





### YOU LOVE YOUR BUILD YOUR BUILDING IF YOU LOVE YOUR

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Dear customers and friends,

we have one thing in our minds when we put together a new catalogue – you! Your help is essential to ensure that we give you the information needed on the quality that you have come to expect for a price which is appreciated.

The feedback from our friends and customers is highly valued as it is with your help that we can ensure that our catalogue contains the information you need. If the information you are seeking is not available, please do not hesitate to contact us. We will be glad to be of assistance.

In this edition you will find an extensive innovation especially in the range of our movement detectors but also in the range of chimes.

Enjoy the catalogue and we look forward to hearing from you soon.

The Grothe Export Team



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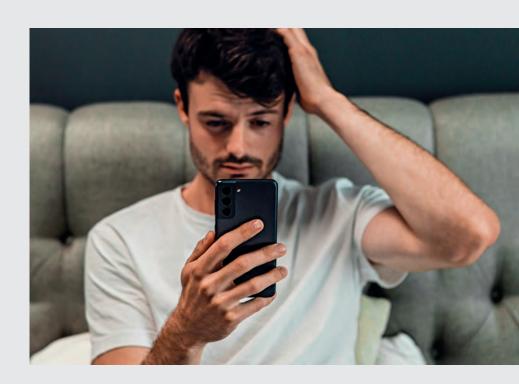
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# Ding. Dong. Ding. Dong.



Open the door or play dead? Who would you open the door for?



Stays 5 seconds.



Stays 5 hours.

vidoora leaves the choice up to you. Check who's at the front door from the comfort of your sofa or while you're out and about. You decide via app whether the guest can come in or whether you are not available at the moment.

### Nice to know who's ringing.





Knowing who's ringing no matter where you are



Your smartphone as an intercom



Enhanced security for your home

vidoora
The smart video doorbell



Open the door or play dead?

### vidoora features

### Wide-angle camera 160°

160° diagonal image capture for a comprehensive view of your front door.

### Night vision

Powerful LEDs provide detailed video images at dusk and at night.

### Illuminated nameplate

The digital display shows your name. As soon as the sensor detects movement, it switches on the lighting.

### Low data consumption

Despite HD video resolution, all vidoora products ensure low data usage.

### HD quality

HD video resolution with optimal picture quality and minimal data consumption.

### Security

Access the door station camera anytime to monitor activity at your front door.

### Barrier-free communication

Icons and voice prompts indicate call status for hearing or visually impaired people.

### Compatible with Grothe Wireless Chimes

To ensure perfect interaction, vidoora is compatible with Grothe wireless chimes.

### vidoora

### Freedom, mobility and security

You want to relax in the garden, but don't want to miss the postman? You're stuck in the evening rush hour, but the pizza delivery guy will be there in five minutes?

No problem! From now on you'll have the front door in your pocket and won't miss anyone.

Ding Dong! Now you're always at home, even when you're on the road. vidoora shows you exactly who is at the door in every situation. Are unannounced visitors or unknown persons knocking at the door?

From now on you know without having to open the door first. Dangerous situations can be recognised immediately, which is why elderly people and children benefit particularly from the security.

### Installed in no time.

vidoora is very easy to install. Once you have drilled a hole in the wall and connected two wires according to the instructions, nothing stands in the way of your new door station.

The step-by-step instructions will guide you through the installation process, telling you exactly what you need to do to bring vidoora to life.

### App, App, hurray!

Download the CallMe app from the App Store or Play Store. The vidoora door station harmonises perfectly with the app.

The following functions are available in the app:

- Accept or reject the call
- Have a conversation with a visitor at the front door
- Open the door
- See live images from the camera
- Show missed calls

The prerequisite for sending/establishing data traffic between the Vidoora door station and the smartphone is that the Internet provider allows VoIP (SIP and RTP).



### vidoora video doorbell



### vidoora - WLAN video doorbell anthracite

Typ: vidoora VD 720-W aa • Art. no. 75405 (DE), 75405 FR, 75405 GB, 75405 NL

- Wide-angle camera 160°
- Night vision with IR LED
- Illuminated, digital nameplate
- Compatible with MISTRAL / CALIMA

### vidoora - WLAN video doorbell anthracite

Typ: vidoora VD 720-L aa • Art. no. 75406 (DE), 75406 FR, 75406 GB, 75406 NL

- Wide-angle camera 160°
- Night vision with IR LED
- Illuminated, digital nameplate
- Compatible with MISTRAL / CALIMA



### vidoora - WLAN video doorbell silver

Typ: vidoora VD 720-W si • Art. no. 75403 (DE), 75403 FR, 75403 GB, 75403 NL

- Wide-angle camera 160°
- Night vision with IR LED
- Illuminated, digital nameplate
- Compatible with MISTRAL / CALIMA

### vidoora - WLAN video doorbell silver

Typ: vidoora VD 720-L si • Art. no. 75404 (DE), 75404 FR, 75404 GB, 75404 NL

- Wide-angle camera 160°
- Night vision with IR LED
- Illuminated, digital nameplate
- Compatible with MISTRAL / CALIMA



### vidoora - WLAN video doorbell white

Typ: vidoora VD 720-W ws • Art. no. 75401 (DE), 75401 FR, 75401 GB, 75401 NL

- Wide-angle camera 160°
- Night vision with IR LED
- Illuminated, digital nameplate
- Compatible with MISTRAL / CALIMA

### vidoora - WLAN video doorbell white

Typ: vidoora VD 720-L ws • Art. no. 75402 (DE), 75402 FR, 75402 GB, 75402 NL

- Wide-angle camera 160°
- Night vision with IR LED
- Illuminated, digital nameplate
- Compatible with MISTRAL / CALIMA

### vidoora Accessories



### vidoora - Angle adapter

Typ: vidoora Winkeladapter • Art. no. 75421

- Suitable for vidoora WLAN / LAN door station
- 15° angle adapter including fixing material
- For use in door reveals
- Up to 3 pieces can be combined at 45°
- 145 x 69 x 22 mm

## SOMETHING TO SUIT EVERY TASTE.





**ECHO**: this doorbell has a timeless design and is available in wireless and electronic versions.

**CALIMA 200:** small, mobile and versatile. This wireless doorbell frees up more space.

calima 800: the small doorbell with a big range of functions. A hybrid model with customisation options, an SD card slot and a Bluetooth loudspeaker function.



### WITH **GROTHE DOORBELLS**, YOU WILL ALWAYS STRIKE THE RIGHT NOTE.

Grothe doorbells look and sound good! Choose your doorbell from a broad product range: classic electromechanical, innovative electronic or in combination with the latest, far-reaching wireless technology that is protected against interfering frequencies.

**MISTRAL**: the chameleon of the wireless doorbells. A doorbell and a picture frame in one.





FLUSH-MOUNTED DOORBELLS: these small and unobtrusive doorbells are available in a wireless design and an electronic design.

### **ELECTROMECHANICAL DOORBELLS:**

the classic doorbells. With a bell made of pure bell steel. In many different designs and with a variety of surfaces.



### A BRIEF OVERVIEW:

Whether you are equipping new buildings, modernising or expanding your doorbell system, we have the ideal solution for your project. As well as looking good, our doorbells also shine with their excellent sound.



### WIRELESS DOORBELLS











### **ELECTRONIC DOORBELLS**



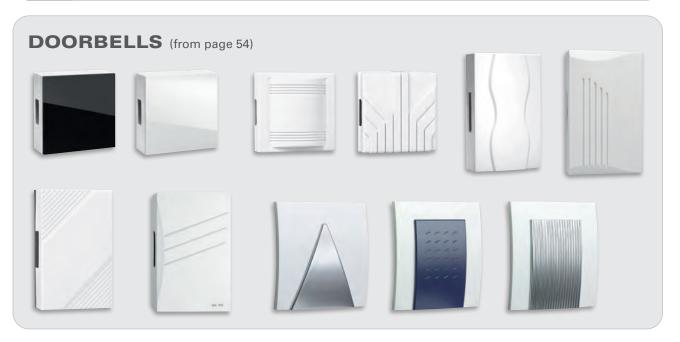








### ELECTROMECHANICAL DOORBELLS







CALIMA is the doorbell series developed for the **individual requirements** of everyday modern life. With **practical functions**, the doorbells of the CALIMA series can be tailored to meet your needs. In addition, each CALIMA features **special highlights**, such as a nightlight or the capability to stream music.



**Flexible:** Interference-free wireless connection with a range of up to 500 metres. Satisfies current radio equipment directive RED2014/53/EU.



**Menu with voice message**: Simple management through clear menu structure, speech announcement and two discreet buttons.



**Differentiation between multiple calls:** Directly signals the door at which the doorbell was rung.



**Coloured LED ring**: Also provides visual indication that a visitor is at the door. Freely select the colour and light type.



**Mute function and snooze function:** For the times you'd like to have quiet in the house.





### CALIMA 50 - The wired model

- Electronic doorbell with the functions of the CALIMA series
- Doorbell and doorbell button are connected with wires
- Wall-mounting
- Without LED light ring
- Power supplied by battery or transformer
- Diameter 105 mm, depth 43 mm

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### **CALIMA 100** – The hybrid model

- Can be operated as a wireless or as an electronic doorbell
- Wall-mounting
- Without LED light ring
- Power supplied by battery or transformer
- Diameter 105 mm, depth 43 mm

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### CALIMA 200 - The mobile model

- Small and portable
- Practical, small wireless doorbell with all functions of the CALIMA series
- Diameter 65 mm, height 100 mm

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### CALIMA 400 - The plug-in model

- LED light ring with nightlight function
- Power supplied via power socket
- Diameter 65 mm, height 100 mm

Page 1



### CALIMA 600 - The custom model

- In addition to the preinstalled ring tones, MP3 melodies can also be set as the ring tone via microSD card
- Power supplied by batteries or table adapter (with TA55)
- Diameter 85 mm, height 140 mm

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### CALIMA 800 - The Bluetooth® model

- Pair with smartphone using Bluetooth®
- Stream music
- Slot for microSD card (for additional MP3 ring tones)
- Music is interrupted if doorbell is pressed
- Up to 8 hours of battery life
- Table adapter for charging included
- Diameter 85 mm, height 140 mm

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### **CALIMA 100: WIRELESS AND ELECTRONIC DOORBELL IN ONE**

- Wall-mounting
- 2-button operation (menu button and select button)
- Menu navigation with voice message (German)
- 13 varied melodies
- Differentiation between 11 calls
- 11 transmitters can be paired
- Snooze function: 1, 3 or 9 hours of time-limited muting
- Mute function: optical indicator as a reminder
- Long range: 500 m
- Optical / acoustic warning about low batteries
- Expandable system: simple pairing of additional wireless doorbell buttons and wireless doorbells
- Individual ringing: multiple wireless doorbell buttons can be paired with each wireless doorbell
- Central ringing: one wireless doorbell button can be paired with any number of wireless doorbells of the ECHO, MISTRAL and CALIMA series

- Matrix ringing: option to combine central and individual ringing
- Separate setting options for each wireless doorbell button to determine the melody
- Interference-free wireless connection (each wireless doorbell button transmits a unique code)
- Compatible with all MISTRAL wireless doorbell buttons and transmitters
- Colour: white / black
- Volume: max. 83 dB(A) depending on the melody
- Frequency: 868.35 MHz
- Power supply: 3 x 1.5 V AA batteries or via 8 12 V AC / DC terminals
- . Option to connect two traditional doorbell buttons
- Temperature range: 5°C to 40°C
- Use: In dry rooms only



### **CALIMA 100 wireless doorbell set**

Type: CALIMA 100

Art. no. 43680 (DE), 43681 (GB), 43682 (FR), 43683 (NL), 43684 (BE), 43687 (CH)

- White MISTRAL SE03 wireless doorbell button included
- Wireless doorbell and wireless doorbell button paired from factory
- Transmitter dimensions: 36 x 100 x 17 mm
- Receiver dimensions: Ø 105 mm, depth 43 mm



### CALIMA 100E wireless doorbell (single device)

Type: CALIMA 100E

Art. no. 43650 (DE), 43651 (GB), 43653 (NL), 43654 (BE), 43657 (CH)

• Receiver dimensions: Ø 105 mm, depth 43 mm



### CALIMA 200, 400: WIRELESS DOORBELLS - SMALL AND FLEXIBLE

- 2-button operation (menu button and select button)
- Menu navigation with voice message (German)
- Optical signal display with the LED ring flashing in different colours (colours can be set)
- 13 varied melodies
- Differentiation between 11 calls
- 11 transmitters can be paired
- Interference-free wireless connection (each wireless doorbell button transmits a unique code)
- Snooze function: 1, 3 or 9 hours of time-limited muting
- Mute function: optical indicator as a reminder
- Expandable system: simple pairing of additional wireless doorbell buttons and wireless doorbells
- Individual ringing: multiple wireless doorbell buttons can be paired with each wireless doorbell (CALIMA 400 only)

- Central ringing: one wireless doorbell button can be paired with any number of wireless doorbells of the ECHO, MISTRAL and CALIMA series (CALIMA 400 only)
- Matrix ringing: option to combine central and individual ringing
- Separate setting options for each wireless doorbell button to determine the melody and LED ring colour
- Compatible with all MISTRAL wireless doorbell buttons and transmitters
- Colour: white / black
- Volume: max. 83 dB(A) depending on the melody
- Frequency: 868.35 MHz
- Temperature range: 5°C to 40°C
- Use: In dry rooms only



### **CALIMA 200 wireless doorbell set**

Type: CALIMA 200 • Art. no. 43560 (DE), 43561 (GB), 43563 (NL), 43564 (BE), 43565 (IT), 43567 (CH)

- Including wireless doorbell button
- Range: 250 m
- Wireless doorbell and wireless doorbell button paired from factory
- Power supply: 4 x 1.5 V, AA (not included in delivery)
- · Optical/acoustic warning about low batteries
- Receiver dimensions: Ø65 x 100 mm
- Transmitter dimensions: 36 x 100 x 17 mm



### CALIMA 200E wireless doorbell (single device)

Type: CALIMA 200E • Art. no. 43610 (DE), 43611 (GB), 43612 (FR), 43613 (NL), 43614 (BE), 43615 (IT), 43617 (CH)

- Power supply: 4 x 1.5 V, AA (not included in delivery)
- Optical/acoustic warning about low batteries
- Receiver dimensions: Ø65 x 100 mm



### CALIMA 400 wireless plug-in doorbell set

Type: CALIMA 400 • Art. no. 43600 (DE), 43601 (GB), 43602 (FR), 43603 (NL), 43604 (BE), 43605 (IT), 43607 (CH)

- White MISTRAL SE03 wireless doorbell button included, long range of 500 m
- · Wireless doorbell and wireless doorbell button paired from factory
- Nightlight function, option to set different colours
- Power supply: 230V AC
- Standby power consumption: 0.2 W
- Nightlight standby power consumption: 0.5 W
- Receiver dimensions: Ø65 x 100 mm
- Transmitter dimensions: 36 x 100 x 17 mm



### CALIMA 400E wireless plug-in doorbell (single device)

Type: CALIMA 400E • Art. no. 43640 (DE), 43641 (GB), 43643 (NL), 43644 (BE), 43647 (CH)

- Nightlight function, option to set different colours
- Power supply: 230V AC
- Standby power consumption: 0.2 W
- Nightlight standby power consumption: 0.5 W
- Receiver dimensions: Ø65 x 100 mm



### CALIMA 600, 800: WIRELESS DOORBELLS FOR MORE CUSTOMISATION

- 2-button operation (menu button and select button)
- Menu navigation with voice message (German)
- Optical signal display with the LED ring flashing in different colours (colours can be set)
- 13 varied melodies plus your own melodies via SD card
- Differentiation between 22 calls
- · 22 transmitters can be paired
- Interference-free wireless connection (each wireless doorbell button transmits a unique code)
- Snooze function: 1, 3 or 9 hours of time-limited muting
- Mute function: optical indicator as a reminder
- Long range: 500 m
- Optical/acoustic warning about low batteries
- Expandable system: simple pairing of additional wireless doorbell buttons and wireless doorbells

- Individual ringing: multiple wireless doorbell buttons can be paired with each wireless doorbell
- Central ringing: one wireless doorbell button can be paired with any number of wireless doorbells of the ECHO, MISTRAL and CALIMA series
- Matrix ringing: option to combine central and individual ringing
- Separate setting options for each wireless doorbell button to determine the melody and LED ring colour
- Compatible with all MISTRAL wireless doorbell buttons and transmitters
- Colour: white / black
- Volume: max. 86 dB(A) depending on the melody
- Frequency: 868.35 MHz
- Temperature range: 5°C to 40°C
- Use: In dry rooms only



### **CALIMA 600** wireless doorbell set

Type: CALIMA 600 • Art. no. 43570 (DE), 43571 (GB), 43572 (FR), 43573 (NL), 43574 (BE), 43575 (IT), 43577 (CH)

- White MISTRAL SE03 wireless doorbell button included
- Wireless doorbell and wireless doorbell button paired from factory
- Option to switch on the flashing light function
- SD card slot for your own ring tones
- Power supply: 4 x 1.5 V batteries (LR14/C) or via table adapter TA55 (optional)
- Receiver dimensions: Ø85 x 140 mm
- Transmitter dimensions: 36 x 100 x 17 mm



### CALIMA 600E wireless doorbell (single device)

Type: CALIMA 600E • Art. no. 43620 (DE), 43621 (GB), 43623 (NL), 43624 (BE), 43627 (CH)

- Option to switch on the flashing light function
- SD card slot for your own ring tones
- Power supply: 4 x 1.5 V batteries (LR14/C) or via table adapter TA55 (optional)
- Receiver dimensions: Ø85 x 140 mm



### **CALIMA 800 wireless doorbell set**

Type: CALIMA 800 • Art. no. 43580 (DE), 43581 (GB), 43582 (FR), 43583 (NL), 43584 (BE), 43585 (IT), 43587 (CH)

- White MISTRAL SE03 wireless doorbell button and table adapter TA55 included
- Wireless doorbell and wireless doorbell button paired from factory
- Bluetooth loudspeaker function
- Option to switch on the flashing light function
- SD card slot for your own ring tones
- Power supply: built-in lithium battery via table adapter TA55
- Receiver dimensions: Ø85 x 140 mm
- Transmitter dimensions: 36 x 100 x 17 mm



### CALIMA 800E Bluetooth wireless loudspeaker doorbell (single device)

Type: CALIMA 800E • Art. no. 43630 (DE), 43631 (GB), 43632 (FR), 43633 (NL), 43634 (BE), 43635 (IT), 43637 (CH)

- Table adapter TA55 included (for charging the battery)
- Bluetooth loudspeaker function
- Option to switch on the flashing light function
- SD card slot for your own ring tones
- Power supply: built-in lithium battery via table adapter TA55
- Receiver dimensions: Ø85 x 140 mm





Waiting inside for someone when there's work to do in the garden – that's a thing of the past with a CALIMA wireless doorbell!



Simply take CALIMA with you!



You no longer risk missing your visitors when you have a CALIMA.

### **ACCESSORIES** FOR CALIMA 800



### Table adapter

Type: TA55 • Art. no. 43599

- External power supply for CALIMA 600 or additional charge station for CALIMA 800
- Plug-in power supply unit 5 V / 1 A with micro-USB connector included
- LED charging state indicator
- Cable length: 2 m
- Dimensions: Ø80 x 20 mm





**500-m range**: MISTRAL can be mounted anywhere in the house.

Polyphonic melodies: with the wide range of ring tones, you can customise MISTRAL to suit your taste.

Brilliant sound: ready to use in a matter of minutes in the set with the matching MISTRAL wireless doorbell button.

Safety: satisfies current radio equipment directive RED2014/53/EU.

### MISTRAL 200M and 300M

The classic model of the GROTHE wireless doorbells: doorbells of the MISTRAL series reliably announce the arrival of visitors at the front door in millions of households.







MISTRAL 300M

- Various designs and colours
- The MISTRAL 300M can be combined with existing doorbell buttons
- LED flashing light with the 300M series
- Battery adapter included

### The MISTRAL 200 M and 300 M wireless doorbells are available in six colours:



White



Black



Silver



Red



Green



White / silver

### **MISTRAL** transmitters & Motion detector

Easy to connect to the doorbell.



**MISTRAL** transmitter SE06 (Page 37)



Motion detector BM03 (Page 37)



MISTRAL transmitter SE03 (Page 36)

### MISTRAL 600

The customisable doorbell for self-expression: simply use the supplied motifs or your own photos.



- Polyphonic ringtones
- Option to combine with existing doorbell buttons
- Two integrated LED flashes
- Battery adapter included

### With 12 interchangeable motifs



### MISTRAL 650 and 350

The classically elegant wireless doorbell sets: a modern design for the popular MISTRAL wireless doorbell.

- Polyphonic ringtones
- The MISTRAL 650 can be combined with existing doorbell buttons
- LED flash







Available individually or as a set with the wireless doorbell button MISTRAL SE03.

### **MISTRAL 200M SETS**

- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters
- Matrix ringing: combination of central and individual ringing
- Optical and acoustic low-battery indicator for transmitters and receivers
- 4-position slide switch for setting ringing signals
- 20 transmitters can be taught in

- With alarm function: DIN emergency ring tone
- Range: 500 m
- 16 polyphonic melodies
- Differentiation between 16 calls: wireless and via 2-wire technology
- Adjustable volume: max. 86 dB(A)
- MISTRAL 200 batteries: 4 x 1.5 V LR14/C (not included)
- Typical battery life: 5 10 years
- Transmitter dimensions: 150 x 115 x 40 mm



### MISTRAL 200M wireless doorbell set

Type: MISTRAL 200M • Art. no. 43305

- Housing colour: white Front: white / silver
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 200M wireless doorbell set

Type: MISTRAL 200M ws • Art. no. 43182

- Housing colour: white Front: white acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6-12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 200M wireless doorbell set

Type: MISTRAL 200M sw • Art. no. 43183

- Housing colour: white Front: black acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 200M wireless doorbell set

Type: MISTRAL 200M si • Art. no. 43184

- Housing colour: white Front: silver acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 200M AND 210M SETS

- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters
- Matrix ringing: combination of central and individual ringing
- Optical and acoustic low-battery indicator for transmitters and receivers
- 4-position slide switch for setting ringing signals
- 20 transmitters can be taught in

- With alarm function: DIN emergency ring tone
- Range: 500 m
- 16 polyphonic melodies
- **Differentiation between 16 calls:** wireless and via 2-wire technology
- Adjustable volume: max. 86 dB(A)
- MISTRAL 200 batteries: 4 x 1.5 V LR14/C (not included)
- Typical battery life: 5 10 years
- MISTRAL 200 dimensions: 150 x 115 x 38 mm



### 200M wireless doorbell set

Type: MISTRAL 200M rt • Art. no. 43185

- Housing colour: white Front: red acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### 200M wireless doorbell set

Type: MISTRAL 200M gn • Art. no. 43186

- Housing colour: white Front: green acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### 210M wireless doorbell set

Type: MISTRAL 210M • Art. no. 43303

- Housing colour: white Front: grey
- MISTRAL SE03 wireless doorbell button included
- Adjustable volume, max. 83 dB(A)
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm
- MISTRAL 210M transmitter dimensions: 180 x 140 x 50 mm



Additional **MISTRAL** sets and doorbells on the following pages

### MISTRAL 300M SINGLE DEVICES AND SETS

- · For wall-mounting and freestanding
- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters
- Matrix ringing: combination of central and individual ringing
- Optical and acoustic low-battery indicator for transmitters and receivers
- 4-position slide switch for setting ringing signals
- 20 transmitters can be taught in
- With LED flash

- With alarm function: DIN emergency ring tone
- Range: 500 m
- 16 polyphonic melodies
- **Differentiation between 16 calls:** wireless and via 2-wire technology
- Terminals for connecting two traditional doorbell buttons
- Adjustable volume: max. 86 dB(A)
- MISTRAL 300 batteries: 4 x 1.5 V LR14/C (not included)
- Typical battery life: 5 10 years
- Terminals for external power supply: 8-12 V AC/DC
- MISTRAL 300 dimensions: 150 x 115 x 38 mm



### MISTRAL 300M E wireless doorbell (single device)

Type: MISTRAL 300M E • Art. no. 43301

Housing colour: whiteFront: white / silver



### MISTRAL 300M wireless doorbell set

Type: MISTRAL 300M • Art. no. 43300

- Housing colour: white Front: white / silver
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 300M BM wireless doorbell set

Type: MISTRAL 300M BM • Art. no. 43315

- Housing colour: white Front: white / silver
- MISTRAL BM03 wireless motion detector included
- Power supply for motion detector: 1 x 3 V, CR123A, external power supply: 8 – 12 V =/~50 Hz
- Transmitter protection rating: IP20
- MISTRAL BM03 motion detector dimensions: 124 x 69 x 54 mm



### MISTRAL 300M wireless doorbell set

Type: MISTRAL 300M ws • Art. no. 43142

- Housing colour: white Front: white acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### **MISTRAL 300M SETS**



### 300M wireless doorbell set

Type: MISTRAL 300M sw • Art. no. 43143

- Housing colour: white Front: black acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### 300M wireless doorbell set

Type: MISTRAL 300M si • Art. no. 43144

- Housing colour: white Front: silver acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### 300M wireless doorbell set

Type: MISTRAL 300M rt • Art. no. 43145

- Housing colour: white Front: red acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### 300M wireless doorbell set

Type: MISTRAL 300M gn • Art. no. 43146

- Housing colour: white Front: green acrylic door
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### 300M wireless doorbell set

Type: MISTRAL 300M ws-si • Art. no. 43372

- Housing colour: white Front: white / silver
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03 / AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### **MISTRAL 600** SINGLE DEVICES AND SETS

- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters
- Matrix ringing: combination of central and individual ringing
- Optical and acoustic low-battery indicator for transmitters and receivers
- 4-position slide switch for setting ringing signals
- 20 transmitters can be taught in
- With LED flash
- With alarm function: DIN emergency ring tone

- Range: 500 m
- 16 polyphonic melodies
- Differentiation between 16 calls: wireless and via 2-wire technology
- Terminals for connecting two traditional doorbell buttons
- 12 interchangeable design motifs included
- Adjustable volume: max. 83 dB(A)
- MISTRAL 600 batteries: 4 x 1.5 V LR14/C (not included)
- Typical battery life: 5 10 years
- Terminals for external power supply: 8-12 V AC/DC
- MISTRAL 600 dimensions: 180 x 140 x 50 mm



### Wireless doorbell set

Type: MISTRAL 600 • Art. no. 43400

- Housing colour: grey
- For wall-mounting and freestanding
- MISTRAL SE03-s wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03/AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### Wireless doorbell set

Type: MISTRAL 600 ws • Art. no. 43410

- Housing colour: white
- For wall mounting and freestanding
- MISTRAL SE03 wireless doorbell button included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03/AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### Wireless doorbell (single device)

