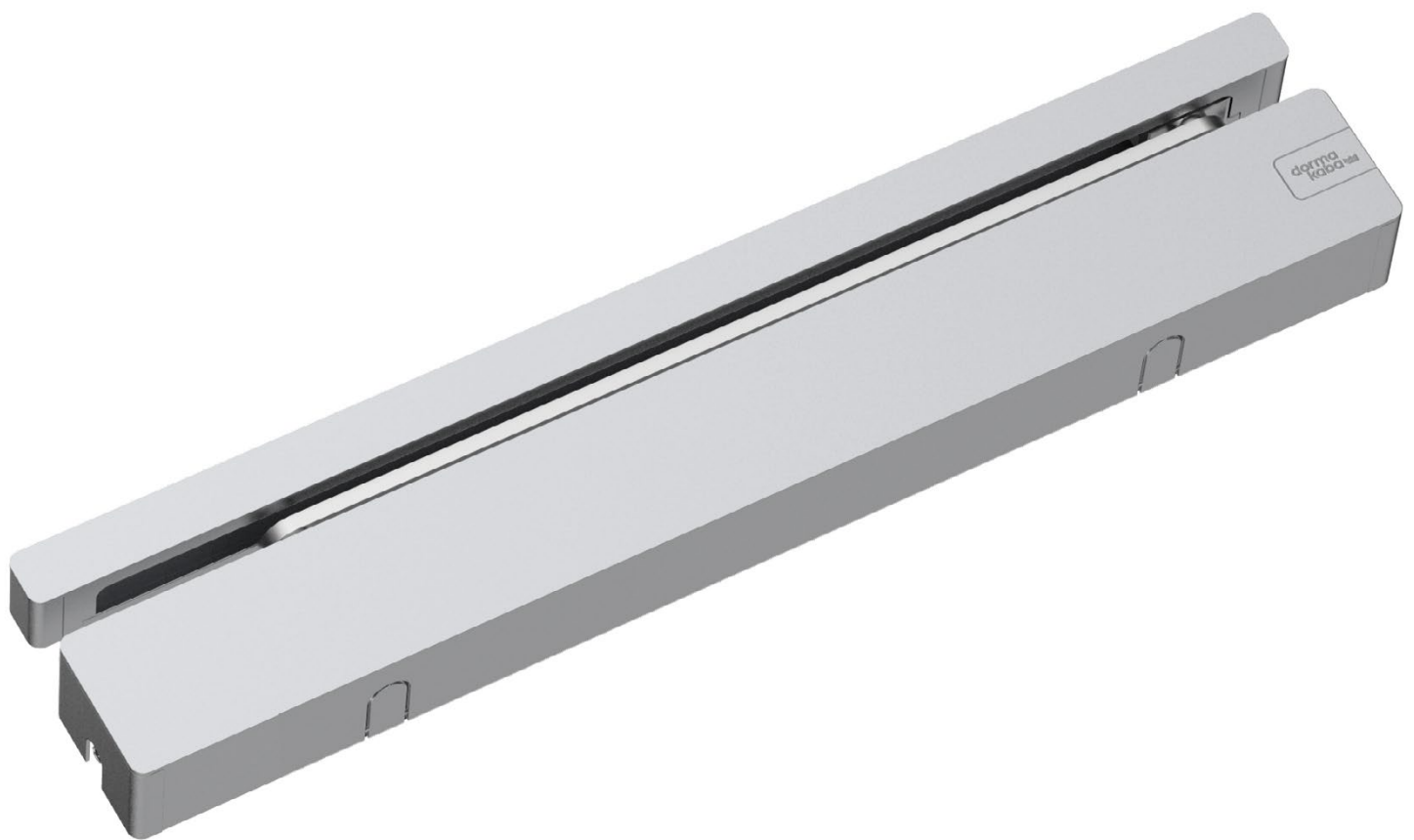


# TS 97 FL

## Free swing door closer



# For freely movable fire and smoke doors and secure closure in the event of a fire

The TS 97 FL XEA in XEA design for door widths up to 1,400 mm is a hold-open system with free-swing funktion for a door opening angle of > 0° that is used as a hold-open system along with a smoke detector system (e.g. RMZ XEA). The TS 97 FLR-K XEA is used as a complete solution with free-swing funktion for a door opening angle of > 0° including a smoke detector system.

For both systems, the door is freely movable thanks to free-swing funktion. The door is securely locked by the door closer in the event of an alarm or during power failure.

ISO 9001 certified.

## Benefits – point by point

### For trade

- Optimum rounding off of the product range
- Simple material planning due to a clear programme structure

### For fitters

- Quick, easy installation
- Flexible operation with DIN-left and DIN-right use, as well as installation on door leaf and lintel

### For planners

- Covers a wide range of applications for door widths up to 1,400 mm
- Compliance with statutory requirements for barrier-free building thanks to the proven EASY OPEN technology – in accordance with DIN 18040 and DIN SPEC 1104 (CEN/TR 15894)
- Universally suitable for single-leaf or double-leaf doors
- Uniform appearance in the dormakaba XEA design

### For the end user

- Intuitive use of the door – free-swing funktion is put into force on the first door operation irrespective of the door opening angle
- Unresistant opening of doors in the area of preventive fire protection
- Highest application security
- High comfort of use and fully-controlled, reliable closing with adjustable latching action

## **F** Certificate of suitability

### TS 97 FL XEA

The TS 97 FL XEA has been tested and certified as per EN 1155 by the MPA NRW testing centre in Dortmund. A certificate of suitability is required for the respective fire or smoke door if the TS 97 FL XEA is fitted in lintel mounting on the opposite hinge side.

### TS 97 FLR-K XEA

The TS 97 FLR-K XEA has been tested and certified as per EN 1155 by the MPA NRW testing centre in Dortmund. Approval as hold-open system according to the general design certification from DIBt, Berlin. Acceptance inspection mandatory.

### Note

According to the general requirements and test specifications for the approval process for hold-open systems by the DIBt (Institut für Bautechnik, German Institute for Construction Technology), Berlin, it is mandatory to use a manual release pushbutton (e.g. dormakaba HT) for free-swing door closers. This button must be red and bear the inscription "Close door". The button must be directly next to the shutter and must not be covered by the door when opened. Please note that the maximum door opening angle is often larger than the available free-running range.

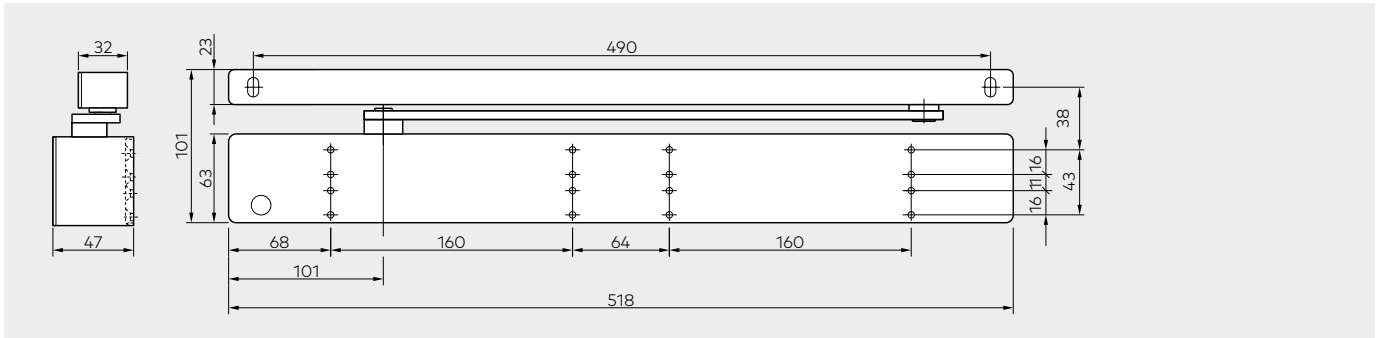
### TS 97 FLR-K XEA

The smoke detector unit must be replaced after eight years according to BS EN 14677. Once the replacement deadline is reached, this is shown by a constantly glowing LED light.

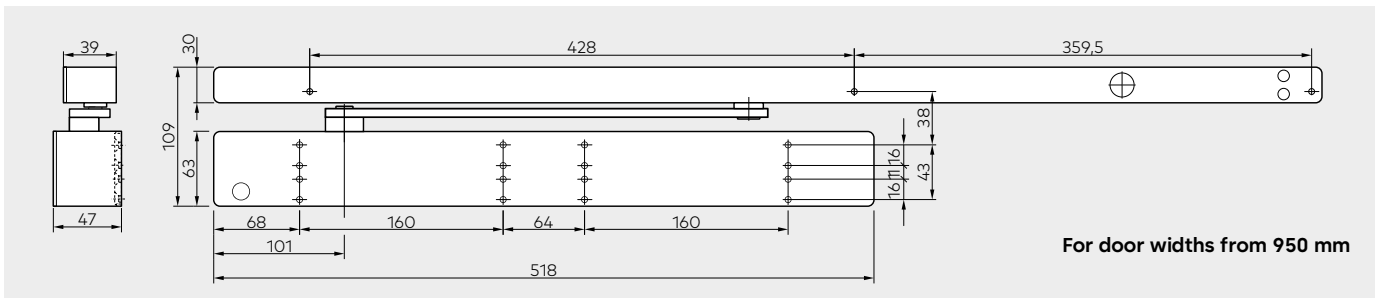
Data and features		TS 97 FL XEA	TS 97 FLR-K XEA
Continuously adjustable closing force	Size	EN 3-6	EN 3-6
General doors	1400 mm	●	●
Fire and smoke doors	≤ 1400 mm	●	●
Same design for DIN-L (left-handed door) and DIN-R (right-handed door)		●	●
Slide channel		●	●
Closing time continuously adjustable using valve		●	●
Latching action continuously adjustable using valve		●	●
Mechanical cushioned limit stay		○	○
Free-swing funktion from a door opening angle of > 0°		●	●
Weight in kg		5,2	5,7
Dimensions in mm (without slide channel)	Length	518	518
	Installation depth	47	47
	Height	63	63
Door closers tested in accordance with BS EN 1154		●	●
Hold-open system tested in accordance with BS EN 1155		●	●
Hold-open system tested in accordance with BS EN 14637		●	●
CE-Identification for construction products		●	●
Suitable for barrier-free building according to DIN 18040 and DIN SPEC 1104 (CEN/TR 15894)		●	●
Functions	Smoke detector	–	●
	Trigger element	●	●
	Power supply	–	●
Smoke detection	Photoelectric (optical)	–	●
Connection to other detectors		–	●
Total power input (max.) for additional detectors in W		–	7,8
LED indicators	Alarm	–	●
	Operation	–	●
	Maintenance	–	●
	Contamination	–	●
Input voltage		24 V DC ± 15%	230 V AC + 10% / – 15%
Output voltage		–	24 V DC
Power consumption in W		3	14,8
Potential-free change-over contact Low voltage (SELV)		–	24 V AC/DC 1 A
Restore	Manual reset	–	●
Connections for external manual release device		–	●
Protection type		IP 54	IP 20

● Yes – No ○ Option

## TS 97 FL XEA

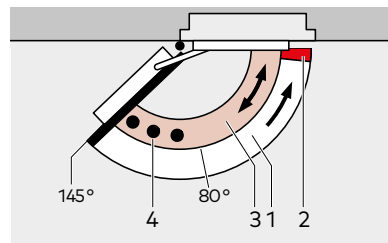


## TS 97 FLR-K XEA

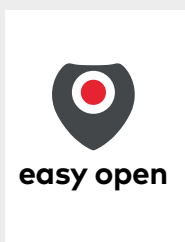


### Free-swing funktion for door opening angles > 0°

When the door is opened, free-swing funktion is activated for a door opening angle of > 0°. Free-swing funktion enables an easy walking through the door as only the resistance of the door hinges counteracts for opening. The door remains freely movable and is not automatically closed, which is a relief when walking through doors in heavily frequented areas. In the event of fire or a power failure, the door is securely closed by the door closer. It is used for the securing of fire and smoke doors as well as common doors in old-age homes, centres for the handicapped, public buildings, e.g. educational institutions, and hospitals.



