neutral conductor.




For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.

B01 drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).

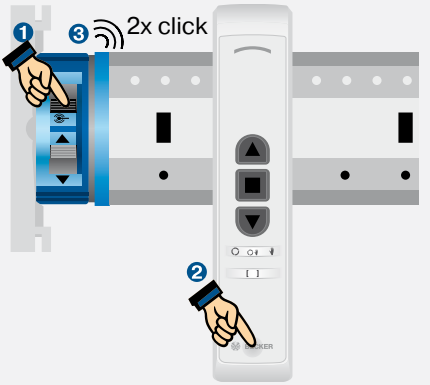


## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

## Programming the transmitter

Activate the drive by switching on the power supply (Power On) or by operating the radio switch into the position for 3 minutes in learning mode ❶. Then press the programming button on the required master transmitter ❷ until the drive clicks twice ❸.



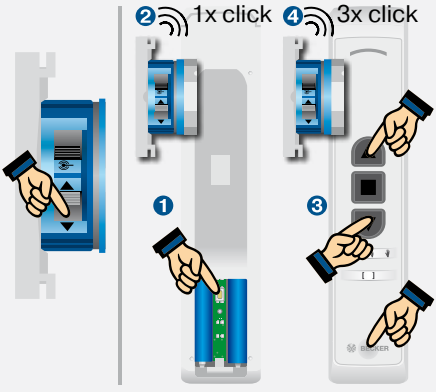

## Correcting the direction of redation

No limit positions may be programmed.

Via the switch on the drive: If the drive is redating in the wrong direction, reverse the direction switch on the drive.

With the transmitter: Press the master button ❶ under the battery compartment cover as many times as needed until the drive clicks once.

Then press the programming, UP, and DOWN buttons ❸ until the drive clicks three times ❹.



# DRIVE TYPE B01

## Setting the limit positions

### First, put the transmitter into master mode

Press the master button under the battery compartment cover as many times as needed until the drive clicks once.

### 1. Programming the upper limit position (in master mode)

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Move the roller shutter to the desired upper position. Then press the programming and UP buttons until the drive clicks once.

### 2. Programming the lower limit position (in master mode)

Ⓐ **To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).

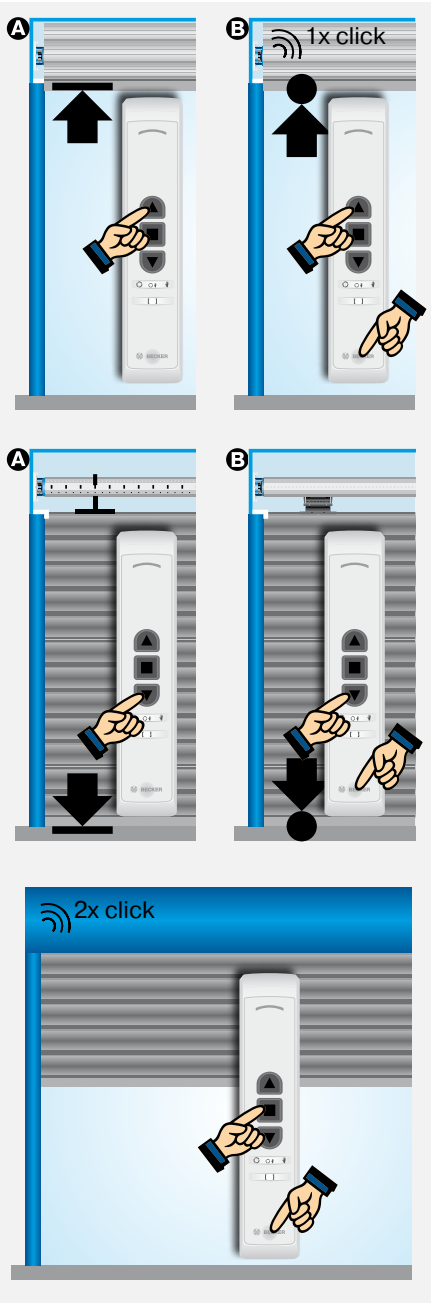
Ⓑ **To lower point**

Run the roller shutters to the desired position. Then press the programming button and the DOWN button until the drive clicks once.

### 3. Deleting the limit positions (in master mode)

Press the programming button and the STOP button until the drive clicks twice.

If the roller shutter is situated between the limit positions, both limit positions are deleted in the procedure. If the roller shutter is situated in one of the limit positions, only this position will be deleted.



## 4. Activating the anti-freeze mechanism at the top (in master mode)

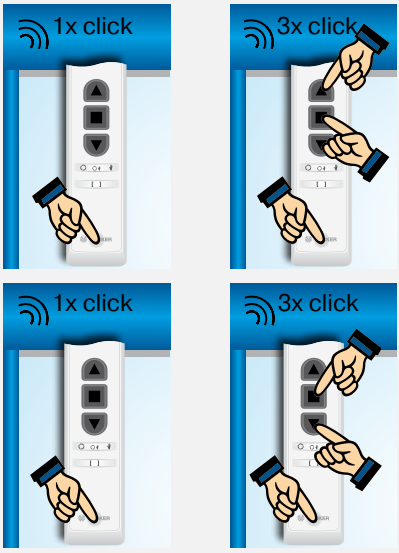
Run the roller shutter towards the upper stop. Then press the programming button until the drive clicks once. Then press the programming button, STOP button and UP button until the drive clicks three times.

## 5. Activating the fly screen predection function (in master mode)

Run the roller shutter to the upper limit position. Then press the programming button until the drive clicks once. Then press the programming, STOP, and DOWN buttons until the drive clicks three times.

## Leaving the master mode

Press the manual/auto button on the front of the transmitter until the manual/auto LED no longer flashes.




## Note:

In master mode, the drive operates in dead-man control mode. The drive indicates the lack of a limit position by briefly starting up, stopping and then continuing (limit position status indicator). Once the limit positions have been detected correctly 3 times in succession (3 opening and closing movements), the drive definitively saves the limit positions.

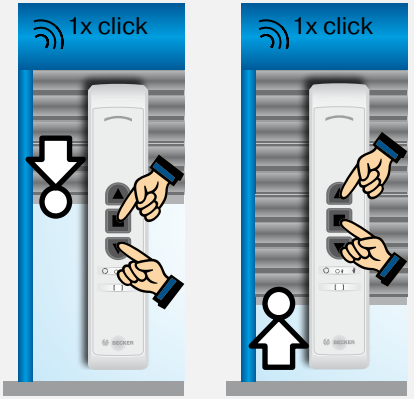
## 6. Programming the intermediate positions

Move the drive to the desired position and press the STOP and DOWN buttons (Intermediate position I) or STOP and UP buttons (Intermediate position II) until the drive clicks once.

To move to the corresponding intermediate position, press the DOWN button or UP button twice within one second (double tap).

## 7. Deleting an intermediate position

Run the drive to the position to be deleted and repeat the programming until the drive clicks twice.



# DRIVE TYPE N01

## Type plate

❶ Type designation: e.g. R8-17-N01

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8 | Rated torque |
| N | EnOcean radio drive |
| 01 | Drive type |

❷ Operating mode (short-period operation S2)
After 4 minutes of continuous operation, the drive must be allowed to cool off.

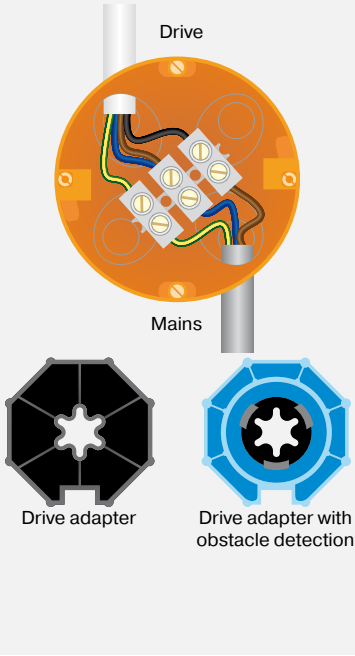
❸ Serial number: e.g. 20 08 52247

| | |
|---|---|
| 20 | Year 2020 |
| 08 | Calendar week |
| 52247 | Consecutive number |

❹ QR Code
Online information about the drive


## Connection

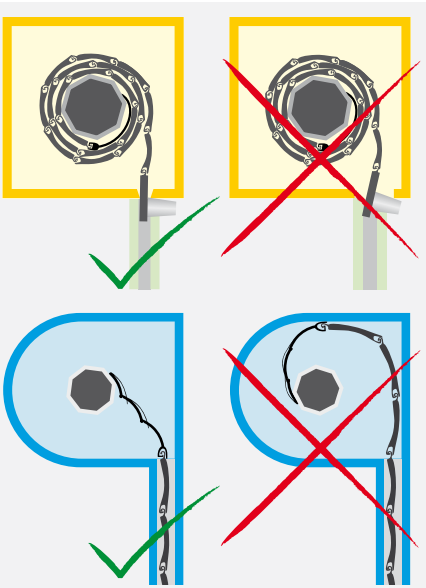
Drives with electronic limit switch and integrated radio receiver are connected directly to the power supply. The brown wire is connected together with the blue wire to the neutral conductor.




For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.

N01 drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).

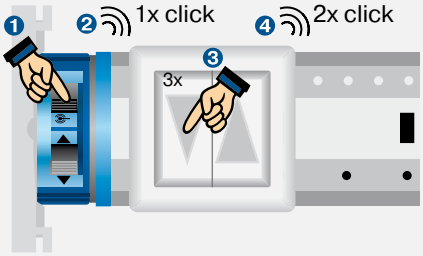


## Installation with anti-lifting devices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

## Programming the transmitter

Activate the drive by switching on the power supply (Power On – the drive clicks once) ❷) or by operating the radio switch into the position for 3 minutes in learning mode ❶. Then press a button on the EnOcean transmitter three times in quick succession ❸ until the drive clicks twice ❹.

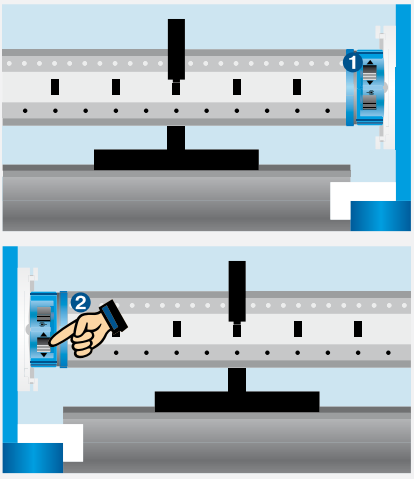



## Correcting the direction of redation

No limit positions may be programmed.

With the direction switch ❶ on the drive, the rotation direction is corrected ❷.

As illustrated by the example opposite, make sure that the switch is in the correct position for left and right installation.

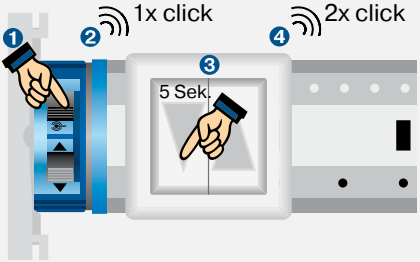


# DRIVE TYPE N01

## Setting the limit positions

### First, put the drive into setting mode

Activate the drive by switching on the power supply (Power On) or by operating the radio switch into the position for 3 minutes in learning mode ❶. The drive clicks once ❷. Then press a button on the EnOcean transmitter for 5 seconds ❸ until the drive clicks twice ❹.




### Note:

In setting mode, the up and down drive commands are performed with a delay time of 1 second.

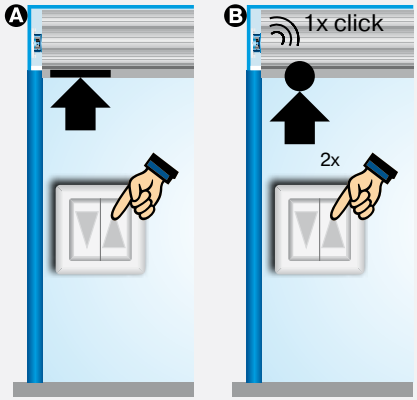
### 1. Programming the upper limit position (in setting mode)

Ⓐ **To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the roller shutters to the desired upper position. Then briefly press the UP button twice. The drive clicks once.



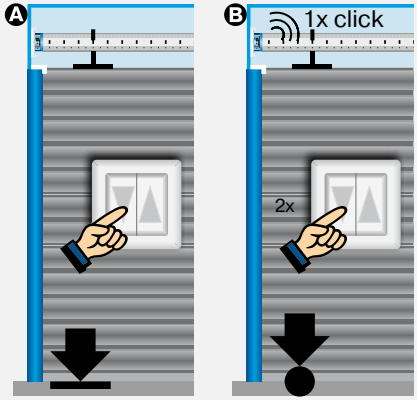

### 2. Programming the lower limit position (in setting mode)

Ⓐ **To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).

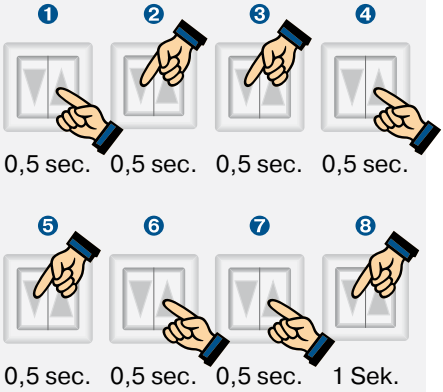
Ⓑ **To lower point**

Run the roller shutters to the desired position. Then press the DOWN button briefly twice until the drive clicks once.



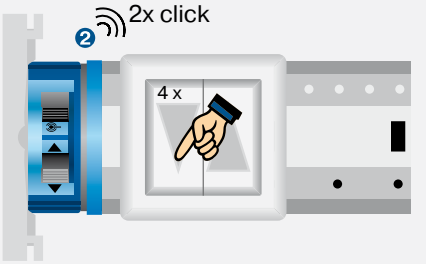
## 3. Deleting the limit positions (in setting mode)

Carry out the steps ❶ to ❽ as described in the adjacent deletion sequence. The drive does not perform any movement due to the delayed response in setting mode. The deletion process has been successfully completed when the drive clicks twice.




## Exiting setting mode

Press a button on the transmitter 4 times in quick succession ❶. The drive clicks twice ❷.



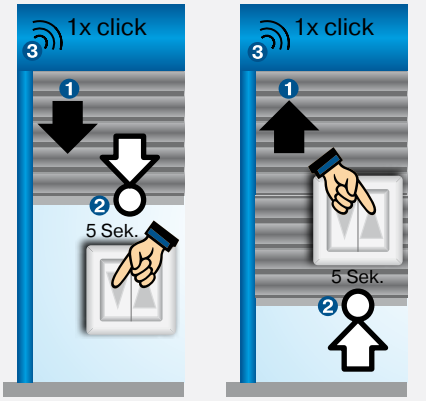

## Programming the intermediate positions

Ⓐ **Intermediate position I**

Run the roller shutter in the DOWN direction ❶. While moving downward, press the DOWN button at the desired position ❷ and hold it until the drive confirms the programming process with one click after 5 seconds ❸.

Ⓑ **Intermediate position II**

Run the roller shutter in the UP direction ❶. While moving upward, press the UP button at the desired position ❷ and hold it until the drive confirms the programming process with one click after 5 seconds ❸.




## Deleting the intermediate position

Press the UP or DOWN button ❶ and hold it until the drive moves to the intermediate position and confirms the deletion process with two clicks after 5 seconds ❷.

# DRIVE TYPE D01

## Type plate

❶ Type designation: e.g. R8-17-D01

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8 | Rated torque |
| D | DECT radio drive |
| 01 | Drive type |

❷ Operating mode (short-period operation S2)

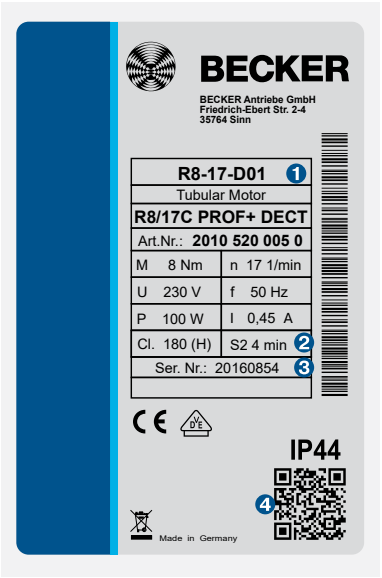
After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 20 16 0854

| | |
|---|---|
| 20 | Year 2020 |
| 16 | Calendar week |
| 0854 | Consecutive number |

❹ QR Code

Online information about the drive




## Connection

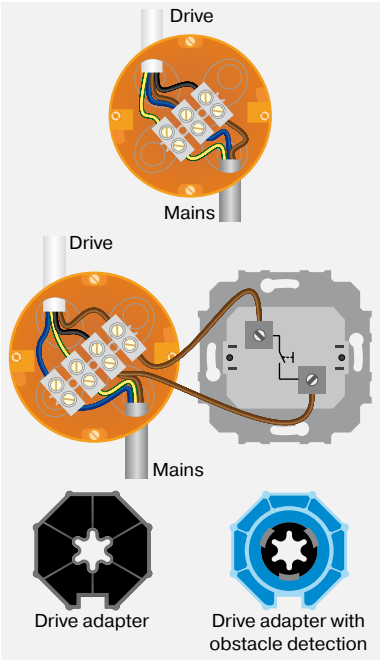
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.

### Connection with on-site operation with a single button

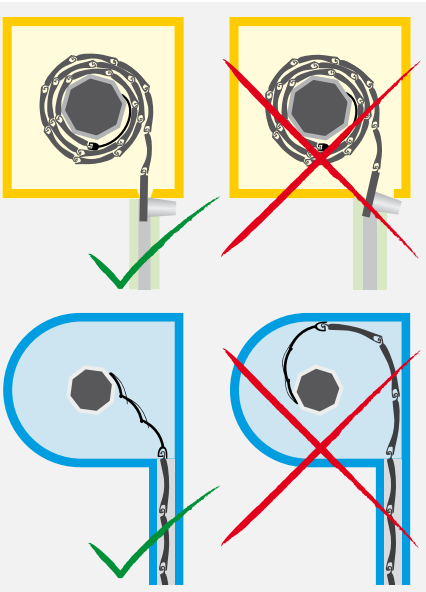
With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.

For the sensitive obstacle detection to be active, the drive adapter with object detection must be mounted on the drive.



D01 drives with electronic limit switching detect and program the limit positions automatically if stops exist. If no stops exist, limit switch points are programmed.

In order for the drive to detect the upper limit position correctly, a defined stop must be present (angled strip or mechanical stop).

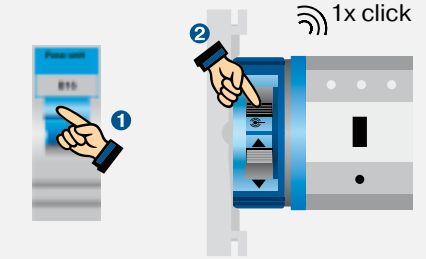


## Installation with anti-lifting evices

The anti-lifting device must be securely engaged and be pressing the roller shutter onto the window sill.

## Programming the DECT base station

Set the drive to programming mode for 3 minutes by switching the power on ❶ (drive clicks once) or by setting the radio switch ❷ into the position for 3 minutes in learning mode. Then follow the instructions on the DECT base station.



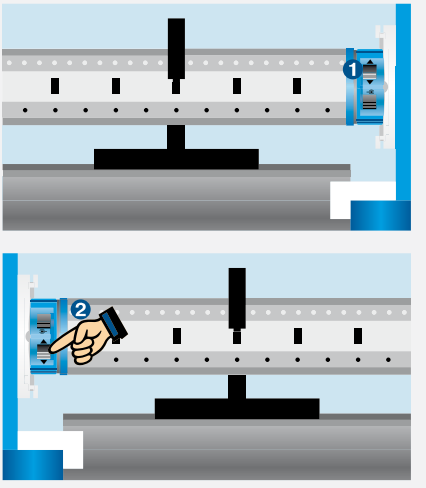

## Correcting the direction of redation

No limit positions may be programmed.

With the direction switch ❶ on the drive, the rotation direction is corrected ❷.

As illustrated by the example opposite, make sure that the switch is in the correct position for left and right installation.

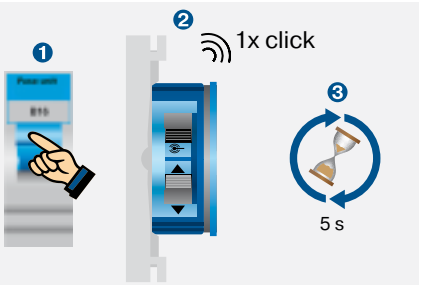
The drive has automatic running direction correction. Once the upper limit position has been programmed, the drive will stop during downward travel if the direction of rotation is incorrect, and will then click 3 times and correct its direction of rotation automatically.



# DRIVE TYPE D01

## Setting the limit positions via on-site operation

Switch on the power supply (Power On) ❶. The drive then clicks once ❷. Then wait 5 seconds ❸ before starting the programming.

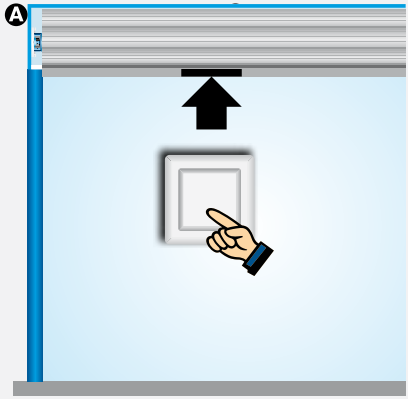



**Note:**

The drive runs in dead-man mode and travels alternately in the up and down directions once the button has been pressed for >0.5 seconds. Once both limit positions have been programmed, the push-button controls the drive after being briefly pressed in the UP-STOP-DOWN sequence.

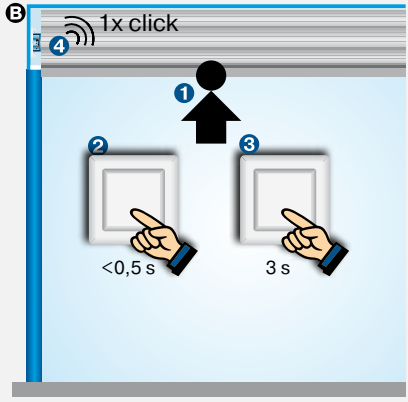
**Ⓐ To upper stop**

Run the roller shutter towards the upper stop until the drive stops automatically.




**Ⓑ To upper point**

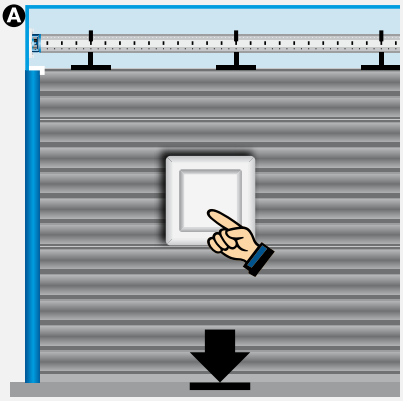
Run the roller shutters to the desired upper position ❶. Press the button very briefly at first ❷ and then immediately press it again for a slightly longer time ❸ until the drive clicks once ❹.



## 2. Programming the lower limit position (in setting mode)

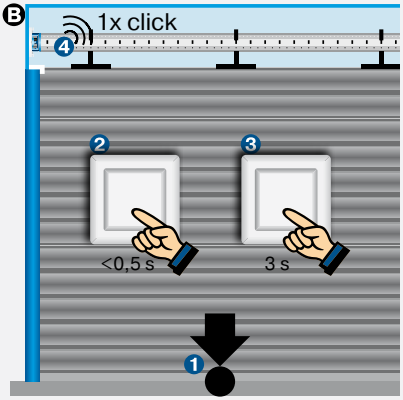
**Ⓐ To lower stop**

Run the roller shutter down until the drive switches off automatically (the drive adapter for obstacle detection must be used for the installation with springs).



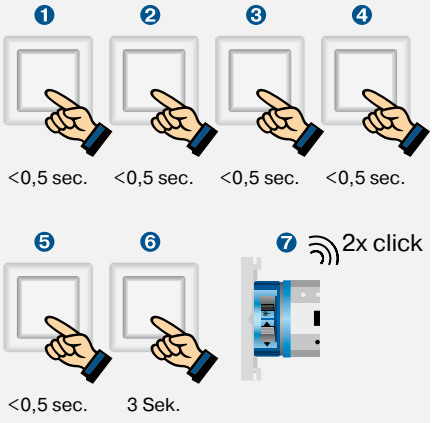

**Ⓑ To lower point**

Move the roller shutter to the desired lower position ❶. Press the button very briefly at first ❷ and then immediately press it again for a slightly longer time ❸ until the drive clicks once ❹.




## 3. Deleting the limit positions

Press the button very briefly 5 times in succession (steps ❶ to ❺). Immediately afterward, press the button once more for a slightly longer time ❻ until the drive clicks twice ❼.




## Note

The limit positions can also be programmed using the universal programming unit or the FRITZ!Box.

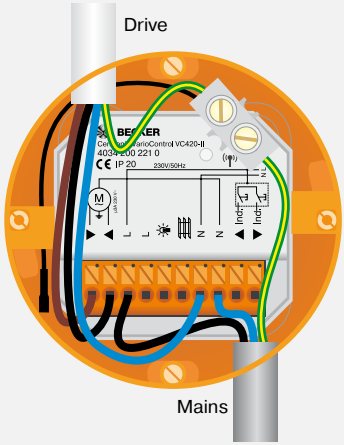
# CONTROL UNIT VC420-II

## Commissioning

### Connection

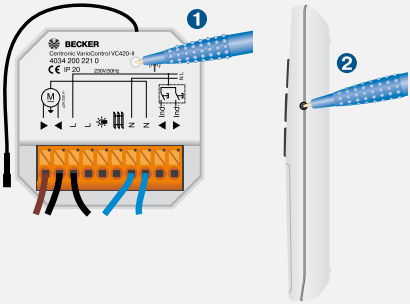
The external radio receiver VC420-II allows conventional drives to be converted to radio drives. An additional push-button input on the VC420-II enables operation via an external UP/DOWN push-button.

Connect the VC420-II as shown in the example opposite.



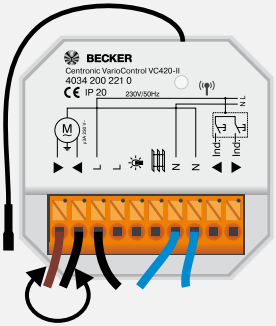

### Programming the master transmitter

Put the control unit into learning mode for 3 minutes by briefly pressing the radio learning button or by switching on the power supply (Power On) ❶. Then press the programming button on the required master transmitter ❷ until the control unit confirms the learning process with a short up/down command (3 seconds when installing new drives, 10 seconds to overwrite a previously programmed master transmitter).



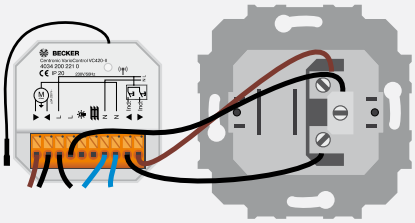

### Correcting the direction of redation

The direction can be reversed by swapping round the brown and black wires of the drive connecting cable.



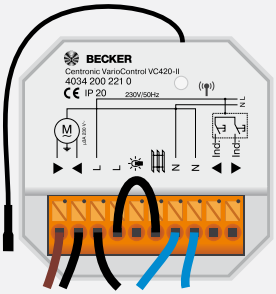
## Individual inputs

An UP/DOWN button can be connected at the individual inputs. Press the button and keep it pressed for a time to trigger the UP/DOWN command. Press the button briefly to trigger a stop command. Press the UP/DOWN button briefly twice to move to the corresponding intermediate position.



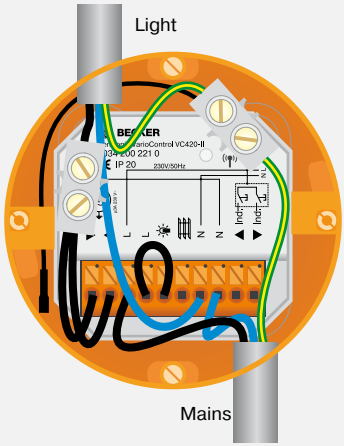
## Changeover: Roller shutter/awning/Venetian blind modes

By bridging terminals L and ≡ the control unit is switched from roller shutter/awning mode to venetian blind mode.




## Changeover: Light controller/drive controller

By bridging terminals L and ☼ the control unit operates in light control mode. After an up or down command, there is no shutdown after the running time. An up or down command switches the light on, and a stop command switches the light off again.



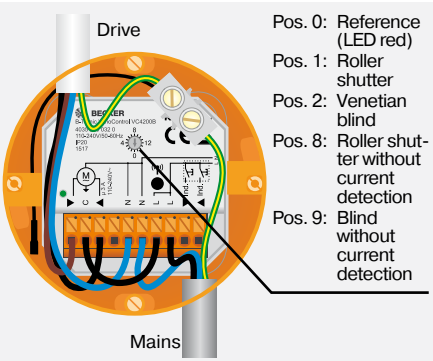
# CONTROL UNIT VC4200B

## Commissioning

### Connecting the drive controller

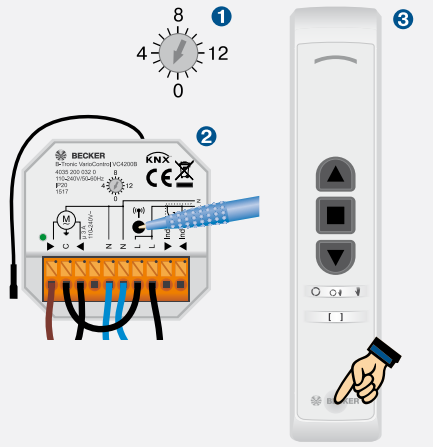
Conventional drives (tubular drives, blind drives) for roller shutter and sun protection applications can be connected to the bidirectional radio receiver VC4200B. The VC4200B uses current detection to automatically calculate the travel time between limit positions, and reports the position of the shading solution back to the transmitter or to CentralControl. To do so, once the shading solution has been installed it must be moved all the way to the limit positions three times without stopping.

Current detection is deactivated in function switch positions 8 (roller shutter) and 9 (blind). The travel time must be programmed in order for position information to be displayed in CentralControl. To do so, run the shading solution to the upper limit position in Master mode, and press the programming button and the UP button for 3 seconds. Then run the shading solution to the lower limit position and press the programming button and the DOWN button for 3 seconds.




### Programming the transmitter

Switch the function switch to pos. 1 (Example: roller shutter) ❶. Then press the radio programming button for 3 seconds or switch the power on for 3 minutes to put the control unit into programming mode ❷. Then press the programming button on the desired transmitter ❸ until the control unit confirms the learning process with a green LED light.

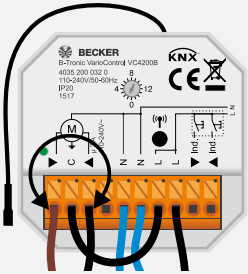



### Note:

Before programming, the relevant function must also be set at the transmitter.

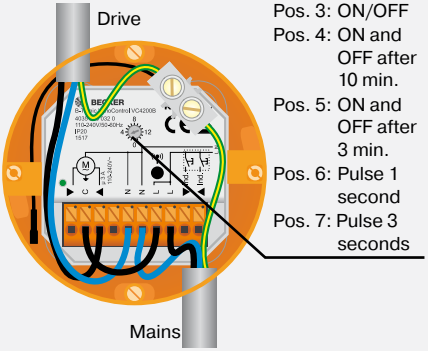
## Correcting the direction of redation

The direction can be reversed by swapping round the brown and black wires of the drive connecting cable. The direction can also be reversed using the Becker hand-held transmitter (see B01 drive type, adjusting the direction of rotation).



## Connection of light controller/ radio switch

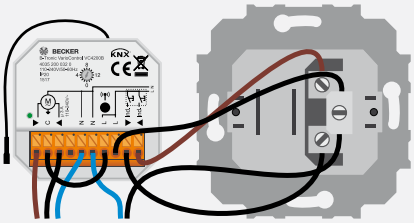
The VC4200B can be operated as a radio switch. The function switch must be put in the desired position before programming the transmitter.




## Individual inputs

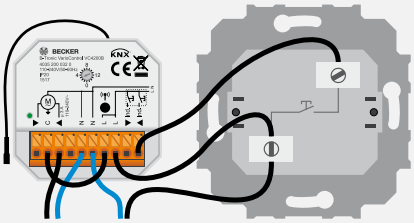
Function: Roller shutters/Venetian blind

An UP/DOWN button can be connected at the individual inputs. Press the button and keep it pressed for a time to trigger the UP/DOWN command. Press the button briefly to trigger a stop command. Press the UP/DOWN button briefly twice to move to the corresponding intermediate position.



## Function: Switching actuator

A push-button can be connected to the individual input „UP“. When the pushbutton is pressed, the „UP“ output is switched on or off.

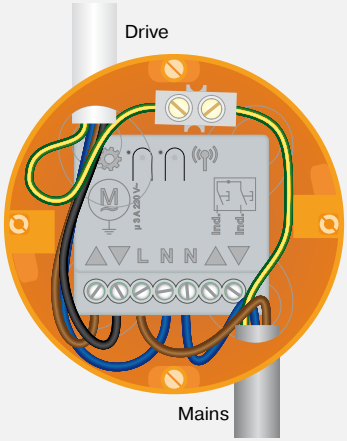


# CONTROL UNIT VC420 PLUS

## Commissioning

### Connecting the drive controller

Conventional drives (tubular drives, blind drives) for roller shutter and sun protection applications can be connected to the bidirectional radio receiver VC420 PLUS. The VC420 PLUS calculates the position of the shading solution and reports this back to the transmitter or to CentralControl. To this end, the travel path must be set after installation, as must the maximum tilt in the case of Venetian blinds.

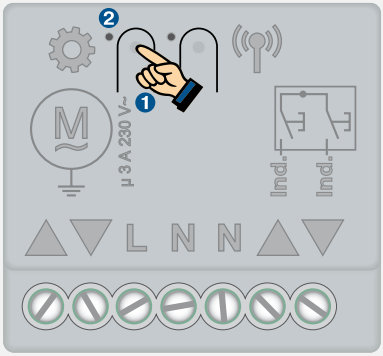



### Checking or switching the operating mode

By briefly pressing the mode button ❶ the current operating mode is indicated by an orange flashing of the LED ❷.

By pressing and holding the mode button for a longer time ❶ the control unit switches to the next mode. By briefly pressing again, the desired mode can be selected. After the mode has been selected, the LED lights up ❷ green after a short time, thus confirming the mode change.

To reset the operating mode, press and hold the mode button ❶ until the LED ❷ blinks red and then lights up green.

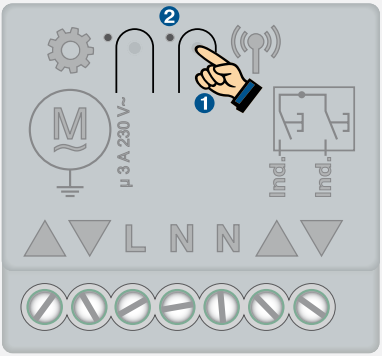



| | |
|---|---|
| Roller shutter (state on delivery) | 1x flash |
| Sun protection | 2x flash |
| Venetian blind | 3x flash |
| Switching actuator | 4x flash |

## Establishing programming mode

By switching on the power (Power On) or by pressing the radio learning button ❶ the VC420 PLUS enters learning mode. The LED ❷ blinks green for 3 minutes (learning mode Centronic and CentronicPlus) and then orange (learning mode CentronicPlus).

If there is already an existing network (mesh installation), the commissioning must be performed with a transmitter already in the network.



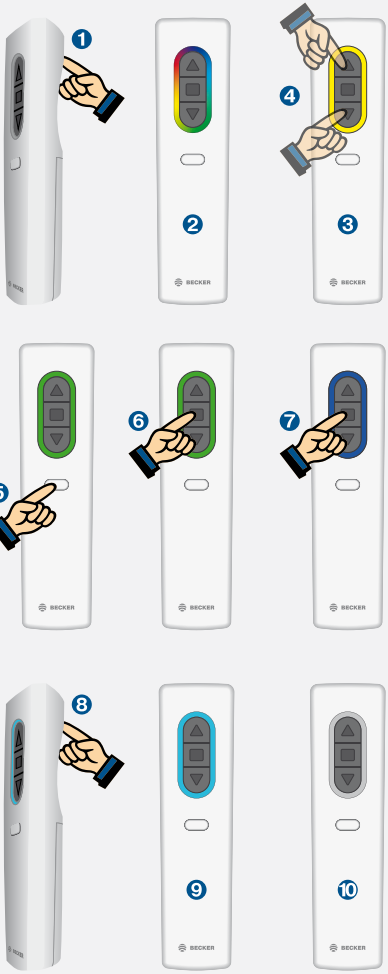

## Programming a CentronicPlus transmitter

Pressing the programming button for 3 seconds ❶ the transmitter searches for CentronicPlus devices that are in learning mode. The search is indicated by a continuous color change of the LED ring ❷. The transmitter connects to the VC420 PLUS, and the LED ring lights up yellow ❸ and the VC420 PLUS performs a movement. If multiple receivers are in learning mode at the same time, the desired receiver can be selected using the UP and DOWN buttons ❹. With a multi-channel hand transmitter, the desired transmission channel is selected using the function button ❺.

By pressing the STOP button, the transmission channel is activated, and the LED ring lights up green ❻. By pressing the STOP button again, the transmission channel can be deactivated, and the LED ring lights up blue ❼. Pressing the STOP button again reactivates the transmission channel ❽ the LED ring lights up green again ❻.

Briefly pressing the programming button ❽ causes a switch to the setting mode. The LED ring pulses light ❾.

By pressing the programming button for 3 seconds ❽ the hand transmitter is switched to normal operation. The LED ring turns off ❿.



# CONTROL UNIT VC420 PLUS

## Programming the Centronic master transmitter

Once programming mode has been established on the VC420 PLUS, press the programming button on the desired master transmitter until the control unit confirms the programming operation with a brief UP/DOWN command (3 seconds for initial installation, 10 seconds to overwrite a previously programmed master transmitter).

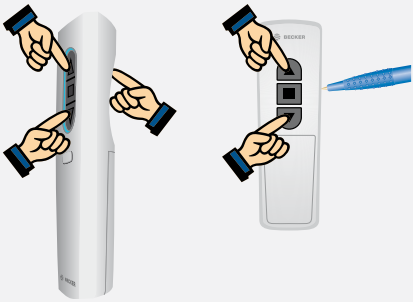
## Activating setting mode after programming the CentronicPlus transmitter

Pressing the programming button for 3 seconds ❶ does the transmitter connect to a receiver from the installation (network). After a continuous color change of the LED ring ❷ the receiver confirms the connection. The LED ring indicates that the transmission channel is active by lighting up green or blue ❸ or inactive ❹ is switched. With the UP and DOWN buttons, the desired VC420 PLUS can be selected ❺. By briefly pressing the programming button ❻ the setting mode is activated, and the LED ring pulses light blue ❼.


## Changing the direction of rotation using the hand-held transmitter

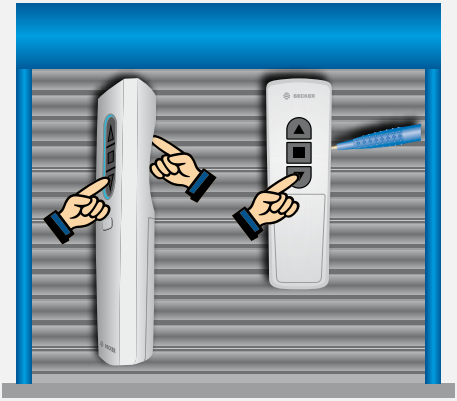
The direction of rotation can only be changed if no travel path has been set.

Press the programming button, the UP button and the DOWN button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms the direction of rotation change.

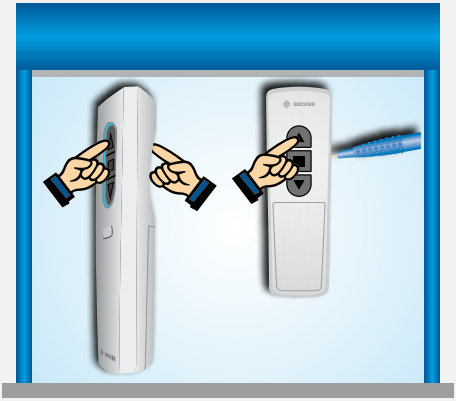


## Setting the travel path

Run the shading solution (roller shutter, sun protection or Venetian blind) to the lower limit position. Press the programming button and the DOWN button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms.

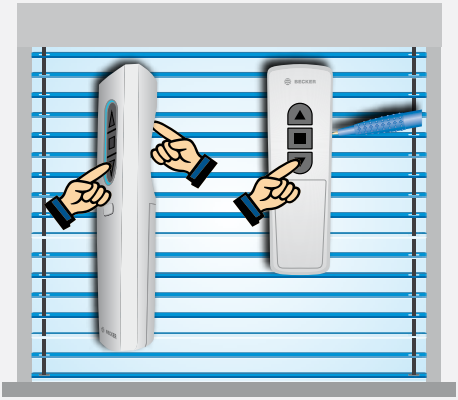


Then run the shading solution (roller shutter, sun protection or Venetian blind) to the upper limit position. Press the programming button and the UP button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms.



## Setting the maximum tilt (Venetian blinds only)

Move the Venetian blind from the lower limit position in the UP direction until the slats are completely open. Press the programming button and the DOWN button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms.



# CONTROL UNIT VC420 PLUS

## Deleting the travel path and the maximum tilt (for Venetian blinds)

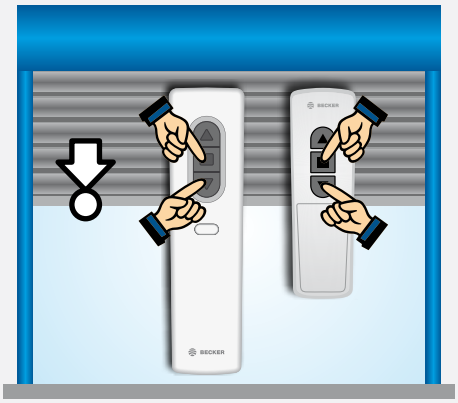
Run the shading solution (roller shutter, sun protection or Venetian blind) between the limit positions. Press the programming button and the STOP button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms.