Type: MISTRAL 600E • Art. no. 43401

- Housing colour: grey
- · For wall mounting and freestanding



### Wireless doorbell (single device)

Type: MISTRAL 600E ws • Art. no. 43411

- Housing colour: white
- For wall mounting and freestanding



### MISTRAL 650 & MISTRAL 350 SETS

- High-gloss finish
- Superb sound
- 12 polyphonic ringtones
- Bright LED flash
- Tone generation and flashing light are activated and deactivated independently of one another
- Adjustable volume: max. 86 dB(A)
- Time-limited mute function
- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters

- Matrix ringing: combination of central and individual ringing
- · Optical and acoustic low-battery indicator
- 12 transmitters can be taught in
- Individual ring tone for each transmitter
- Power supply for receiver: 4 x 1.5 V LR14/C batteries (not included)
- Power supply for wireless doorbell button: 2 x 1.5 V LR03/ AAA batteries (not included)
- External power supply: 6 12 V DC
- Frequency: 868.35 MHz
- Range: 500 metres (in the open)
- MISTRAL transmitter dimensions: 180 x 120 x 50 mm



### MISTRAL 650 wireless doorbell set

Type: MISTRAL 650 SW • Art. no. 43552

- Colour: black / white
- · For wall mounting
- Terminals for connecting 2 traditional doorbell buttons and an external power supply 8 – 12 V AC/DC
- Differentiation between 12 calls
- MISTRAL SE03 wireless doorbell button included
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 650 wireless doorbell set

Type: MISTRAL 650 WS • Art. no. 43553

- Colour: white
- For wall mounting
- Terminals for connecting 2 traditional doorbell buttons and an external power supply 8 – 12 V AC/DC
- Differentiation between 12 calls
- MISTRAL SE03 wireless doorbell button included
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 350 wireless doorbell set

Type: MISTRAL 350 SW • Art. no. 43550

- Colour: black / white
- Freestanding
- Differentiation between 12 calls
- MISTRAL SE03 wireless doorbell button included
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### MISTRAL 350 wireless doorbell set

Type: MISTRAL 350 WS • Art. no. 43551

- Colour: white
- Freestanding
- Differentiation between 12 calls
- MISTRAL SE03 wireless doorbell button included
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm





### **MISTRAL 350** SINGLE DEVICES

- High-gloss finish
- Superb sound
- 12 polyphonic ringtones
- Bright LED flash
- Tone generation and flashing light are activated and deactivated independently of one another
- Adjustable volume: max. 86 dB(A)
- Time-limited mute function
- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters

- Matrix ringing: combination of central and individual ringing
- Optical and acoustic low-battery indicator
- 12 transmitters can be taught in
- Individual ring tone for each transmitter
- Power supply for receiver: 4 x 1.5 V LR14/C batteries (not included)
- Frequency: 868.35 MHz
- Range: 500 metres (in the open)
- MISTRAL transmitter dimensions: 180 x 120 x 50 mm



### **MISTRAL 350E** wireless doorbell

Type: MISTRAL 350E SW • Art. no. 43558

- Colour: black / white
- Freestanding
- Wireless differentiation between 12 calls



### MISTRAL 350E wireless doorbell

Type: MISTRAL 350E WS • Art. no. 43559

- Colour: white
- Freestanding
- Wireless differentiation between 12 calls



### **MISTRAL 400** SINGLE DEVICES AND SETS

- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters
- Matrix ringing: combination of central and individual ringing
- . Optical and acoustic low-battery indicator for transmitters
- 4-position slide switch for setting ringing signals
- 20 transmitters can be taught in

- With LED flash
- With alarm function: DIN emergency ring tone
- Range: 500 m
- 16 polyphonic melodies
- Differentiation between 16 calls
- Volume: adjustable, max. 80 dB(A)
- Power supply: 230 V AC
- Dimensions: 127 x 62 x 78 mm



### Wireless plug-in doorbell set

Type: MISTRAL 400M • Art. no. 43310 (D)
Type: Mistral 400M UK • Art. no. 43314 (GB)

- Housing colour: white
- Incl. MISTRAL SE03 wireless doorbell button
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03/AAA (not included in delivery)
- Transmitter protection rating: IP54
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm



### Wireless plug-in doorbell

Type: MISTRAL 400M • Art. no. 43311 (D)
Type: MISTRAL 400M UK S • Art. no. 43318 (GB)

Colour: whiteSingle device

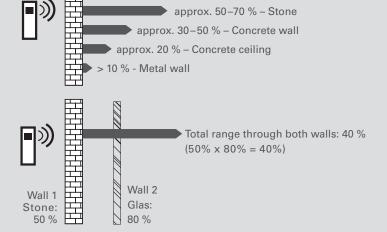
### IMPACT OF WALLS AND CEILINGS ON RANGE

100 % – freedfield approx. 80 % – Wood, glass

approx. 60-70 % - Gypsum board/metal stud wall

### Overview: Reduction of range by different materials

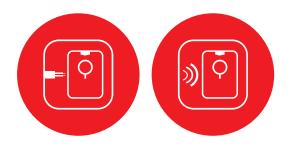
(Walls, doors, metal parts, etc. can reduce the range significantly.)



To extend the range in difficult conditions, use the distance multiplier or MISTRAL WR

Further **information and circuit overviews** can be found in the **operating instructions** or online on the respective product pages.





### **ECHO**

The hi-fi doorbell that can play your own sounds.



### WIRELESS HI-FI DOORBELL SETS: ECHO M AND BM

- · High-gloss finish
- Superb sound
- Bright LED flash
- Tone generation and flashing light are activated and deactivated independently of one another
- Adjustable volume: max. 86 dB(A)
- Central ringing: multiple receivers can be controlled by one transmitter
- Individual ringing: each receiver can be individually controlled by additional transmitters
- Matrix ringing: combination of central and individual ringing

- Optical and acoustic low-battery indicator
- 20 transmitters can be taught in
- · Individual ring tone for each transmitter
- Differentiation between 20 calls
- Transfer of your own ring tones using a microSD card
- Total playing time of the ring tones: up to 90 s
- Software for compiling the ring tones included
- Frequency: 868.35 MHz
- Range: 500 m
- Power supply for the receiver: 8 12 V AC / DC, with wall bracket 43505 or 4 x 1.5 V LR14/C batteries (not included)
- ECHO M transmitter dimensions: 175 x 120 x 45 mm



### ECHO M wireless hi-fi doorbell set

Type: ECHO M SW • Art. no. 43501

- · Colour: black / white
- MISTRAL SE03 transmitter included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03/AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 transmitter dimensions: 36 x 100 x 17 mm





### ECHO M wireless hi-fi doorbell set

Type: ECHO M WS • Art. no. 43502

- · Colour: white
- MISTRAL SE03 transmitter included
- Power supply for wireless doorbell button: 2 x 1.5 V, LR03/AAA (not included in delivery), external power supply: 6 – 12 V DC
- Transmitter protection rating: IP54
- MISTRAL SE03 transmitter dimensions: 36 x 100 x 17 mm





### ECHO BM wireless hi-fi doorbell set

Type: ECHO BM SW • Art. no. 43515

- Colour: black / white
- MISTRAL BM03 motion detector included
- Power supply for transmitter: 1 x 3 V, CR123A (not included in delivery), external power supply:  $8-12 \text{ V} = /\sim 50 \text{ Hz}$
- Transmitter protection rating: IP20
- MISTRAL BM03 motion detector dimensions: 124 x 69 x 54 mm





### ECHO BM wireless hi-fi doorbell set

Type: ECHO BM WS • Art. no. 43516

- Colour: white
- MISTRAL BM03 motion detector included
- Power supply for transmitter: 1 x 3 V, CR123A (not included in delivery), external power supply:  $8 12 \text{ V} = /\sim 50 \text{ Hz}$
- Transmitter protection rating: IP20
- MISTRAL BM03 motion detector dimensions: 124 x 69 x 54 mm



### **ELECTRONIC DOORBELL: ECHO 120 AND ECHO 230**

- · High-gloss finish
- Superb sound
- Bright LED flash
- Tone generation and flashing light are activated and deactivated independently of one another
- Adjustable volume: max. 86 dB(A)
- 2 doorbell buttons can be connected via terminals
- Individual ring tone for each button
- Differentiation between 2 calls
- Transfer of your own ring tones using a microSD card
- Total playing time of the ring tones: up to 90 s
- Software for compiling the ring tones included
- **Dimensions**: 175 x 120 x 45 mm



### ECHO 120 electronic doorbell

Type: ECHO 120 SW • Art. no. 43530

- Colour: black / white
- Power supply: 8 12 V AC / DC or 4 x 1.5 V LR14/C batteries





### **ECHO 120 electronic doorbell**

Type: ECHO 120 WS • Art. no. 43531

- Colour: white
- Power supply: 8 12 V AC / DC or 4 x 1.5 V LR14/C batteries





### ECHO 230 electronic doorbell

Type: ECHO 230 SW • Art. no. 43540

- Colour: black / white
- Power supply: 230 V AC or 8 12 V AC / DC
- The built-in power supply unit is VDE approved





### ECHO 230 electronic doorbell

Type: ECHO 230 WS • Art. no. 43541

- Colour: white
- Power supply: 230 V AC or 8 12 V AC / DC
- The built-in power supply unit is VDE approved





### **ACCESSORIES: ECHO**



### Wall bracket

Type: WH ECHO 120/M • Art. no. 43505

- Can be used to connect a power supply and traditional doorbell buttons to an ECHO M or ECHO BM wireless doorbell
- Colour: white



### **MISTRAL** magnetic contact

Type: MISTRAL MK • Art. no. 43394

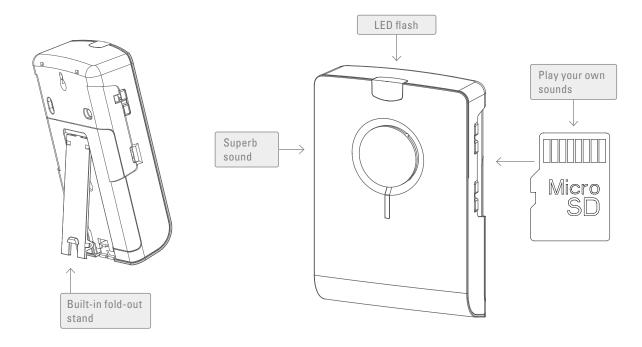
- Activates MISTRAL transmitters or electronic doorbells
- Compatible with: MISTRAL transmitter 03 / MISTRAL 650 / CROMA 50 / CROMA 100, 150, 230 / ECHO / UP-GONG 120 WS (with a DC voltage supply)
- 2-m connection cable
- Dimensions: 60 x 17 x 11 mm
- Colour: white plastic



### MicroSD card

Type: Mikro SD32 • Art. no. 43508

- Tested microSD card for transferring your own ring tones to the ECHO M and CALIMA 600 / 800
- Storage capacity: 32 GB





## FLUSH-MOUNTED SMALL • UNOBTRUSIVE WIRELES INTEGRABLE DOORBELL

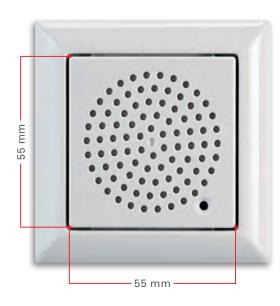


The simple design of the flush-mounted doorbell series fits unobtrusively into numerous products from well-known switch manufacturers.

Simply install it flexibly in situ.







- Quartz-stabilised range of 250 metres
- 15 polyphonic melodies with adjustable volume
- 1-button operation with voice announcement
- Snooze function
- Set is paired at the factory and ready for use
- Extremely simple pairing of additional wireless doorbell buttons or wireless doorbells
- Satisfies current radio equipment directive RED2014/53/EU
- Mounting plate and adapter frame included

#### **FLUSH-MOUNTED WIRELESS DOORBELL 230**

- 1-button operation
- Menu navigation with voice message (German)
- 15 varied melodies
- Range: 250 m
- Expandable system: simple pairing of additional wireless doorbell buttons and wireless doorbells
- Individual ringing: multiple wireless doorbell buttons can be paired with each wireless doorbell
- Central ringing: one wireless doorbell button can be paired with any number of wireless doorbells
- Matrix ringing: option to combine central and individual ringing
- Separate setting options for each wireless doorbell button to determine the melody
- Interference-free wireless connection (each wireless doorbell button transmits a unique code)

- Compatible with all MISTRAL wireless doorbell buttons and transmitters
- Snooze function: 1, 3 or 9 hours of time-limited muting
- Mute function with optical indicator as a reminder
- Volume: adjustable, max. 83 dB(A) depending on the melody
- Frequency: 868.35 MHz
- Power supply: 230 V 50 Hz (0.036 A)
- Mounting plate and adapter frame included
- For 55 x 55 mm switch ranges from well-known manufacturers such as Jung, Merten, Berker or Siemens
- Use: In dry rooms only
- Installation depth: 40 mm
- **Dimensions**: 80 x 80 x 52 mm



#### Flush-mounted wireless doorbell set

Type: UP-FG 230ws • Art. no. 43740 (D), 43741 (GB), 43742 (FR), 43743 (NL), 43744 (BE), 43747 (CH)

- Colour: white
- White MISTRAL SE03 wireless doorbell button included
- Wireless doorbell and wireless doorbell button paired from factory
- MISTRAL SE03 wireless doorbell button dimensions: 36 x 100 x 17 mm
- $\bullet$  Power supply for wireless doorbell button: 2 x 1.5 V LR03 / AAA batteries (not included in delivery), external power supply: 6 12 V DC



#### Flush-mounted wireless doorbell (single device)

Type: UP-FG E 230ws 200E • Art. no. 43770 (D), 43771 (GB), 43772 (FR), 43773 (NL), 43774 (BE), 43777 (CH)

• Colour: wite



# WIRELESS TRANSMITTER

Can be combined with all Grothe wireless doorbells.

#### MISTRAL SE03 WIRELESS TRANSMITTER

The wireless transmitter with an extremely long range. Meets the highest standards in terms of functionality.

- For all Grothe wireless doorbells
- Frequency: 868.35 MHz
- Range: 500 m in the open
- Ring forwarding
- LED function control
- Protection rating: IP54
- Power supply: 2 x 1.5 V AAA batteries (not included) or 6 – 12 V DC
- Operating temperature: -15°C to 50°C



# MISTRAL SE03 wireless doorbell button

Type: MISTRAL SE03 • Art. no. 43441

- Plastic colour: white
- Dimensions: 100 x 36 x 17 mm



# MISTRAL SE03 wireless doorbell button

Type: MISTRAL SE03a • Art. no. 43442

- Plastic colour: anthracite
- Dimensions: 100 x 36 x 17 mm



# MISTRAL SE03 wireless doorbell button

Type: MISTRAL SE03s • Art. no. 43440

- Plastic colour: painted silver
- Dimensions: 100 x 36 x 17 mm



#### **DOORBELL BUTTON ETA FUNK**

Perfect for retrofitting – from analogue to wireless. Thanks to the simple and timeless design and the choice of various surfaces, this doorbell button is ideal for many different facades. The ETA Funk doorbell button is available with four different surfaces. Either for surface or flush mounting. A surface-mounted frame or flush-mounted box is included. A detailed description of this series can be found on pages 68/69.





- Surface mounting: 43451
- Flush mounting: 43455



## Aluminium, smooth

- Surface mounting: 43452
- Flush mounting: 43456



#### Plastic, matt white

- Surface mounting: 43453
- Flush mounting: 43457



#### Plastic, matt black

- Surface mounting: 43454
- Flush mounting: 43458

#### MISTRAL SE06 WIRELESS TRANSMITTER

Connects a traditional doorbell button to a Grothe wireless doorbell. The MISTRAL SE06 wireless transmitter modernises traditionally wired doorbell systems, turning them into wireless doorbell systems without the need to change the doorbell button on the front door.



#### **MISTRAL SE06 flush-mounted wireless transmitter**

Type: MISTRAL SE06 • Art. no. 43443

- Plastic colour: black
- For all wireless doorbells of the MISTRAL, ECHO and CALIMA series
- For installation in switch boxes and devices
- Frequency: 868.35 MHz (satisfies current radio equipment directive RED 2014/53/EU)
- Range: 150 m in the open
- Power supply: 12 V DC or CR 2450 battery
- Triggered by falling edge
- Protection rating: IP20 (for indoor use only)
- Operating temperature: -10°C to 50°C
- Dimensions: 37 x 20 x 42 mm

#### **MISTRAL BM03 WIRELESS MOTION DETECTOR**

Detects people and movements in the detection range and triggers the MISTRAL wireless doorbell at which it has been taught in. A delay time of 3–60 s can be set. The low power consumption results in an extremely long battery life. For all Grothe wireless doorbells.



#### MISTRAL BM03 wireless motion detector

Type: MISTRAL BM03 • Art. no. 43445

- Plastic colour: white
- Maximum monitoring range: 108° for 15 m of optical range
- Walk test with LED indicator
- Delay time: can be set from 3-60 s
- With swivel bracket
- Frequency: 868.35 MHz
- Range: 500 m in the open
- Power supply: 3 V CR123A lithium battery or 8 12 V AC / DC
- Protection rating: IP20 (for indoor use only)
- Dimensions: 124 x 69 x 54 mm



#### RECEIVER: WIRELESS RELAY BOX

Wireless receiver for switching electrical devices. Ideal for switching outdoor lighting or gates. Up to 16 transmitters can be taught in at the receiver. Using the transmitters of the MISTRAL series, a potential-free contact can be switched wirelessly in the relay box. This potential-free contact switches loads of up to 10 A and its switching duration can be set.

- For all Grothe wireless doorbells
- Plastic colour: grey
- · Switches electrical devices
- Frequency: 868.35 MHz
- Range: 500 m in the open
- Switching contact: 230 V/10 A
- With timer function 1 1000 s

- Up to 16 transmitters can be taught in
- Screw connections included
- Power supply: 8 12 V AC / DC or 3 V CR123A lithium battery
- Operating temperature: -5 °C to 40 °C
- Protection rating: IP66
- **Dimensions**: 110 x 110 x 70 mm



#### Wireless relay box

Type: MISTRAL RB • Art. no. 43385

- Single device
- Colour: grey



#### Wireless relay box set

Type: MISTRAL RB • Art. no. 43386

- As a set including a white MISTRAL SE03 wireless doorbell button
- Colour: grey



#### MOBILE RECEIVER: MISTRAL 800 MOBILE

Be reachable anywhere in the house with the MISTRAL 800 mobile receiver. As well as the acoustic and optical signal, a vibration effect is generated in the mobile receiver to signal that a visitor is at the door even in noisy environments. You can carry the mobile receiver on your belt thanks to the clip. Up to 15 transmitters can be taught in at the receiver. Missed rings are displayed.

- Suitable for all wireless transmitters of the MISTRAL series
- . Can be carried using the belt clip
- Signalling: optical, acoustic and vibration
- Call differentiation with 4 tone sequences
- Indicator: missed ring
- Differentiation between 4 calls
- Volume: 86 dB(A)

- 15 transmitters can be taught in
- Battery life: ECO mode approx. 5 years, normal operation approx. 2 years
- Power supply: 9 V PP3 battery (not included)
- Frequency: 868.35 MHz
- Range: 500 metres (in the open)
- **Dimensions**: 81 x 62 x 28 mm



#### Mobile SW - mobile receiver

Type: MISTRAL 800 Mobile SW • Art. no. 43380

- Single device
- Colour: black



#### Mobile Set SW - mobile receiver set

Type: MISTRAL 800 Mobile Set SW • Art. no. 43382

- As a set including a white MISTRAL SE03 wireless doorbell button
- Colour: black



#### Mobile WS - mobile receiver

Type: MISTRAL 800 Mobile WS • Art. no. 43381

- Single device
- · Colour: white



#### RECEIVER: WIRELESS DOOR RELEASE RELAY

The MISTRAL FTR controls an existing door release. With a MISTRAL wireless doorbell button, the MISTRAL FTR can be controlled wirelessly from anywhere. The MISTRAL FTR is so small that it can be installed in flush-mounted boxes and in junction boxes. It is ideal for retrofitting and in combination with Wi-Fi door stations with a built-in MISTRAL transmitter.



#### Wireless door release relay

Type: MISTRAL FTR • Art. no. 43387

- Compatible with all wireless transmitters of the MISTRAL series
- · Plastic colour: black
- Switches electrical devices
- Frequency: 868.35 MHz
- Range: 150 m in the open
- Switching contact: 30 V / 1 A
- With timer function 0.5 30 s
- Up to 15 transmitters can be taught in
- Power supply: 12 V AC / DC / 30 mA
- Operating temperature: -10°C to 50°C
- Protection rating: IP20
- Dimensions: 42 x 40 x 21 mm

#### MOBILE RECEIVER: MISTRAL REPEATER

The signal repeater for the transmitters of the MISTRAL series. It extends the range of the MISTRAL transmitter.



#### MISTRAL repeater

Type: MISTRAL WR • Art. no. 43480

- Compatible with all wireless transmitters of the MISTRAL series and wireless doorbells of the MISTRAL, ECHO and CALIMA series
- Plastic colour: white
- Extends the range of the MISTRAL transmitters by 500 metres
- Max. two repeaters in a single system
- 20 transmitters can be taught in
- Power supply: 2 x 1.5 V LR6 / AA batteries or external power supply with 8 – 12 V AC / DC, max. 2.0 A
- Frequency: 868.35 MHz
- Range: 500 metres (in the open)
- Protection rating: IP20
- Dimensions: 85 x 85 x 30 mm

#### **MAGNETIC CONTACT**

Magnetic contact for activating a MISTRAL transmitter or electronic doorbell.



#### MISTRAL magnetic contact

Type: MISTRAL MK • Art. no. 43394

- Colour: white
- Activates MISTRAL transmitters or electronic doorbells
- Compatible with: MISTRAL transmitter 03 / MISTRAL 650 / CROMA 50 / CROMA 100, 150, 230 / ECHO / UP-GONG 120 WS (with a DC voltage supply)
- 2-metre connection cable
- Dimensions: 60 x 17 x 11 mm



#### **PLUG-IN POWER SUPPLY UNIT**



#### Mains adapter

Type: NA 9V-GPE • Art. no. 43399

- · Colour: black
- Suitable for wireless doorbells MISTRAL 300, 600, 650 / ECHO 120 / CROMA 100 and wireless doorbell button MISTRAL SE03
- Matching plug included
- When using on the transmitter, disconnect the plug and connect directly to terminals or use DC socket 39949
- 9 V DC max. 0.5 A (4.5 W) / 230 V AC (Schuko/Euro)
- Max. 0.5 A (4.5 W)
- 1.75-m supply cable

#### REPLACEMENT BATTERY



#### 3 V CR123A lithium battery

Type: AL 1057/614 • Art. no. 39013

- Suitable for MISTRAL motion detector BM03, MISTRAL relay box RB
- Can be used for various opening and motion detectors in alarm systems



#### **Battery for MISTRAL SE06**

Type: Batterie CR 2450 • Art. no. 43397

- 3 V lithium battery for MISTRAL SE06
- Dimensions: 5 x 24 x 24 mm

## **WIRELESS DOORBELLS POLO 100**



#### Wireless doorbell set (white)

Type: Polo 100 w/w • Art. no. 43251

- 16 melodies
- 80 db (A), adjustable, Frequency 868.35 MHz
- Mute function
- Batteries wireless bell button AAA LR03 1.5 V (not incl.)
- Batteries wireless doorbell AA 1,5 Vn (not incl.)
- LED indication
- 250 m range (free field)
- Incompatible with Mistral



#### Wireless doorbell set (black)

Type: Polo 100 w/s • Art. no. 43252

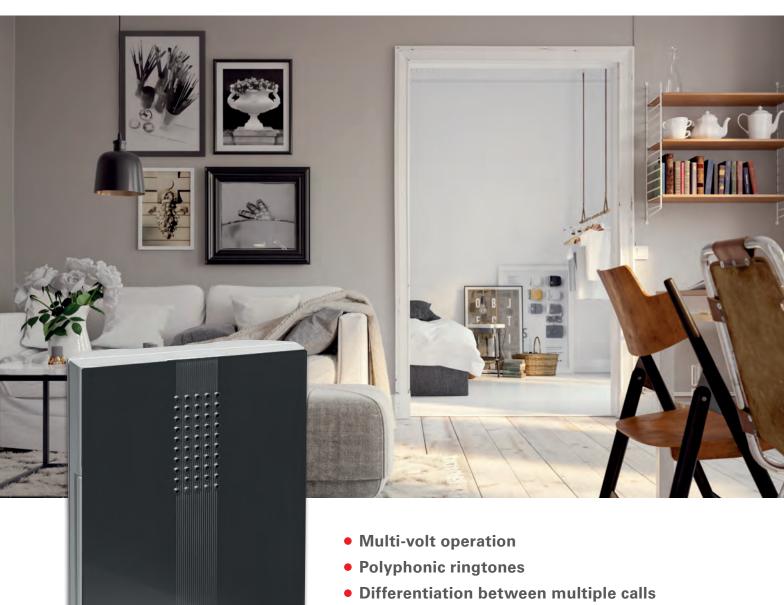
- 16 melodies
- 80 db (A), adjustable, Frequency 868.35 MHz
- Mute function
- Batteries wireless bell button AAA LR03 1.5 V (not incl.)
- Batteries wireless doorbell AA 1,5 Vn (not incl.)
- LED indication
- 250 m range (free field)
- Incompatible with Mistral

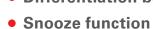




# **CROMA**

With various colours, designs and melodies, CROMA provides many opportunities for customisation.