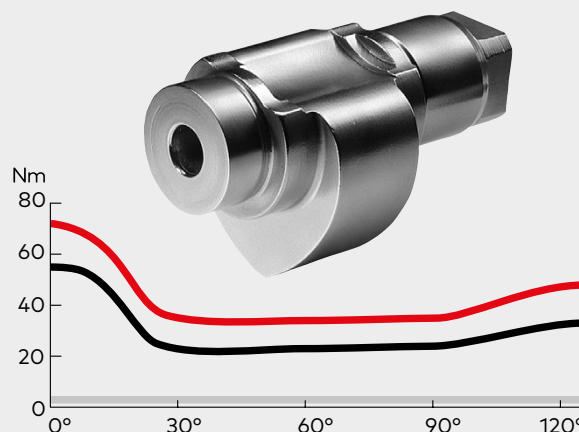
- 1 Fully controlled closing with adjustable speed (without power)
- 2 (Continuously) adjustable latching action
- 3 free-swing area
- 4 Cushioned limit stay



**DIN SPEC 1104**  
**CEN TR 15894**

**DIN 18040**

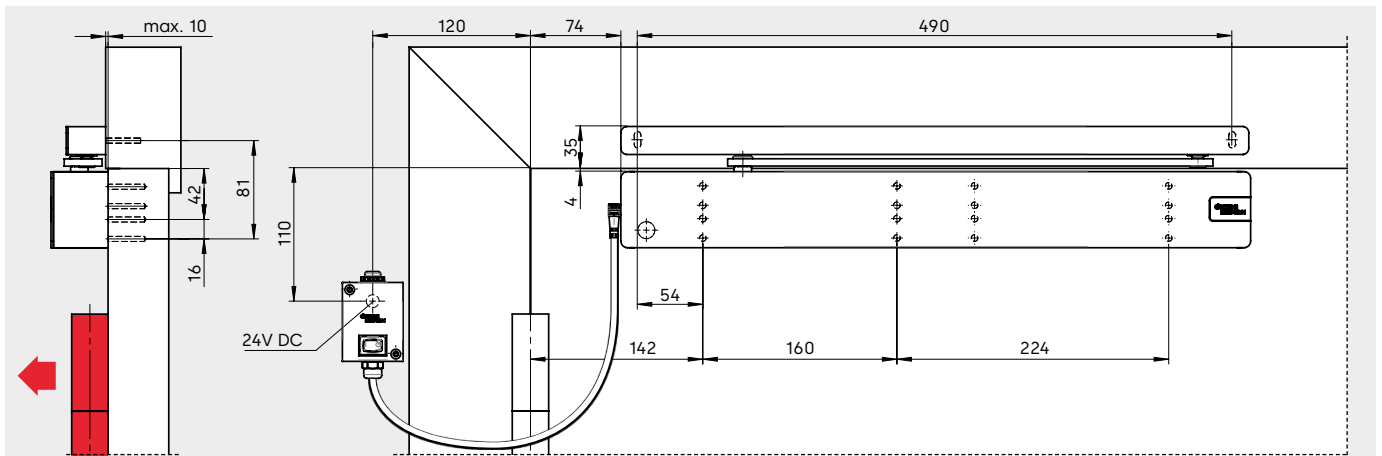
For dormakaba free-swing door closers with EASY OPEN technology, the heart-shaped cam significantly reduces the opening torque to be overcome.



Torque characteristics of a slide channel door closer TS 97 FL XEA (size EN 3–6, max. closing force adjustment)

- Opening torque
- Closing torque
- TS 97 FL XEA free-swing door closer

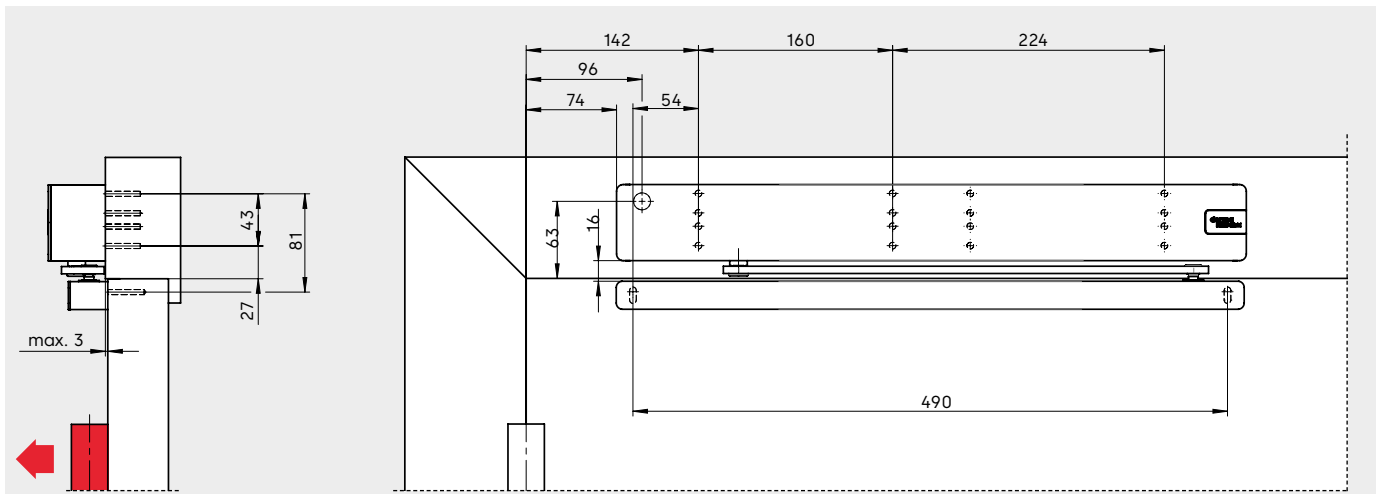
## TS 97 FL XEA – Application and installation



Note: The distribution box can be omitted if power is supplied via the door leaf (using KÜ/LK 12).

Door closer TS 97 FL XEA, door-leaf mounting on hinge side

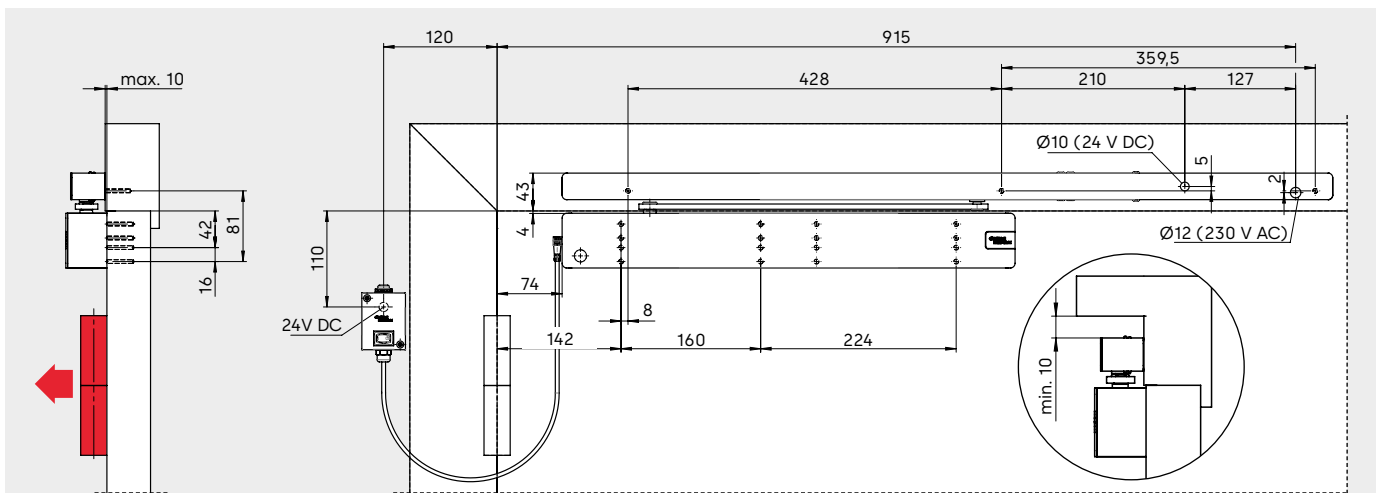
Examples: DIN-L door, DIN-R door; mirror image



Door closer TS 97 FL XEA, door-leaf mounting on hinge side

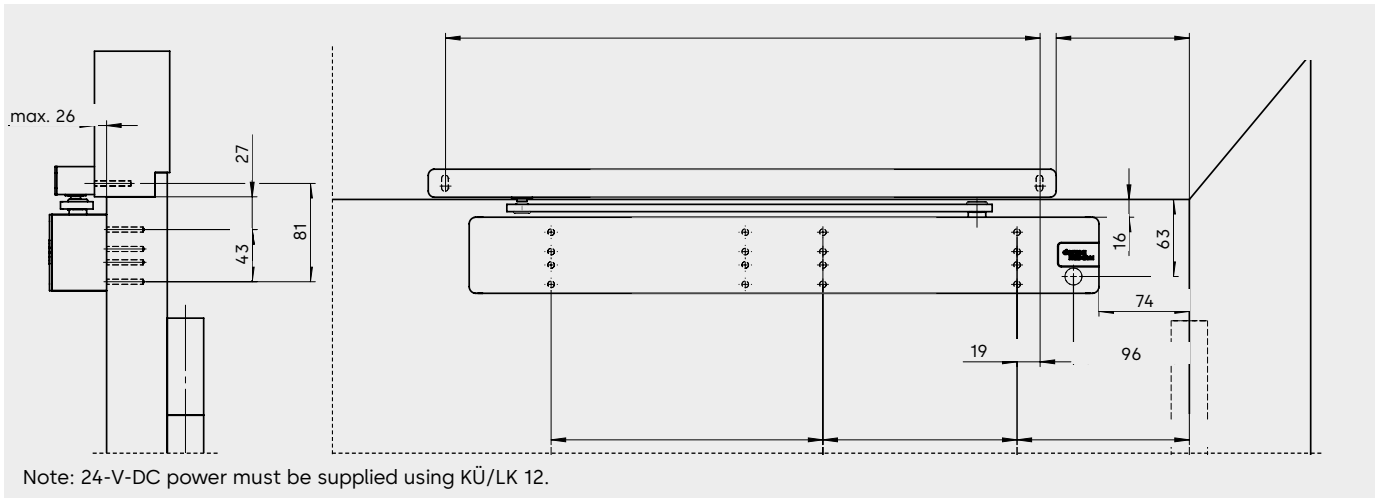
Examples: DIN-L door, DIN-R door; mirror image

## TS 97 FLR-K XEA – Application and installation



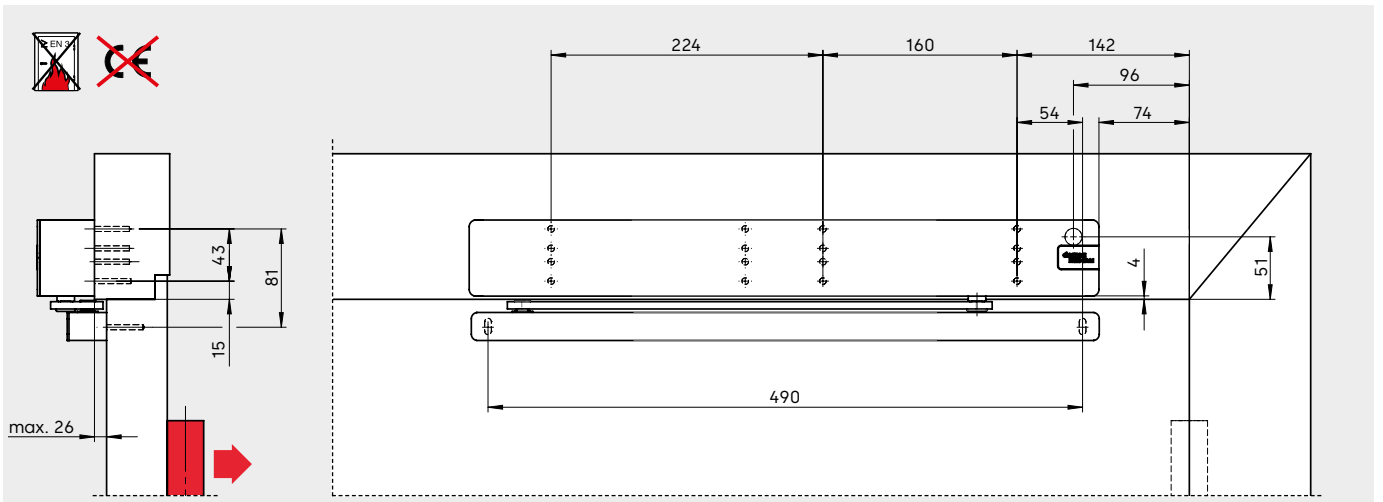
Door closer TS 97 FLR-K XEA, door-leaf mounting on hinge side

