

QUIET AND STRONG WITH FILIGREE DESIGN
GEZE SLIMDRIVE EMD – THE SWING DOOR DRIVE



TABLE OF CONTENTS

Introduction: Quiet and strong with filigree design	4
Product benefits and examples of use	5
The Slimdrive EMD/EMD-F component in overview	6
Technical features and overview of the assembly types	7
Uses	8
Slimdrive EMD for toilets for the disabled – Reliability at any location	9
Programme switch	10
Safety sensor barriers: Optimum controlling and securing of automatic drives	11
Hygienically one step ahead: GEZE swing door systems with no-contact control	12
GEZE radio programme. Wireless control with system	13
Installation drawings: Head mounting with guide rail on the hinge end	14
Installation drawings: Head mounting with guide rail on the end opposite the hinge	16
Installation drawings: Head mounting with rod on the end opposite the hinge	18
Installation drawings: Door leaf mounting with guide rail on the hinge end	20
Installation drawings: Double-leaf, head mounting with guide rail on the hinge end	22
Installation drawings: Double-leaf, head mounting with guide rail on the end opposite the hinge	23
Installation drawings: Double-leaf, head mounting with rod on the end opposite the hinge	24
Installation drawings: Double-leaf, door leaf mounting with guide rails on the hinge end	25
Installation dimensions of GC 334 safety sensors and sensor barrier with handle bar	26
Cable plan for Slimdrive EMD/EMD-F, single and double leaf	27
TÜV certificate	30



Z-UP Stuttgart, Germany

INTRODUCTION



Quiet and strong with filigree design

The electro-mechanical swing door drive, the GEZE Slimdrive EMD, is characterised by a range of different installation options and leaves plenty of scope for the ideas of architects and planners. The compact drive, just 7 cm in height, is able to easily and quietly move both large and heavy interior and exterior doors. This means that the Slimdrive EMD, which is type-tested in accordance with DIN 18650, is the ideal solution when both performance capability and lowest possible noise emissions are required.

The spectrum of uses ranges from public buildings through to office complexes and hotels and right down to hospital and care institutions. The most modern control technology in combination with a low wear and maintenance free high-performance motor ensure reliable operation even for heavily used doors. All this opens up a wide range of design options - even when space is at a premium and when slim profiles are used.

There is also a version available for use as smoke and fire-proof doors: The Slimdrive EMD-F has been authorised by the Deutsche Institut für Bautechnik (the German institute for construction technology) for use with both single and double leaf doors.

The GEZE GmbH is thus the only manufacturer to offer a complete range of automatic door drives with 7 cm optic. The range of Slimdrive products covers automatic door systems for swing doors, linear, telescopic and semi-circular sliding doors as well as folding doors. The very low construction height enables a seemingly elegant, almost invisible integration into the facade.

GEZE offers comprehensive service – fast and competent.

PRODUCT BENEFITS



DIN 18650



Slimdrive EMD, the quiet electro-mechanical drive system for single and double leaf swing doors is a powerful and highly compressed piece of technology. All drives in the range are type-tested and certified according to DIN 18650 and BGR 232 (corresponds to EN 954-1) and, naturally, all fulfil the latest safety and technologic standards.

Additional product benefits

- Low wear and maintenance free high performance motor for guaranteed reliable operation
- Very low drive dimensions enable installation even when space is at a premium, in particular in the event of slim profiles
- Extremely flexible thanks to many connection options, for example, motor lock, display programme switch, electrical door opener and locking bolt switch contact.
- Intelligent communication using a bus system enables simple cabling
- All door parameters, for example, opening or closing speed and end stop can be adapted optimally
- Adjustable supported servo-function to also make the door easy to open manually
- Standard: Push-and-go function can be activated and deactivated as required
- In low energy mode, the drive moves the door at a reduced speed
- Optional CAN interface for the implementation of demanding requirements, e. g. lobby controls
- Integrated closing sequence control integrated into the drive system for double leaf swing doors



EXAMPLES OF TYPES OF APPLICATION

- Anywhere where technology and optics are to be combined to the best of their abilities and drives with larger dimensions would disrupt the overall appearance
- When loud noises are to be avoided
- For large and heavy doors that need to be move with the minimum of effort, for example, in hospitals, homes for senior citizens or disabled persons and hotels
- For double leaf interior and exterior doors that need to close in the right order even without power (EMD F-IS)
- Automatic GEZE swing doors are characterised by a simple assembly process and they can also be retrofitted

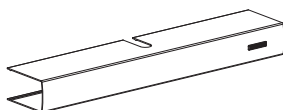
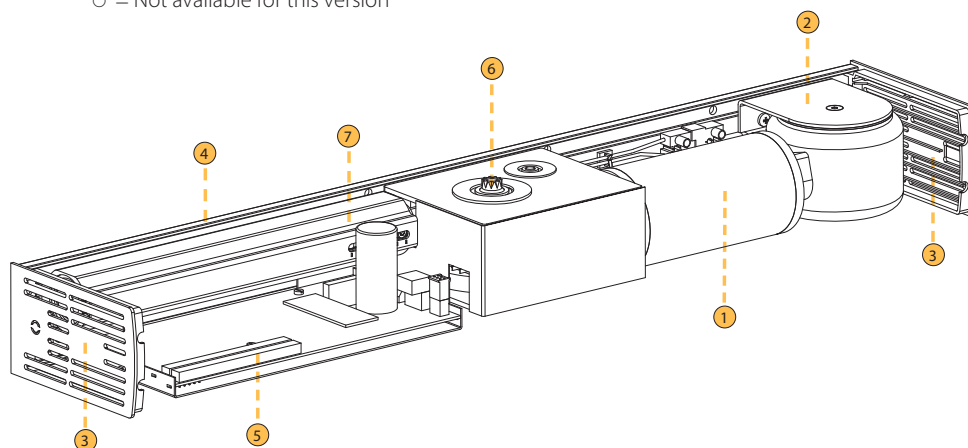
Suitable for single and double leaf doors used as smoke and fire-proof doors all EMD-F-IS versions

The GEZE Slimdrive EMD/EMD-F component in overview

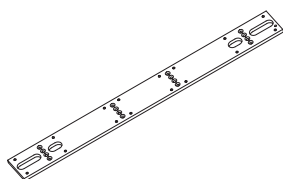
Components	EMD	EMD-F
① Motor-transmission unit	●	●
② Transformer	●	●
③ Side elements	●	●
④ Base plate	●	●
⑤ Control unit	●	●
⑥ Drive axis, continuous	●	●
⑦ Energy reserve	○	●

● = Standard

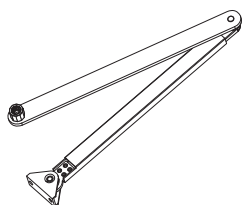
○ = Not available for this version

**Hood**

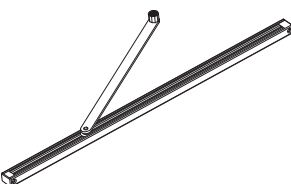
- Anodised or coloured
- The double leaf version is available with a continuous or with an intermediate hood

**Mounting plate** for drives (optional)

- A mounting plate may be required depending on the installation situation.
- Generally speaking, the use of a mounting plate is recommended to make mounting easier.
- The double leaf version is available with a continuous or with an intermediate hood

**Rod**

- For body depths of 0–100 mm, 100–200 mm, 200–300 mm

**Guide rail with lever**

- Mounting will depend upon the selected type of opening.

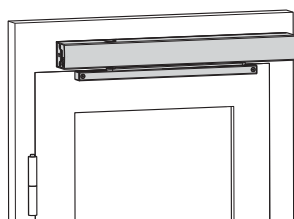
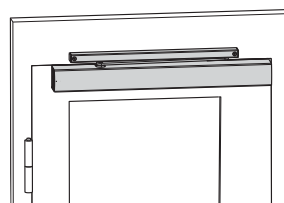
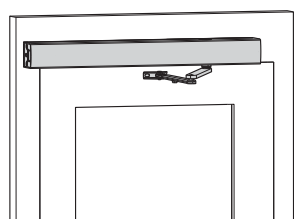
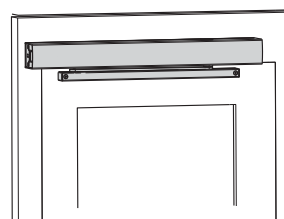
TECHNICAL FEATURES

		EMD	EMD-F
Drive dimensions (W x H x D)		650 x 70 x 121 mm	650 x 70 x 121 mm
Closing force can be adjusted		○	EN 3-6
Max. leaf weight		180 kg	230 kg
Min. leaf width	with guide rail	850 mm	850 mm
	with rod	750 mm	750 mm
Max. leaf width		1,400 mm	1,400 mm
For fire proof doors fitted with guide rail = max. leaf width of 1250 mm (in accordance with EN 1154)			
Max. door opening angle, adjustable		115°	115°
Power supply		230 V AC, 50/60 Hz, tolerance +10/-14%	
Power consumption		230 W	230 W
Power supply for peripheral devices 24 V DC		1,200 mA	1,200 mA
Functions	Automatic	●	●
	Servo	○	●
	Low energy	●	●
	Push&Go	●	●
Operating modes (via internal programme switch)	Automatic	Automatic	Automatic
	Night	Night	Night
	Permanently open	Permanently open	Permanently open
Opening and closing speed can be adjusted		●	●
Electrical end stop can be adjusted		●	●
Mechanical end stop can be adjusted		○	●
Recognition of obstacles and reversing		●	●
Actuation delay, adjustable		0-20 seconds	0-20 seconds
Hold-open time, adjustable		0-60 seconds	0-60 seconds
Temperature range		-10 up to +50 °C	-10 up to +50 °C
Protection type		IP 20	IP 20
Opening and closing process		Channel-controlled	Channel-controlled

● = Standard

● = Can be switched optionally

○ = Not available for this version

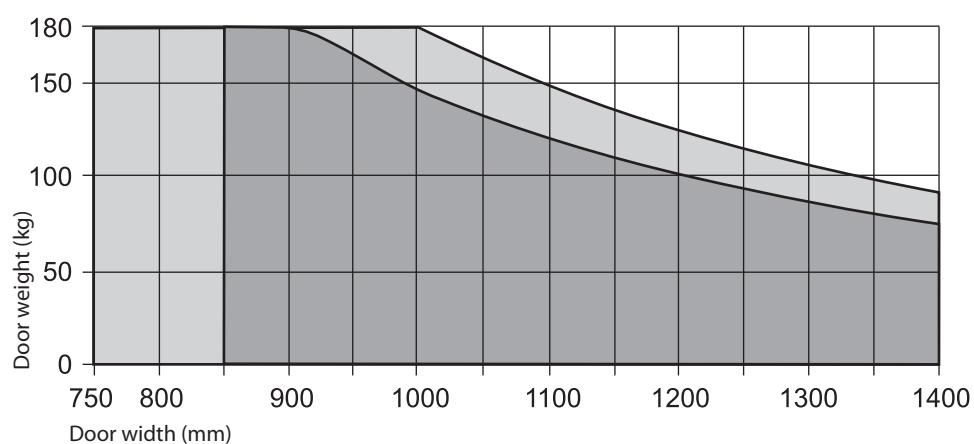
**OVERVIEW OF
ASSEMBLY TYPES**
Mounting at the hinge end

Head mounting with guide rail

Door leaf mounting with guide rail
Mounting at the end opposite the hinge

Head mounting with rod

Head mounting with guide rail

USES

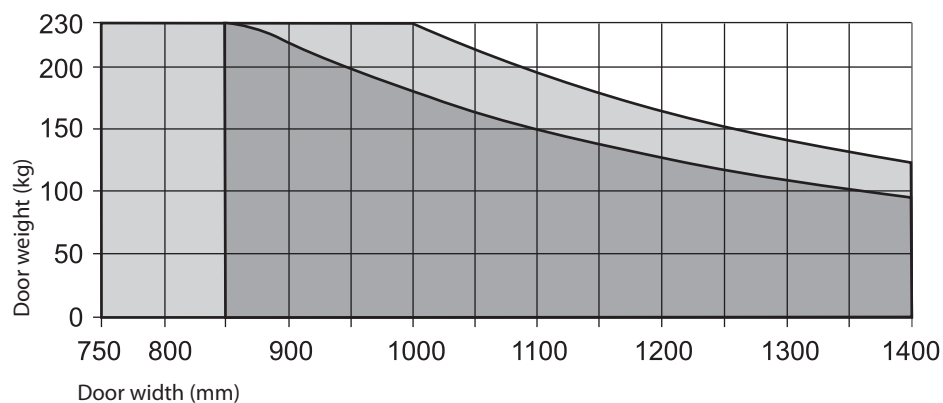


Single leaf widths depending on leaf weight

Max. area of application Slimdrive EMD



Max. area of application Slimdrive EMD-F



Hinge dimensions for double leaf systems (with/without IS)

Mounting type	Hinge distance		
Head mounting hinge end with guide rail	min. 1,700 mm	max. 2,500 mm	max. 2800 mm, not for fire proof doors
Head mounting end opposite the hinge with guide rail	min. 1,700 mm	max. 2,500 mm	max. 2800 mm, not for fire proof doors
Head mounting end opposite the hinge with rod	min. 1,500 mm	max. 2,800 mm	max. 2,800 mm

Single leaf widths depending on leaf weight, see application diagram above

Current overview of Slimdrive EMD-F

Mounting type		Head mounting Hinge end		Door leaf mounting Hinge end		Head mounting Opposite hinge side	
Pivot element		Guide rail		Guide rail		Guide rail	
Spring preload		min.	max.	min.	max.	min.	max.
Closer size EN 1154		3 ... 5		3 ... 5		3 ... 5	
Closing torque		20 ... 45 Nm		17 ... 43 Nm		20 ... 45 Nm	
Opening torque	Automatic	122 ... 97 Nm		125 ... 96 Nm		115 ... 90 Nm	
	Manual	45 ... 66 Nm		50 ... 73 Nm		42 ... 65 Nm	

Note: For automatic mode, the doors must be equipped with suitable hinges. A door stop is necessary.