## Setting the intermediate positions

### Programming the intermediate position I

Run the shading solution to the desired intermediate position (with tilt in Venetian blind mode) and press the STOP button and the DOWN button on the CentronicPlus transmitter or on the Centronic transmitter until the control unit confirms the setting by performing a travel movement.

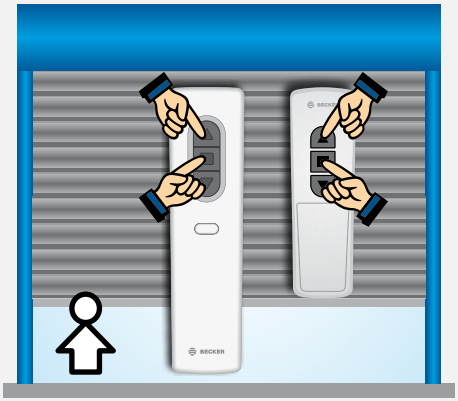
To travel to intermediate position I, press the DOWN button twice within one second.



### Programming the intermediate position II

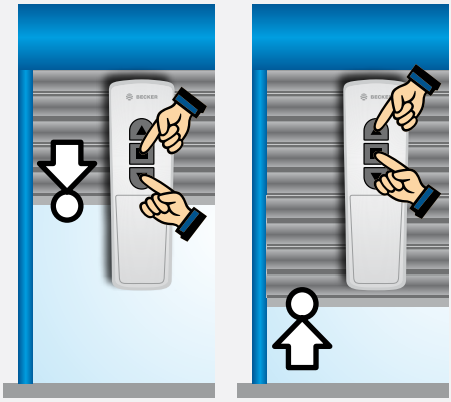
Run the shading solution to the desired intermediate position (with tilt in Venetian blind mode) and press the STOP button and the UP button on the CentronicPlus transmitter or on the Centronic transmitter until the control unit confirms the setting by performing a travel movement.

To travel to intermediate position II, press the UP button twice within one second.



## Deleting intermediate position I/intermediate position II

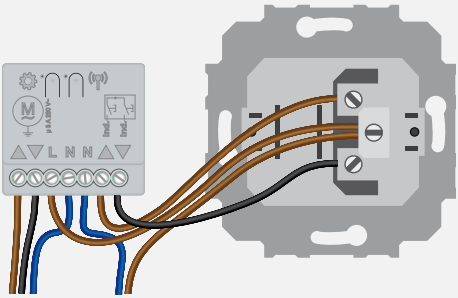
Press the UP or DOWN button twice to move the shading solution to the intermediate position you want to delete, and repeat the programming operation with the CentronicPlus or Centronic transmitter until the control unit confirms the deletion by performing two travel movements.



## Individual inputs

Function: Roller shutters/Sun protection/Venetian blind

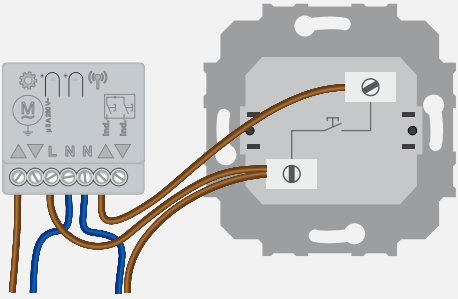
An UP/DOWN button can be connected at the individual inputs. Press the button and keep it pressed for a time to trigger the UP/DOWN command. Press the button briefly to trigger a stop command. Press the UP or DOWN button briefly twice to move to the corresponding intermediate position.



## Function: Switching actuator

Function: On/Off

A push-button can be connected to the individual input „UP“. When the pushbutton is pressed, the „UP“ output is switched on or off. The “UP” output is activated by pressing the UP or DOWN button on a CentronicPlus or Centronic transmitter, and is deactivated again by pressing the STOP button.

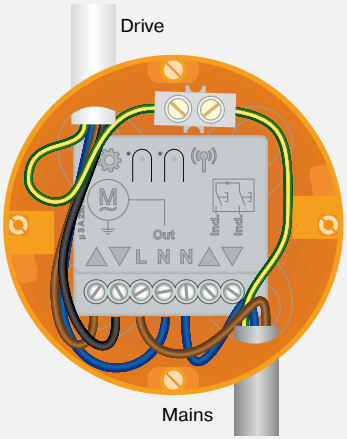


# CONTROL UNIT VC420 DECT

## Commissioning

### Connection

Conventional drives (tubular drives, venetian blind drives) for roller shutter and sun protection applications can be connected to the bidirectional radio receiver VC420 DECT. The VC420 DECT calculates the respective position of the shading element and reports it back to the DECT base station.

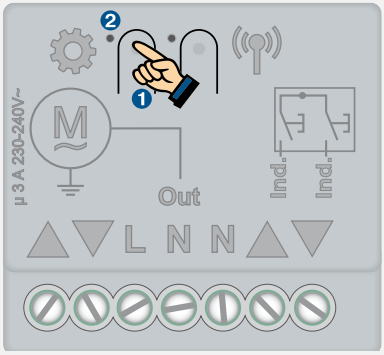



### Check or switch the operating mode

By briefly pressing the mode button ❶ the current operating mode is indicated by an orange flashing of the LED ❷.

By pressing and holding the mode button for a longer time ❶ the control unit switches to the next mode. The LED ❷ lights up green after a short time, thus confirming the mode change.

To reset the operating mode, press and hold the mode button ❶ until the LED ❷ blinks red and then lights up green.

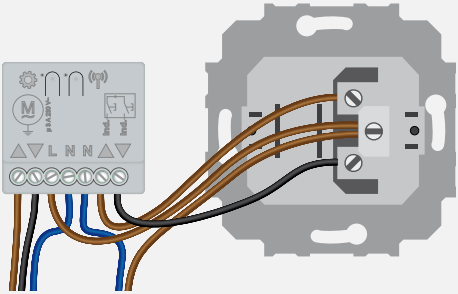



| | |
|---|---|
| Roller shutter (state on delivery) | 1x flash |
| Venetian blind | 3x flash |

## Individual inputs

Function: Roller shutters/Venetian blind

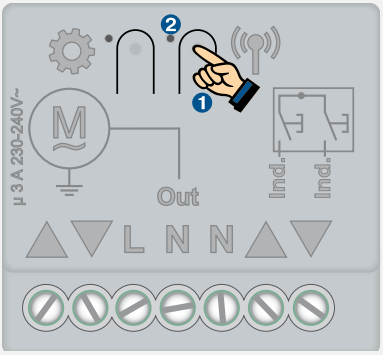
An UP/DOWN button can be connected at the individual inputs. Press the button and keep it pressed for a time to trigger the UP/DOWN command. Press the button briefly to trigger a stop command. Press the UP or DOWN button briefly twice to move to the corresponding intermediate position.




## Establishing programming mode

By switching on the power (Power On) or by pressing the radio learning button ❶ the VC420 DECT enters learning mode. The LED ❷ blinks green for 3 minutes. If the VC420 DECT was already connected to another DECT base station, it will attempt to re-establish the existing connection for 3 minutes. During this time, the LED blinks ❷ orange. Afterward, the VC420 DECT switches to learning mode for another 3 minutes.

To reset the radio programming, press the button ❶ until the LED ❷ starts blinking red and then lights up green. While the LED is green, release the button ❶.




## Additional functions

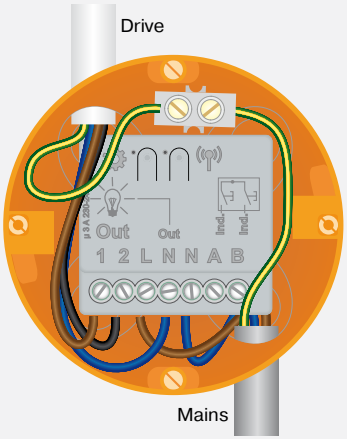
The additional functions, such as rotation direction reversal, running time, current-based end position detection, etc., can be configured in the FRITZ!Box.

# CONTROL UNIT LC422 DECT

## Commissioning

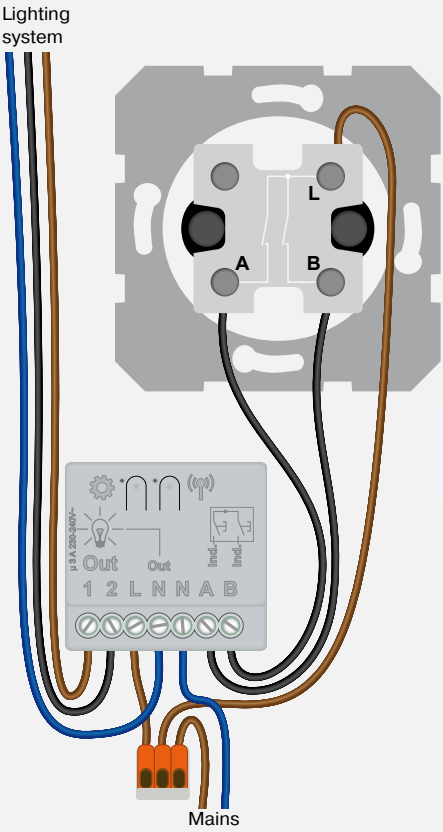
### Connection

The LC422 DECT control unit has 2 switching outputs as well as 2 push-button inputs. A lighting system can be connected to each switching output. The LC422 DECT reports the status of the outputs to the base station. The function of the outputs can be configured in the FRITZ!Box.




### Connection button

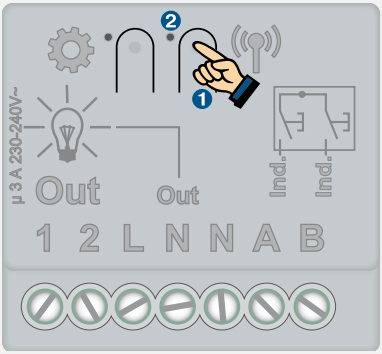
DECT radio signals can be generated via the two push-button inputs. The function of the inputs can be configured in the FRITZ!Box.



## Establishing programming mode

By switching on the power (Power On) or by pressing the radio learning button ❶ the LC422 DECT enters learning mode. The LED ❷ blinks green for 3 minutes. If the LC422 DECT was already connected to another DECT base station, it will attempt to re-establish the existing connection for 3 minutes. During this time, the LED blinks ❷ orange. ChatGPT: Afterward, the LC422 DECT switches to learning mode for another 3 minutes.

To reset the radio programming, press the button ❶ until the LED ❷ starts blinking red and then lights up green. While the LED is green, release the button ❶.

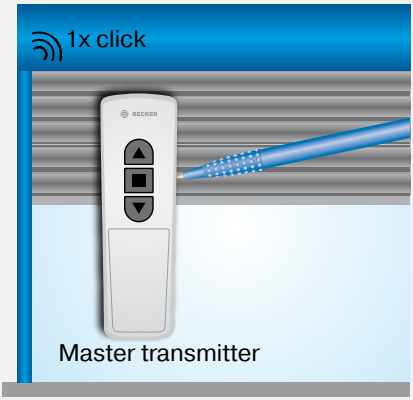


# CONTROL UNIT SC431-II

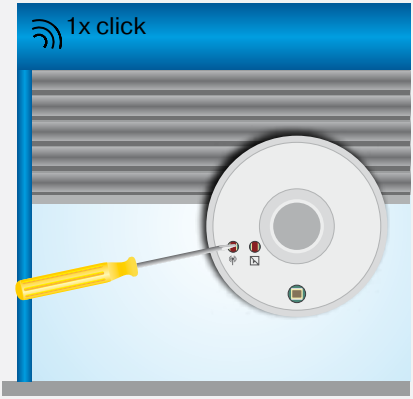
## Commissioning the radio-controlled light sensor SC431-II

### Programming the SC431-II

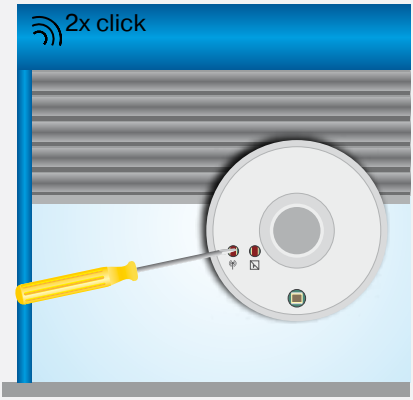
1. Press the programming button on the right-hand side of the master transmitter (the transmitter that was programmed first) until the receiver clicks once.




2. Now press the programming button of the SC431-II until the receiver clicks once.

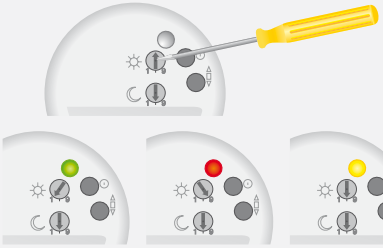



3. Now press the programming button of the SC431-II again, until the receiver clicks twice.



## Setting the sun protection function

1. By turning the sun threshold regulator, you can adjust the the sun threshold setting with the aid of the indicator lamp.



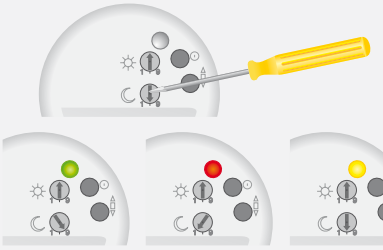
LED green
Sun protection function is executed

LED red
Sun protection function is not executed

LED flashes yellow
Redary switch in position 0
Sun protection function deactivated

## Setting the twilight function

2. By turning the twilight threshold regulator, you can adjust the the twilight threshold setting with the aid of the indicator lamp.



LED green
Twilight function is not executed

LED red
Below threshold value – twilight function is executed

LED flashes yellow
Redary switch in position 0
Twilight function deactivated

## Manual/auto button

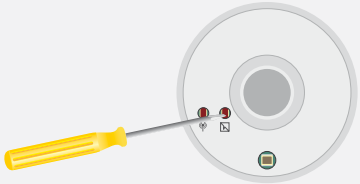
You can switch the automatic commands (sun protection and twilight function) on/off by pressing the manual-auto button.


Automatic off

Automatic on

## Glass breakage function

Press the ⧅ button until the LED indicator lights up green. The glass breakage function is now active. By pressing the button again ⧅ the glass breakage function is deactivated. The LED indicator lights up red.



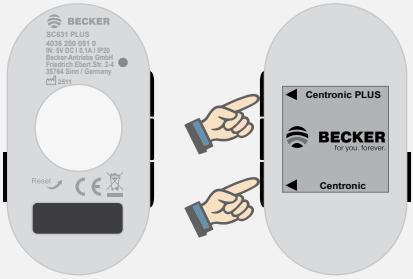
# CONTROL UNIT SC631 PLUS

## Commissioning of the wireless glass light sensor SC631 PLUS

### Attach the sensor to the glass

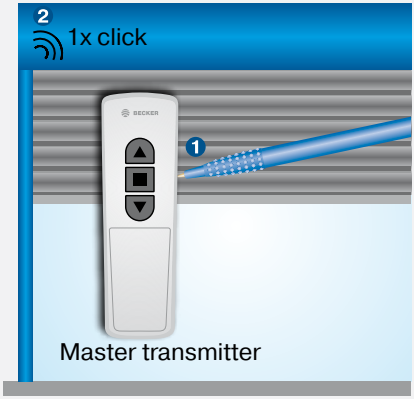
Install the sensor on the windowpane using the adhesive pad on the back. The incoming light wakes the sensor.

Now select the radio system.

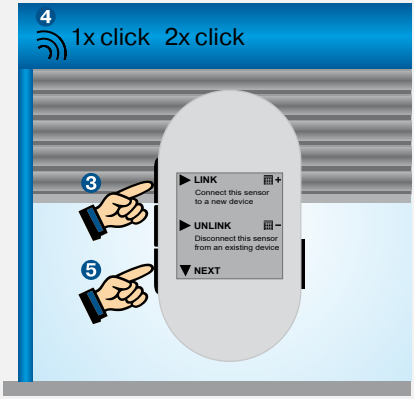



### Teach into a Centronic receiver

Press the programming button ❶, on the right side of the master transmitter until the receiver confirms ❷.




Press the upper LINK button ❸ until the receiver confirms once and then twice ❹.



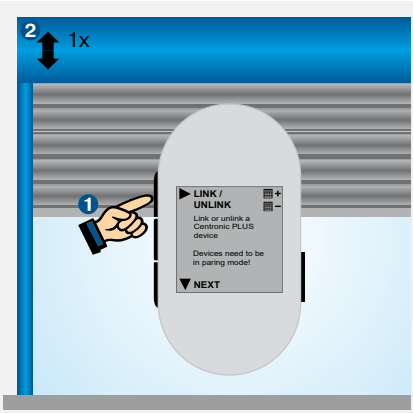

To exit the settings, press the lower button 4 times ❺.

## Teach into a CentronicPLUS receiver

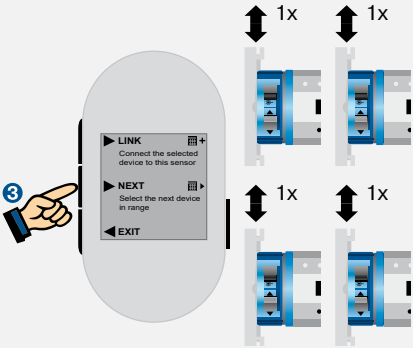
Press the upper LINK button ❶.

The SC631 PLUS searches for all receivers that are in learning mode, for example by being powered on.

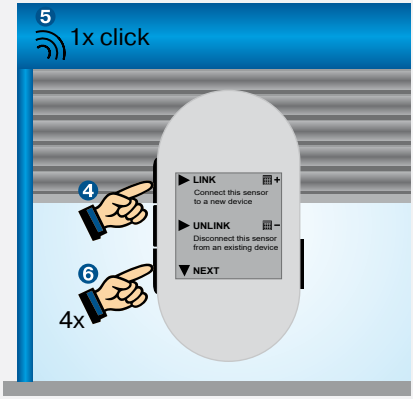
After a short time, the receiver with the best reception quality confirms ❷.




If necessary, use the middle NEXT button ❸ to select another receiver.




By pressing the upper LINK button ❹ the SC631 PLUS is taught into the selected receiver. The receiver confirms the pairing ❺.




To exit the settings, press the lower button 4 times ❻.

# CONTROL UNIT SC631 PLUS

## Open the menu

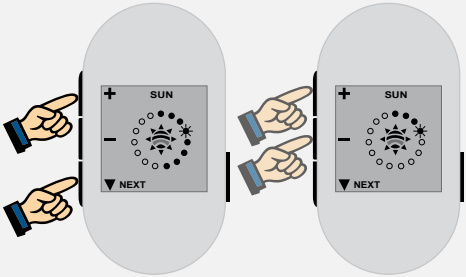
By pressing the up and down buttons simultaneously, the menu level is opened.

## Menu SUN (Sun threshold)

The dark dots indicate the set sun value.

The dot displayed as a sun indicates the currently measured sun value.

The threshold can be set using the upper two buttons.

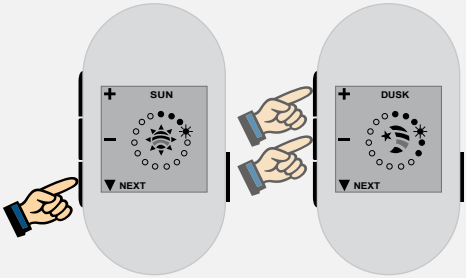



## Menu DUSK (Dusk threshold)

By pressing the lower NEXT button, the menu for setting the dusk threshold is opened.

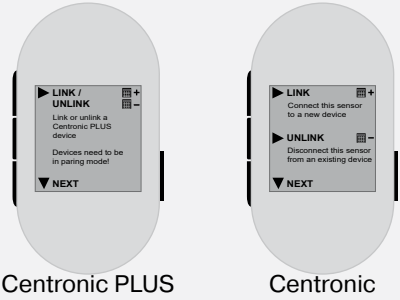
The dot displayed as a sun indicates the currently measured dusk value.

The threshold can be set using the upper two buttons.




## Menu LINK/UNLINK

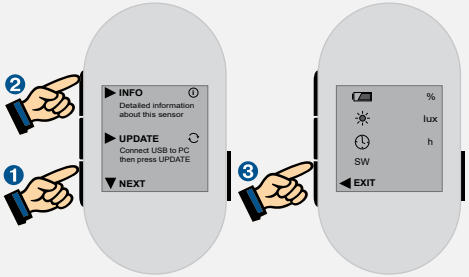
After pressing the lower NEXT button, the menu for linking/unlinking additional receivers for Centronic or CentronicPLUS devices appears.




Centronic PLUS Centronic

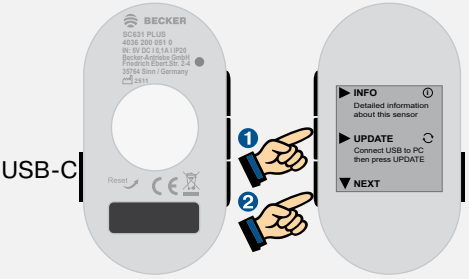
## Menu INFO/UPDATE

After pressing the lower NEXT button again ❶ the INFO/UPDATE menu is opened. Under the INFO item ❷ the battery voltage (%), the currently measured brightness (kLux), the time since restart (h), and the software version are displayed. Using the lower EXIT button ❸ the INFO/UPDATE menu is called up again.

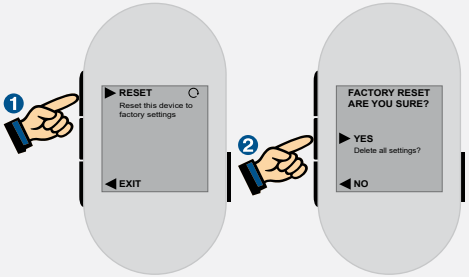



On the side, at the back, there is a USB-C connection located under a protective cap. Via this connection, under the UPDATE menu item ❶ the software can be updated.

Pressing the lower NEXT button ❷ opens the RESET menu.

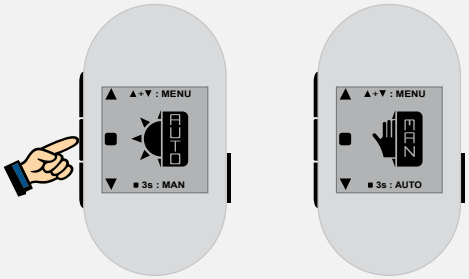



By pressing the upper RESET button ❶ the reset menu is opened. After confirming with the middle YES button ❷ the SC631 PLUS is reset to factory settings.




## Switching Manual/Automatic

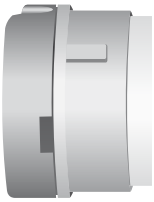
By pressing the middle STOP button for 3 seconds, you can switch between manual and automatic mode.



# GENERAL

## Sun protection-Drive types

**Type M:**
Drive with mechanical limit switching



**Type S(+):**
(1997-2003)
Drive with electronic limit switching

**Type SF(+):**
(2000-2003)
Drive with electronic limit switching and radio receiver (40 MHz)


**Type PS(+):**
(2000-2002)
Drive with electronic limit switching and point to point programming

**Type SEB(+):**
(2003-2016)
Drive with electronic limit switching and reversal (fabric stretching)

**Type PSF(+):**
(from 2005)
Drive with Centronic radio receiver (868,3 MHz), point to point programming

**Type SEI1 / Type E16:**
(from 2012 / since 2018)
Drive with electronic limit switching, for locking systems

**Type SEFI1 / Type C16:**
(from 2012 / since 2018)
Drive with Centronic radio receiver (868,3 MHz) for locking systemse

### Type E18:

(from 2015)

Drive with electronic limit switching and sensitive obstruction detection for ZIP screens

### Type C18:

(from 2015)

Drive with Centronic radio receiver (868,3 MHz) and sensitive obstruction detection for ZIP screens

### Type E12:

(from 2017)

Drive with electronic limit switching, point to point programming and reversal (fabric stretching)

### Type C12:

(from 2017)

Drive with Centronic radio receiver (868,3 MHz) and reversal (fabric stretching)

### Type E15:

(from 2017)

Drive with electronic limit switching, point to point programming

### Type C12 PLUS:

(from 2021)

Drive with Centronic radio receiver, CentronicPlus and reversal (fabric stretching)

### Type C18 PLUS:

(from 2021)

Drive with Centronic radio receiver, CentronicPlus and sensitive obstruction detection for ZIP screens

### Type C16 PLUS:

(from 2025)

Drive with Centronic radio receiver, CentronicPlus for locking systemse

# GENERAL

## Which type of sun protection drive has been installed?

The limit positions of the latest generation of drives with electronic limit switching can be deleted and redefined via the existing control panel. To do this, proceed as follows:

First, run the drive for 6 seconds in the Retract or Extend direction.

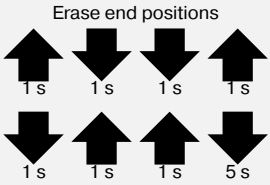
Then perform the travel movements described opposite to delete the limit positions. If the drive then clicks twice, it is one of the following types: E18, E12 or E15.

If the drive is installed in a ZIP screen, it is an E18 type drive.

To identify the types E12 and E15, move the drive in any direction.

If the drive stops after roughly 3 seconds then continues running it is an E15 type drive.

If the drive stops after roughly 10 seconds then continues running it is an E12 type drive.

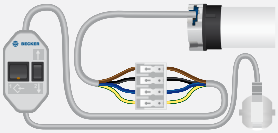



All other drives can be identified using the adjustment set. The wires of the drive connection cable are connected to the wires of the adjustment set with matching colors.

Press the programming button ❶ for 2 seconds.

If the drive produces a loud noise and the tube does not turn, the drive is a type M. Replace the programming unit immediately with one that is suitable for an M drive.

If there is no reaction or a single or double click, it is one of the types S(+), PS(+), SEB(+), SE I1, SEF I1, SF(+), PSF(+), C16, C12, C12 PLUS, C18, or C18 PLUS.



Press the travel button to move in both directions.

If the drive shows no reaction, it is a drive with an integrated radio receiver of type SF(+) (up to 2002), type PSF(+) (2003 to 2017), type SEFI1 (from 2012), type C18 (from 2017), C12 (from 2017), type C16 (from 2018), C12 PLUS (from 2021), or type C18 PLUS (from 2021).

If the system is equipped with a locking system and the drive does not react, it is a C16 or SEF I1 drive type, or an E16 or SE I1 drive type if it does react.

If the drive is installed in a ZIP screen, it is a C18 or C18 PLUS drive type.

Run the shading solution in the Extend direction ❶ and press the programming button again ❷ for 2 seconds.

If there is no reaction or a single click, move the shading element in the retraction direction until the drive stops at the end stop or a previously programmed switch-off point. If the drive clicks twice, press the programming button again until the drive clicks once. Then move the shading element in the retraction direction until the drive stops at the end stop or a previously programmed switch-off point.

Both limit positions are now programmed in the drive.

Press the programming button again ❶ for 2 seconds. If the drive clicks twice, it is an S(+) drive type (up to 2003).

If the drive does not react, it is a PS(+) or SEB(+) type.

Press the travel and programming button to run the the deletion sequence:

- Press and hold the programming button ❶
- Press and hold the ⬇ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

Press the programming button ❶ for 2 seconds twice consecutively.

If the drive clicks once and then twice, it is a type SEB(+) (from 2003 onwards).

If the drive clicks only once, it is a type PS(+) (from 2003 onwards).




# DRIVE TYPE M (M04)

## Type plate

❶ Type designation: e.g. R8-17-M04

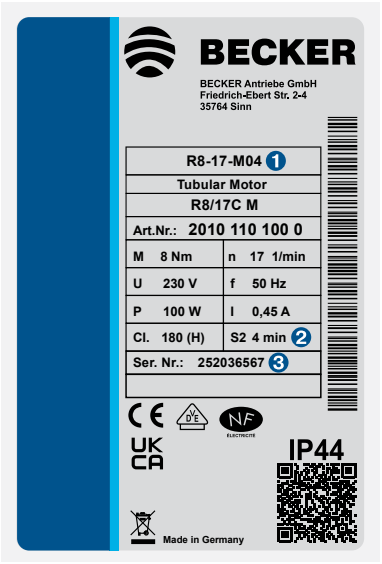
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 8/17 | Rated torque-output speed |
| M | Mechanical limit switching |
| 04 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 252036567

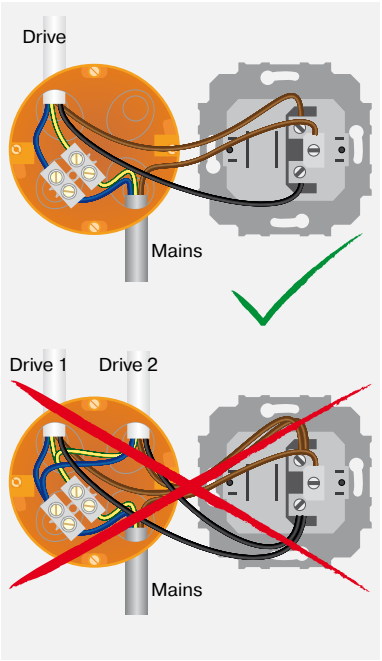
| | |
|---|---|
| 25 | Year 2025 |
| 20 | Calendar week |
| 36567 | Consecutive number |




## Connection

Drives with mechanical limit switching must not be connected in parallel to a control point. Discharge of the capacitor could damage the limit switches. This would cause the limit positions to be “overrun”.

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.



## Information

Before installation, make sure that the drive adapter safety catch has engaged (is screwed tight).

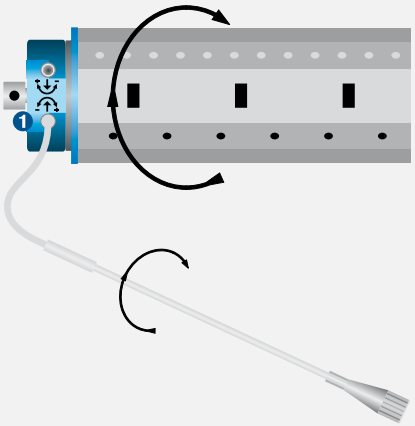
Mark the position of the drive adapter on the tube and drill a 4 mm hole at this point.

Secure the drive adapter against axial displacement in the tube using a screw or a rivet.

The arrow on the drive head indicates the direction of redation at ❶. The limit position is set on the corresponding adjuster, for example, with the flexible setting tool (item no. 4933 200 002 0).

Turning in the + direction increases the range; turning in the - direction reduces it.

The barrel must not be turned more than 38 revolutions in one direction.



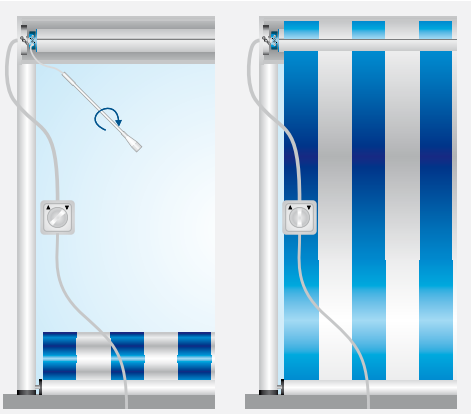
# DRIVE TYPE M (M04)

## Setting the limit positions

### 1. Setting the extend limit position

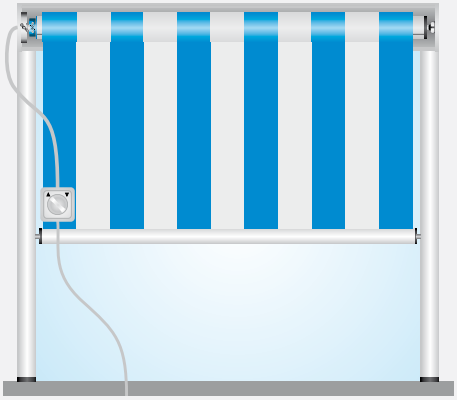
After the tube is installed, move the drive in the extend direction until it stops automatically. Using the flexible setting tool, turn the corresponding adjuster in the + direction (clockwise) until the tube is in a suitable position for connecting the shading solution to the tube.

Connect the shading solution to the tube.

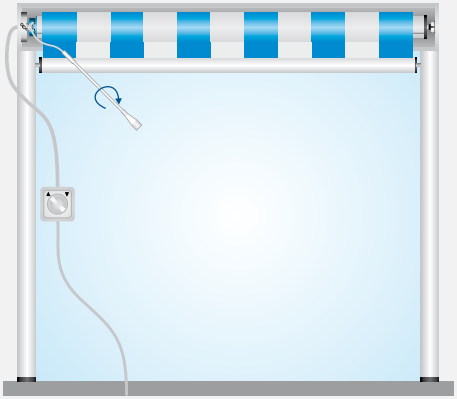


Retract the shading solution until the drive switches off automatically via the limit switch for the retract limit position.

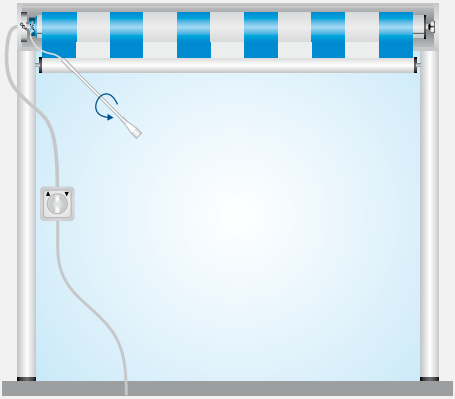
Note: When delivered (from the factory), the limit switch range is preset to 2 revolutions in the retract and extend directions. While retracting, the drive switches off after 4-5 revolutions.



Turn the corresponding adjuster in the + direction (clockwise) using the flexible setting tool until the shading solution is in the retract limit position.

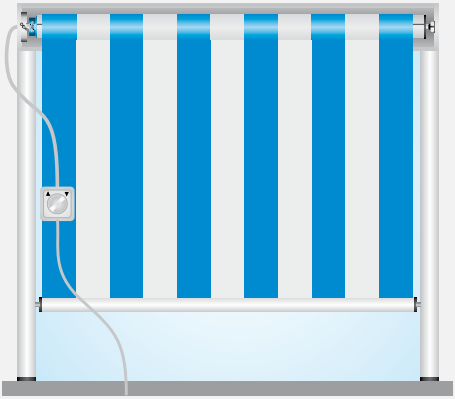


Switch off the retracting mechanism. Using the flexible setting tool, turn the adjuster for the Extend limit position 3-10 revolutions in the - direction (depending on how many times the fabric is wrapped around the tube when the shading solution is extended).

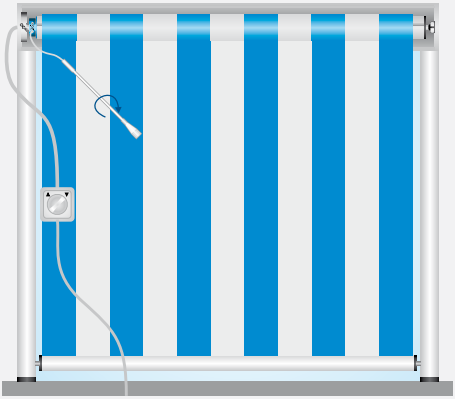


## 2. Setting the retract limit position

Run the shading solution in the extend direction until the drive switches off automatically when the limit switch for the extend limit position is reached.



Using the flexible setting tool, turn the adjuster for the extend limit position in the + direction (clockwise) until the desired extend position is reached.



# DRIVE TYPE S(+)

## Type plate

❶ Type designation: e.g. R 20/17 S+

| | |
|---|---|
| R | Size of drive (tube diameter)<br>R - 45mm<br>L - 58mm |
| 20/17 | Rated torque-output speed |
| S | Electronic limit switching for sun protection |
| + | Higher closing force for cassette awnings |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 05 48 50572

| | |
|---|---|
| 05 | Year 2005 |
| 48 | Calendar week |
| 50572 | Consecutive number |


## Connection

Several drives with electronic limit switching can be connected in parallel to a control unit. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

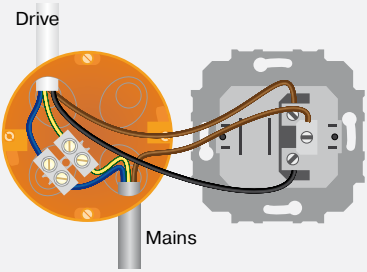
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.

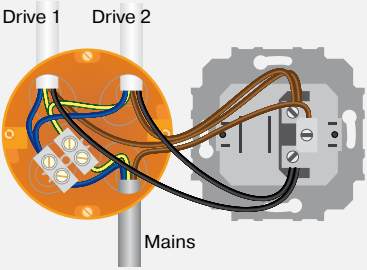
The following applies to operator controls with a 5A contact load rating:

R8/17 S - R12/17 S(+) =
max. 5 drives

R20/17 S(+) - R60/17 S(+) =
max. 3 drives

L70/17 S(+) - L120/11 S(+) =
max. 2 drives

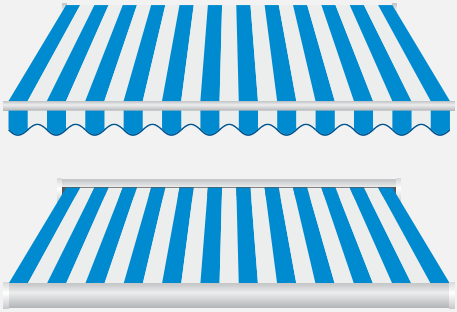


S(+) drives with electronic limit switching detect and program the retract limit position automatically if a permanent stop exists.

## Drives Type S

S drives are used to operate screens, awnings and conservatory shading.

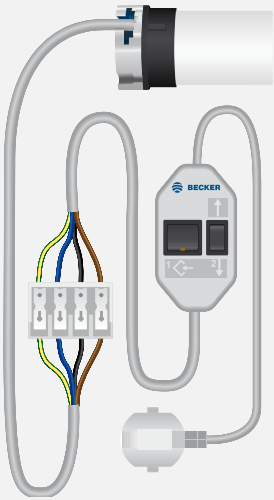


## Drives Type S+

S+ drives are used to operate cassette awnings that require a higher closing torque. The cassette is always closed completely.

The limit positions can be set via the programming unit.

Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



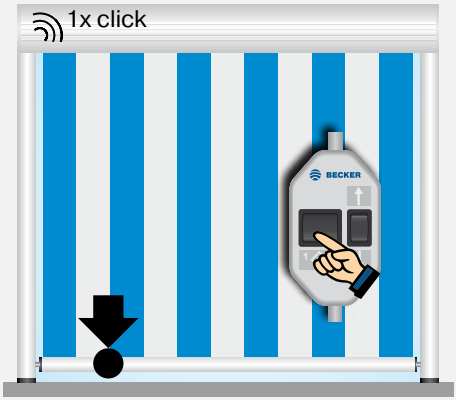
# DRIVE TYPE S(+)

## Setting the limit positions using the programming unit

### 1. Programming the extend limit position using the programming unit

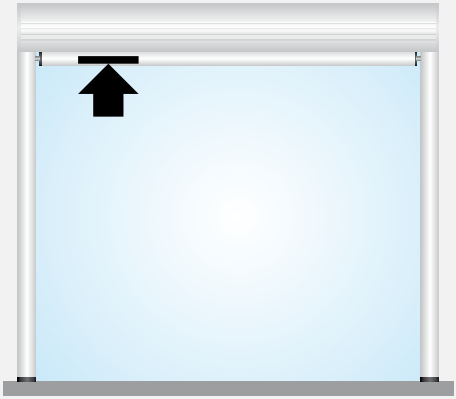
Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

Run the shading solution to the desired position and press the programming button until the drive clicks once.




### 2. Programming the retract limit position using the programming unit

Run the shading solution towards the upper stop until the drive stops automatically.



## 3. Deleting the limit positions using the programming unit

Press the programming button on the programming unit until the drive clicks twice.

# DRIVE TYPE PS(+)

## Type plate

❶ Type designation: e.g. R 30/17 C PS+

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 30/17 | Rated torque-output speed |
| C | Plug-in connecting cable |
| P | Point to point programming |
| S | Electronic limit switching for sun protection |
| + | Higher closing force for cassette awnings |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 09 01 961657

| | |
|---|---|
| 09 | Year 2009 |
| 01 | Calendar week |
| 961657 | Consecutive number |


## Connection

Several drives with electronic limit switching can be connected in parallel to a control unit. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

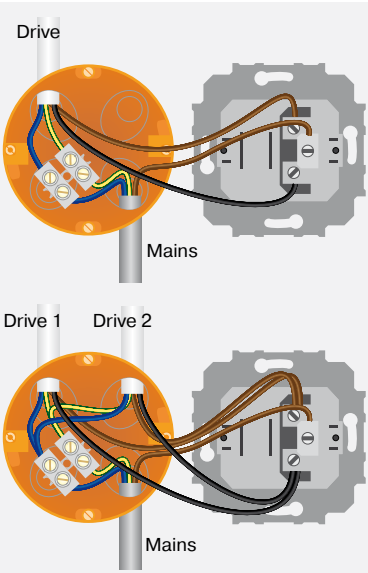
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.

The following applies to operator controls with a 5A contact load rating:

R5/20 PS - R12/17 C PS(+) =
max. 5 drives

R20/17 C PS(+) - R60/17 C PS(+) =
max. 3 drives

L70/17 C PS(+) - L120/11 C PS(+) =
max. 2 drives



# Information

PS(+) drives with electronic limit switching detect and program the Retract limit position automatically if a permanent stop exists.

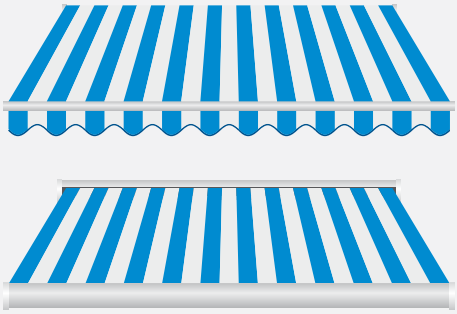
If no stop exists, a limit switch-off point is programmed.

## Drives Type PS

PS drives are used to operate screens, awnings and conservatory shading.

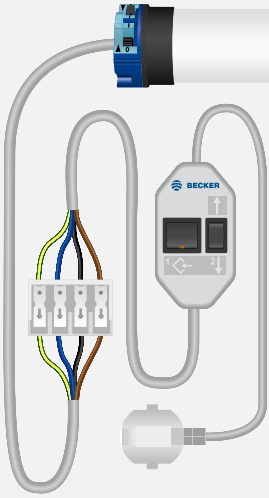
## Drives Type PS+

PS+ drives are used to operate cassette awnings that require a higher closing torque. The cassette is always closed completely.