Long battery life



## **CROMA** 50 ELECTRONIC DOORBELL

- 3 sounds differentiation between 3 calls
- Battery operation
- Long battery life (normal operation approx. 3 years)
- Parallel connection to other doorbells possible (see circuit overview on page 49)
- Adjustable volume: max. 83 dB(A)
- Power supply: 4 x 1.5 V batteries (LR14/C, alkaline, not included)
- Operating temperature: 5°C to 40°C
- **Dimensions**: 150 x 115 x 40 mm



#### **Electronic doorbell**

Type: CROMA 50 SW • Art. no. 43150

• Colour: white / silver



#### **Electronic doorbell**

Type: CROMA 50 ws • Art. no. 43152

- Housing colour: white
- Door: high-gloss white acrylic



#### **Electronic doorbell**

Type: CROMA 50 sw • Art. no. 43153

- Housing colour: white
- Door: high-gloss black acrylic



#### **Electronic doorbell**

Type: CROMA 50 si • Art. no. 43154

- Housing colour: white
- Door: high-gloss silver acrylic



#### **Electronic doorbell**

Type: CROMA 50 rt • Art. no. 43155

- Housing colour: white
- Door: high-gloss red acrylic



#### **Electronic doorbell**

Type: CROMA 50 gn • Art. no. 43156

- Housing colour: white
- Door: high-gloss green acrylic

## **CROMA** 100 ELECTRONIC DOORBELL

- 17 polyphonic melodies
- Infinite volume adjustment
- Differentiation between 2 calls
- 1-button muting
- Operation with batteries or transformer
- Long battery life (normal operation approx. 3–5 years)
- Acoustic signalling of low battery

- Parallel connection to other doorbells possible (see page 48)
- Adjustable volume: max. 86 dB(A)
- Power supply: 8 12 V AC / DC or 4 x 1.5 V batteries (LR14 / C, alkaline, not included)
- Operating temperature: 5°C to 40°C
- **Dimensions**: 191 x 163 x 51 mm



#### **Electronic doorbell**

Type: CROMA 100A • Art. no. 43170

• Door colour: silver / grey



#### **Electronic doorbell**

Type: CROMA 100A ws/ws • Art. no. 43172

• Door colour: white / white



#### **Electronic doorbell**

Type: CROMA 100A ws/si • Art. no. 43173

• Door colour: white / silver



#### Electronic doorbell

Type: CROMA 100A ws/sw • Art. no. 43174

• Door colour: white / black

#### **CROMA** 150/250 ELECTRONIC DOORBELL

- High-gloss finish
- 12 polyphonic ringtones
- Differentiation between 2 calls
- Individual ring tone for each input
- Bright LED flash
- Tone generation and flashing light are activated and deactivated independently of one another
- Adjustable volume: max. 86 dB(A)
- Time-limited mute function, adjustable
- Power supply: 4 x 1.5 V batteries (LR14 / C, alkaline) or 8 – 12 V AC / DC (0.5 A) or 230 V AC (not included)
- Optical and acoustic battery indicator
- Operating temperature: 5°C to 40°C
- **Dimensions**: 175 x 120 x 45 mm



#### **Electronic doorbell**

Type: CROMA 150 SW • Art. no. 43554

- Colour: black / white
- Power supply: 8 12 V AC / DC or 4 x 1.5 V LR14/C batteries



#### **Electronic doorbell**

Type: CROMA 150 WS • Art. no. 43555

- · Colour: white
- Power supply: 8 12 V AC / DC or 4 x 1.5 V LR14/C batteries



#### **Electronic doorbell**

Type: CROMA 250 SW • Art. no. 43556

- Colour: black / white
- $\bullet\,$  Power supply: 230 V AC or 8 –12 V AC / DC
- The built-in power supply unit is VDE approved



#### **Electronic doorbell**

Type: CROMA 250 WS • Art. no. 43557

- Colour: white
- $\bullet$  Power supply: 230 V AC or 8 12 V AC / DC
- The built-in power supply unit is VDE approved

#### **CROMA** 225A ELECTRONIC DOORBELL



#### **Electronic doorbell**

Type: CROMA 225A gn • Art. no. 43225

- The ideal basic doorbell
- Colour: white
- · 3 classic sounds
- Differentiation between 3 calls
- Battery operation
- Long battery life (normal operation approx. 3 years)
- Adjustable volume: max. 83 dB(A)
- Power supply: 4 x 1.5 V batteries (LR14/C, alkaline, not included)
- Operating temperature: 5°C to 40°C
- **Dimensions**: 160 x 160 x 65 mm

#### **CROMA 230 ELECTRONIC DOORBELL**

- 17 polyphonic melodies
- Infinite volume adjustment
- Differentiation between 2 calls
- 1-button muting
- Multi-volt operation with transformer 8-12 V AC/DC or 230 V AC
- Can also be used in mixed systems thanks to the built-in transformer (230 VAC power supply/8 V triggering)
- Eco-friendly operation due to minimal standby losses
- Parallel connection to other doorbells possible (see circuit overview on page 159)
- Adjustable volume: max. 86 dB(A)
- Tested acc. to VDE
- Operating temperature: 5 °C to 40 °C
- **Dimensions**: 150 x 115 x 45 mm



#### Electronic doorbell

Type: CROMA 230A • Art. no. 43175
• Door colour: white / high-gloss silver



#### Electronic doorbell

Type: CROMA 230A-a/w • Art. no. 43190

• Door colour: white / silver

**Note:** With a 230 V AC power supply, an all-pole mains switch must be provided in the electrical building installation in accordance with the applicable standard. The built-in transformer is not suitable or intended for the operation of electrical door releases! If triggering with 230 V AC, only use suitable 230 V buttons!



## **CROMA** 231 ELECTRONIC DOORBELL

- 17 polyphonic melodies
- Infinite volume adjustment
- Differentiation between 2 calls
- 1-button muting
- Multi-volt operation with transformer 8-12 V AC/DC or 230 V AC
- Can also be used in mixed systems thanks to the built-in transformer (230 VAC power supply/8 V triggering)
- Eco-friendly operation due to minimal standby losses
- Parallel connection to other doorbells possible (see circuit overview on page 159)
- Adjustable volume: max. 86 dB(A)
- Tested acc. to VDE
- Operating temperature: 5°C to 40°C
- **Dimensions**: 191 x 163 x 51 mm



#### **Electronic doorbell**

Type: CROMA 231A • Art. no. 43177

• Door colour: white / silver



#### **Electronic doorbell**

Type: CROMA 231A ws/ws • Art. no. 43195

• Door colour: white / white



#### **Electronic doorbell**

Type: CROMA 231A ws/si • Art. no. 43196

• Door colour: white / silver



#### **Electronic doorbell**

Type: CROMA 231A ws/sw • Art. no. 43197

• Door colour: white / black

#### Accessories



#### Mains adapter

Type: NA 9V-GPE • Art. no. 43399

- Suitable for wireless doorbells MISTRAL 300, 600, 650 / ECHO 120 / CROMA 100 and wireless doorbell button MISTRAL SE03
- Colour: black
- Matching plug included
- When using on CROMA: disconnect the plug and connect directly to terminals
- Output: 9 V DC
- 9 V DC max. 0.5 A (4.5 W) / 230 V AC (Schuko/Euro)
- 1.75-m supply cable

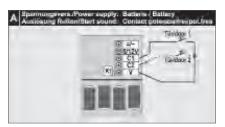


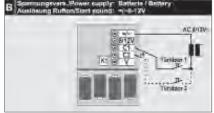
#### **MISTRAL** magnetic contact

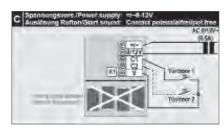
Type: MISTRAL MK • Art. no. 43394

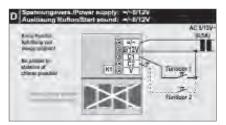
- Activates MISTRAL transmitters or electronic doorbells
- Plastic colour: white
- Compatible with: MISTRAL transmitter 03 / MISTRAL 650 / CROMA 50 / CROMA 100, 150, 230 / ECHO UP-GONG 120 WS (with a DC power supply)
- 2-m connection cable
- Dimensions: 60 x 17 x 11 mm

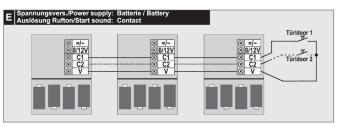
#### **CIRCUIT OVERVIEW FOR CROMA 100**

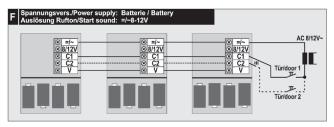


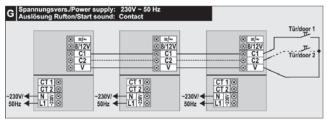






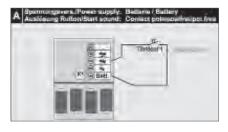


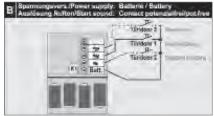


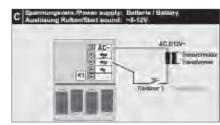


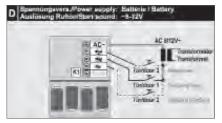


## **CIRCUIT OVERVIEW FOR CROMA** 50/225A



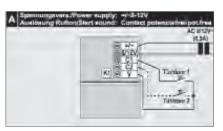


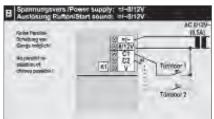


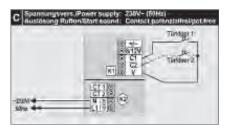


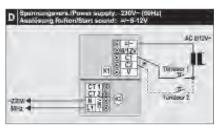
For other connection options, see the operating instructions.

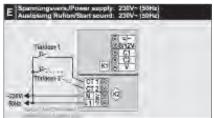
## **CIRCUIT OVERVIEW FOR CROMA** 230/231

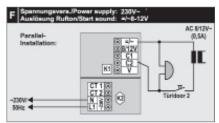


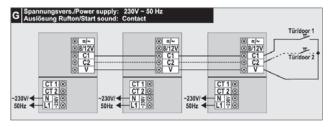


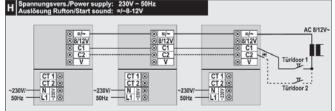












#### Note:

- With a 230 V AC power supply, an all-pole mains switch must be provided in the electrical building installation in accordance with the applicable standard.
- The built-in transformer is not suitable or intended for the operation of electrical door releases. You may need to supply an additional transformer (e.g. GT 3148).
- If triggering with 230 V AC, only use suitable 230 V buttons.



#### **Electronic doorbell**

Type: CALIMA 50 • Art. no. 43690 (DE), 43691 (GB), 43692 (FR), 43693 (NL), 43694 (BE), 43694 (CH)

- Wall-mounting
- Colour: white / black
- 2-button operation (menu button and select button)
- Menu navigation with voice message (German)
- 13 varied melodies
- Differentiation between 2 calls
- Snooze function: 1, 3 or 9 hours of time-limited muting

- Power supply: 3 x 1.5 V AA batteries or via 8 – 12 V AC / DC terminals
- Option to connect two traditional doorbell buttons
- Temperature range: 5°C to 40°C
- Use: In dry rooms only
- Diameter 105 mm, depth 40.5 mm





# FLUSH MOUNTED DOOR BELLS



## **FLUSH-MOUNTED DOORBELLS 120WS AND 230WS**

- Mounting plate and frame included
- Mute function

- 17 polyphonic ringtones
- Adjustable volume: max. 83 dB(A)
- **Dimensions**: 80 x 80 x 43 mm
- Installation depth: 31 mm

#### Flush-mounted doorbell 120ws

Type: UP-GONG 120ws • Art. no. 43701

- Colour: white, similar to RAL 9003
- 8-12 V AC / DC / 0.280 A

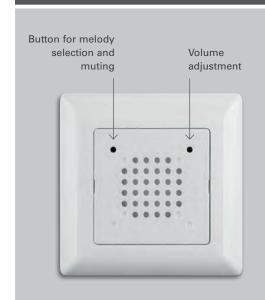
#### Flush-mounted doorbell 230ws

Type: UP-GONG 230ws • Art. no. 43706

- Colour: white, similar to RAL 9003
- 230 V AC / 0.080 A



#### FLUSH-MOUNTED DOORBELL



#### Flush-mounted doorbell

Type: UP-GONG 120ws Art. no. 43701

- Colour: white (similar to RAL 9003)
- Mounting plate and frame included
- 17 polyphonic ringtones
- Adjustable volume max. 83 dB(A)
- Mute function
- 8 12 V AC / DC / 0.280 A
- Installation depth: 31 mm
- Dimensions: 80 x 80 x 43 mm

#### Flush-mounted doorbell

Type: UP-GONG 230ws Art. no. 43706

- Colour: white (similar to RAL 9003)
- Mounting plate and frame included
- 17 polyphonic ringtones
- Adjustable volume max. 83 dB(A)
- Mute function
- 230 V AC / 0.080 A
- Installation depth: 31 mm
- Dimensions: 80 x 80 x 43 mm

#### FLUSH-MOUNTED BELL



#### Flush-mounted bell

Type: UP-LTW 120ws Art. no. 43711

- Small bell
- Colour: white (similar to RAL 9003)
- Mounting plate and frame included
- Max. volume 80 dB(A)
- Continuous operation
- 8-12 V AC / 0.320 A
- Installation depth: 31 mm
- Dimensions: 80 x 80 x 43 mm

#### Flush-mounted bell

Type: UP-LTW 230ws Art. no. 43716

- Small bell
- Colour: white (similar to RAL 9003)
- Mounting plate and frame included
- Max. volume 80 dB(A)
- Continuous operation
- 230 V AC / 0.045 A
- Installation depth: 31 mm
- Dimensions: 80 x 80 x 43 mm



#### **FLUSH-MOUNTED** BUZZERS



#### Flush-mounted buzzer

Type: UP-SU 120ws Art. no. 43721

- Small buzzer
- Colour: white (similar to RAL 9003)
- Volume: max. 80 dB(A)
- Short-term operation (SO) 5/55 s
- 8-12 V AC / 0.43 A
- Installation depth: 31 mm
- Dimensions: 80 x 80 x 43 mm

#### Flush-mounted buzzer

Type: UP-SU 230ws Art. no. 43726

- Small buzzer
- Colour: white (similar to RAL 9003)
- Volume: max. 80 dB(A)
- Short-term operation (SO) 5/55 s
- 230 V AC / 0.022 A
- Installation depth: 31 mm
- Dimensions: 80 x 80 x 43 mm

#### FLUSH-MOUNTED SIGNAL GENERATORS



#### Signal generator

Type: SG 851 8-12 V AC Art. no. 24012

- Signal generators with the same design can be connected in parallel
- Colour: white
- Mounting plate and frame included
- Max. volume 70 dB(A)
- Discreet electronic alpha tone
- 8-12 V AC / 0.45 A
- For use in switch junction boxes with a depth of at least 43 mm
- Dimensions: 80 x 80 x 48 mm

#### Signal generator

Type: SG 851 230 V AC Art. no. 24017

- Signal generators with the same design can be connected in parallel
- Colour: white
- Mounting plate and frame included
- Max. volume 70 dB(A)
- Discreet electronic alpha tone
- 230 V ~/ 0.9 A
- For use in switch junction boxes with a depth of at least 43 mm
- Dimensions: 80 x 80 x 48 mm

**Note:** Flush-mounted doorbells 120 and 230 also offer the functions of the SG 851 8–12 V and SG 851 230 V. The SG 851 8–12 V AC and SG 851 230 V AC models do not fit the switch ranges of other manufacturers.



# ELECTRO-MECHANICAL DOORBELLS



# Robust and impossible to ignore.

The rich, two-tone sound of the electromechanical doorbell is created by real bell steel. The device can be operated either with 230 V or via a traditional transformer.























Sound bars made of real **bell steel** 

#### **Electromechanical doorbells**



#### **Doorbell**

Type: GONG 065 Bw • Art. no. 44065

- Housing: white / silver
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8 12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5 / 15 s
- Dimensions: 136 x 150 x 50 mm



#### Doorbell

Type: GONG 565 Bw/sim • Art. no. 44565

- Housing: white / silver
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8 12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5 / 15 s
- Dimensions: 136 x 150 x 50 mm



#### Doorbell

Type: GONG 665 Bw/bl • Art. no. 44665

- Housing: white
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8 12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5 / 15 s
- Dimensions: 136 x 150 x 50 mm



#### Doorbell

Type: GONG 165 Bw • Art. no. 44165

- · Housing: white
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8 12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5 / 15 s
- Dimensions: 118 x 118 x 47 mm



#### **Doorbell**

Type: GONG 265 w • Art. no. 44265

- · Housing: white
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8-12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5 / 15 s
- Dimensions: 118 x 118 x 38 mm



#### **Electromechanical doorbells**



#### Doorbell

Type: GONG 465A BW/sw • Art. no. 44465

- Box: high-gloss white
- Front: high-gloss black
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8-12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5/15 s
- Dimensions: 118 x 118 x 47 mm



#### Doorbell

Type: GONG 465A BW/w • Art. no. 44466

- Box: high-gloss white
- Front: high-gloss white
- With compartment for 9 V PP3 battery (ALKALINE), not included
- Operation with external transformer possible
- 8-12 V AC (12 VA) or 9 V (PP3 battery: type 6LR61)
- Max. 80 dB(A)
- SO max. 5/15 s
- Dimensions: 118 x 118 x 47 mm



#### **Doorbell**

Type: GONG 465A-230 ws/sw • Art. no. 44475

- Box: high-gloss white
- Front: high-gloss black
- 230 V AC
- Max. 80 dB(A)
- SO max. 5/15 s
- Dimensions: 118 x 118 x 47 mm



#### Doorbell

Type: GONG 465A-230 ws/ws • Art. no. 44476

- Box: high-gloss white
- Front: high-gloss white
- 230 V AC
- Max. 80 dB(A)
- SO max. 5/15 s
- Dimensions: 118 x 118 x 47 mm



#### Doorbell

Type: GONG 569-230 V • Art. no. 44179

- Housing: white
- Base plate: black
- 230 V AC (0.06 A)
- Max. 80 dB(A)
- Dimensions: 170 x 105 x 50 mm



## Electromechanical doorbells



#### Doorbell

Type: GONG 169 Bw • Art. no. 44169

- Housing: white
- Operation with external transformer possible
- 8 12 V AC (12 VA) or
- 4 x 1.5 V batteries, type C (not included)
- Max. 80 dB(A)
- SO max. 5/15 s
- Dimensions: 169 x 104 x 49 mm



#### Doorbell

Type: GONG 169 DKw • Art. no. 44171

- · Housing: white
- Operation with external transformer possible
- 8 12 V AC (12 VA)
- Choice of two tone or continuous tone
- Max. 80 dB(A)
- Dimensions: 169 x 104 x 49 mm



#### **Doorbell**

Type: GONG 169 TRw • Art. no. 44172

- Housing: white
- Operation with built-in transformer
- 8 12 V AC (12 VA) or primary: 230 V
- Max. 80 dB(A)
- Dimensions: 169 x 104 x 49 mm



#### Doorbell

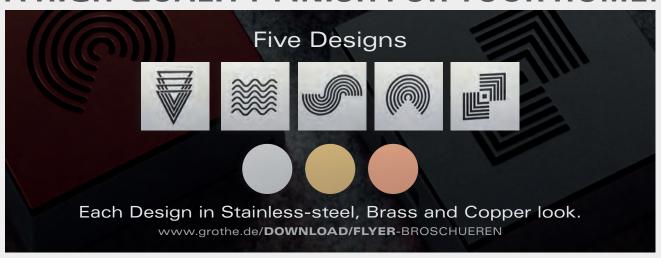
Type: GONG 569 Bw • Art. no. 44569

- Housing: white
- With compartment for 4 x type C batteries (not included)
- Operation with external transformer possible
- 8 12 V AC (12 VA) or 4 x 1.5 V batteries, type C
- Max. 80 dB(A)
- SO max. 5/15 s
- Dimensions: 171 x 105 x 54 mm

# GONG 465A TWO-TONE DOORBELL



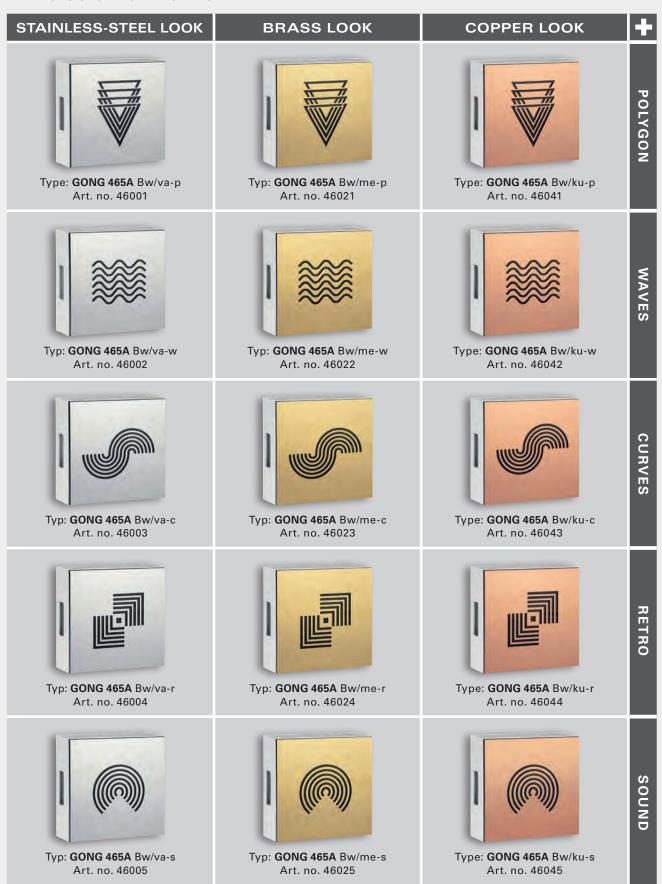
## A HIGH-QUALITY FINISH FOR YOUR HOME.



#### **ELECTROMECHANICAL TWO-TONE DOORBELL**

• Clear, rich tone (real bell steel) • High-quality stainless-steel, brass and copper look with linear patterns • Maximum volume: 80 dB(A) • Can be powered by batteries • Power supply: 9 V PP3 battery • External power supply: 8 – 12 V AC (12 VA) • Short-term operation: 5 / 15 s

• Dimensions: 116 x 116 x 46 mm







#### Doorbells that offer more than just sound.

Our tried-and-tested electronic and electromechanical doorbells not only provide a clear sound, they also act as stylish decor. With their real wood veneer, they are the ideal choice to create a natural and harmonious ambience in your living space. By choosing oak, cherry or walnut, you can adapt the doorbell to perfectly reflect your personal style and interior design.



CROTHE

# Wooden CROMA GUADRO GONGS CROMA CROTHE CROTHE GROTHE

#### CROMA 100A AND 231A • ELECTRONIC DOORBELLS

- 17 polyphonic melodies Infinite volume adjustment Differentiation between 2 calls
- 1-button muting Parallel connection to other doorbells possible Adjustable volume: max. 86 dB(A)
- Operating temperature: 5 °C to 40 °C Dimensions: 191 x 163 x 51 mm



CROMA 100A ws/ei Real oak veneer

Typ: CROMA 100A ws/ei Art. no. 43782



CROMA 100A ws/ki Real cherry veneer

Typ: CROMA 100A ws/ki Art. no. 43781



CROMA 100A ws/wa Real walnut veneer

Typ: CROMA 100A ws/wa Art. no. 43783

- Operation with batteries or transformer Long battery life (normal operation approx. 3-5 years)
- $\bullet$  Acoustic signalling of low battery  $\bullet$  Power supply: 8 –12 V AC / DC or 4 x 1.5 V batteries (LR14 / C, alkaline, not included)

#### CROMA 231A ws/ei Real oak veneer

Typ: CROMA 231A ws/ei Art. no. 43802

#### CROMA 231A ws/ki Real cherry veneer

Typ: CROMA 231A ws/ki Art. no. 43801

#### CROMA 231A ws/wa Real walnut veneer

Typ: CROMA 231A ws/wa Art. no. 43803

• Multi-volt operation with transformer 8 – 12 V AC/DC or 230 V AC can also be used in mixed systems thanks to the built-in transformer (230 V AC power supply/8 V triggering) • Eco-friendly operation due to minimal standby losses • Tested acc. to VDE

#### QUADRO 100 • ELECTROMECHANICAL TWO-TONE DOORBELL

- Clear, rich tone (real bell steel) Maximum volume: 80 dB(A) Can be powered by 9 V block battery
- External power supply: 8 12 V AC (12 VA) Short-term operation: 5 / 15 s Dimensions: 116 x 116 x 46 mm



Quadro 100 Bw/ei Real oak veneer

Typ: GONG Quadro 100 Bw/ei Art. no. 46121



Quadro 100 Bw/ki Real cherry veneer

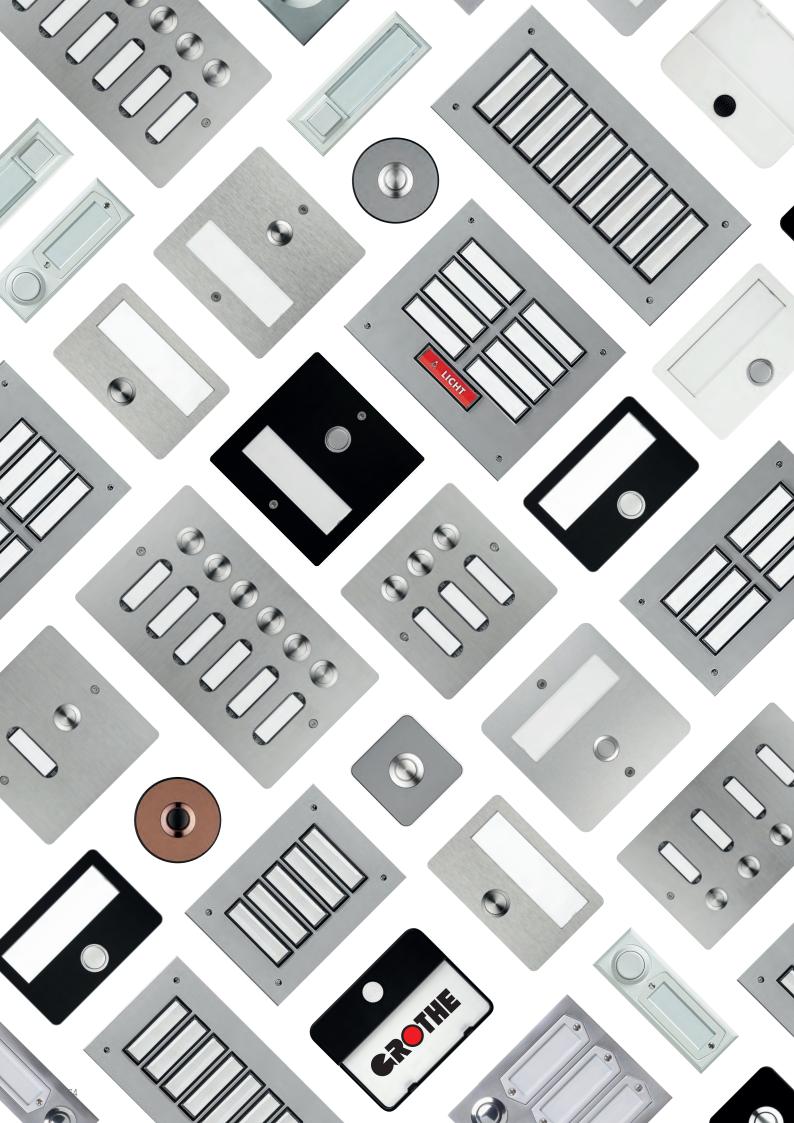
Typ: GONG Quadro 100 Bw/ki Art. no. 46101



#### Quadro 100 Bw/wa Real walnut veneer

Typ: GONG Quadro 100 Bw/wa Art. no. 46141





# BELL BUTTONS, DOORBELL PANELS, CONTACTS

The doorbell button creates the first impression for any visitor entering a building. With the individual, top-quality doorbell buttons and contacts from Grothe, you can add your own personal touch to the building's entrance. For single-family and multi-family buildings.