GEZE Slimdrive EMD for toilets for the disabled – Reliability at any location

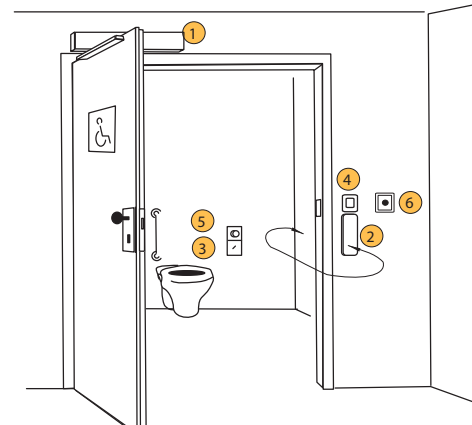
SPECIAL AREAS OF USE

A toilet for disabled people must be set up in such a way to ensure that people with very different abilities are able to use the facilities without needing help. The Slimdrive EMD swing door drive offers essential assistance and ensures considerable convenience.

GEZE implements living quarters – barrier-free and suitable for the disabled



LTU Arena, Düsseldorf, Germany



- ① Slimdrive EMD
- ② Large elbow switch OPEN DOOR (inside and out)
- ③ Switch: Lock/unlock the door
- ④ "Occupied" sign
- ⑤ "Occupied" control lamp
- ⑥ Emergency-stop switch

Description of function

After pressing the large elbow switch on the outside of the toilet, the door opens automatically and then closes itself after a set hold-open time has elapsed.

The switch in the WC cubicle is activated by the user to display the "Occupied" sign on the exterior indicator and the control lamp on the switch. At the same time, the large elbow switch inside and out is deactivated. This means that the door cannot be opened by anyone else, or opened accidentally by the user. The powered door opener prevents manually opening of the door from the outside. To leave the cubicle, the user employs the switch again. The "Occupied" display outside along with the control lamp inside will go out. Sensors at the DOOR OPEN large elbow switch activate the drive and the door is opened immediately.

In the event of a power failure, the closed-circuit opening unlocks the door and the user may exit by pushing opening or pulling the door. Pressing the large elbow switch will enable the door to be opened from the inside even when the system is powered. In an emergency, a key or the triggering of emergency off button can be used to open the door manually from the outside.

GEZE program switch for selection of the operational state of automatic swing doors

**Display program switch**

Operation electronically via push buttons	Can be locked in escape and rescue routes
GEZE DPS	GEZE DPS-SCT

**Button programme switch**

Operation electronically via push buttons	Can be locked in escape and rescue routes
GEZE TPS	GEZE TPS-SCT

**Mechanical programme switch**

Mechanical operation via rotating door knob	Via key in escape and rescue routes
GEZE MPS	GEZE MPS-ST



The following operating modes can be set using the programme switch:

Permanently open

The door moves to the OPEN position and remains open. Movement detector or actuation device are deactivated.

Night operating mode

The drive is switched off, the door can be opened and closed by hand.

Optional: The door opens and closes only when activated via an "Authorised" actuation device.

Closing time operating mode (one-way)

Door only opens and only closes when a person goes through the door from the inside to the outside.

The external movement detector is not active, the internal one is switched to active.

Automatic operating mode

The door opens as soon as triggering through a movement sensor or actuation device takes place, and closes again after a certain time, which can be adjusted. Safety sensors serve to monitor the swivelling range. The movement of the door stops as soon as a person comes into the detection area of the sensor.

**Fixed leaf on / off**

In a double leaf system, the fixed leaf control can be deactivated. In this mode, the fixed leaf remains closed and the movement of the door is implemented by the active leaf only.

Operating mode OFF (only with TPS and MPS)

The drive is switched off and the door can be moved manually.

**Key switch**

It is possible to lock the programme switch using a key button (obligatory for doors in escape and rescue routes).

Optimum controlling and securing of automatic drives

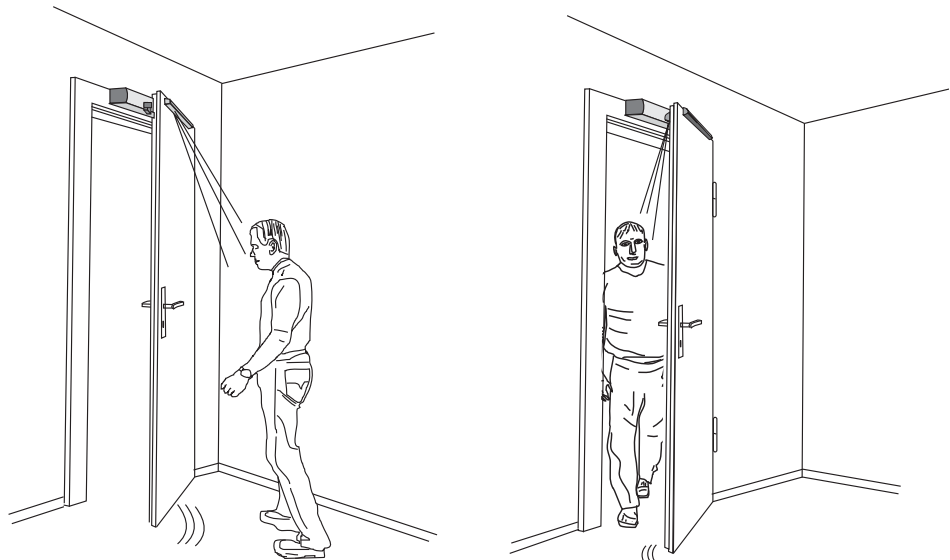
GEZE SENSOR BARRIERS

Safety sensor barriers are used to monitor and secure the swing range of automated swing door leaves. The assembly is carried out on both sides, directly to the door leaf. This ensures the greatest possible level of protection both when opening and when closing the door.

Functioning principles

The GEZE safety sensor barriers work using an infrared light basis. A short-wave infrared beam is issued by the transmitter and picked up by the receiver thanks to reflections on the floor. The 3D light curtain of the sensor barrier results in a very precisely set detection area. Optical measurements of distances combined with trigonometry (triangulation) can be used to reliably recognise persons and objects, for example, shopping trolleys and patient beds.

- The door movement is stopped in the opening direction as soon as the sensor barrier registers an obstacle. Wall blanking of the safety sensor barriers is possible and can be learned.
- In the closing direction, the safety sensor barrier controls the drive of the door being approached and opens it again.



GEZE sensor barriers GC 334:

These electronically adjustable active infrared sensors with dip switch serve to secure automatic swing door leaves in accordance with DIN 18650. They can also be used when the floor conditions are difficult, for example, floor mats and metal rails as well as dark and absorbing floors.

- Simple click mounting in the sensor profile
- Fully automatic start up via learn button, can also be done for several connected units
- Simple adjustment options (e.g. exit assignment, frequency, background mode, grey area) via dip switch
- Integrated second output relay in the sensor in order to secure both the hinge end and the end opposite the hinge with a single cable leading to the drive
- Low power consumption of sensor module
- Closely meshed detection field with a wide detection field for each sensor module
- Highest standard of safety thanks to the constant self-monitoring

Control elements for automatic swing door systems

Operating elements

- ① Integrated programme switch
- ② Button programme switch
- ③ Key switch

Control and security

- ④ Trigger button
- ⑤ Active infrared sensor barrier
- ⑥ Electrical door opener

No-contact control

- ⑦ AIR 12 Cleanscan
- ⑧ Radar movement detector
- ⑨ GEZE radio programme



Hygienically one step ahead - GEZE swing door systems with no-contact control

**GEZE proximity switch AIR 12 Cleanscan**

Opening doors with a wave: The AIR 12 Cleanscan can be used to control interior doors with no requirement for haptic perception cleanly and conveniently. Thus, active infrared sensors ensure, for example, the bacteria-free access to the bathrooms as well as for germ-free conditions in hotel kitchens, swimming baths and doctor's surgeries.

The pulse generator is installed at hand height and is able to precisely recognise people and objects, regardless of the direction in which they are moving, both very close i.e. at a distance of just five centimetres or even as far as 0.6 metres. The differing detection distances can be adapted optimally to the actual ambient circumstances and the requirements of the user groups. The no-contact sensor system offer the highest possible level of operating convenience, simply moving towards the door is sufficient to activate the automated opening function. It also brings about the benefit of absolute hygiene.

- No-contact proximity switch
- Variable adjustment of the sensor range in two stages
- Precise detection of people and objects - regardless of the direction in which they are moving
- Can be used universally for either surface or flush mounting

**GEZE radar movement detector GC 302:**

Radar technology is ideal for detecting moving objects. Radar (**R**adio **D**etection and **R**anging) refers to the locating of and detection of objects by means of electro-magnetic waves. The GEZE radar movement sensor GC 302 serves to implement reliable control of automatic doors.

- Pre-programmed convenience settings
- Configuration using buttons and remote control
- Prevention of unintentional door opening by blocking out cross-traffic
- SMD+ as the new detection field for movements < 50 mm/second

Wireless control with system - reliable, convenient and secure at the touch of a button

GEZE RADIO PROGRAMME



Radio controlled operators for the various applications in our daily life make bring added convenience. Senior citizens, the disabled or physically weaker people can be afforded more quality of life, and they help make things easy for care staff. They are increasingly becoming standard fittings for barrier-free and age-suitable living.

With a new and innovative radio solution, GEZE has also adapted their range of control elements. The wireless control of doors and windows using the GEZE radio programme makes connection to a power supply superfluous. Thanks to the tiny dimensions of the radio modules, these can easily be integrated in a drive or an in-wall casing and can also be clipped directly into the elbow switch and mounted wirelessly on glass.

Examples of types of application

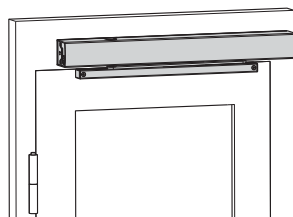
- Retro-fitting without needing to lay cables and using existing switches/buttons
- Mounting without connection to power, for example, on glass
- Individual or group control of doors and windows
- Combined control of doors and windows using a remote



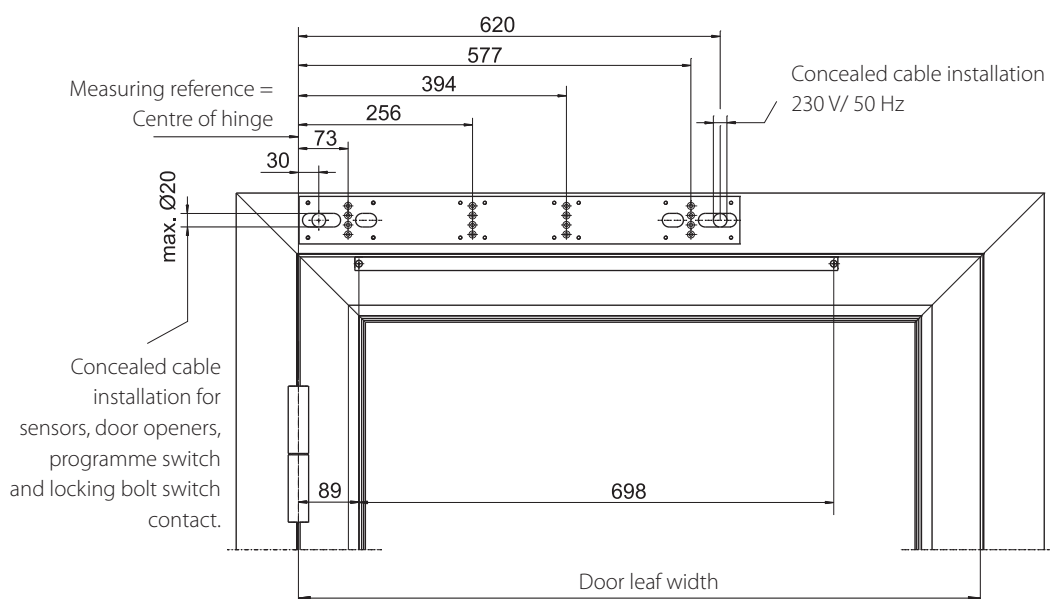
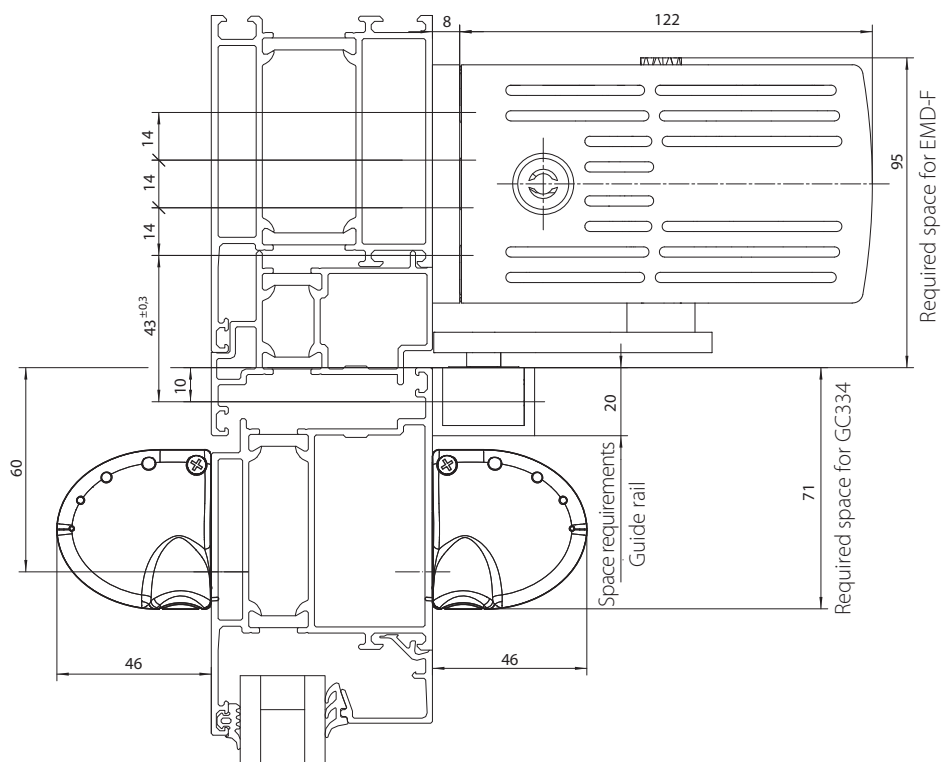
The GEZE radio programme is safe! The encryption of the radio signals using a rolling code with up to 74 trillion code combinations means that taught radio transmitters cannot be "cracked". Each transmitter is taught individually and safely to eliminate false or unauthorised radio control. The radio transmitter has a range of up to 30 metres. Doors can be controlled over great distances and even through walls. The radio receiver has two outputs. On each of the two outputs, individual radio receivers can be taught and evaluated differently according to the connection to the control. In addition, it is possible to select various operating modes via a DIP switch. For example, a short push of the button can be used to just open the door, whereas if the button is pushed longer the door is held open. The radio programme is compatible with all GEZE door and window drives and is particularly suited for use with automatic swing doors.