The limit positions can be set using the programming unit or the switch on the drive head.

Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.

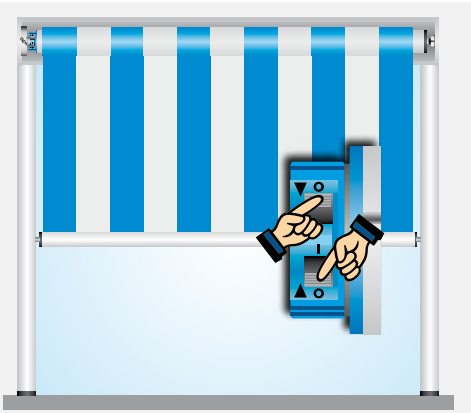


# DRIVE TYPE PS(+)

## Setting the limit positions with the switches

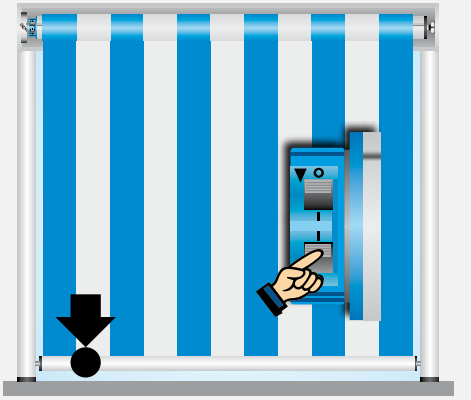
### 1. Deleting both limit positions with the switches

Set both switches to O and execute a short drive command.



### 2. Programming the extend limit position

Run the shading solution to the desired position and change the corresponding switch from O to I.



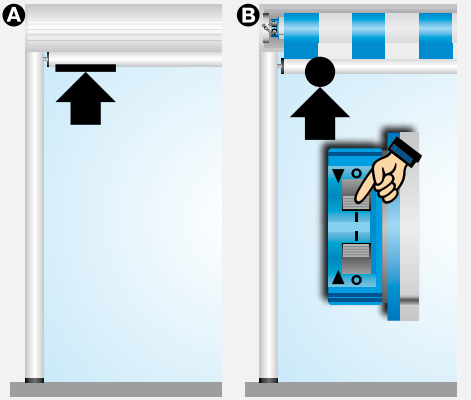
### 3. Programming the retract limit position

Ⓐ **Retract limit position stop**

Run the shading solution towards the stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired position and change the corresponding switch from O to I.



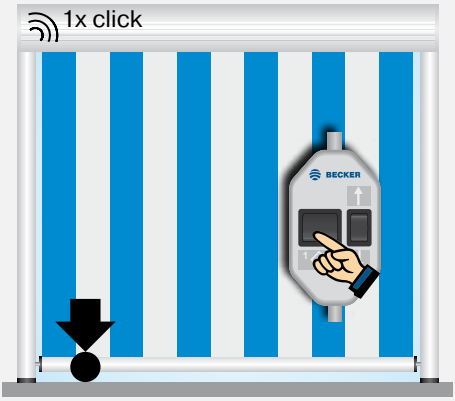
# Setting the limit positions using the programming unit

## 1. Programming the extend limit position using the programming unit

Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

At least one switch on the drive head must be in the position **I**.

Run the shading solution to the desired position and press the programming button until the drive clicks once.



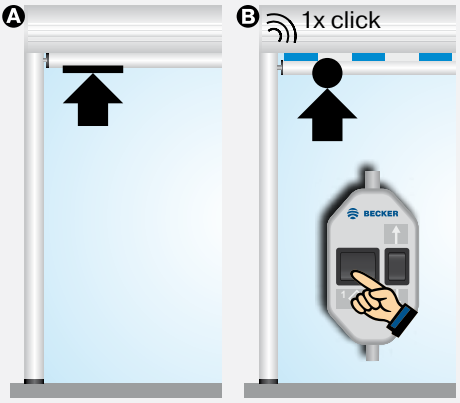

## 2. Programming the retract limit position using the programming unit

Ⓐ **To retract limit position stop**

Run the shading solution towards the stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired upper position and press the programming button on the programming unit until the drive clicks once.




## 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- Press and hold the ⬇ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.

# DRIVE TYPE E15

## Type plate

❶ Type designation: e.g. R 30-17-E15

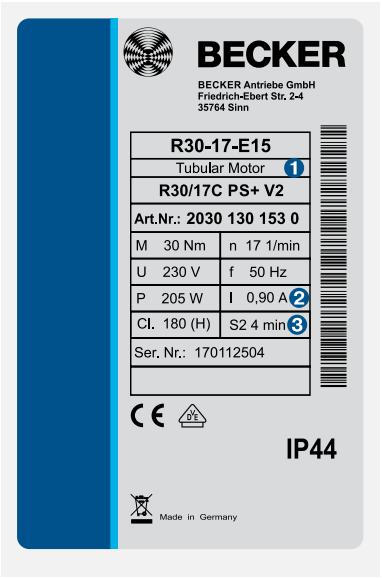
| | |
|---|---|
| R | Size of drive<br>(tube diameter)<br>R - 45mm<br>L - 58mm |
| 30-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 15 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 17 01 12504

| | |
|---|---|
| 17 | Year 2017 |
| 01 | Calendar week |
| 12504 | Consecutive number |




## Connection

Several drives with electronic limit switching can be connected in parallel to a control unit. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

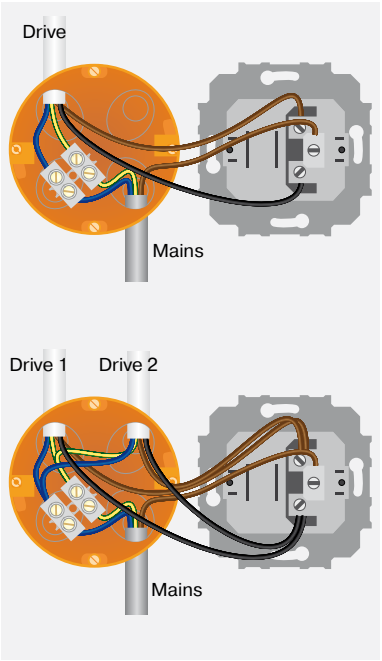
The following applies to operator controls with a 5A contact load rating:

R8-17-E15 bis R12-17-E15 =
max. 5 drives

R20-17-E15 bis R60-17-E15 =
max. 3 drives

L70-17-E15 bis L120-11-E15 =
max. 2 drives

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.



## Stop behaviour

The E15 can be switched between increased and reduced stop behaviour.

Increased stop behaviour with cassette awnings

Reduced stop behaviour with open awnings, screens, etc.

## Setting the limit positions

The limit positions can be set in 2 different ways:

❶. Programming unit

❷. Operator control unit


## Setting the stop behaviour

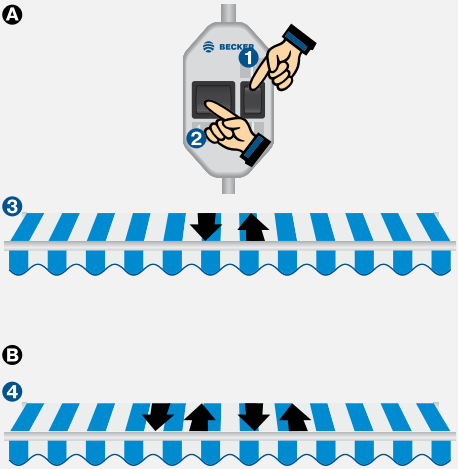
On delivery, the 45 diameter and 58 diameter drive types have an increased stop behaviour. The stop behaviour can only be changed during the first 3 runs towards the upper stop.

**Ⓐ Switching on the reduced stop behaviour**

Move the shading solution in the retract direction ❶ and also press the programming button before it reaches the upper limit position ❷. Keep holding both buttons pressed until the shading solution confirms the changeover by extending and retracting once ❸.

**Ⓑ Switching on increased stop behaviour**

Repeat the procedure under Ⓐ until the drive confirms the changeover by extending and retracting twice ❹.



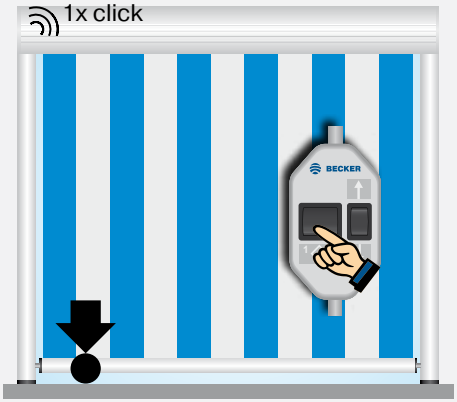
# DRIVE TYPE E15

## Setting the limit positions using the programming unit

### 1. Programming the extend limit position using the programming unit

Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

Run the shading solution to the desired position and press the programming button until the drive clicks once.



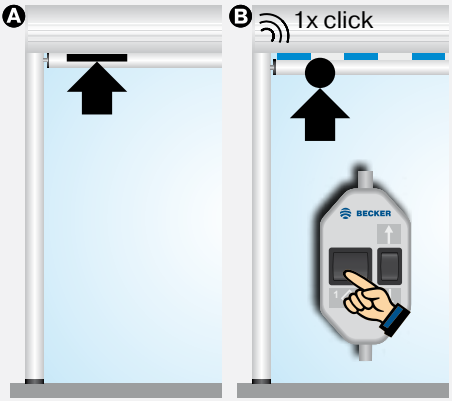

### 2. Programming the retract limit position using the programming unit

Ⓐ **To retract limit position stop**

Run the shading solution towards the stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired upper position and press the programming button on the programming unit until the drive clicks once.




### 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- Press and hold the ⬇ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

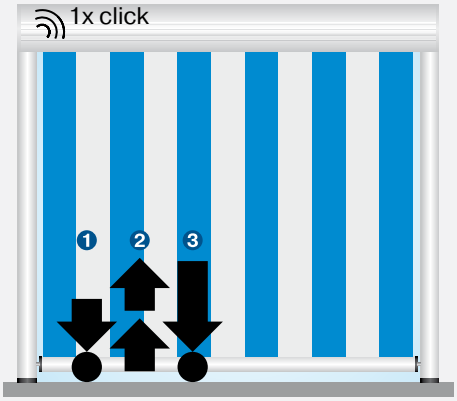
If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted. In terms of special functions, the drive reverts to the as-delivered condition.

# Setting the limit positions using the operator control

## 1. Setting the extend limit position using the operator control

**To lower point**

Run the shading solution to the lower limit position ❶. Then move the shading element twice briefly in the upward direction, with a 1-second pause between each movement ❷ and then again in the downward direction until the drive stops automatically and clicks once after 3 seconds ❸.



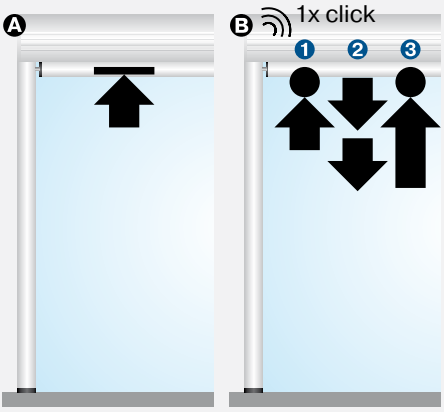

## 2. Setting the retract limit position using the operator control

Ⓐ **To upper stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the shading solution to the upper limit position ❶. Then move the shading element twice briefly in the extension direction, with a 1-second pause between each movement ❷ and then again in the retraction direction until the drive stops automatically and clicks once after 3 seconds ❸.

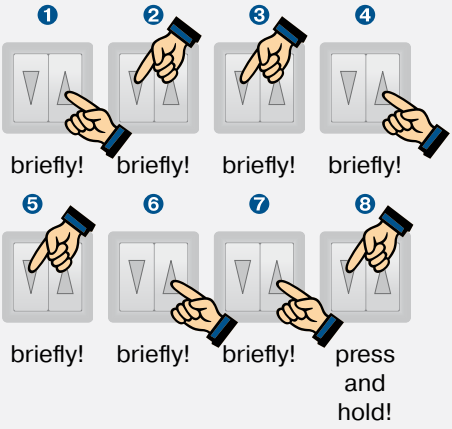



## 3. Deleting the limit positions using the operator control

Run the drive for 6 seconds in the retract or extend direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite at one second intervals until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be issued after every short drive command.



# DRIVE TYPE E12

## Type plate

❶ Type designation: e.g. R30-17-E12

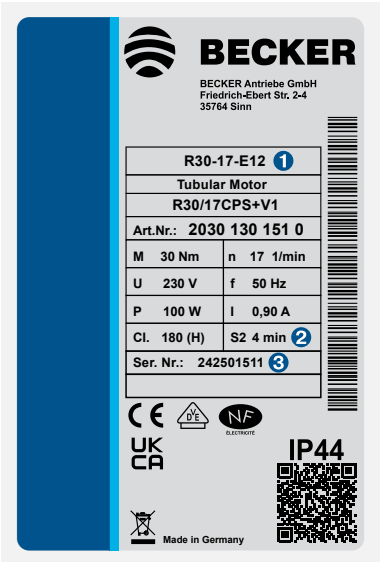
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 30-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 12 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 242501511

| | |
|---|---|
| 24 | Year 2024 |
| 25 | Calendar week |
| 01511 | Consecutive number |




## Connection

Several drives with electronic limit switching can be connected in parallel to a control unit. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

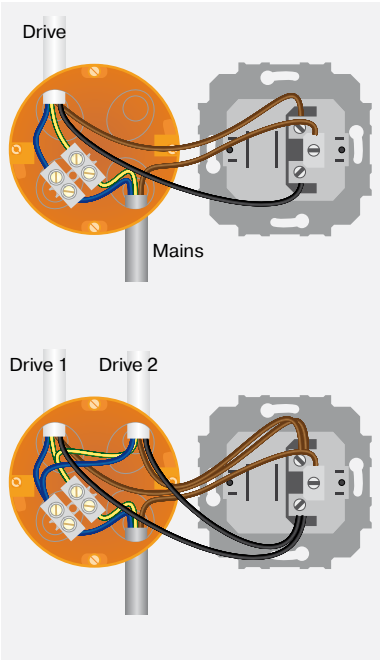
The following applies to operator controls with a 5A contact load rating:

R8-17-E12 bis R12-17-E12 =
max. 5 drives

R20-17-E12 bis R60-17-E12 =
max. 3 drives

L70-17-E12 bis L120-11-E12 =
max. 2 drives

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.



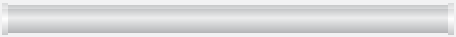
## Autoinstall

The E12 can automatically detect and program the optimum maximum Extend limit position for articulate-darm and cassette awnings via the Autoinstall function.

## Stop behaviour

The E12 can be switched between increased and reduced stop behaviour.

Increased stop behaviour with cassette awnings



Reduced stop behaviour with open awnings, screens, etc.

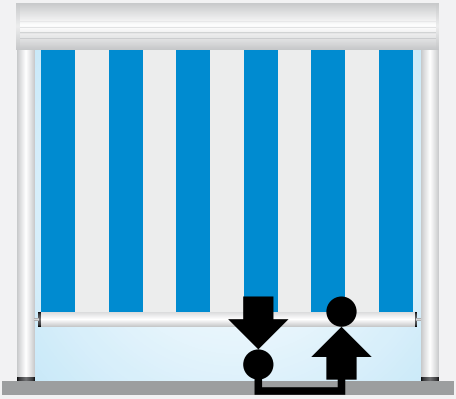
1x click

## Fabric untensioning

When the fabric untensioning is active, the drive moves slightly downwards once it reaches the upper limit position in order to relieve the strain on the fabric.

## Fabric stretching function

A programmable fabric stretching function ensures the fabric is pulled taut after extending to the lower limit position.



## Setting the limit positions

The limit positions can be set in 3 different ways:

❶. Switch located on drive

❷. Programming unit

❸. Operator control unit

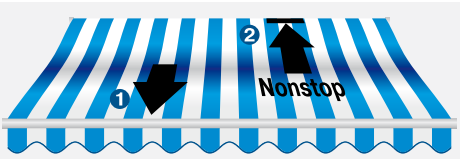
# DRIVE TYPE E12

## Setting the limit positions via Autoinstall

**Ⓐ Autoinstall with articulated arm and cassette awnings**

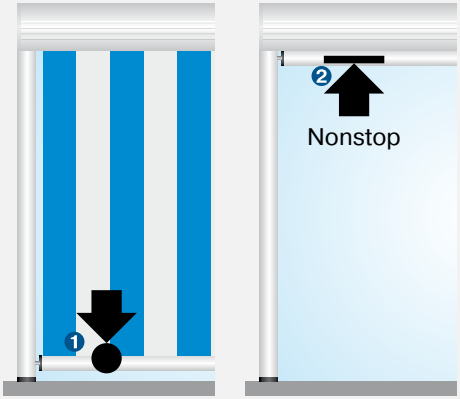
Run the shading solution in the extend direction until it passes the extend limit position and the fabric is resting on the articulated arms ❶.

Then run the shading solution without stopping in the retract direction until it stops automatically at the upper stop ❷.




**Ⓑ Autoinstall (freely selectable lower point to upper stop)**

Run the shading solution to the desired extend limit position ❶. Then run the shading solution without stopping in the retract direction until it stops automatically at the upper stop ❷.



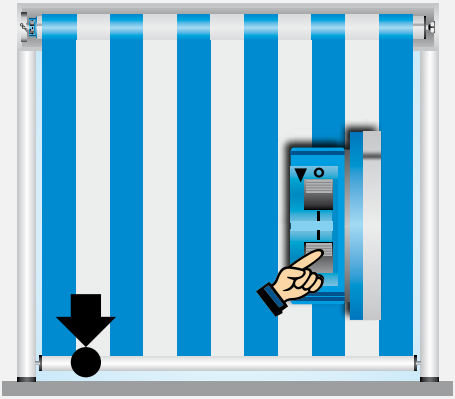
# Setting the limit positions with the switches

## 1. Deleting both limit positions with the switches

Set both switches to O and execute a short drive command.

## 2. Programming the extend limit position

Run the shading solution to the desired position and change the corresponding switch from O to I.



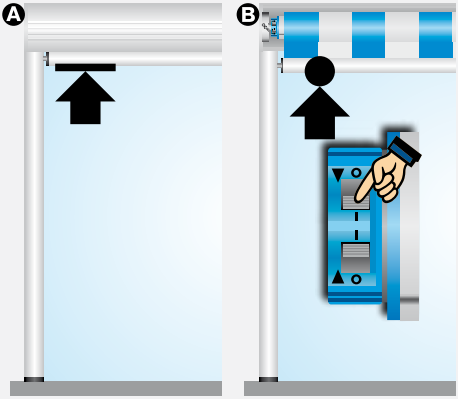
## 3. Programming the retract limit position

Ⓐ **Retract limit position stop**

Run the shading solution towards the stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired position and change the corresponding switch from O to I.



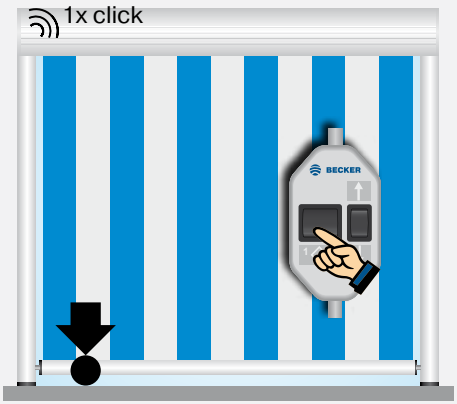
# DRIVE TYPE E12

## Setting the limit positions using the programming unit

### 1. Programming the extend limit position using the programming unit

Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

At least one switch on the drive head must be in the position I. Run the shading solution to the desired position and press the programming button until the drive clicks once.



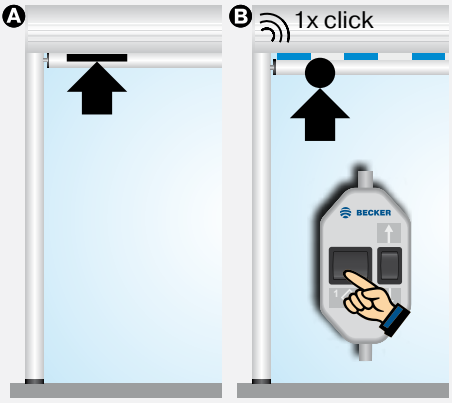

### 2. Programming the retract limit position using the programming unit

Ⓐ **To retract limit position stop**

Run the shading solution towards the stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired upper position and press the programming button on the programming unit until the drive clicks once.




### 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- Press and hold the ↓ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted. In terms of special functions, the drive reverts to the as-delivered condition.

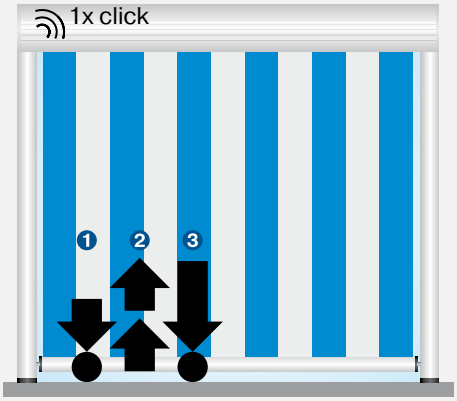
# Setting the limit positions using the operator control

## 1. Setting the extend limit position using the operator control

At least one switch on the drive head must be in the position **I**.

**To lower point**

Run the shading solution to the lower limit position ❶. Then move the shading element twice briefly in the upward direction, with a 1-second pause between each movement ❷ and then again in the downward direction until the drive stops automatically and clicks once after 3 seconds ❸.



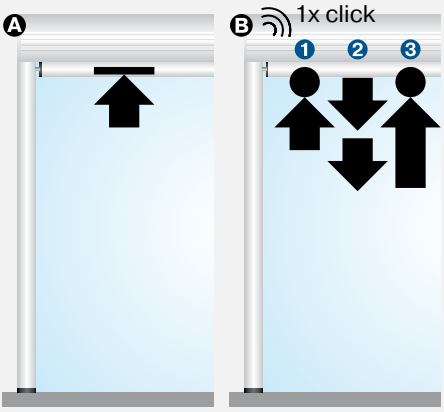

## 2. Setting the retract limit position using the operator control

Ⓐ **To upper stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Run the shading solution to the upper limit position ❶. Then move the shading element twice briefly in the extension direction, with a 1-second pause between each movement ❷ and then again in the retraction direction until the drive stops automatically and clicks once after 3 seconds ❸.

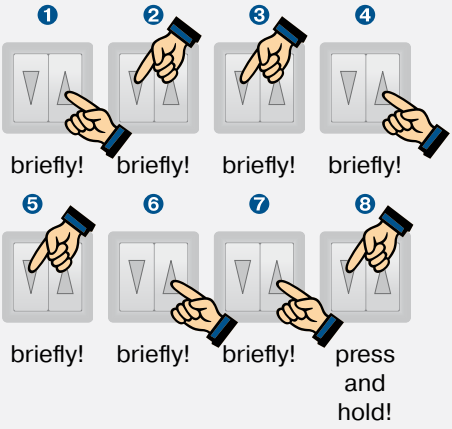



## 3. Deleting the limit positions using the operator control

Run the drive for 6 seconds in the retract or extend direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite at one second intervals until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be issued after every short drive command.



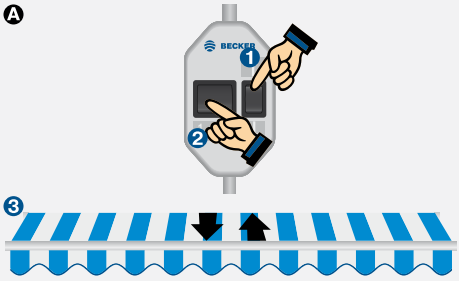
# DRIVE TYPE E12

## Setting the stop behaviour

On delivery, the 35 diameter drive types have a reduced stop behaviour, and the 45 diameter and 58 diameter drive types have an increased stop behaviour. The stop behaviour can only be changed during the first 3 runs towards the upper stop.

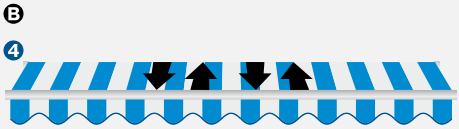
**Ⓐ Switching on the reduced stop behaviour**

Move the shading solution up ❶ and also press the programming button before it reaches the upper limit position ❷. Keep holding both buttons pressed until the shading solution confirms the changeover by extending and retracting once ❸.




**Ⓑ Switching on increased stop behaviour**

Repeat the procedure under Ⓐ until the drive confirms the changeover by extending and retracting twice ❹.



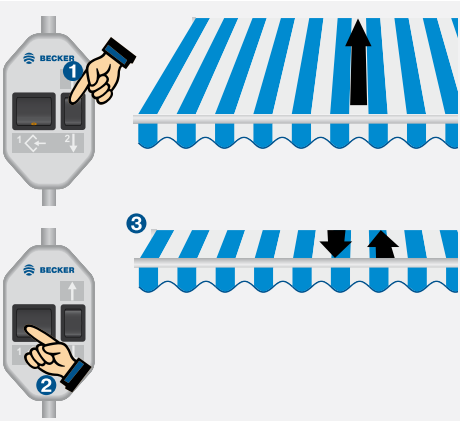

## Setting the special function fabric untensioning

### 1. Activating/deactivating the fabric untensioning function

On delivery, the fabric untensioning function is deactivated on drive types with a diameter of 35 mm, and is activated on drive types with diameters of 45 mm and 58 mm.

Run the shading solution towards the upper stop ❶.

Press the programming button until ❷ the drive confirms the activation or deactivation of the fabric relief ❸.

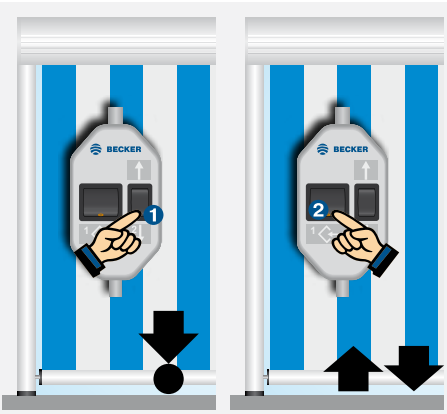


# Setting the special function fabric stretching

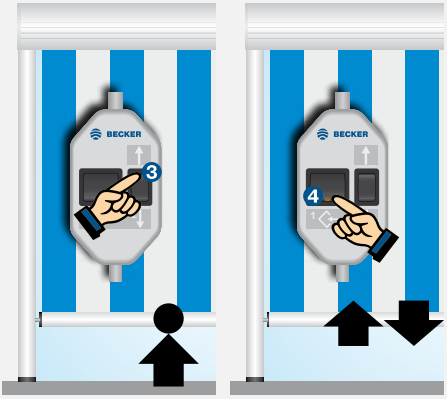
## 1. Activating the fabric stretching function

Run the shading solution to the extend limit position ❶.

Then press the programming button until the drive confirms by retracting and extending ❷.

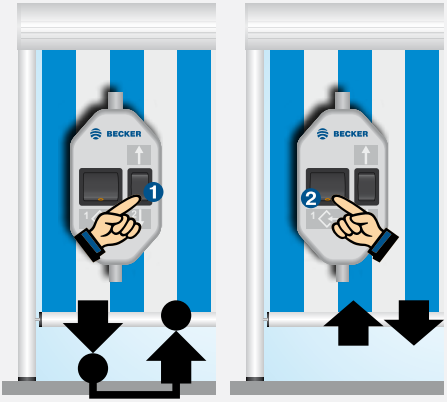



Then move the shading solution to the fabric stretching position ❸ and press the programming button again until the drive confirms by retracting and extending ❹.




## 2. Deactivating the fabric stretching function

Move the shading solution to the fabric stretching position ❶ and press the programming button until the drive confirms by retracting and extending ❷.



# DRIVE TYPE SE-B(+)

## Type plate

❶ Type designation: e.g. R 40/17 SE-B+

| | |
|---|---|
| R | Size of drive (tube diameter) R - 45mm L - 58mm |
| 40/17 | Rated torque-output speed |
| S | Electronic limit switching for sun protection |
| E-B | Automatic fabric stretching in the extend limit position |
| + | Higher closing force for cassette awnings |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 08 50 20130

| | |
|---|---|
| 08 | Year 2008 |
| 50 | Calendar week |
| 20130 | Consecutive number |


## Connection

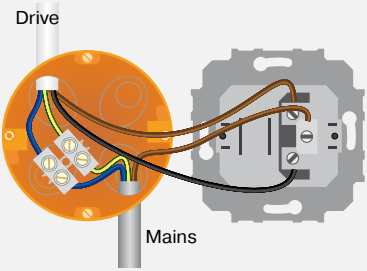
Multiple drives with electronic limit switching can be connected in parallel to a control point. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

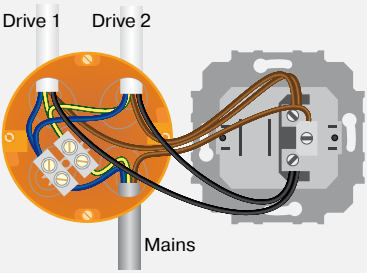
The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.

The following applies to operator controls with a 5A contact load rating:

R20/17 SE-B(+) - R60/17 SE-B(+) = max. 3 drives

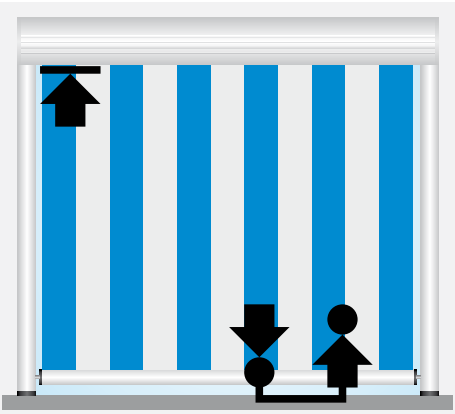
L70/17 SE-B(+) - L120/11 SE-B(+) = max. 2 drives



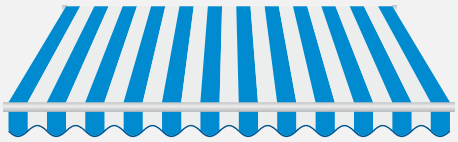
SE-B(+) drives with electronic limit switching detect and program the Retract limit position automatically. A fixed stop must be available in the Retract limit position.

An automatic reversal function in the extend limit position ensures that the fabric is stretched.



## Drives Type SE-B

SE-B drives are used to operate screens, awnings and conservatory shading.

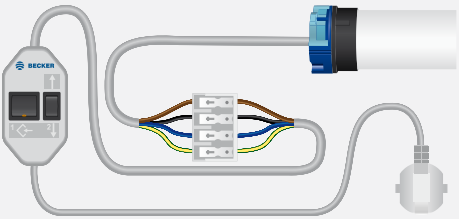


## Drives Type SE-B+

SE-B+ drives are used to operate cassette awnings that require a higher closing torque. The cassette is always closed completely.

The limit positions can be set via the programming unit.

Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



# DRIVE TYPE SE-B(+)

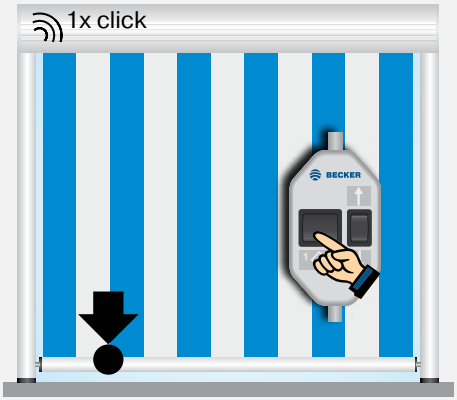
## Setting the limit positions using the programming unit

### 1. Programming the extend limit position using the programming unit

Connect the wires of the tubular drive to the wires of the same colour in the programming unit.

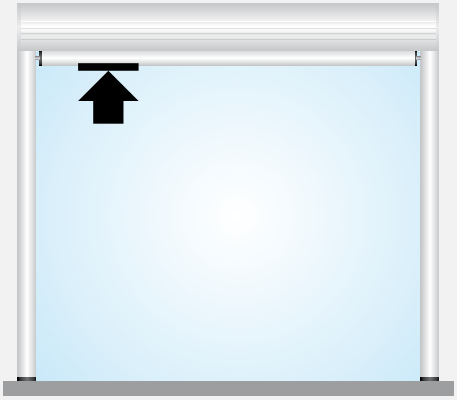
Run the shading solution to the desired position and press the programming button until the drive clicks once.

Note: If the drive clicks twice, an extend limit position had already been saved, which has now been deleted. In this case, press the programming button again until you hear one click.




### 2. Programming the retract limit position using the programming unit

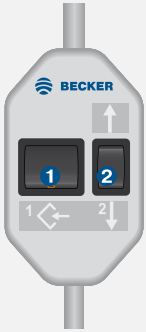
Run the shading solution towards the upper stop until the drive stops automatically.



## 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- Press and hold the ⬇ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.



# DRIVE TYPE E18

## Type plate

❶ Type designation: e.g. R12-17-E18

| | |
|---|---|
| R | Size of drive<br>(tube diameter)<br>P - 35mm<br>R - 45mm |
| 12-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 18 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 243502161

| | |
|---|---|
| 24 | Year 2024 |
| 35 | Calendar week |
| 02161 | Consecutive number |


## Connection

Several drives with electronic limit switching can be connected in parallel to a control unit. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

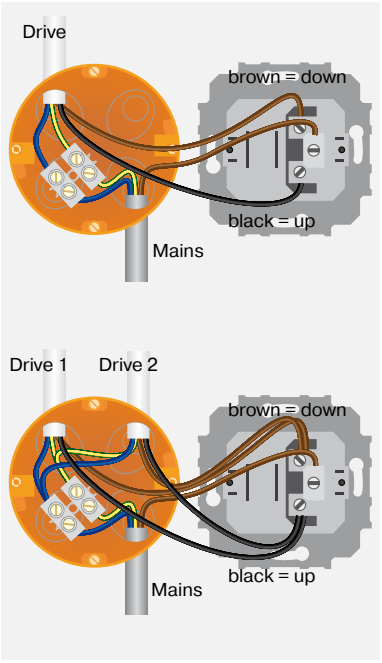
The following applies to operator controls with a 5A contact load rating:

R8-17-E18 bis R12-17-E18 =
max. 5 drives

R20-17-E18 bis R40-17-E18 =
max. 3 drives

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.

After programming the limit positions, the drive changes its direction of movement if necessary, such that a switch of the black wire always causes an upward movement and a switch of the brown wire always causes a downward movement.



## Obstacle detection

In order to avoid uncontrolled unwinding of the shading solution, obstructions in the DOWN direction are detected (such as wind load).

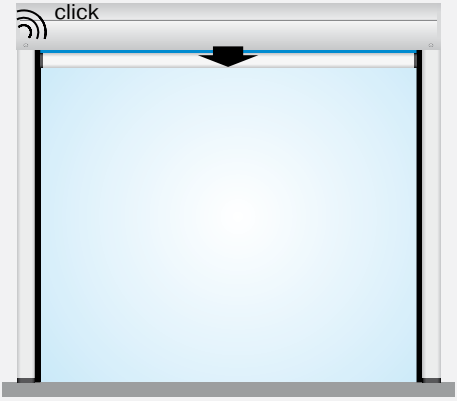
For the sensitive obstruction detection to become active, the drive adapter must be fitted with obstruction detection on the drive and the shading solution must have a heavy end strip.

Drive adapter

Drive adapter with obstacle detection

## Fabric untensioning

When the fabric untensioning is active, the drive moves slightly downwards once it reaches the upper limit position in order to relieve the strain on the fabric.




## Setting the limit positions

The limit positions can be set in 3 different ways:

❶. Switch located on drive

❷. Programming unit

❸. Operator control unit

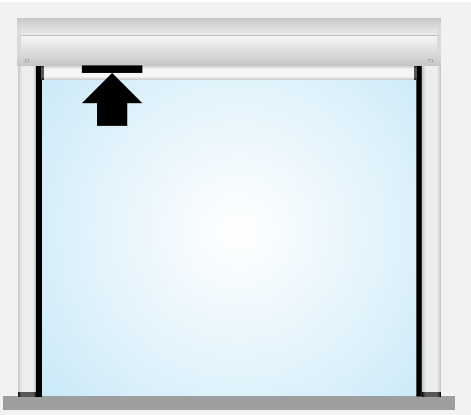
# DRIVE TYPE E18

## Setting the limit positions via Autoinstall

### 1. Programming the retract limit position

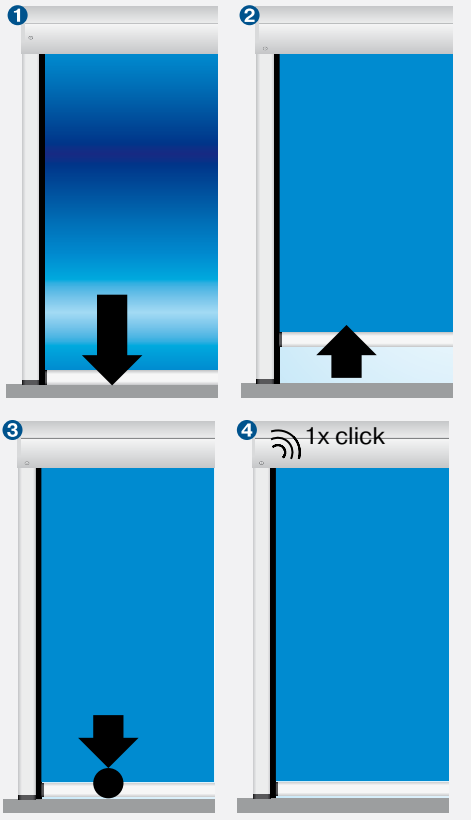
At least one switch on the drive head must be in the position **I**.

Run the shading solution towards the stop until the drive stops automatically.



### 2. Programming the extend limit position

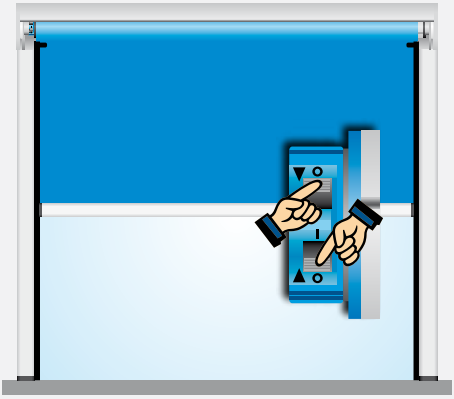
Move in the downward direction and hold the travel button until the drive passes the extension end position ❶ then move upward ❷ and then move downward again ❸ to finally stop at the extension end position and confirm the programming process with a click ❹.



# Setting the limit positions with the switches

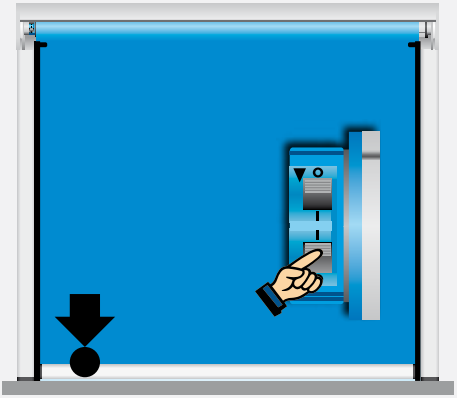
## 1. Deleting both limit positions with the switches

Set both switches to O and execute a short drive command.



## 2. Programming the extend limit position

Run the shading solution to the desired position and change the corresponding switch from O to I.



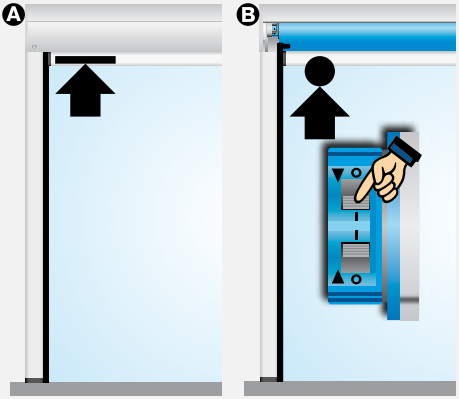
## 3. Programming the retract limit position

Ⓐ **Retract limit position stop**

Run the shading solution towards the stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired position and change the corresponding switch from O to I.



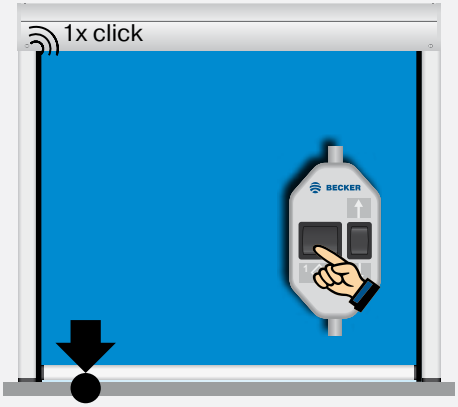
# DRIVE TYPE E18

## Setting the limit positions using the programming unit

### 1. Programming the extend limit position using the programming unit

Connect the wires in the connecting cables of the drive to the wires of the same colour in the Becker programming unit.

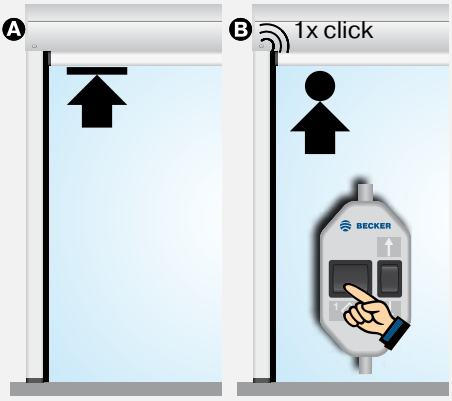
At least one switch on the drive head must be in the position **I**. Run the shading solution to the desired position and press the programming button until the drive clicks once.




### 2. Programming the retract limit position using the programming unit

Ⓐ **To retract limit position stop**
Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**
Run the shading solution to the desired upper position and press the programming button on the programming unit until the drive clicks once.




