

dormakaba Deutschland GmbH DORMA Platz 1 D-58256 Ennepetal							
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# GSR-EMR XEA BG

# 1 About this manual

## 1.1 Information about the manual

This instruction is part of the product. The instruction comprises important instructions for safe operation. Therefore, the instruction must be carefully read before using the product. This instruction must be kept during the service life of the product and must be passed on with the product. This instruction describes the installation, startup, maintenance and disassembly of the slide rail system GSR-EMR XEA BG. The text of the instruction is supported by figures in a separate figure part. The chapter numbers in the text can be found again top left in the figures in the figure part. Not every chapter in the text is supported by an illustration in the picture part. The illustrations show the mounting for the active leaf DIN-R. Please proceed mirror-inverted with the active leaf DIN-R.

## 1.2 Target groups

The installation, startup, maintenance and disassembly must only be carried out by skilled staff which has been authorized by dormakaba. The acceptance test must only be carried out by skilled staff that is certified for this by dormakaba. The operation of the slide rail system may be carried out by any person who is mentally and physically able.

## 1.3 Provided documents

- Mounting instructions
- Connection diagrams RMZ/RM-ED
- Data sheet about the use of arrest systems
- General building approval

## 1.4 Symbols and abbreviations used

### 1.4.1 Safety instructions



#### DANGER

This signal word indicates a situation of immediate risk, which will lead to death or serious injury if not averted.



#### WARNING

This signal word indicates a situation of potential risk, which could lead to death or serious injury if not averted.



#### CAUTION

This signal word indicates a situation of potential risk, which could lead to minor or slight injury if not averted.



#### ATTENTION

This signal word indicates a situation of potential risk, which could lead to damage to property or the environment if not averted.



#### TIPS AND RECOMMENDATIONS

This signal word indicates useful information for efficient and trouble-free operation.

### 1.4.2 Further labeling



Step-by-step graphics



Position numbers of parts

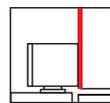


Figure shows installation directly on the door lintel

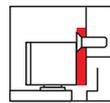


Figure shows installation options with mounting plates

### 1.4.3 Tool symbols



Tape measure



Saw



Allen wrench,  
e.g. wrench size 3

## 1.5 Glossary

- E End switch - releases fixed leaf if active leaf is shut.
- EMF Electromechanical locking device
- G Active leaf
- S Fixed leaf
- HT Manual release button
- RMZ Smoke detection panel
- RS Smoke switch
- TS Door closer

## 2 Safety



### DANGER

#### Danger to life through electric current

Works on electrical systems must only be carried out by skilled electricians.

- Before starting work on electrical systems and equipment, establish a zero-potential condition and ensure this condition while carrying out the work.

### 2.1 Intended use

The catching device is used to keep open fire and smoke protection closures. Fire and smoke protection closures must meet the building regulation requirements "self-locking". The slide rail system ensures the correct order when closing 2-winged doors. The electromechanical locking device is no substitution for a door stop. The locking device is released manually or via an external RMZ.

### 2.2 Foreseeable misuse

Do not control any further alarm systems with the fire detector of the catching device, e.g. transmission device for fire alarms.

### 2.3 Limitation of liability

The manufacturer does not assume liability for damages in the following events:

- Nonobservance of this instruction.
- A deviating application of the intended use.
- The assignment of insufficiently skilled staff.
- Unauthorized modifications.
- Technical alterations.
- The use of spare parts which are not authorized.

### 2.4 Prerequisites for the operation of catching devices

The use of catching devices is subject to special regulations by reason of official admission standards. These regulations refer in particular to the inspection, the continuing surveillance and the maintenance. Follow the details from the data sheet about the use of catching devices.

If the lower surface of the cover on one or both sides of the door is more than 1 m above the lintel bottom edge, an additional cover smoke detector must be mounted on each side of the door and must be connected with the RMZ. Measure the distance up to the smoke-impermeable ceiling. A separate verification of suitability is required for the respective fire / smoke protection door.