Examples: DIN-L door, DIN-R door; mirror image



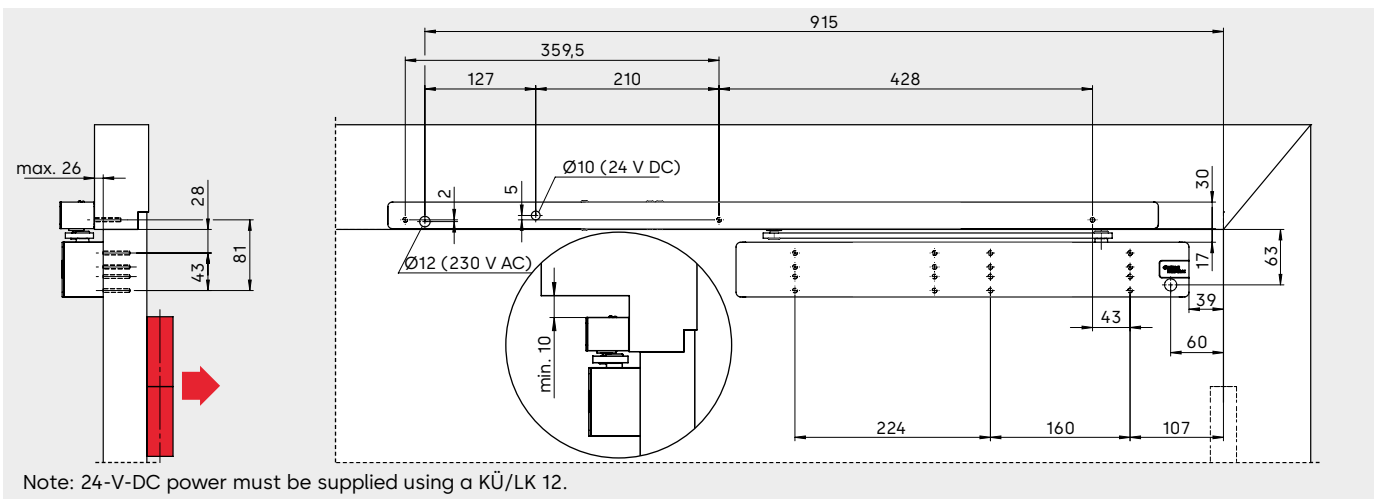
Door closer **TS 97 FL XEA**, door-leaf mounting on opposite hinge side

Examples: DIN-L door, DIN-R door; mirror image



Door closer **TS 97 FL XEA**, lintel mounting on opposite hinge side

Examples: DIN-L door, DIN-R door; mirror image



Door closer **TS 97 FLR-K XEA**, door-leaf mounting on opposite hinge side

Examples: DIN-L door, DIN-R door; mirror image

# TS 97 FL XEA – Use on double-leaf doors on the hinge side

The modular TS 98 GSR XEA system also facilitates the use of TS 97 FL XEA EN 3–6 on the active door leaf.

When the door is opened, free-swing funktion is activated for a door opening angle of  $> 0^\circ$  on the active door leaf. The door remains freely movable and is not closed automatically, which is a relief when walking through doors in heavily frequented areas. The GSR system ensures that double-leaf doors are closed in the right order: first the passive door leaf, then the active one. The push rods clamping system that is independent of the hydraulics of the door closer works with an overload protection. The trigger mechanism has been integrated in the slide channel.

## TS 97 FL GSR XEA standard version – door coordinator with free-swing funktion on the active door leaf

The GSR system ensures that double-leaf doors are closed in the right order: first the passive door leaf, then the active one.

## TS 97 FL GSR-EMF 1 XEA – door coordinator with free-swing funktion on the active door leaf and electromechanical hold-open of the passive door leaf

The GSR-EMF 1 XEA system ensures the closing of double-leaf doors in the correct order: first the passive door leaf, then the active one. It also enables the combined hold-open mechanism of the door leaves. The passive door leaf can be set to a hold-open point between  $80^\circ$  and  $130^\circ$ , the active door leaf can be set using the door coordinator at any angle up to max.  $145^\circ$ .

In the event of an alarm or during power failure, the hold-open mechanism is revoked and the door coordinator ensures the closing of door leaves in the correct order. The actuation is done through external smoke detectors with integrated power pack (e.g. RMZ in XEA design). The RM-N can be connected as second and third detector. Thanks to the adjustable disengagement force (no tools necessary), the hold-open mechanism can easily also be triggered manually.

### Note

The maximum door opening angle is always the hold-open point of the passive door leaf – set door stop.

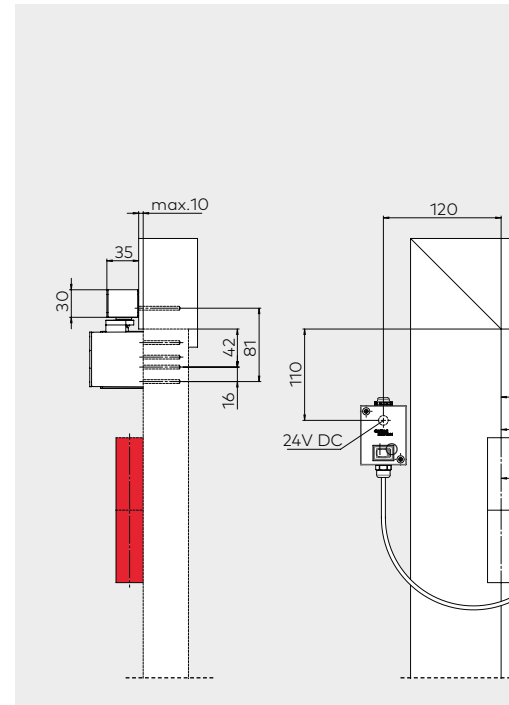
## TS 97 FL GSR-EMR 1 XEA – door coordinator with free-swing funktion on the active door leaf, electromechanical hold-open of the passive door leaf and integrated smoke detector with integrated power pack.

The GSR-EMR 1 XEA system ensures the closing of double-leaf doors in the correct order: first the passive door leaf, then the active one. It also enables the combined hold-open mechanism of the door leaves. The passive door leaf can be set to a hold-open point between  $80^\circ$  and  $130^\circ$ , the active door leaf can be set using the door coordinator at any angle up to max.  $145^\circ$ . The hold-open mechanism is revoked in the event of fire or during power failure.

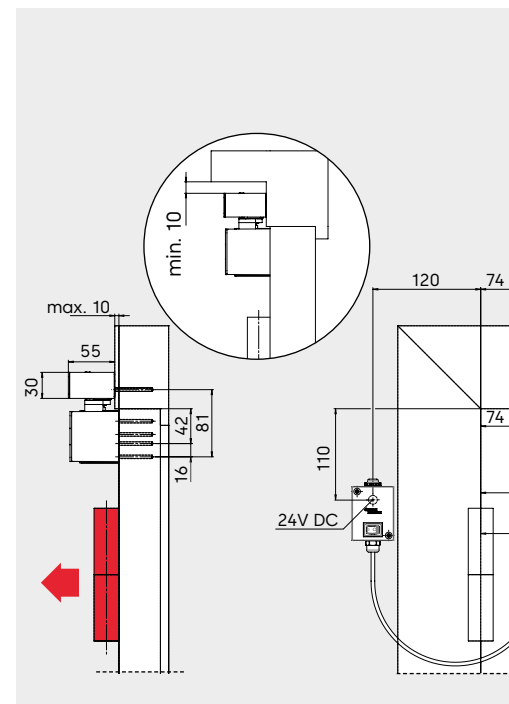
The door coordinator ensures the closing of door leaves in the correct order. The actuation for GSR-EMR XEA is done using a smoke detector with integrated power pack integrated in the door coordinator. The RM-N can be connected as second and third detector. Thanks to the adjustable disengagement force (no tools necessary), the hold-open mechanism can easily also be triggered manually.

### Note

The maximum door opening angle is always the hold-open point of the passive door leaf – set door stop. The smoke detector unit must be replaced after eight years according to BS EN 14677. Once the replacement deadline is reached, this is shown by a constantly glowing LED light.



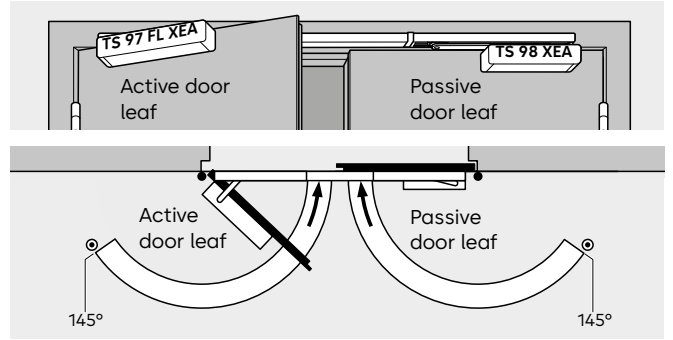
TS 97 FL GSR-EMF 1 XEA, hinge side



TS 97 FL GSR-EMR 1 XEA, hinge side

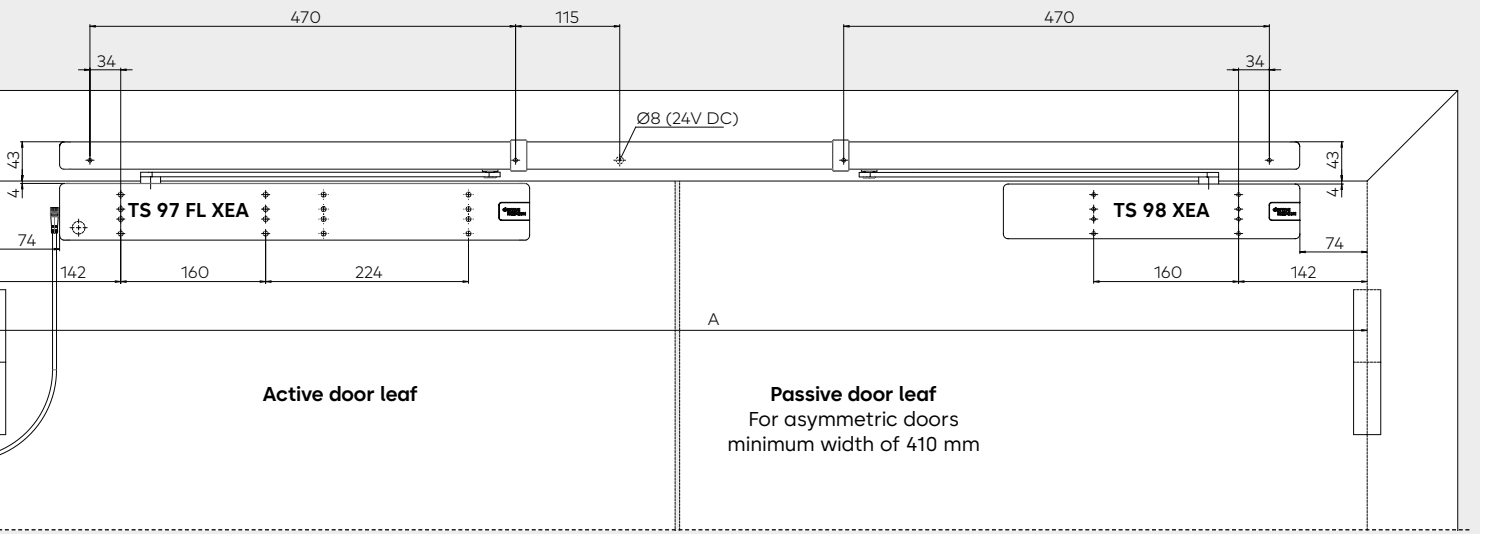
**F Certificate of suitability**

The TS 97 FL XEA GSR is tested and quality-monitored by the notified body MPA in Dortmund in accordance with BS EN 1158. An additional certificate of suitability is also required for the fire or smoke door concerned.