Mounting at the hinge end

Drawing number 70106-ep41

Fixing with mounting plate**Head mounting
with guide rail**

max. door projection: 30 mm
max. door opening angle 105°

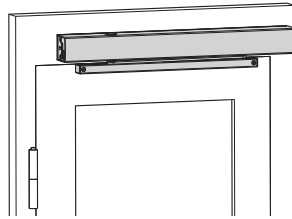


Representation: DIN left– DIN right: Mirror image

Mounting at the hinge end

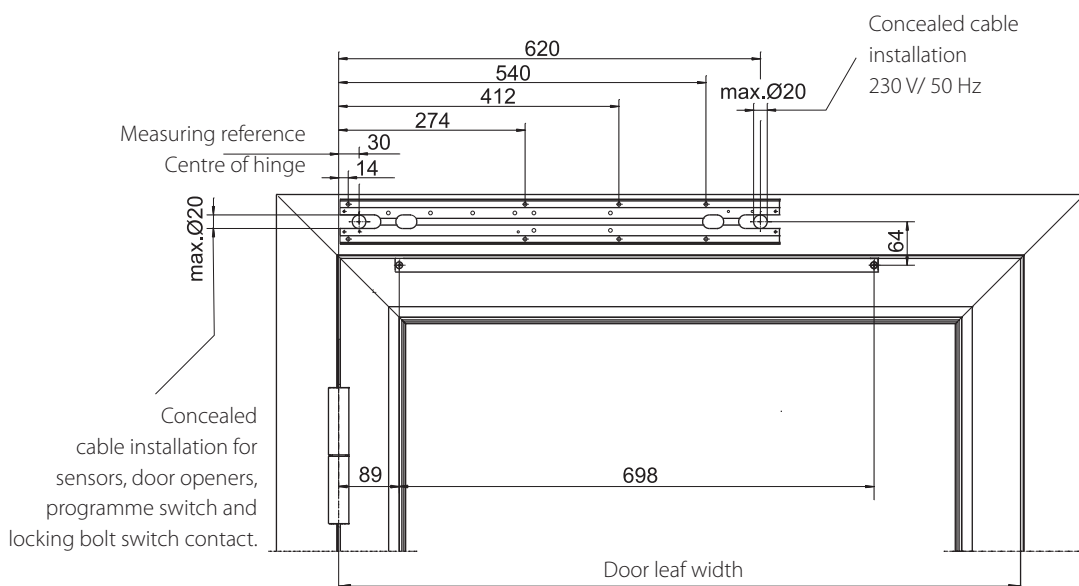
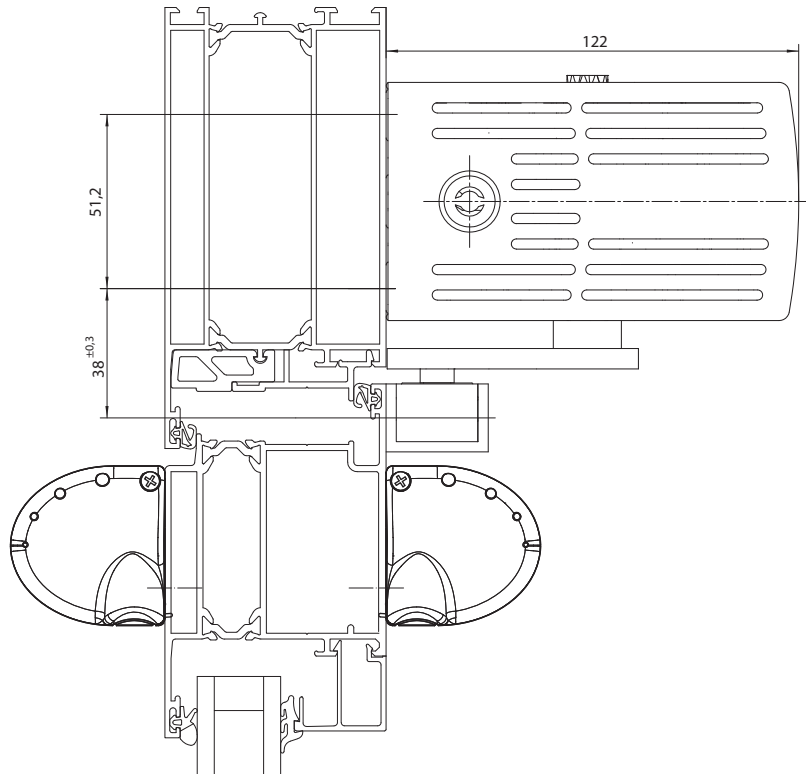
Drawing number 70106-ep41

Direct fixing



Head mounting with guide rail

max. door projection: 30 mm
max. door opening angle 105°

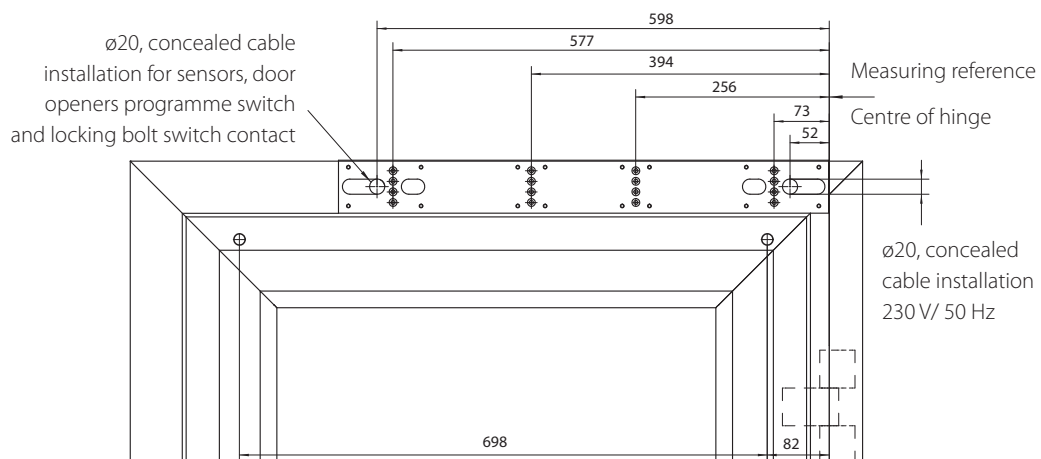
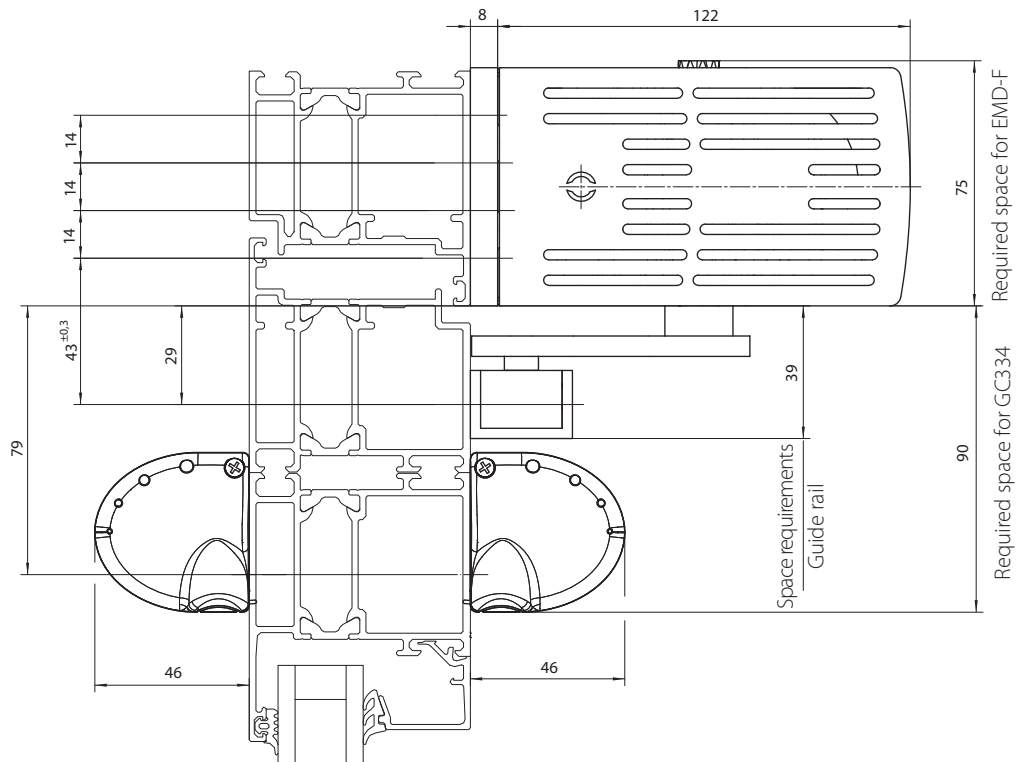


Representation: DIN left– DIN right: Mirror image

Drawing number 70106-ep42

A technical diagram of a door handle assembly. It shows a horizontal handle with a cylindrical lock mechanism in the center. The handle is mounted on a rectangular base plate. The diagram is a simple line drawing with some shading to indicate depth.

max. body depth: -30 to +50 mm
max. door opening angle 105°

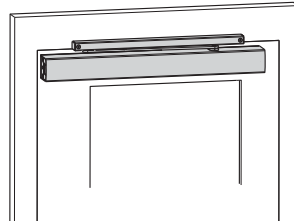


16 | GEZE AUTOMATIC DOOR SYSTEMS

Mounting at the end opposite the hinge

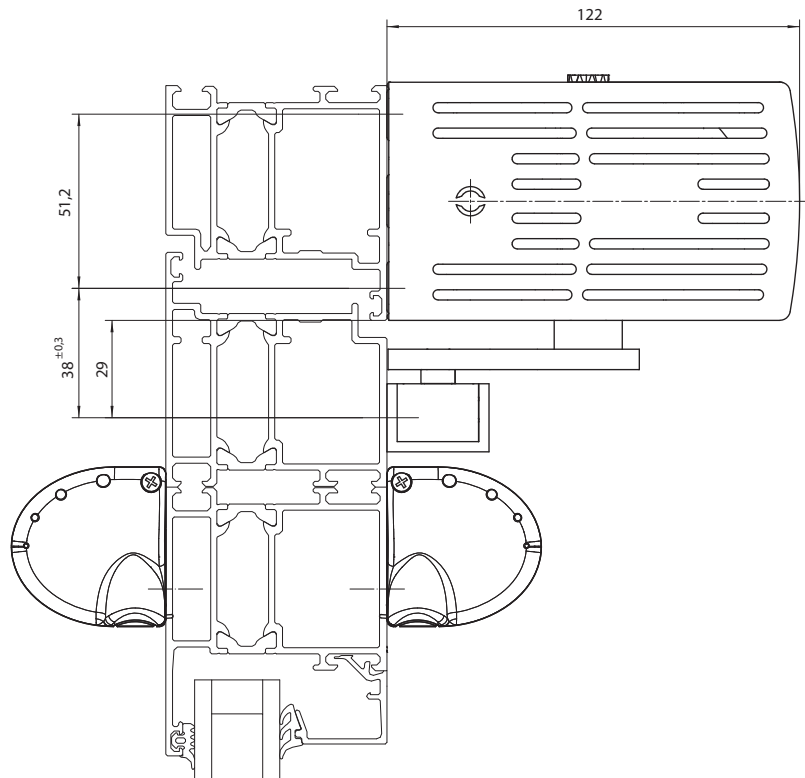
Drawing number 70106-ep42

Direct fixing

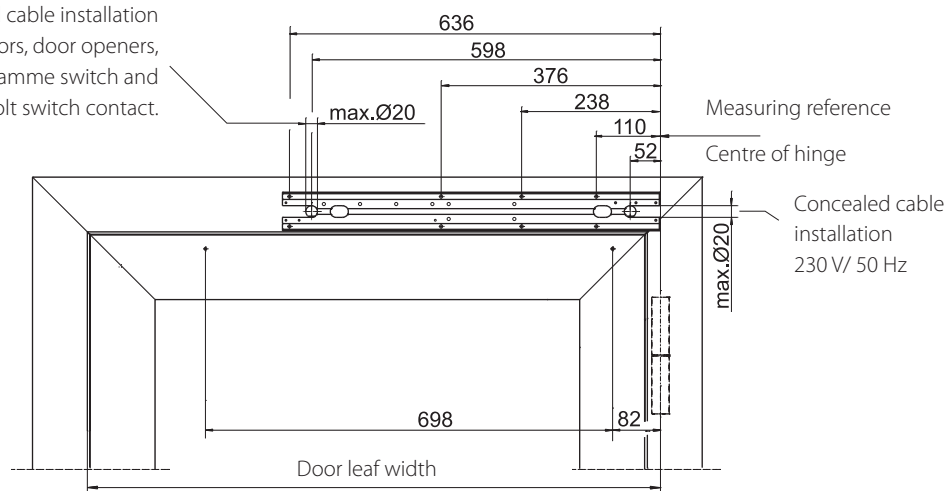


Head mounting with guide rail

max. body depth: -30 to +50 mm
max. door opening angle 105°



Concealed cable installation
for sensors, door openers,
programme switch and
locking bolt switch contact.