Do not control any further alarm systems with the fire detector of the catching device, e.g. transmission device for fire alarms.

- ① RMZ
- ② EMF
- ③ Cover smoke detector
- ④ Manual release button for catching devices (optional). The manual release button must not be covered by the locked door.

### 2.5 Requirements of the electrical installation by the customer

A circuit breaker B-10A/B-16A must be present in the supply circuit. The circuit breaker simultaneously serves as disconnect device to switch the RMZ to zero-potential. The transverse section of the mains supply line must only be a max. 3 x 1.5 mm<sup>2</sup> (NYM).

## 3 Product description

The GSR-EMR XEA BG comprises the following components:

- Slide rail system with sequential locking control
- Built-in electromechanical locking device
- Smoke detection panel

The GSR-EMR XEA BG is intended for the mounting into the opposite hinge side. The GSR-EMR XEA BG is suitable for DIN-L and DIN-R doors.

The sliding rail system GSR-EMR XEA BG is suitable for door widths of 1800-2500 mm.

### 3.1 RMZ

The RMZ supplies the connected electromechanical locking device with 24-V-DC voltage. In the event of an alarm or a power cut, the RMZ switches to zero-potential (tripping) and the door closes. The new arming takes place either through a manual or automatic reset. Optional cover smoke detector RMZ and manual release buttons HT may be connected to the RMZ. 2 LEDs show the current operating status. The configuration of the RMZ happens through the DIP switch.

#### 3.1.1 DIP switch on the RMZ

The functions of the RMZ are set via the DIP switch. Changes are only accepted after pressing the reset button (settings see chapter 5.1).

### 3.1.2 Clamp terminal assignment of the RMZ

<b>3 GND</b> <b>12 + 24 V</b> <b>14</b>	Connection of external detector with terminating resistor	Total output max. 9.8 W
<b>1+</b> <b>4 -</b>	Output 24 V DC Catching device(s)	
<b>2</b> <b>10</b>	External manual release with terminating resistor (43 kOhm)	
<b>7 NO</b> <b>8 NC</b> <b>9 C</b>	Potential free changer low voltage (SELV) 24 V AC/DC, 1 A	
<b>11</b> <b>16</b>	Potential free clamp Bus	

### 3.1.3 Display of the operating status of the RMZ

#### Functions of the LEDs

LED on — LED off —

#### Operating display LED 1 (green/red)

operation: green	—————
Alarm smoke detector: red	—————
Alarm manual release button: red	— — — — —

#### Service display LED 2 (yellow)

Maintenance due: flashing	- - - - -
Soiling: flashing	— — — — —
Disturbance: duration	—————
Disturbance: flashing	—————

wrong wiring to the cover smoke detector/manual release button

## 3.2 EMF

The EMF is an electromechanical locking mechanism with adjustable release force, which enables locking the door without spring back. After a cut-off of power supply, the locking device disengages and the door will be closed securely through the door closer.

## 3.3 Technical data

### 3.3.1 RMZ

Input:	230 V AC +10 %/-15 % 120 mA/28 VA/50 Hz
Output:	24 V DC/460 mA/11 W
Degree of protection:	IP 30
Protection category:	II
Smoke switch:	24 V DC/50 mA
Temperature:	-20 °C/+40 °C
Rel. Humidity:	max. 93 % without condensation

### 3.3.2 EMF

Operating voltage:	24 V DC
Power consumption:	2 x 1.4 W = 2.8 W
Duty cycle:	100 % ED
Release torque:	approx. 25 – 65 Nm at 90° opening angle (dependent on the set closing force on the closer)
Door opening angle:	80° bis 120°

## 4 Installation

The mounting of the slide rail system takes place directly on the door lintel or optionally with a mounting plate.