# CONNECTING THE OUTSIDE TO THE INSIDE.

For over **130 years** we have been continuously developing **top-quality signalling products**. Our **doorbell buttons and contacts** with their **reliable signal transmission** have been announcing visitors at front doors for decades.

**Excellent materials** and **precise workmanship** make them a long-term companion – in your building too.



# RELIABLE IN CONTINUOUS OPERATION

Our doorbell buttons are built to accompany you over **many years**. This is why we thoroughly **check** that all **our doorbell buttons** reliably send a signal to the connected doorbell.



# RELIABLE FUNCTIONALITY

The buttons are characterised by **optimum switching behaviour** with **tactile feedback** and **extremely low bounce times** – ideal for use in bus systems.



## THE PERFECT DESIGN FOR EVERY FACADE

We manufacture a wide range of **doorbell buttons in various designs and materials** to perfectly match your house facade. We offer doorbell buttons made of **stainless steel**, **brass**, **aluminium**, **gold**, **bronze** or **weather-resistant thermoplast**.

# **DOORBELL BUTTON**

# PICCOLO PIAZZA & CERCHIO

The new Piccolo doorbell button series has a modern design and is available in different shapes and surfaces. Round, square, silver, gold or black – the series has something for every building facade. The buttons are suitable for classic doorbell systems.















# **CLASSIC DESIGNS**

Our classic designs can be found in many doorways throughout Germany. The first doorbell buttons were manufactured from cast material and wood in 1892, followed by the first light, plastic buttons in the 1930s. Since then, there have been many different versions in a wide range of designs. But a classic never goes out of fashion!



# STAINLESS STEEL

Our doorbell buttons made of solid stainless steel are particularly robust and vandal proof. Ideal for highly frequented properties in urban areas.





# **THERMOPLAST**

The most popular and most durable material of the 20th century is plastic. It allows many different designs and is extremely light, electrically insulating and inexpensive. Our range of thermoplast doorbell buttons is as varied as the properties of the material.

So, you are interested in the design of the buttons? You can find numerous 3D models on the product pages on our website.











# Perfect for retrofitting – from analogue to wireless.











Thanks to the simple and timeless design and the choice of various surfaces, this doorbell button is ideal for many different facades.



# **Great LED illumination –** for initial installation or retrofitting

The classic doorbell button has a large, illuminated LED name plate.









# Large name plate – low price.

This modern, inexpensive and reliable doorbell button is ideal for in-house use. For example, residential or office blocks, loft apartments, practices and studios.

# High-quality surface – timeless design



Timeless, simple and robust.

An elegant doorbell button for single-family homes, ideal for refurbished old buildings or modern new buildings. The stainless-steel design rounds off the appearance of a building's front door perfectly.

# WIRELESS DOORBELL BUTTONS







# **FOR RETROFITTING**

From analogue to wireless. Thanks to the simple and timeless design and the choice of various surfaces, this doorbell button is ideal for many different facades.



This illustration roughly corresponds to the actual size

#### THE PERFECT COMBINATION:

ETA FUNK and wireless doorbells of the **CALIMA** series



Eta Funk E.g. CALIMA 800

- Different surfaces either made of aluminium, smooth or in stainlesssteel look, or made of weatherresistant plastic, in black or white
- Name plate (illuminated easy to change from the front)
- For all wireless doorbells of the MISTRAL, ECHO and CALIMA series

#### **WIRELESS DOORBELL BUTTONS**

- Surface- or flush-mounting
- LED name plate 8-12 V AC / DC, 10 mA
- Name plate easy to change from the front
- With matching PROTACT button (IP44)
- Frequency: 868.35 MHz

- Wireless range: 500 m in the open
- Power supply: 2 x 1.5 V type AAA (not included in delivery) or external power supply
- Operating temperature: -10°C to 50°C
- **Dimensions**: 130 x 127 x 17 mm



# Aluminium wireless doorbell button in a stainless-steel look

**Surface-mounting** • Type: ETA Funk AP VA • Art. no. 43451 **Flush-mounting** • Type: ETA Funk UP VA • Art. no. 43455

- Surface: aluminium in stainless-steel look
- Incl. PROTACT 150 VA and surface-mounting frame or flushingmounting box



#### Aluminium wireless doorbell button

**Surface-mounting** • Type: ETA Funk AP ALU • Art. no. 43452 **Flush-mounting** • Type: ETA Funk UP ALU • Art. no. 43456

- Surface: aluminium EV1
- Incl. PROTACT 110 AL and surface-mounting frame or flushingmounting box



#### White wireless doorbell button

**Surface-mounting •** Type: ETA Funk AP weiß • Art. no. 43453 **Flush-mounting •** Type: ETA Funk UP weiß • Art. no. 43457

- Surface: plastic, matt white
- Incl. PROTACT 710 AL and surface-mounting frame or flushingmounting box



#### Black wireless doorbell button

**Surface-mounting** • Type: ETA Funk AP schwarz • Art. no. 43454 **Flush-mounting** • Type: ETA Funk UP schwarz • Art. no. 43458

- Surface: plastic, matt black
- Incl. PROTACT 710 AL and surface-mounting frame or flushingmounting box



# **DOORBELL BUTTON**





# MADE OF V2A STAINLESS STEEL



Timeless, simple and robust. An elegant doorbell button for single-family homes, ideal for refurbished old buildings or modern new buildings. The design and flawless stainless-steel surface round off the appearance of a building's front door perfectly.



The stainlesssteel surface is hygienic and easy to clean.



(W) 60 x (H) 120 x (D) 18 mm – this illustration roughly corresponds to the actual size

#### ETA 520/521 V2A STAINLESS STEEL

- Surface-mounting
- Front panel: brushed V2A stainless steel, thickness: 2 mm
- LED name plate: 8 16 V AC / DC 30 mA
- Name plate changed easily from the front
- PROTACT 150 VA doorbell button with tactile feedback
- Power supply: PROTACT max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Dimensions: 60 x 120 x 18 mm



#### ETA 520 V2A doorbell button

Type: ETA 520 V2A AP ws • Art. no. 55520

• Incl. surface-mounting frame in white





#### ETA 521 V2A doorbell button

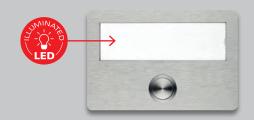
Type: ETA 521 V2A AP sw • Art. no. 55521

• Incl. surface-mounting frame in black



#### **ETA 640 LED • LARGE NAME PLATE**

- · Surface-mounting
- Surface-mounting frame included
- LED name plate 8 12 V AC / DC, 10 mA
- . Name plate easy to change from the front
- PROTACT doorbell button with tactile feedback
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- **Dimensions**: 80 x 120 x 22 mm



#### ETA 640 LED doorbell button

Type: ETA 640 LED AP • Art. no. 55640

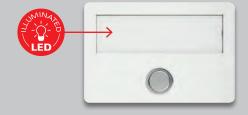
- Aluminium doorbell button in a stainless-steel look
- Incl. PROTACT 750 VA and surface-mounting frame (black)



#### ETA 641 LED doorbell button

Type: ETA 641 LED AP • Art. no. 55641

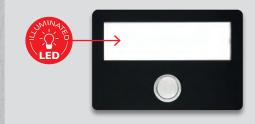
- Doorbell button with aluminium surface
- Incl. PROTACT 710 AL and surface-mounting frame (black)



#### ETA 642 LED doorbell button

Type: ETA 642 LED AP • Art. no. 55642

- Doorbell button with plastic surface, matt white
- Incl. PROTACT 710 AL and surface-mounting frame (white)



#### ETA 643 LED doorbell button

Type: ETA 643 LED AP • Art. no. 55643

- · Doorbell button with plastic surface, matt black
- Incl. PROTACT 710 AL and surface-mounting frame (black)

PLENTY OF SPACE **LED** name plate FOR YOUR LABEL Approx. 30 x 100 mm **PROTACT** doorbell button with tactile feedback

**CROTHE** 





### WITH XXL NAME PLATE

This modern, inexpensive and reliable doorbell button is ideal for in-house use. For example, residential or office blocks, loft apartments, practices and studios.







LED name plate approx. 33 x 74 mm

#### **ETA 650 LED • XXL NAME PLATE**

- Doorbell panel with plastic surface
- Surface-mounting
- Suitable for indoor mounting
- Large name plate with LED illumination
- LED: 8-12 V AC / DC, 10 mA
- Name plate easy to change from the front
- Power supply: max. 12 24 V AC / DC, 5 mA 1.0 A
- **Dimensions**: 60 x 80 x 20 mm



#### ETA 651 LED doorbell button

Type: ETA 651 LED SW • Art. no. 55651

• Plastic surface: matt black



#### ETA 650 LED doorbell button

Type: ETA 650 LED WS • Art. no. 55650

• Plastic surface: matt white

## DOORBELL PANELS



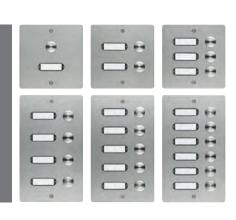
Tried-and-tested elements of a doorbell system in an elegant and robust design. The doorbell panels of the ETA 400/500 V2A series create a neat and elegant impression at the front door. The rust-proof stainless steel ensures absolute weather resistance and still looks like new many years later.

#### **ETA 400/500 V2A SERIES**

- For surface or flush-mounting
- Surface-mounting frame or flush-mounting box included
- Front panel in brushed V2A stainless steel
- Material thickness: 2 mm

(3)

Further information from page 76



## MADE OF STAINLESS STEEL, ALUMINIUM AND THERMOPLAST



## ALUMINIUM

#### **ANODISED SILVER**



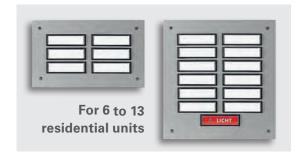
#### 1-COLUMN ETA SERIES

- Can be illuminated
- Weather resistant
- Further information from page 80



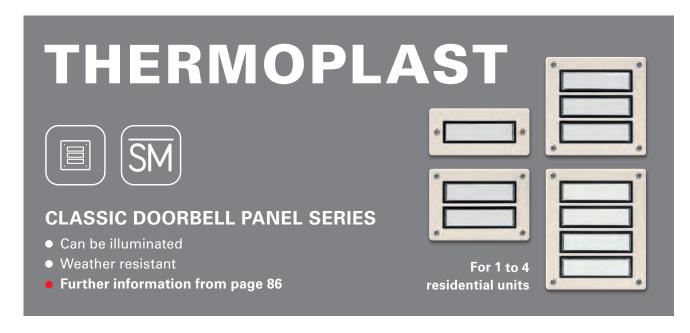
#### 2-COLUMN ETA SERIES

- Can be illuminated
- Weather resistant
- Further information from page 82









## **DOORBELL PANELS**





## MADE OF STAINLESS STEEL

#### ETA 500 V2A • 1 COLUMN • SURFACE-MOUNTING

- Surface-mounting
- · Surface-mounting frame in black included
- Front panel in brushed V2A stainless steel
- Material thickness: 2 mm

- LED name plate: 8 16 V AC / DC 30 mA
- . Name plate easy to change from the front
- PROTACT 150 VA doorbell button with tactile feedback
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)



#### V2A doorbell panels surface-mounted

Type: ETA 501 V2A AP • Art. no. 55501

- V2A doorbell panel for one residential unit
- Dimensions: 130 x 130 x 19 mm



#### V2A doorbell panels surface-mounted

Type: ETA 502 V2A AP • Art. no. 55502

- V2A doorbell panel for two residential units
- Dimensions: 130 x 130 x 19 mm



#### V2A doorbell panels surface-mounted

Type: ETA 503 V2A AP • Art. no. 55503

- V2A doorbell panel for three residential units
- Dimensions: 130 x 130 x 19 mm



#### V2A doorbell panels surface-mounted

Type: ETA 504 V2A AP • Art. no. 55504

- V2A doorbell panel for four residential units
- Dimensions: 220 x 130 x 19 mm

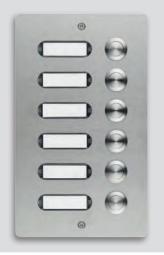
#### ETA 500 V2A • 1 COLUMN • SURFACE-MOUNTING



#### V2A doorbell panels surface-mounted

Type: ETA 505 V2A AP • Art. no. 55505

- V2A doorbell panel for five residential units
- Dimensions: 220 x 130 x 19 mm



#### V2A doorbell panels surface-mounted

Type: ETA 506 V2A AP • Art. no. 55506

- V2A doorbell panel for six residential units
- Dimensions: 220 x 130 x 19 mm





## DOORBELL PANELS





## MADE OF STAINLESS STEEL

#### ETA 400 V2A • 1 COLUMN • FLUSH-MOUNTING

- Flush-mounting
- Including flushing-mounting box in black
- Front panel in brushed V2A stainless steel
- Material thickness: 2 mm

- LED name plate: 8-16 V AC / DC 30 mA
- Name plate easy to change from the front
- PROTACT 150 VA doorbell button with tactile feedback
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)



#### V2A doorbell panel flush-mounted

Type: ETA 401 V2A UP • Art. no. 55401

- V2A doorbell panel for one residential unit
- Dimensions: 130 x 130 x 45 mm



#### V2A doorbell panel flush-mounted

Type: ETA 402 V2A UP • Art. no. 55402

- V2A doorbell panel for two residential units
- Dimensions: 130 x 130 x 45 mm



#### V2A doorbell panel flush-mounted

Type: ETA 403 V2A UP • Art. no. 55403

- V2A doorbell panel for three residential units
- Dimensions: 130 x 130 x 45 mm

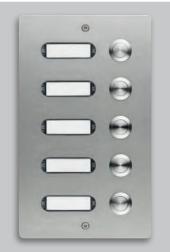


#### V2A doorbell panel flush-mounted

Type: ETA 404 V2A UP • Art. no. 55404

- V2A doorbell panel for four residential units
- Dimensions: 220 x 130 x 45 mm

#### ETA 400 V2A • 1 COLUMN • FLUSH-MOUNTING



#### V2A doorbell panel flush-mounted

Type: ETA 405 V2A UP • Art. no. 55405

- V2A doorbell panel for five residential units
- Dimensions: 220 x 130 x 45 mm



#### V2A doorbell panel flush-mounted

Type: ETA 406 V2A UP • Art. no. 55406

- V2A doorbell panel for six residential units
- Dimensions: 220 x 130 x 45 mm





## **DOORBELL PANELS**





## MADE OF ALUMINIUM

#### DOORBELL PANELS • 1 COLUMN • FLUSH-MOUNTING

- Flush-mounting
- · Aluminium, anodised silver
- Can be illuminated with SOFFITTE 2130 or SOFFITTE 2030
- "LICHT" (LIGHT) sign included (red)
- Weather resistant

- Temperature range: -20 °C to 50 °C
- Power supply: max. 24 V AC (1.5 A) / 24 V DC (1.0 A)
- Mounting holes: each 16 mm from the outer edge
- Soffitte (page 204)
- Aluminium flush-mounted box (page 84/85) not included, order separately!



#### 1-column doorbell panel

Type: ETA 801 EV1 • Art. no. 55801

- 1 rectangular button
- For flush-mounted box UPK 801
- Dimensions: 72 x 121 mm



#### 1-column doorbell panel

Type: ETA 802 EV1 • Art. no. 55802

- 2 rectangular buttons
- For flush-mounted box UPK 802
- Dimensions: 96 x 121 mm



#### 1-column doorbell panel

Type: ETA 803 EV1 • Art. no. 55803

- 3 rectangular buttons
- For flush-mounted box UPK 803
- Dimensions: 120 x 121 mm



#### 1-column doorbell panel

Type: ETA 804 EV1 • Art. no. 55804

- 4 rectangular buttons
- For flush-mounted box UPK 804
- Dimensions: 144 x 121 mm



#### 1-column doorbell panel

Type: ETA 805 EV1 • Art. no. 55805

- 5 rectangular buttons
- For flush-mounted box UPK 805
- Dimensions: 168 x 121 mm



#### DOORBELL PANELS \* 1 COLUMN \* FLUSH-MOUNTING



## **DOORBELL PANELS**



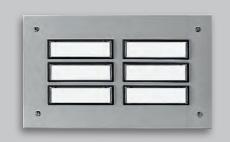


## MADE OF ALUMINIUM

#### DOORBELL PANELS • 2 COLUMNS • FLUSH-MOUNTING

- Flush-mounting
- · Aluminium, anodised silver
- Can be illuminated with SOFFITTE 2130 or SOFFITTE 2030
- "LICHT" (LIGHT) sign included (red)
- Weather resistant

- Temperature range: -20°C to 50°C
- Power supply: max. 12 V AC (5 mA-1.5 A) / 12 V DC (5 mA-1.0 A)
- Mounting holes: each 16 mm from the outer edge
- Soffitte (page 204) and aluminium flush-mounted box (page 85) not included, order separately!



#### 2-column doorbell panel

Type: ETA 833 EV1 • Art. no. 55826

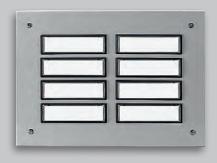
- 6 rectangular buttons in 2 columns
- For flush-mounted box UPK 833
- Dimensions: 120 x 202 mm



#### 2-column doorbell panel

Type: ETA 834 EV1 • Art. no. 55827

- 7 rectangular buttons in 2 columns
- For flush-mounted box UPK 834/844
- Dimensions: 144 x 202 mm



#### 2-column doorbell panel

Type: ETA 844 EV1 • Art. no. 55828

- 8 rectangular buttons in 2 columns
- For flush-mounted box UPK 834/844
- Dimensions: 144 x 202 mm



#### 2-column doorbell panel

Type: ETA 845 EV1 • Art. no. 55829

- 9 rectangular buttons in 2 columns
- For flush-mounted box UPK 845/855
- Dimensions: 168 x 202 mm



#### DOORBELL PANELS • 2 COLUMNS • FLUSH-MOUNTING



#### 2-column doorbell panel

Type: ETA 855 EV1 • Art. no. 55830

- 10 rectangular buttons in 2 columns
- For flush-mounted box UPK 845/855
- Dimensions: 168 x 202 mm



#### 2-column doorbell panel

Type: ETA 856 EV1 • Art. no. 55831

- 11 rectangular buttons in 2 columns
- For flush-mounted box UPK 856/866
- Dimensions: 192 x 202 mm



#### 2-column doorbell panel

Type: ETA 866 EV1 • Art. no. 55832

- 12 rectangular buttons in 2 columns
- For flush-mounted box UPK 856/866
- Dimensions: 192 x 202 mm



#### 2-column doorbell panel

Type: ETA 867 EV1 • Art. no. 55833

- 13 rectangular buttons in 2 columns
- For flush-mounted box UPK 867
- Dimensions: 216 x 202 mm

# ACCESSORIES FLUSH-MOUNTED BOXES

#### FLUSH-MOUNTED BOX FOR ETA 801-809, 1 COLUMN

RECTANGULAR BUTTON	Flush-mounted box for ETA 801 EV1 Type: UPK 801 • Art. no. 55881	Dimensions: 52 x 104 x 54 mm
2 RECTANGULAR BUTTONS	Flush-mounted box for ETA 802 EV1 Type: UPK 802 • Art. no. 55882	Dimensions: 76 x 104 x 54 mm
3 RECTANGULAR BUTTONS	Flush-mounted box for ETA 803 EV1 Type: UPK 803 • Art. no. 55883	Dimensions: 100 x 104 x 54 mm
4 RECTANGULAR BUTTONS	Flush-mounted box for ETA 804 EV1 Type: UPK 804 • Art. no. 55884	Dimensions: 124 x 104 x 54 mm
5 RECTANGULAR BUTTONS	Flush-mounted box for ETA 805 EV1 Type: UPK 805 • Art. no. 55885	Dimensions: 148 x 104 x 54 mm
6 RECTANGULAR BUTTONS	Flush-mounted box for ETA 806 EV1 Type: UPK 806 • Art. no. 55886	Dimensions: 172 x 104 x 54 mm
7 RECTANGULAR BUTTONS	Flush-mounted box for ETA 807 EV1 Type: UPK 807 • Art. no. 55887	Dimensions: 196 x 104 x 54 mm
RECTANGULAR BUTTONS	Flush-mounted box for ETA 808 EV1 Type: UPK 808 • Art. no. 55888	Dimensions: 220 x 104 x 54 mm
9 RECTANGULAR BUTTONS	Flush-mounted box for ETA 809 EV1 Type: UPK 809 • Art. no. 55889	Dimensions: 244 x 104 x 54 mm





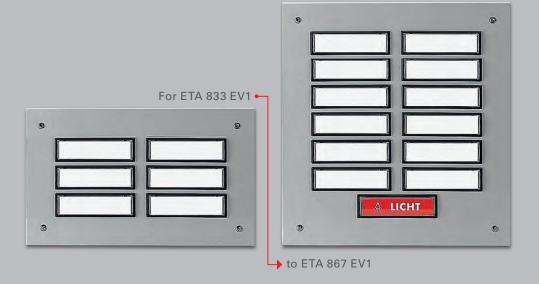
#### FLUSH-MOUNTED BOX FOR ETA 833-867, 2 COLUMNS

120011 MOONTED BOXTON EN 1000 0007, <b>2 0020</b> mile			
1	RECTANGULAR BUTTON	Flush-mounted box for ETA 833 EV1 Type: UPK 833 • Art. no. 55893	Dimensions: 101 x 185 x 56 mm
7/8	RECTANGULAR BUTTON	Flush-mounted box for ETA 834/844 EV1 Type: UPK 834/844 • Art. no. 55894	Dimensions: 125 x 185 x 54 mm
9/10	RECTANGULAR BUTTON	<b>Flush-mounted box</b> for ETA 845/855 EV1 Type: UPK 845/855 • Art. no. 55895	Dimensions: 149 x 185 x 54 mm
11/12	RECTANGULAR BUTTON	Flush-mounted box for ETA 856/866 EV1 Type: UPK 856/866 • Art. no. 55896	Dimensions: 173 x 185 x 54 mm
13	RECTANGULAR BUTTON	Flush-mounted box for ETA 867 EV1 Type: UPK 867 • Art. no. 55897	Dimensions: 197 x 185 x 54 mm





- Flush-mounting
- Aluminium
- 4 mounting lugs with thread
- Cable entry at the top and bottom





## **DOORBELL PANELS**





### MADE OF THERMOPLAST

#### DOORBELL PANELS • 1 COLUMN • SURFACE-MOUNTING

- Surface-mounting
- White
- Weather-resistant plastic
- Can be illuminated

- Temperature range: -20 °C to 50 °C
- Power supply: max. 12 V AC / DC (5 mA 1.5 A)
- Illumination: Soffitte 2130 (17 V / 0.1 A) or Soffitte 2030 LED. Not included. Order separately!



#### Classic doorbell panel

Type: ETA 631 WS • Art. no. 55631

- 1 rectangular button for surface-mounting
- Dimensions: 48 x 100 x 25 mm



#### Classic doorbell panel

Type: ETA 632 WS • Art. no. 55632

- 2 rectangular buttons for surface-mounting
- Dimensions: 72 x 100 x 25 mm



#### Classic doorbell panel

Type: ETA 633 WS • Art. no. 55633

- 3 rectangular buttons for surface-mounting
- Dimensions: 96 x 100 x 25 mm



#### Classic doorbell panel

Type: ETA 634 WS • Art. no. 55634

- 4 rectangular buttons for surface-mounting
- Dimensions: 120 x 100 x 25 mm



## $R \cdot E \cdot T \cdot R \cdot 0 \cdot F \cdot I \cdot T$

#### REPLACEMENT DEVICES FOR OLD GROTHE SYSTEMS WITH 4+N MULTI-WIRE TECHNOLOGY



#### **Door loudspeaker**

Type: TL 1145/500 • Art. no. 98450

- For the SINTHESI S2 series
- For 4+n technology
- Replacement for TS 6000
- TL cover required (see "Door stations" chapter)



#### **Adapter Grothe 6000**

Type: TLZ 1145/804 • Art. no. 98451

- For the SINTHESI S2 series (2 modules)
- For replacing Grothe 6000 with a SINTHESI door station
- Front made of anodised aluminium
- Dimensions: 175 x 285 x 10 mm

#### **Adapter Grothe 6000**

Type: TLZ 1145/806 • Art. no. 98452

- For the SINTHESI S2 series (3 modules)
- For replacing Grothe 6000 with a SINTHESI door station
- Front made of anodised aluminium
- Dimensions: 175 x 375 x 10 mm

#### **Adapter Grothe 6000**

Type: TLZ 1145/822 • Art. no. 98453

- For the SINTHESI S2 series (4 modules)
- For replacing Grothe 6000 with a SINTHESI door station
- Front made of anodised aluminium
- Dimensions: 175 x 465 x 10 mm





#### Power supply unit

Type: NG 786/399 • Art. no. 74169

- Replacement device for standard intercoms (e.g. NG229, NG299, NG329, NG399)
- 4+n technology
- Primary: 230 V AC, 50 Hz
- Secondary: 6 V DC / 0.12 A and 12 V AC / 0.40 A (+2.0 A intern)
- Dimensions: 90 x 54 x 55 mm (3 module widths)



#### Built-in door loudspeaker

Type: TL 5150/53 • Art. no. 74301

- Replacement device for 4+n standard intercom (e.g. TL 290, TL 290-12, TL 2690)
- 4+n technology
- Adjustable volume
- For operation in intercoms with 8 V DC and 6 V DC
- Dimensions: 75 x 111 x 30 mm



#### **Universal telephone HT 623**

Type: HT 623 • Art. no. 74333

- Telephone with handset
- Can be used with 4+n technology from all well-known manufacturers
- 1+n and 2+n from specific manufacturers, List see website
- With a button and door release button
- Electronic call or buzzer
- ABS plastic, white, matt

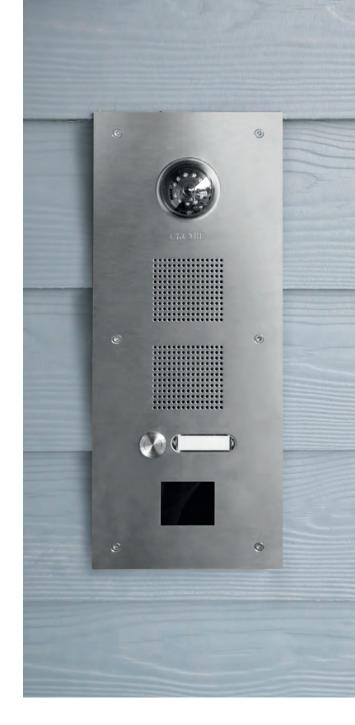


## CUSTOM ROBUSTA

Whether you want an audio or video intercom, the ROBUSTA will meet your needs. As it is a custom-made product, you can choose between different surfaces, grille patterns, buttons and name plates. There are numerous options and you can choose the size of the base panel. You can also have the name plates engraved if you wish.