**Note**

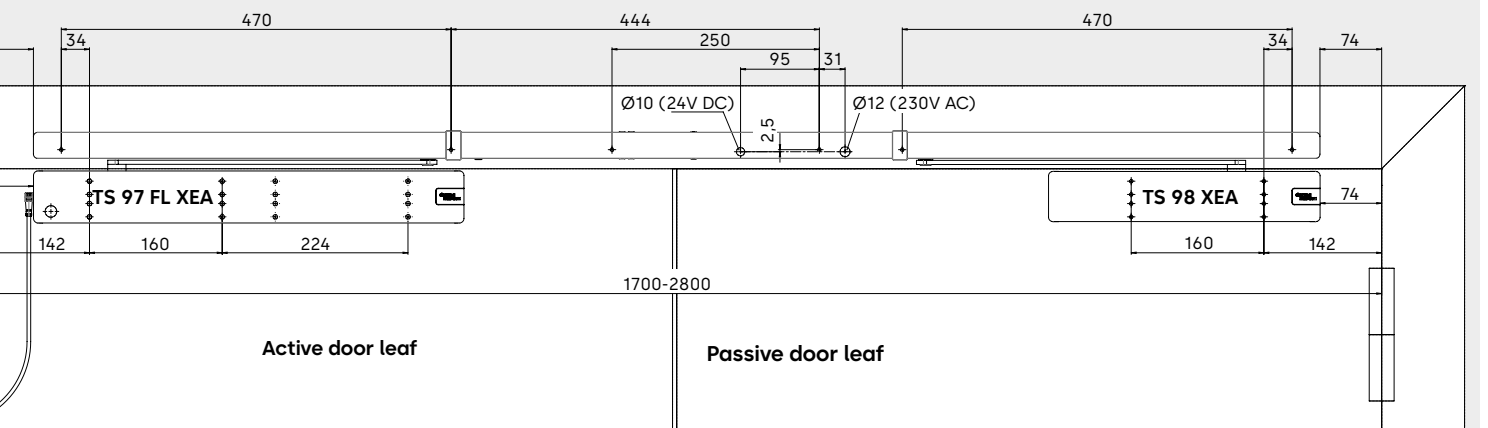
The distribution box can be omitted if power is supplied via the door leaf (using KÜ/LK 12).



Examples: Active door leaf LH door, active door leaf RH door, mirror image

**Note**

The distribution box can be omitted if power is supplied via the door leaf (using KÜ/LK 12).



Examples: Active door leaf LH door, active door leaf RH door, mirror image

# TS 97 FL XEA – Use on double-leaf doors on the opposite hinge side

The modular TS 98 GSR XEA system also facilitates the use of TS 97 FL XEA EN 3–6 on the active door leaf.

When the door is opened, free-swing funktion is activated for a door opening angle of  $> 0^\circ$  on the active door leaf. The door remains freely movable and is not closed automatically, which is a relief when walking through doors in heavily frequented areas. The GSR system ensures that double-leaf doors are closed in the right order: first the passive door leaf, then the active one. The push rods clamping system that is independent of the hydraulics of the door closer works with an overload protection. The trigger mechanism has been integrated in the slide channel.

## TS 97 FL GSR XEA BG standard version – door coordinator with free-swing funktion on the active door leaf

The GSR system ensures that double-leaf doors are closed in the right order: first the passive door leaf, then the active one.

## TS 97 FL GSR-EMF 1 XEA BG – door coordinator with free-swing funktion on the active door leaf and electromechanical hold-open of the passive door leaf

The GSR XEA ensures that, in case of double-leaf doors, the active door leaf always closes after the passive door leaf. It is characterised by the fact that it is equipped with a push rods clamping system. This system works independent of the hydraulics of the door closer and therefore ensures extreme security and reliability.

An overload protection protects the door coordinator and the door construction from damage. The door coordinator GSR XEA can be used for LH doors as well as for RH doors and can be combined with the door closer TS 97 FL XEA on the active door leaf and the door closer TS 98 XEA on the passive door leaf.

The max. door opening angle is approx.  $110^\circ$ . To prevent the door or door closer from being damaged, a door stop must be set. For emergency application on fire and smoke doors, it is recommended to use the TS 97 FL XEA GSR on the hinge side.

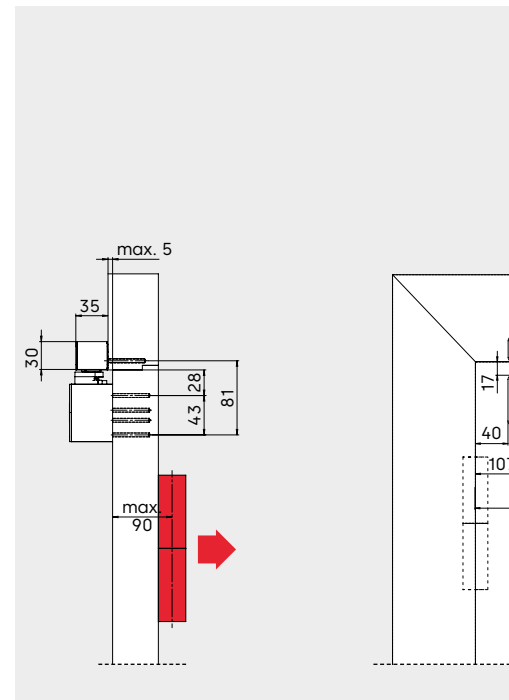
## TS 97 FL GSR-EMR 1 XEA BG – door coordinator with free-swing funktion at the active door leaf, electromechanical hold-open of the passive door leaf and integrated smoke detector with integrated power pack

The GSR XEA ensures that, in case of double-leaf doors, the active door leaf always closes after the passive door leaf. It is characterised by the fact that it is equipped with a push rods clamping system. This system works independent of the hydraulics of the door closer and therefore ensures extreme security and reliability.

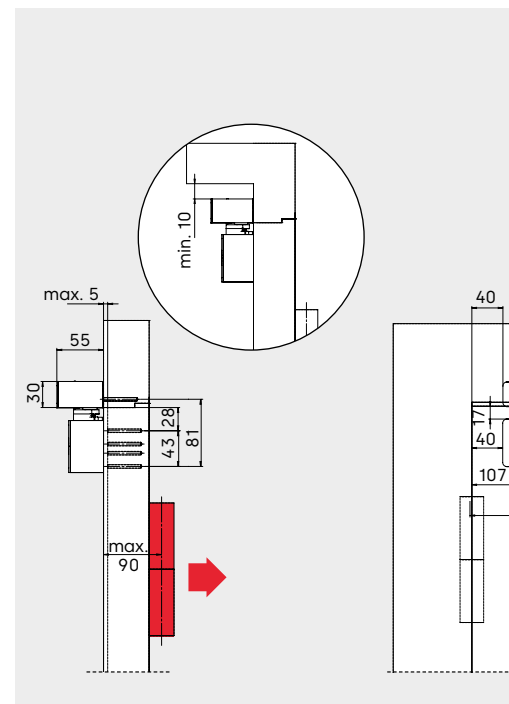
An overload protection protects the door coordinator and the door construction from damage. The door coordinator GSR XEA can be used for LH doors as well as for RH doors and can be combined with the door closer TS 97 FL XEA on the active door leaf and the door closer TS 98 XEA on the passive door leaf.

The maximum door opening angle is always the hold-open point of the passive door leaf – set door stop.

The smoke detector unit must be replaced after eight years according to BS EN 14677. Once the replacement deadline is reached, this is shown by a constantly glowing LED light.



TS 97 GSR-EMF 1 XEA, opposite hinge side

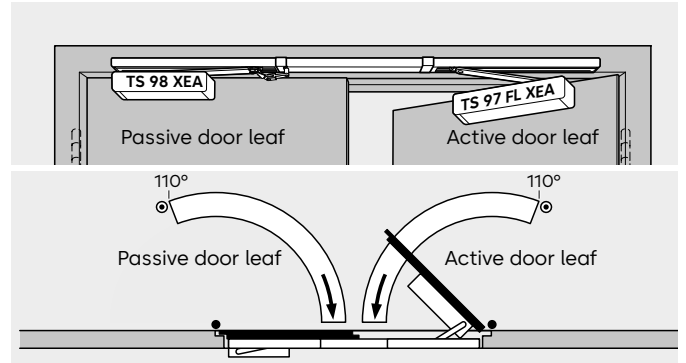


TS 97 FL GSR-EMR 1 XEA, opposite hinge side



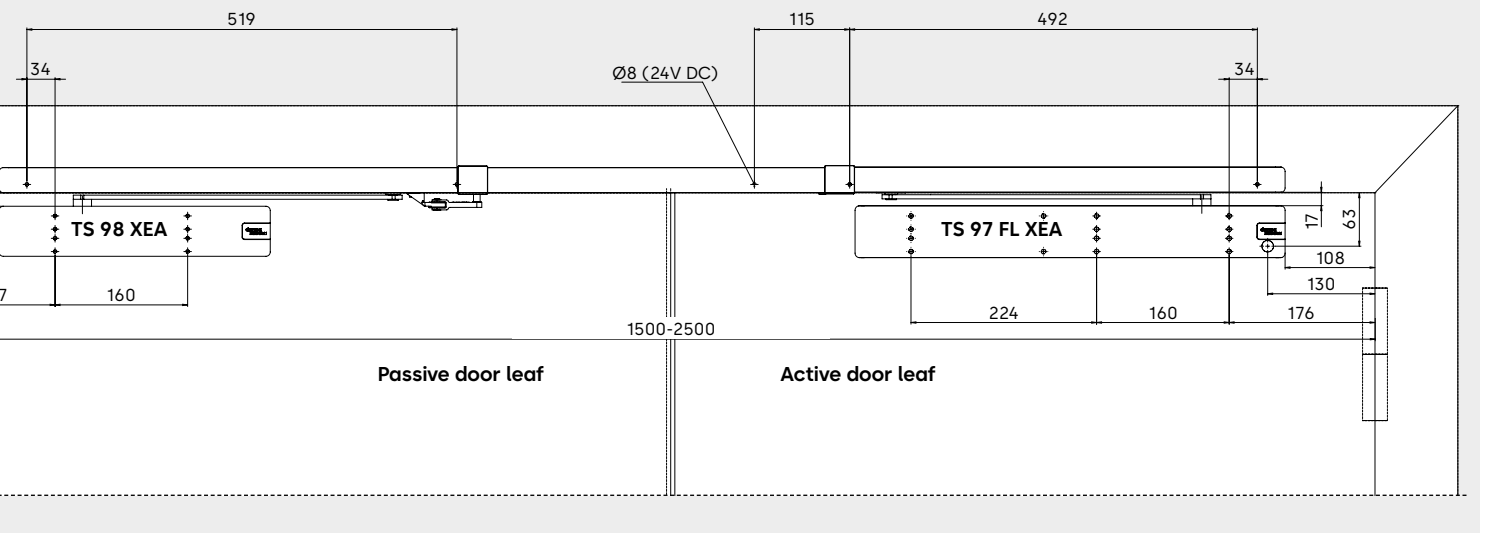
**F Certificate of suitability**

The TS 97 FL XEA GSR BG is tested and quality-monitored by the notified body MPA in Dortmund in accordance with BS EN 1158. An additional certificate of suitability is also required for the fire or smoke door concerned.



**Note**

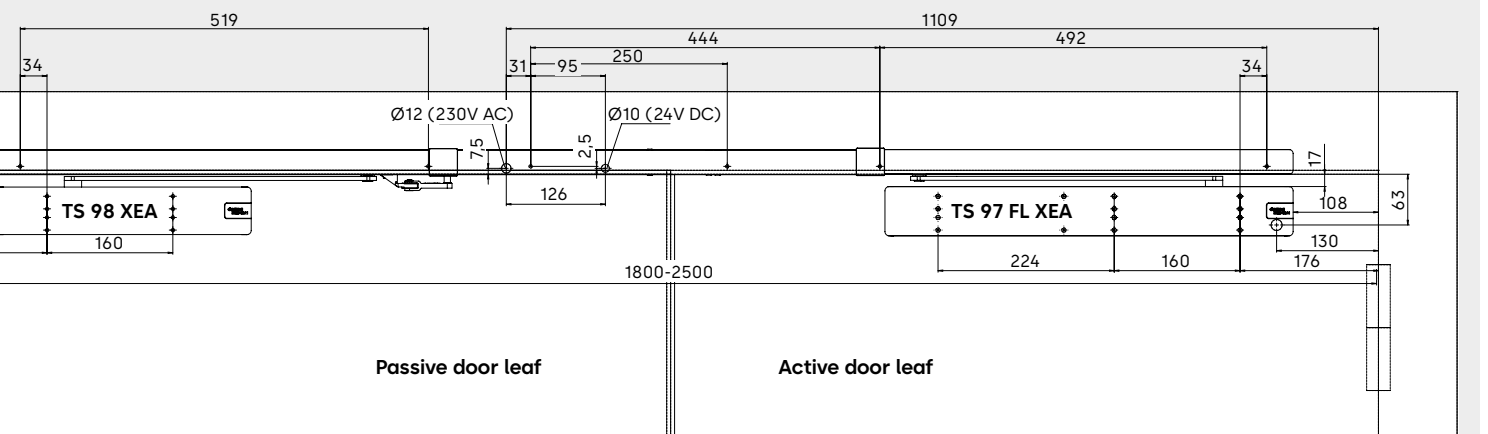
24-V-DC power must be supplied using a KÜ/LK 12.