Representation: DIN left– DIN right: Mirror image

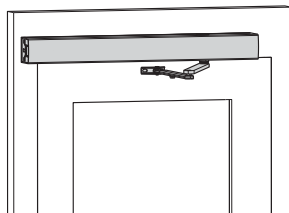
Mounting at the end opposite the hinge

Drawing number 70106-ep43

Fixing with mounting plate

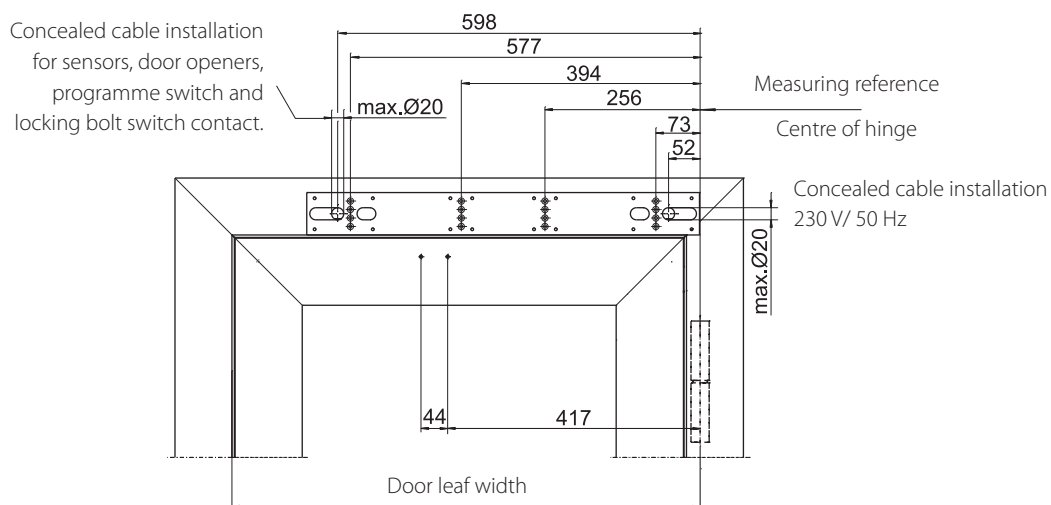
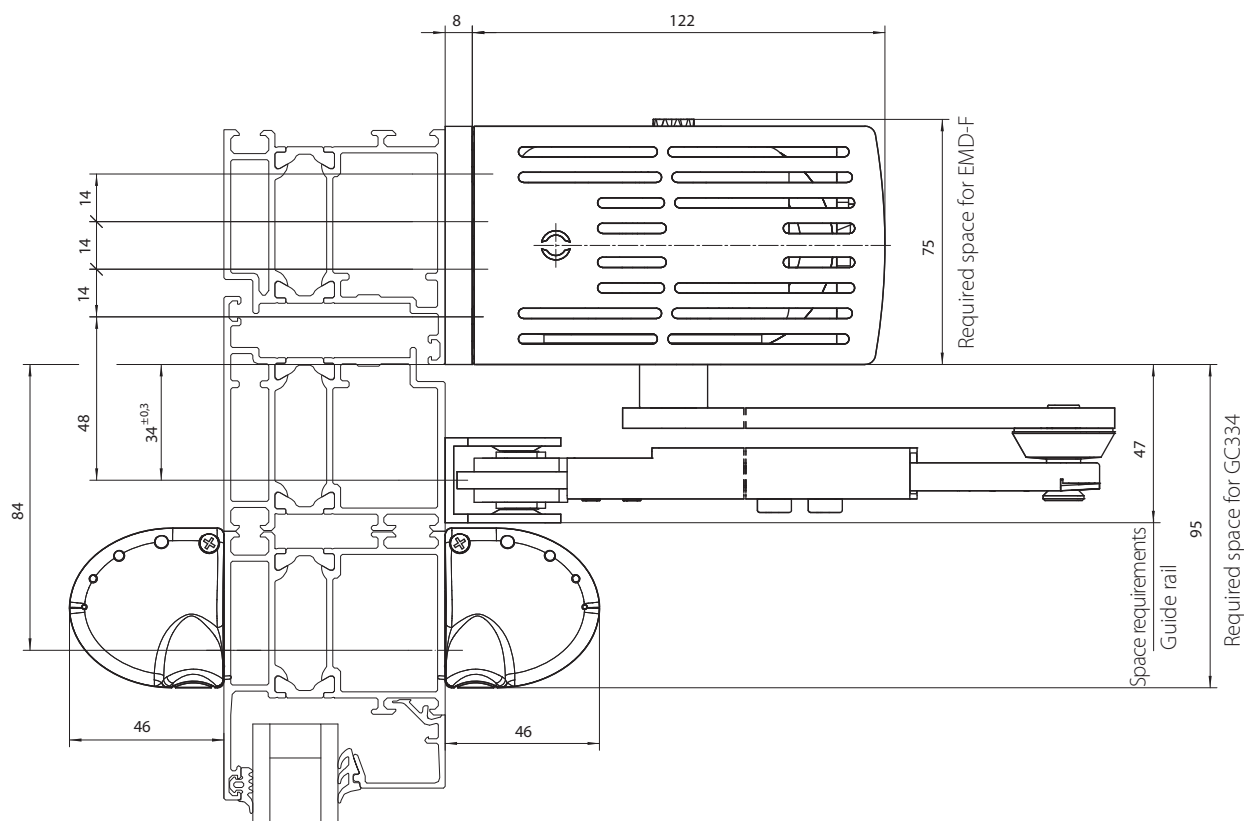
Note:

We recommend the use of rods for external doors. Wind loads as well as under and over pressure must also be taken into consideration.



Head mounting with rod

max. body depth: 0 - 100 mm
100 - 200 mm
200 - 300 mm
max. door opening angle 110°



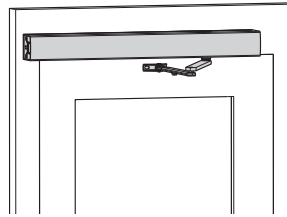
Representation: DIN left– DIN right: Mirror image

Drawing number 70106-ep43

Direct fixing

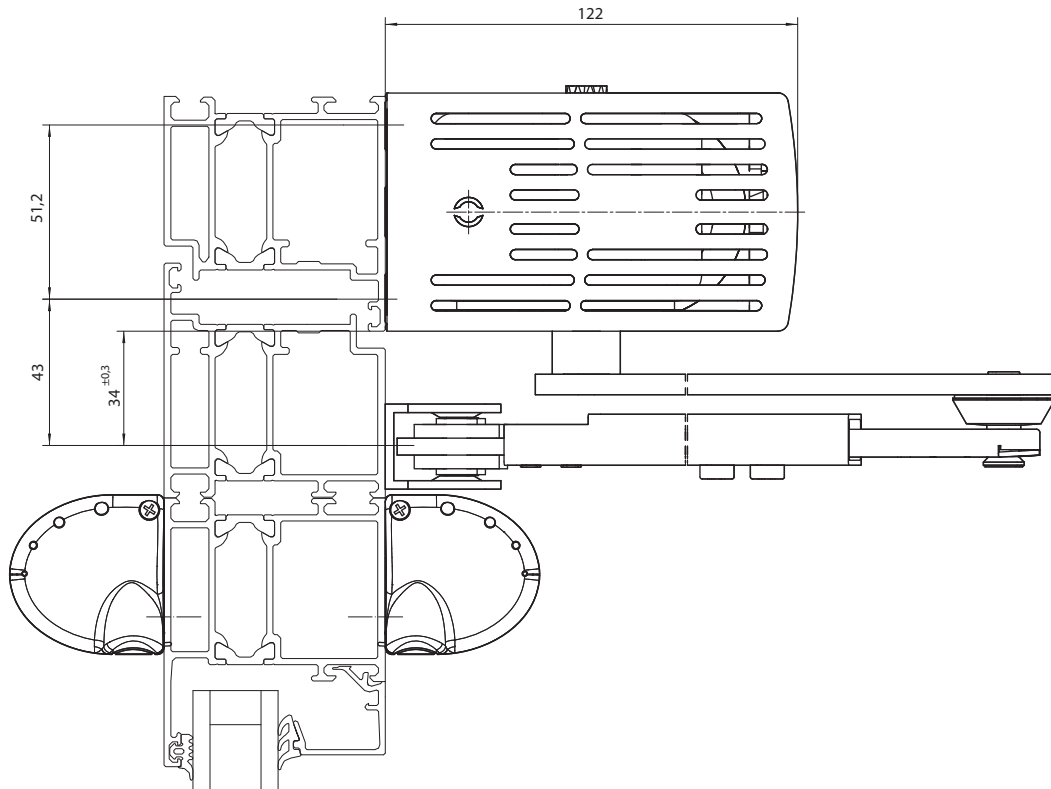
Note:

We recommend the use of rods for external doors. Wind loads as well as under and over pressure must also be taken into consideration.

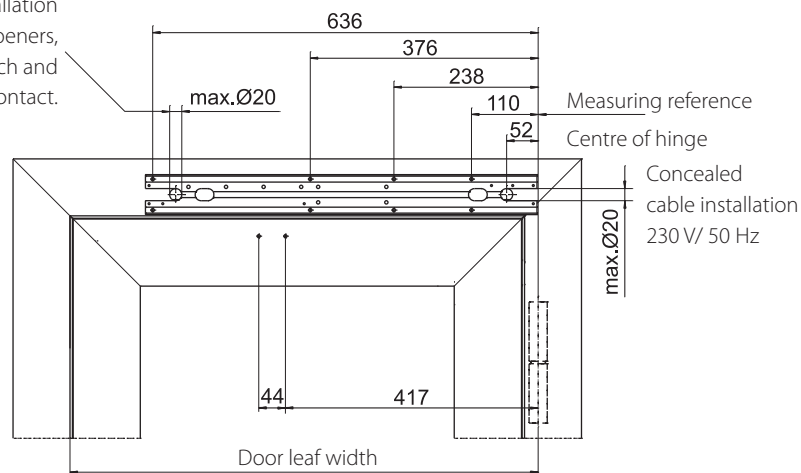


Head mounting with rod

max. body depth:	0 - 100 mm
	100 - 200 mm
	200 - 300 mm
max. door opening angle	110°



Concealed cable installation
for sensors, door openers,
programme switch and
locking bolt switch contact.