### 3. Deleting the limit positions using the programming unit

- Press and hold the programming button ❶
- Press and hold the ↓ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

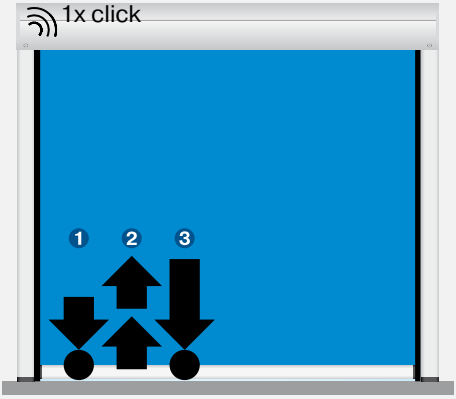
If the drive is situated between the limit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted. In terms of special functions, the drive reverts to the as-delivered condition.

# Setting the limit positions using the operator control

## 1. Programming the extend limit position using the operator control

At least one switch on the drive head must be in the position **I**.

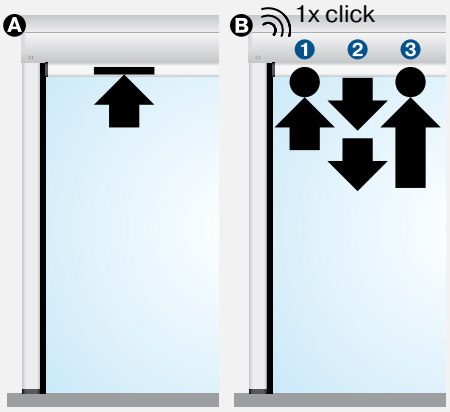
Run the shading solution to the lower limit position ❶. Then move the shading element twice briefly in the retraction direction, with a 1-second pause between each movement ❷ and then again in the extension direction until the drive stops automatically and clicks once after 3 seconds ❸.




## 2. Setting the retract limit position using the operator control

Ⓐ **To retract limit position stop**
Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**
Run the shading solution to the retract limit position ❶. Then move the shading element twice briefly in the extension direction, with a 1-second pause between each movement ❷ and then again in the retraction direction until the drive stops automatically and clicks once after 3 seconds ❸.

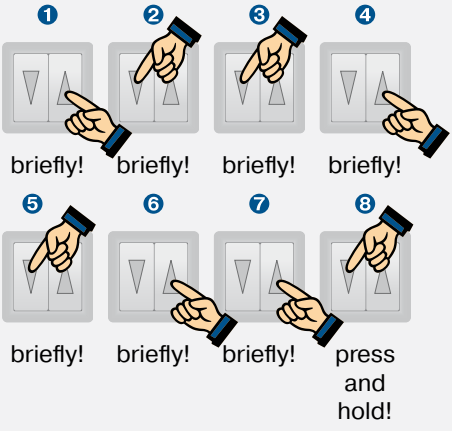



## 3. Deleting the limit positions using the operator control

Run the drive for 6 seconds in the retract or extend direction.

Then run through steps ❶ to ❽ of the deletion sequence shown opposite at one second intervals until the drive clicks twice.

When using operator controls with maintained operation mode, a STOP command must be issued after every short drive command.



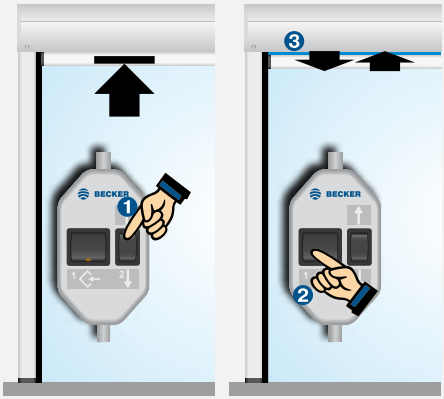
# DRIVE TYPE E18

## Setting the special function fabric untensioning

### Activating/deactivating the fabric untensioning function

Run the shading solution towards the upper stop ❶.

Press the programming button ❷ until the drive confirms the activation or deactivation of the fabric untensioning by briefly extending and retracting ❸.

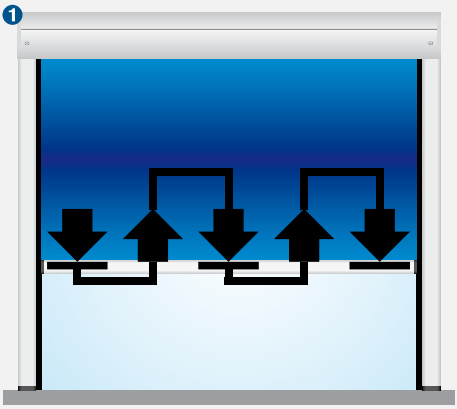



## Sensitive obstacle detection

If an obstruction is detected during the drive (e.g. wind load during the closing movement), the drive stops, reverses and tries to move past the obstruction a second time. If this fails, the drive switches off after the third attempt ❶.

If obstructions occur at different points, the drive restarts three times in each case. After a maximum of ten stops caused by obstructions at different points, the drive reverses and switches off.

Approx. 15 cm from the lower limit position, the drive interrupts operation immediately following the first detection of an obstacle and makes no further attempt to continue.



# DRIVE TYPE E16 (SE I1)

## Type plate

❶ Type designation: e.g. R8-17-E16

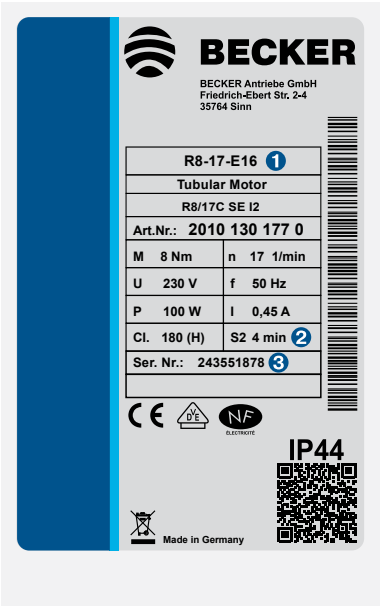
| | |
|---|---|
| R | Size of drive (tube diameter)<br>R - 45mm<br>L - 58mm |
| 8-17 | Rated torque-output speed |
| E | Electronic limit switching |
| 16 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 243551878

| | |
|---|---|
| 24 | Year 2024 |
| 35 | Calendar week |
| 51878 | Consecutive number |




## Connection

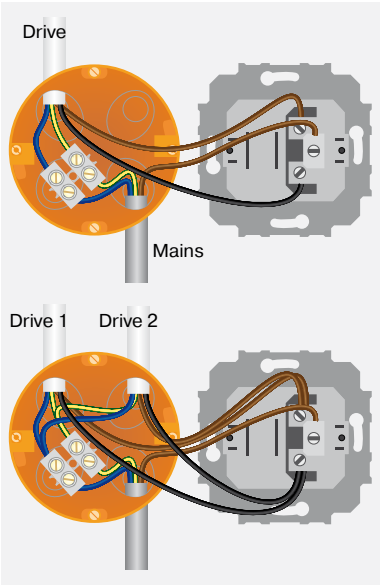
Multiple drives with electronic limit switching can be connected in parallel to a control point. The maximum number of synchronously controlled drives depends on the load capacity of the operator control unit.

The changeover time for switching the running direction must be at least 0.5 seconds. The switch and controls must not execute simultaneous retract and extend commands.

The following applies to operator controls with a 5A contact load rating:

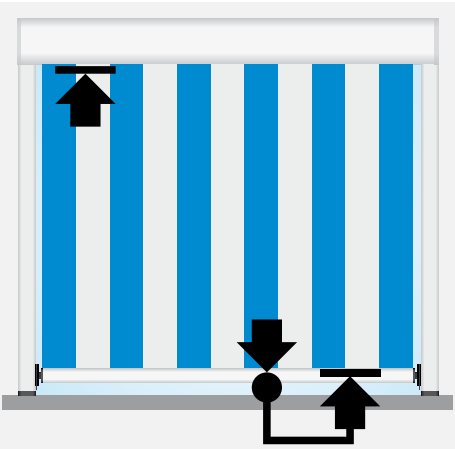
R8 - R60 =
max. 3 drives

L70 - L120 =
max. 2 drives



SE I1 drives with electronic limit switching detect and program the retract limit position automatically. A fixed stop must be available in the retract limit position.

The shading solution is automatically locked and tightened in the extend position.

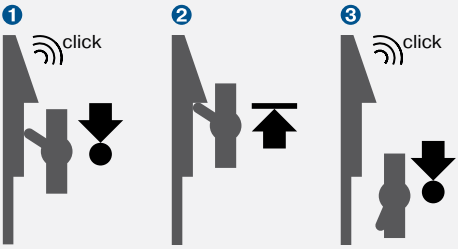


## Locking principle

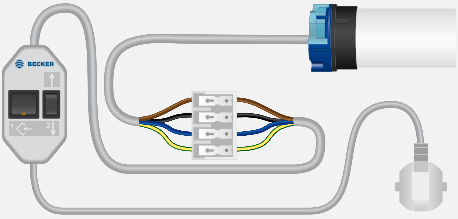
The shading solution is extended until the bolt has passed the locking point (bolt clicks). The first point is programmed here ❶.

Then run the shading solution in the UP direction until the drive pulls the fabric tight and switches off automatically ❷.

The shading solution is then moved out of the path of the locking mechanism. A point is also programmed here ❸.




Connect the wires in the connecting cable of the drive to the wires of the same colour in the programming unit.



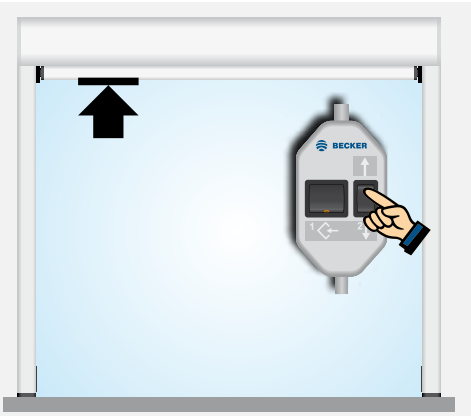
# DRIVE TYPE E16 (SE I1)

## Setting the limit positions

### 1. Programming the retract limit position

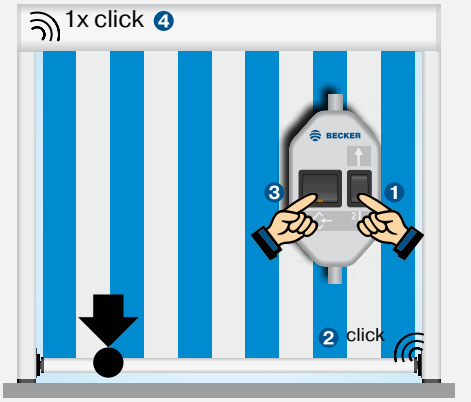
Connect the wires of the tubular drive to the wires of the same colour in the programming unit.

Run the shading solution towards the upper stop until the drive stops automatically.




### 2. Programming the locking limit position

Run the shading solution down ❶ until the locking mechanism clicks ❷. Then press the programming button on the programming unit ❸ until the drive clicks once ❹.




### 3. Moving the shading solution into the locking mechanism

Run the shading solution upwards into the locking mechanism until the drive switches off automatically.

## 4. Programming the unlocking limit position

Run the shading solution downwards out of the locking position ❶ until the locking mechanism clicks ❷. Then press the programming button on the programming unit ❸ until the drive clicks once ❹.


## 5. Deleting the limit positions using the programming unit

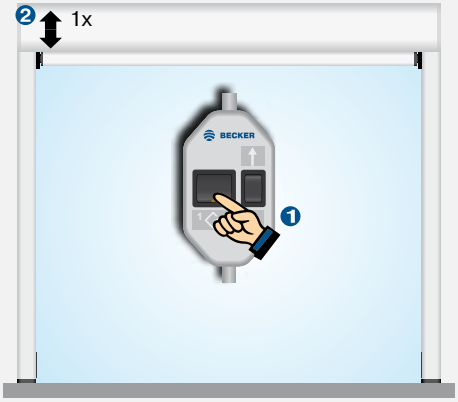
- Press and hold the programming button ❶
- Press and hold the ⬇ button ❷
- Release the programming button ❶
- Press the programming button ❶ again until the drive clicks twice.

If the drive is situated between the imit positions, both limit positions are deleted. If the drive is situated in one of the limit positions, only this position will be deleted.


## 6. Activating the fabric untensioning special function (with E16 only)

Run the shading solution towards the upper stop. Press the programming button ❶ until the drive confirms the activation of the fabric untensioning function by one downward and upward movement ❷.

Repeat the procedure to deactivate the fabric untensioning function.



# DRIVE TYPE PSF(+)

## Type plate

❶ Type designation: e.g. R30/17C PSF+

| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 30/17 | Rated torque-output speed |
| C | Plug-in connecting cable |
| P | Point to point programming |
| S | Electronic limit switching for sun protection |
| F | Radio receiver |
| + | Higher closing force for cassette awnings |

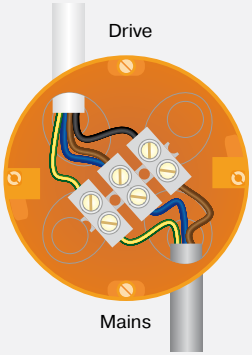
❷ Operating mode (short-period operation S2)
After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 08 49 20095

| | |
|---|---|
| 08 | Year 2008 |
| 49 | Calendar week |
| 20095 | Consecutive number |


## Connection

Drives with electronic limit switch and integrated radio receiver are connected directly to the power supply. The brown wire is connected together with the blue wire to the neutral conductor.



PSF(+) drives with electronic limit switching detect and program the retracting limit position automatically if a permanent stop exists.

If no stop exists, a limit switch-off point is programmed.

## Drives Type PSF

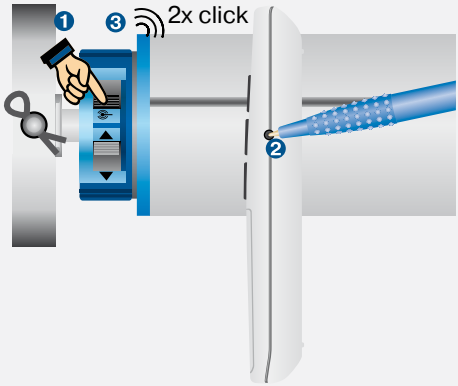
PSF drives are used to operate screens, awnings and conservatory shading.

## Drives Type PSF+

PSF+ drives are used to operate cassette awnings that require a higher closing torque. The cassette is always closed completely.

## Programming the master transmitter

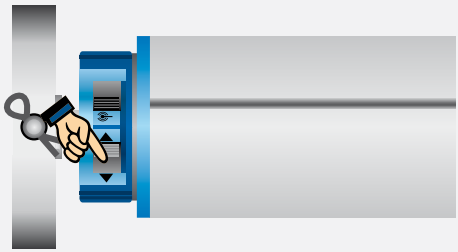
By switching on the power supply (Power On) or by moving the radio switch to the position you put the drive into learning mode for 3 minutes ❶. Then press the programming button on the master transmitter ❷ until the drive clicks twice ❸ (3 seconds for new drives, 10 seconds to overwrite an already taught-in master transmitter).




## Correcting the direction of redation

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

Attention: The direction of redation can only be changed as long as no limit positions have been programmed.



# DRIVE TYPE PSF(+)

## Setting the limit positions

### 1. Programming the extend limit position with the master transmitter

Run the shading solution to the extend limit position. Then press the programming button and the EXTEND button until the drive clicks once.

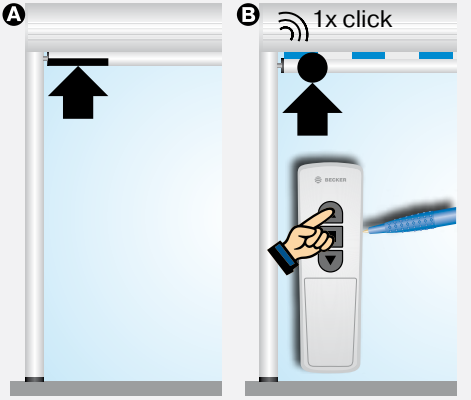

### 2. Programming the retract limit position using the master transmitter

Ⓐ **Retract limit position stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired retract position. Then press the programming button and the RETRACT button until the drive clicks once.




### 3. Deleting the limit positions using the master transmitter

Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.

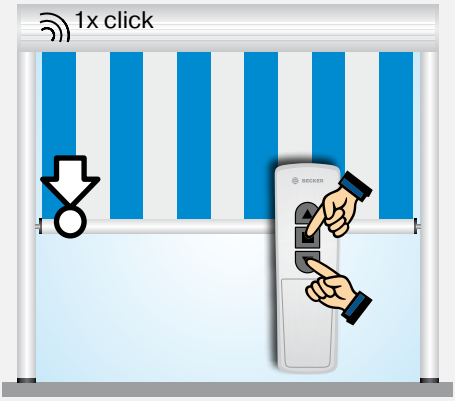
If the shading solution is situated between the limit positions, both limit positions are deleted in the procedure. If the shading solution is situated in one of the limit positions, only this position will be deleted.

# Setting the intermediate positions

## 1. Programming the intermediate position I

Run the shading solution to the desired intermediate position and press the STOP and EXTEND buttons until the drive clicks once.

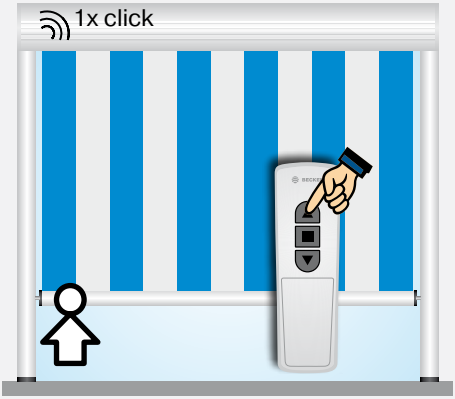
To travel to intermediate position I, press the EXTEND button twice within one second.




## 2. Programming the intermediate position II

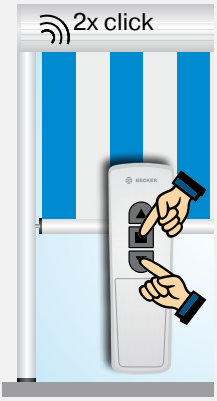
Run the shading solution to the desired intermediate position and press the STOP and RETRACT buttons until the drive clicks once.

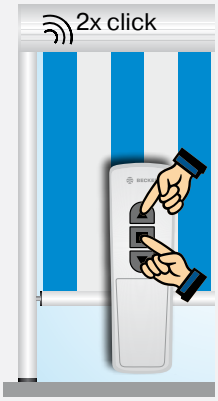
To travel to intermediate position II, press the RETRACT button twice within one second.




## 3. Deleting the intermediate position I / Intermediate position II

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and EXTEND buttons or STOP and RETRACT buttons) until the drive clicks twice.



# DRIVE TYPE C16 (SEF I1)

## Type plate

❶ Type designation: e.g. R8-17-C16

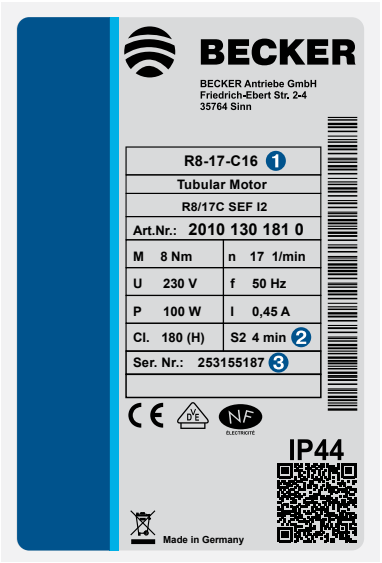
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 8-17 | Rated torque-output speed |
| C | Integrated Centronic radio receiver |
| 16 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 253155187

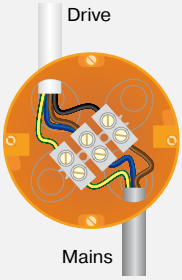
| | |
|---|---|
| 25 | Year 2018 |
| 31 | Calendar week |
| 55187 | Consecutive number |




## Connection

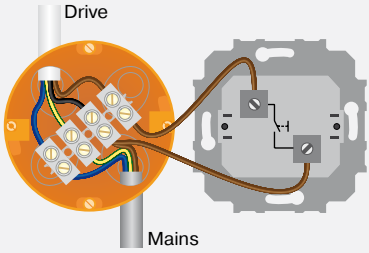
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.




### Connection with on-site operation with a single button (only at C16)

With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.



The drives with electronic limit switch C16 automatically detect and program the closed end position. A fixed stop must be present at the closed end position.

The shading solution is automatically locked and tightened in the extend position.

## Locking principle

The shading solution is extended until the bolt has passed the locking point (bolt clicks). The first point is programmed here ❶.

Then run the shading solution in the UP direction until the drive pulls the fabric tight and switches off automatically ❷.

The shading solution is then moved out of the path of the locking mechanism. A point is also programmed here ❸.

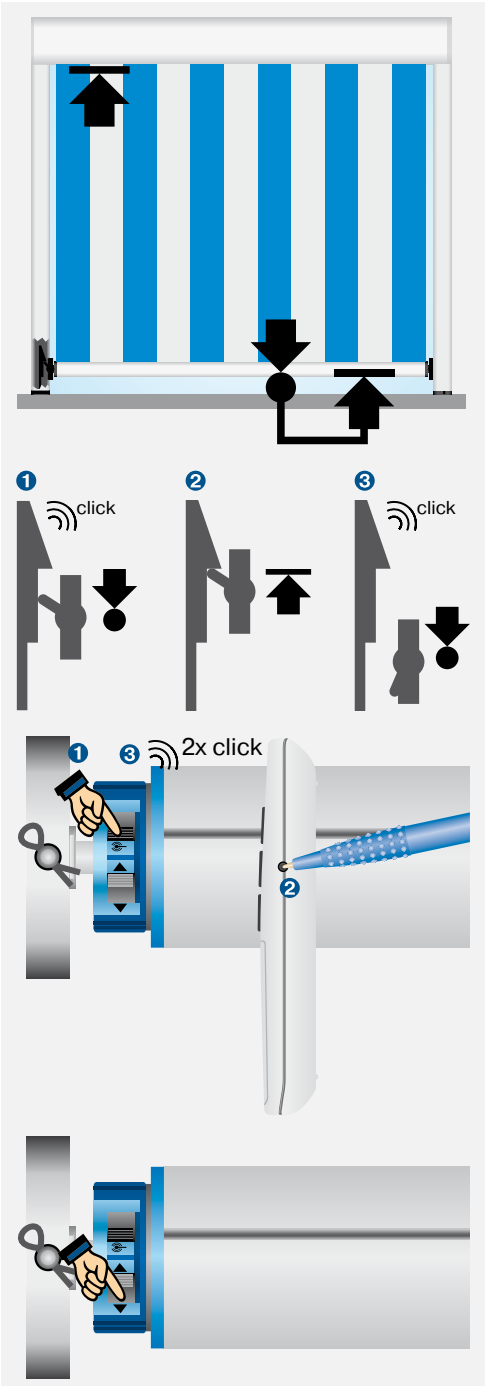
## Programming the master transmitter

By switching on the power supply (Power On) or by moving the radio switch to the position, you put the drive into learning mode for 3 minutes ❶. Then press the programming button on the master transmitter ❷ until the drive clicks twice ❸ (3 seconds for new drives, 10 seconds to overwrite an already taught-in master transmitter).

## Correcting the direction of redation

The direction of rotation can be corrected using the switch on the drive head or the master transmitter (with C16 only).

Attention: The direction of redation can only be changed as long as no limit positions have been programmed.



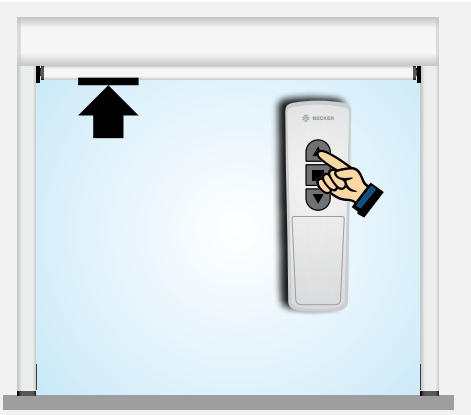
# DRIVE TYPE C16 (SEF I1)

## Setting the limit positions

### 1. Programming the retract limit position using the master transmitter

Connect the wires of the tubular drive to the wires of the same colour in the programming unit.

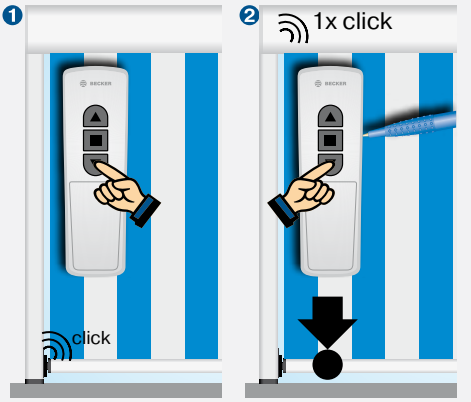
Run the shading solution towards the upper stop until the drive stops automatically.



### 2. Programming the locking limit position using the master transmitter

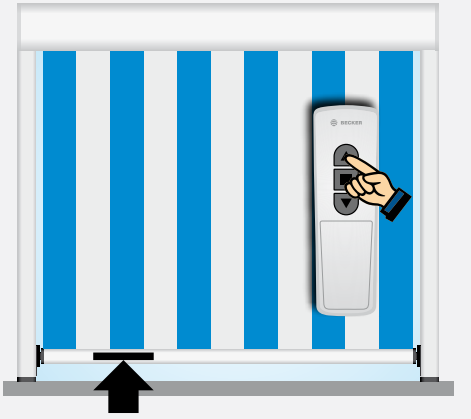
Run the shading solution down until the locking mechanism clicks ❶.

Then press the programming button and the EXTEND button until the drive clicks once ❷.




### 3. Moving the shading solution into the locking mechanism using the master transmitter

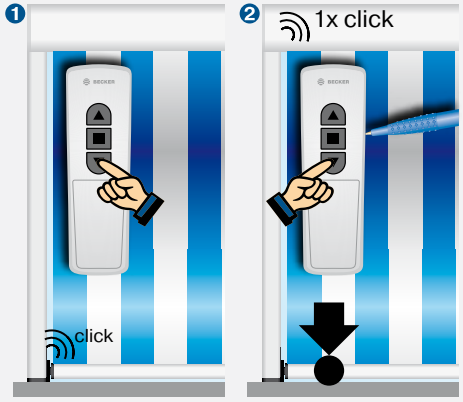
Run the shading solution upwards into the locking mechanism until the drive switches off automatically.



## 4. Programming the unlocking limit position using the master transmitter

Run the shading solution down until the locking mechanism clicks ❶.

Then press the programming button and the EXTEND button until the drive clicks once ❷.



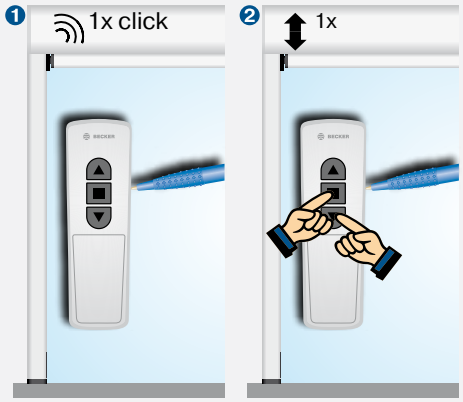

## 5. Deleting the limit positions using the master transmitter

Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.


## 6. Activating the fabric untensioning special function (only at C16)

Open the shading solution to the upper limit position. Then press the programming button until the drive clicks once ❶. Then press the programming button, the STOP button and the DOWN button until the drive confirms the activation of the fabric untensioning function by one downward and upward movement ❷.

Repeat the procedure to deactivate the fabric untensioning function.



# DRIVE TYPE C16 PLUS

## Type plate

❶ Type designation: e.g. R8-17-C16 PLUS

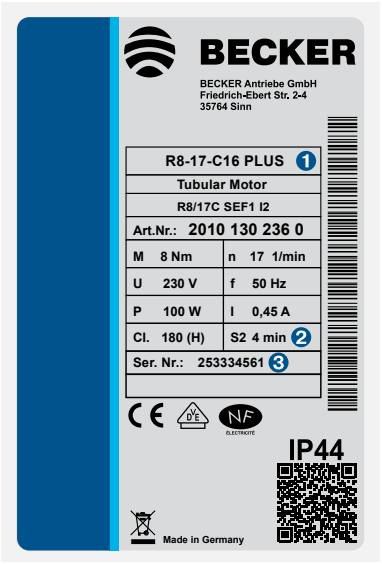
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 8 | Rated torque |
| C | Centronic radio |
| 16 | Drive type |
| PLUS | CentronicPLUS radio |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 253334561

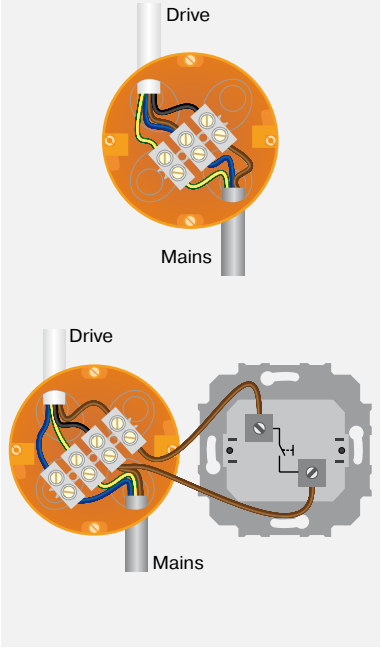
| | |
|---|---|
| 25 | Year 2025 |
| 33 | Calendar week |
| 34561 | Consecutive number |




## Connection

### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.



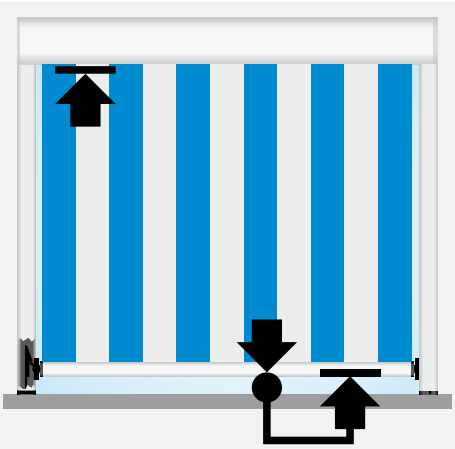

### Connection with on-site operation with a single button (only at C16)

With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.

# Information

The drives with electronic limit switch C16 PLUS automatically detect and program the closed end position. A fixed stop must be present at the closed end position.

The shading solution is automatically locked and tightened in the extend position.

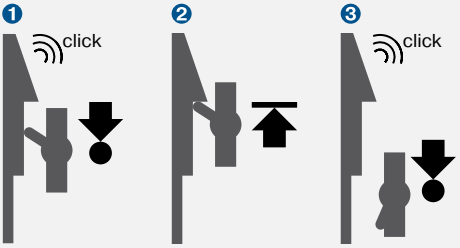


## Locking principle

The shading solution is extended until the bolt has passed the locking point (bolt clicks). The first point is programmed here ❶.

Then run the shading solution in the UP direction until the drive pulls the fabric tight and switches off automatically ❷.

The shading solution is then moved out of the path of the locking mechanism. A point is also programmed here ❸.




## Establishing programming mode

Activate the drive by switching on the power supply ❶ (Power On – the drive clicks once) or by switching the radio switch ❷ into the position Into learning mode (for Centronic: 3 minutes, for CentronicPlus: 15 minutes). You can now pair a Centronic Master transmitter (see Drive Type C16) or a CentronicPlus transmitter for further commissioning.

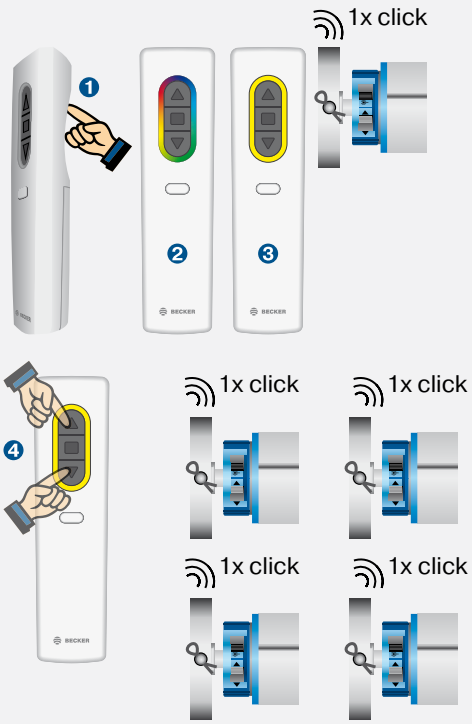
# DRIVE TYPE C16 PLUS

## Programming the transmitter and assigning a channel

### 1. Select a drive that is in learning mode

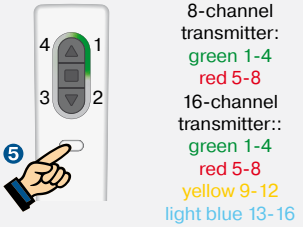
Pressing the programming button for 3 seconds ❶ prompts the transmitter to search for all drives currently in programming mode. The search process is indicated by the LED ring continually changing colour ❷. The transmitter automatically connects to the next drive (drive without programmed end positions: 1 click, drive with programmed end positions: 1 wave), and the LED ring lights up yellow.

If multiple drives are in programming mode at the same time, the desired drive can be selected using the UP or DOWN button ❹.



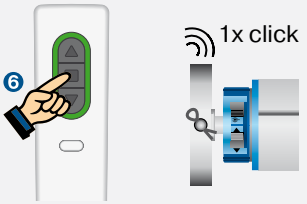

### 2. Select transmission channel

The function button ❺ the desired transmission channel is selected on a multi-channel transmitter. The LED ring is divided into four segments, each assigned a color level. In the adjacent example, transmission channel 1 is selected.




### 3. Establish the network and activate the transmission channel

By pressing the STOP button ❻ a new network is established. The selected transmission channel is active and can go on to operate the drive. The LED ring lights up green. The drive confirms the action by clicking once.

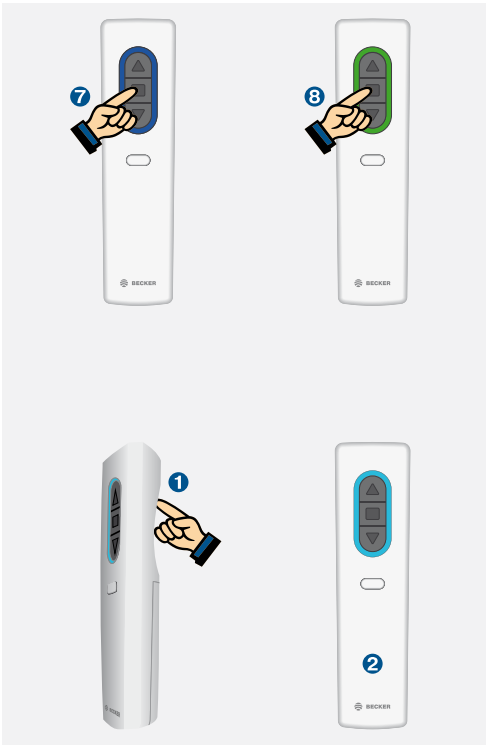


## 4. Deactivate/activate the transmission channel

Pressing the STOP button again deactivates the transmission channel ❼. The LED ring lights up blue.

Commissioning (setting the limit positions, activating the special functions etc.) can also be performed when the transmission channel is deactivated.

Pressing the STOP button again reactivates the transmission channel ❽.




## Switching on setting mode

Briefly pressing the programming button ❶ activates the setting mode. The LED ring pulses light ❷. The drive is now in dead-man mode.

## Note:

When pairing a new transmitter with a new drive, a separate network is created. Commission all additional drives that should belong to the network using the same transmitter to prevent the creation of multiple networks.

## Correcting the direction of redation

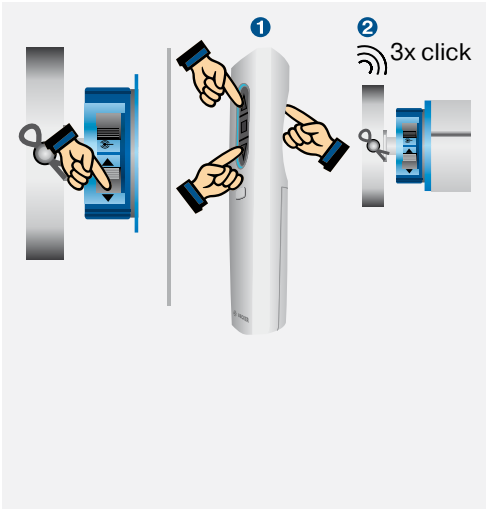
No limit positions may be programmed.

Via the switch on the drive:

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

With the transmitter (in setting mode):

When setting mode is activated, press the programming button, UP button and DOWN button ❶ until the drive clicks three times ❷. The LED ring displays a red/blue redation.

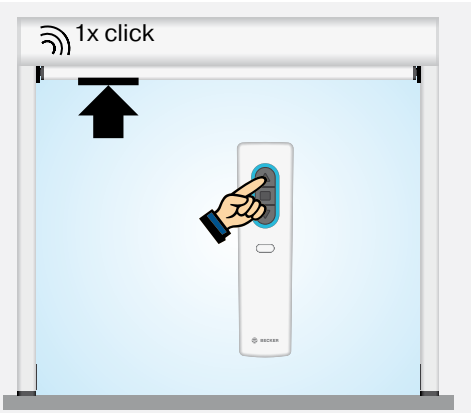


# DRIVE TYPE C16 PLUS

## Setting the limit positions

### 1. Programming the retract limit position (in setting mode)

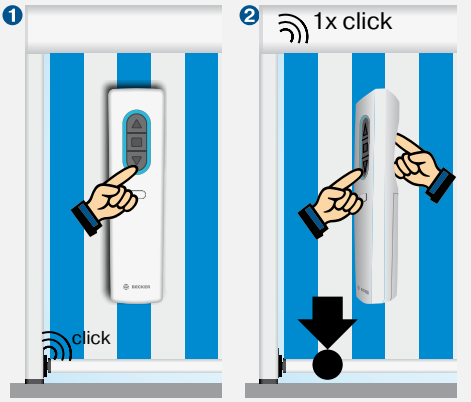
Run the shading solution towards the upper stop until the drive stops automatically.




### 2. Programming the locking limit position using the master transmitter

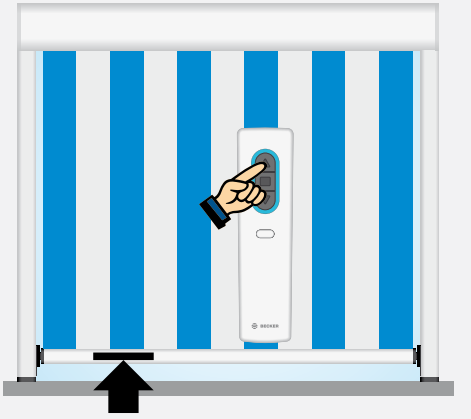
Run the shading solution down until the locking mechanism clicks ❶.

Then press the programming button and the EXTEND button until the drive clicks once ❷.




### 3. Moving the shading solution into the locking mechanism using the master transmitter

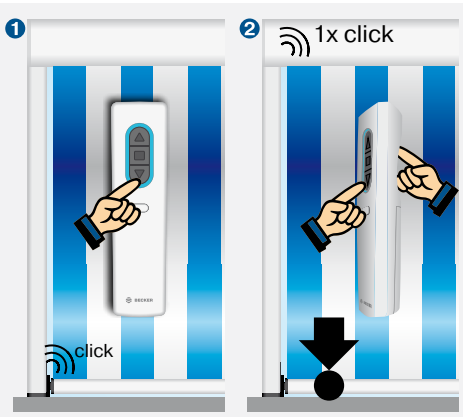
Run the shading solution upwards into the locking mechanism until the drive switches off automatically.



## 4. Programming the unlocking limit position using the master transmitter

Run the shading solution down until the locking mechanism clicks ❶.

Then press the programming button and the EXTEND button until the drive clicks once ❷.



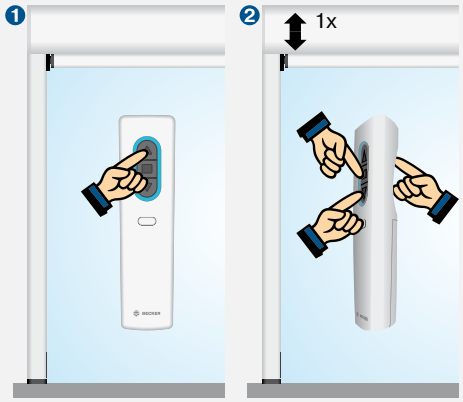

## 5. Deleting the limit positions using the master transmitter

Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.


## 6. Activating the fabric untensioning special function

Move the blind to the upper end position ❶. Then press the programming button, the STOP button and the DOWN button until the drive confirms the activation of the fabric untensioning function by one downward and upward movement ❷.

Repeat the procedure to deactivate the fabric untensioning function.



# DRIVE TYPE C12

## Type plate

❶ Type designation: e.g. R30-17-C12

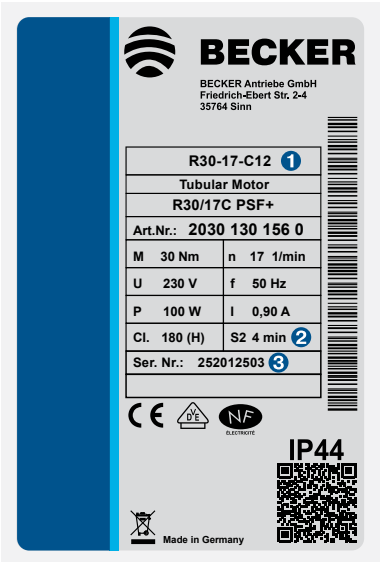
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 30-17 | Rated torque-output speed |
| C | Centronic radio |
| 12 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 252012503

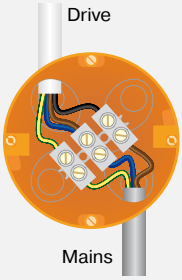
| | |
|---|---|
| 25 | Year 2025 |
| 20 | Calendar week |
| 12503 | Consecutive number |




## Connection

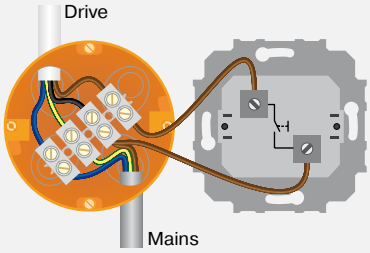
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.