Examples: Active door leaf LH door, active door leaf RH door, mirror image

**Hinweis**

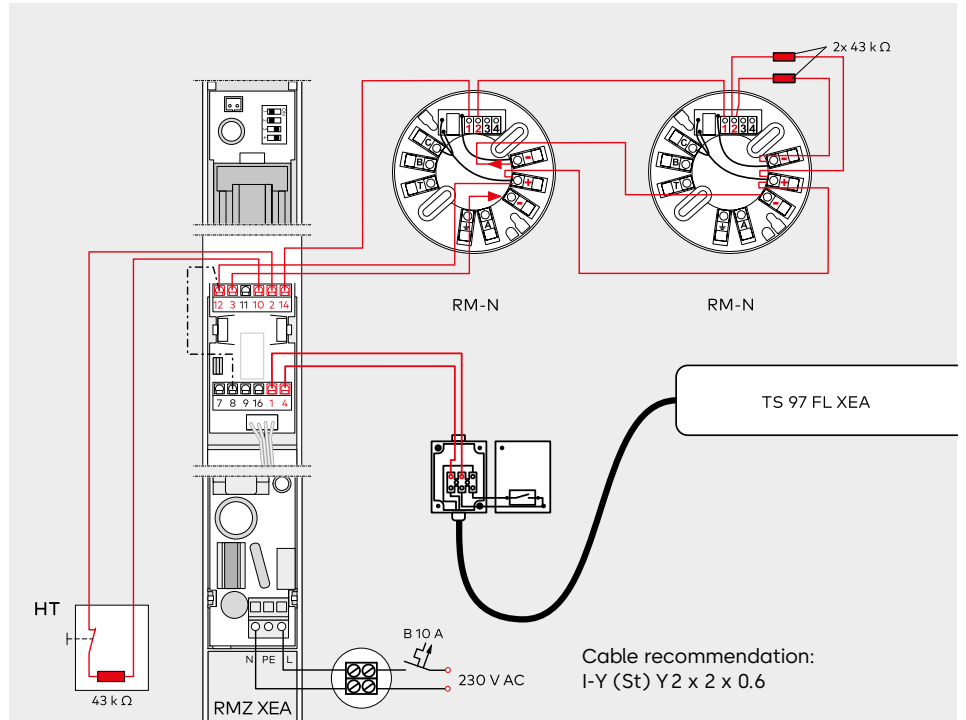
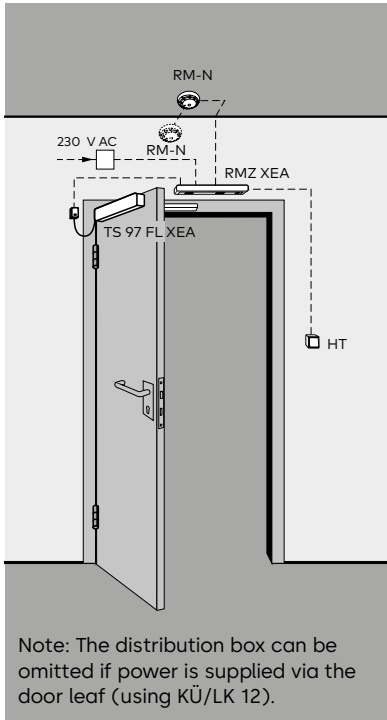
Die Stromzuführung 24 V DC muss über einen KÜ / LK 12 erfolgen.



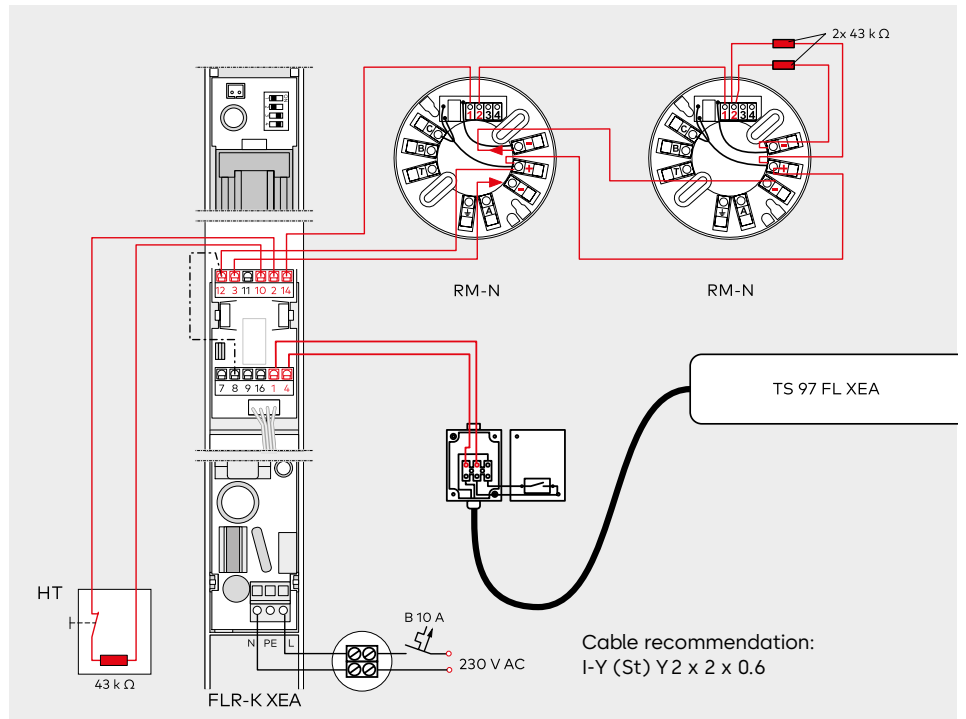
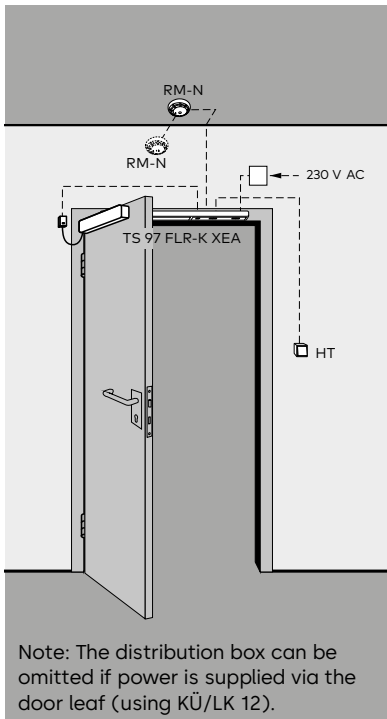
Examples: Active door leaf LH door, active door leaf RH door, mirror image

# TS 97 FL XEA – Usage examples of hold-open system

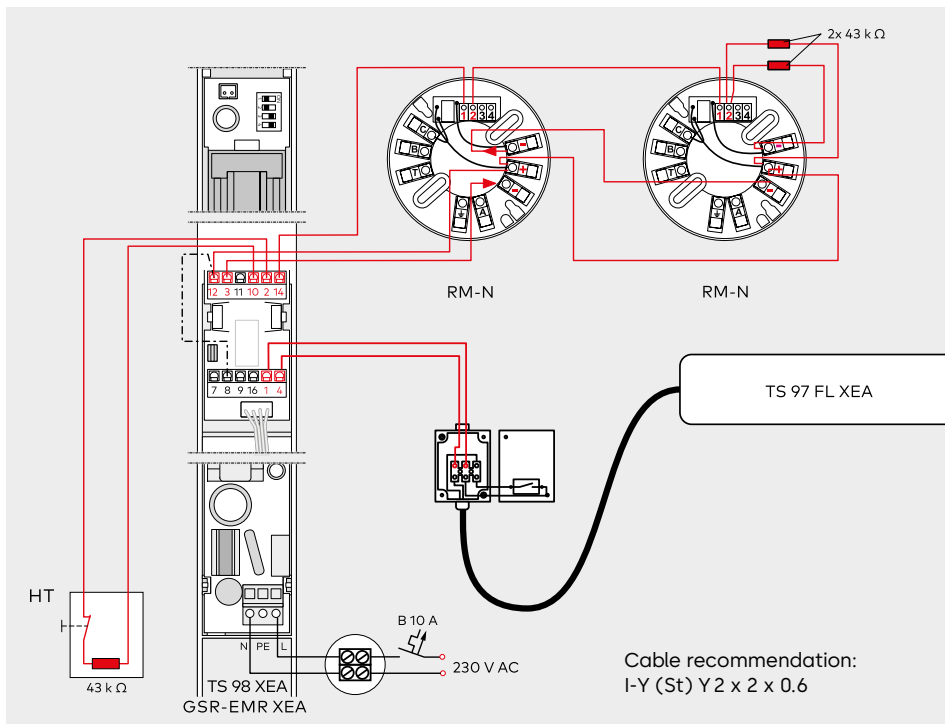
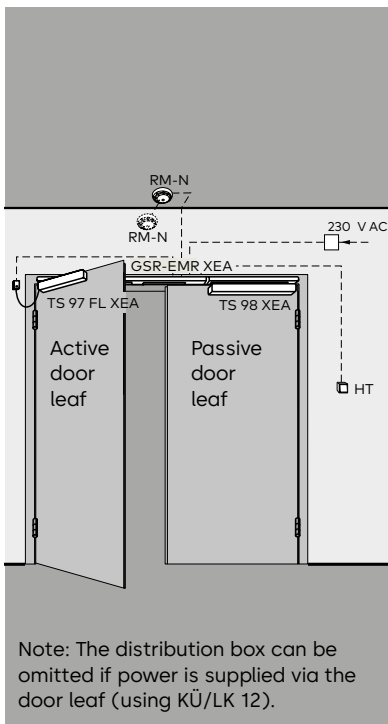
TS 97 FL XEA + RMZ XEA + 2x RM-N



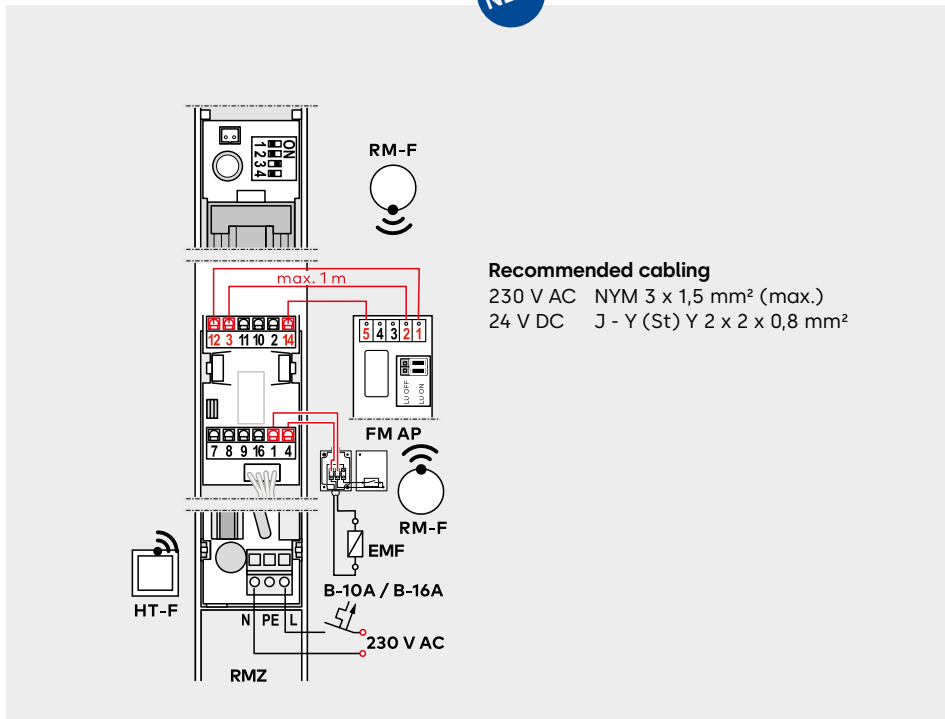
TS 97 FLR-K XEA + 2x RM-N



**TS 97 FL GSR-EMR 1 XEA + 2x RM-N**



**Alternative: RMZ mit Funkmodul FM AP / RM-F**



# Smoke detection control panel RMZ

## Smoke detector RM-N

## Radio smoke detector RM-F with radio module FM AP

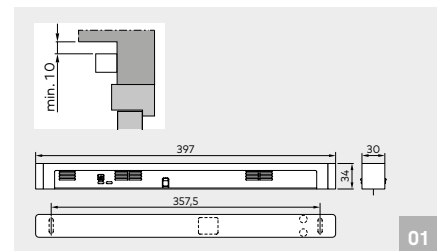


The RMZ XEA smoke detector with integrated power pack in XEA design and the RM-N smoke detector ideally supplement the TS 97 FL XEA system for preventive fire protection. They are designed according to the latest guidelines from the Deutsches Institut für Bautechnik (German Institute for Construction Technology) and guarantee the optimal interaction of all systems to hold open fire and smoke doors under different conditions. As an alternative to the RM-N smoke detector, the RM-F radio smoke detectors can also be connected to the smoke detection control unit via the FM-AP radio module.