Initial inquiries can be made via our **inquiry form**. We will then get in touch with you to discuss additional questions and details. You can find further information on the available options and the relevant form on the following pages.

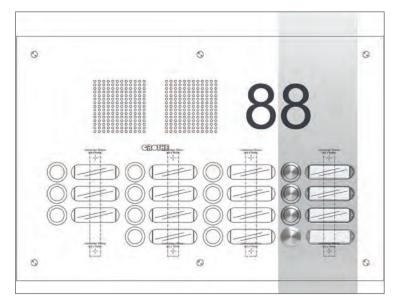
- Materials available for the front panel:
   brushed stainless steel (V2A),
   aluminium/anodised silver (EV1),
   powder-coated aluminium (RAL colour as desired),
   polished and PVD-coated stainless steel (GO)
- Flush-mounting possible with a suitable embedding box
- Surface-mounting upon request
- Option to install a loudspeaker, camera module, reader for access control, code lock module etc.
- Labels and engravings possible upon request







Prewired with a universal loudspeaker adapter for installing Grothe built-in loudspeakers (see page 208).







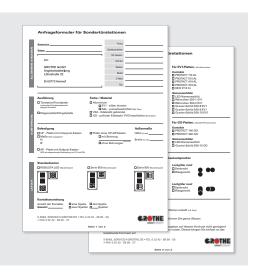


Example selection of available PROTACT buttons (from page 104) – more at www.grothe.de

## Inquiry form for custom-made products

Using the inquiry form, you can plan your custom door station and submit an inquiry to our Customer Service team.

The form is available as a downloadable PDF on the Grothe website at www.grothe.de/ROBUSTA, or from service@grothe.de



# DOORBELL BUTTON SERIES PICCOLO PIAZZA



## SMALL BUT ATTRACTIVELY DESIGNED

The new Piccolo doorbell button series has a modern design and is available in different shapes and surfaces. Round, square, silver, gold or black – the series has something for every building facade. The buttons are suitable for classic doorbell systems.

#### **PICCOLO PIAZZA**

- For surface-mounting
- The surface and frame are made of weather-resistant plastic
- With matching PROTACT button (IP44)
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- **Dimensions**: 50 x 50 x 17 mm



#### PICCOLO PIAZZA - white with a stainless-steel look

Type: Piccolo Piazza ws V2A • Art. no. 64180

- PROTACT 450 VA included
- Surface-mounting bracket: white
- · Surface: stainless-steel look



#### PICCOLO PIAZZA - black with a stainless-steel look

Type: Piccolo Piazza sw V2A • Art. no. 64181

- PROTACT 450 VA included
- Surface-mounting bracket: black
- · Surface: stainless-steel look



#### PICCOLO PIAZZA - white with a brass look

Type: Piccolo Piazza ws Messing • Art. no. 64182

- PROTACT 340 GO included
- Surface-mounting bracket: white
- · Surface: brass look



#### PICCOLO PIAZZA – black with a brass look

Type: Piccolo Piazza sw Messing A4 • Art. no. 64183

- PROTACT 340 GO included
- Surface-mounting bracket: black
- Surface: brass look



#### **PICCOLO PIAZZA** – white with a copper look

Type: Piccolo Piazza ws Kupfer • Art. no. 64184

- PROTACT 420 AL-KS included
- Surface-mounting bracket: white
- Surface: copper look



#### PICCOLO PIAZZA – black with a copper look

Type: Piccolo Piazza sw Kupfer • Art. no. 64185

- PROTACT 420 AL-KS included
- Surface-mounting bracket: black
- Surface: copper look



#### PICCOLO PIAZZA – white with a matt-black look

Type: Piccolo Piazza ws Schwarz • Art. no. 64186

- PROTACT 410 AL included
- Surface-mounting bracket: white
- Surface: matt black



#### PICCOLO PIAZZA – black with a matt-black look

Type: Piccolo Piazza sw Schwarz • Art. no. 64187

- PROTACT 410 AL included
- Surface-mounting bracket: black
- Surface: matt black



# DOORBELL BUTTON SERIES PICCOLO CERCHIO



## THE RIGHT DESIGN FOR EVERY FACADE.

All doorbell buttons of this series feature the tried-and-tested PROTACT button. Cable entry is from behind and is invisible.

No fastening screws are visible after mounting.

#### **PICCOLO CERCHIO**

- For surface-mounting
- The surface and frame are made of weather-resistant plastic
- With matching PROTACT button (IP44)
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- **Dimensions**: 50 x 50 x 17 mm



#### PICCOLO CERCHIO - white with a stainless-steel look

Type: Piccolo Cerchio ws V2A • Art. no. 64190

- PROTACT 450 VA included
- Surface-mounting bracket: white
- · Surface: stainless-steel look



#### PICCOLO CERCHIO - black with a stainless-steel look

Type: Piccolo Cerchio sw V2A • Art. no. 64191

- PROTACT 450 VA included
- Surface-mounting bracket: black
- · Surface: stainless-steel look



#### PICCOLO CERCHIO - white with a brass look

Type: Piccolo Cerchio ws Messing • Art. no. 64192

- PROTACT 340 GO included
- Surface-mounting bracket: white
- Surface: brass look



#### PICCOLO CERCHIO – black with a brass look

Type: Piccolo Cerchio sw Messing • Art. no. 64193

- PROTACT 340 GO included
- Surface-mounting bracket: black
- Surface: brass look



#### PICCOLO CERCHIO – white with a copper look

Type: Piccolo Cerchio ws Kupfer • Art. no. 64194

- PROTACT 420 AL-KS included
- Surface-mounting bracket: white
- Surface: copper look



#### PICCOLO CERCHIO – black with a copper look

Type: Piccolo Cerchio sw Kupfer • Art. no. 64195

- PROTACT 420 AL-KS included
- Surface-mounting bracket: black
- Surface: copper look



#### PICCOLO CERCHIO - white with a matt-black look

Type: Piccolo Cerchio ws Schwarz • Art. no. 64196

- PROTACT 410 AL included
- Surface-mounting bracket: white
- Surface: matt black



#### PICCOLO CERCHIO - black with a matt-black look

Type: Piccolo Cerchio sw Schwarz • Art. no. 64197

- PROTACT 410 AL included
- Surface-mounting bracket: black
- Surface: matt black





#### **FASHION** DOORBELL BUTTON



#### Fashion doorbell button

Type: KKO L 2001 WS/T • Art. no. 64070

- White
- Surface-mounting
- · Durable special contacts
- Package type: 1 pc. / blister
- Temperature range: -20 °C to 50 °C
- Power supply: 8 24 V AC (1.5 A / 24 VA)
- LED illumination: approx. 20 mA
- **Dimensions**: 25 x 65 x 20 mm

**Note:** Not suitable for doorbell systems with electronic doorbells because the contact and the LED are connected in parallel!

#### **GOLF** DOORBELL BUTTON

- Surface-mounting
- · Weather-resistant plastic housing
- Durable special contacts with precious-metal coating
- Temperature range: -20 °C to 50 °C
- Power supply: max. 24 V AC (1.5 A) / 24 V DC (1.0 A)
- **Dimensions**: 25 x 65 x 20 mm



#### Golf doorbell button

Type: KKO 2001 WS/WS • Art. no. 64032

- White
- Package contents: 10 pc.

#### Golf doorbell button

Type: KKO 2001 WS/WS • Art. no. 64090

- White
- Package contents: 1 pc. (blister)

#### KKO 5050 DOORBELL BUTTON



#### KKO 5050 doorbell button

Type: KKO 5050 • Art. no. 64025

- 1 doorbell button (snap dome)
- Surface-mounting
- · Self-cleaning frictional contact
- Package contents: 10 pc. (price / pc.)
- Power supply: max. 24 V AC (5 mA-1.5 A) / 24 V DC (5 mA-1.0 A)
- Dimensions: Ø 50 x 20 mm



#### KKO 2002 DOORBELL BUTTON

- Surface-mounting
- Illuminated Button and LED name plate
  (do not use the lighting if the chime is battery-operated)
- · Synthetic housing

- 3 Connection ports
- **Power supply**: 8 12 V AC / DC
- **Dimensions**: 60 x 40 x 20 mm



#### KKO 2002 doorbell button white

Typ: KKO 2002 ws • Art.-Nr. 64085

• White / white

#### KKO 2002 doorbell button black

Typ: KKO 2002 sw • Art.-Nr. 64086

• Black / white

#### KKO 2005 DOORBELL BUTTON

- Surface-mounting
- Package contents: 10 pc.
- Synthetic housing

- Power supply: 8 12 V AC / DC
- **Dimensions**: 17 x 55 x 24 mm



#### KKO 2005 doorbell button white

Typ: KKO 2005W • Art.-Nr. 64036

• White / white

#### KKO 2005 doorbell button black

Typ: KKO 2005 • Art.-Nr. 64035

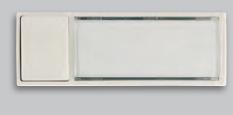
• Black / White





## MADE OF THERMOPLAST

#### **MONTILUX DOORBELL BUTTON**





#### Montilux doorbell button

Type: MONTILUX 2154 • Art. no. 51011

- Surface-mounting
- Weather-resistant plastic housing
- 1 doorbell button (snap dome)
- White (RAL 9010)
- LED name plate illumination
- Package contents: 10 pc. (price / pc.)
- Temperature range: -20 °C to 50 °C
- Power supply: max. 12 V AC / DC (5 mA 1.5 A)
- Dimensions: 32 x 90 x 18.5 mm

#### **COMBIFIX AND COMBILUX DOORBELL BUTTON**

- Surface-mounting
- 1 doorbell button (snap dome)
- Stackable
- White
- Weather-resistant plastic housing

- Package contents: 10 pc. (price / pc.)
- Temperature range: -20 °C to 60 °C
- Power supply: max. 24 V AC (1.5 A) / 24 V DC (1.0 A)
- **Dimensions**: 32 x 90 x 18 mm



#### **Combifix doorbell button**

Type: ETA 2121 • Art. no. 51013

Without illumination



#### Combifix II doorbell button

Type: ETA 2122A • Art. no. 51014

• Without illumination



#### Combilux doorbell button

Type: ETA 2132A • Art. no. 51015

• With LED illumination: 8–12 V AC (20 mA)



#### **DOMOLUX DOORBELL BUTTON**

- Surface-mounting
- 1 doorbell button (snap dome)
- With LED illumination: 8-12 V AC
- Simple mounting due to clamped connection (max. 0.8 mm)
- Weather-resistant plastic housing
- Durable special contacts with precious-metal coating
- Temperature range: -20 °C to 50 °C
- Power supply: max. 12 V AC / DC (5 mA 1.5 A)
- **Dimensions**: 90 x 90 x 18.5 mm



#### **Domolux doorbell button**

Type: DOMOLUX WS/SW • Art. no. 51103

- 1 doorbell button (snap dome)
- White / black (RAL 9010/9005)



#### Domolux doorbell button

Type: DOMOLUX SIM/SW • Art. no. 51113

- 1 doorbell button (snap dome)
- Matt silver / black (RAL 9005)
- Metal look



#### **Domolux Duo doorbell button**

Type: DOMOLUX DUO WS/SW • Art. no. 51203

- 2 doorbell buttons (snap dome)
- White / black (RAL 9010/9005)



#### **Domolux Duo doorbell button**

Type: DOMOLUX DUO SIM/SW • Art. no. 51213

- 2 doorbell buttons (snap dome)
- Matt silver / black (RAL 9005)
- Metal look



#### Lux incandescent bulb

Type: Glühlampe Lux • Art. no. 98191

- Replacement incandescent bulb for COMBILUX and DOMOLUX with incandescent bulbs (for older models only)
- Package contents: 10 pc.







### MADE OF METAL

#### **KKO DOORBELL BUTTON**



#### **Contact shell**

Type: KKO 2018 • Art. no. 64033

- · Surface-mounting
- · Colour: silver
- Power supply: max. 24 V 2.5 A • **Dimensions**: 61 x 26 x 28 mm • Package contents: 10 pc.



#### **Contact shell**

Type: KKO 2019 • Art. no. 64034

- Surface-mounting
- Metal casing
- Name plate
- Power supply: max. 24 V 2.5 A
- **Dimensions**: 61 x 26 x 28 mm
- Package contents: 10 pc.

## **DOORBELL BUTTON**

### SPECIAL

#### PENDANT CALL BUTTON



#### Pendant call button

Type: KKO 3736A • Art. no. 64063

- · Self-cleaning frictional contacts
- Convenient shape (hospital call button)
- · With collar as button protection
- Package contents: 10 pc. (price / pc.)
- Power supply: max. 24 V AC (5 mA-1.5 A) / 24 V DC (5 mA-1.0 A)
- Dimensions: 36 x 67 m



## **CONTACT SHELLS**





## FM MADE OF BRASS

#### **CONTACT SHELLS • FLUSH-MOUNTING**

- Flush-mounting
- Robust metal contact shell
- PROTACT button included
- · Colour-coordinated countersunk wood screws included
- · Can be installed in commercially available flush-mounted boxes (screw spacing 60 mm)
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Dimensions: 70 x 28 mm



#### **Contact shell**

Type: KS 2070 MS-GL • Art. no. 64131

- Shiny polished brass
- Incl. PROTACT 340 GO



#### **Contact shell**

Type: KS 2071 MS-AGL • Art. no. 64132

- · Shiny anthracite coated brass
- Incl. PROTACT 371 NI



#### **Contact shell**

Type: KS 2074 WS • Art. no. 64141

- White coated brass
- Incl. PROTACT 340 GO



#### **Contact shell**

Type: KS 2077 WS SI • Art. no. 64145

- White coated brass
- Incl. PROTACT 360 CR



#### **Contact shell**

Type: KS 2075 • Art. no. 64143

- Chrome-plated matt brass
- Incl. PROTACT 310 AL



#### **Contact shell**

Type: KS 2076 • Art. no. 64144

- Chrome-plated shiny brass
- Incl. PROTACT 360 CR







## MADE OF STAINLESS STEEL

#### ETA S100 ROUND

- · Solid stainless-steel design
- Extremely vandal proof due to smooth contours
- Surface- and flush-mounting using pre-mounting plate (adapter)
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Protection rating: IP40
- · Pre-mounting plate included



#### **Doorbell button**

Type: ETA S 100 • Art. no. 55540



- · Surface- or flush-mounting
- Dimensions: Ø80 x 16 mm







#### **LED** doorbell button

Type: ETA S 100 LEDws • Art. no. 55542

- Incl. PROTACT 230 LED
- Can only be installed in flush-mounted boxes
- Dimensions: Ø80 x 28 mm







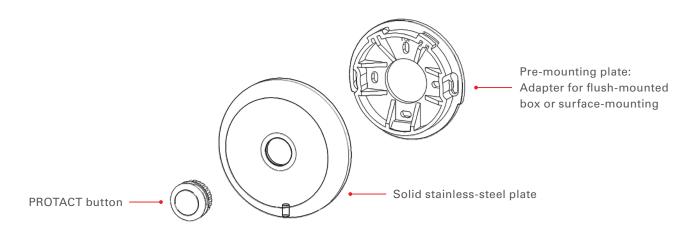
#### LED doorbell button

Type: ETA S 100 LEDbl • Art. no. 55543

- Incl. PROTACT 220 LED
- Can only be installed in flush-mounted boxes
- Dimensions: Ø80 x 28 mm







#### ETA S200 SQUARE

- · Solid stainless-steel design
- Extremely vandal proof due to smooth contours
- Surface- and flush-mounting using pre-mounting plate (adapter)
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Protection rating: IP40
- Pre-mounting plate included



#### **Doorbell button**

Type: ETA S 200 • Art. no. 55541

- Incl. PROTACT 150 VA
- Surface- or flush-mounting
- Dimensions: 82 x 82 x 16 mm







#### LED doorbell button

Type: ETA S 200 LEDws • Art. no. 55544

- Incl. PROTACT 230 LED
- Can only be installed in flush-mounted boxes
- Dimensions: 82 x 82 x 28 mm







#### **LED** doorbell button

Type: ETA S 200 LEDbl • Art. no. 55545

- Incl. PROTACT 220 LED
- Can only be installed in flush-mounted boxes
- Dimensions: 82 x 82 x 28 mm





#### **TORK 2060 DOOR CONTACT**

- Surface-mounting
- Brushed-brass surface
- Cable entry from the side or rear
- For M16 cable gland

- Temperature range: -20 °C to 50 °C
- Protection rating: IP44 (for outdoor use)
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)



#### **Door contact**

Type: TORK 2060 • Art. no. 64151

- Incl. PROTACT 340 GO
- Surface-mounting only
- Dimensions: 82 x 82 x 28 mm









### MADE OF CAST METAL

#### **CAST-BRASS DOORBELL BUTTONS**

- Cast brass
- Surface-mounting
- 1 doorbell button

- Temperature range: -20 °C to 50 °C
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)



#### **Cast-brass doorbell button**

Type: ETA 2310 • Art. no. 55595

- Brushed brass
- Incl. PROTACT 340 GO
- Dimensions: 65 x 35 x 10 mm



#### **Cast-brass doorbell button**

Type: ETA 2312 • Art. no. 55597

- Textured and burnished brass
- Incl. PROTACT 420 AL-KS
- Dimensions: 65 x 35 x 10 mm

#### **CAST-BRONZE DOORBELL BUTTONS**

- Cast bronze
- Surface-mounting
- Recessed anodised brass frames

- Temperature range: -20 °C to 50 °C
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)



#### **Cast-bronze doorbell button**

Type: ETA 501 G • Art. no. 55511

- 1 doorbell button
- Incl. PROTACT 420 AL-KS
- Dimensions: 38 x 98 x 15 mm



#### **Cast-bronze doorbell button**

Type: ETA 502 G • Art. no. 55512

- 2 doorbell buttons
- Incl. PROTACT 420 AL-KS
- Dimensions: 62 x 98 x 15 mm





#### CAST-ALUMINIUM DOORBELL BUTTONS

- Aluminium/anodised silver EV1
- Surface-mounting
- Recessed aluminium frames

- Temperature range: -20 °C to 50 °C
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)



#### **Cast-aluminium doorbell button**

Type: ETA 501 GA • Art. no. 55531

- 1 doorbell button
- Incl. PROTACT 410 AL
- Dimensions: 38 x 98 x 15 mm



#### Cast-aluminium doorbell button

Type: ETA 502 GA • Art. no. 55532

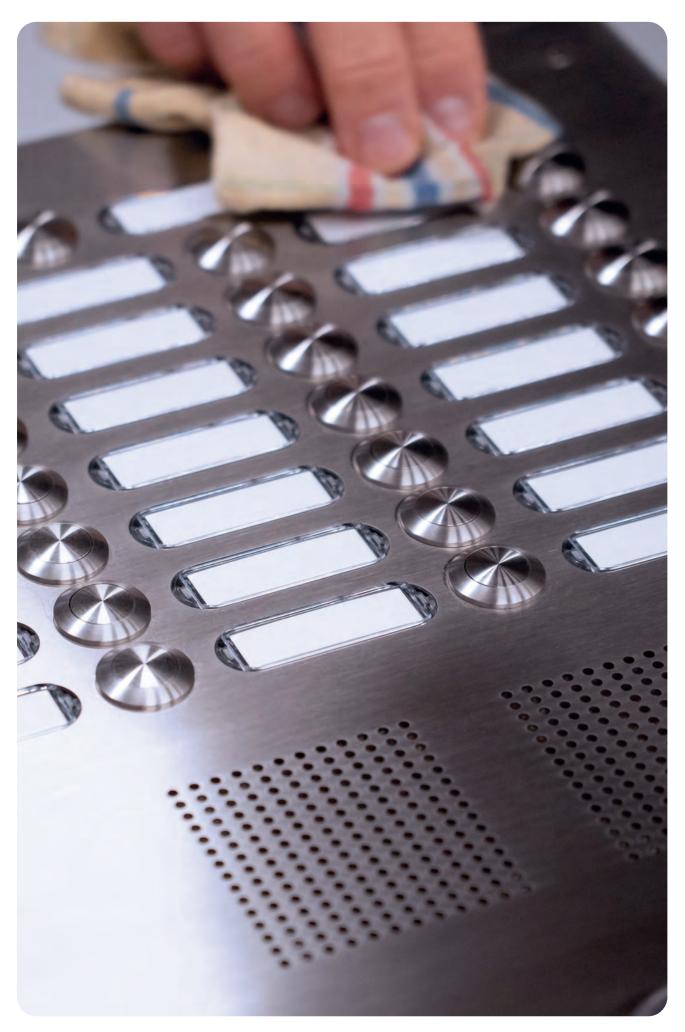
- 2 doorbell buttons
- Incl. PROTACT 410 AL
- Dimensions: 62 x 98 x 15 mm



#### **Cast-aluminium doorbell button**

Type: ETA 503 GA • Art. no. 55533

- 3 doorbell buttons
- Incl. PROTACT 410 AL
- Dimensions: 86 x 98 x 15 mm





# PROTACTS SCREW-IN CONTACTS



The innovative doorbell button from Grothe with precious-metal switching contacts and time-saving wiring technology is suitable for installation in door stations and for industrial applications. Our range includes over 25 different designs as well as various types of metal and surfaces.



Tactile feedback thanks to the snap effect



Quick installation – no screwing

Two terminals each for simple through-wiring









#### PROTACT • WITHOUT ILLUMINATION

• Package contents: 5 pc.

• Panel hole: 16 mm

• Installation depth: 13 mm less the panel thickness

• Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)

• Voltage drop when new: < 0.1 V

• Contact resistance: < 0.1 Ohm

• Insulation resistance: min. 100 MOhm

• Bounce time: < 20 ms

• Suitable for rigid wires with the following diameter: 0.6 mm to 0.8 mm

• Actuating force: approx. 6 N

• Contact travel: 0.8 mm

• Total actuating travel: 1.2 mm

• Temperature range: -20 °C to 60 °C

• Protection rating: IP54 (when installed in a

vertical panel)



#### **Doorbell button**

Type: PROTACT 150 VA • Art. no. 62000

• Pushbutton: V2A stainless steel

• Diameter: 14.5 mm

• Button surround: V2A stainless steel

• Diameter: 22.0 mm



#### **Doorbell button**

Type: PROTACT 140 GO • Art. no. 62001

• Pushbutton: gold-plated brass

• Diameter: 14.5 mm

• Button surround: gold-plated brass

• Diameter: 22.0 mm



#### **Doorbell button**

Type: PROTACT 110 AL • Art. no. 62002

Pushbutton: aluminiumDiameter: 14.5 mm

• Button surround: aluminium

• Diameter: 22.0 mm



#### **Doorbell button**

Type: PROTACT 210 AL • Art. no. 62045

Pushbutton: aluminiumDiameter: 11.5 mm

• Button surround: aluminium

• Diameter: 20.0 mm



#### **Doorbell button**

Type: PROTACT 260 CR • Art. no. 62054

• Pushbutton: chrome-plated brass

• Diameter: 11.5 mm

• Button surround: chrome-plated brass

• Diameter: 20.0 mm



## PROTACT • WITHOUT ILLUMINATION

- Package contents: 5 pc. (price / pc.)
- Panel hole: 16 mm
- Installation depth: 13 mm less the panel thickness
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Voltage drop when new: < 0.1 V
- Contact resistance: < 0.1 Ohm
- Insulation resistance: min. 100 MOhm
- Bounce time: < 20 ms

- For rigid wires with the following diameter: 0.6 to 0.8 mm
- Actuating force: approx. 6 N
- Contact travel: 0.8 mm
- Total actuating travel: 1.2 mm
- Temperature range: -20 °C to 60 °C
- Protection rating: IP54 (when installed in a vertical panel)



#### **Doorbell button**

Type: PROTACT 340 GO • Art. no. 62025

- Pushbutton: gold-plated brass
- Diameter: 11.5 mm
- Button surround: gold-plated brass
- Diameter: 20.0 mm



#### **Doorbell button**

Type: PROTACT 370 NI • Art. no. 62026

- Pushbutton: nickel-plated brass
- Diameter: 11.5 mm
- Button surround: nickel-plated brass
- Diameter: 20.0 mm



#### **Doorbell button**

Type: PROTACT 371 NI • Art. no. 62034

- Pushbutton: matt nickel-plated brass
- Diameter: 11.5 mm
- Button surround: matt nickel-plated brass
- Diameter: 20.0 mm



## **Doorbell button**

Type: PROTACT 310 AL • Art. no. 62032

- Pushbutton: brass, aluminium
- Diameter: 11.5 m
- Button surround: brass, aluminium
- Diameter: 20.0 mm



## **Doorbell button**

Type: PROTACT 360 CR • Art. no. 62033

- Pushbutton: chrome-plated brass
- Diameter: 11.5 mm
- Button surround: chrome-plated brass
- Diameter: 20.0 mm



## **Doorbell button**

Type: PROTACT 450 VA • Art. no. 62006

- Pushbutton: V2A stainless steel
- Diameter: 11.5 mm
- Button surround: V2A stainless steel
- Diameter: 20.0 mm



## PROTACT • WITHOUT ILLUMINATION

- Package contents: 5 pc. (price / pc.)
- Panel hole: 16 mm
- Installation depth: 13 mm less the panel thickness
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Voltage drop when new: < 0.1 V
- Contact resistance: < 0.1 Ohm
- Insulation resistance: min. 100 MOhm
- Bounce time: < 20 ms

- For rigid wires with the following diameter: 0.6 to 0.8 mm
- Actuating force: approx. 6 N
- Contact travel: 0.8 mm
- Total actuating travel: 1.2 mm
- Temperature range: -20°C to 60°C
- **Protection rating:** IP54 (when installed in a vertical panel)



#### **Doorbell button**

Type: PROTACT 420 AL-KS • Art. no. 62013

- Pushbutton: black plasticDiameter: 11.5 mm
- Button surround: R14 aluminium
- Diameter: 20.0 mm



#### **Doorbell button**

Type: PROTACT 410 AL • Art. no. 62016

- Pushbutton: EV1 aluminium
- Diameter: 11.5 mm
- Button surround: EV1 aluminium
- Diameter: 20.0 mm



#### **Doorbell button**

Type: PROTACT 750 VA • Art. no. 62050

- Pushbutton: V2A stainless steel
- Diameter: 16.8 mm
- Button surround: V2A stainless steel
- Diameter: 22.0 mm



## **Doorbell button**

Type: PROTACT 550 VA • Art. no. 62060

- Pushbutton: V2A stainless steel
- Diameter: 16.8 mm
- Button surround: V2A stainless steel
- Diameter: 22.0 mm



## **Doorbell button**

Type: PROTACT 710 AL • Art. no. 62010

- Pushbutton: aluminiumDiameter: 16.8 mm
- Button surround: aluminium
- Diameter: 22.0 mm



## **Doorbell button**

Type: PROTACT 510 AL • Art. no. 62061

- Pushbutton: aluminiumDiameter: 16.8 mm
- Button surround: aluminium
- Diameter: 22.0 mm



## PROTACT • WITHOUT ILLUMINATION

- Package contents: 5 pc.
- Panel hole: 16 mm
- Installation depth: 13 mm less the panel thickness
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA)
- Voltage drop when new: < 0.1 V
- Contact resistance: < 0.1 Ohm
- Insulation resistance: min. 100 MOhm
- Bounce time: < 20 ms

- For rigid wires with the following diameter: 0.6 to 0.8 mm
- Actuating force: approx. 6 N
- Contact travel: 0.8 mm
- Total actuating travel: 1.2 mm
- Temperature range: -20°C to 60°C
- Protection rating: IP54 (when installed in a

vertical panel)



#### **Doorbell button**

Type: PROTACT 380 KS • Art. no. 61031

- Pushbutton: white-grey plastic
- Diameter: 11.5 mm
- Button surround: black plastic
- Diameter: 20.0 mm



## **Doorbell button**

Type: PROTACT 381 AL • Art. no. 61032

- Pushbutton: white-grey plastic
- Diameter: 11.5 mm
- Button surround: white-grey plastic
- Diameter: 20.0 mm



## **Doorbell button**

Type: PROTACT 650 VA • Art. no. 62070

- Pushbutton: V2A stainless steel
- Diameter: 11.5 mm
- Button surround: V2A stainless steel
- Diameter: 20.0 mm



## **Doorbell button**

Type: PROTACT 681 KS • Art. no. 61045

- Pushbutton: black plastic
  Diameter: 13.5 x 16.0 mm
- Button surround: black plastic
- Diameter: 20.0 x 22.0 mm



#### **Doorbell button**

Type: PROTACT 680 KS • Art. no. 61047

- Pushbutton: white-grey plastic
- Diameter: 13.5 x 16.0 mm
- Button surround: white-grey plastic
- Diameter: 20.0 x 22.0 mm



## PROTACT • WITH ILLUMINATION

- Package contents: 3 pc.
- Panel hole: 16 mm
- Installation depth: 13 mm less the panel thickness
- Installation depth with LED module: 25 mm
- Power supply: max. 12 V AC / DC (1.5 A), min. 5 V (1 mA) Contact travel: 0.8 mm
- **LED light**: 8 12 V AC (0.02 A)
- Voltage drop when new: < 0.1 V
- Contact resistance: < 0.1 Ohm
- Insulation resistance: min. 100 MOhm

- Bounce time: < 20 ms
- For rigid wires with the following diameter: 0.6 to 0.8 mm
- Actuating force: approx. 6 N
- Total actuating travel: 1.2 mm
- Temperature range: -20 °C to 60 °C
- Protection rating: IP54 (when installed in a vertical panel)



#### **Doorbell button**

Type: PROTACT 101 LED • Art. no. 63022

• Pushbutton: red plastic • Diameter: 14.6 mm

• Button surround: aluminium

• Diameter: 22.0 mm





## **Doorbell button**

Type: PROTACT 100 LED • Art. no. 63032

• Pushbutton: red plastic • Diameter: 14.6 mm

• Button surround: black aluminium

• Diameter: 22.0 mm





## **Doorbell button**

Type: PROTACT 102 LED • Art. no. 63042

• Pushbutton: red plastic • Diameter: 14.6 mm

• Button surround: gold-plated brass

• Diameter: 22.0 mm





#### **Doorbell button**

Type: PROTACT 105 LED • Art. no. 63052

• Pushbutton: red plastic • Diameter: 14.6 mm

• Button surround: V2A stainless steel

• Diameter: 22.0 mm





## PROTACT • WITH ILLUMINATION

• Package contents: 1 pc.