### Connection with on-site operation with a single button

With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.



## Autoinstall

The C12 can automatically detect and program the optimum maximum Extend limit position for articulate-darm and cassette awnings via the Autoinstall function.

## Stop behaviour

The C12 can be switched between increased and reduced stop behaviour.

## Fabric untensioning

When the fabric untensioning is active, the drive moves slightly in the extend direction once it reaches the retract limit position in order to relieve the strain on the fabric.

## Fabric stretching function

A programmable fabric stretching function ensures the fabric is pulled taut after extending to the lower limit position.

## Programming the master transmitter

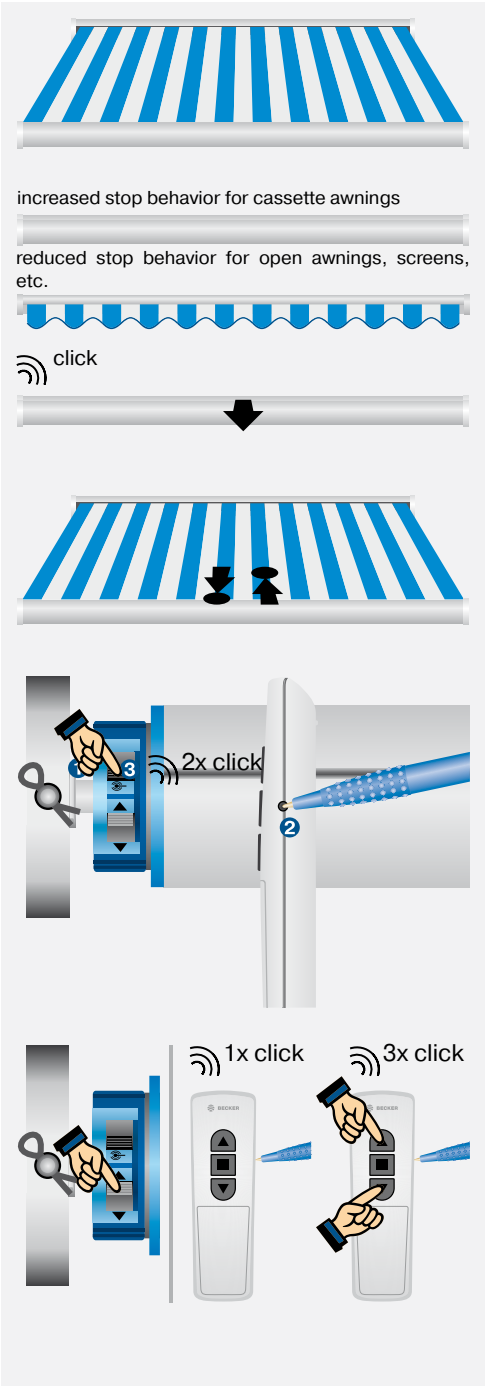
By switching on the power supply (Power On) or by moving the radio switch to the position you put the drive into learning mode for 3 minutes ❶. Then press the programming button on the master transmitter ❷ until the drive clicks twice ❸ (3 seconds for new drives, 10 seconds to overwrite an already taught-in master transmitter).

## Correcting the direction of redation

No limit positions may be programmed.

Via the switch on the drive: If the drive is redating in the wrong direction, reverse the direction switch on the drive.

Via the master transmitter: Press the programming button until the drive clicks once. Then press the programming button, RETRACT button and EXTEND button until the drive clicks three times.



# DRIVE TYPE C12

## Setting the stop behaviour

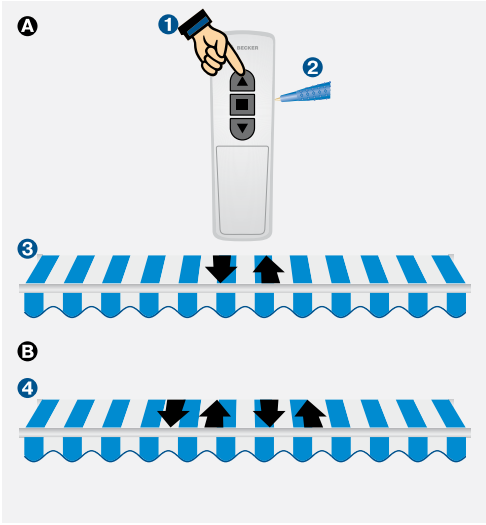
On delivery, the 35 diameter drive types have a reduced stop behaviour, and the 45 diameter and 58 diameter drive types have an increased stop behaviour. The stop behaviour can only be changed during the first 3 runs towards the upper stop.

Ⓐ **Switching on the reduced stop behaviour**

Move the shading solution in the retract direction ❶ and also press the programming button before it reaches the limit position ❷. Keep holding both buttons pressed until the shading solution confirms the changeover by extending and retracting once ❸.

Ⓑ **Switching on increased stop behaviour**

Repeat the procedure under Ⓐ until the drive confirms the changeover by extending and retracting twice ❹.




## Setting the limit positions via Autoinstall

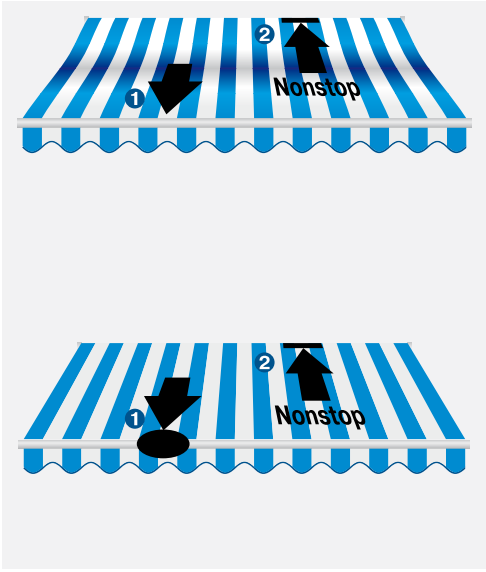
Ⓐ **Autoinstall with articulated arm and cassette awnings**

Run the shading solution in the extend direction until it passes the extend limit position and the fabric is resting on the articulated arms ❶.

Then run the shading solution without stopping in the retract direction until it stops automatically at the upper stop ❷.

Ⓑ **Autoinstall (freely selectable lower point to upper stop)**

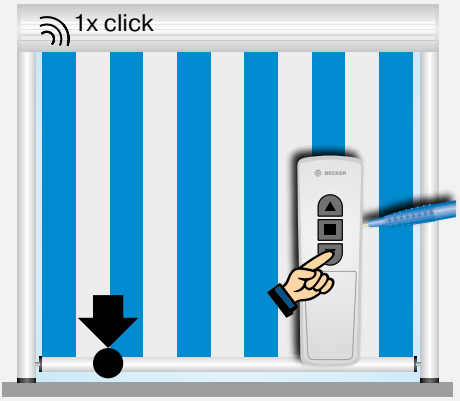
Run the shading solution to the desired extend limit position ❶. Then run the shading solution without stopping in the retract direction until it stops automatically at the upper stop ❷.



# Setting the limit positions

## 1. Programming the extend limit position with the master transmitter

Run the shading solution to the extend limit position. Then press the programming button and the EXTEND button until the drive clicks once.



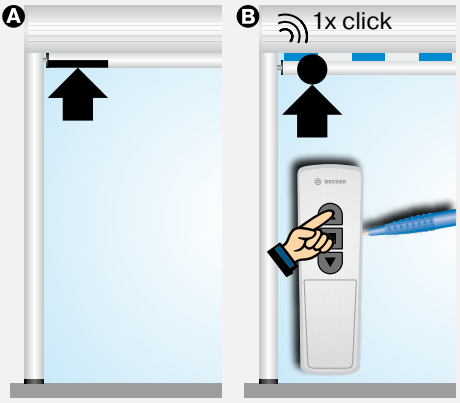

## 2. Programming the retract limit position using the master transmitter

Ⓐ **Retract limit position stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired retract position. Then press the programming button and the RETRACT button until the drive clicks once.




## 3. Deleting the limit positions using the master transmitter

Press the programming button and the STOP button until the drive clicks twice after 10 seconds.

If the shading solution is situated between the limit positions, both limit positions are deleted in the procedure. If the shading solution is situated in one of the limit positions, only this position will be deleted. In terms of special functions, the drive reverts to the as-delivered condition.

# DRIVE TYPE C12

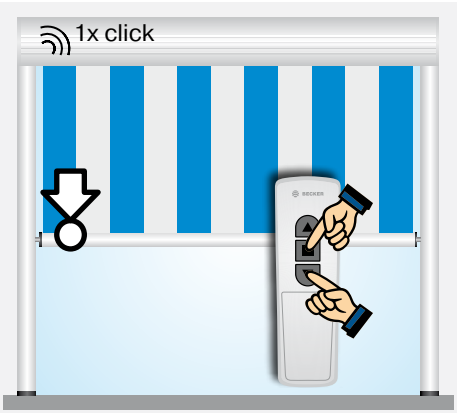
## Setting the intermediate positions

### 1. Programming the intermediate position I

Run the shading solution to the desired intermediate position and press the STOP and EXTEND buttons until the drive clicks once.

Repeat the procedure to overwrite the intermediate position.

To travel to intermediate position I, press the EXTEND button twice within one second.

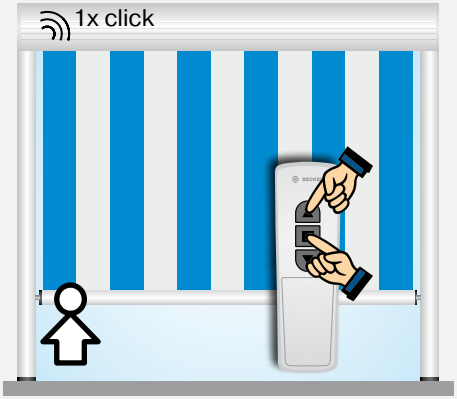



### 2. Programming the intermediate position II

Run the shading solution to the desired intermediate position and press the STOP and RETRACT buttons until the drive clicks once.

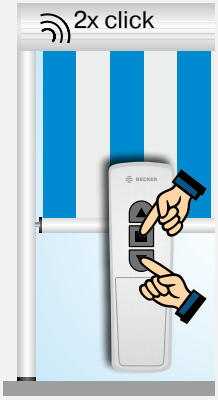
Repeat the procedure to overwrite the intermediate position.

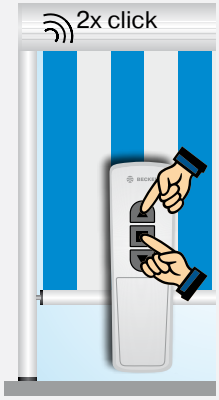
To travel to intermediate position II, press the RETRACT button twice within one second.




### 3. Deleting the intermediate position I / Intermediate position II

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and EXTEND buttons or STOP and RETRACT buttons) until the drive clicks twice.



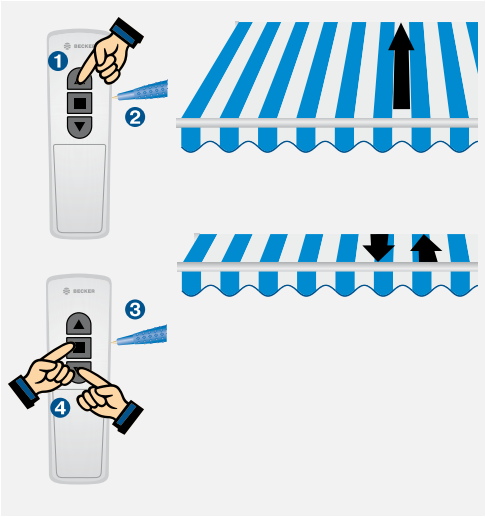



## Setting the special function fabric untensioning

### 1. Activating/deactivating the fabric untensioning function

On delivery, the fabric untensioning function is deactivated on drive types with a diameter of 35 mm, and is activated on drive types with diameters of 45 mm and 58 mm.

Run the shading solution towards the upper stop ❶. Then press the programming button ❷ until the drive clicks once. Press the programming button again ❸ and also the STOP and EXTEND buttons ❹ until the drive confirms activation or deactivation of the fabric untensioning.

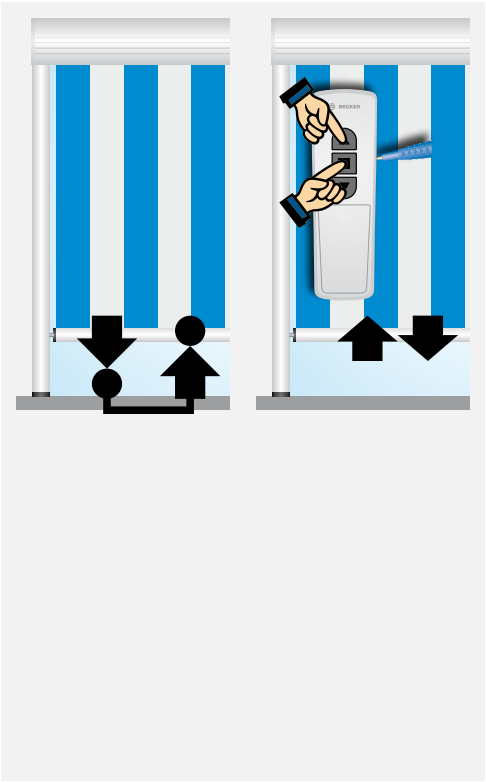



## Setting the special function fabric stretching

### 1. Activating/deactivating the fabric stretching function

Move the shading solution to the fabric stretching position. Then press the programming button, STOP button and RETRACT button until the drive signals to confirm the programming operation.

To deactivate the fabric tensioning function, press the EXTEND button to move the drive to the fabric tensioning position then press the programming button, STOP button and RETRACT buttons again until the drive signals to confirm the programming operation.



# DRIVE TYPE C12 PLUS

## Type plate

❶ Type designation: e.g. R30-17-C12 PLUS

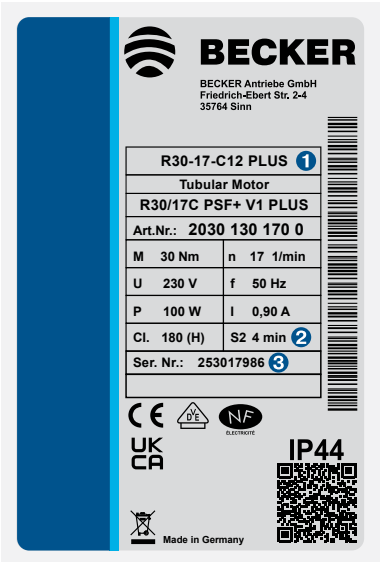
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm<br>L - 58mm |
| 30-17 | Rated torque-output speed |
| C | Centronic radio |
| 12 | Drive type |
| PLUS | CentronicPLUS radio |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 253017986

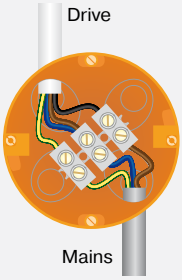
| | |
|---|---|
| 25 | Year 2025 |
| 01 | Calendar week |
| 17986 | Consecutive number |




## Connection

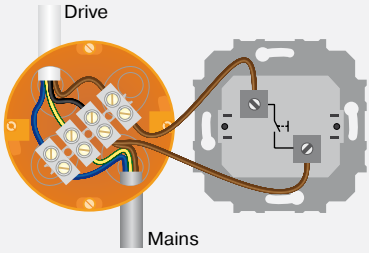
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.




### Connection with on-site operation with a single button

With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.



## Autoinstall

The C12 PLUS can automatically detect and program the optimum maximum extend limit position for articulated-arm and cassette awnings via the Autoinstall function.

## Stop behaviour

The C12 PLUS can be switched between increased and reduced stop behaviour.

## Fabric untensioning

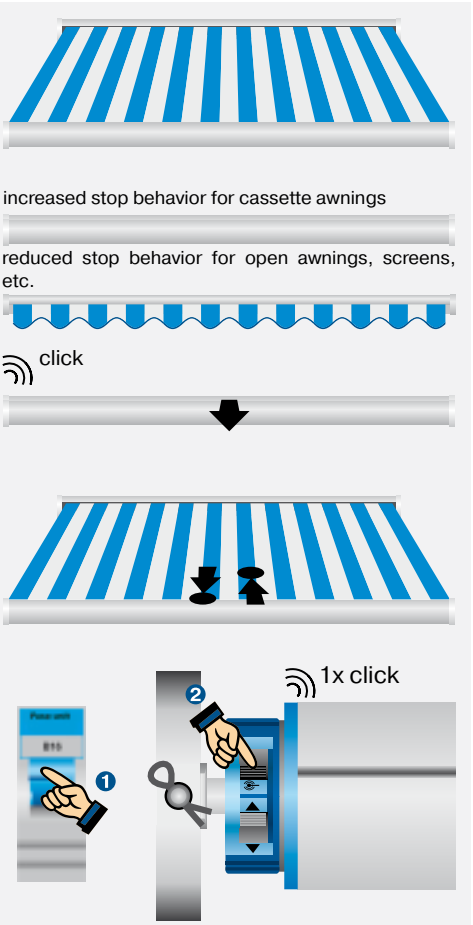
When the fabric untensioning is active, the drive moves slightly in the extend direction once it reaches the retract limit position in order to relieve the strain on the fabric.

## Fabric stretching function

Programmable fabric stretching ensures the fabric is pulled taut after extending to the lower limit position.

## Establishing programming mode

Activate the drive by switching on the power supply ❶ (Power On – the drive clicks once) or by switching the radio switch ❷ into the position Into learning mode (for Centronic: 3 minutes, for CentronicPlus: 15 minutes). You can now program a Centronic master transmitter (see C12 drive type) or a CentronicPlus transmitter for further commissioning.



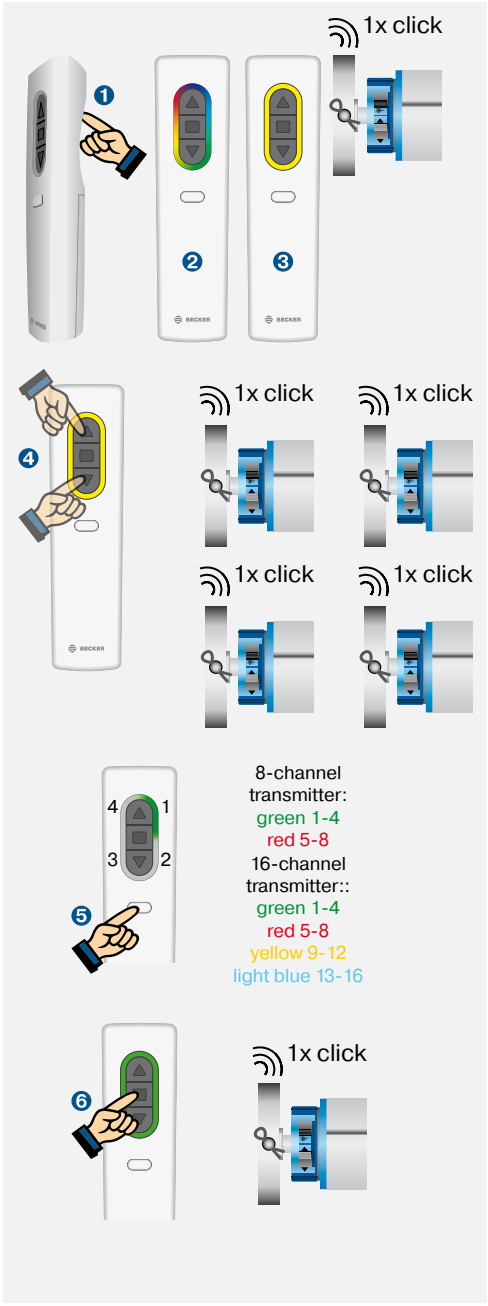
# DRIVE TYPE C12 PLUS

## Programming the transmitter and assigning a channel

### 1. Select a drive that is in learning mode

Pressing the programming button for 3 seconds ❶ prompts the transmitter to search for all drives currently in programming mode. The search process is indicated by the LED ring continually changing colour ❷. The transmitter automatically connects to the next drive (drive without programmed end positions: 1 click, drive with programmed end positions: 1 wave), and the LED ring lights up yellow.

If multiple drives are in programming mode at the same time, the desired drive can be selected using the UP or DOWN button ❹.




### 2. Select transmission channel

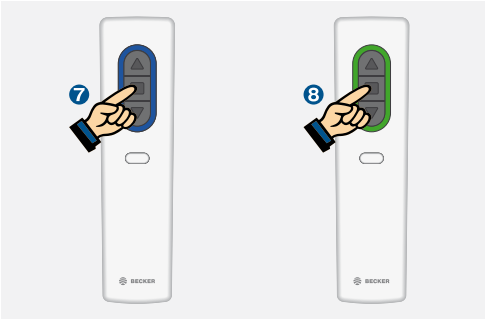
The function button ❺ can be used to select the desired transmission channel if a multi-channel transmitter is being used. In this case the LED ring is split into 4 fields, each of which is allocated different colour planes. In the example opposite, transmission channel 1 is selected.

### 3. Establish the network and activate the transmission channel

By pressing the STOP button ❻ a new network is established. The selected transmission channel is active and can go on to operate the drive. The LED ring lights up green. The drive confirms the action by clicking once.

## 4. Deactivate/activate the transmission channel

Pressing the STOP button again deactivates the transmission channel ❼. The LED ring lights up blue. Commissioning (setting the limit positions, activating special functions, etc.) can also be carried out with the transmission channel deactivated. Pressing the STOP button again reactivates the transmission channel ❽.




## Switching on setting mode

Briefly pressing the programming button ❶ activates the setting mode. The LED ring pulses light ❷. The drive is now in dead-man mode.


## Note:

When pairing a new transmitter with a new drive, a separate network is created. Commission all additional drives that should belong to the network using the same transmitter to prevent the creation of multiple networks.

## Correcting the direction of redation

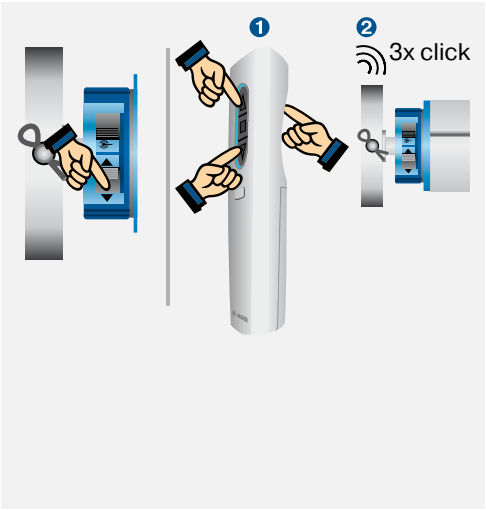
No limit positions may be programmed.

Via the switch on the drive:

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

With the transmitter (in setting mode):

When setting mode is activated, press the programming button, UP button and DOWN button ❶ until the drive clicks three times ❷. The LED ring displays a red/blue redation.



# DRIVE TYPE C12 PLUS

## Setting the stop behaviour (in setting mode)

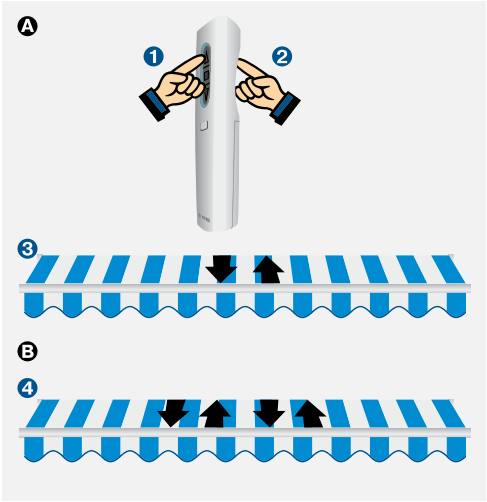
On delivery, the 35 diameter drive types have a reduced stop behaviour, and the 45 diameter and 58 diameter drive types have an increased stop behaviour. The stop behaviour can only be changed during the first 3 runs towards the upper stop.

**Ⓐ Switching on the reduced stop behaviour**

Move the shading solution in the retract direction ❶ and also press the programming button before it reaches the limit position ❷. Keep holding both buttons pressed until the shading solution confirms the changeover by extending and retracting once ❸.

**Ⓑ Switching on increased stop behaviour**

Repeat the procedure under Ⓐ until the drive confirms the changeover by extending and retracting twice ❹.




## Setting the limit positions via Autoinstall (in setting mode)

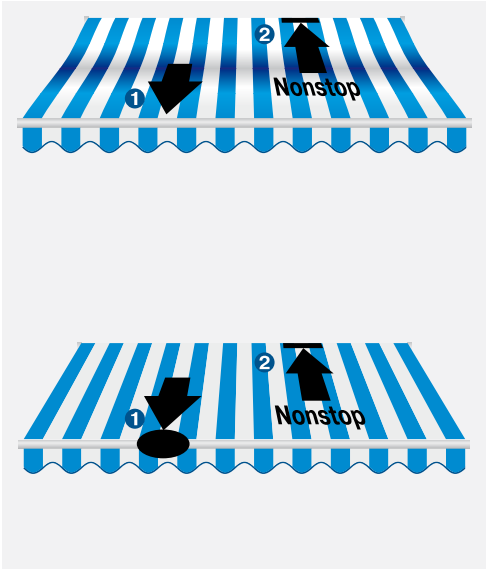
**Ⓐ Autoinstall with articulated arm and cassette awnings**

Run the shading solution in the extend direction until it passes the extend limit position and the fabric is resting on the articulated arms ❶.

Then run the shading solution without stopping in the retract direction until it stops automatically at the upper stop ❷.

**Ⓑ Autoinstall (freely selectable lower point to upper stop)**

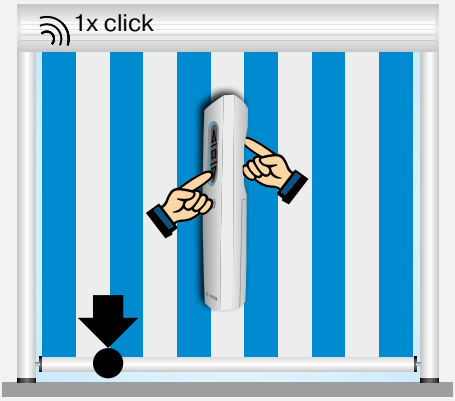
Run the shading solution to the desired extend limit position ❶. Then run the shading solution without stopping in the retract direction until it stops automatically at the upper stop ❷.



# Setting the limit positions (in setting mode)

## 1. Programming the extend limit position (in setting mode)

Run the shading solution to the extend limit position. Then press the programming button and the EXTEND button until the drive clicks once.



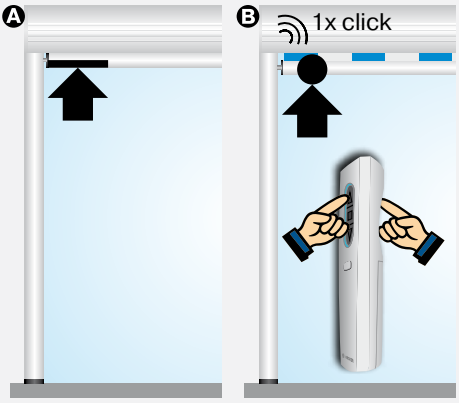

## 2. Programming the retract limit position (in setting mode)

Ⓐ **Retract limit position stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired retract position. Then press the programming button and the RETRACT button until the drive clicks once.




## 3. Deleting the limit positions (in setting mode)

Press the programming button and the STOP button until the drive clicks twice after 6 seconds.

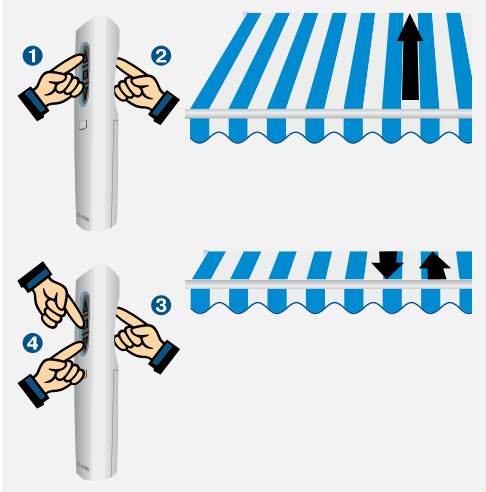
If the shading solution is situated between the limit positions, both limit positions are deleted in the procedure. If the shading solution is situated in one of the limit positions, only this position will be deleted. In terms of special functions, the drive reverts to the as-delivered condition.

# DRIVE TYPE C12 PLUS

## Setting the special fabric untensioning and fabric stretching functions (in setting mode)

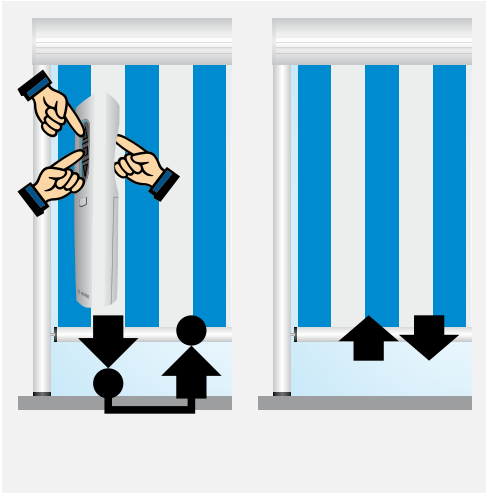
### 1. Activating/deactivating the fabric untensioning function (in setting mode)

On delivery, the fabric untensioning function is deactivated on drive types with a diameter of 35 mm, and is activated on drive types with diameters of 45 mm and 58 mm. Run the shading solution towards the upper stop ❶. Then press the programming button ❷ until the drive clicks once. Press the programming button again ❸ and also the STOP and EXTEND buttons ❹ until the drive confirms activation or deactivation of the fabric untensioning.



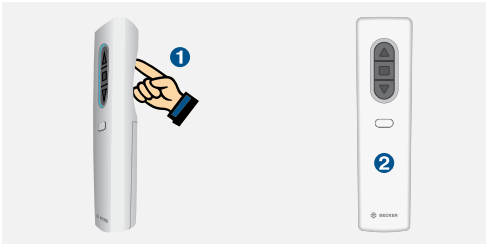

### 2. Activating/deactivating the fabric stretching function (in setting mode)

Move the shading solution to the fabric stretching position. Then press the programming button, STOP button and RETRACT button until the drive signals to confirm the programming operation. To deactivate the fabric tensioning function, press the EXTEND button to move the drive to the fabric tensioning position then press the programming button, STOP button and RETRACT buttons again until the drive signals to confirm the programming operation.



## Exiting setting mode

A long press (3 seconds) of the programming button ❶ deactivates the setting mode. The LED ring turns off ❷. The hand-held transmitter is now in normal mode.



# Setting the intermediate positions

## 1. Programming the intermediate position I

Run the shading solution to the desired intermediate position and press the STOP and EXTEND buttons until the drive clicks once.

Repeat the procedure to overwrite the intermediate position.

To travel to intermediate position I, press the EXTEND button twice within one second.


## 2. Programming the intermediate position II

Run the shading solution to the desired intermediate position and press the STOP and RETRACT buttons until the drive clicks once.

Repeat the procedure to overwrite the intermediate position.

To travel to intermediate position II, press the RETRACT button twice within one second.


## 3. Deleting the intermediate position I / Intermediate position II

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and EXTEND buttons or STOP and RETRACT buttons) until the drive clicks twice.

# DRIVE TYPE C18

## Type plate

❶ Type designation: e.g. R30-17-C18

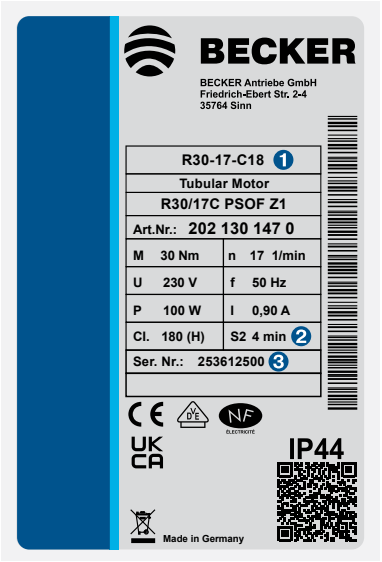
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 30-17 | Rated torque-output speed |
| C | Centronic radio |
| 18 | Drive type |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 253612500

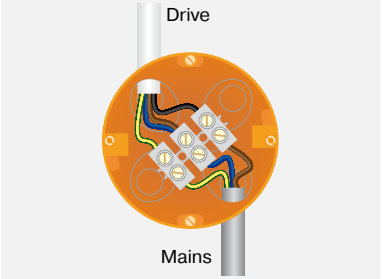
| | |
|---|---|
| 25 | Year 2025 |
| 36 | Calendar week |
| 12500 | Consecutive number |




## Connection

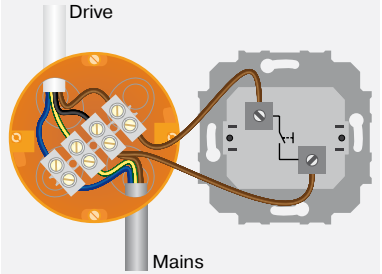
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.




### Connection with on-site operation with a single button

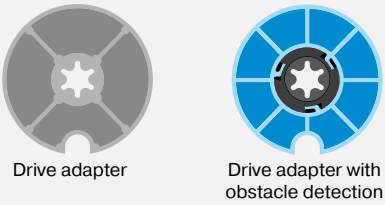
With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.



## Obstacle detection

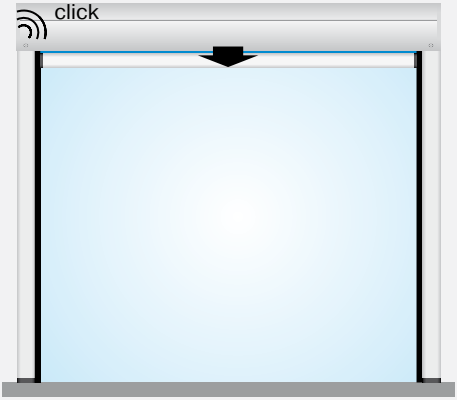
In order to avoid uncontrolled unwinding of the shading solution, obstructions in the DOWN direction are detected (such as wind load).

For the sensitive obstruction detection to become active, the drive adapter must be fitted with obstruction detection on the drive and the shading solution must have a heavy end strip.



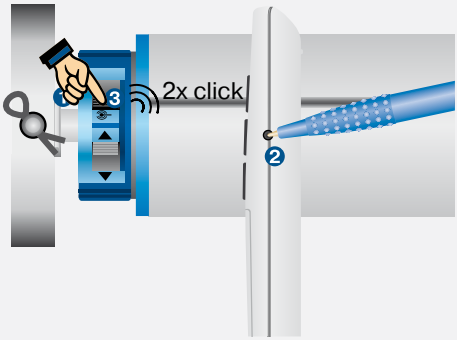

## Fabric untensioning

When the fabric untensioning is active, the drive moves slightly downwards once it reaches the retract limit position in order to relieve the strain on the fabric.




## Programming the master transmitter

By switching on the power supply (Power On) or by moving the radio switch to the position you put the drive into learning mode for 3 minutes ❶. Then press the programming button on the master transmitter ❷ until the drive clicks twice ❸ (3 seconds for new drives, 10 seconds to overwrite an already taught-in master transmitter).

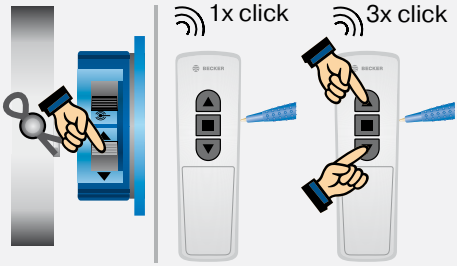



## Correcting the direction of redation

No limit positions may be programmed.

Via the switch on the drive: If the drive is redating in the wrong direction, reverse the direction switch on the drive.

Via the master transmitter: Press the programming button, until the drive clicks once. Then press the programming button, RETRACT button and EXTEND button until the drive clicks three times.

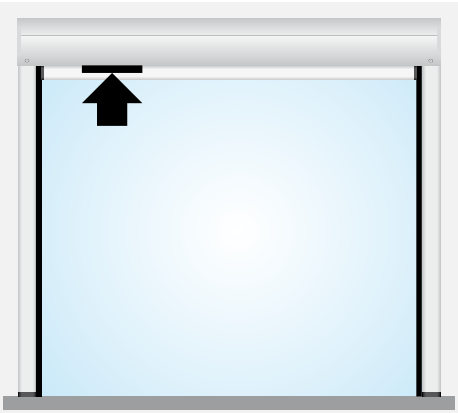


# DRIVE TYPE C18

## Setting the limit positions via Autoinstall

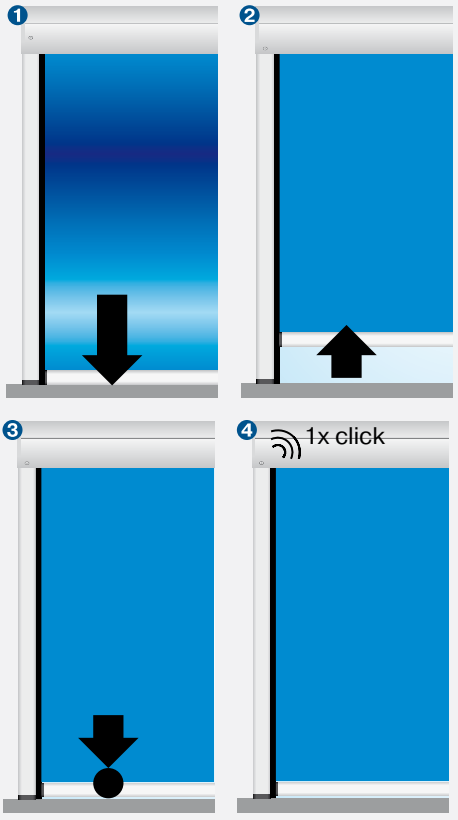
### 1. Programming the retract limit position

Run the shading solution towards the stop until the drive stops automatically.



### 2. Programming the extend limit position

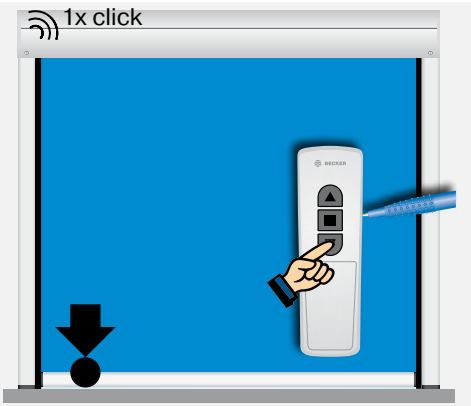
Travel in the extend direction and keep the travel button pressed until the drive moves past the extend limit position ❶ then move upward ❷ and then move downward again ❸ to finally stop at the extension end position and confirm the programming process with a click ❹.



# Setting the limit positions

## 1. Programming the extend limit position with the master transmitter

Run the shading solution to the extend limit position. Then press the programming button and the EXTEND button until the drive clicks once.



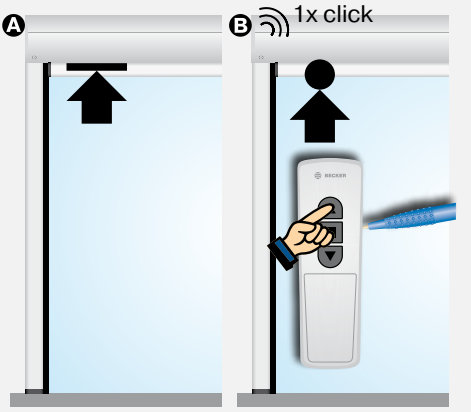

## 2. Programming the retract limit position using the master transmitter

Ⓐ **Retract limit position stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired retract position. Then press the programming button and the RETRACT button until the drive clicks once.

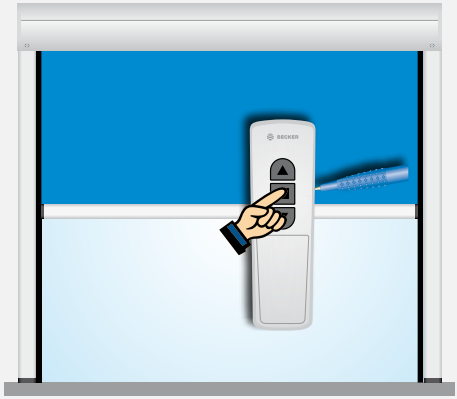



## 3. Deleting the limit positions using the master transmitter

Press the programming button and theSTOP button until the drive clicks twice after 10 seconds.

If the shading solution is situated between the limit positions, both limit positions are deleted in the procedure.

If the shading solution is situated in one of the limit positions, only this position will be deleted.



# DRIVE TYPE C18

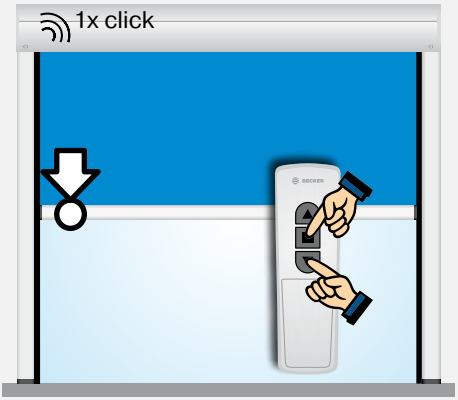
## Setting the intermediate positions

### 1. Programming the intermediate position I

Run the shading solution to the desired intermediate position and press the STOP and EXTEND buttons until the drive clicks once.

Repeat the procedure to overwrite the intermediate position.

To travel to intermediate position I, press the EXTEND button twice within one second.

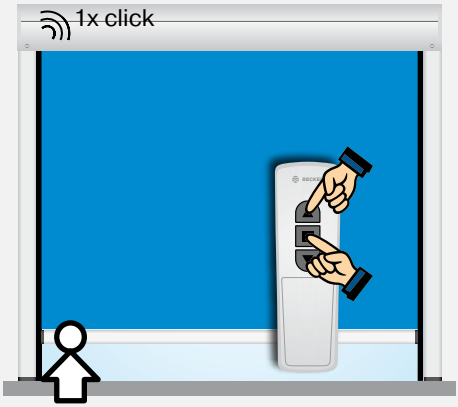



### 2. Programming the intermediate position II

Run the shading solution to the desired intermediate position and press the STOP and RETRACT buttons until the drive clicks once.