Data and features		RMZ XEA	RM-N	FM AP	RM-F
Functions	Smoke detector	●	●	–	●
	Trigger element	●	–	–	–
	Power supply	●	–	–	–
Smoke detection	Photoelectric (optical)	●	●	–	●
Assembly	Lintel mounting	●	–	●	–
	Ceiling installation	–	●	–	●
Connection to other detectors		●	–	●	–
Total power input (max.) for hold-open systems and additional detectors in W		9,8	–	9,8	–
Power consumption internal detector in W		1,2	0,65	1,2	0,65
LED Advertisements	Alarm	●	●	●	●
	Operation	●	–	●	●
	Maintenance	●	–	●	●
	Dirt	●	–	–	●
Input voltage		230 V AC ± 10 %	24 V DC +15%, -10%	18–28 V DC	–
Output voltage		24 V DC	–	–	–
Detector operating voltage		24 V DC +15%, -10%	24 V DC	18–28 V DC	3 V DC
Power input (max.) in mA		75	20	13	–
Potential-free changeover contact Low voltage (SELV)		24 V AC/DC 1 A	30 V AC/DC 1 A	24 V AC/DC 1 A	–
Restore	Automatic	●	●	●	●
	Can be changed to manual reset <sup>1)</sup>	●	–	–	–
Function check	Exhaust gas	●	●	–	●
Terminals for external manual release device		●	–	–	–
Protection type		IP 30	IP 43	IP 40	IP 42
Ambient temperature in °C		–20, +40	–10, +60	–30, 70	–30, 70
Weight in kg		0,25	0,15	0,065	0,168
Dimensions in mm	Length	397	∅ 100	148,2	∅ 80
	Depth	34	44	30,4	
	Height	30		28,6	70
Tested in accordance with EN 54, Part 7		●	●	●	●
CE-Identification for construction products		●	●	●	●

● Yes – No

<sup>1)</sup> Required in connection with the free-swing door closers TS 97 FL XEA and ITS 96 FL



### O1 Smoke detection control panel RMZ XEA

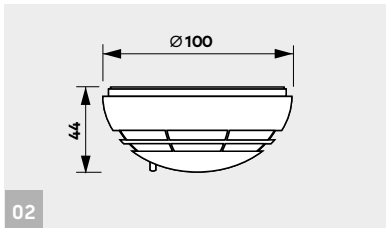
The RMZ XEA smoke detector with integrated power pack in XEA design supplies connected hold-open systems with a 24-V direct current and switches them off from power in the event of an alarm or during power failure (activation). The reset is automatic but can be changed to manual reset (required in connection with the free-swing door closers TS 97 FL XEA and ITS 96 FL). Connections are possible for other detectors and for an external manual release device, and a potential-free change-over contact is also available.

### F Approval certification

The RMZ XEA smoke detector with integrated power pack in XEA design and the RM-N smoke detector are approved by the Deutsches Institut für Bautechnik, Berlin, general building approval; acceptance inspection mandatory.

### Regulations/information

The smoke detector unit must be replaced after 8 years as per DIN 14677. An LED will continuously indicate when the replacement date has been reached.



### 02 smoke detector

The RM-N smoke detector senses both smoldering and open, developing fires early and can be connected to all dormakaba hold-open systems.



### 03 FM AP radio module

The FM AP radio module is connected to the smoke detection control unit and serves as a receiver for the RM-F radio smoke detectors and HT-F radio push buttons. Up to 8 radio devices can be registered. The multicolor, LED-illuminated ring indicates the operating status.

### 04 FM AP Console

Mounting console for the FM AP radio module

### 05 RM-F radio smoke detector

The RM-F radio smoke detector with multicolor, LED-illuminated ring senses smoldering fires as well as open fires with smoke development. The LED-illuminated ring indicates the operating status. The integrated battery is designed for 8 years of operation and can be replaced.

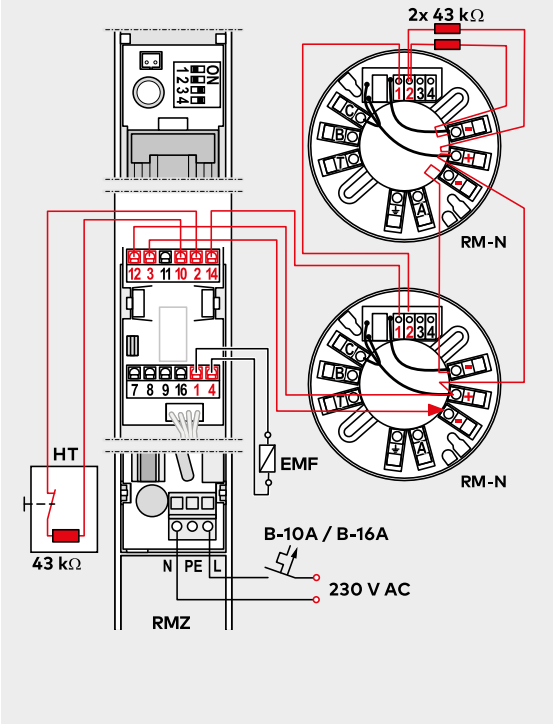
### 06 HT-F radio push button

The HT-F radio push button adds manual switching capability to the system. A multicolor LED provides information about the operating status. The integrated battery is designed for 8 years of operation and can be replaced. The push button is supplied with a surface-mounted box, but can also be installed in a flush-mounted box with a minimum depth of 50 mm.

## Example of connection plan RMZ with RM-N

### Recommended cabling

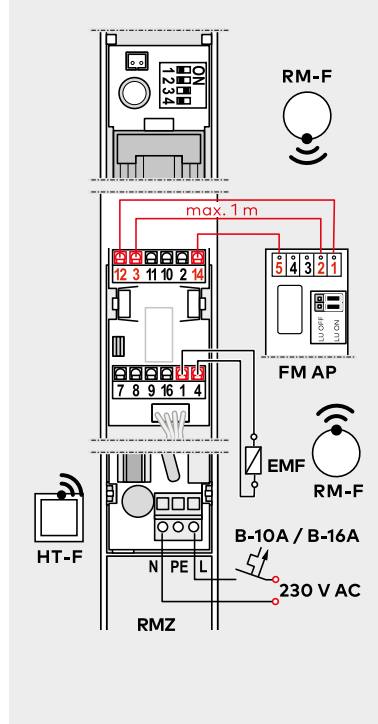
230 V AC NYM 3 x 1,5 mm<sup>2</sup> (max.)  
24 V DC J - Y (St) Y 2 x 2 x 0,6 mm<sup>2</sup> / 0,8 mm<sup>2</sup>



## RMZ with FM AP/RM-F radio module

### Recommended cabling

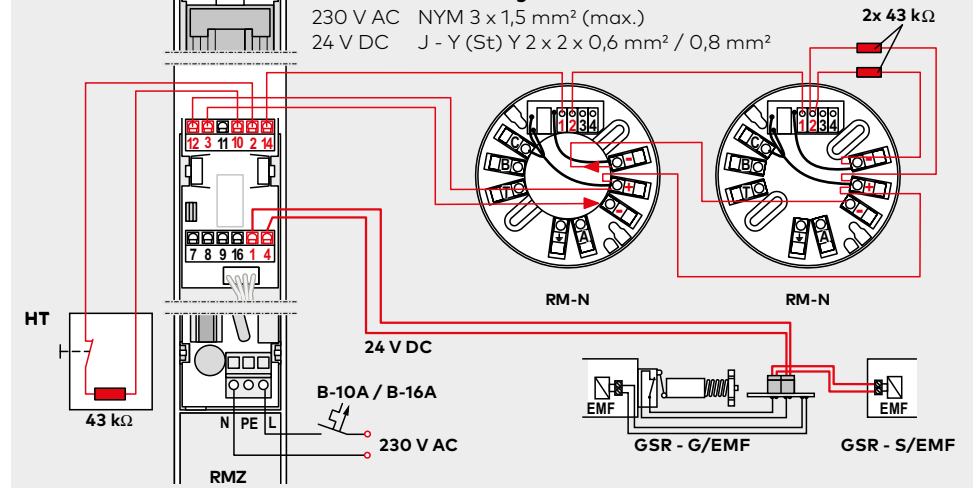
230 V AC NYM 3 x 1,5 mm<sup>2</sup> (max.)  
24 V DC J - Y (St) Y 2 x 2 x 0,8 mm<sup>2</sup>



## Connection diagram, GSR-EMR XEA with 2x RM-N

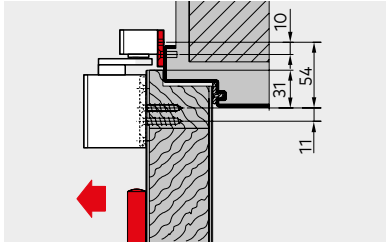
### Recommended cabling

230 V AC NYM 3 x 1,5 mm<sup>2</sup> (max.)  
24 V DC J - Y (St) Y 2 x 2 x 0,6 mm<sup>2</sup> / 0,8 mm<sup>2</sup>

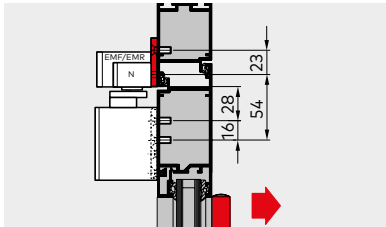


# Accessories

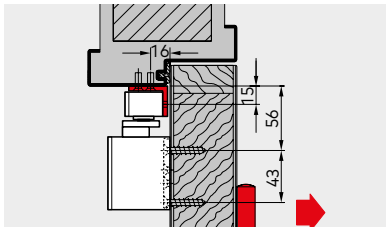
## Single-leaf doors



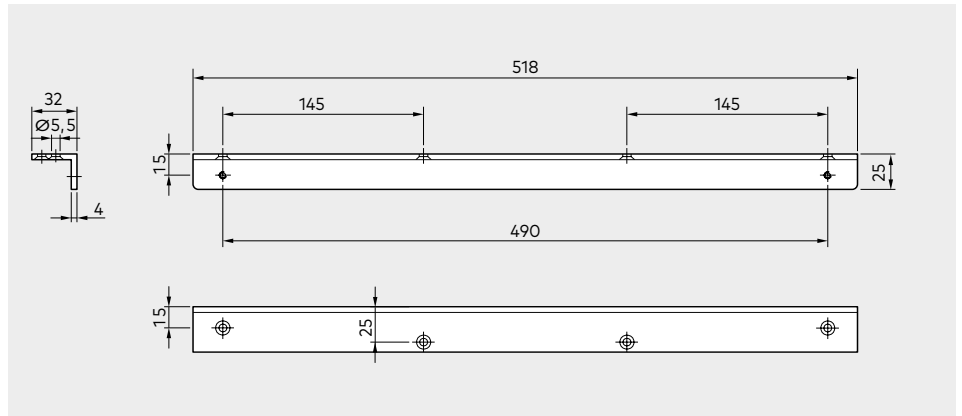
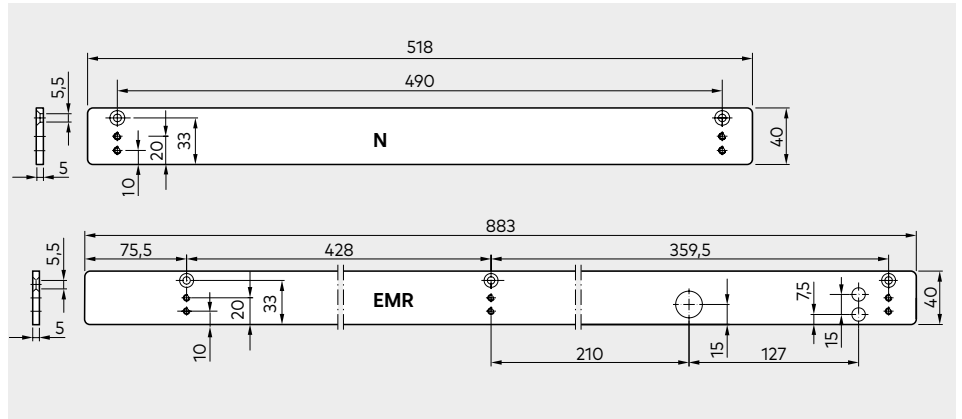
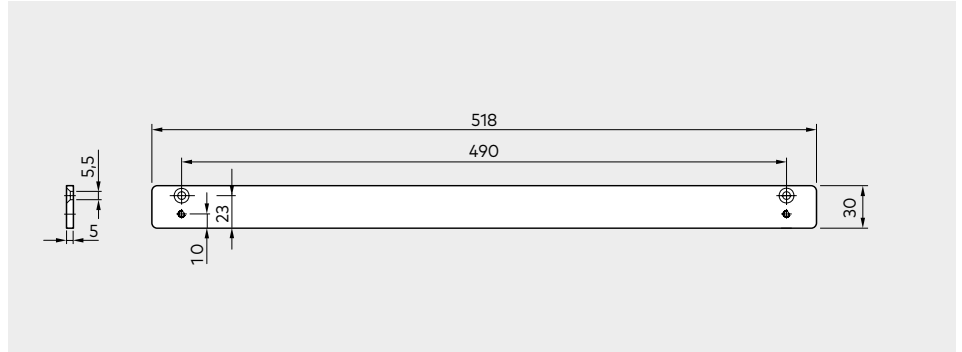
**30-mm mounting plate for G-N XEA**  
For fixing the slide channel on door frames where a direct mounting is not possible.