### 4.1 Prepare the mounting of the slide rail

The slide rail can be mounted in two different options:

Option **A** = Mounting directly on the door lintel

Option **B** = Mounting with mounting plate

#### Mounting steps for options A and B

1. Prepare the additional cover smoke detectors and/or manual release buttons if necessary.
2. Take into account the mounting position on active leaf G and fixed leaf S.
3. Mark the fixing points for the closer and the slide rails and the base according to the hole pattern.  
Hole pattern **A** = Mounting directly on the door lintel  
Hole pattern **B** = Mounting with mounting plate
4. Drill the holes.
5. Drill the holes for the connecting cables  
Ø 12 mm and for the connection to required cover smoke detectors and manual release button  
Ø 10 mm.
6. Lay the lines.

#### Additional mounting steps for option B (mounting with mounting plates)

7. Shorten the middle mounting plate.
8. Mount the mounting plate on the door profile.

### 4.2 Mount the sliding rail of the fixed leaf

1. Insert the end caps connector into the slide rail.
2. Tighten the slide rail.

### 4.3 Mount the base for the RMZ

1. Insert the EMF cable of the fixed leaf and the provided cable for the connection to the RMZ underneath the base.
2. Hang the cable into the brackets on the base.
3. Insert all other cables through the base.
4. Mount the base for the RMZ.
5. Temporarily fix the cable on the door lintel. Pay attention that cables are not damaged during adjustment tasks.

### 4.4 Mount the active leaf slide rail

1. Insert the end caps connector into the slide rail.
2. Tighten the slide rail.

### 4.5 Mount the door closer



#### ATTENTION

##### Risk of damage to the catching device

The dimensions on the drill template of the door closer are not suitable for the mounting of this product.

- Use the dimensions from the drill pictures of the instruction of this product.

1. Mount the door closer and lever to the door leaf according to the enclosed instructions for the door closer.
2. Adjust the door closer.

### 4.6 Shorten the connecting tube

1. Measure the dimension X.
2. Shorten the connecting tube to the dimension X-41 mm.

### 4.7 Adjust the triggering roller on the door leaf

1. Close the fixed leaf.
2. Close the active leaf.
3. Unscrew the hexagon socket screw
4. Press on the lever of the triggering roller onto the door.
5. Tighten the hexagon screw. Pay attention to the torque 5 Nm.
6. Remove the screw.

### 4.8 Mount the connecting tube

1. Open the active leaf.
2. Open the fixed leaf.
3. Screw in the adjusting sleeve up to marking.
4. Move the lever with the roller in the direction of the opened active leaf until it clicks.
5. Insert of the connecting tube into the adjusting sleeve of the active leaf slide rail.
6. Insert the slide of the fixed leaf slide rail and fit the connecting tube into the retainer.

### 4.9 Set the sequential locking control

Only if the clamp plate is adjusted correctly, can the active leaf be moved into the direction of closing while the fixed leaf is closed.

The clamp plate is adjusted correctly when the connecting tube pushes the clamp plate into a rectangular position via the adjusting sleeve.

Carrying out the setting as follows:

1. Close the fixed leaf.
2. Close the active leaf.
3. Unscrew the adjusting sleeve manually so far that the pin ② drops out. In the process, the clamp plate must be in a rectangular position to the clamping rod ①. The pin holds the sequential locking control in a neutral position without hindering and will not be required after mounting.
4. Secure the adjusting sleeve with the plastic bolt.

### 4.10 Check the sequential locking control



#### WARNING

##### Risk of smoke inhalation

If the sequential locking of the door leaves is not achieved the catching device must not be used on fire and smoke protection doors.

- Mount a catch cap.

1. Open the active leaf.
2. Open the fixed leaf.
3. Hold the fixed leaf.
4. Change the position of the active leaf to the opening direction. The active leaf must be set in each position.
5. Let the fixed leaf close. The active leaf must only close automatically when the fixed leaf is closed.