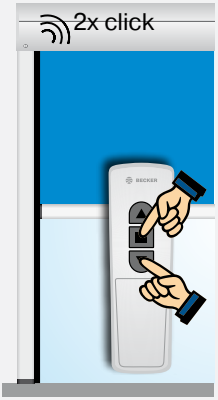
Repeat the procedure to overwrite the intermediate position.

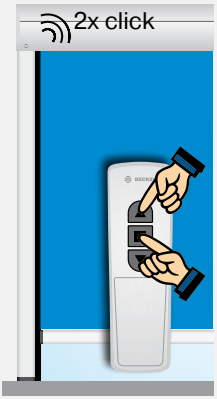
To travel to intermediate position II, press the RETRACT button twice within one second.




### 3. Deleting the intermediate position I / Intermediate position II

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and EXTEND buttons or STOP and RETRACT buttons) until the drive clicks twice.



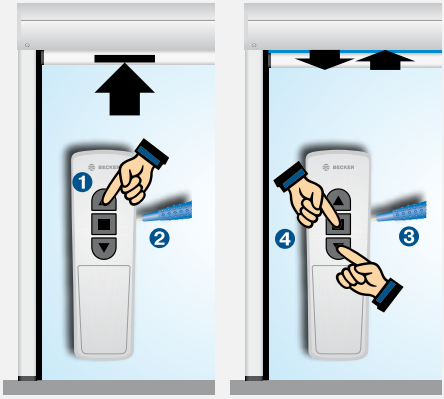



# Setting the special function fabric untensioning

## 1. Activating/deactivating the fabric untensioning function

On delivery, the fabric untensioning function is deactivated on drive types P - 35 mm, and is activated on drive types R - 45 mm.

Run the shading solution towards the upper stop ❶. Then press the programming button ❷ until the drive clicks once. Press the programming button again ❸ and also the STOP and EXTEND buttons ❹ until the drive confirms activation or deactivation of the fabric untensioning.

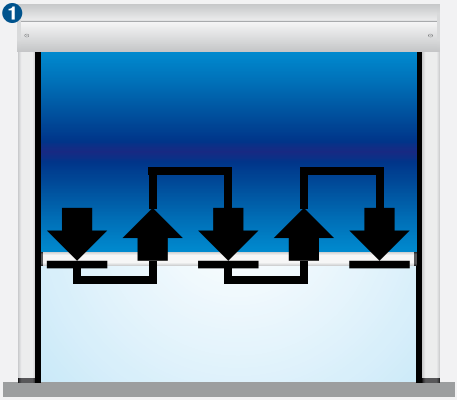



# Sensitive obstacle detection

If an obstruction is detected during the drive (e.g. wind load during the closing movement), the drive stops, reverses and tries to move past the obstruction a second time. If this fails, the drive switches off after the third attempt ❶.

If obstructions occur at different points, the drive restarts three times in each case. After a maximum of ten stops caused by obstructions at different points, the drive reverses and switches off.

Approx. 15 cm from the lower limit position, the drive interrupts operation immediately following the first detection of an obstacle and makes no further attempt to continue.



# DRIVE TYPE C18 PLUS

## Type plate

❶ Typeenbezeichung:
z.B. R30-17-C18 PLUS

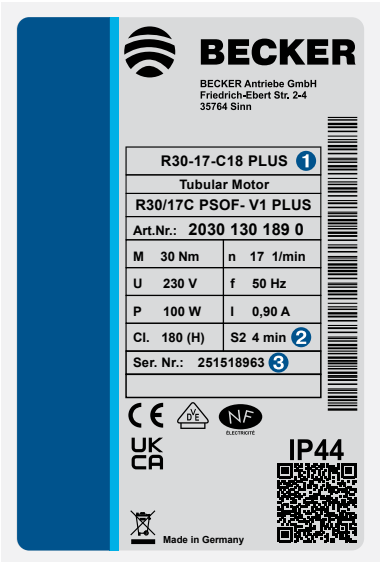
| | |
|---|---|
| R | Size of drive (tube diameter)<br>P - 35mm<br>R - 45mm |
| 30-17 | Rated torque-output speed |
| C | Centronic radio |
| 18 | Drive type |
| PLUS | CentronicPLUS radio |

❷ Operating mode (short-period operation S2)

After 4 minutes of continuous operation, the drive must be allowed to cool off.

❸ Serial number: e.g. 251518963

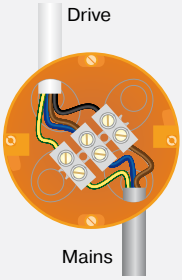
| | |
|---|---|
| 2025 | Year 2025 |
| 15 | Calendar week |
| 18963 | Consecutive number |




## Connection

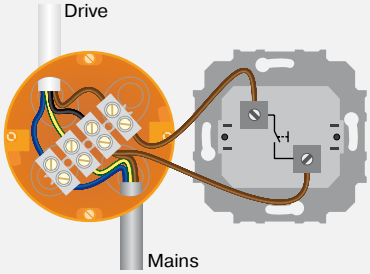
### Connection without on-site operation

The blue and green/yellow wires of the drive are connected to the same coloured wires of the power line. The black wire of the drive is connected to the phase (L) and the brown wire is also connected to the blue wire (N) of the power line.




### Connection with on-site operation with a single button

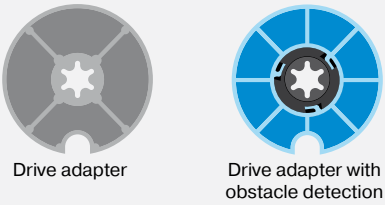
With on-site operation, the brown wire of the drive is connected to the phase of the power line via a single button. The push-button must not be operated during the first five seconds after the mains voltage has been switched on. The drive can then be operated via the single button using the command sequence Up, Stop, Down, Stop, etc.



## Obstacle detection

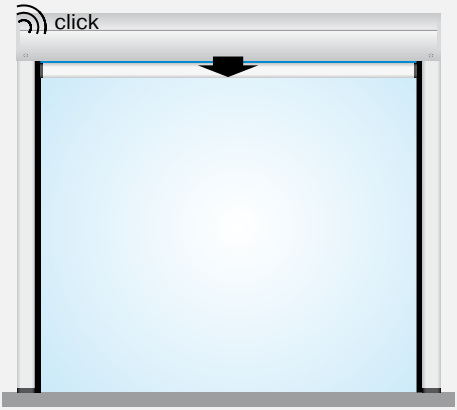
In order to avoid uncontrolled unwinding of the shading solution, obstructions in the DOWN direction are detected (such as wind load).

For the sensitive obstruction detection to become active, the drive adapter must be fitted with obstruction detection on the drive and the shading solution must have a heavy end strip.



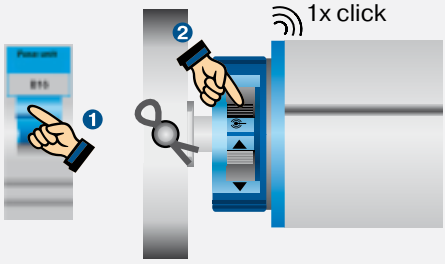

## Fabric untensioning

When the fabric untensioning is active, the drive moves slightly downwards once it reaches the retract limit position in order to relieve the strain on the fabric.




## Establishing programming mode

Activate the drive by switching on the power supply ❶ (Power On – the drive clicks once) or by switching the radio switch ❷ into the position Into learning mode (for Centronic: 3 minutes, for CentronicPlus: 15 minutes). You can now program a Centronic master transmitter (see C18 drive type) or a CentronicPlus transmitter for further commissioning.



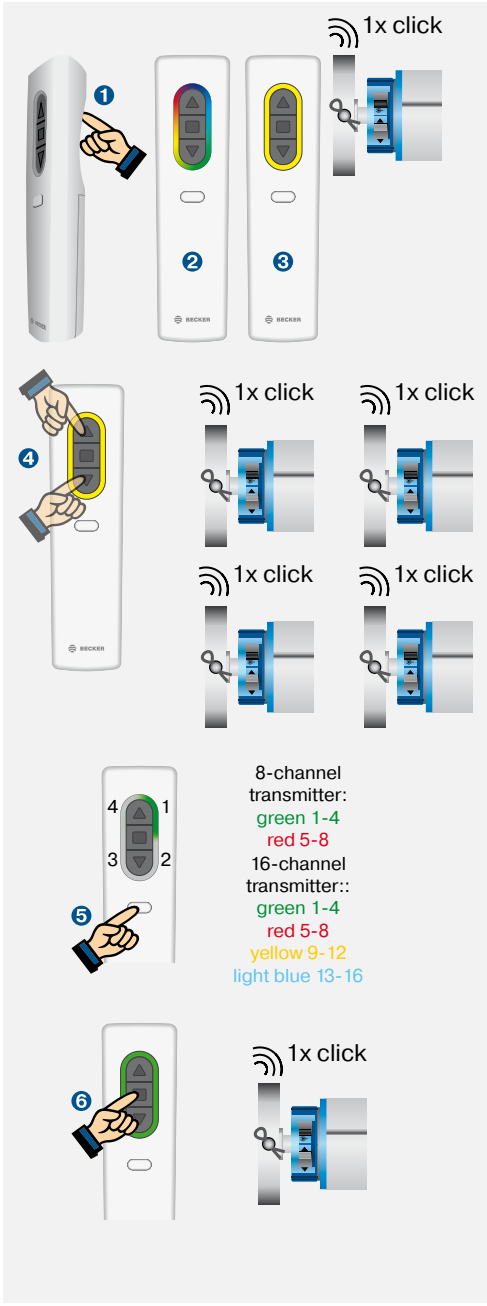
# DRIVE TYPE C18 PLUS

## Programming the transmitter and assigning a channel

### 1. Select a drive that is in learning mode

Pressing the programming button for 3 seconds ❶ prompts the transmitter to search for all drives currently in programming mode. The search process is indicated by the LED ring continually changing colour ❷. The transmitter automatically connects to the next drive (drive without programmed end positions: 1 click, drive with programmed end positions: 1 wave), and the LED ring lights up yellow.

If multiple drives are in programming mode at the same time, the desired drive can be selected using the UP or DOWN button ❹.




### 2. Select transmission channel

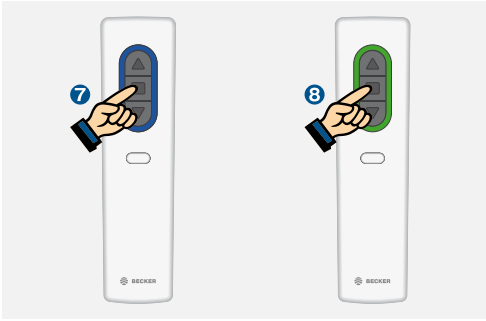
The function button ❺ can be used to select the desired transmission channel if a multi-channel transmitter is being used. In this case the LED ring is split into 4 fields, each of which is allocated different colour planes. In the example opposite, transmission channel 1 is selected.

### 3. Establish the network and activate the transmission channel

By pressing the STOP button ❻ a new network is established. The selected transmission channel is active and can go on to operate the drive. The LED ring lights up green. The drive confirms the action by clicking once.

## Deactivate/activate the transmission channel

Pressing the STOP button again deactivates the transmission channel ❼. The LED ring lights up blue. Commissioning (setting the limit positions, activating the special functions etc.) can also be performed when the transmission channel is deactivated. Pressing the STOP button again reactivates the transmission channel ❽.




## Switching on setting mode

Briefly pressing the programming button ❶ activates the setting mode. The LED ring pulses light ❷. The drive is now in dead-man mode.


## Note:

When pairing a new transmitter with a new drive, a separate network is created. Commission all additional drives that should belong to the network using the same transmitter to prevent the creation of multiple networks.

## Correcting the direction of redation

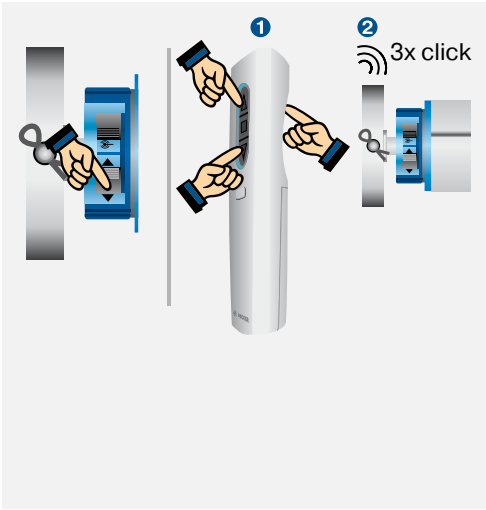
No limit positions may be programmed.

Via the switch on the drive:

If the drive is redating in the wrong direction, reverse the direction switch on the drive.

With the transmitter (in setting mode):

When setting mode is activated, press the programming button, UP button and DOWN button ❶ until the drive clicks three times ❷. The LED ring displays a red/blue redation.

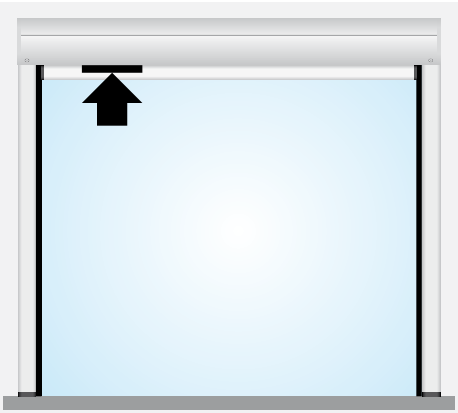


# DRIVE TYPE C18 PLUS

## Setting the limit positions via Autoinstall in setting mode or normal mode

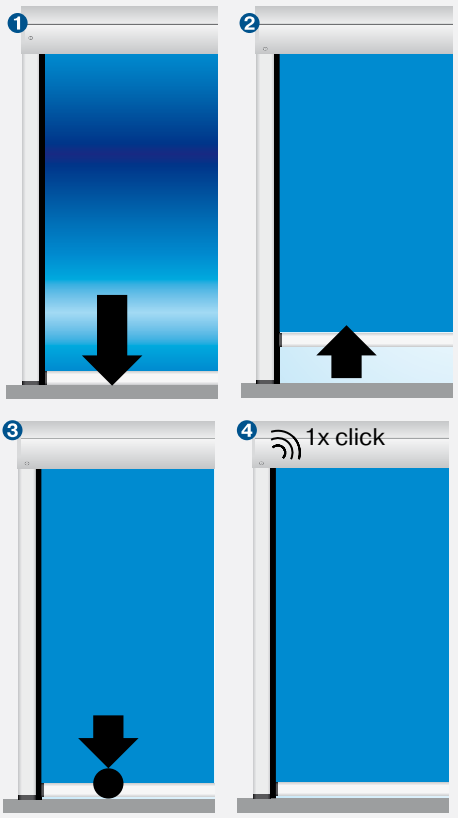
### 1. Programming the retract limit position

Run the shading solution towards the stop until the drive stops automatically.



### 2. Programming the extend limit position

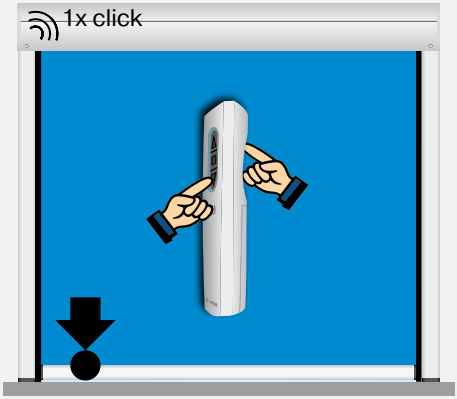
Travel in the extend direction and keep the travel button pressed until the drive moves past the extend limit position ❶ then move upward ❷ and then downwards ❸ to finally stop at the extension end position and confirm the programming process with a click ❹.



# Setting the limit positions (in setting mode)

## 1. Programming the extend limit position (in setting mode)

Run the shading solution to the extend limit position. Then press the programming button and the EXTEND button until the drive clicks once.



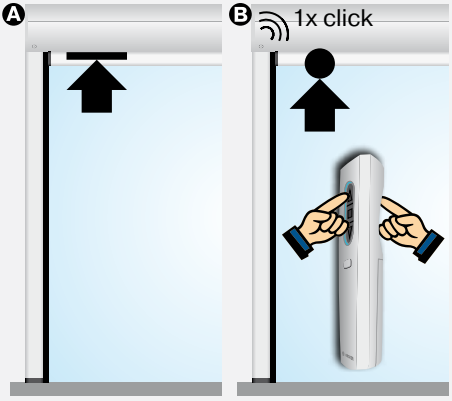

## 2. Programming the retract limit position (in setting mode)

Ⓐ **Retract limit position stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To retract limit position point**

Run the shading solution to the desired retract position. Then press the programming button and the RETRACT button until the drive clicks once.

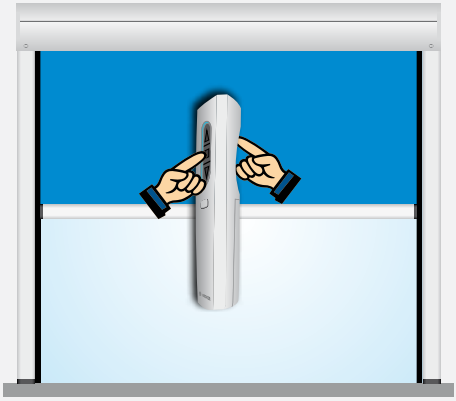



## 3. Deleting the limit positions (in setting mode)

Press the programming button and the STOP button until the drive clicks twice after 6 seconds.

If the shading solution is situated between the limit positions, both limit positions are deleted in the procedure.

If the shading solution is situated in one of the limit positions, only this position will be deleted.



# DRIVE TYPE C18 PLUS

## Setting the intermediate positions

### 1. Programming the intermediate position I

Run the shading solution to the desired intermediate position and press the STOP and EXTEND buttons until the drive clicks once.

Repeat the procedure to overwrite the intermediate position.

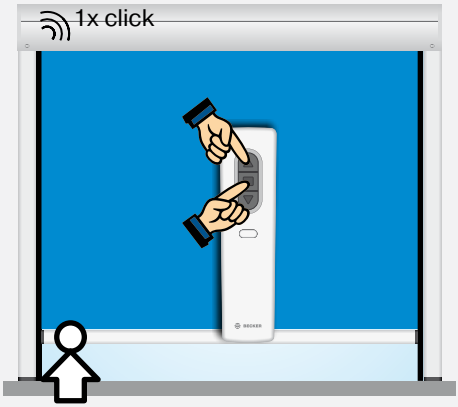
To travel to intermediate position I, press the EXTEND button twice within one second.


### 2. Programming the intermediate position II

Run the shading solution to the desired intermediate position and press the STOP and RETRACT buttons until the drive clicks once.

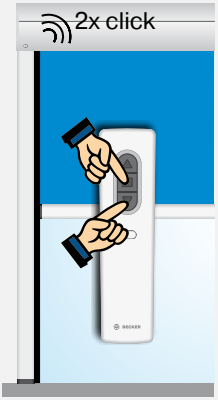
Repeat the procedure to overwrite the intermediate position.

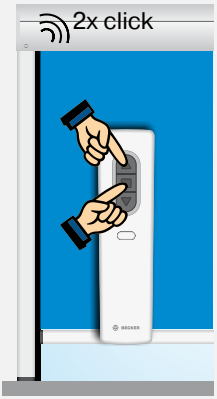
To travel to intermediate position II, press the RETRACT button twice within one second.




### 3. Deleting the intermediate position I / Intermediate position II

Run the drive to the position you wish to delete and repeat the programming procedure (press the STOP and EXTEND buttons or STOP and RETRACT buttons) until the drive clicks twice.



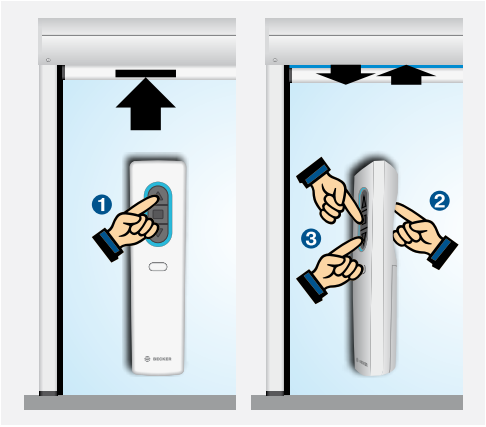



# Setting the special function fabric untensioning (in setting mode)

## Activating/deactivating the fabric untensioning function (in setting mode)

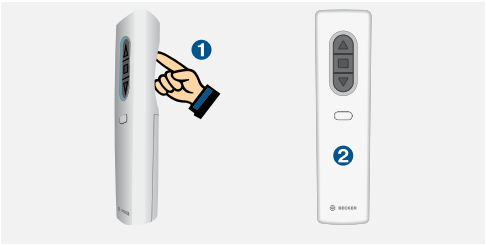
On delivery, the fabric untensioning function is deactivated on drive types P - 35 mm, and is activated on drive types R - 45 mm.

Run the shading solution towards the upper stop ❶. Press the programming button ❷ and also the STOP and EXTEND buttons ❸ until the drive confirms activation or deactivation of the fabric untensioning.



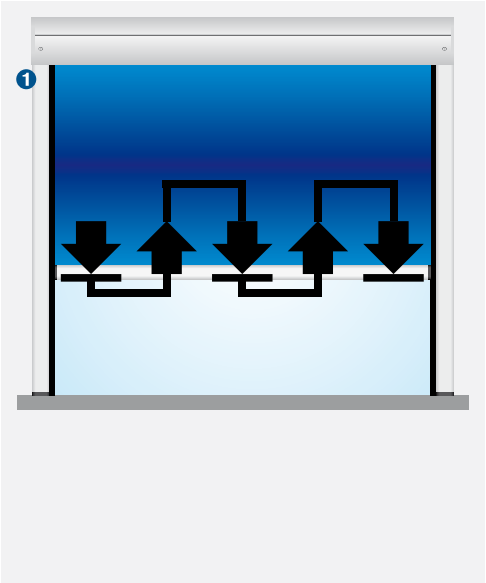

## Exiting setting mode

A long press (3 seconds) of the programming button ❶ deactivates the setting mode. The LED ring turns off ❷. The drive is now in normal mode.




## Sensitive obstacle detection

If an obstruction is detected during the drive (e.g. wind load during the closing movement), the drive stops, reverses and tries to move past the obstruction a second time. If this fails, the drive switches off after the third attempt ❶. If obstructions occur at different points, the drive restarts three times in each case. After a maximum of ten stops caused by obstructions at different points, the drive reverses and switches off. Approx. 15 cm from the lower limit position, the drive interrupts operation immediately following the first detection of an obstacle and makes no further attempt to continue.

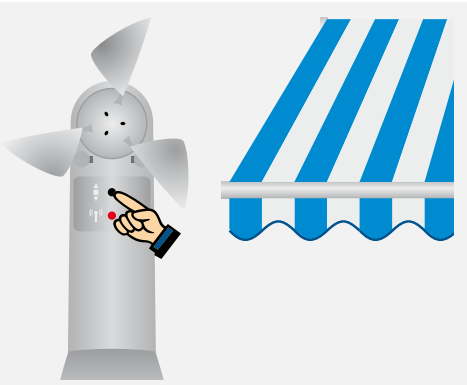


# CONTROL UNITS SET SWS241

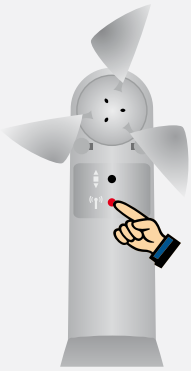
## Commissioning of the sun-wind set radio hand transmitter with sensor - SWS241

### 1. Programming the master transmitter

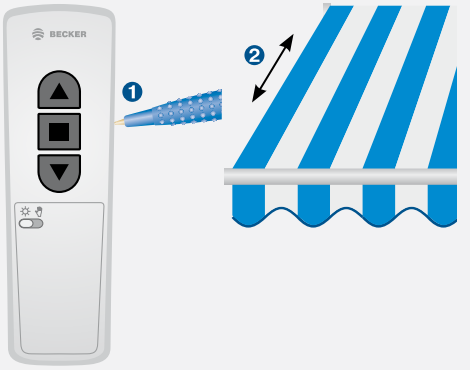
a. Run the shading solution to a centre position using the UP/STOP/DOWN toggle switch.



b. Then press the programming button am SWC510. The SWC510 goes into programming mode for 3 minutes.



c. Press the programming button ❶ on the SWC441-II radio hand transmitter during the learning mode, until an acknowledgment ❷ (“Nodding” of the blind) occurs.

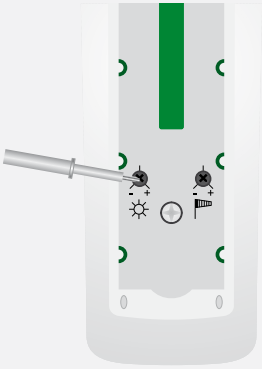



Note: In order to recognise the shift clearly, the shading solution should be situated between the limit positions.

## 2. Setting the sun threshold

Remove the labelling field on the back of the SWC441-II hand-held radio transmitter. Use the tool provided to turn the sun threshold regulator to the desired setting.

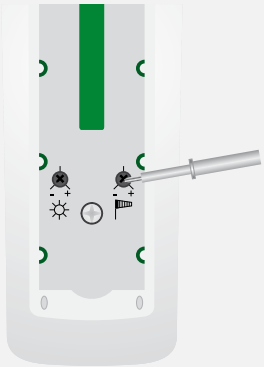
The sun threshold has 15 possible settings (approx. 2 klux to 100 klux). When slowly turning the regulator, the shading solution shifts to indicate the setting changes.



## 3. Setting the wind threshold

Use the tool provided to turn the wind threshold regulator to the desired setting.

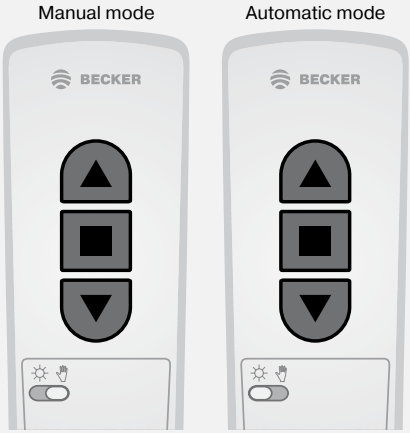
The wind threshold has 11 possible settings (approx. 2m/s to 22 m/s). When slowly turning the regulator, the shading solution shifts to indicate the setting changes.



## 4. Checking settings

After the threshold values are set, the system switches to the TEST mode automatically. In TEST mode, the shade function and wind monitoring times are shortened. The functions can be checked in automatic mode.

End the test mode by using the slide switch to move from automatic mode to manual mode and back to automatic mode. If the slide switch is not operated within 15 minutes, the test mode is ended automatically.



# CONTROL UNITS SET SWS441/SWS641

## Commissioning of the sun-wind set radio hand transmitter with sensor - SWS441/SWS641

### 1. Programming the master transmitter

Switch the mains power of the radio receiver (drive type C12 PLUS) off and on again ❶. Then press the programming button on the master transmitter ❷ until the drive clicks twice ❸.

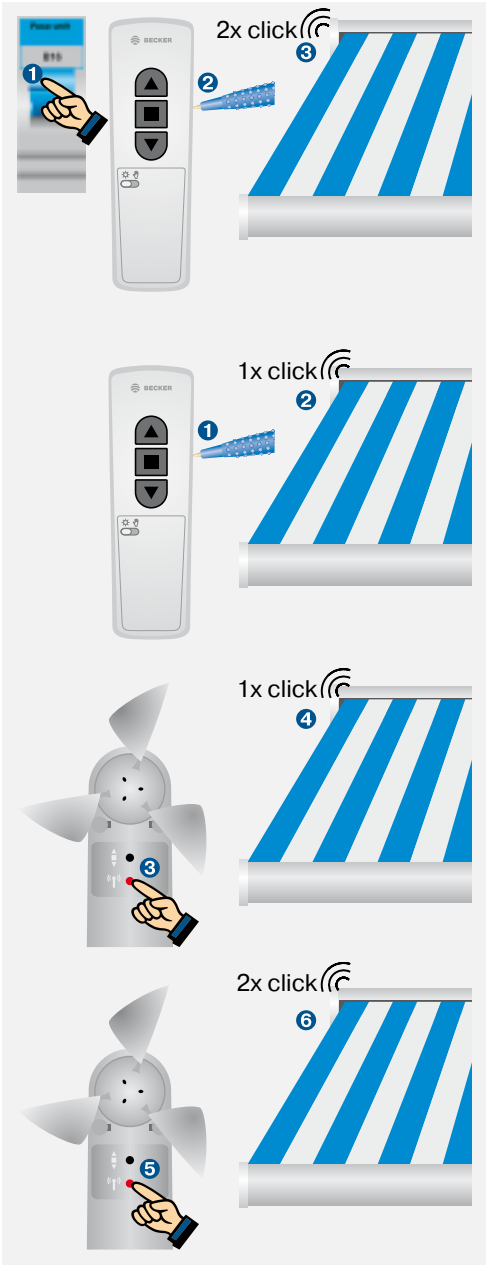
Note: Follow the instructions on pages 92 and 93 to set the limit positions for the PSF(+) drive.

### 2. Programming the SC811/SC861

a) Press the programming button of the master transmitter ❶ until the tubular drive clicks once ❷.

b) Then press the programming button des SC811/SC861 ❸ until the tubular drive clicks once ❹.

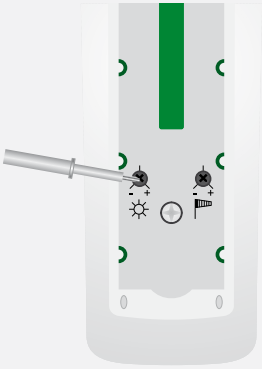
c) Press the programming button of the SC811/SC861 again ❺ until the tubular drive clicks twice ❻.



## 3. Setting the sun threshold

Remove the labelling field on the back of the SWC441-II hand-held radio transmitter. Use the tool provided to turn the sun threshold regulator to the desired setting.

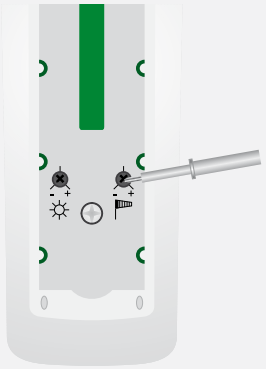
The sun threshold has 15 possible settings (approx. 2 klux to 100 klux). When slowly turning the regulator, the tubular drive clicks to indicate the setting changes.



## 4. Setting the wind threshold

Use the tool provided to turn the wind threshold regulator to the desired setting.

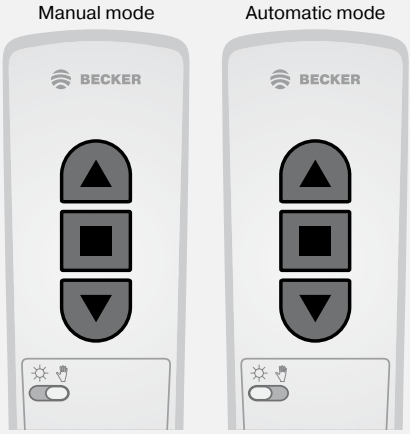
The wind threshold has 11 possible settings (approx. 2m/s to 22 m/s). When slowly turning the regulator, the tubular drive clicks to indicate the setting changes.



## 5. Checking settings

After the threshold values are set, the system switches to the TEST mode automatically. In TEST mode, the shade function and wind monitoring times are shortened. The functions can be checked in automatic mode.

End the test mode by using the slide switch on the SWC441-II to move from automatic mode to manual mode and back to automatic mode. If the slide switch is not operated within 15 minutes, the test mode is ended automatically.



# CONTROL UNITS SET SWS541 PLUS

## Commissioning the radio-controlled Sun-Wind-Rain set using the SWC541 PLUS hand-held transmitter and the SC911 PLUS sensor

**Note: Information on programming the transmitter in the receiver can be found in the sections on C12 PLUS, C18 PLUS, VC420 PLUS and VC470 PLUS.**

**If the SWS541 PLUS has been added to an already installed network (mesh), the SWC541 PLUS hand-held transmitter is programmed into the network first.**

To do so, press the programming button on a transmitter that is already in the network until the LED stops continually changing colour and lights up green or blue. On the new SWC541 PLUS transmitter with factory settings, keep the programming button pressed down until the LED rings on both transmitters fill in in the clockwise direction and flash green (see also: CentronicPlus radio technology in the Appendix).

## Add the SC911 PLUS sensor to the network (activate), and allocate it to a receiver

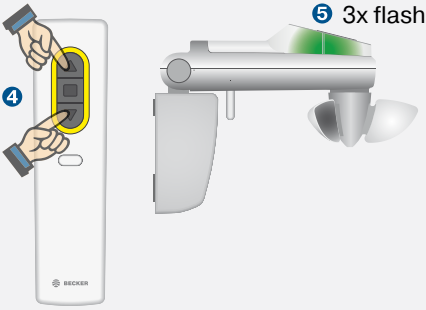
### Establishing programming mode at the sensor

Set the SC911 PLUS into operation by switching on the power supply ❶ (Power On) for 15 minutes in learning mode. The SC911 PLUS confirms learning mode by flashing the LED green once ❷.


### Selecting the sensor in programming mode

Pressing the programming button for 3 seconds ❶ the transmitter searches for all receivers that are in learning mode. The search is indicated by a continuous color change of the LED ring ❷. The transmitter connects to a receiver (sensor) in programming mode. The LED ring lights up yellow ❸.

If multiple receivers (sensors) are in programming mode at the same time, the desired SC911 PLUS can be selected using the RETRACT or EXTEND button ❹. The SC911 PLUS confirms the selection by flashing the LED green three times ❺.

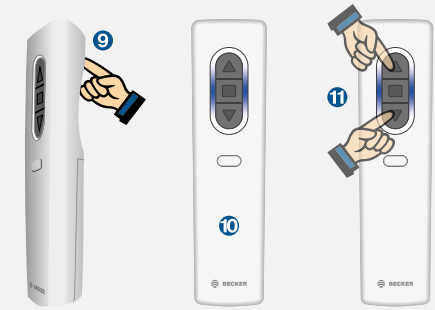



## Activating the sensor

By briefly pressing the STOP button ❻ the sensor is activated and becomes part of the mesh network. The LED ring lights up white ❼. The sensor confirms the activation by flashing green 3 times ❽.


## Selecting a receiver in the network

After briefly pressing the programming button ❾ a receiver in the network acknowledges. The LED ring lights up blue/white. Using the CLOSE or OPEN button ❿ the receiver to which the sensor is to be assigned can be selected ⓫.




## Allocating the sensor to the receiver

By briefly pressing the STOP button ⓬ the sensor is assigned to the receiver. The LED ring lights up green/white. The sensor values are now transmitted to the receiver. Pressing the STOP button again cancels the assignment. The LED ring then lights up blue/white again ⓭.

# CONTROL UNITS SET SWS541 PLUS

## Ending the programming procedure

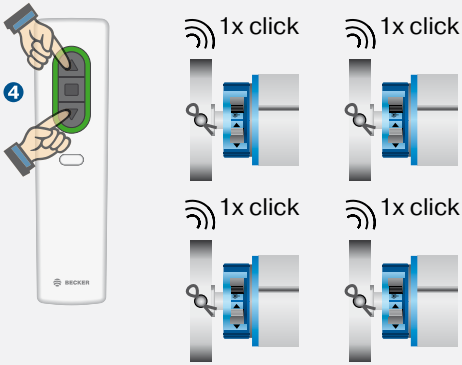
A long press (3 seconds) of the programming button ❶ ends the programming process. The LED ring turns off ❷.


## Setting the thresholds and the behaviour in the event of rain in the receiver

### Selecting the receiver

Pressing the programming button for 3 seconds ❶ the transmitter searches for all receivers that are in the same network. The search is indicated by a continuous color change of the LED ring ❷. The transmitter automatically connects to the nearest receiver in the network. The LED ring lights up green ❸ (green = active) or blue (inactive).

The desired receiver can be selected using the UP or DOWN button ❹. The receiver confirms the selection by clicking once or by performing a travel movement.

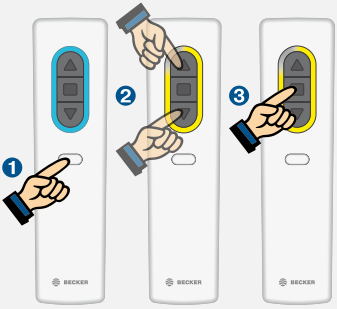




## Activating setting mode

Briefly pressing the programming button ❶ activates the setting mode. The LED ring pulses light ❷. The receiver is now in setting mode.

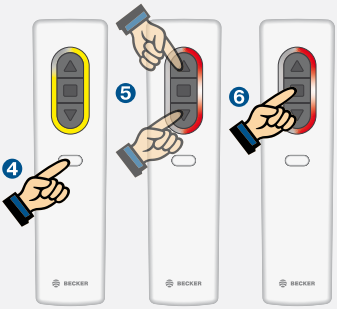
## 1. Setting the sun thresholds

By pressing the function button for 3 seconds ❶ the transmitter switches to the sun threshold setting. By pressing the UP or DOWN button ❷ the sun threshold value can be adjusted. By pressing the STOP button ❸ the preset value is reselected.



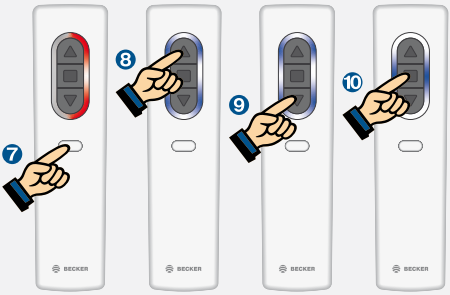

## 2. Setting the wind thresholds

By pressing the function button for 1 second ❹ the transmitter switches to the wind threshold setting. By pressing the UP or DOWN button, the wind threshold value can be adjusted ❺. By pressing the STOP button ❻ the preset value is reselected.




## 3. Setting the behaviour in the event of rain

By pressing the function button for 1 second ❼ the transmitter switches to the setting for rain behavior. By pressing the UP button, the blind retracts in case of rain ❽. By pressing the DOWN button, the blind extends in case of rain ❾. By pressing the STOP button, there is no reaction to rain ❿.




## Exiting setting mode and saving the settings

A long press (3 seconds) of the programming button ❶ deactivates the setting mode. The LED ring turns off ❷. The receiver saves the settings.

# SOLARKIT SK460

## Commissioning SolarKit SK460

**Note: The SolarKit SK460 can be used for roller shutters or sun protection (screen). The control unit and charging electronics are integrated in the drive. The drive (type C28) is compatible with the Centronic series radio control units EasyControl, SunWindControl, and SensorControl.**

### Installation

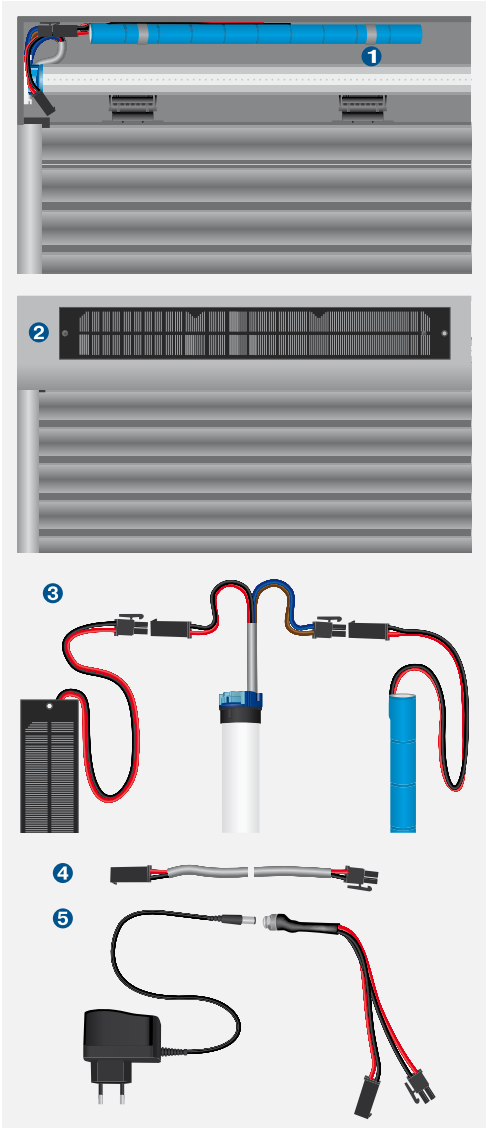
Mount the stick battery above the winding shaft on the same side as the drive using the supplied mounting kit ❶. The stick battery, as well as all plug connections and cables, must not come into contact with the shutter curtain or the screen.

Mount the solar panel ❷ on the same side as the drive. Drill the holes for mounting and cable routing according to the user manual. Insert the connection cable through the cable entry. Ensure the edge protection is seated correctly. Affix the panel precisely over the mounting holes. Carefully rivet the panel using the supplied rivets.

The adjacent example ❸ shows the plug connections between the drive, solar panel, and stick battery..

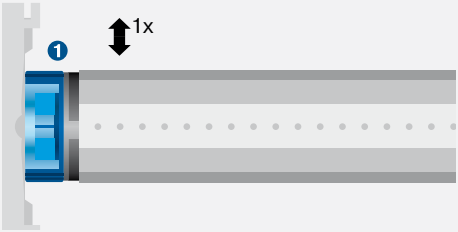
The solar panel should receive as much direct sunlight as possible. To achieve optimal placement, an extension cable (1.5 m) can optionally be used between the drive and the solar panel ❹.

To charge the battery, an optional power supply with a Y-connector can also be used ❺ between the drive and the panel.



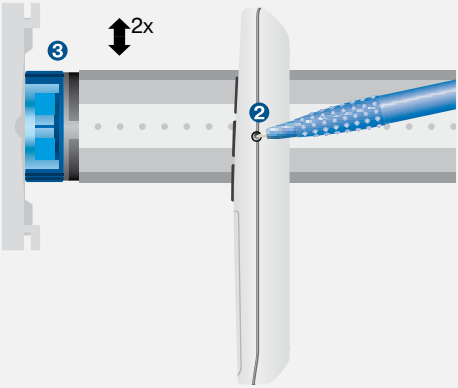
## Enable learning mode for the master transmitter

First disconnect the plug connections between the drive and the battery and between the drive and the solar panel. Then reconnect the connections. The drive is now in learning mode for 3 minutes and acknowledges once ❶ (optionally also possible by pressing the programming button on an additionally paired transmitter for 10 seconds).