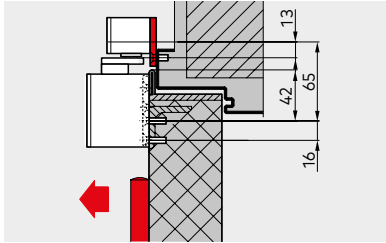
**40-mm mounting plate for G-N XEA, EMR XEA and FLR-K XEA**  
For fixing the slide channel on door frames where a direct mounting is not possible.



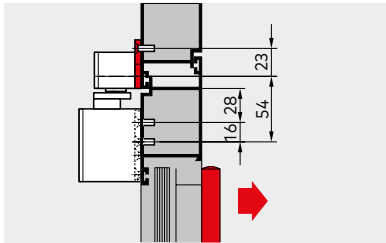
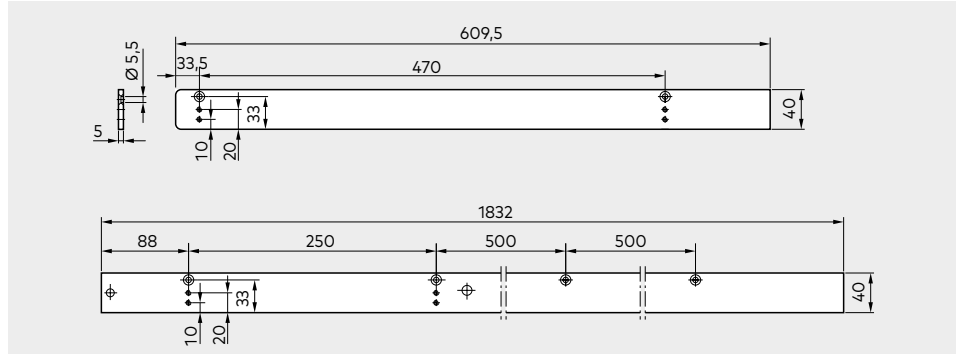
**Lintel bracket for G-N XEA**  
For fixing the slide channel on door frames with deep lintel in case of mounting on the opposite hinge side. G-N XEA design variant for direct lintel mounting is also available.



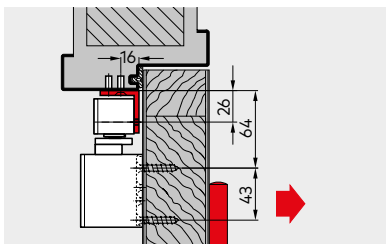
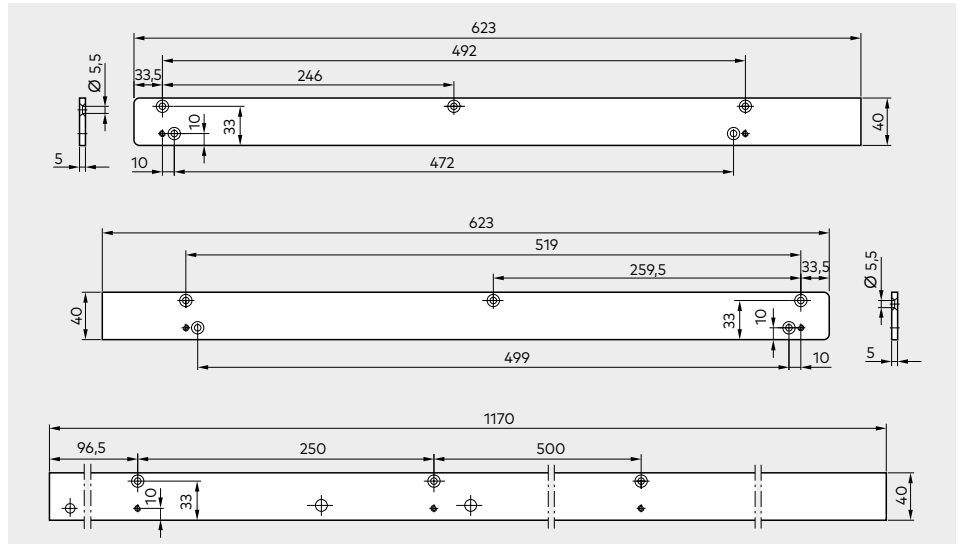
# Double-leaf doors



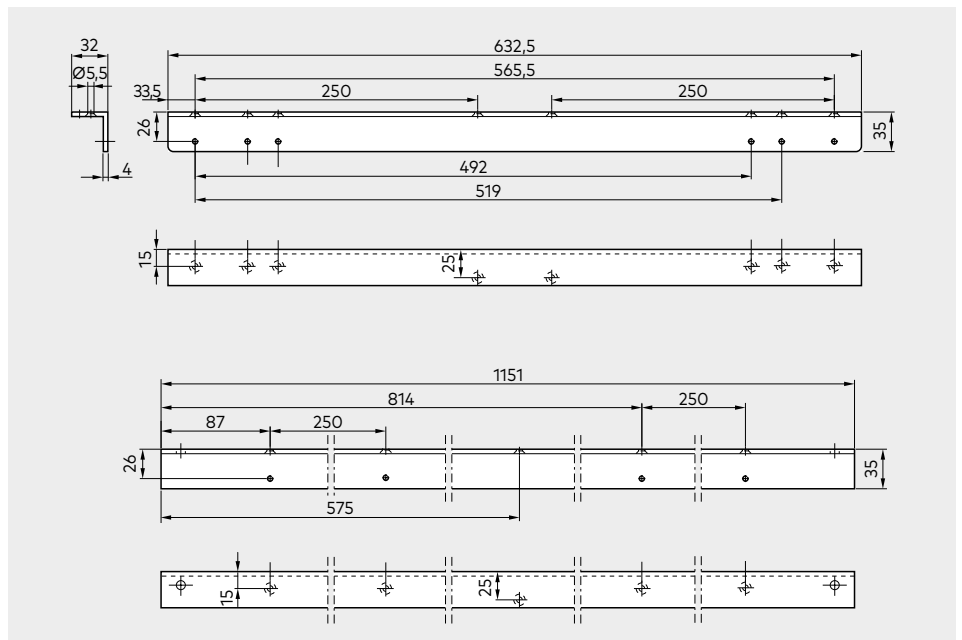
**40-mm mounting plate for GSR XEA**  
For fixing the slide channels on door frames where a direct mounting is not possible.



**40-mm mounting plate for GSR XEA BG**  
For fixing the slide channels on door frames where a direct mounting is not possible.






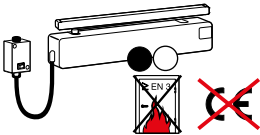

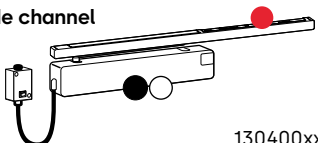


**Lintel bracket for GSR XEA BG**  
For fixing the slide channels on door frames with deep lintel.

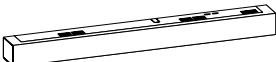
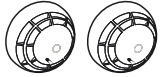






# Product contents and accessories

## Single-leaf doors

	Mounting plate 30 mm for G-N XEA	Mounting plate 40 mm for G-N XEA	Mounting plate 40 mm for G-EMR XEA	Lintel bracket for G-N XEA	Cushioned limit stay for G-N XEA
					
	574000xx	574100xx	574600xx	574300xx	35800093
<b>TS 97 FL XEA (EN 3-6)</b> door leaf/lintel mounting on hinge side/ opposite hinge side* incl. G-N XEA slide channel		△	△	△	△
*Lintel mounting on opposite hinge side: 130200xx					
<b>TS 97 FLR-K XEA (EN 3-6)</b> Door-leaf mounting on hinge side/ opposite hinge side incl. G-EMR XEA slide channel					
			130400xx		

## Accessories

Smoke detector system	
<b>RMZ</b> 648000xx	
<b>RM-N</b> 64830900 packaging unit 2 pcs.	
<b>FM AP radio module</b> Silver (RAL 9006) 57290001 White (RAL 9016) 57290011 Special colour 57290009	
<b>RM-F radio smoke detector</b> 57280011 packaging unit 2 pcs.	
<b>HT-F radio push button</b> 57300011	
<b>FM AP Console</b> 9900057005003	

### xx Colour options

- 01 Silver-coloured
- 11 White (RAL 9016)
- 09 special colour

Can also be delivered in Design\* version  
04 stainless-steel finish

\* "Design" refers to the surface finish of the products

### Manual release button

**HT-UP**  
19144601175



**HT-AP**  
19144601175  
+ 515853332

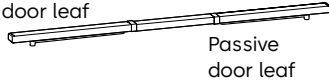
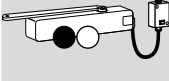

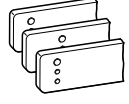
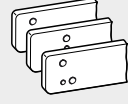
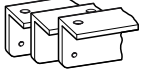




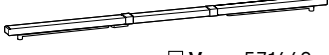


Cable transition	<b>KÜ 480</b>	15813000
Cable spiral	<b>KS 370</b>	15819000
Detachable cable transition connector	<b>LK-12</b>	15813010

For specification text/product description, see page 12/13



# Double-leaf doors

	TS 97 FL XEA	TS 98 XEA	Mounting plates for GSR XEA	Mounting plates for GSR XEA BG	Lintel bracket for GSR XEA BG	Cushioned limit stay
 <p>Active door leaf</p> <p>Passive door leaf</p>						
	EN 3-6 for GSR application on active door leaf ■ 130300xx	EN 1-6 for GSR application on passive door leaf ■ 441101xx	574800xx	574900xx	574700xx	18020000
<b>GSR XEA</b>  <ul style="list-style-type: none"> <li><input type="checkbox"/> VK 571010xx</li> <li><input type="checkbox"/> V 571020xx</li> <li><input type="checkbox"/> VL 571030xx</li> </ul>	<input type="checkbox"/>	1 x ■	<input type="checkbox"/>	1 x ■	△	△
<b>GSR-EMF 1 XEA</b>  <ul style="list-style-type: none"> <li><input type="checkbox"/> VK 571110xx</li> <li><input type="checkbox"/> V 571120xx</li> <li><input type="checkbox"/> VL 571130xx</li> </ul>	<input type="checkbox"/>	1 x ■	<input type="checkbox"/>	1 x ■	△	△ <sup>1)</sup>
<b>GSR-EMR 1 XEA</b>  <ul style="list-style-type: none"> <li><input type="checkbox"/> V 572150xx</li> <li><input type="checkbox"/> VL 572160xx</li> </ul>	<input type="checkbox"/>	1 x ■	<input type="checkbox"/>	1 x ■	△	△ <sup>1)</sup>
<b>GSR XEA BG</b>  <ul style="list-style-type: none"> <li><input type="checkbox"/> V 571440xx</li> </ul>	<input type="checkbox"/>	1 x ■	<input type="checkbox"/>	1 x ■	△	△

<sup>1)</sup> Use cushioned limit stay only on active door leaf.