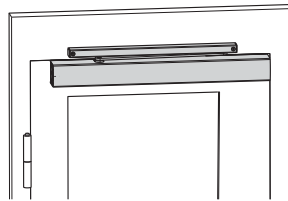


Representation: DIN left– DIN right: Mirror image

Mounting at the hinge end

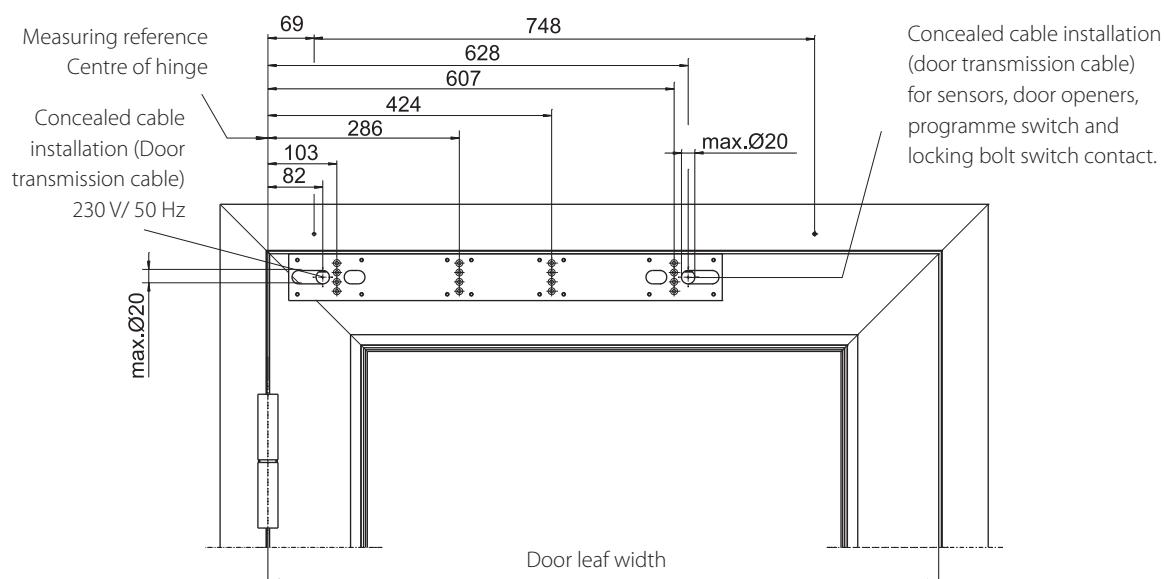
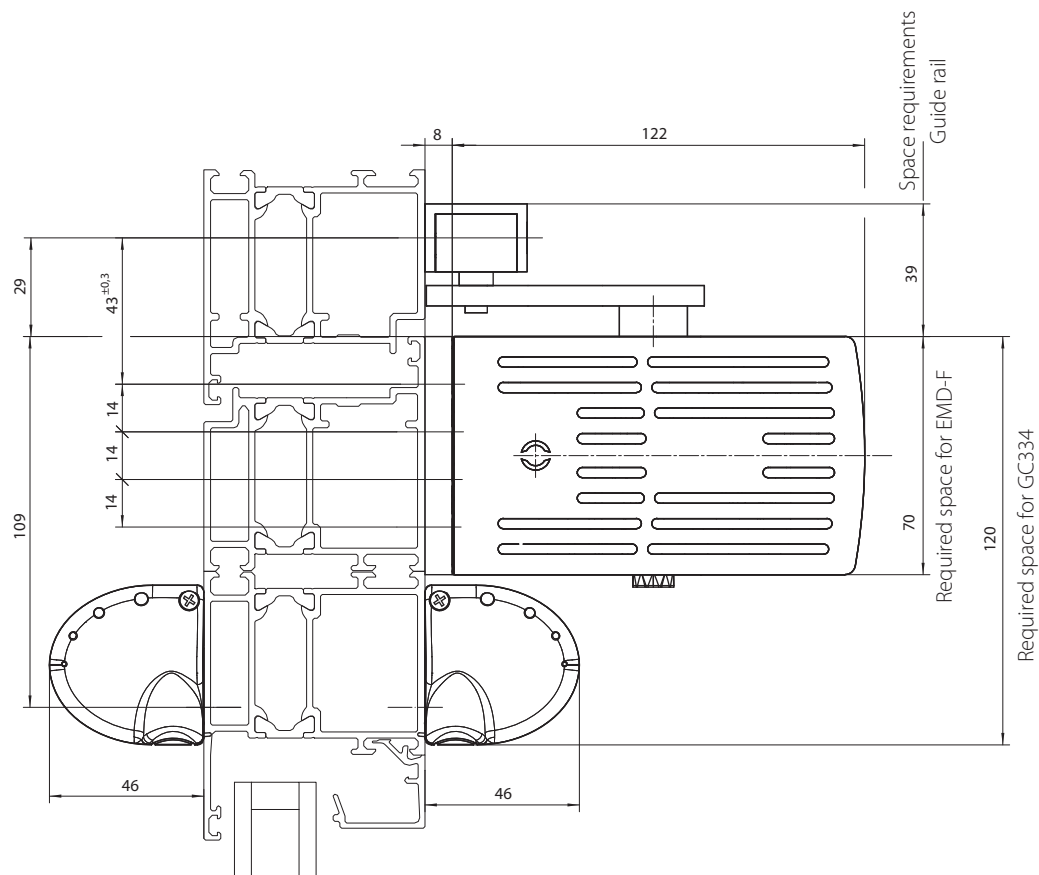
Drawing number 70106-ep44

Fixing with mounting plate



Door leaf mounting with guide rail

max. door projection: 30 mm
max. door opening angle: 115°

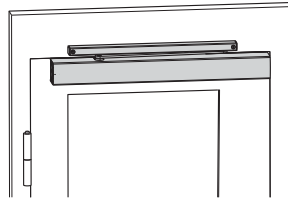


Representation: DIN left– DIN right: Mirror image

Mounting at the hinge end

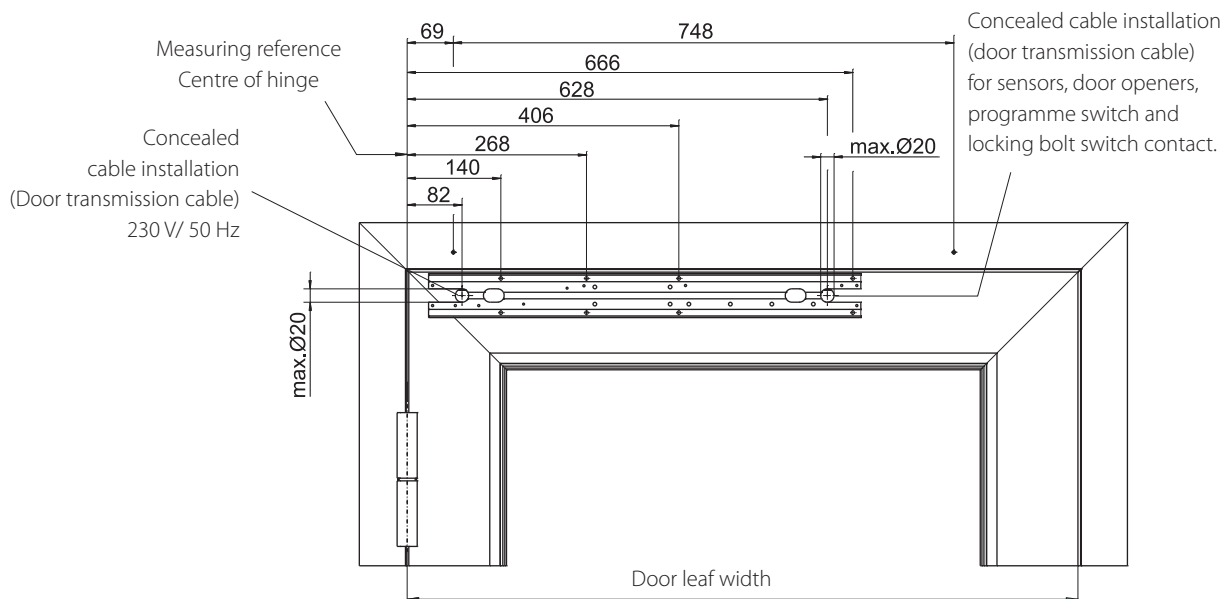
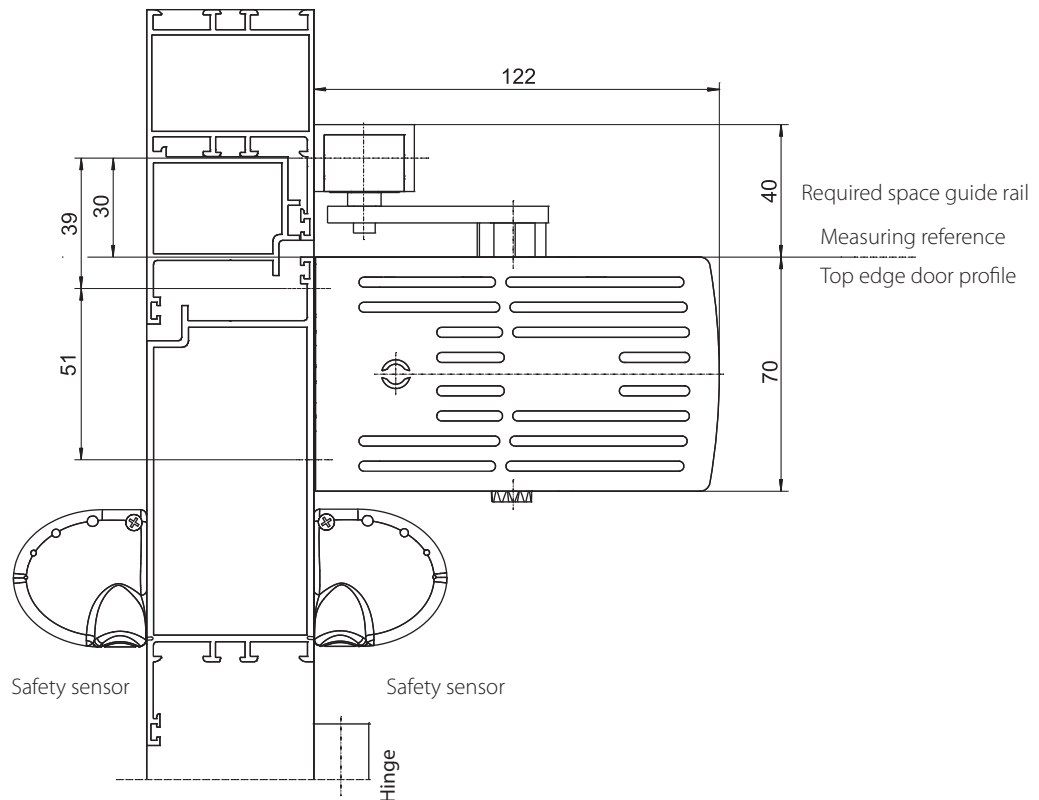
Drawing number 70106-ep44

Direct fixing



Door leaf mounting with guide rail

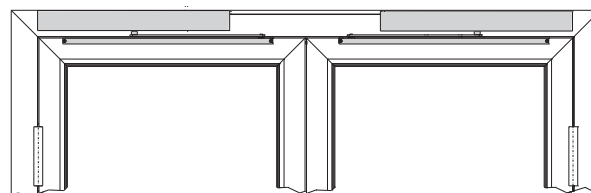
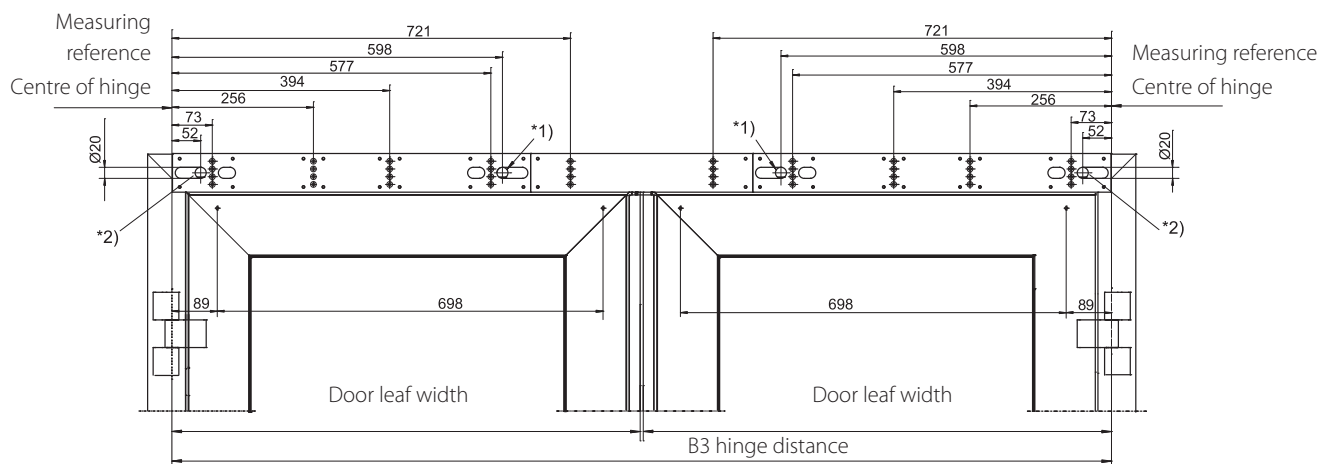
max. door projection: 30 mm
max. door opening angle 115°



Representation: DIN left– DIN right: Mirror image

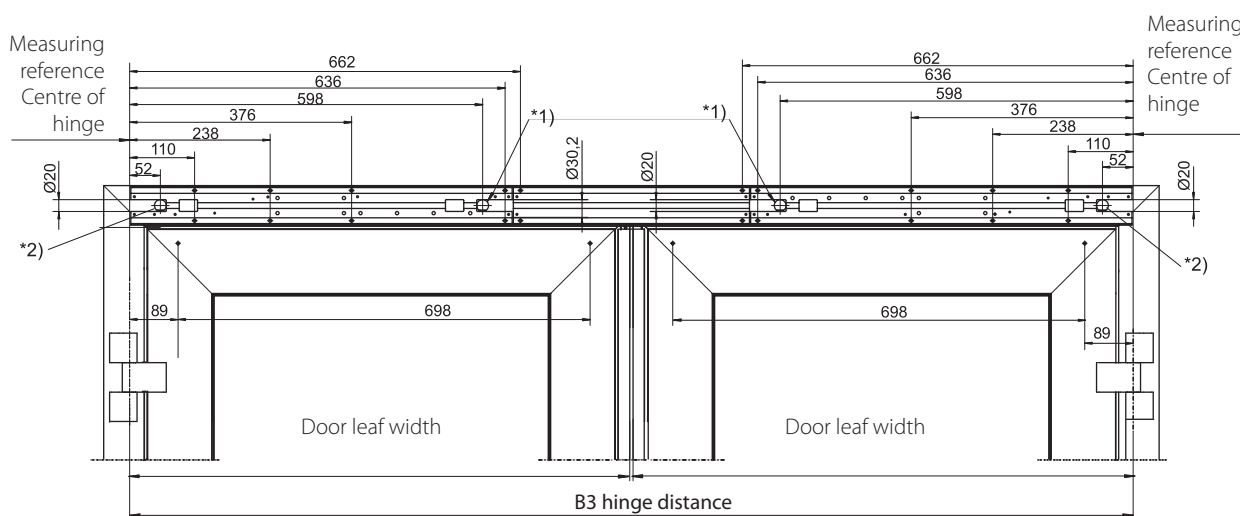
DOUBLE leaf, Mounting at the hinge end

Drawing number 70106-ep51

**Head mounting
with guide rail****Fixing with mounting plates**

*1) Concealed cable installation 230 V / 50 Hz

*2) Concealed cable installation for sensors, door openers, programme switch and locking bolt switch contact.