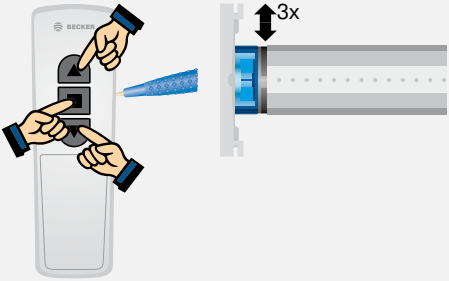

## Programming the master transmitter

Then press the programming button on the required master transmitter ❷ until the drive acknowledges twice. ❸ (3 seconds when installing new drives, 10 seconds to overwrite a previously programmed master transmitter).




## Correcting the direction of redation

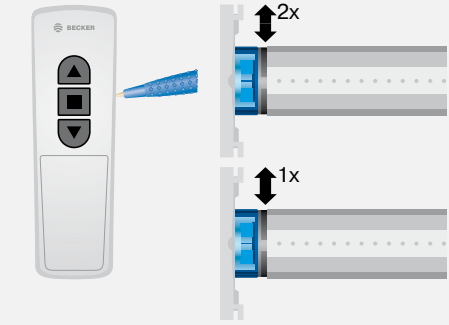
No limit positions may be programmed. Press the programming, UP, and DOWN buttons on the master transmitter until the drive confirms three times.




## Selection of roller shutter or screen operation

Press the programming, UP, STOP, and DOWN buttons until the drive acknowledges twice (screen operation) or once (roller shutter operation).

Speed reduction and stop behavior are each adapted to the operating mode.



# SOLARKIT SK460

## Limit position setting in roller shutter/screen operation

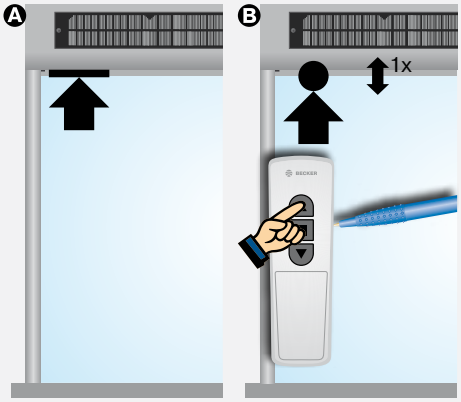
### 1. Programming the upper limit position using the master transmitter

Ⓐ **To upper stop**

Run the shading solution towards the upper stop until the drive stops automatically.

Ⓑ **To upper point**

Move the blind to the desired upper position. Then press the programming and UP buttons until the drive acknowledges once.



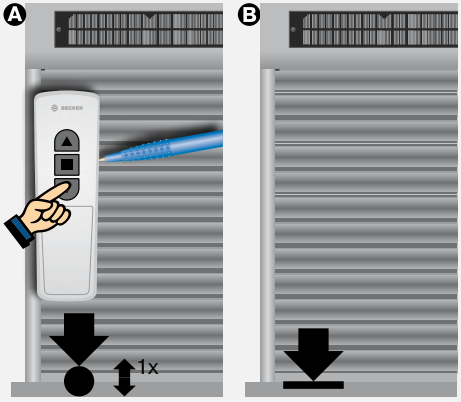

### 2. Programming the lower limit position using the master transmitter

Ⓐ **To lower point**

Move the blind to the desired position. Then press the programming and DOWN buttons until the drive acknowledges once.

Ⓑ **To lower stop (only for roller shutters with lift-up protection)**

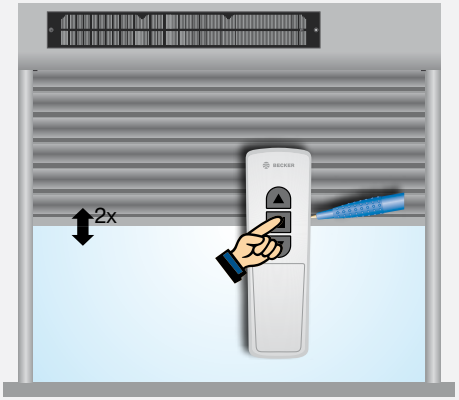
Move the blind in the upward direction until the drive switches off automatically.




### 3. Deleting the limit positions using the master transmitter

Press the programming and STOP buttons until the drive acknowledges twice after 10 seconds.

If the shading solution is situated between the limit positions, both limit positions are deleted in the procedure. If the shading solution is situated in one of the limit positions, only this position will be deleted.

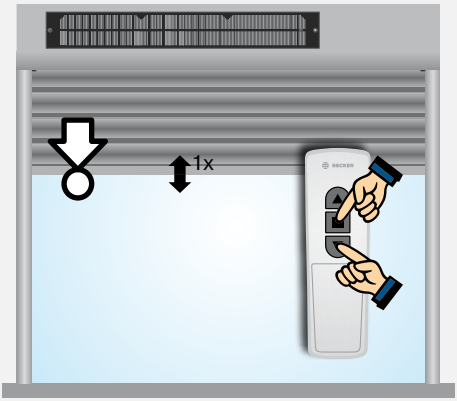


# Setting the intermediate positions

## 4. Programming the intermediate position

Move the blind to the desired intermediate position and press the STOP and DOWN buttons until the drive acknowledges once.

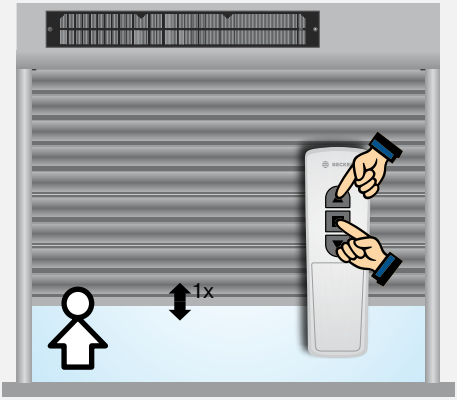
To move to the intermediate position, press the DOWN button twice within one second (double tap).




## 5. Teaching the ventilation position

Move the blind to the desired ventilation position and press the STOP and UP buttons until the drive acknowledges once.

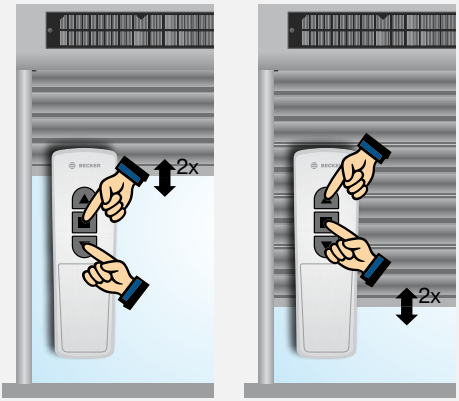
To move to the ventilation position, press the UP button twice within one second (double tap).




## 6. Deleting the intermediate position /Ventilation position

Move the blind to the position to be deleted and repeat the teaching process (press STOP and DOWN buttons or STOP and UP buttons) until the drive acknowledges twice.

Overwriting the intermediate position/ventilation position is possible at any time without prior deletion.

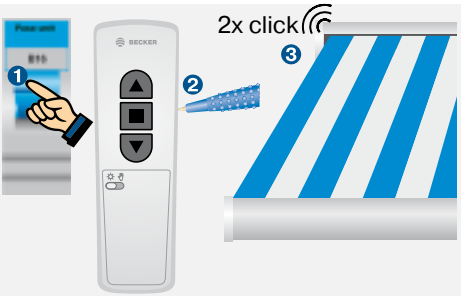


# CONTROL UNIT SC211-II

## Commissioning of the SC211-II awning radio-controlled movement sensor

### 1. Programming the master transmitter

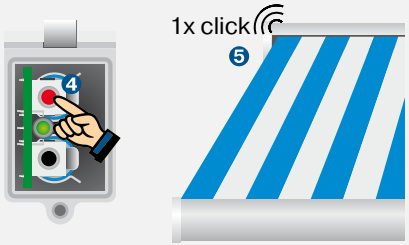
Switch the mains power of the radio receiver (drive type C12 PLUS) off and on again ❶. Then press the programming button on the master transmitter SWC241-II ❷ until the drive clicks twice ❸.




### 2. Programming the SC211-II

a.) Remove the labelling field on the back of the SWC241-II hand-held radio transmitter. Use the tool provided to turn the SWC241-II wind threshold regulator clockwise to the maximum setting ❶. Then press the programming button ❷ until the drive clicks once ❸.


b) Then press the red programming button ❹ of the SC211-II until the tubular drive clicks once ❺.

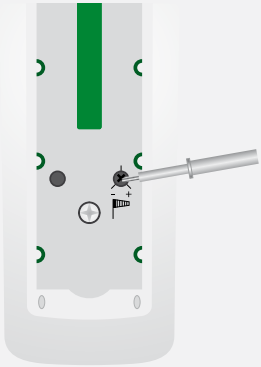



c) Press the red programming button once again ❻ until the tubular drive clicks twice ❼.

## 3. Setting the wind threshold

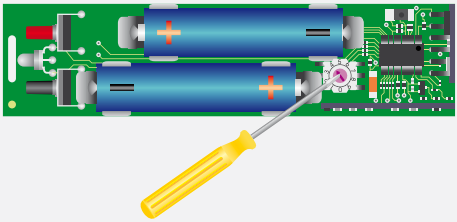
Use the tool provided to turn the wind threshold regulator on the SWC241-II to the desired setting.

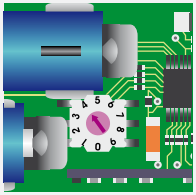
The wind threshold has 11 possible settings (approx. 2m/s to 22 m/s). When slowly turning the regulator, the tubular drive clicks to indicate the setting changes.



## 4. Setting the release angle

Use the supplied adjustment tool to set the trigger angle on the rotary switch on the circuit board.





0 = Off
1 = Sensitive
9 = Insensitive

## 5. Programming the release angle

Run the awning to the extend limit position. After waiting for 15 seconds, press the programming knob until, after 6 seconds, the LED changes from green to orange and back to green.

# CONTROL UNIT VC470-II

## Commissioning

### Connection

The external radio receiver VC470-II can be used to convert conventional drives for Venetian blinds, awnings and roller shutters to radio drives. The Hirschmann STAS 3 connector is used as the connection at the drive and the Hirschmann STAK 3 coupling is used as the connection to the mains supply.


### 1. Programming the master transmitter

Switch off the power supply on the VC470-II radio receiver and then switch it back on ❶. Then press the programming button on the master transmitter ❷, until the control unit shifts briefly to confirm the programming operation (3 seconds for initial installation, 10 seconds to overwrite a previously programmed master transmitter).

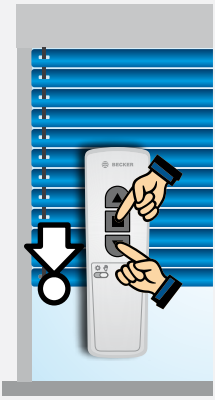
### 2. Correcting the direction of redation

Carefully turn the reversing switch on the mains connection side of the VC470-II to the opposite position to reverse the direction of rotation.

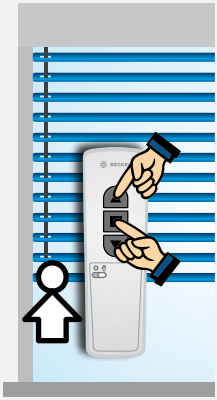
## 3. Programming the intermediate position/tilt position

Run the Venetian blind out of the upper limit position to the required intermediate position then press the STOP and DOWN button until the drive shifts to confirm the programming operation.

Run to the required tilt position and then press the STOP and UP buttons until the drive shifts to confirm the programming operation.



Intermediate position



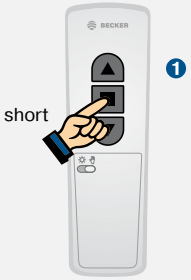
Tilt position

## 4. Deleting the intermediate position/Tilt position

Press the STOP button briefly ❶, then press the STOP button and keep it pressed down for 6 seconds ❷ until the drive shifts to confirm the deletion.

You can also delete the intermediate and tilt position by switching from the Venetian blind/roller shutter/awning mode.

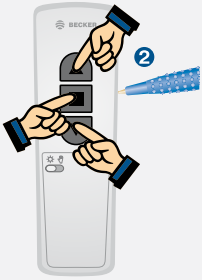
You can delete the positions individually by approaching the intermediate or tilt position (by tapping UP or DOWN twice) then repeating the programming.





## 5. Changeover: Venetian blind/roller blind/awning mode

Press the programming button on the master transmitter for 3 seconds until the drive shifts ❶. Then press the programming, UP, STOP and DOWN buttons for 10 seconds until the drive shifts to confirm the changeover ❷.

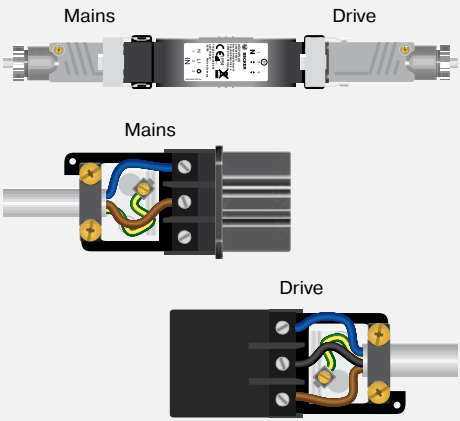



# CONTROL UNIT VC470 PLUS

## Commissioning

### Connection

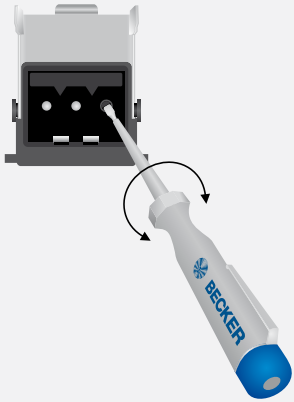
The external radio receiver VC470 PLUS can be used to convert conventional drives for Venetian blinds, awnings and roller shutters to radio drives. The Hirschmann STAS 3 connector is used as the connection at the drive and the Hirschmann STAK 3 coupling is used as the connection to the mains supply.




### Checking or switching the operating mode

Carefully turning the mode selector switch on the mains connection side of the VC470 PLUS changes the operating mode. On delivery, the Venetian blind operating mode is activated.

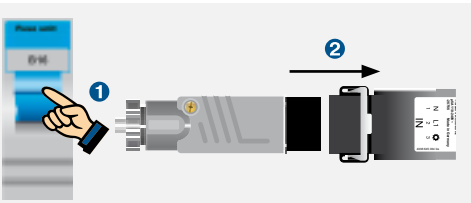
Once the mode has been changed and the VC470 PLUS has been connected to the power supply, all previous programming is deleted.




| | |
|---|---|
| Roller shutter | Position 1 (left stop) |
| Sun protection | Position 2 |
| Venetian blind (state on delivery) | Position 3 |
| Switching actuator | Position 4 (right stop) |

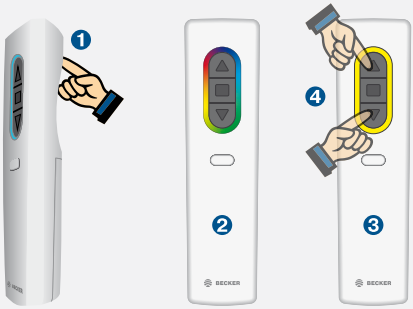
## Establishing programming mode

Switching on the power supply ❶ or plugging in the Hirschmann coupling ❷ on the mains side puts the VC470 PLUS into programming mode for 15 minutes. The VC470 PLUS performs a short travel movement to confirm programming mode.

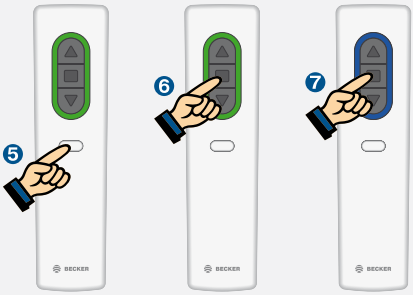



## Programming the CentronicPlus transmitter

Pressing the programming button for 3 seconds ❶ prompts the transmitter to search for the VC470 PLUS currently in programming mode. The search is indicated by a continuous color change of the LED ring ❷. The transmitter connects to the VC470 PLUS, the LED ring lights up yellow ❸ and the VC470 PLUS performs a travel movement. If multiple receivers are in programming mode at the same time, the desired receiver can be selected using the RETRACT or EXTEND button ❹. With a multi-channel hand transmitter, the desired transmission channel is selected using the function button ❺.

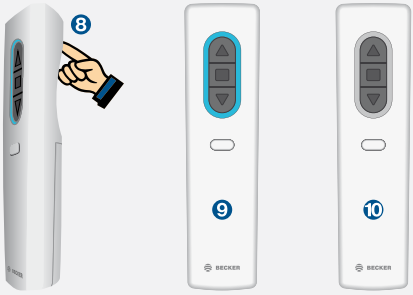



Pressing the STOP button activates the transmission channel; the LED ring lights up green ❻. By pressing the STOP button again, the transmission channel can be deactivated, and the LED ring lights up blue ❼. Pressing the STOP button again reactivates the transmission channel, the LED ring lights up green again ❻.




Briefly pressing the programming button ❽ causes a switch to the setting mode. The LED ring pulses light ❾.

By pressing the programming button for 3 seconds ❽ puts the handheld transmitter into normal mode. The LED ring goes out ❿.

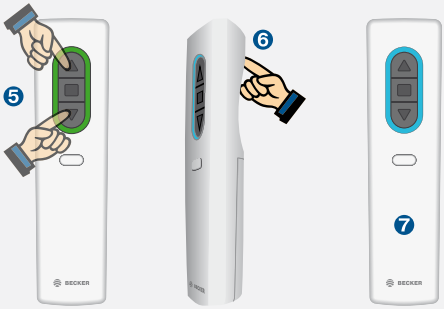


## Programming the Centronic master transmitter

Once programming mode has been established on the VC470 PLUS, press the programming button on the desired master transmitter until the control unit confirms the programming operation with a brief EXTEND/RETRACT command (3 seconds for initial installation, 10 seconds to overwrite a previously programmed master transmitter).

## Activating setting mode after programming the CentronicPLUS transmitter

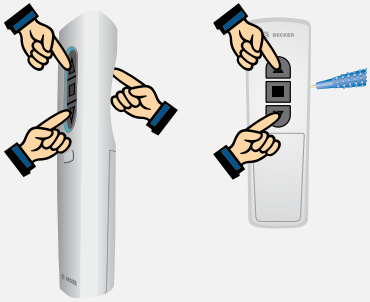
Pressing the programming button for 3 seconds ❶ does the transmitter connect to a receiver from the installation (network). After a continuous color change of the LED ring ❷ the receiver confirms the connection. The LED ring indicates that the transmission channel is active by lighting up green or blue ❸ or inactive ❹ is switched. The desired VC470 PLUS can be selected using the RETRACT or EXTEND button ❺. By briefly pressing the programming button ❻ the setting mode is activated, and the LED ring pulses light blue ❼.


## Changing the direction of rotation using the hand-held transmitter

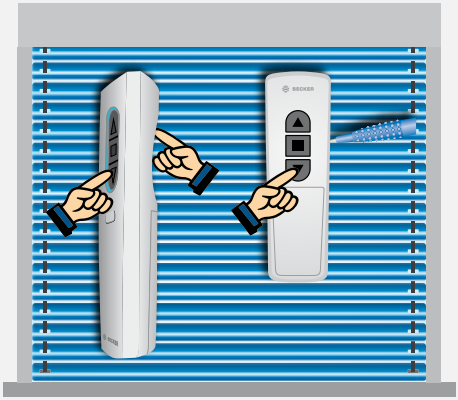
The direction of rotation can only be changed if no travel path has been set.

Press the programming button, the RETRACT button and the EXTEND button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms the direction of rotation change.



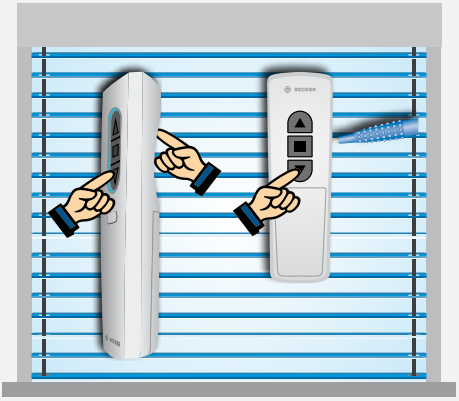
## Setting the travel path

Run the shading solution (roller shutter, sun protection or Venetian blind) to the lower limit position. Press the programming button and the EXTEND button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms.

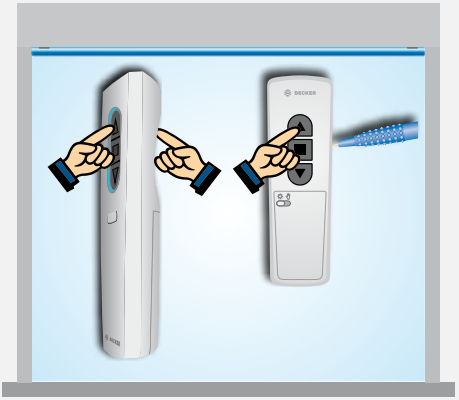


## Setting the maximum tilt (Venetian blinds only)

Move the venetian blind upward from the lower end position until the slats are fully opened. Press the programming and OPEN buttons on the CentronicPlus transmitter (in setting mode) or on the Centronic Master transmitter until the control unit acknowledges.



Then move the blind (roller shutter, sun protection, or venetian blind) to the upper end position. Press the programming and CLOSE buttons on the CentronicPlus transmitter (in setting mode) or on the Centronic Master transmitter until the control unit acknowledges.



### Deleting the travel path and the maximum tilt (for Venetian blinds)

Run the shading solution (roller shutter, sun protection or Venetian blind) between the limit positions. Press the programming button and the STOP button on the CentronicPlus transmitter (in setting mode) or on the Centronic master transmitter until the control unit confirms.

## Setting the intermediate positions

### Programming the intermediate position I

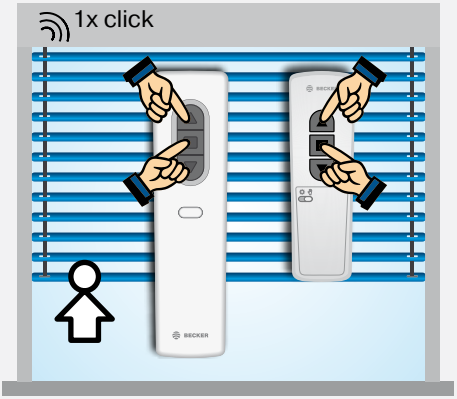
Run the shading solution to the desired intermediate position (with tilt in Venetian blind mode) and press the STOP button and the EXTEND button on the CentronicPlus transmitter or on the Centronic transmitter until the control unit confirms the setting by performing a travel movement.

To travel to intermediate position I, press the EXTEND button twice within one second.


### Programming the intermediate position II

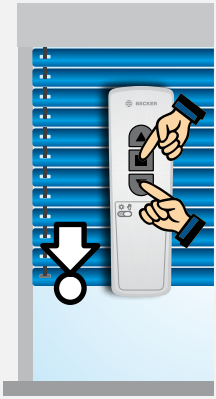
Run the shading solution to the desired intermediate position (with tilt in Venetian blind mode) and press the STOP button and the RETRACT button on the CentronicPlus transmitter or on the Centronic transmitter until the control unit confirms the setting by performing a travel movement.

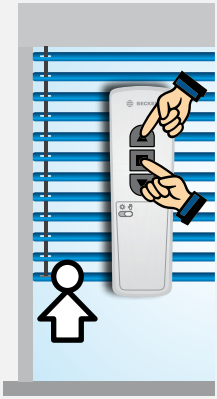
To travel to intermediate position II, press the RETRACT button twice within one second.



## Deleting the intermediate position I / Intermediate position II

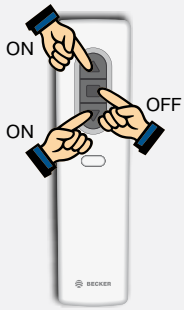
Press the UP or EXTEND button twice to move the shading solution to the intermediate position you want to delete, and repeat the programming operation with the CentronicPlus or Centronic transmitter until the control unit confirms the deletion by performing 2 travel movements.

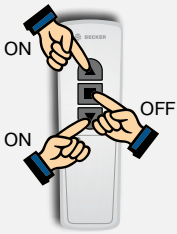




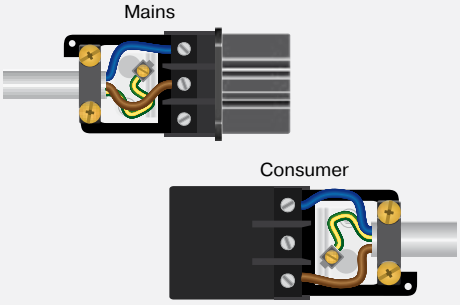
## Function: Switching actuator

The “UP” output is activated by pressing the UP or EXTEND button on a CentronicPlus or Centronic transmitter and is deactivated again by pressing the STOP button.



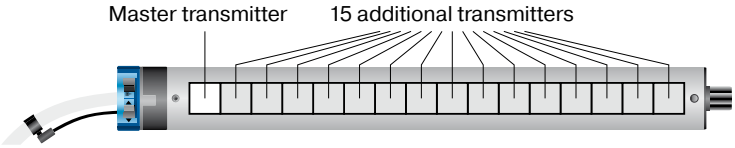

The load is connected to the Hirschmann plug as shown in the adjacent example.



# CENTRONIC RADIO TECHNOLOGY

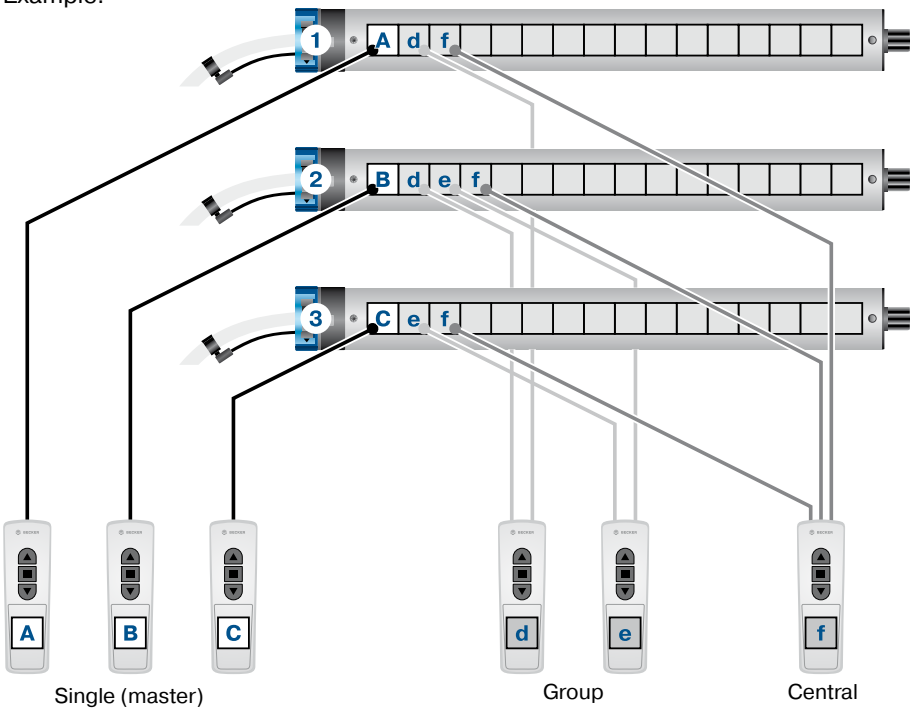
## Operating principle: Single, group and central control unit configuration

Each radio receiver has one memory slot for a master transmitter and 15 memory slots for additional transmitters.




The master transmitter is programmed in the receiver via the radio programming button/radio switch or by switching on the power. All other transmitters are programmed in the receiver using the master transmitter. Programming one transmitter on several drives enables the creation of a group/central transmitter.

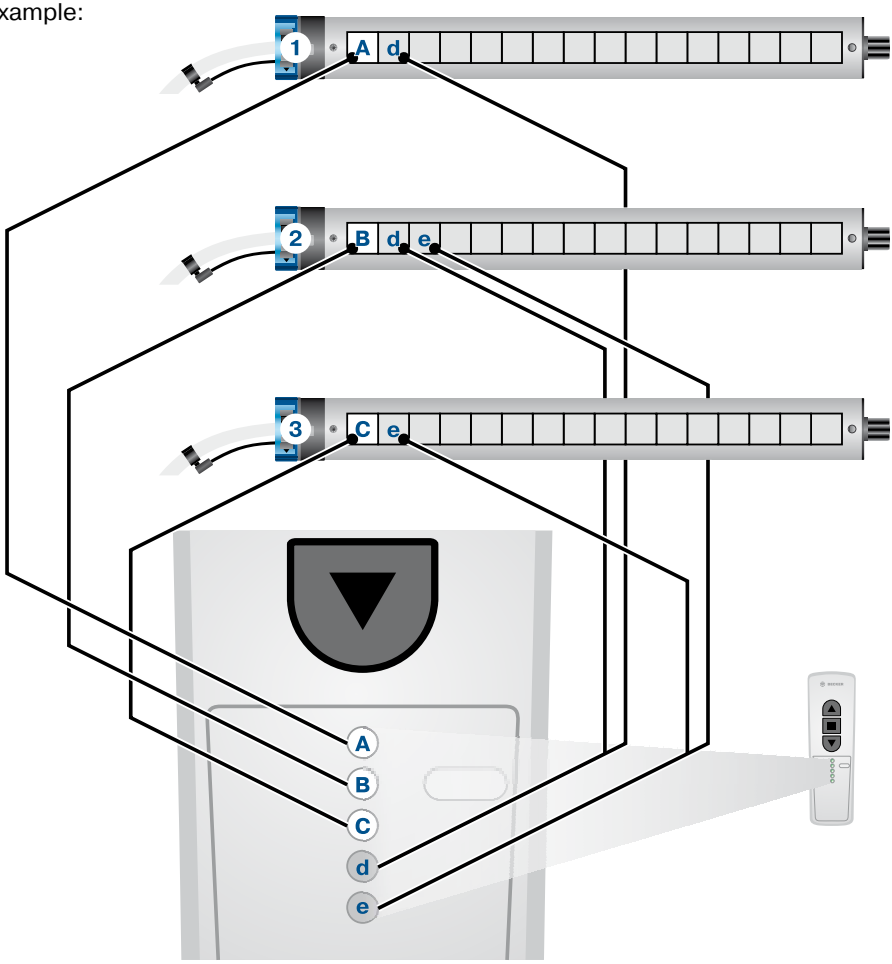
Example:




Single transmitter A (master transmitter) controls drive 1
Single transmitter B (master transmitter) controls drive 2
Single transmitter C (master transmitter) controls drive 3
Group transmitter d controls drives 1 and 2
Group transmitter e controls drives 2 and 3
Central transmitter f controls drive 1, drive 2 and drive 3

In the case of 5-channel transmitters, each channel behaves like a separate transmitter. If all of the channels are selected (all group LEDs light up), all of the receivers programmed into the transmitter are activated.

Example:




Channel 1 - “Single transmitter A“ (master transmitter) controls drive 1
Channel 2 - “Single transmitter B“ (master transmitter) controls drive 2
Channel 3 - “Single transmitter C“ (master transmitter) controls drive 3
Channel 4 - “Group transmitter d“ controls drives 1 and 2
Channel 5 - “Group transmitter e“ controls drives 2 and 3
Channel 6 - “Central transmitter“ (all group LEDs light up) controls drive1, drive 2 and drive 3

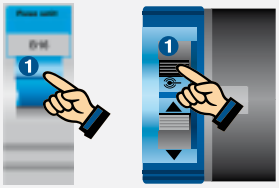
# CENTRONIC RADIO TECHNOLOGY

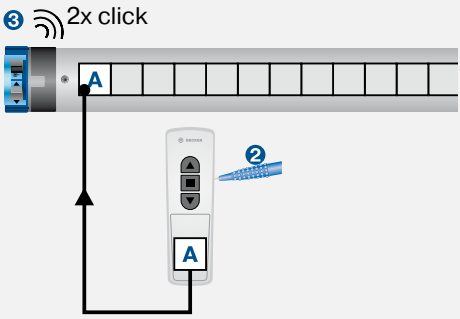
## Pairing the transmitters

### Programming the master transmitter

Switch the mains voltage at the radio receiver (radio drive or external Centronic radio receiver) back on (power on) or switch the radio switch of the radio drive to the position or press the radio programming button of the external Centronic radio receiver ❶.

Then press the programming button on the transmitter for 3 seconds ❷ until the radio drive clicks twice ❸ or the external radio receiver confirms the programming by shifting briefly twice.



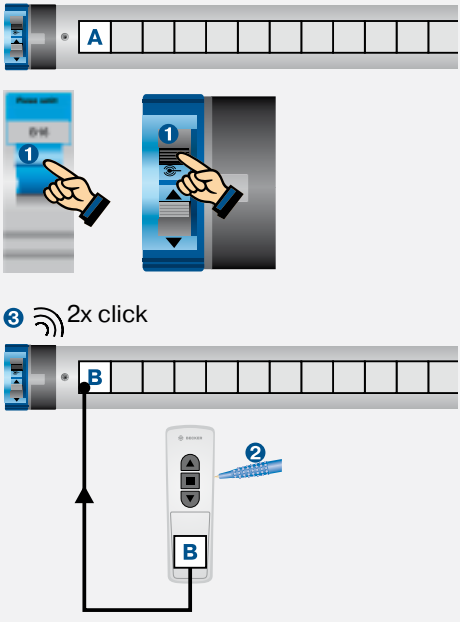




### Overwriting the master transmitter

Programming a new master transmitter overwrites the old master transmitter. All other parameters programmed in the receiver are retained.

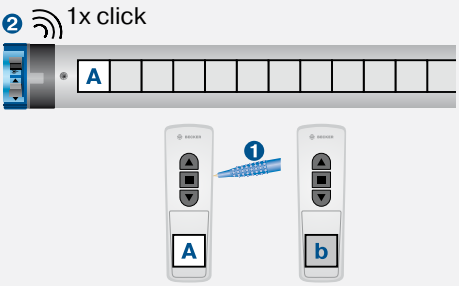
Switch the mains voltage at the radio receiver (radio drive or external Centronic radio receiver) back on (power on) or switch the radio switch of the radio drive to the position or press the radio programming button of the external Centronic radio receiver ❶.

Then press the programming button on the master transmitter to be reprogrammed for 10 seconds ❷ until the radio drive clicks twice ❸ or the external radio receiver confirms the programming by shifting briefly twice.

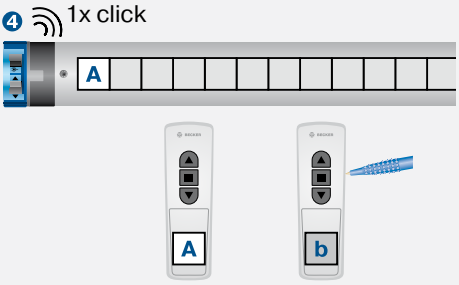


## Programming more transmitters

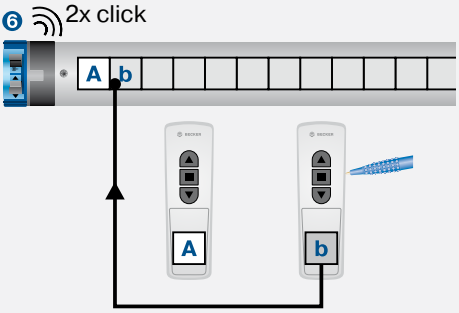
Press the programming button on the master transmitter for 3 seconds ❶ until the radio drive clicks once ❷ or the external radio receiver moves briefly once.




Then press the programming button on the new transmitter for 3 seconds ❸ until the radio drive clicks once ❹ or the external radio receiver moves briefly once.




Then press the programming button on the new transmitter again for 3 seconds ❺ until the radio drive clicks twice ❻ or the external radio receiver confirms the programming by shifting briefly twice.

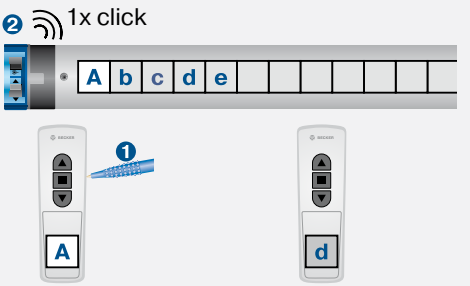


# CENTRONIC RADIO TECHNOLOGY

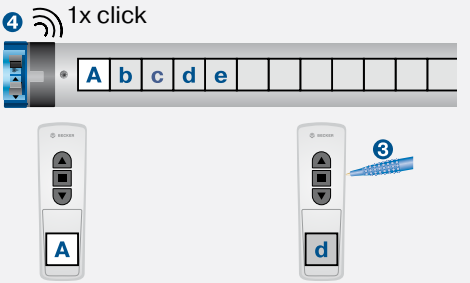
## Deleting the transmitters

### Deleting individual transmitters

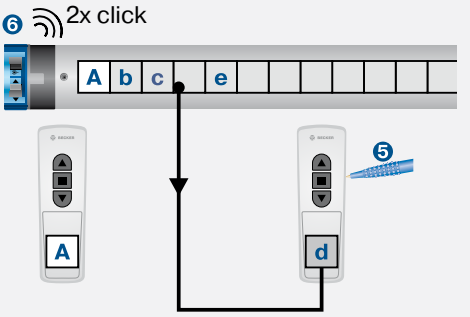
Press the programming button on the master transmitter for 3 seconds ❶ until the radio drive clicks once ❷ or the external radio receiver moves briefly once.




Then press the programming button on the transmitter to be deleted for 3 seconds ❸ until the radio drive clicks once ❹ or the external radio receiver moves briefly once.

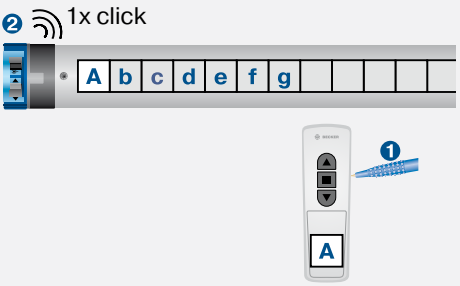



Then press the programming button on the transmitter to be deleted again for 10 seconds ❺ until the radio drive clicks twice ❻ or the external radio receiver confirms the deletion by shifting briefly twice.

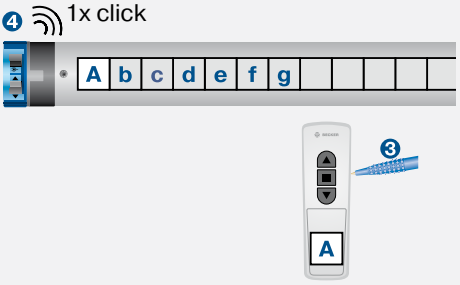


## Deleting all transmitters (except the master transmitter)

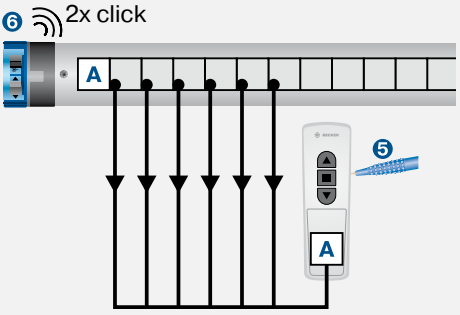
Press the programming button on the master transmitter for 3 seconds ❶ until the radio drive clicks once ❷ or the external radio receiver moves briefly once.




Press the programming button on the master transmitter again for 3 seconds ❸ until the radio drive clicks once ❹ or the external radio receiver moves briefly once.

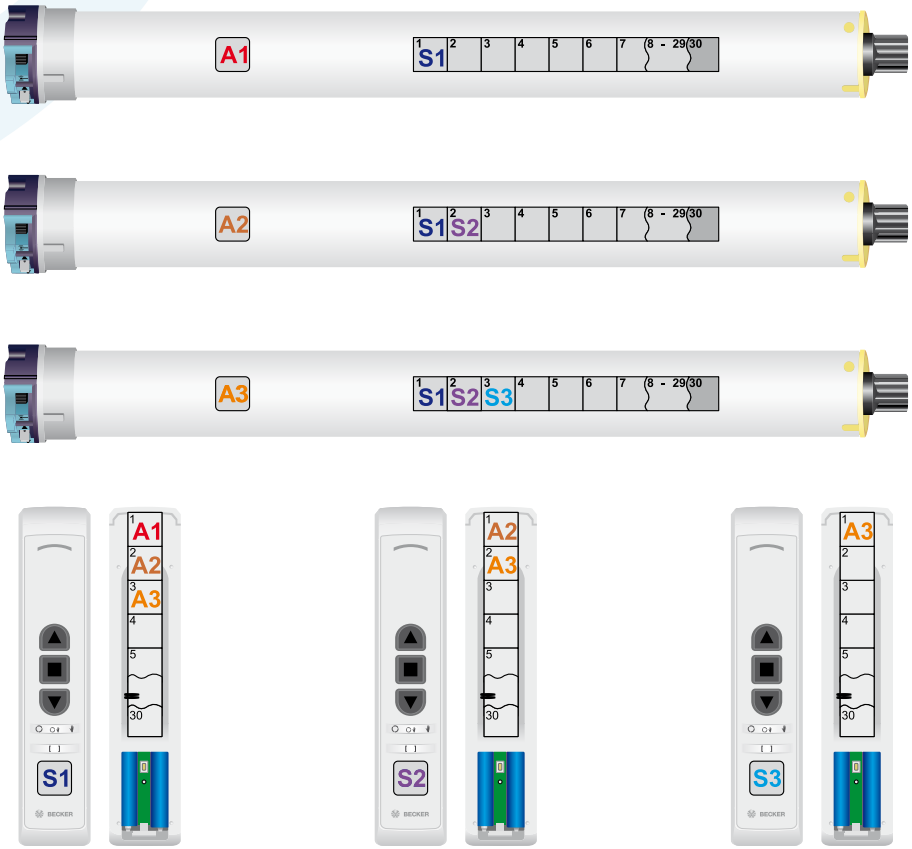



Then press the programming button on the master transmitter again for 10 seconds ❺ until the radio drive clicks twice ❻ or the external radio receiver confirms the deletion by shifting briefly twice.