• Panel hole: 16 mm

• Installation depth: 13 mm less the panel thickness

• Installation depth with LED module: 25 mm

Power supply: max. 12 V AC / DC (1.5 A),
 min. 5 V (1 mA) • LED light: 8 – 12 V AC (0.02 A)

Voltage drop when new: < 0.1 V</li>
 Contact resistance: < 0.1 Ohm</li>

• Insulation resistance: min. 100 MOhm

• Bounce time: < 20 ms

• For rigid wires with the following diameter: 0.6 to 0.8 mm

• Actuating force: approx. 6 N

• Contact travel: 0.8 mm

• Total actuating travel: 1.2 mm

• Temperature range: -20°C to 60°C

• Protection rating: IP54 (when installed in a

vertical panel)



#### **Doorbell button**

Type: PROTACT 220 LED • Art. no. 63232

Pushbutton: blue LED ringDiameter: 14.6 mm

• Button surround: V2A stainless steel

• Diameter: 22.0 mm





## **Doorbell button**

Type: PROTACT 230 LED • Art. no. 63242

• Pushbutton: white LED ring

• Diameter: 14.6 mm

• Button surround: aluminium

• Diameter: 22.0 mm





## **Doorbell button**

Type: PROTACT 240 LED • Art. no. 63252

Pushbutton: blue LED ringDiameter: 14.6 mm

• Button surround: aluminium

• Diameter: 22.0 mm



# ACCESS CONTROL ELOCK LOCK CYLINDER

Open the door with just a tap on your smartphone – the eLock lock cylinder offers a mobile access solution that is easy ROTHE to install, combining the security of tried-and-**GROTHE eLock** tested mechanics with the convenience of digital solutions.

## Modernisation

Easily replace existing lock cylinders with an eLock version.

## Security

These mechanical lock cylinders have no need for cables, a cloud or a network.

## Convenience

Open the door using the eLock app or a proximity key.

## Management

Administrators can activate or block access authorisations for up to 250 users in the eLock app, where up to 25 lock cylinders can be managed.

## Programming

Administrators transfer information to the cylinder via the programming card.

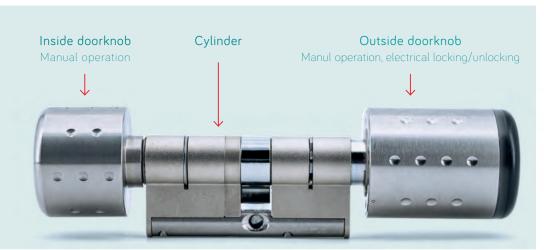
## Double knob

Available in various versions: half cylinder, double knob with electronics on one or both sides.



Туре	Article number	Description
eLock 030/030	93500	Electronic lock cylinder • Outside: 30 mm • Inside: 30 mm
eLock 030/035	93501	Electronic lock cylinder • Outside: 30 mm • Inside: 35 mm
eLock 035/035	93502	Electronic lock cylinder • Outside: 35 mm • Inside: 35 mm
eLock 030/040	93503	Electronic lock cylinder • Outside: 30 mm • Inside: 40 mm
eLock 035/040	93504	Electronic lock cylinder • Outside: 35 mm • Inside: 40 mm
eLock 040/040	93505	Electronic lock cylinder • Outside: 40 mm • Inside: 40 mm
eLock 030/045	93506	Electronic lock cylinder • Outside: 30 mm • Inside: 45 mm
eLock 035/045	93507	Electronic lock cylinder • Outside: 35 mm • Inside: 45 mm
eLock 040/045	93508	Electronic lock cylinder • Outside: 40 mm • Inside: 45 mm
eLock 045/045	93509	Electronic lock cylinder ● Outside: 45 mm ● Inside: 45 mm
eLock 030/050	93510	Electronic lock cylinder • Outside: 30 mm • Inside: 50 mm
eLock 035/050	93511	Electronic lock cylinder • Outside: 35 mm • Inside: 50 mm
eLock 040/050	93512	Electronic lock cylinder • Outside: 40 mm • Inside: 50 mm
eLock 045/050	93513	Electronic lock cylinder • Outside: 45 mm • Inside: 50 mm
eLock 050/050	93514	Electronic lock cylinder • Outside: 50 mm • Inside: 50 mm
eLock 035/030	93515	Electronic lock cylinder • Outside: 35 mm • Inside: 30 mm
eLock 040/030	93516	Electronic lock cylinder • Outside: 40 mm • Inside: 30 mm
eLock 040/035	93517	Electronic lock cylinder • Outside: 40 mm • Inside: 35 mm
eLock 045/030	93518	Electronic lock cylinder • Outside: 45 mm • Inside: 30 mm
eLock 045/035	93519	Electronic lock cylinder • Outside: 45 mm • Inside: 35 mm
eLock 045/040	93520	Electronic lock cylinder • Outside: 45 mm • Inside: 40 mm
eLock 050/030	93521	Electronic lock cylinder • Outside: 50 mm • Inside: 30 mm
eLock 050/035	93522	Electronic lock cylinder • Outside: 30 mm • Inside: 35 mm
eLock 050/040	93523	Electronic lock cylinder • Outside: 50 mm • Inside: 40 mm
eLock 050/045	93524	Electronic lock cylinder • Outside: 50 mm • Inside: 45 mm
eLock 055/030	93545	Electronic lock cylinder • Outside: 55 mm • Inside: 30 mm
eLock 055/035	93546	Electronic lock cylinder • Outside: 55 mm • Inside: 35 mm
eLock 055/040	93547	Electronic lock cylinder • Outside: 55 mm • Inside: 40 mm

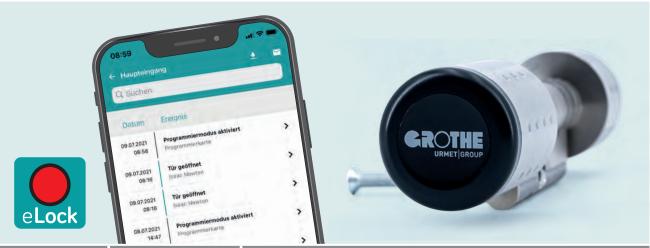






Туре	Article number	Description
eLock 055/045	93548	Electronic lock cylinder • Outside: 55 mm • Inside: 45 mm
eLock 055/050	93549	Electronic lock cylinder • Outside: 55 mm • Inside: 50 mm
eLock 055/055	93550	Electronic lock cylinder • Outside: 55 mm • Inside: 55 mm
eLock 030/055	93551	Electronic lock cylinder • Outside: 30 mm • Inside: 55 mm
eLock 035/055	93552	Electronic lock cylinder • Outside: 35 mm • Inside: 55 mm
eLock 040/055	93553	Electronic lock cylinder • Outside: 40 mm • Inside: 55 mm
eLock 045/055	93554	Electronic lock cylinder • Outside: 45 mm • Inside: 55 mm
eLock 050/055	93555	Electronic lock cylinder • Outside: 50 mm • Inside: 55 mm
eLock 060/030	93556	Electronic lock cylinder • Outside: 60 mm • Inside: 30 mm
eLock 060/035	93557	Electronic lock cylinder • Outside: 60 mm • Inside: 35 mm
eLock 060/040	93558	Electronic lock cylinder • Outside: 60 mm • Inside: 40 mm
eLock 060/045	93559	Electronic lock cylinder • Outside: 60 mm • Inside: 45 mm
eLock 060/050	93560	Electronic lock cylinder • Outside: 60 mm • Inside: 50 mm
eLock 060/055	93561	Electronic lock cylinder • Outside: 60 mm • Inside: 55 mm
eLock 060/060	93562	Electronic lock cylinder • Outside: 60 mm • Inside: 60 mm
eLock 030/060	93563	Electronic lock cylinder • Outside: 30 mm • Inside: 60 mm
eLock 035/060	93564	Electronic lock cylinder • Outside: 35 mm • Inside: 60 mm
eLock 040/060	93565	Electronic lock cylinder • Outside: 40 mm • Inside: 60 mm
eLock 045/060	93566	Electronic lock cylinder • Outside: 45 mm • Inside: 60 mm
eLock 050/060	93567	Electronic lock cylinder • Outside: 50 mm • Inside: 60 mm
eLock 055/060	93568	Electronic lock cylinder • Outside: 55 mm • Inside: 60 mm
eLock 065/030	93569	Electronic lock cylinder • Outside: 65 mm • Inside: 30 mm
eLock 065/035	93570	Electronic lock cylinder • Outside: 65 mm • Inside: 35 mm
eLock 065/040	93571	Electronic lock cylinder • Outside: 65 mm • Inside: 40 mm
eLock 065/045	93572	Electronic lock cylinder • Outside: 65 mm • Inside: 45 mm
eLock 065/050	93573	Electronic lock cylinder • Outside: 65 mm • Inside: 50 mm
eLock 065/055	93574	Electronic lock cylinder • Outside: 65 mm • Inside: 55 mm
eLock 065/060	93575	Electronic lock cylinder • Outside: 65 mm • Inside: 60 mm





		7 10
Туре	Article number	Description
eLock 065/065	93576	Electronic lock cylinder • Outside: 65 mm • Inside: 65 mm
eLock 030/065	93577	Electronic lock cylinder • Outside: 30 mm • Inside: 65 mm
eLock 035/065	93578	Electronic lock cylinder • Outside: 35 mm • Inside: 65 mm
eLock 040/065	93579	Electronic lock cylinder ● Outside: 40 mm ● Inside: 65 mm
eLock 045/065	93580	Electronic lock cylinder ● Outside: 45 mm ● Inside: 65 mm
eLock 050/065	93581	Electronic lock cylinder • Outside: 50 mm • Inside: 65 mm
eLock 055/065	93582	Electronic lock cylinder • Outside: 55 mm • Inside: 65 mm
eLock 060/065	93583	Electronic lock cylinder • Outside: 60 mm • Inside: 65 mm
eLock 070/030	93584	Electronic lock cylinder • Outside: 70 mm • Inside: 30 mm
eLock 070/035	93585	Electronic lock cylinder • Outside: 70 mm • Inside: 35 mm
eLock 070/040	93586	Electronic lock cylinder • Outside: 70 mm • Inside: 40 mm
eLock 070/045	93587	Electronic lock cylinder • Outside: 70 mm • Inside: 45 mm
eLock 070/050	93588	Electronic lock cylinder • Outside: 70 mm • Inside: 50 mm
eLock 070/055	93589	Electronic lock cylinder • Outside: 70 mm • Inside: 55 mm
eLock 070/060	93590	Electronic lock cylinder • Outside: 70 mm • Inside: 60 mm
eLock 070/065	93591	Electronic lock cylinder • Outside: 70 mm • Inside: 65 mm
eLock 070/070	93592	Electronic lock cylinder • Outside: 70 mm • Inside: 70 mm
eLock 030/070	93593	Electronic lock cylinder • Outside: 30 mm • Inside: 70 mm
eLock 035/070	93594	Electronic lock cylinder • Outside: 35 mm • Inside: 70 mm
eLock 040/070	93595	Electronic lock cylinder • Outside: 40 mm • Inside: 70 mm
eLock 045/070	93596	Electronic lock cylinder • Outside: 45 mm • Inside: 70 mm
eLock 050/070	93597	Electronic lock cylinder • Outside: 50 mm • Inside: 70 mm
eLock 055/070	93598	Electronic lock cylinder • Outside: 55 mm • Inside: 70 mm
eLock 060/070	93599	Electronic lock cylinder • Outside: 60 mm • Inside: 70 mm
eLock 065/070	93600	Electronic lock cylinder ● Outside: 65 mm ● Inside: 70 mm
		<b>Electronic lock cylinder ●</b> up to max. 090/090 on request





Туре	Article number	Description
eLock BattCR2	93526	CR2 battery for eLock lock cylinder
eLock DR-ROT	93527	Red sealing ring for eLock lock cylinder
eLock plus BS-T30	93530	Surcharge for T30 doors (fire doors)
eLock PK	93531	eLock programming card
Surcharge eLock AVL	93532	Surcharge for spindle extension For use with anti-plug-pulling furniture. Extends the spindle by a total of 15 mm.
Surcharge eLock BE	93533	Surcharge for electronics on both sides Managed in the app as two cylinders.
Surcharge eLock BE AVL	93534	Surcharge for electronics on both sides with a spindle extension For use with anti-plug-pulling furniture. Extends the spindle by a total of 15 mm. Managed in the app as two cylinders.
eLock MTS	93535	eLock installation spanner
eLock Halb-Zylinder 030/010	93536	Electronic half cylinder  • Outside: 30 mm • Inside: 10 mm

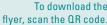
OUTSIDE

(here e.g. 30 mm)

eLock - measuring correctly

INSIDE (here e.g. 30 mm) How do I work out the correct cylinder size for my door? When buying an eLock lock cylinder, you need the precise door thickness. You can find this out by measuring the length of the profile cylinder correctly. You do not need to remove the cylinder for this - simply measure the length directly on the door. Here is a tip to help with this: for eLocks, the first number before the slash always gives the outside length, while the second number is the inside length. Always measure from the mounting screw. If the cylinder is fitted with protection against plug pulling on the outside, only measure to the end of the cylinder.

To download the







# eLock **ACCESSORIES**

## MIFARE Plus® PROXIMITY KEYS FOR NEW SYSTEMS



## Type: GR-010-205

Art. no. 74994

#### **Proximity key**

- Frequency 13.56 MHz Engraved serial number PU with 5 pc.
- Colour: black



## Type: GB-010-200

Art. no. 74984

## **Proximity key**

- Frequency 13.56 MHz Engraved serial number PU with 20 pc.
- Colour: black



## Type: GB-010-2228

Art. no. 74986

### **Proximity key**

- Frequency 13.56 MHz Engraved serial number PU with 20 pc.
- Colour: blue



## Type: GB-010-229

Art. no. 74987

#### **Proximity key**

Type: • Art. no.

- Frequency 13.56 MHz Engraved serial number PU with 20 pc.
- Colour: red



### Type: GB-010-230

Art. no. 74988

#### **Proximity key**

- Frequency 13.56 MHz Engraved serial number PU with 20 pc.
- Colour: green



## Type: GB-010-278

Art. no. 74989

### **Proximity key**

- Frequency 13.56 MHz Engraved serial number PU with 20 pc.
- · Colour: yellow



## Type: FD-010-158

Art. no. 74978

## **Proximity key set**

- Frequency 13.56 MHz Engraved serial number PU with 10 pc.
- Colour: 2 pc. each in black, blue, red, green, yellow



# WE OPEN DOORS.

Every intercom needs a door release! Thanks to the unlocking function, you can conveniently open the door for your visitors. With Grothe door releases, you are just a small lever away from having state-of-the-art convenience in your daily life.

# Standard door releases

- DIN left / right
- With and without locking
- With and without unlocking
- With and without adjustable latch



# IP54 door releases

- DIN left / right
- With locking
- Water resistant and dust tight (IP54)



# Compact door releases

- DIN left / right
- With short strike plate



# Rim door releases

 Can be used on the right and left



# Chain door releases

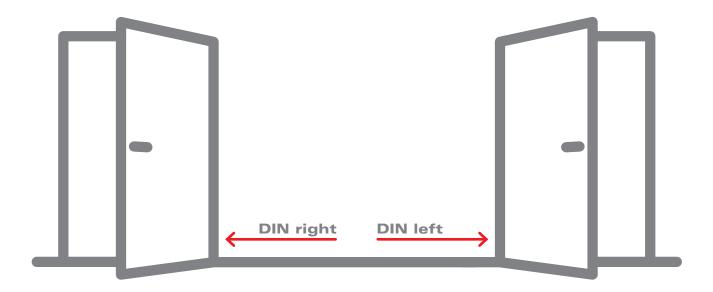
 Can be used on the right and left



## Angled strike plates

- For left- or right-hinged doors
- For special door frames





## Locking / unlocking

## Function of the (temporary) locking

When the door release button is actuated, the lock built into the door release is mechanically released for a single opening of the door for a specific period of time. If the door clicks shut again, the mechanical lock automatically re-engages. This is recommended with DC operation as the electric unlocking is not audible, unlike with AC operation (buzzing noise).

## Function of the (continuous) unlocking

Due to the mechanical unlocking device built into the door release, the door can be left open for any length of time or reset to normal functionality by moving a small lever or turning an adjusting screw (depending on the type).

# **STANDARD** DOOR RELEASES

## WITH LARGE BODY

- **DIN left** (can be used on the right and left)
- Asymmetrical configuration
- Compact design
- Short-term load: 20 s
- Electrical resistance: 12 Ohm

- Power supply: 8 -12 V AC / DC (0.8 A)
- Latch length: 46 mm
- **Body**: 90 x 20 x 28 mm
- Perforated strike plate: 250 x 25 x 3 mm



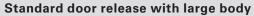
## Standard door release with large body

Type: TO 5110 • Art. no. 93012

## Standard door release with large body

Type: TO 5111 • Art. no. 93013

• With locking



Type: TO 5112 • Art. no. 93014

• With unlocking

## Standard door release with large body

Type: TO 5113 • Art. no. 93015

- With locking
- · With unlocking



# **STANDARD** DOOR RELEASES

## WITH SMALL BODY

- DIN left (can be used on the right and left)
- Symmetrical configuration
- Compact design
- Adjustable latch
- Short-term load: 20 s

- Electrical resistance: 12 Ohm
- Latch length: 46 mm
- **Body**: 70 x 20 x 28 mm
- Perforated strike plate: 250 x 25 x 3 mm



## Standard door release with small body

Type: TO 5300 • Art. no. 93011

• Power supply: 6 - 12 V AC / DC (0.75 - 1 A)

## Standard door release with small body

Type: TO 5400 • Art. no. 93081

• Power supply: 8 – 12 V AC / DC (0.8 A)

#### Standard door release with small body

Type: TO 5411 • Art. no. 93082

- With locking
- **Power supply:** 8 12 V AC / DC (0.8 A)

## Standard door release with small body

Type: TO 5412 • Art. no. 93083

- With unlocking
- Power supply: 8 12 V AC / DC (0.8 A)

## Standard door release with small body

Type: TO 5413 • Art. no. 93084

- With locking
- With unlocking
- **Power supply:** 8 12 V AC / DC (0.8 A)



# **IP54** DOOR RELEASES

## FOR OUTDOOR USE

- Asymmetrical configuration
- Protection rating: IP 54
- Compact design
- With locking

- Short-term load: 20 s
- Electrical resistance: 20 Ohm
- Power supply:
   12 V AC / DC (0.5 A)
- Latch length: 44 mm
- **Body**: 99 x 20 x 35 mm
- Perforated strike plate: 250 x 25 x 3 mm



## Door release for outdoor use

Type: TO 5900-R • Art. no. 93091

• DIN right



## Door release for outdoor use

Type: TO 5900-L • Art. no. 93090

• DIN left



Not suitable for combining with the angled strike plate!



# **COMPACT** DOOR RELEASE

## WITH SHORT STRIKE PLATE



## Compact door release

Type: TO 5116 • Art. no. 93114

- DIN left (can be used on the right and left)
- Asymmetrical configuration
- · Compact door release with short strike plate
- Short-term load: 20 s
- Power supply: 8 12 V AC / DC (0.8 A)
- Latch length: 46 mm
- **Body**: 90 x 20 x 28 mm
- Perforated strike plate: 160 x 25 x 3 mm

## QUIESCENT-CURRENT D. R.

## WITH 1000 KG OF COMPRESSIVE FORCE



## Quiescent-current door release

Type: TO 5134 • Art. no. 93061

- DIN left (can be used on the right and left)
- Asymmetrical configuration
- Compact design
- Latch is unlocked when the power supply is off
- Latch is locked when the power supply is on
- Compressive force: 1000 kg
- Power supply: 24 V DC (0.11 A)
- Latch length: 47 mm
- Body: 99 x 20 x 29 mm
- $\bullet$  Perforated strike plate: 250 x 25 x 3 mm

## **RIM** DOOR RELEASE

## FOR MOUNTING ON THE DOOR FRAME



#### Rim door release

Type: TO 5600 • Art. no. 93021

• DIN left (can be used on the right and left)

• Short-term load: 20 s

Electrical resistance: 30 Ohm
Power supply: 12 V AC / DC (0.5 A)

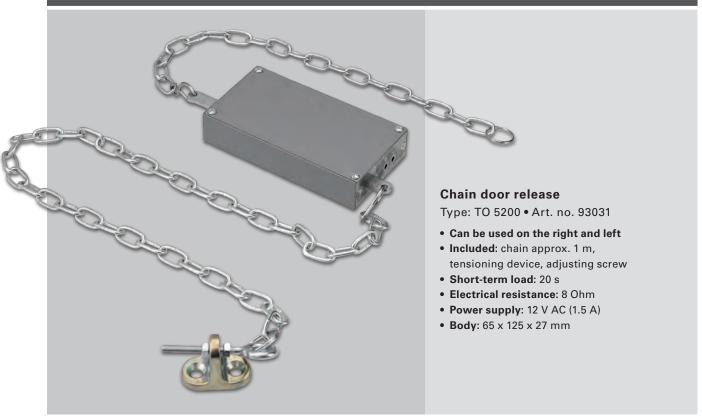
Latch length: 44 mm
 Body: 132 x 24 x 62 mm

• Perforated strike plate: 132 x 52 x 3 mm

Not suitable for combining with the angled strike plate!

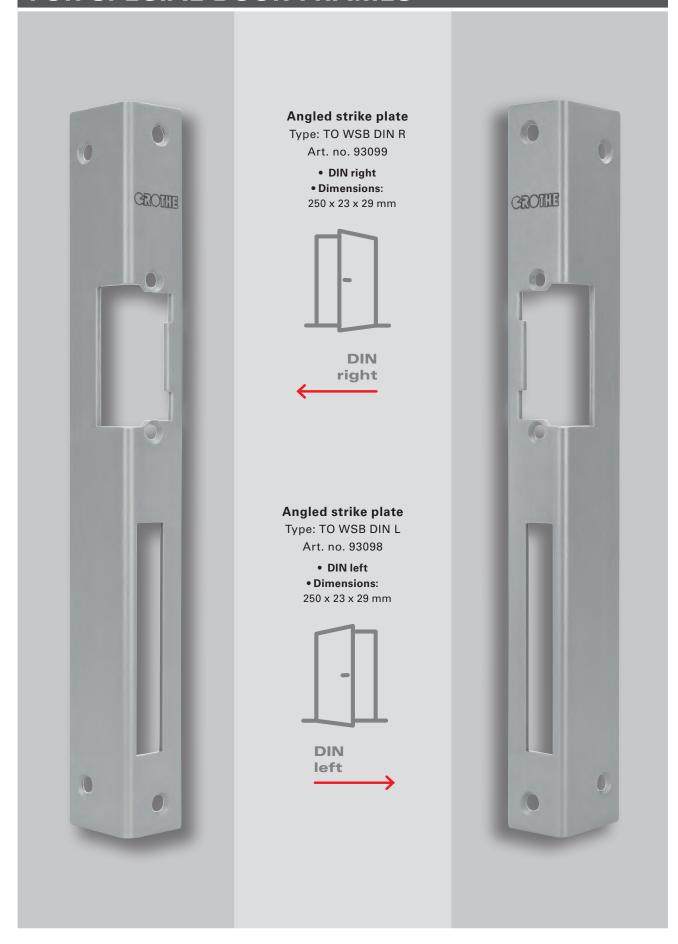
## **CHAIN DOOR RELEASE**

## FOR RIM LOCKS WITH A DOORKNOB



# **ANGLED STRIKE PLATES**

## FOR SPECIAL DOOR FRAMES



# BELLS, HORNS, POWER SIGNAL GENERATORS

Whether as a friendly way of greeting your visitors or as a warning signal to increase safety – Grothe signal systems attract the desired attention. The combination of acoustic and optical warning signals is ideal for every hazardous area.