**If the triggering roller is not swiveled by the trigger, the trigger must be moved.**

1. Close the fixed leaf.
2. Loosen the screw.
3. Push the trigger into the direction of the triggering roller.
4. Tighten the screw.

#### 4.11 Mount the RMZ

1. Break off a recess for the 230-V-AC power supply.
2. Insert all cables into the intended openings.
3. Screw the RMZ onto the base.

#### 4.12 Lay the EMF connection cable

1. Lay the EMF-connecting cables of the fixed leaf to the active leaf in a way that does not result in the jamming of the connecting rod.
2. Tighten the cable with zip ties.

#### 4.13 Establish electrical connections

1. Insert the connection cable of the EMF fixed leaf into the EMF active leaf.
2. Insert the 24-V-DC connection cable of the RMZ to the EMF active leaf.
3. Clamp the 24-V-DC connection cable to the active leave slide rail onto the RMZ (RMZ, clamps 1 and 4).
4. Connect the 230-V-AC-connection cable. For maintaining the protection category II  (protective insulation), lay the 230-V-AC supply double insulated up to the connecting terminal.
5. Ensure the tension relief of the mains power supply of the RMZ.  
The protective earth must not be used electronically. Connect the provided protective earth to the support terminal (PE).
6. Close the touch protection.
7. Screw the touch protection tightly.

#### Connect optional cover smoke detectors and/or manual release buttons

1. Connect the cover smoke detector and/or manual release buttons to the RMZ according to the enclosed connection diagrams.
2. Follow the terminating resistors (43 kOhm)!

## 5 Start up

### 5.1 Set the DIP switch

1. Put the DIP switches in the appropriate position.
  - 1 OFF = automatic reset (delivery state)  
ON = manual reset  
Stick the provided label onto the cover with this function type
  - 2 OFF = 1-radial operation (line)  
ON = 2-radial operation (star)
  - 3 OFF = without optional cover smoke detector  
ON = with optional cover smoke detector
  - 4 OFF = without optional manual switch  
ON = with optional manual release switch
2. Press the reset button.

### 5.2 Laying the lines

1. Remove the red protection cover from the smoke detector unit.
2. Turn on the on-site power supply (230 V AC).
  - The operation display flashes green

### 5.3 Set the fixture point



#### ATTENTION:

##### Risk of cable damage

While setting the fixture points cables might be damaged.

- Pay attention not to jam the connecting cables.

1. Open the active and fixed leaf until it clicks.
2. Unbolt the screws of the locking unit(s).
3. Open the active and fixed leaves to the desired hold open bracket.
4. Tighten the screws of the locking unit(s) again.
5. Place the door stop into the position of the fixture points selected.

## 5.4 Set the release force



### ATTENTION:

#### Risk of damage to the catching device

Setting a release force too high may result in damages to the door hinges and the fastening elements of the door closing system.

- Set the release force depending on the door width and the selected size of the closing contact.
- According to the DIN EN 1155 the release force must not be less than 40 Nm at a door opening angle of 90 and not more than 120 Nm.

1. Set the release force.
2. Control the release force.

## 5.5 Mount the paneling.

1. Attach the end caps.
2. Break off the marked gaps on the panelings. Pay attention that the correct side is broken off.
3. Mount the paneling of the glide rail.
4. Measure the dimension X.
5. Shorten the middle paneling to the dimension X-30 mm.
6. Mount the middle paneling.
7. Attach the plastic shades.

## 5.6 Check the EMF

The EMF can be released manually or by cutting of the power supply.

### 5.6.1 Release EMF manually

1. Open and lock the door leaves that are fitted with an EMF.
2. Pull on the locked door leaves.
  - ▶ The door leaves are released and close. The active leaf closes only when the fixed leaf is closed.