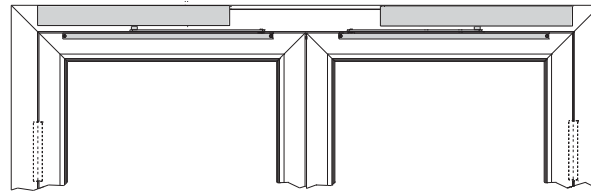
Direct fixing

*1) Concealed cable installation 230 V / 50 Hz

*2) Concealed cable installation for sensors, door openers, programme switch and locking bolt switch contact.

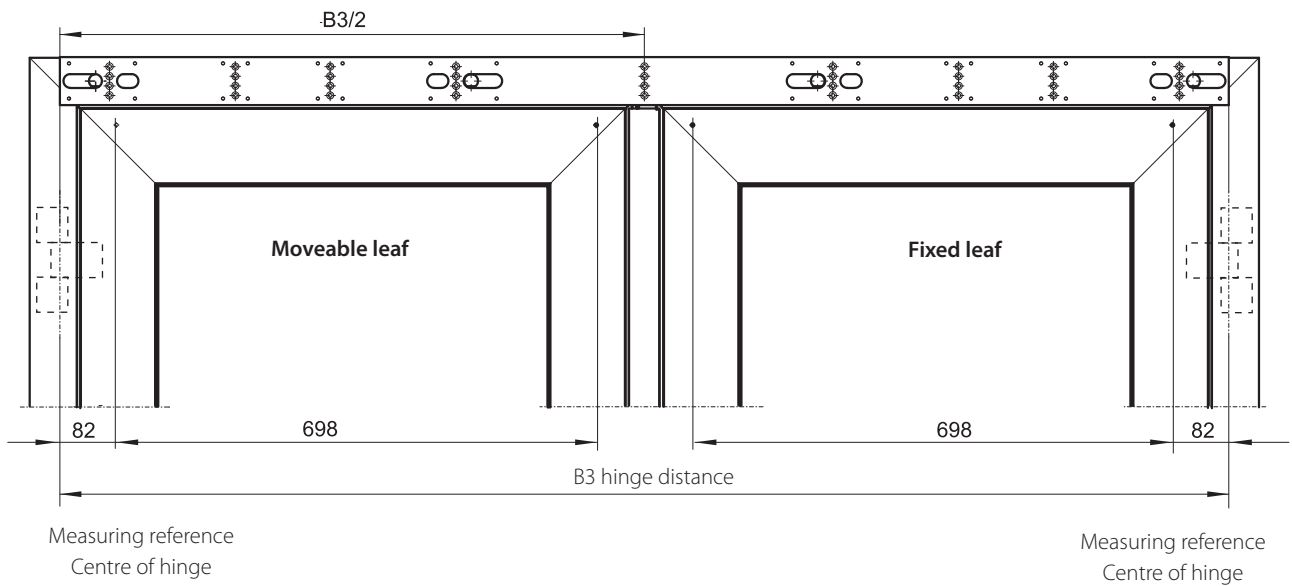
DOUBLE leaf, Mounting at the end opposite the hinge

Drawing number 70106-ep52

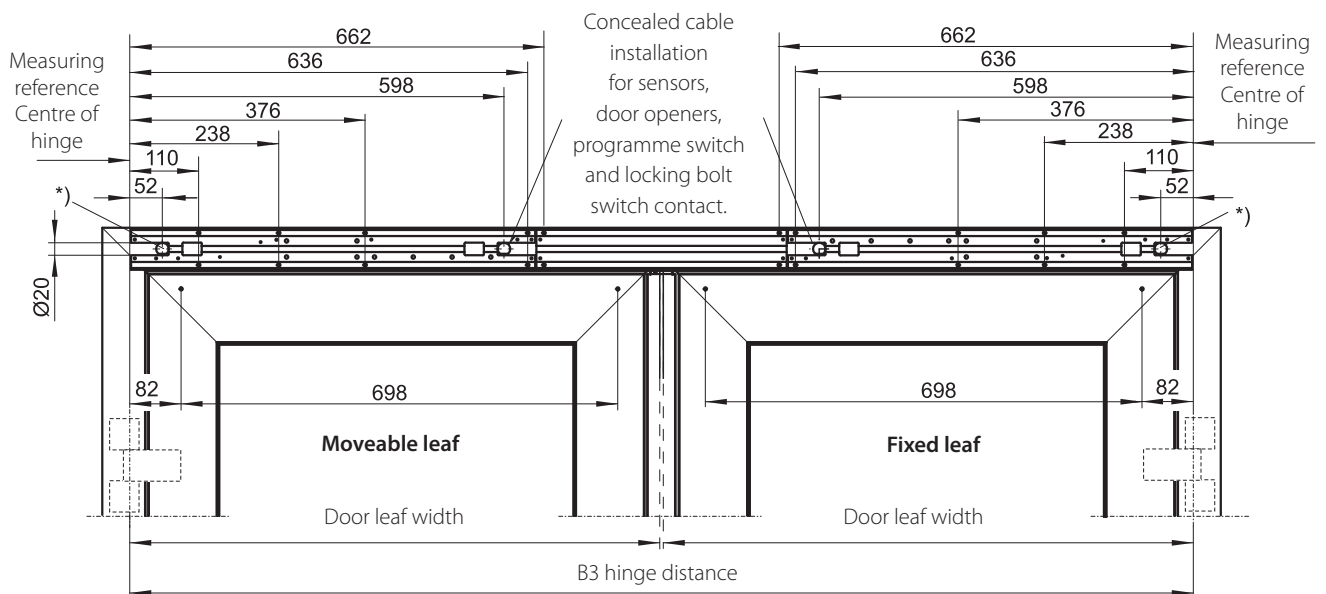


Head mounting
with guide rail

Fixing with mounting plates



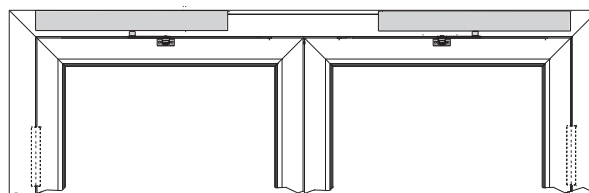
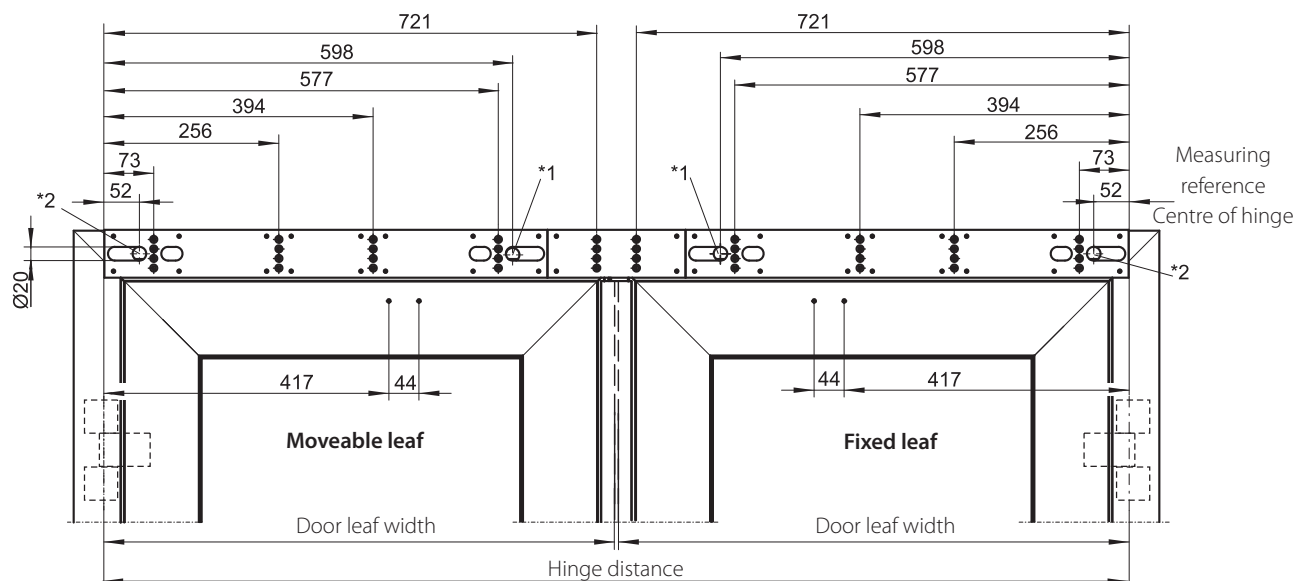
Direct fixing



*) Concealed cable installation 230 V / 50 Hz right and left

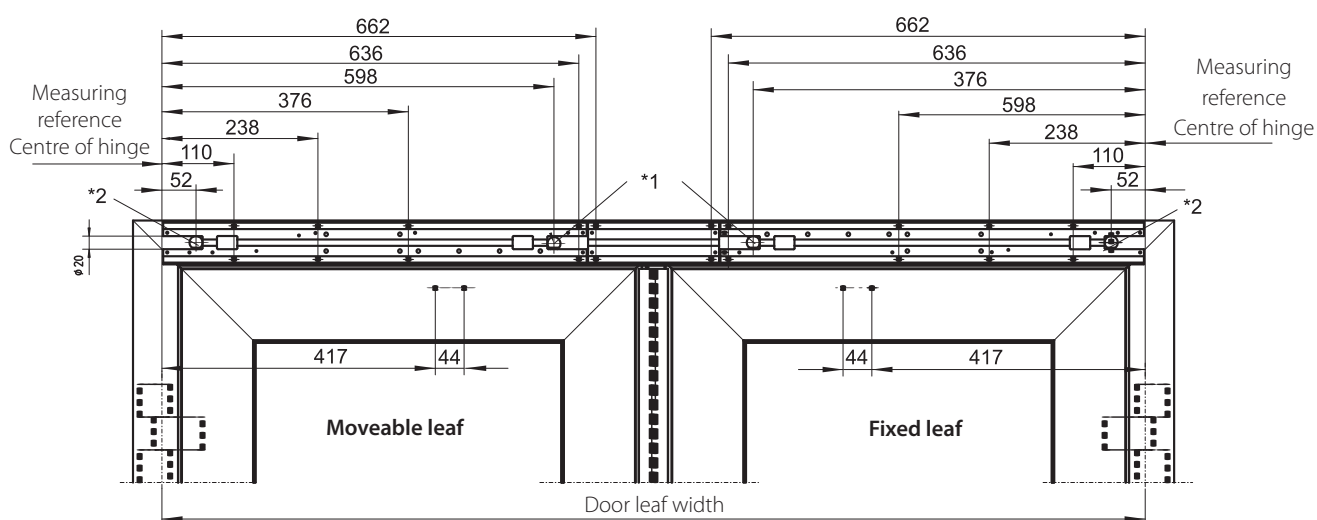
DOUBLE leaf, Mounting at the end opposite the hinge

Drawing number 70106-ep53

**Head mounting with rod****Fixing with mounting plates**

*1) Concealed cable installation for sensors, door openers, programme switch and locking bolt switch contact.

*2) Concealed cable installation 230 V / 50 Hz

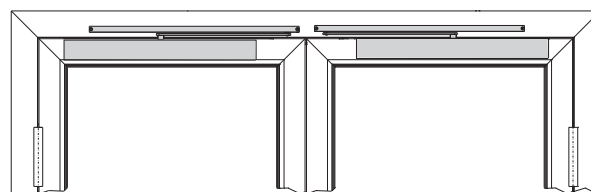
Direct fixing

*1) Concealed cable installation for sensors, door openers, programme switch and locking bolt switch contact.