High volume
 Robust design
 Tried-and-tested technology









# HORNS



- Compact horns with a high volume for indoor and outdoor use
- Volume of up to 100 dB(A)
- For applications in industry and trade
- Integrated warning beacon with the combination horn





# POWER SOUND GENERATORS



## POWER SOUND GENERATORS (PSGS)

(from page 144)

- High volume thanks to double-pressurechamber loudspeaker system
- Power booster up to 115 dB(A)
- Universal use in industry, trade or households
- Table, wall and ceiling mounting (30°/60° angle)



# SMALL BELLS

# Mobile, versatile, hybrid, customised.

The small bells have a **vintage look** and produce a **classic sound**. Though relatively unusual these days, these doorbells too can be connected to a **modern doorbell system** using a doorbell transformer. They accentuate the style of older houses and can also be connected to a wireless doorbell using the MISTRAL SE06 flush-mounted transmitter.





## Alarm clock bell with round housing

Type: LTW 101A 8V AC • Art. no. 24071

A true classic. In our opinion, these wonderful, small alarm clock bells with a round housing are "oldies but goodies" and they still have a place in our hearts. Ideal for older houses that remain full of charm!

- Housing: ABS plastic, white
- Gong: bell steel
- Short-term operation: 10 s (SO 10 s)
- Power supply: 8 V AC (0.86 A)
- Volume: max. 85 dB(A)
- Gong diameter: 70 mm
- **Dimensions**: 80 x 75 x 35 mm

## SMALL BELLS



#### Small bell

Type: LTW 1101A 8V AC • Art. no. 24075

- Housing: ABS plastic, white
- Gong: bell steel
- Package contents: 2 pc.
- Short-term operation: 10 s (SO 10 s)
- Power supply: 8 V AC (0.86 A)
- Volume: max. 80 dB(A)
- Gong diameter: 70 mm
- Dimensions: 114 x 70 x 30 mm



#### Small bell

Type: LTW 3371A 230V AC • Art. no. 24091

- Housing: ABS plastic, white
- Gong: bell steel
- Cover with screw fastening
- Double coil
- Tested acc. to ÖVE
- Continuous operation
- Power supply: 230 V AC (6 mA)
- Volume: max. 85 dB(A)
- Gong diameter: 70 mm
- Dimensions: 150 x 70 x 35 mm



## Small bell

Type: LTW 4471A 8V AC • Art. no. 24111

- Housing: ABS plastic, white
- Flat gong: bell steel
- Package contents: 2 pc.
- Short-term operation: 20 s (SO 20 s)
- Power supply: 8 V AC (1.0 A)
- Volume: max. 80 dB(A)
- Gong diameter: 70 mm
- Dimensions: 150 x 70 x 30 mm



## Small bell

Type: LTW 4477A 8-12V AC • Art. no. 24113

- Housing: ABS plastic, white
- Shawm gong: bell steel
- Short-term operation: 10 s (SO 10 s)
- Power supply: 8 12 V AC (0.08 0.12 A)
- Volume: max. 85 dB(A)
- Gong diameter: 70 mm
- Dimensions: 148 x 70 x 80 mm

## SMALL BELLS: SURFACE MOUNTING

The small bell 1171A is an alternative to the older models and can be installed as a new device or retrofitted.

- . White plastic housing
- Short-term operation: 10 s (SO 10 s)
- Volume: max. 85 dB(A)
- **Dimensions**: 99 x 62 x 28 mm



#### Small bell 1171A

Type: LTW 1171A 8V AC • Art. no. 24081

• Power supply: 8 V AC (0.83 A)

### Small bell 1171A

Type: LTW 1171A 12V AC • Art. no. 24082

• Power supply: 12 V AC (0.38 A)

#### Small bell 1171A

Type: LTW 1171A 24V AC • Art. no. 24083

• Power supply: 24 V AC (0.17 A)

## SMALL BELLS: FLUSH MOUNTING

You want a classic doorbell but without the old-fashioned design? No problem!

The unobtrusive, flush-mounted small bell blends perfectly with your interior design and does not take up space.

- Colour: white (similar to RAL 9003)
- Incl. mounting plate and frame
- Continuous operation
- Volume: max. 80 dB(A)
- Installation depth: 31 mm Dimensions: 80 x 80 x 40 mm



## Flush-mounted bell

Type: UP-LTW 120ws • Art. no. 43711

- For 50 x 50 mm switch range
- Power supply: 8 12 V AC (0.320 A)

#### Flush-mounted bell

Type: UP-LTW 230ws • Art. no. 43716

- For 50 x 50 mm switch range
- Power supply: 230 V AC (0.045 A)

## **WIRELESS TRANSMITTER EXPANSION WITH MISTRAL SE 06**

With the MISTRAL SE06 flush-mounted transmitter, a bell can also be connected to a wireless doorbell. Detailed information can be found on page 37.



#### **MISTRAL SE06 flush-mounted wireless transmitter**

Type: MISTRAL SE06 • Art. no. 43443

- For installation in switch boxes and devices
- For connection to button
- Power supply: 12 V DC or CR 2450 battery
- Protection rating: IP20 (for indoor use only)
- Dimensions: 37 x 20 x 42 mm





Mechanical buzzers from Grothe are characterised by excellent sound behaviour. Compared to the classic two-tone doorbell, they offer the advantage that the tone generation continues for as long as the doorbell button remains pressed. In industry, the buzzers can be used to warn of hazards or to signal breaks.



## **Surface-mounted buzzer**

Type: SU 1170A 8-12V AC • Art. no. 24052

- Colour: white
- Membrane buzzer with adjustable volume
- Short-term operation: max. 10 s
- **Power supply**: 8 12 V AC (0.37 A)
- Volume: max. 85 dB(A)
- **Dimensions**: 99 x 62 x 28 mm

## FLUSH-MOUNTED BUZZERS (SMALL BUZZERS)

- Colour: white (similar to RAL 9003)
- Incl. mounting plate and frame
- Short-term operation: 5/55 s
- Volume: up to 80 dB(A)
- Installation depth: 31 mm
- **Dimensions**: 80 x 80 x 40 mm



#### Flush-mounted buzzer

Type: UP-SU 120ws • Art. no. 43721

- For 50 x 50 mm switch range
- Power supply: 8 12 V AC (430 mA)

#### Flush-mounted buzzer

Type: UP-SU 230ws • Art. no. 43726

- For 50 x 50 mm switch range
- Power supply: 230 V AC, 50 Hz (36 mA)



# • LARGE BELLS For industrial applications.

In industry, the bells can be used to warn of hazards or to signal breaks. Industry is subject to national and international safety standards that require the installation of suitable warning signals. Grothe alarm bells or large bells can be used to raise the alarm about hazards or emergencies in situations where it is essential to ensure the safety of staff and protect their health.



## **LTW 911**



## LARGE BELL LTW 911

- Housing: Bakelite plastic, light grey
- With waterproof membrane grommet for cable entry
- Gong: painted bell steel, white
- Short-term operation: 10 s

- Volume: max. 98 dB(A)
- Protection rating: IP54
- Gong diameter: 100 mm
- **Dimensions**: 210 x 100 x 51 mm

## Large bell

Type: LTW 911A 8V AC F • Art. no. 24311

• Power supply: 8 V AC (0.6 A)

## Large bell

Type: LTW 911A 24V AC • Art. no. 24331

• Power supply: 24 V AC (0.23 A)

## Large bell

Type: LTW 911A 230V AC • Art. no. 24376

- With micro fuse (0.05 A, medium time lag)
- Power supply: 230 V AC (0.025 A)

## LOUD>LOUDER>>GROTHE





- Wall mounting
- · For industrial and civil applications
- Housing colour: grey
- Gong: painted steel
- Cable entry for cable: 5 9 mm

- Continuous operation
- Protection rating: IP66
- Protection class II
- Diameter of the gongs: 168 mm
- **Dimensions**: 168 x 168 x 78 mm

## Large bell (grey)

Type: LTW 168 GR 12V AC • Art. no. 22522

- Power supply: 12 V AC (860 mA), 50 Hz
- Volume: max. 100 dB(A)

## Large bell (grey)

Type: LTW 168 GR 24V AC • Art. no. 22523

- Power supply: 24 V AC (430 mA). 50 Hz
- Volume: max. 100 dB(A)

Volume: max. 100 dB(A)

#### Large bell (grey)

Type: LTW 168 GR 240V AC • Art. no. 22527

#### • Power supply: 240 V AC (50 mA), 50 Hz

## Large bell (grey)

Type: LTW 168 GR 12V DC • Art. no. 22550

## • Power supply: 12 V DC (600 mA)

• Volume: max. 98 dB(A)

## Large bell (grey)

Type: LTW 168 GR 24V DC • Art. no. 22551

- Power supply: 24 V DC (300 mA)
- Volume: max. 98 dB(A)

## LARGE BELL



## LTW 168 WHITE

- Wall mounting
- For industrial and civil applications
- Housing colour: white
- Gong: painted steel
- Cable entry for cable: 5 9 mm
- Large bell (white)

Type: LTW 168 WS 12V AC • Art. no. 22572

Large bell (white)

Type: LTW 168 WS 24V AC • Art. no. 22573

Large bell (white)

Type: LTW 168 WS 240V AC • Art. no. 22577

Large bell (white)

Type: LTW 168 WS 12V DC • Art. no. 22570

Large bell (white)

Type: LTW 168 WS 24V DC • Art. no. 22571

- Continuous operation
- Protection rating: IP66
- Protection class II
- Diameter of the gongs: 168 mm
- **Dimensions**: 168 x 168 x 78 mm
- Power supply: 12 V AC (860 mA), 50 Hz
- Volume: max. 100 dB(A)
- Power supply: 24 V AC (430 mA). 50 Hz
- Volume: max. 100 dB(A)
- Power supply: 240 V AC (50 mA), 50 Hz
- Volume: max. 100 dB(A)
- Power supply: 12 V DC (600 mA)
- Volume: max. 98 dB(A)
- Power supply: 24 V DC (300 mA)
- Volume: max. 98 dB(A)

## LARGE BELL



## **LTW 168 RED**

- Wall mounting
- · For industrial and civil applications
- Housing colour: red
- Gong: painted steel
- Cable entry for cable: 5 9 mm

- Continuous operation
- Protection rating: IP66
- Protection class II
- Diameter of the gongs: 168 mm
- **Dimensions**: 168 x 168 x 78 mm

## Large bell (red)

Type: LTW 168 RT 12V AC • Art. no. 22562

- Power supply: 12 V AC (860 mA), 50 Hz
- Volume: max. 100 dB(A)

## Large bell (red)

Type: LTW 168 RT 24V AC • Art. no. 22563

- Power supply: 24 V AC (430 mA). 50 Hz
- Volume: max. 100 dB(A)

#### Large bell (red)

Type: LTW 168 RT 240V AC • Art. no. 22567

- Power supply: 240 V AC (50 mA), 50 Hz
- Volume: max. 100 dB(A)

## Large bell (red)

Type: LTW 168 RT 12V DC • Art. no. 22560

## Large bell (red)

Type: LTW 168 RT 24V DC • Art. no. 22561

- Power supply: 12 V DC (600 mA)
- Volume: max. 98 dB(A)
- Power supply: 24 V DC (300 mA)
- Volume: max. 98 dB(A)



Due to electromechanical sound generation using a membrane, horns are ideal for signalling hazards in industrial operations. They can also be used as a component of an alarm or fire protection system. Grothe horns achieve a volume of up to 100 dB(A) by concentrating sound via a cone. With their pervasive volume, our large horns can also be heard clearly even on very large sites. Made of durable plastic or metal, our large horns withstand all weathers.





# **HORN 640**AND **HORN 651**

Impact-resistant plastic housing with cone

## IP54

Suitable for indoor and outdoor use. Full protection against contact (with dust ingress possible in low quantities). Protected against splash water on all sides.

This horn generates sound at a volume of 100 dB(A).

## LARGE HORNS: HORNS 640 AND 651

- Wall mounting
- For industrial applications
- Housing colour: beige
- Material: Duroplast
- With waterproof membranegrommet for cable entry
- Continuous operation
- Protection rating: IP54
- Temperature range: -10 °C to 50 °C
- **Dimensions:** 345 x 150 x 165 mm

## Large horn 640

Type: HUPE 640 12V AC • Art. no. 32012

• Power supply: 12 V AC (2.2 A)

• Volume: 100 dB(A)

#### Large horn 640

Type: HUPE 640 24V AC • Art. no. 32013

• Power supply: 24 V AC (1.2 A)

Volume: 100 dB(A)

#### Large horn 640

Type: HUPE 640 42V AC • Art. no. 32014

• Power supply: 42 V AC (0.5 A)

• Volume: 105 dB(A)

## Large horn 640

Type: HUPE 640 230V AC • Art. no. 32017

## • Tested acc. to DIN EN 62080 (VDE 0632-600)

Power supply: 230 V AC, 50 Hz (0.15 A)

Volume: 100 dB(A)

## Large horn 651

Type: HUPE 651 24V DC • Art. no. 32123

## • Tone sequence can be set via DIP switch

Power supply: 24 V DC (0.4 A)

Volume: 100 dB(A)

# **HORN 680**





Our small horns produce acoustic and optical signals to warn about hazards in industrial operations. The combination horn (see next page) offers even greater safety with its combination of acoustic and optical signals.



SMALL HORNS: HORNS 63	30 AND 631
Wall mounting (with sound cone pointing downwards)     Terminals for max. 1.5 mm²     Continuous operation	<ul> <li>Protection rating: IP43 (protection class II)</li> <li>Temperature range: -30°C to 50°C</li> <li>Dimensions: 168 x 79 x 74 mm</li> </ul>
Small horn 630 Type: HUPE 630 8V AC • Art. no. 31041	<ul><li>Power supply: 8 V AC (0.34 A)</li><li>Volume: 92 dB(A)</li></ul>
<b>Small horn 630</b> Type: HUPE 630 24V AC • Art. no. 31043	<ul><li>Power supply: 24 V AC (0.14 A)</li><li>Volume: 93 dB(A)</li></ul>
<b>Small horn 630</b> Type: HUPE 630 110V AC • Art. no. 31045	<ul> <li>Power supply: 110 V AC (0.06 A)</li> <li>Volume: 95 dB(A)</li> </ul>
<b>Small horn 630</b> Type: HUPE 630 240V AC • Art. no. 31047	<ul><li>Power supply: 240 V AC (0.03 A)</li><li>Volume: 95 dB(A)</li></ul>
<b>Small horn 631</b> Type: HUPE 631 12 – 24V DC • Art. no. 31053	<ul> <li>Power supply: 12 V / 24 V DC (0.05 A / 0.04 A)</li> <li>Volume: 90/92 dB(A)</li> </ul>

# COMBINATION HORNS (SMALL HORNS)

## **COMBINATION HORNS WITH WARNING BEACON**

- Orange beacon dome
- 5-W incandescent bulb included (for Ba15d fitting)
- Continuous operation: optical signal operated independently of the acoustic signal
- Protection rating: IP43
- Protection class: II
- Temperature range: -30 °C to 50 °C
- **Dimensions**: 204 x 79 x 76 mm



## Combination horn with warning beacon

Type: HUPE WL 6301 240V AC • Art. no. 31371

- Power supply: 240 V AC (0.05 A)
- Volume: 92 dB(A)
- Suitable for incandescent bulbs and LED light sources

#### Combination horn with warning beacon

Type: HUPE WL 6311 24V DC • Art. no. 31341

- Power supply: 24 V DC (0.25 A)
- Volume: 96 dB(A)
- Suitable for incandescent bulbs and LED light sources

## **COMBINATION HORNS WITH FLASHING LIGHT**

- Orange beacon dome
- Built-in SMD LED technology
- Continuous operation: optical signal operated independently of the acoustic signal
- Protection rating: IP43
- Protection class: II
- Temperature range: -30 °C to 40 °C
- **Dimensions**: 204 x 79 x 76 mm



## Combination horn with flashing light

Type: HUPE BZ 6301 240V AC • Art. no. 31271

- Power supply: 240 V AC (0.05A)
- Volume: 92 dB(A)

### Combination horn with flashing light

Type: HUPE BZ 6311 24V DC • Art. no. 31241

- Power supply: 24 V DC (0.065 A)
- Volume: 96 dB(A)



# ACCESSORIES REPLACEMENT PARTS

#### **BEACON DOME FOR COMBINATION HORNS**



#### Beacon dome

Type: KSZ OR 100 • Art. no. 31101

• Colour: red

#### LIGHT SOURCES FOR COMBINATION HORNS: INCANDESCENT BULB



#### Incandescent bulb

Type: KSZ 8597 • Art. no. 38597

- For BA15d fitting
- Power supply: 240 V (5W)

#### Incandescent bulb

Type: KSZ 8596 • Art. no. 38596

- For BA15d fitting
- Power supply: 24 V (5W)

#### LIGHT SOURCES FOR COMBINATION HORNS: LED LIGHT SOURCE



#### **LED light source**

Type: KSZ-LED 8661 Art. no. 38661

- Colour: yellow
- Power supply:
   24 V AC/DC (45 mA)



#### **LED light source**

Type: KSZ-LED 8662 Art. no. 38662

- Colour: red
- Power supply:
   24 V AC/DC (45 mA)



#### **LED light source**

Type: KSZ-LED 8651 Art. no. 38651

- Colour: yellow
- Power supply: 230/240 V AC (50 mA)



#### **LED** light source

Type: KSZ-LED 8652 Art. no. 38652

- Colour: red
- Power supply: 230/240 V AC (50 mA)





Universal sound generators with very high volume, a large number of distinctive signal tones and outstanding installation flexibility for indoor and outdoor use (e.g. in schools, airports, industrial sites, public buildings and more). A wide range of mounting options: directly on the wall, or on tables or the ceiling using the supplied accessories. You can also choose different emission angles. When it comes to electrical wiring, in the future you will no longer need to consider which device versions you currently need for your purposes. The PSG 230 can do everything: supplied with 12 /24 V AC/DC or 230 V AC; triggered with the same voltages, different voltages or potential free. A circuit overview can be found in the operating instructions.

PSG 4.0

LED flash

Anthracite colour (RAL 7016)
Protection rating IP54
Up to 115 dB(A) with integrated power booster system

Differentiation between 2 calls

Robust loudspeaker grilles made of high-quality anodised aluminium. A large number of distinctive signal tones:

- 8 siren/alarm tones
- 2 bell/horn tones
- 5 melodies (two-tone, three-tone, Westminster...), beep tone

Programmable tone progression

Green LED readiness indicator

Table, wall and ceiling mounting (30°/60° angle)





Double-pressure-chamber loudspeaker system (up to 115 dB(A))

#### **POWER SOUND GENERATOR 4.0**

- Table, wall and ceiling mounting (30°/60° angle)
- Colour anthracite (RAL7016)
- Robust loudspeaker grilles made of high-quality anodised aluminium
- Double-pressure-chamber loudspeaker system
- Programmable tone progression

- Differentiation between 2 calls
- Green LED readiness indicator
- Continuous operation
- Protection rating: IP54 (for indoor and outdoor use)
- **Dimensions**: 158 x 243 x 80 mm



#### Power sound generator

Type: PSG 4.0-100 • Art. no. 37410

- 8 alarm tones, 8 melodies
- Power supply: 12 24 V AC / DC (1.0 A)



#### Power sound generator

Type: PSG 4.0-230F • Art. no. 37430

- 8 alarm tones, 8 melodies or flashes
- Double-pressure-chamber loudspeaker system
- Volume up to 115 dB(A) with a 230-V supply
- Power supply: 230 V AC (0.1 A) and 12 – 24 V AC / DC (1.0 A)

Combination with a receiver (e.g. MISTRAL FTR or MISTRAL RB) enables wireless control, and the parallel connection of multiple PSGs is also possible.



# TRANSFORMERS









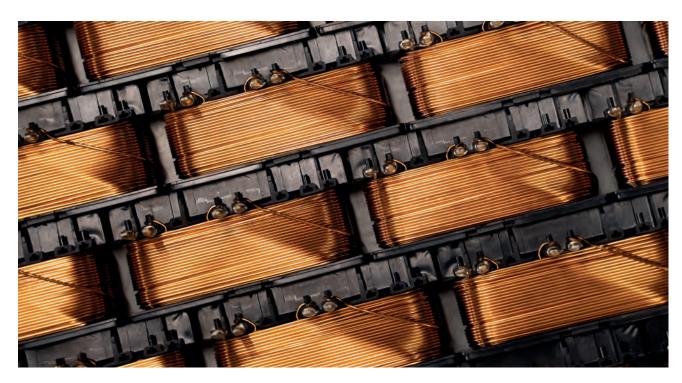
# Rail-mounted devices

- For installation in distribution boards
- Compact dimensions
- Compliant with the most stringent environmental protection requirements



# **GROTHE TRANSFORMERS "MADE IN GERMANY"**

**Doorbell transformers** are **optimised for short-term operation**, for example in doorbells, bells and door releases in living areas. Meanwhile, safety transformers are designed for continuous operation. Grothe **doorbell and safety transformers** (except for doorbell transformer 14207) are **protected by a PTC thermistor** that de-energises the transformer on the primary side in the event of a short circuit or overload. All of the transformers are compliant with the most stringent **environmental protection requirements**, have been tested according to EN61558 and have **VDE certification** (with the ENEC mark for use in Europe).





# GROTHE DOORBELL TRANSFORMERS

- For short-term loads
- Tested according to EN 61558-2-8:2011
- Short-circuit proof due to PTC thermistor (except for GT50810)





S version with single-pole mains switch



# GROTHE SAFETY TRANSFORMERS

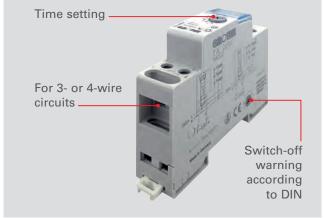
- Suitable for a continuous load
- Tested according to EN 61558-2-6:2010
- Short-circuit proof due to PTC thermistor





# GROTHE STAIRCASE LIGHTING TIMER

- Time setting: infinitely adjustable up to 12 min
- For 3- or 4-wire circuits
- Switch-off warning according to DIN





# DC POWER SUPPLY UNITS

- Power supply unit with replaceable primary fuse
- Surface mounting / top-hat-rail mounting
- Mains voltage indicator LED





# SURFACE MOUNTING SETS

Surface mounting set including two caps for IP20, with a mounting rail and equipment for surface mounting.





Doorbell transformers are **optimised for short-term operation**, for example with **doorbells**, **bells** and **door releases**. Grothe doorbell transformers are **protected by a PTC thermistor**. It de-energises the transformer on the primary side in the event of a short circuit or overload (except for doorbell transformer 14207). When the PTC thermistor is triggered by an overload or short circuit, the transformer should be de-energised briefly, but for at least a minute, so that it can then be put back into operation.

#### **STANDARD** DOORBELL TRANSFORMERS



#### **Doorbell transformer**

Type: GTN 3148 • Art. no. 14201

- Primary voltage: 230 V AC (50 Hz)
  Secondary voltage: 8 V AC (1.0 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm



#### **Doorbell transformer**

Type: GTN 3139 • Art. no. 14039

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8/12 V AC (1.5/1.0 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm



#### **Doorbell transformer**

Type: GTN 3158 • Art. no. 14058

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 12 V AC (1.0 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm



# **STANDARD** DOORBELL TRANSFORMERS



#### **Doorbell transformer**

Type: GTN 3173 • Art. no. 14073

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8/12 V AC (2.0/1.5 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm



#### **Doorbell transformer**

Type: GTN 3182 • Art. no. 14082

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8/12/24 V AC (2.0/1.3/0.6 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm



#### **Doorbell transformer**

Type: GTN 50810 • Art. no. 14207

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8 V AC (1.0 A)
- 2 modules wide
- Single-pole mains switch
- Continuous failure in the event of improper use
- Dimensions: 90 x 36 x 65 mm

#### DOORBELL TRANSFORMER UP TO 24 VA



#### **Doorbell transformer**

Type: GTN 3174 • Art. no. 14074

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8/12 V AC (2.0/2.0 A)
- 3 modules wide
- Dimensions: 90 x 54 x 60 mm



# DOORBELL TRANSFORMERS WITH MAINS SWITCH



#### **Doorbell transformer**

Type: GTN 3148 S • Art. no. 14211

• Primary voltage: 230 V AC (50 Hz)

• Secondary voltage: 8 V AC (1.0 A)

• Single-pole mains switch

• 2 modules wide

• Dimensions: 90 x 36 x 65 mm



#### **Doorbell transformer**

Type: GT 3139 S • Art. no. 14049

• Primary voltage: 230 V AC (50 Hz)

Secondary voltage: 8/12 V AC (1.5/1.0 A)

• Single-pole mains switch

• 2 modules wide

• Dimensions: 90 x 36 x 65 mm



#### **Doorbell transformer**

Type: GTN 3173 S • Art. no. 14083

• Primary voltage: 230 V AC (50 Hz)

• Secondary voltage: 8/12 V AC (2.0/1.5 A)

• Single-pole mains switch

• 2 modules wide

• Dimensions: 90 x 36 x 65 mm

#### **SURFACE MOUNTING SETS**



#### Surface mounting set

Type: GT 36 AP • Art. no. 14936

- For 2-module-wide transformers
- Surface mounting set including two caps for IP20, with a mounting rail and equipment for surface mounting.



#### Surface mounting set

Type: GT 54 AP • Art. no. 14954

- For 3-module-wide transformers
- Surface mounting set including two caps for IP20, with a mounting rail and equipment for surface mounting.





Safety transformers are **optimised for continuous operation**. For example **for installation in distribution boards**, **including flat distribution boards**. Grothe safety transformers are **protected by a PTC thermistor**. It de-energises the transformer on the primary side in the event of a short circuit or overload. When the PTC thermistor is triggered by an overload or short circuit, the transformer should be de-energised briefly, but for at least a minute, so that it can then be put back into operation.