### 5.6.2 Delete EMF electronically

1. Open and lock the door leaves that are fitted with an EMF.
2. Cut off the power supply (i.e. operation of the manual release button).
  - ▶ The door leaves are released and close. The active leaf closes only when the fixed leaf is closed.

## 5.7 Check the function of the catching device via the RMZ.



### CAUTION

#### Risk of eye and respiratory injury

- Follow the application and safety instructions on the test gas and the safety data sheet.

1. Open the door and lock it.
2. Spray the test gas on the smoke detector according to the manufacturers' instructions.
  - ▶ The operation display switches to alarm (red).
  - ▶ The doors are being closed.

#### During a manual reset:

When the test gas is evaporated, press the reset button to activate the catching device again.

#### During an automatic reset:

The catching device will be activated again as soon as the test gas is evaporated.

The door leaf may be locked after 30 seconds after releasing the catching device.

# 6 Closing the installation

If further structural work is carried out, protect the smoke detector against dust.

1. Switch the catching device to zero-potential.
2. Fit the provided dust cover.
3. Before the final start up, remove the dust cover and carry out a further functional check according to chapter 5.7.

## 6.1 Acceptance test

After installation an acceptance test is to be carried out according to the test book for catching devices. The acceptance test must only be carried out by skilled staff that is certified for this by dormakaba. Follow the details from the data sheet about the use of catching devices. The acceptance test must be documented in the test book for catching devices.

# 7 Operating

## 7.1 Open and lock door

1. Open door leaves to the fixture point.
  - ▶ Active and fixed leaf remain standing after letting go.

## 7.2 Close door

1. Firstly, press shut the fixed leaf, then the active leaf against the resistance or press the optional manual release button.
  - ▶ The door leaves are released and close. The active leaf closes only when the fixed leaf is closed.

# 8 Maintenance

The performance of the maintenance must only be carried out by skilled personnel that is authorized by dormakaba.

Follow the details from the data sheet about the use of catching devices.



### TIPS AND RECOMMENDATIONS

Dust deposits in the smoke detector may lead to false alarms.

- Where appropriate, shorten the required maintenance intervals when using in rooms with heavy exposure to dust.

The smoke switch board must be exchanged every 8 years according to DIN 14677. Achievement of the replacement time is continuously shown by the illuminating diode LED 2.

# 9 Maintenance by dormkaba

A regular maintenance of your system will pay off: weak spots are detected and eliminated early, the service life will be increased.

dormakaba and its authorized partners offers a premium maintenance service for automatic doors and catching devices, whereby the official seal of approval provides the operators of the building with reliable safety. If not all door systems are properly tested, the building operator will be liable for property damage and physical injuries in case of an accident. Irrespective of safety aspects, a regular maintenance makes also sense from an economic point of view.

This allows you to detect and eliminate possible damage or wear early on. The risk of unforeseeable costs due to, for example, high repair costs can be minimized – and we will help you keeping an eye on your budget. The goal is always to increase the service life of your door systems.

dormakaba will assume the complete organization and execution of the maintenance. Your benefits: all installations will be tested by trained experts in regular intervals - even systems from other manufacturers. The building operator does not have to take care of anything; legal requirements will be met in a reliable manner.

A maintenance contract for the door will ensure the tested reliability according to a premium standard. We want to convince you as well – let us prepare you a non-binding and free quote for a maintenance contract.

For more information on this topic and many others on the dormakaba service, please go to our homepage at [www.dormakaba.com](http://www.dormakaba.com).

# 10 Dismounting, recycling and disposal

Dismantling is the same procedure in reverse and must be carried out by qualified personnel.



### DANGER

#### Danger to life through electric current

Works on electrical systems must only be carried out by skilled electricians.

- Before starting work on electrical systems and equipment, establish a zero-potential condition and ensure this condition while carrying out the work.

The product must be disposed of environmentally sound. Electro-technical parts and batteries must not be disposed of as household waste. Dispose of electro-technical parts and batteries in the arranged acceptance and collection points.