*2) Concealed cable installation 230 V / 50 Hz

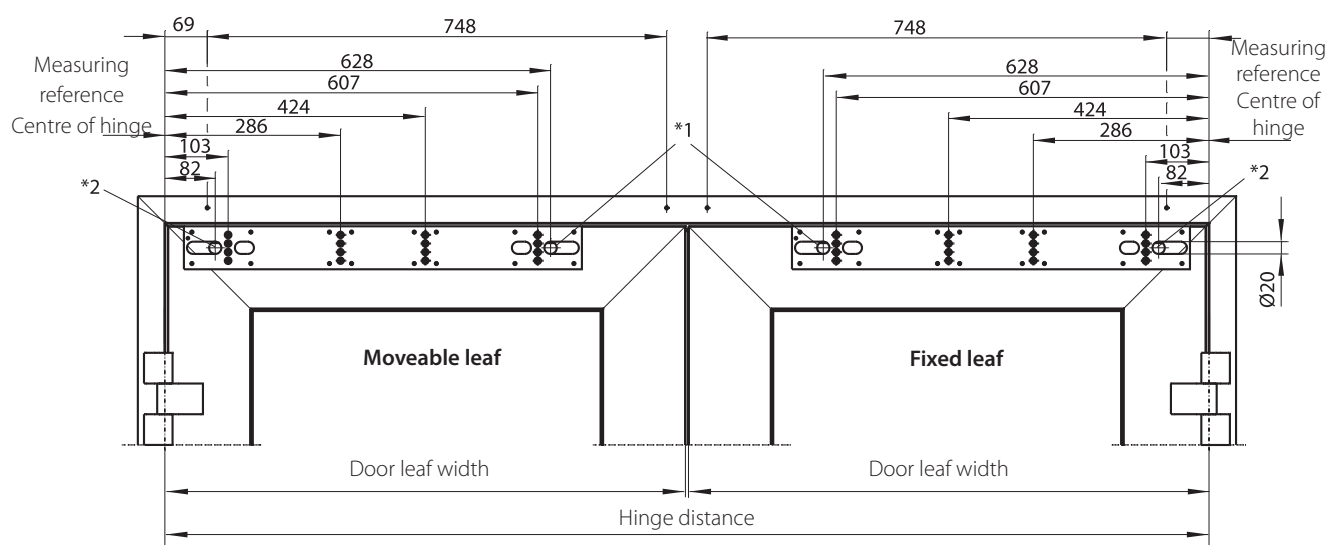
DOUBLE leaf, Mounting at the hinge end

Drawing number 70106-ep54



Door leaf mounting with guide rails

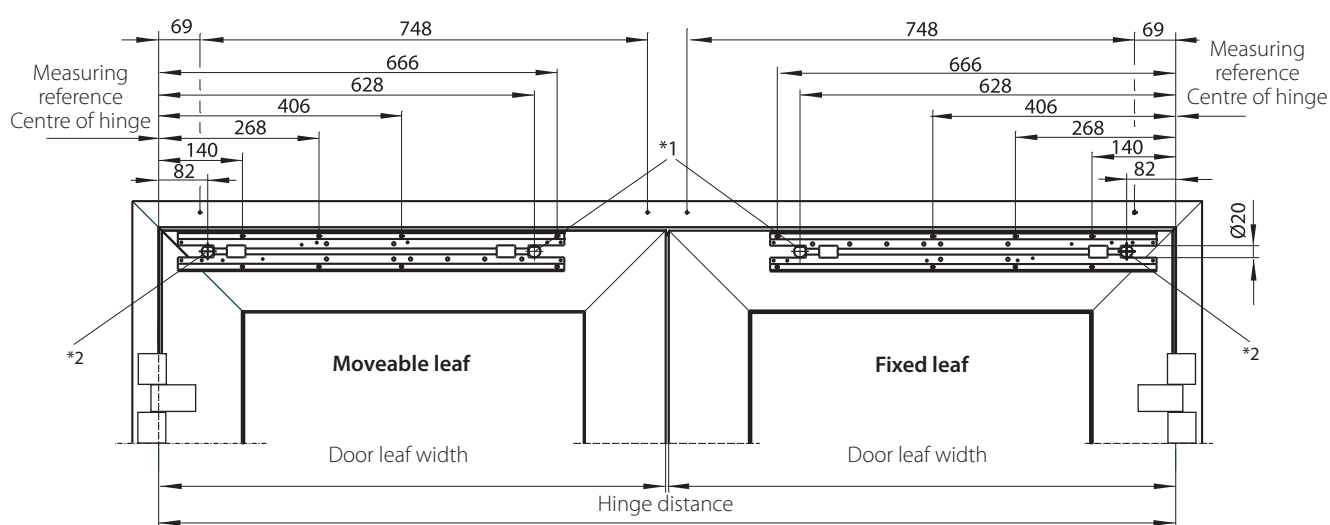
Fixing with mounting plates



*1) Concealed cable installation for sensors, door openers, programme switch and locking bolt switch contact.

*2) Concealed cable installation 230 V / 50 Hz

Direct fixing



*1) Concealed cable installation for sensors, door openers, programme switch and locking bolt switch contact.

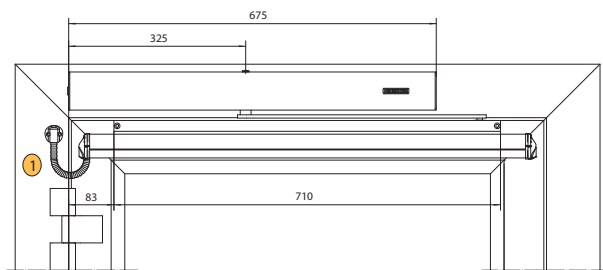
*2) Concealed cable installation 230 V / 50 Hz

Installation dimensions for safety sensors GC 334

Attaching the sensors (for EMD head mounting, at hinge end)

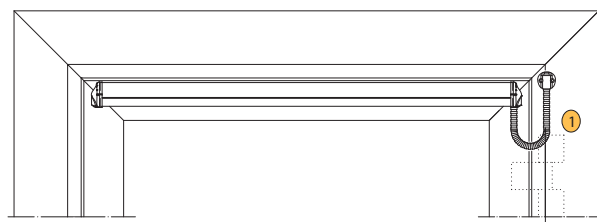
Safety sensor "Open"

mounted at the hinge end



Safety sensor "Close"

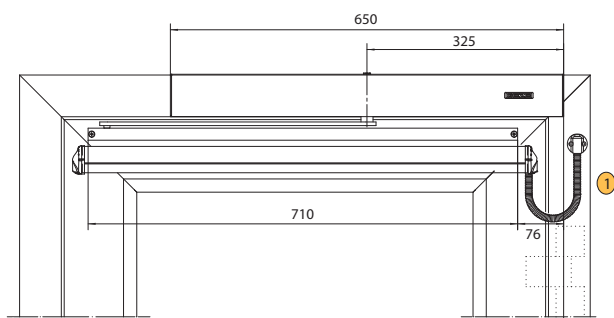
mounted at the end opposite the hinge



Attaching the sensors (for EMD head mounting, at end opposite the hinge)

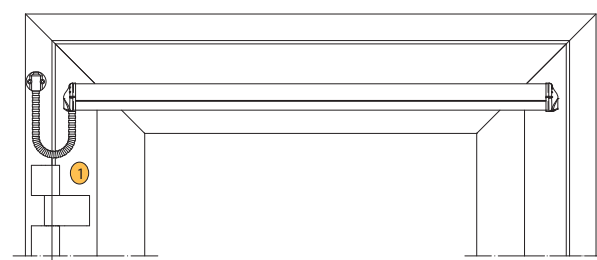
Safety sensor "Close"

mounted at the end opposite the hinge



Safety sensor "Open"

mounted at the hinge end

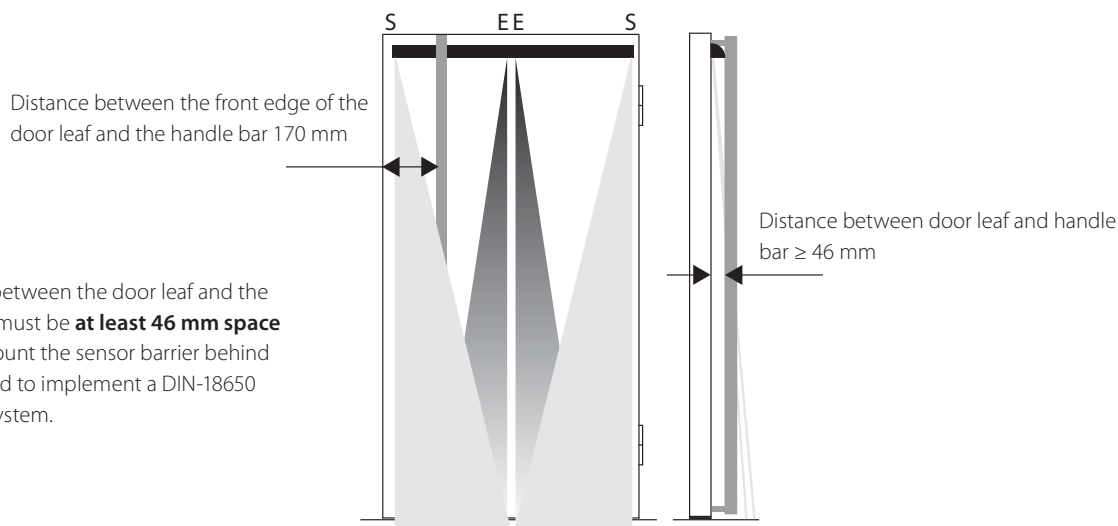


① Optional power feed, concealed installation is also possible. Drilled hole Ø 10 for concealed cable installation

Representation: DIN left– DIN right: Mirror image

Sensor barrier with handle bar

1. The sensor barrier should be mounted in such a way that the handle bar is located between the transmitter (T) and the receiver (R).
2. The angle should be selected in such a way that the handle bar is not in the IR field.
3. The door is secured according to DIN 18650.



Attention:

Please note that between the door leaf and the handle bar there must be **at least 46 mm space** left in order to mount the sensor barrier behind the handle bar and to implement a DIN-18650 compliant door system.

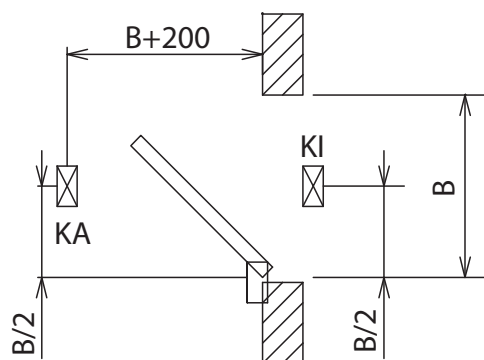
MS	Main switch (optional)
EMER- GENCY	Emergency off switch (optional)
IB	Interrupter button CLOSE DOOR
CA	Contacteur authorised
PS	Programme switch
ST	Emergency stop
IC	Inner contactor
EC	External contactor
DO	Door opener
LM	Locking message
SS	Smoke switch
SSCU	Smoke switching control unit
TS	Door closer
MC	Magnet contact

[illegible]

- ① NYM-J 3 x 1.5 mm²
- ② I-Y(ST)Y 1 x 2 x 0.6 LG
- ③ I-Y(ST)Y 2 x 2 x 0.6 LG
- ④ I-Y(ST)Y 4 x 2 x 0.6 LG
- ⑤ LiYY 2 x 0.25 mm²
- ⑥ LiYY 4 x 0.25 mm²
- ⑦ Scope of delivery for sensor barrier or LiYY 5 x 0.25 mm²
- ⑧ Install taut wire in empty piping, internal diameter 10 mm

Drawing number 70106-9-0971, Page 1

Positioning of the motion detector



Technical drawing illustrating the installation of a door drive unit. The unit is shown connected to a door (labeled 5) and a control panel (labeled 6). The maximum distance between the unit and the door is indicated as **max. 100**. The maximum distance between the unit and the control panel is indicated as **max. 300**. The unit is labeled **Door drive unit**.

Diagram illustrating the wiring for a door drive unit (2) and a sensor barrier. The system includes four input lines (A, B, C, D) and a terminal block with terminals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

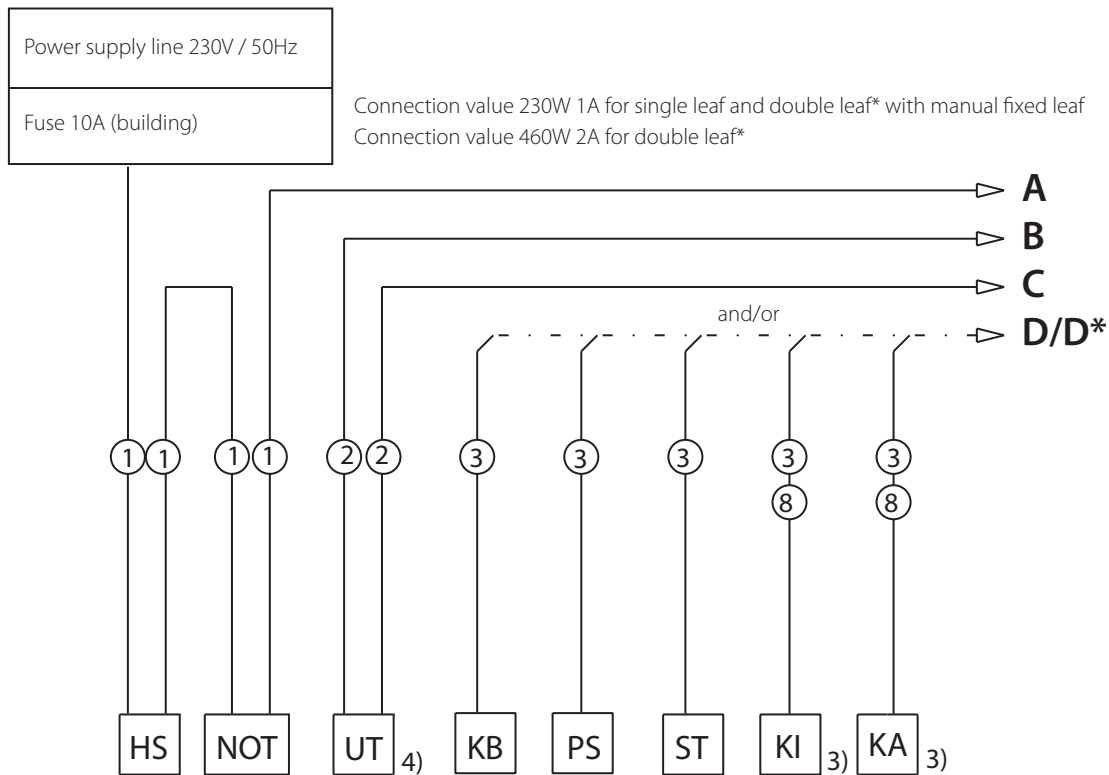
Wiring connections:

- Line A: Connected to terminal 5 via a resistor (RS) and a switch (3).
- Line B: Connected to terminal 1 via a resistor (RS) and a switch (3).
- Line C: Connected to terminal 5 via a switch (1).
- Line D: Connected to terminal 6 via a switch (6).
- Door drive unit (2): Connected to terminals 5 and 6.
- Sensor barrier: Connected to the door drive unit.
- TOE RM switch: Connected to terminals 3 and 8.