# B-TRONIC RADIO TECHNOLOGY

## Operating principle: Single, group and central control unit configuration




Central transmitter S1 controls drives A1, A2 and A3
Group transmitter S2 controls drives A2 and A3
Single transmitter S3 controls drive A3

The transmitter is stored in the drive memory and the drive is stored in the transmitter memory by means of bidirectional programming (linking). This means the transmitter can send drive commands to the drive and the drive can send status signals back to the transmitter.

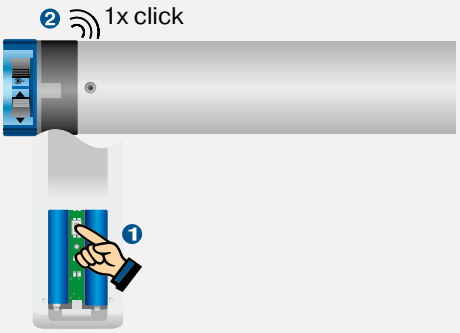
All drives stored in the manual transmitter can be controlled and programmed individually in master mode.

## Master mode

In order to perform „Beckerspecific“ settings, e.g. programming of limit positions, the receiver must be put in the master mode.

### Switching on master mode

Press the master button on an already paired transmitter ❶ as many times as needed until the desired drive clicks once ❷.




### Leaving master mode

Press the manual/auto button ❶ until it no longer flashes ❷.


## Receiver mode

Becker KNX-RF transmitters can control various KNX-RF receivers. In order to control a dimmer, for example, the relevant receiver mode must be set at the hand-held transmitter.

### Querying the receiver mode

Press the programming button ❶ and the manual-auto button ❷ for 1 second. A yellow LED flash indicates this. ❸ the current receiver mode is displayed.

### Changing the receiver mode

Press the programming button ❶ and the manual-auto button ❷ for about 5 seconds. A yellow LED flash indicates this. ❸ the current receiver mode is first displayed and then switched to the next receiver mode.


| LED | Receiver mode |
|---|---|
| Flashes 1x | Roller shutter |
| Flashes 2x | Dimmer |
| Flashes 3x | On/Off switch |
| Flashes 4x | Venetian blind |
| Flashes 5x | Screen |
| Flashes 6x | Roof window |

# B-TRONIC RADIO TECHNOLOGY

## Programming (linking) transmitters

### Putting drive into programming mode

Ⓐ By switching the power on

Switch on the mains voltage at the B-Tronic radio drive ❶.

Ⓑ Via the switch on the drive

Set the radio switch of the B-Tronic radio technology drive to the position .

Ⓒ Via a transmitter that is already programmed

Press the master button ❶ as many times until the drive clicks once ❷. Then press the programming button ❸ until the drive clicks once more. ❹.

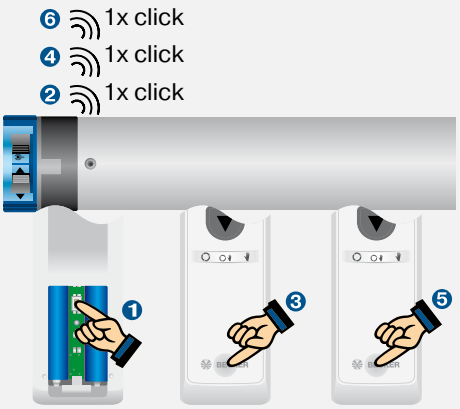

### Programming (linking) transmitters

Press the programming button on the new transmitter ❺ until the drive clicks twice ❻.

The status LED lights up green to confirm that the programming was successful.

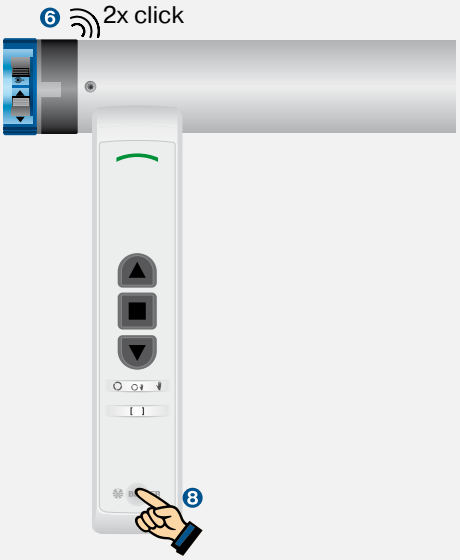
## Putting drive into clearing mode

Press the master button on an already paired transmitter ❶ as many times until the drive clicks once ❷. Then press the programming button on the same transmitter ❸ until the drive clicks once ❹. Press the programming button ❺ once again until the drive clicks once ❻.




## Clearing (unlinking) transmitters

Press the programming button ❼ of the transmitter you want to unpair, until the drive clicks twice ❽.



# B-TRONIC RADIO TECHNOLOGY

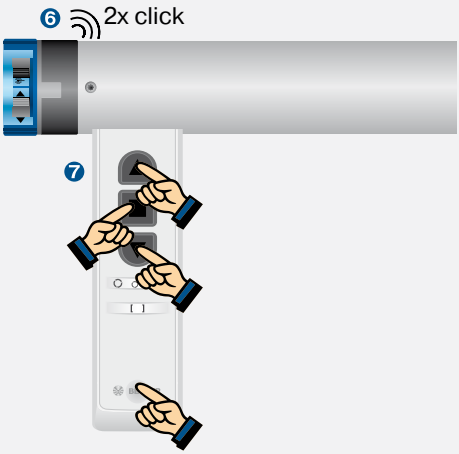
## Deleting all transmitters in the drive

### Putting drive into clearing mode

Press the master button on an already paired transmitter ❶ as many times until the drive clicks once ❷. Then press the programming button on the same transmitter ❸ until the drive clicks once ❹. Press the programming button ❺ once again until the drive clicks once ❻.


### Clearing all transmitters in the drive

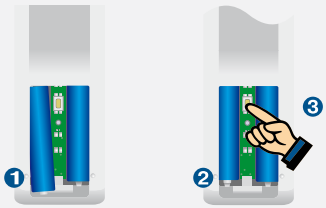
Now press the programming, UP, STOP and DOWN buttons on the same transmitter until the drive clicks twice ❼.




## Deleting all drives in the hand-held transmitter

### Restoring the factory settings of the hand-held transmitter

Remove a battery ❶ and reinsert it after 2 seconds ❷. Press the master button within one second ❸ and hold it until the LED on the hand transmitter stops flashing after 5 seconds and then lights up green.



## Deleting all receivers in the hand-held transmitter that are not responding

### „Cleaning up“ the memory in the hand-held transmitter

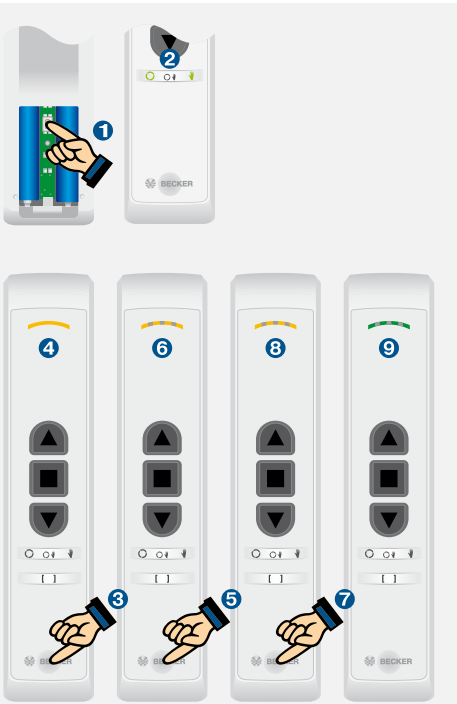
You can delete specific receivers that are no longer responding but are still registered in the memory of the hand-held transmitter.

Make sure that you are within range of all responding receivers. Press the master button on the hand-held transmitter ❶ until the manual/auto button flashes ❷.

Press the programming button ❸ and keep it pressed down until the LED on the hand-held transmitter lights up yellow ❹.

Then press the programming button ❺ and keep it pressed down until the LED flashes yellow ❻.

Then press the programming button ❼ and keep it pressed down until the LED flashes yellow again ❽ then flashes green ❾.



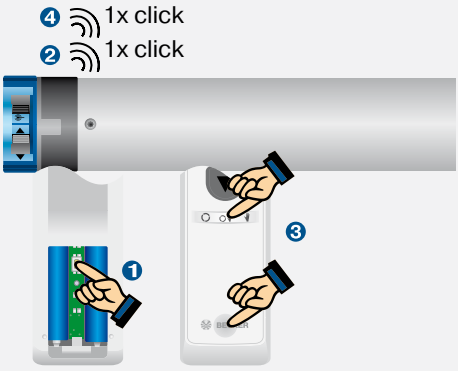

## Repeater mode

### Activating the drive as radio signal amplifier

Press the master button on an already paired transmitter ❶ as many times until the drive clicks once ❷. Then press the programming button and the manual/auto buttons on the same transmitter ❸ until the drive clicks once ❹.

### Deactivating the drive as radio signal amplifier

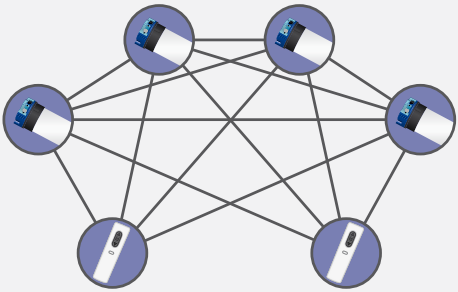
Perform the steps for activation described above until the drive clicks twice.



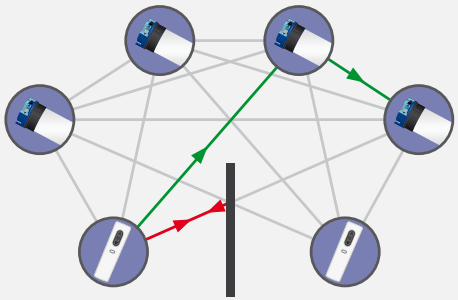
# CENTRONICPLUS RADIO TECHNOLOGY

## The mesh network

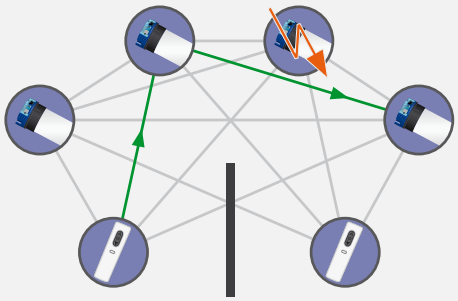
Hand-held transmitters and drives in the CentronicPlus range are fitted with a transmitter and receiver, which is known as a transceiver. During commissioning, the hand-held transmitter and receiver form a network together: the mesh. All participants of the network are aware of one another.



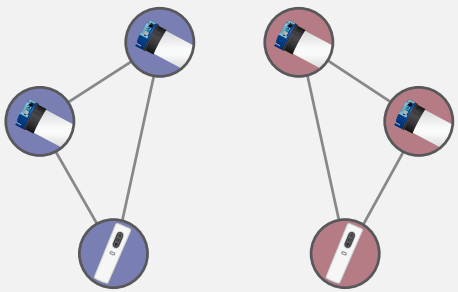
If the direct radio path between a hand-held transmitter and a receiver is blocked, the intelligent mesh network searches for the next-best connection via an alternative route.



If a participant fails on the route, e.g. a drive in a bedroom due to night shut-off mode, the intelligent mesh network calculates an optimal new route.

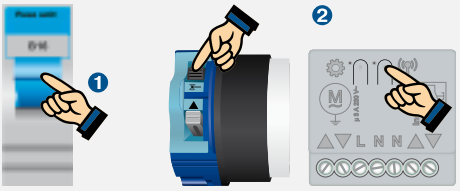


During commissioning, it must be ensured that all radio participants within an installation belong to the same mesh network. If different mesh networks are created unintentionally, these will not be able to communicate with one another.



## Establishing programming mode

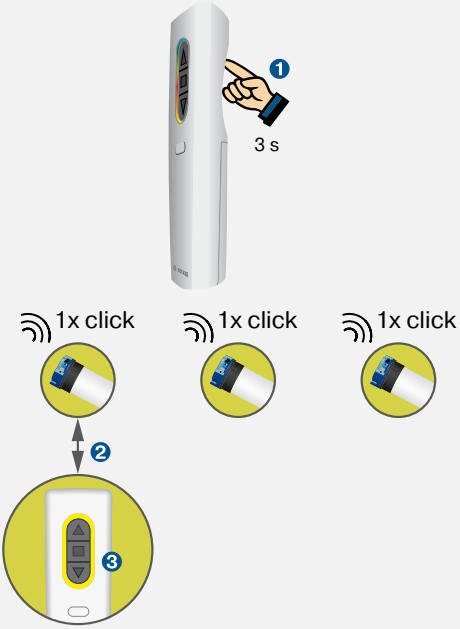
One or more receivers are put into operation by switching on the mains power (Power On) ❶ or by pressing the radio learning switch or radio learning button ❷ are placed in learning mode for 15 minutes.




## Scan the environment / activate device search mode on the hand transmitter

By pressing the programming button for 3 seconds ❶ the hand transmitter is set to device search mode. The hand transmitter indicates the search mode by a continuous color change. The hand transmitter automatically connects to the nearest receiver ❷. The LED ring lights up yellow ❸ and the receiver acknowledges the connection with a click or a movement.

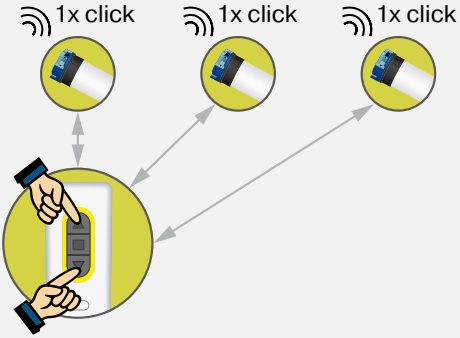
The yellow LED ring indicates that no mesh network has been established.




## Selecting the receiver

The desired receiver can be selected using the UP and DOWN buttons Pressing the DOWN button moves through receivers that are further away with each press. Pressing the UP button moves through receivers that are closer with each press.

The receivers confirm the selection by clicking or by performing a travel movement.



# CENTRONICPLUS RADIO TECHNOLOGY

## Setting up a new mesh network

For multi-channel transmitters, use the function button ❶ to first select the desired transmission channel. By briefly pressing the STOP button ❷ a new mesh network is created. The receiver generates a code (network key) and transmits it to the hand transmitter.

The LED ring lights up green to indicate that the hand-held transmitter has been activated. The receiver will react to the hand-held transmitter in normal mode.

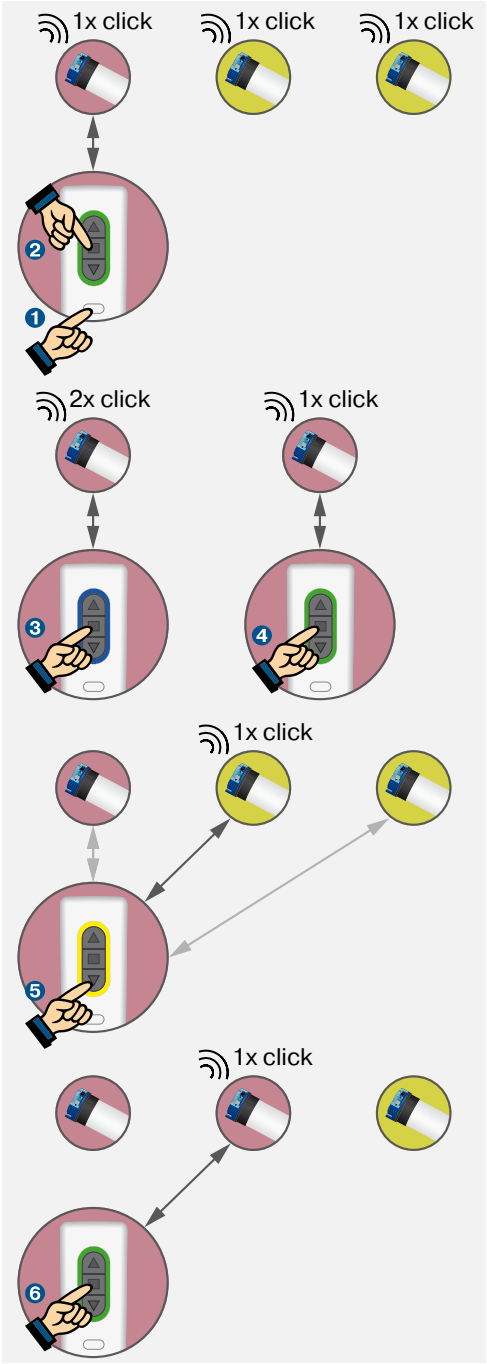
Pressing the STOP button again ❸ makes the LED ring light up blue. In normal operation, the receiver will not respond to the hand transmitter. Pressing the STOP button again ❹ reactivates the LED ring.

## Expanding the mesh network

With the DOWN button ❺ selects the next receiver. The LED ring lights up yellow.

By briefly pressing the STOP button ❻ adds the receiver to the mesh network. The hand transmitter transmits the network key to the receiver.

Programming is completed by pressing the programming button for 3 seconds. The hand-held transmitter is in normal mode.



## Channel selection with multi-channel transmitters (8 channels and 16 channels)

### Single channel

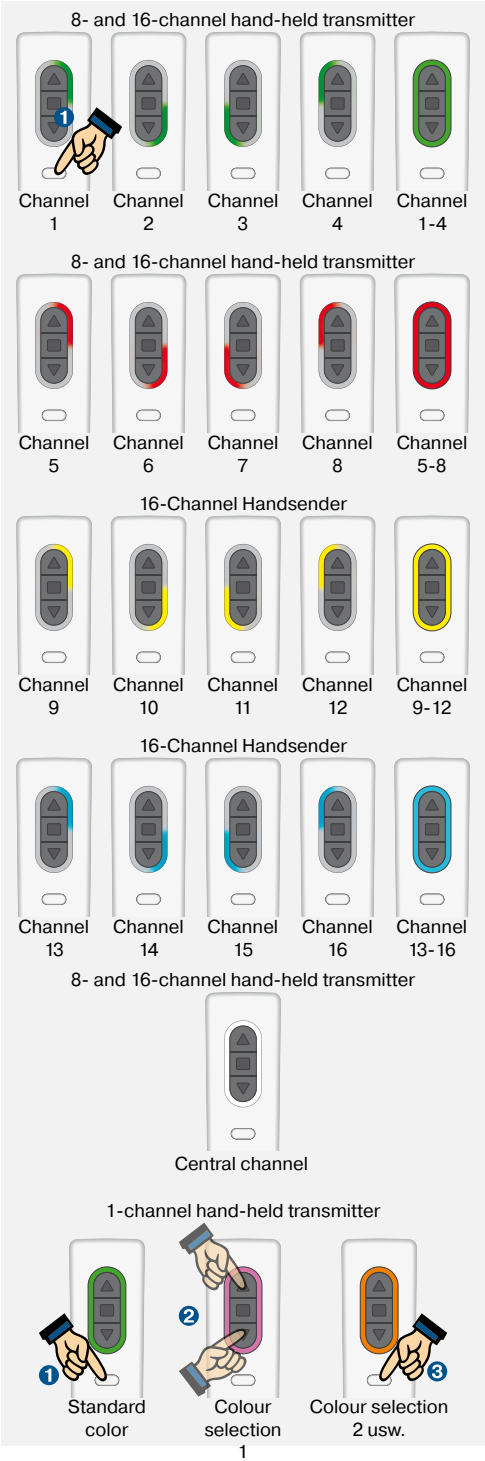
A short press of the function button ❶ switches to the next channel. In normal mode, only the active channels are shown. Unoccupied channels are skipped.

### Group channel

With 8-channel and 16-channel transmitters, the individual channels are also merged into 2 or 4 group channels. The group channels (1-4, 5-8 and 9-12, 13-16) are created automatically if multiple channels from a group have been activated. If a group channel is selected, all hand-held transmitter commands are applied to the receivers within the group in normal mode (drive commands, manual/auto changeover etc.).

### Central channel

If multiple receivers from different groups have been activated, a central channel is created automatically. If the central channel is selected, all hand-held transmitter commands are applied to all receivers in normal mode (drive commands, manual/auto changeover etc.).




## Colour assignment in the 1-channel hand-held transmitter

With the 1-channel hand-held transmitter, 10 different colours can be assigned to the LED ring. For this, the function button is used ❶ is held down until the LED ring flashes briefly. With the UP and DOWN buttons ❷ a different color can be selected. By pressing the function button for 4 seconds ❸ the assigned color is saved.

# CENTRONICPLUS RADIO TECHNOLOGY

## Allocating the channels

The transmission channels within a mesh network can be re-allocated to the receivers at any time.

Activate the device search mode ❶. The transmitter connects to a receiver from the mesh network, and the LED ring lights up green (active) or blue (inactive). The receiver confirms the connection by clicking or by performing a travel movement.

Select the channel that you want to allocate to the receiver ❷.

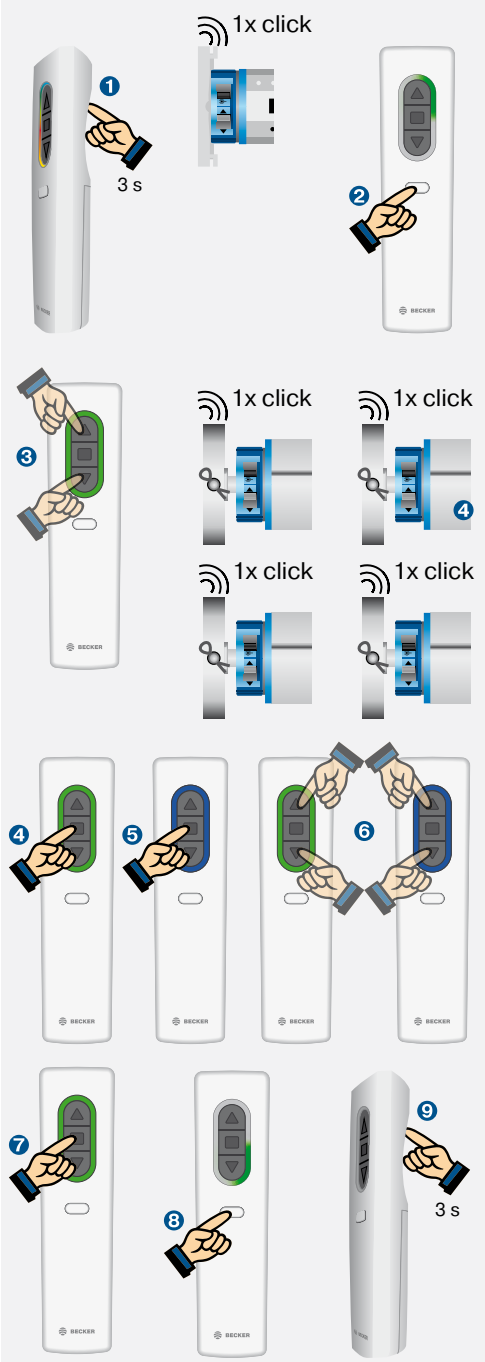
Select the desired receiver ❸ (the LED ring lights up green or blue, and the receiver confirms the selection by clicking or performing a travel movement).

Activate the receiver in the selected channel ❹ (LED ring lights up green) or deactivate the receiver ❺ (LED ring lights up blue).

Use the UP or DOWN button to select additional receivers, if necessary ❻ and activate them in the selected channel ❼.

Use the function button to select the next channel you wish to edit ❽. Follow the same procedure for this channel.

Press the programming button for 3 seconds to exit the device search mode ❾.



## Merging receivers from separate mesh networks

Receivers from different mesh networks can be easily merged in a joint mesh network using a hand-held transmitter.

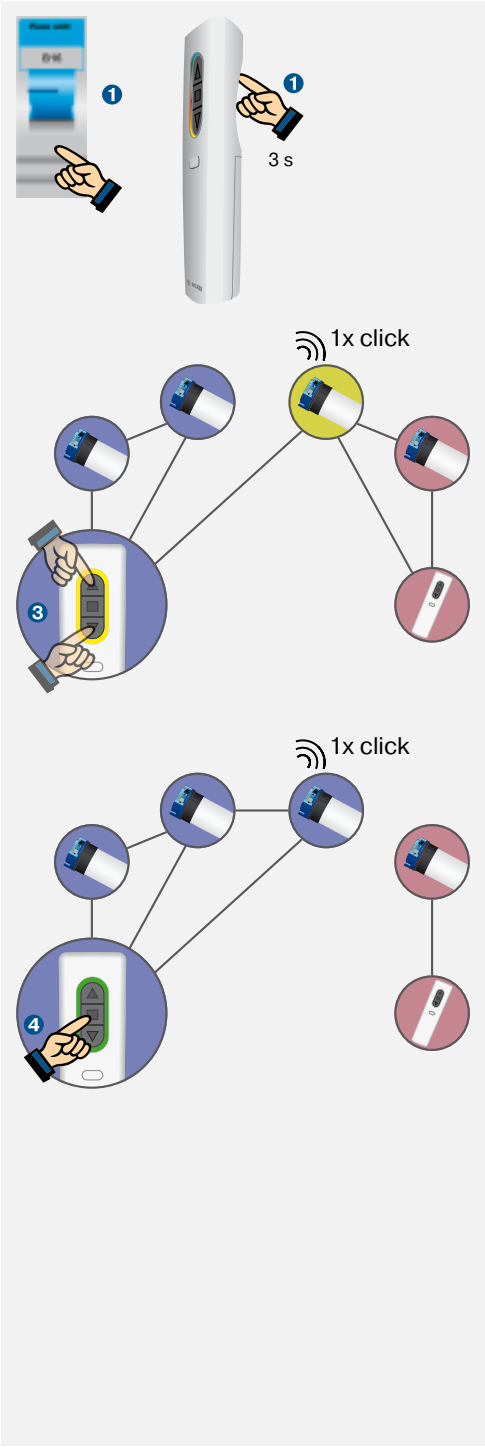
Put the receiver into programming mode (switch the power on) ❶.

Activate the device search mode on a transmitter from the mesh network ❷ in which all receivers are to be merged. Then select a receiver that is not part of this mesh network ❸. The receiver confirms by clicking or by performing a travel movement, and the LED ring lights up yellow.

Press the STOP button to add the receiver to the mesh network ❹. The receiver is activated in the hand-held transmitter channel (LED ring lights up green). Pressing the STOP button again deactivates the receiver (LED ring lights up blue).

Then use the UP or DOWN button to select the next receiver that you want to add to the mesh network. Press the STOP button to add this receiver to the mesh network.

Exit the device search mode by pressing the programming button for 3 seconds.

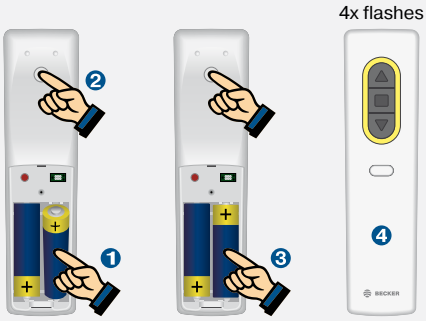


# CENTRONICPLUS RADIO TECHNOLOGY

## Restoring the factory settings of the hand-held transmitter

Firstly reset the hand-held transmitter that is not part of the network to factory settings. ChatGPT: Remove a battery for this purpose ❶ and reinsert it while holding down the programming button ❷ ❸ and keep the programming button pressed until the LED ring flashes bright yellow 4 times ❹.

The transmitter is automatically deleted from the receivers during this process. The deletion is confirmed by either a double click or two waves.



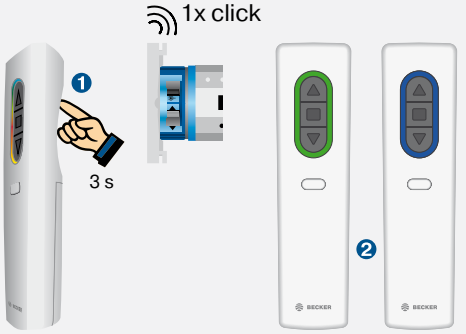

## Adding the hand-held transmitter to an existing mesh network

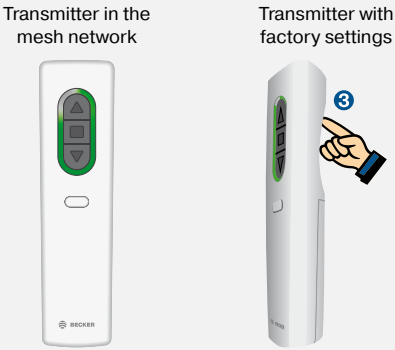
Hand-held transmitters can easily be added to an existing network. To do so, reset the hand-held transmitter to factory settings as described above.

Activate the device search mode on a transmitter that is already part of the mesh network ❶ (the transmitter connects to a receiver from the mesh network ❷ the LED ring lights up green or blue, and the receiver acknowledges).

Place both transmitters next to each other. Press and hold the programming button on the transmitter that is still in factory settings until ❸ the LED rings of both transmitters fill green clockwise and then turn off.

Both transmitters are now in the same mesh network.



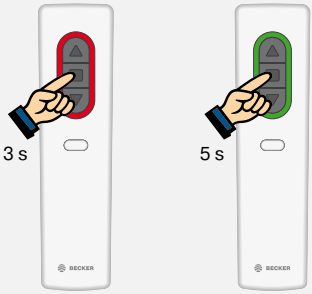



## Switchover manual/auto

CentronicPlus receivers are fitted with automatic functions (sun protection, memo function).

Press the STOP button for 3 seconds to display the status (manual/auto).

Pressing the STOP button for a further 3 seconds changes over the receiver.

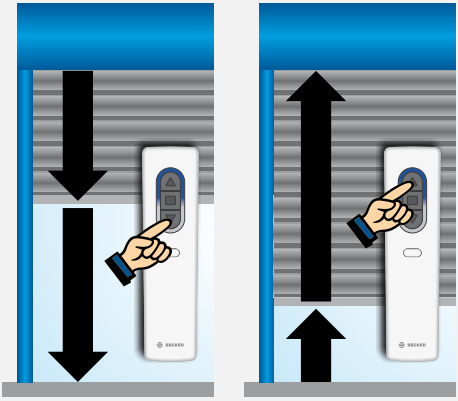



| | |
|---|---|
| green | Automatic mode |
| red | Manual mode |
| yellow (only with group channel or central channel) | Different modes for multi-channel transmitters |

## Memo function

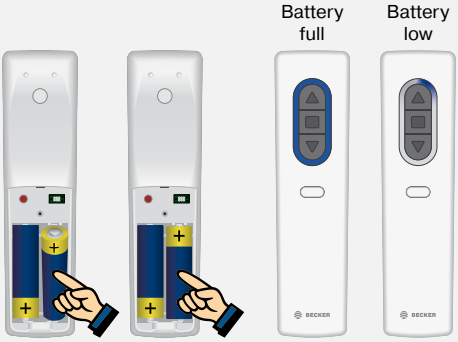
CentronicPlus receivers with memory function can be programmed using the CentronicPlus hand-held transmitter. The switching times are programmed by pressing and holding the UP or DOWN button. A brief stop after 6 seconds indicates that programming has been performed successfully. The LED ring indicates the programming with a blue animation.

In automatic mode, the programmed drive commands are performed automatically every 24 hours. Re-programming overwrites the old switching times.



## Battery status display

The battery status is displayed once the batteries have been inserted. The LED ring fills in in a clockwise direction in relation to the battery charge.



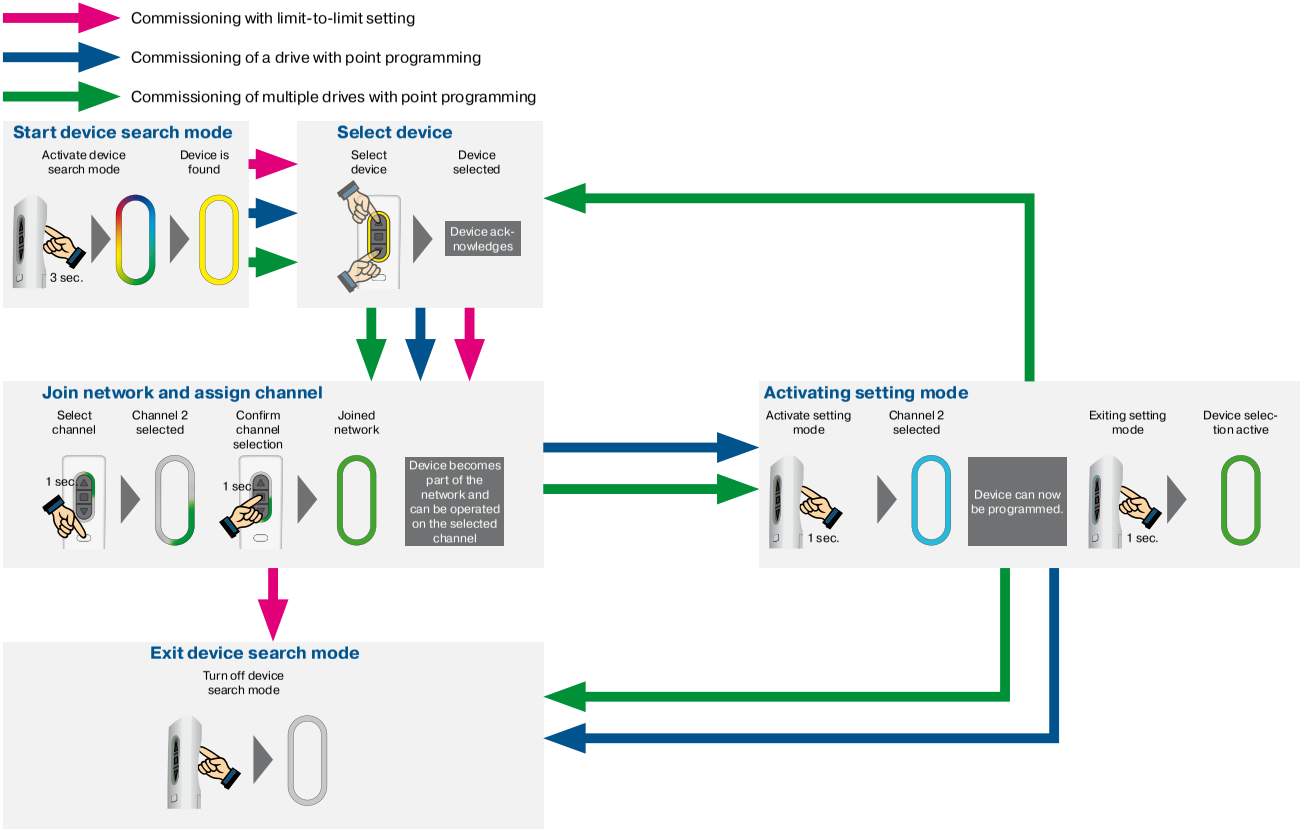
## Delete all transmitters from the receiver

Activate the device search mode on a hand transmitter that is already part of the network ❶ and, if necessary, use the UP or DOWN button to select the desired receiver ❷ (the LED ring lights up green or blue, and the receiver confirms the selection by clicking or performing a travel movement).

Activate the setting mode by briefly pressing the programming button ❸ (the LED ring pulses light blue). Press the programming button followed immediately by the UP, STOP, and DOWN buttons until the deletion is confirmed by a double click or 2 waves from the receiver ❹.

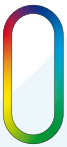
# CENTRONICPLUS RADIO TECHNOLOGY

## The commissioning logic

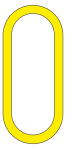


# OVERVIEW OF COLOR RINGS

## Device assignment



**Continuous color change**
Starting the device search mode.



**Yellow**
Selected device is not yet in the network.

**Green**
Selected receiver is part of a network and active on the chosen channel.

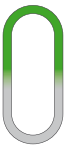
**Blue**
Selected receiver is part of the network but not active on the chosen channel.

**White**
Selected sensor is part of the network.

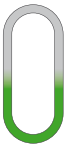
**Purple**
Selected transmitter (CentronicPLUS hand transmitter, VC421, CentronicPLUS USB stick) is part of the network.

## Device programming in setting mode

**Light blue pulsing**
Ausgewählter Empfänger befindet sich im Einstellmodus.

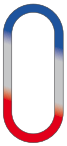


**Green at the top**
Upper limit position programming (drive) or completion of run time programming (external receiver).



**Green at the bottom**
Lower limit position programming (drive) or start of run time or end of slat turning time programming (external receiver).

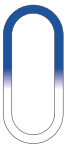
**Red**
Deleting the limit positions (drive) or run times (external receiver).



**Red – Blue rotating clockwise or counterclockwise**
Change of direction of rotation

**Purple rotating clockwise**
Special functions, such as fabric tension, freeze protection, etc.

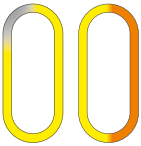
## Assignment receiver – sensor



**Blue at the top, white at the bottom**
Selected receiver is not assigned to the sensor

**Green at the top, white at the bottom**
Selected receiver is assigned to the sensor

## Threshold settings (SWC54xx PLUS)



**Sunlight threshold**
For example, from medium to maximum setting.

**Wind threshold**
From medium to maximum setting.

**Blue is in the middle**
Receiver does not respond to rain.

**Blue moves upward**
Receiver is moving in

**Blue is moving down**
Receiver is moving out

## Assignment of transmitter to receiver

**Green Purple**
Receiver responds to transmitter.

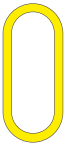
**Blue Purple**
Receiver does not respond to transmitter.

## Manual-automatic switch

**Green**
Memory function or sun protection function active

**Red**
Memory function or sun protection function inactive

## Reset hand-held transmitter



**Yellow flashing**
Hand-held transmitter is being reset

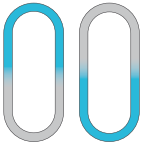
## Transmit network key

**Synchronous green filling with 2 hand-held transmitters**
Network key is being transmitted

## Battery status

**Blue filling of the circle after inserting the battery**
Indicates the battery status.

## Intermediate position



**Light blue at the top**
Intermediate position 1

**Light blue at the bottom**
Intermediate position 2

# IMPORTANT SAFETY INSTRUCTIONS

**Caution! Failure to observe these instructions can lead to serious injuries.**
**Important safety instructions for handling tubular drives.**

- Do not allow children to play with control units.
- When electrical or electronic equipment and units are operated, certain components, e.g., the power supply unit, are live. Physical injuries or damage to property can result in the event of unauthorised interventions or failure to heed warnings.
- All work, including maintenance and cleaning, on electrical installations as well as other system parts must always be performed by trained technicians, in particular qualified electricians.
  Before installation, shut down all lines and control devices that are not essential for operation.
- If the mains connecting cable is damaged, it may only be replaced by the manufacturer.
- When installing the drive, a means of all-pole disconnection from the mains with a contact gap of at least 3 mm per pole must be provided (EN 60335).
- Stop and disconnect the equipment from the mains power supply when maintenance and cleaning is being performed either on the system itself or in the immediate vicinity of it.
- Drives with a H05VV-F connecting cable may only be used indoors.
- All applicable standards and regulations for electrical installation must be complied with.
- Systems have to be checked regularly by authorised specialists for wear and damage.
- Always put damaged systems out of operation immediately until they are repaired by an authorised specialist.
- Do not operate equipment if people or objects are within the danger zone.
- Observe the danger zone of the equipment during operation.
- Ensure that there is adequate clearance (at least 40 cm) between moving parts and adjacent objects.
- Crushing or shearing points must be avoided or protected.
- Observe safety clearances in accordance with DIN EN 294.
- Observe the safety instructions in EN 60335-2-97. Please note that this list of safety instructions is not exhaustive, since it would be impossible for the standard to include all sources of danger. For example, the design of the operated product, the way the drive works in the situation it is installed in. or even the way the end product is mounted in the end user‘s place of use cannot be taken into consideration by the drive manufacturer.
- If any questions or uncertainties regarding the safety instructions contained in the standard arise, please contact the manufacturer of the part or end product in question.
- Only use spare parts, tools and accessory devices which have been approved by the drive manufacturer.
- Unapproved third-party products or modifications to the system and its accessories represent a risk to your safety and the safety of others. This means that the use of unapproved third-party products, and modifications which have not been agreed with or approved by us, are prohibited. We do not accept liability for damage or injury arising from such actions.
- Position control devices within sight of the driven product at a height of over 1.5 m.
- Rated torque and duty cycle must be suitable for the requirements of the driven product.
- Technical data, rated torque and service life can be found on the type plate of the tubular drive.
- Moving parts of drives must be installed at a height of over 2.5 m above floor level or any other surface from which access to the drive is gained.
- To connect the drive to the driven part, solely components from the current Becker mechanical accessory catalogue may be used.

## Important safety instructions for handling mains-operated control units.

- Keep children away from control units.
- Device contains small parts that can be swallowed.
- Risk of injury due to electric shock.
- Connections to the 230 V mains must always be performed by a qualified electrician.
- Disconnect the connecting cable from the power supply prior to assembly.
- Always comply with regulations of local energy supply companies and VDE 100 provisions for wet and damp rooms during installation.
- Keep people out of the system's range of travel.
- Only use in dry rooms (exceptions: VCJ470, VC410, VC510, SWC510).
- Only use original, unmodified Becker parts.
- Observe all pertinent country-specific regulations.
- Dispose of exhausted batteries properly. Only replace batteries with the same type.
- If the system is controlled by one or more devices, the system's range of travel must always be visible during operation.
- When connecting the control cables (protected extra-low voltages), only use cables with sufficient electric strength.

## Important safety instructions for handling tubular drives with batteryoperated and solar power-operated control units.

- Keep children away from control units.
- Device contains small parts that can be swallowed.
- Keep people out of the system's range of travel.
- Only use in dry rooms (exceptions: SC861, SC561, SC211, SC431).
- Only use original, unmodified Becker parts.
- Observe all pertinent country-specific regulations.
- Dispose of exhausted batteries properly. Only replace batteries with the same type.
- If the system is controlled by one or more transmitters, the system's range of travel must always be visible during operation.

BECKER-Drive GmbH

Drives and control units for roller shutters,
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