Optionally also possible:

**GSR-EMF 2 XEA BG**  
**GSR-EMR 2 XEA BG**

		Door width (mm)	
		B	BG
<b>GSR XEA/</b> <b>GSR-EMF XEA</b>	VK	1220 – 1350	–
	V	>1350 – 2500	1500 – 2500
	VL	>2500 – 2800	–
<b>GSR-EMR XEA</b>	V	1700 – 2500	1800 – 2500
	VL	>2500 – 2800	–

- Hold-open system
- Smoke detector with integrated power pack
- free-swing
- xx Article number supplement, see colour options
- Separate closer
- Separate slide channel
- △ Accessories

# Specification text

## Single-leaf doors

### TS 97 FL XEA EN 3-6

Slide channel door closer as per EN 1154, with CE marking, in XEA design, with rapidly decreasing opening torque for easy opening of doors as per DIN SPEC 1104. For door widths up to 1,400 mm with electro-hydraulic hold-open tested in accordance with EN 1155 and free-swing funktion from a door angle > 0°. Continuously adjustable closing force EN 3–6. Closing time and latching action continuously adjustable using valve. Fixing positions: Door-leaf mounting on hinge side and opposite hinge side. Lintel mounting on hinge side and opposite hinge side (an approval is required in individual cases for lintel mounting on opposite hinge side at fire and smoke doors). Operating voltage 24 V DC. Mounting bracket with universal fixing hole pattern. Non-handed. Slide channel height-adjustable. Approved by the German Institute for Building Technology, Berlin, for use in hold-open systems. Acceptance inspection mandatory. A certificate of suitability is required for the respective fire or smoke door in case of lintel mounting on the opposite hinge side.

#### Colour

- Silver-coloured
- White (cf. RAL 9016)
- Stainless-steel finish
- Special colour (cf. RAL)

#### Make

TS 97 FL XEA

### TS 97 FLR-K XEA EN 3-6

Slide channel door closer as per EN 1154, with CE marking, in XEA design, with rapidly decreasing opening torque for easy opening of doors as per DIN SPEC 1104. For door widths up to 1,400 mm with electro-hydraulic hold-open tested in accordance with EN 1155 and free-swing funktion from a door angle > 0°. Continuously adjustable closing force EN 3–6. Closing time and latching action continuously adjustable using valve. Fixing positions: Door-leaf mounting on hinge side and opposite hinge side. Operating voltage 24 V DC. Mounting bracket with universal fixing hole pattern. Non-handed. Slide channel with integrated power supply unit and smoke detector with operating and maintenance display. Installation height 30 mm. Connections for further detectors, external manual release device and potential-free alarm contact. Connection voltage 230 V AC, operating voltage 24 V DC. General building approval granted by DIBt, Berlin, for use in a hold-open system. Acceptance inspection mandatory.

#### Colour

- Silver-coloured
- White (cf. RAL 9016)
- Stainless-steel finish
- Special colour (cf. RAL)

#### Make

TS 97 FLR-K XEA

# Double-leaf doors

## TS 97 FL GSR XEA EN 3-6

Slide channel door closer on active door leaf as per EN 1154, with CE marking, in XEA design, with rapidly decreasing opening torque for easy opening of doors as per DIN SPEC 1104. For door widths up to 1,400 mm with electro-hydraulic hold-open tested in accordance with EN 1155 and free-swing funktion from a door angle > 0°. Continuously adjustable closing force EN 3–6. Closing time and latching action continuously adjustable using valve. Operating voltage 24 V DC. Mounting bracket with universal fixing hole pattern. Non-handed. Slide channel with integrated mechanical door coordinator, tested in accordance with EN 1158. Door coordinator operated separately from the door closer hydraulics using a push rods clamping system with an overload release and continuous cover. Non-handed. Slide channel door closer on passive door leaf TS 98 XEA EN 1–6. Approved by the German Institute for Building Technology, Berlin, for use in hold-open systems. Acceptance inspection mandatory.

### Installation:

- Door-leaf mounting/hinge side (TS 97 FL XEA on active door leaf, TS 98 XEA on passive door leaf)

### Colour

- Silver-coloured
- White (cf. RAL 9016)
- Stainless-steel finish
- Special colour (cf. RAL)

### Make

TS 97 FL GSR XEA

## TS 97 FL GSR-EMF 1 XEA EN 3-6

Slide channel door closer on active door leaf as per EN 1154, with CE marking, in XEA design, with rapidly decreasing opening torque for easy opening of doors as per DIN SPEC 1104. For door widths up to 1,400 mm with electro-hydraulic hold-open tested in accordance with EN 1155 and free-swing funktion from a door angle > 0°. Continuously adjustable closing force EN 3–6. Closing time and latching action continuously adjustable using valve. Operating voltage 24 V DC. Mounting bracket with universal fixing hole pattern. Non-handed. Slide channel with integrated mechanical door coordinator, tested in accordance with EN 1158. Electromechanical hold-open system, 24 V DC, tested in accordance with EN 1155. Hold-open point (80°–130°) and continuously adjustable disengagement force. Door coordinator operated separately from the door closer hydraulics using a push rods clamping system with an overload release and continuous cover. Non-handed. Slide channel door closer on passive door leaf TS 98 XEA EN 1–6. Approved by the German Institute for Building Technology, Berlin, for use in hold-open systems. Acceptance inspection mandatory.

### Installation:

- Door-leaf mounting/hinge side (TS 97 FL XEA on active door leaf, TS 98 XEA on passive door leaf)

### Colour

- Silver-coloured
- White (cf. RAL 9016)
- Stainless-steel finish
- Special colour (cf. RAL)

### Make

TS 97 FL GSR-EMF 1 XEA

## TS 97 FL GSR-EMR 1 XEA EN 3-6

Slide channel door closer on active door leaf as per EN 1154, with CE marking, in XEA design, with rapidly decreasing opening torque for easy opening of doors as per DIN SPEC 1104. For door widths up to 1,400 mm with electro-hydraulic hold-open tested in accordance with EN 1155 and free-swing funktion from a door angle > 0°. Continuously adjustable closing force EN 3–6. Closing time and latching action continuously adjustable using valve. Operating voltage 24 V DC. Mounting bracket with universal fixing hole pattern. Non-handed. Smoke detector with operation and maintenance indicator flush-integrated into the door co-ordinator housing. Connections for further detectors, external manual release device and potential-free alarm contact. Supply voltage 230 V AC, operating voltage 24 V DC. Slide channel with integrated mechanical door coordinator, tested in accordance with EN 1158. Electromechanical hold-open system, 24 V DC, tested in accordance with EN 1155. Hold-open point (80°–130°) and continuously adjustable disengagement force. Door coordinator operated separately from the door closer hydraulics using a push rods clamping system with an overload release and continuous cover. Non-handed. Slide channel door closer on passive door leaf TS 98 XEA EN 1–6. General building approval granted by DIBt, Berlin, for use in a hold-open system. Acceptance inspection mandatory.

### Installation:

- Door-leaf mounting/hinge side (TS 97 FL XEA on active door leaf, TS 98 XEA on passive door leaf)

### Colour

- Silver-coloured
- White (cf. RAL 9016)
- Stainless-steel finish
- Special colour (cf. RAL)

### Make

TS 97 FL GSR-EMR 1 XEA

# Specification texts

## RMZ XEA

Smoke detector with integrated power pack in XEA design, with operating and maintenance display, integrated power supply unit and optical smoke detector for lintel mounting. For actuation of dormakaba hold-open systems. Connections for further detectors, external manual release device and potential-free alarm contact. Can be switched to manual reset. One-piece cover, installation height 30 mm. General building approval granted by DIBt, Berlin, for use as a hold-open system. Acceptance inspection mandatory.

### Installation:

- RMZ XEA with integrated power supply unit.  
Supply voltage 230 V AC  
Operating voltage 24 V DC.
- Optional with integrated alarm module for acoustic monitoring.

### Colour

- Silver-coloured
- White (cf. RAL 9016)
- Stainless-steel finish
- Special colour (cf. RAL)

### Make

RMZ XEA

## RM-N

Optical smoke detector, 24 V DC, for ceiling installation. Can be used as second and third detector in all dormakaba hold-open systems. With potential-free change-over contact. General building approval granted by DIBt, Berlin; tested to EN 54, Part 7, by VdS, Cologne. Acceptance inspection mandatory.

### Colour

- White, similar to RAL 90033

### Make

RM-N

## FM AP

Hold-open radio system for the extension of wired hold-open systems. To be connected to the smoke detection control unit of the respective dormakaba hold-open system.

### Version

- 1 FM AP radio module with 2 RM-F ceiling-mounted radio detectors
- Optionally with surface-mounted/flush-mounted HT-F AP/UP radio push button
- FM AP Console

### Color

- Silver
- White (sim. to RAL 9016)
- Special color (sim. to RAL \_\_\_\_)

## RM-F

Usable as a second or third detector in conjunction with the FM AP radio module in all wired dormakaba hold-open systems. With potential-free changeover contact. General building approval by DIBt, Berlin. Acceptance test required.

### Color

- White (sim. to RAL 9016)

## HT-F AP/UP

Radio push button for use on all wired dormakaba hold-open systems in conjunction with the radio module set. Radio push button for System 55 hold-open systems with surface-mounted box, suitable for combination with flush-mounted inserts. Single-pole changeover contact, single frame, red sticker with white "Close door" lettering.

### Make

- HT-F AP
- HT-F UP

# Requirements/instructions for hold-open systems

The use of hold-open systems is subject to special requirements due to the official approval provisions. They particularly apply to acceptance, ongoing monitoring and maintenance.

The below instructions are intended to inform all participants of the most important measures on using hold-open systems with regard to the official requirements.

See the following documents for further details:  
**General requirements and test specifications for the approval process for hold-open systems by Deutsches Institut für Bautechnik, Berlin**  
**General design approvals from the Deutsches Institut für Bautechnik, Berlin for the respective hold-open system**  
**BS EN 1155**  
**BS EN 14637**

## 1. General information

**1.1** For doors held open by hold-open systems, the area required for closing must be kept clear at all times. This area must be clearly marked with a label, floor markings or similar. It may be necessary to ensure, using constructive measures, that cables, stored goods or components (for example lower ceilings or their components) cannot fall into the area to be kept clear.

**1.2** Wherever possible, smoke detectors should be used for hold-open systems. Smoke detectors must be used for hold-open systems for doors on escape routes.

**1.3** It must also be possible to manually trigger every hold-open system without impairing the functional readiness of the triggering system.  
In case of door closers with an electromagnetic hold-open mechanism, this can be easily lifted by applying light pressure to the door leaf. If hold-open magnets or free-swing door closers are used, these are triggered by a button. The manual trigger for this must be red and bear the label "Close door".  
The button must be in the immediate proximity of the door and must not be covered by the door when opened.

## 2. 2. Acceptance test

**2.1** After installation at the location of use, proper functioning and installation in accordance with specifications must be ensured via an acceptance test. The acceptance test may only be performed by the manufacturer's specialists for monitoring systems and/or hold-open systems, by specialists authorised by such or by a testing body appointed for this.

**2.2** After the acceptance test has been carried out, an approval sign (105 x 52 mm) with the inscription: **Hold-open system**  
**Acceptance by .....**  
(company logo and month and year of acceptance) should be permanently mounted on the wall in close proximity to the shutter.

**2.3** A certificate is to be issued to the facility operator concerning the successful acceptance test. It is to be retained by the facility operator.

## 3. Periodic monitoring

**3.1** The facility operator must constantly keep the hold-open system ready for operation and check it for proper functioning at least once per month.

**3.2** Moreover, the facility operator is obligated to perform a test for proper and fault-free interaction of all devices as well as maintenance or have such performed at least once per year, unless a shorter period of time is indicated in the approval decision. This test and maintenance may only be performed by a specialist or trained person.

**3.3** Scope, results and time of periodic monitoring are to be registered. These registers are to be retained by the facility operator.





## Our Sustainability Commitment

We are committed to foster a sustainable development along our entire value chain in line with our economic, environmental and social responsibilities toward current and future generations. Sustainability at product level is an important, future-oriented approach in the field of construction. In order to give quantified disclosures of a product's environmental impact through its entire life cycle, dormakaba provides Environmental Product Declarations (EPD), based on holistic life cycle assessments.

[www.dormakaba.com/sustainability](http://www.dormakaba.com/sustainability)



## Our offering

### Access Automation Solutions

Entrance Automation  
Entrance Security



### Access Control Solutions

Electronic Access & Data  
Escape and Rescue Systems  
Lodging Systems



### Access Hardware Solutions

Door Closers  
Architectural Hardware  
Mechanical Key Systems



### Services

Technical Support  
Installation and commissioning  
Maintenance and Repair



WN 05510151532, EN, 04/2024  
Subject to technical modifications.



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