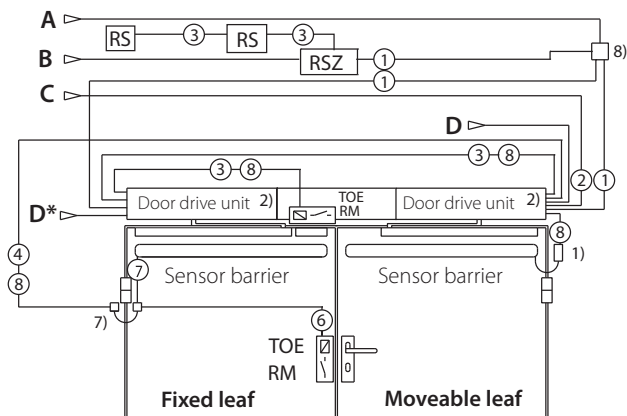
Cable plan for EMD/EMD-F, double leaf

Drawing number 70106-9-0971, Page 2

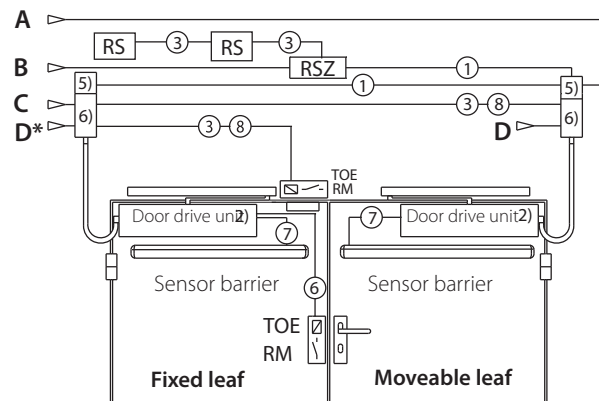
See circuit diagram 70106-9-0970, 107579



Head mounting, double leaf*



Door leaf mounting, double leaf*



* Integrated mechanical closing sequence control is necessary



Certificate No. P-2657/06 (English Issue)

(valid only in association with the terms overleaf)

Holder of the certificate: GEZE GmbH
Reinhold-Vöster-Straße 21-29, 71229 Leonberg

Site of Manufacture: GEZE GmbH
Reinhold-Vöster-Straße 21-29, 71229 Leonberg

Type Approval Mark:



valid until
2010-12-31

Product: Actuator mechanism for swing leaf doors
Model: Slimdrive EMD

Testing based on the following:

- DIN 18650-1/2: 2005-12
Locks and metal fittings - automatic door systems

Result of testing:

The result of the type approval test showed, that the requirements made at the testing bases are met by the product as a whole, provided that there is compliance with the terms laid down at the Type Approval Certificate P-2657/06.

Permission is hereby given to use the Test Mark illustrated above, in accordance with the contractual terms printed overleaf.

Arnstadt, 2006-05-19

TÜV Thüringen Anlagentechnik GmbH
Testing Centre for Equipment Safety

Dipl.-Ing. Martin Sorge
Head of Testing Centre





Certificate No. P-2667/06 (English Issue)

(valid only in association with the terms overleaf)

Holder of the certificate: GEZE GmbH
Reinhold-Vöster-Straße 21-29, 71229 Leonberg

Site of Manufacture: GEZE GmbH
Reinhold-Vöster-Straße 21-29, 71229 Leonberg

Type Approval Mark:

valid until
2010-12-31



Product: Actuator mechanism for swing leaf doors for use with fire doors
Model: Slimdrive EMD-F

Testing based on the following:

- DIN 18650-1/2: 2005-12
Locks and metal fittings - automatic door systems

Result of testing:

The result of the type approval test showed, that the requirements made at the testing bases are met by the product as a whole, provided that there is compliance with the terms laid down at the Type Approval Certificate P-2667/06.

Permission is hereby given to use the Test Mark illustrated above, in accordance with the contractual terms printed overleaf.

Arnstadt, 2006-05-19

TÜV Thüringen Anlagentechnik GmbH
Testing Centre for Equipment Safety

Dipl.-Ing. Martin Sorge
Head of Testing Centre



GEZE GmbH
P.O. Box 1363
71226 Leonberg
Germany

GEZE GmbH
Reinhold-Vöster-Straße 21-29
71229 Leonberg
Germany

Telefon +49 (0) 7152-203-0
Telefax +49 (0) 7152-203-310

www.geze.com

Germany
GEZE Sonderkonstruktionen GmbH
Planken 1
97944 Boxberg-Schweigern
Tel. +49 (0) 7930-9294-0
Fax +49 (0) 7930-9294-10
E-Mail: sk.de@geze.com

GEZE GmbH
Niederlassung Nord/Ost
Bühningstraße 8
13086 Berlin (Weissensee)
Tel. +49 (0) 30-47 89 90-0
Fax +49 (0) 30-47 89 90-17
E-Mail: berlin.de@geze.com

GEZE GmbH
Niederlassung West
Nordsternstraße 65
45329 Essen
Tel. +49 (0) 201-83082-0
Fax +49 (0) 201-83082-20
E-Mail: essen.de@geze.com

GEZE GmbH
Niederlassung Mitte
Adenauerallee 2
61440 Oberursel (b. Frankfurt)
Tel. +49 (0) 6171-63610-0
Fax +49 (0) 6171-63610-1
E-Mail: frankfurt.de@geze.com

GEZE GmbH
Niederlassung Süd
Reinhold-Vöster-Straße 21-29
71229 Leonberg
Tel. +49 (0) 7152-203-594
Fax +49 (0) 7152-203-438
E-Mail: leonberg.de@geze.com

GEZE Service GmbH NL Südwest
Reinhold-Vöster-Straße 25
71229 Leonberg
Tel. +49 (0) 7152-92 33 34

GEZE Service GmbH NL Nord-Ost
Bühningstraße 8
13086 Berlin (Weissensee)
Tel. +49 (0) 30-47 02 17 32

GEZE Service GmbH NL West
Nordsternstraße 65
45329 Essen
Tel. +49 (0) 201-8 30 82 16

GEZE Service GmbH NL Mitte
Adenauerallee 2
61440 Oberursel
Tel. +49 (0) 6171-63 61 03

GEZE Service GmbH NL Süd
Keltnering 10
85658 Eggening
Tel. +49 (0) 8095-87 13 61

Austria
GEZE Austria GmbH
Mayrwiesstraße 12
5300 Hallwang b. Salzburg
Tel. +43-(0)662-663142
Fax +43-(0)662-663142-15
E-Mail: austria.at@geze.com

Baltic States
GEZE GmbH Baltic States office
Dzelzavas iela 120 S
1021 Riga
Tel. +371 (0) 67 89 60 35
Fax +371 (0) 67 89 60 36
E-Mail: office-latvia@geze.com

Benelux
GEZE Benelux B.V.
Leemkuil 1
Industrieterrein Kapelbeemd
5626 EA Eindhoven
Tel. +31-(0)40-26290-80
Fax +31-(0)40-26 290-85
E-Mail: benelux.nl@geze.com

Bulgaria
GEZE Bulgaria - Trade
Representative Office
61 Pirinski Prohod, entrance „B“,
4th floor, office 5,
1680 Sofia
Tel. +359 (0) 24 70 43 73
Fax +359 (0) 24 70 62 62
E-Mail: office-bulgaria@geze.com

China
GEZE Industries (Tianjin) Co., Ltd.
Shuangchenzhong Road
Beichen Economic Development
Area (BEDA)
Tianjin 300400, P.R. China
Tel. +86(0)22-26973995-0
Fax +86(0)22-26972702
E-Mail: Sales-info@geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.
Branch Office Shanghai
Unit 25N, Cross Region Plaza
No 899, Ling Ling Road,
Xuhui District
200030 Shanghai, P.R. China
Tel. +86 (0)21-523 40 960
Fax +86 (0)21-644 72 007
E-Mail: chinasales@geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.
Branch Office Guangzhou
Room 17C3
Everbright Bank Building, No.689
Tian He Bei Road
510630 Guangzhou
P.R. China
Tel. +86(0)20-38731842
Fax +86(0)20-38731834
E-Mail: chinasales@geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.
Branch Office Beijing
Rm3A02, Building 3
ZhuBang 2000 Business Plaza
No.98, Balizhuang xili
Chaoyang District
100025 Beijing, P.R.China
Tel. +86 (0)10-8797 5177 -/78
Fax +86 (0)10-8797 5171
E-Mail: chinasales@geze.com.cn

France
GEZE France S.A.R.L.
ZAC de l'Orme Rond
RN 19
77170 Servon
Tel. +33-(0)1-606260-70
Fax +33-(0)1-606260-71
E-Mail: france.fr@geze.com

Hungary
GEZE Hungary Kft.
Bartók Béla út 105-113.
Budapest
H-1115
Tel. +36 (1) 481 4670
Fax +36 (1) 481 4671
E-Mail: office-hungary@geze.com

Iberia
GEZE Iberia S.R.L.
Pol. Ind. El Pla
C/Comerc, 2-22, Nave 12
08980 Sant Feliu de Llobregat
(Barcelona)
Tel. +34(0)9-02194036
Fax +34(0)9-02194035
E-Mail: info@geze.es

India
GEZE India Private Ltd.
MF 2 & 3, Guindy Industrial Estate
Ekkattuthangal
Chennai 600 097
Tamilnadu
Tel. +91 44 3061 6900
Fax +91 44 3061 6901
E-Mail: office-india@geze.com

Italy
GEZE Italia Srl
Via Giotto, 4
20040 Cambiago (MI)
Tel. +3902950695-11
Fax +3902950695-33
E-Mail: italia.it@geze.com

GEZE Engineering Roma Srl
Via Lucrezia Romana, 91
00178 Roma
Tel. +3906-7265311
Fax +3906-72653136
E-Mail: roma@geze.biz

Poland
GEZE Polska Sp.z o.o.
ul. Annapol 21
03-236 Warszawa
Tel. +48 (0)22 440 4 440
Fax +48 (0)22 440 4 400
E-Mail: geze.pl@geze.com

Romania
GEZE GmbH Reprezentanta Romania
Str. Ionescu Baican nr. 22
RO-021835 Bucuresti, sector 2
Tel. +40 (0) 21 25 07 750
Fax +40 (0) 21 25 07 750
E-Mail: office-romania@geze.com

Russian Federation
GEZE GmbH Representative
Office Russia
Kolodesnij pereulok3, str. 25
Office Nr. 5201-5203
107076 Moskau
Tel. +7 (0) 49 55 89 90 52
Fax +7 (0) 49 55 89 90 51
E-Mail: office-russia@geze.com

Scandinavia – Sweden
GEZE Scandinavia AB
Mallslingan 10
Box 7060
18711 Täby, Sweden
Tel. +46(0)8-7323-400
Fax +46(0)8-7323-499
E-Mail: sverige.se@geze.com

Scandinavia – Norway
GEZE Scandinavia AB avd. Norge
Industriveien 34 B
2073 Dal
Tel. +47(0)639-57200
Fax +47(0)639-57173
E-Mail: norge.se@geze.com

Scandinavia – Finland
Branch office of GEZE Scandinavia AB
Herralantie 824
Postbox 20
15871 Hollola
Tel. +358(0)10-4005100
Fax +358(0)10-4005120
E-Mail: finland.se@geze.com

Scandinavia – Denmark
GEZE Danmark
Branch office of GEZE Scandinavia AB
Høje Taastrup Boulevard 53
2630 Taastrup
Tel. +45(0)46-323324
Fax +45(0)46-323326
E-Mail: danmark.se@geze.com

South Africa
DCLSA Distributors (Pty.) Ltd.
118 Richards Drive, Halfway House,
Ext 111
P.O. Box 7934, Midrand 1685
Tel. +27(0)113158286
Fax +27(0)113158261
E-Mail: info@dclsa.co.za

Switzerland
GEZE Schweiz AG
Bodenackerstrasse 79
4657 Dulliken
Tel. +41-(0)62-2855400
Fax +41-(0)62-2855401
E-Mail: schweiz.ch@geze.com

Turkey
GEZE GmbH Türkiye - İstanbul
İrtibat Bürosu
Ataşehir Bulvarı, Ata 2/3
Plaza Kat: 9 D: 84 Ataşehir
Kadıköy / İstanbul
Tel. + 90 (0) 21 64 55 43 15
Fax + 90 (0) 21 64 55 82 15
E-Mail: office-turkey@geze.com

Ukraine
Repräsentanz GEZE GmbH Ukraine
ul. Vikentija Hvoyki, 21,
office 151
04080 Kiev
Tel. +38 (0) 44 49 97 725
Fax +38 (0) 44 49 97 725
E-Mail: office-ukraine@geze.com

United Arab Emirates/GCC
GEZE Middle East
P.O. Box 17903
Jebel Ali Free Zone
Dubai
Tel. +971(0)4-8833112
Fax +971(0)4-8833240
E-Mail: geze@emirates.net.ae

United Kingdom
GEZE UK Ltd.
Blenheim Way
Fradley Park
Lichfield
Staffordshire WS13 8SY
Tel. +44(0)1543443000
Fax +44(0)1543443001
E-Mail: info.uk@geze.com

GEZE REPRESENTATIVE