# **STANDARD** SAFETY TRANSFORMERS



#### Safety transformer

Type: GTN 1965 • Art. no. 14102

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8 V AC (2.0 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm



#### Safety transformer

Type: GTN 1975 • Art. no. 14101

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 12 V AC (1.5 A)
- 2 modules wide
- Dimensions: 90 x 36 x 65 mm

#### SAFETY TRANSFORMER UP TO 25 VA



#### Safety transformer

Type: GTN 1973 • Art. no. 14034

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 8/12 V AC (2.0/2.0 A)
- 3 modules wide
- Dimensions: 90 x 54 x 60 mm

# SAFETY TRANSFORMER UP TO 63 VA



#### Safety transformer

Type: GT 1980 • Art. no. 14140

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 12/16/24/32 V AC (3.3/2.5/1.6/1.2 A)
- 5 modules wide
- Dimensions: 90 x 90 x 60 mm



#### Safety transformer

Type: GT 1990 • Art. no. 14160

- Primary voltage: 230 V AC (50 Hz)
- Secondary voltage: 12 / 24 V AC (5.2 / 2.6 A), max. 63 VA
- 5 modules wide
- Dimensions: 90 x 90 x 60 mm

# **SURFACE MOUNTING SETS**



#### Surface mounting set

Type: GT 36 AP • Art. no. 14936

- For 2-module-wide transformers
- Surface mounting set including two caps for IP20, with a mounting rail and equipment for surface mounting.

#### Surface mounting set

Type: GT 54 AP • Art. no. 14954

- For 3-module-wide transformers
- Surface mounting set including two caps for IP20, with a mounting rail and equipment for surface mounting.

#### Surface mounting set

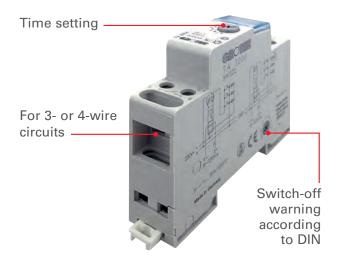
Type: GT 90 AP • Art. no. 14990

- For 5-module-wide transformers
- Surface mounting set including two caps for IP20, with a mounting rail and equipment for surface mounting.





# STAIRCASE LIGHTING TIMERS



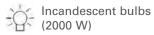
Staircase lighting timers for installation in distribution boards. The switch-off warning alerts stairwell occupants to the fact that the light will switch off soon. In the event that work is carried out in the stairwell, the continuous light can be switched on.

#### Staircase lighting timer

Type: TA 220d • Art. no. 94022

- Electronic control
- Resettable
- Programmable time extension function
- Current pulse mode
- Switch-off warning according to DIN 18015-2 (the staircase lighting flickers several times approx. 30 s before the time runs out)
- Operating voltage: 230 VAC (50 Hz)
- Control voltage: 8 230 V AC/DC and 230 V AC
- Contact load: 16 A (1 normally open contact)
- Temperature range: -25 °C to 50 °C
- 1 module wide
- **Dimensions**: 82 x 18 x 58 mm

#### **SWITCHING CAPACITIES:**

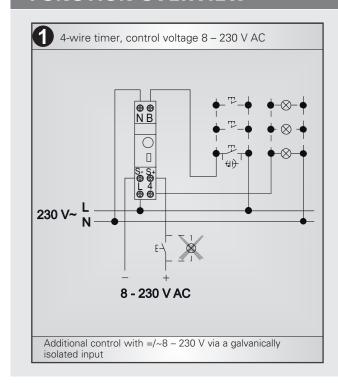


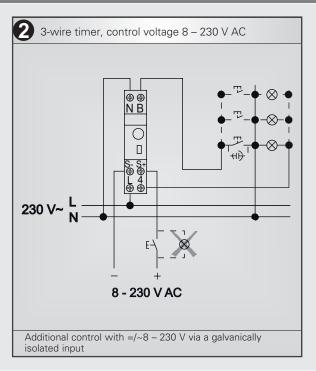




Neon lamps (max. 100 mA)

#### **FUNCTION OVERVIEW**









# DC POWER SUPPLY UNITS

# DC POWER SUPPLY UNITS



#### Power supply unit

Type: NG AL12/5A • Art. no. 39340

- Power supply unit with replaceable primary fuse
- Surface mounting / top-hat-rail mounting
- Mains voltage indicator LED
- Primary voltage: 230 V AC (50 Hz)
- Output voltage: 12 V DC (max. 5 A)
- 4 modules wide
- Dimensions: 123 x 100 x 68 mm



#### Power supply unit

Type: NG AL12/2A • Art. no. 39342

- Power supply unit potentiometer
- Surface mounting / top-hat-rail mounting
- Mains voltage indicator LED
- Primary voltage: 100-240 V AC (50 Hz)
- Output voltage: 12 V DC (max. 2 A)
- 2 modules wide
- Dimensions: 94 x 36 x 69 mm



#### Power supply unit

Type: NG AL24/1A • Art. no. 39343

- Power supply unit with replaceable primary fuse
- Surface mounting / top-hat-rail mounting
- Mains voltage indicator LED
- Primary voltage: 100-240 V AC (50 Hz)
- Output voltage: 24 V DC (max. 1 A)
- 2 modules wide
- Dimensions: 94 x 36 x 69 mm

# INDUSTRIAL SIGNALING

**MODULAR SYSTEMS AND BEACONS** 



Define the appropriate signal for each (hazardous) situation and mix and match different colours and light combinations with the optical and acoustic signalling devices. Whether you want to mount individual warning beacons, tower systems or rotating beacons on the wall or on even surfaces, installation is lightning fast with the right accessories.













# MODULAR SYSTEM M SYSTEM

The M system is a compact, modular system consisting of base modules, beacons and sound generators whose high optical performance and powerful sound make the system the optimal solution for all demanding applications. All of the modules have protection rating IP65 and are therefore ideal for outdoor applications.

The **multilevel technology** enables a variety of alarm levels to be implemented using a single device. With this in mind, there is a range of **different sounds as well as beacon and flashing functions to choose from**.



#### M SYSTEM: SOUND GENERATORS (SIRENS)

- Two functions: alarm 1, alarm 2
- Alarm 1: 32 tones, set via DIP switch A
- Alarm 2: 32 tones, set via DIP switch B
- Independent control via separate contacts
- **Volume**: max. 105 dB(A)

- **Power supply:** 12 24 V AC / DC
- Continuous operation
- Temperature range: -30 °C to 50 °C
- Protection rating: IP65
- Dimensions: Ø 92 x 63 mm



#### Sound generator module

Type: MSG 8921 • Art. no. 38921

• Plastic: black





#### Sound generator module

Type: MSG 8922 • Art. no. 38922

• Plastic: white



#### M SYSTEM: LED & ACOUSTIC COMBINATION BEACON

- Flat design
- Three functions: warning, alarm 1 and alarm 2
- Warning: triple strobe flashing effect
- Alarm 1: triple strobe flashing effect and 32 tones, set via DIP switch A
- Alarm 2: powerful warning light and 32 tones, set via DIP switch B
- · Independent control via separate contacts
- Flashing frequency: approx. 85 flashes / minute
- Volume: max. 105 dB(A)
- Power supply: 12 24 V AC / DC
- Temperature range: -30 °C to 55 °C
- Protection rating: IP65
- Dimensions: Ø 92 x 63 mm



#### LED combination beacon module

Type: MHZ 8931 • Art. no. 38931

- Colour: orange
- Luminous intensity: 15 Cd(p)





#### LED combination beacon module

Type: MHZ 8932 • Art. no. 38932

- Colour: red
- Luminous intensity: 10 Cd(p)





#### LED combination beacon module

Type: MHZ 8933 • Art. no. 38933

- Colour: green
- Luminous intensity: 20 Cd(p)





#### LED combination beacon module

Type: MHZ 8934 • Art. no. 38934

- Colour: blue
- Luminous intensity: 5 Cd(p)





# M SYSTEM: LED WARNING & ROTATING BEACON

- Three functions: continuous light, rotating light and flashing light
- Flashing frequency: approx. 85 flashes / minute
- Rotating frequency: approx. 140 rotations / minute
- Independent control via separate contacts
- Continuous operation
- **Power supply**: 12 24 V AC / DC
- Protection rating: IP65
- Temperature range: -30 °C to 55 °C
- Dimensions: Ø 92 x 126 mm



#### LED warning beacon module

Type: MWL 8941 • Art. no. 38941

- Colour: orange
- Luminous intensity: 20 Cd(p)





#### LED warning beacon module

Type: MWL 8942 • Art. no. 38942

- Colour: red
- Luminous intensity: 13 Cd(p)





#### LED warning beacon module

Type: MWL 8943 • Art. no. 38943

- Colour: green
- Luminous intensity: 16 Cd(p)





#### LED warning beacon module

Type: MWL 8944 • Art. no. 38944

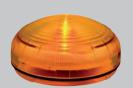
- Colour: blue
- Luminous intensity: 5 Cd(p)





#### M SYSTEM: LED WARNING BEACON

- Flat design
- Three functions: continuous light, flashing light and double flashing light
- Independent control via separate contacts
- With a directional Fresnel lens for signalling over longer distances
- Flashing frequency: approx. 140 flashes / minute
- Continuous operation
- Power supply: 12 24 V AC / DC
- Protection rating: IP65
- Temperature range: -30 °C to 50 °C
- Dimensions: Ø 92 x 43 mm



#### LED warning beacon module

Type: MWL 8951 • Art. no. 38951

- Colour: orange
- Luminous intensity: 20 Cd(p)





#### LED warning beacon module

Type: MWL 8952 • Art. no. 38952

- Colour: red
- Luminous intensity: 13 Cd(p)





#### LED warning beacon module

Type: MWL 8953 • Art. no. 38953

- Colour: green
- Luminous intensity: 16 Cd(p)





#### LED warning beacon module

Type: MWL 8954 • Art. no. 38954

- Colour: blue
- Luminous intensity: 5 Cd(p)



# M system: LED MULTI-BEACON

- Independent control via separate contacts
- **Power supply:** 12 24 V AC / DC
- Flashing frequency: approx. 140 flashes / minute
- Continuous operation
- Protection rating: IP65
- Dimensions: Ø 92 x 43 mm



#### LED multi-beacon module

Type: MWL 8963 • Art. no. 38963

- With a directional Fresnel lens for signalling over longer distances
- Integrated light colours: red, orange, green, cyan, violet, blue, white and yellow
- Temperature range: -30 °C to 55 °C





#### LED multi-beacon module

Type: MML 8962 • Art. no. 38962

- Signalling at close range
- Integrated light colours: red, orange, green
- Temperature range: -30 °C to 50 °C





# M SYSTEM: BASE MODULES

- For all 389xx modules
- Housing: plastic (PC\*), black

- Multi-volt operation
- Temperature range: -30 °C to 50 °C



#### Flat base module

Type: BMF 8911 • Art. no. 38911

- Surface mounting
- Power supply: 12 24 V AC / DC
- Dimensions: Ø 92 x 22 mm





#### Deep base module

Type: BMT 8912 • Art. no. 38912

- Surface mounting
- Power supply: 12 24 V AC / DC
- Dimensions: Ø 92 x 47 mm





#### Deep base module

Type: BMT 8914 • Art. no. 38914

- Surface mounting
- Power supply: 90 240 V AC
- Dimensions: Ø 92 x 47 mm





#### Wall base module

Type: BMW 8913 • Art. no. 38913

- Wall mounting
- Power supply: 12 24 V AC / DC
- PC\* plastic, black
- Dimensions: 100 x 61 x 115 mm





#### Wall base module

Type: BMW 8915 • Art. no. 38915

- Wall mounting
- Power supply: 90 240 V AC
- PC\* plastic, black
- Dimensions: 100 x 61 x 115 mm





#### Wall double base module

Type: BDW 8916 • Art. no. 38916

- Wall mounting
- Power supply: 12 24 V AC / DC
- Dimensions: 100 x 95 x 115 mm





#### Wall double base module

Type: BDW 8917 • Art. no 38917

- Wall mounting
- Power supply: 90 240 V AC
- Dimensions: 100 x 95 x 115 mm





# M SYSTEM: BASE MODULES

- For all 389xx modules
- Housing / cover: plastic (PC\*), white

- Multi-volt operation
- Temperature range: -30 °C to 50 °C



#### Flat base module

Type: BMF 8991 • Art. no. 38991

- Surface mounting
- Power supply: 12 24 V AC / DC
- Dimensions: Ø 92 x 22 mm





#### Deep base module

Type: BMT 8992 • Art. no. 38992

- Surface mounting
- Power supply: 12 24 V AC / DC
- M20 screw connection
- Dimensions: Ø 92 x 47 mm





#### Deep base module

Type: BMT 8994 • Art. no. 38994

- Surface mounting
- Power supply: 90 240 V AC
- M20 screw connection
- Dimensions: Ø 92 x 47 mm





#### Flush-mounted base module

Type: BME 8993 • Art. no. 38993

- Mounting in suspended ceilings
- Housing: plastic (PC\*), black

• Dimensions: Ø 145 x 70 mm

- Power supply: 12 24 V AC / DC
- 12-24 V AC/DC



#### Flush-mounted base module

Type: BME 8995 • Art. no. 38995

- Mounting in suspended ceilings
- Housing: plastic (PC\*), black
- Power supply: 90 240 V AC
- Dimensions: Ø 145 x 70 mm





Polycarbonate is an engineering thermoplastic characterised by high transparency, high heat deflection stability and high impact resistance.



This **electronic siren** is suitable for the M system, a compact and modular system. The sound generator is combined with an M system base module at the factory and has an extremely high volume. The two functions, warning and alarm, can be switched independently via separate contacts. One tone is defined for the alarm; 12 tones are provided for the warning and can be set via DIP switch.

#### **SIRENS INCLUDING POWER SUPPLY**

- Two functions: warning and alarm
- Independent control via separate contacts
- Warning: 12 tones, set via DIP switch
- Alarm: fixed tone
- Surface mounting on horizontal surfaces
- Volume: 80 100 dB(A) depending on the pitch
- Continuous operation
- Temperature range: -30 °C to 50 °C
- Protection rating: IP65
- Dimensions: Ø 92 x 102 mm



#### **Electronic siren**

Type: SIR 8901RT • Art. no. 38901

• Plastic: red

• Power supply: 12 - 24 V AC / DC (215 - 250 mA)





#### **Electronic siren**

Type: SIR 8902WS • Art. no. 38902

Plastic: white

• Power supply: 12 – 24 V AC / DC (215 – 250 mA)





#### **Electronic siren**

Type: SIR 8903RT • Art. no. 38903

• Plastic: red

• Power supply: 90 – 240 V AC (35 – 60 mA)





#### **Electronic siren**

Type: SIR 8904WS • Art. no. 38904

Plastic: white

• Power supply: 90 - 240 V AC (35 - 60 mA)







# ENTRY MANAGEMENT

Staff operate the entry tower from anywhere on the premises via two-button remote control. This allows them to move freely through the rooms and regulate the maximum number of people on the premises with no additional effort.



No installation effort. Immediately ready for use thanks to plug & play technology. Can be used anywhere. Invite customers in via remote control.

# **Entry management**

Type: ELM 8955 • Art. no. 38955

- Entry management via remote control
- Two beacon units: red and green
- Battery operation for up to eight hours
- Diameter: 22 mm
- Power supply: 100 240 V AC, 50 Hz, plug-in power supply unit, battery operation
- Dimensions: 1350 x 230 x 230 mm



#### M SYSTEM: TRAFFIC LIGHT BASE MODULES

- For all 389xx modules
- Surface mounting
- Housing: plastic (PC\*), grey
- Multi-volt operation
- Temperature range: -25 °C to 50 °C



Type: AMP 8906 • Art. no. 38906

- Surface mounting
- Power supply: 12 24 V AC / DC
- Dimensions: 231 x 120 x 133 mm
- Always order beacon modules separately





# Traffic light base module for two beacon units

Type: AMP 8907 • Art. no. 38907

- Surface mounting
- Power supply: 120 240 V AC
- Dimensions: 231 x 120 x 133 mm
- Always order beacon modules separately





# Traffic light base module for three beacon units

Type: AMP 8908 • Art. no. 38908

- Surface mounting
- Power supply: 12 24 V AC / DC
- Dimensions: 342 x 120 x 133 mm
- Always order beacon modules separately



# Traffic light base module for three beacon units

Type: AMP 8909 • Art. no. 38909

- Surface mounting
- Power supply: 120 240 V AC
- Dimensions: 342 x 120 x 133 mm
- Always order beacon modules separately



# **ACCESSORIES**

for AMP 8906 to 8909 and AMP 8966 to 8669



#### WALL BRACKET

Type: WHA 8910 • Art. no. 38910

- Swivelling
- Material: stainless steel
- Dimensions: 136 x 88 x 30 mm

#### M SYSTEM: TRAFFIC LIGHT MODULES WITH LED WARNING BEACONS

- For all 389xx modules
- · Surface mounting
- Housing: plastic (PC\*), grey
- Multi-volt operation
- Temperature range: -25 °C to 50 °C



#### Traffic light module incl. two LED warning beacons

Type: AMP 8966 • Art. no. 38966

Set consisting of:

- 1x traffic light base module AMP 8906
- 1x LED warning beacon module MWL 8952
- 1x LED warning beacon module MWL 8953
- Power supply: 12 24 V AC / DC
- Dimensions: 231 x 120 x 133 mm



#### Traffic light module incl. two LED warning beacons

Type: AMP 8967 • Art. no. 38967

Set consisting of:

- 1x traffic light base module AMP 8906
- 1x LED warning beacon module MWL 8952
- 1x LED warning beacon module MWL 8953
- Power supply: 120 240 V AC
- Dimensions: 231 x 120 x 133 mm





#### Traffic light module incl. three LED warning beacons

Type: AMP 8968 • Art. no. 38968

Set consisting of:

- 1x traffic light base module AMP 8908
- 1x LED warning beacon module MWL 8951
- 1x LED warning beacon module MWL 8952
- 1x LED warning beacon module MWL 8953
- Power supply: 12 24 V AC / DC
- Dimensions: 342 x 120 x 133 mm



#### Traffic light module incl. three LED warning beacons

Type: AMP 8969 • Art. no. 38969

Set consisting of:

- 1x traffic light base module AMP 8906
- 1x LED warning beacon module MWL 8952
- 1x LED warning beacon module MWL 8953
- Power supply: 120 240 V AC
- Dimensions: 342 x 120 x 133 mm















# WARNING AND FLASHING BEACONS

With a combination of different optical and acoustic signals, our flashing and warning beacons warn of hazards wherever they are used.



Thanks to their high radiant power, xenon tubes and SMD LEDs are clearly visible even in bright lighting or from a long way away. 360° light emission.

- Various flashing light signals
  Multi-flashing beacons light up at definable intervals.
- Additional sound generator

  Combination beacons have an integrated sound generator that provides the option of emitting an acoustic signal together with the optical signal.



# **SMALL WARNING BEACON WITH Ba15d FITTING**

- Equipped for incandescent bulbs and LED light sources 12 240 V (5 W) not included
- Fitting: Ba15d
- Terminals for max. 1.5 mm<sup>2</sup>
- 360° light emission

- Power supply: max. 240 V AC / DC (5 W)
- Temperature range: -30 °C to 50 °C
- Protection rating: IP65
- Dimensions: Ø 75 x 86 mm





#### Warning beacon with fitting

Type: KWL 8101 • Art. no. 38101

- Colour: orange
- Luminous intensity: 3 Cd(p)
- Order incandescent bulb or LED light source separately (page 116 / 117)





#### Warning beacon with fitting

Type: KWL 8102 • Art. no. 38102

- Colour: red
- Luminous intensity: 1 2 Cd(p)
- Order incandescent bulb or LED light source separately (page 116 / 117)





#### Warning beacon with fitting

Type: KWL 8106 • Art. no. 38106

- Colour: green
- Luminous intensity: 1 Cd(p)
- Order incandescent bulb or LED light source separately (page 116 / 117)



#### **SMALL LED MULTI-FLASHING BEACON**

- Integrated extra-bright SMD LEDs
- . Optimal safeguarding against failure
- Functions: continuous light or single, double (xenon effect) or triple flashing, set via DIP switch
- Maintenance free, low energy consumption
- Continuous operation

- Flashing frequency: approx. 150 flashes / minute
- Temperature range: -30 °C to 60 °C
- Protection rating: IP65
- Dimensions: Ø 75 x 79 mm





#### LED multi-flashing beacon

Type: KBZ 8211 • Art. no. 38211

- Colour: orange
- Luminous intensity: 20 Cd(p)
- Power supply: 12 24 V AC / DC (0.055 A)





#### LED multi-flashing beacon

Type: KBZ 8212 • Art. no. 38212

- · Colour: red
- Luminous intensity: 8 Cd(p)
- Power supply: 12 24 V AC / DC (0.055 A)





#### LED multi-flashing beacon

Type: KBZ 8221 • Art. no. 38221

- Colour: orange
- Luminous intensity: 20 Cd(p)
- Power supply: 90 240 V AC (0.02 A)





#### LED multi-flashing beacon

Type: KBZ 8222 • Art. no. 38222

- Colour: red
- Luminous intensity: 8 Cd(p)
- Power supply: 90 240 V AC (0.02 A)



Essential accessories: adapter base (38002) and mounting element (38001 or 38004 or 38005)

Optional accessory: extension tube (38003)

Always order separately: special toothed connector as vibration protection. Terminals for max. 1.5 mm².



# **ALWAYS INCLUDE MOUNTING ELEMENTS IN YOUR ORDER!**



#### Mounting base

Type: KSZ 8001 • Art. no. 38001

- For horizontal mounting
- With male thread
- Colour: grey
- Protection rating: IP65
- Dimensions: Ø 60 x 35 mm



#### Adapter base

Type: KSZ 8002 • Art. no. 38002

- Screws directly onto the beacon. Essential for making combinations using the other accessories!
- With female thread
- Plastic: PA 6.6
- Colour: grey
- Protection rating: IP65
- Dimensions: Ø 60 x 38 mm



#### **Extension tube**

Type: KSZ 8003 • Art. no. 38003

- 100-mm extension
- With male thread
- Colour: grey
- Protection rating: IP65
- Dimensions: Ø 25 x 117 mm



#### **Mounting bracket**

Type: KSZ 8004 • Art. no. 38004

- For vertical mounting / wall mounting
- One connection
- Colour: grey
- Protection rating: IP65
- Dimensions: Ø 69 x 85 mm



#### Mounting bracket

Type: KSZ 8005 • Art. no. 38005

- For vertical mounting / wall mounting
- Two connections
- Colour: grey
- Protection rating: IP65
- Dimensions: Ø 69 x 85 mm

# **MEDIUM LED MULTI-FLASHING BEACON**

- Integrated extra-bright SMD LEDs
- Optimal safeguarding against failure
- Functions: continuous light, triple flashing (xenon effect)
- Maintenance free, low energy consumption
- Continuous operation

- Flashing frequency: approx. 150 flashes / minute
- Temperature range: -30 °C to 60 °C
- Protection rating: IP65
- Dimensions: Ø 106 x 63 mm





#### LED multi-flashing beacon

Type: MBZ 8411 • Art. no. 38411

• Colour: orange

Luminous intensity: 22 Cd(p)

• Power supply: 12 – 24 V AC / DC (0.32 A)





#### LED multi-flashing beacon

Type: MBZ 8412 • Art. no. 38412

• Colour: red

• Luminous intensity: 13 Cd(p)

• Power supply: 12 – 24 V AC / DC (0.32 A)





#### LED multi-flashing beacon

Type: MBZ 8421 • Art. no. 38421

Colour: orange

• Luminous intensity: 22 Cd(p)

• Power supply: 90 – 240 V AC (0.075 A)





#### LED multi-flashing beacon

Type: MBZ 8422 • Art. no. 38422

• Colour: red

• Luminous intensity: 13 Cd(p)

• Power supply: 90 – 240 V AC (0.075 A)





# LARGE WARNING AND FLASHING BEACONS

- Equipped for incandescent bulbs and LED light sources 12 – 240 V (25 W) – not included
- Fitting: Ba15d
- Terminals for max. 1.5 mm²
- 360° light emission
- Maintenance free, low energy consumption
- Power supply: max. 240 V AC / DC (25 W)
- Temperature range: -30 °C to 50 °C
- Protection rating: IP54
- Dimensions: Ø 138 x 115 mm





#### Warning beacon with fitting

Type: GWL 8511 • Art. no. 38511

- Colour: orange
- Luminous intensity: 56 Cd(p)
- Order incandescent bulb or LED light source separately (page 116 / 117)





#### Warning beacon with fitting

Type: GWL 8512 • Art. no. 38512

- Colour: red
- Luminous intensity: 24 Cd(p)
- Order incandescent bulb or LED light source separately (page 116 / 117)





#### Warning beacon with fitting

Type: GWL 8516 • Art. no. 38516

- Colour: green
- Luminous intensity: 10 Cd(p)
- Order incandescent bulb or LED light source separately (page 116 / 117)





# LARGE FLASHING BEACONS

- Powerful warning effect thanks to xenon flash tubes
   (6 J) included
- Application area: hazardous areas, e.g. in industrial operations or alarm systems
- Light emission: 360°
- Terminals for max. 1.5 mm<sup>2</sup>

- Replaceable xenon flash tubes
- Flashing frequency: 65 flashes / minute
- Temperature range: -10 °C to 40 °C
- Protection rating: IP54
- Dimensions: Ø 138 x 115 mm





#### Flash

Type: GBZ 8601 • Art. no. 38531

- Colour: orange
- Luminous intensity: 3360 Cd(p)
- Power supply: 12 24 V AC / DC (1.8 / 0.85 A)





#### Flash

Type: GBZ 8602 • Art. no. 38532

- Colour: red
- Luminous intensity: 1440 Cd(p)
- $\bullet$  Power supply: 12 24 V AC / DC (1.8 / 0.85 A)





#### Flash

Type: GBZ 8611 • Art. no. 38551

- Colour: orange
- Luminous intensity: 3360 Cd(p)
- Power supply: 240 V AC (0.1 A)





#### Flash

Type: GBZ 8612 • Art. no. 38552

- Colour: red
- Luminous intensity: 1440 Cd(p)
- Power supply: 240 V AC (0.1 A)





# **LARGE FLASHING BEACONS**

- Powerful warning effect thanks to xenon flash tubes
   (6 J) included
- Excellent light distribution thanks to special lens
- Excellent safeguarding against failure as there are no moving parts
- Application area: hazardous areas, e.g. in industrial operations or alarm systems
- M16 screw connection
- Replaceable xenon flash tubes
- Flashing frequency: approx. 85 flashes / minute
- Temperature range: -30 °C to 40 °C
- Protection rating: IP54
- **Dimensions**: Ø 130 x 138.5 mm





#### Flashing beacon

Type: GBZ 8621 • Art. no. 38553

• Colour: orange

• Luminous intensity: 2650 Cd(p)

• Power supply: 240 V AC (0.09 A)





#### Flashing beacon

Type: GBZ 8622 • Art. no. 38554

• Colour: red

• Luminous intensity: 2650 Cd(p)

• Power supply: 240 V AC (0.09 A)





#### LARGE COMBINATION FLASHING BEACON

- Powerful warning effect thanks to xenon flash tubes (6 J) included
- Application area: hazardous areas, e.g. in industrial operations or alarm systems
- Light emission: 360°
- Incl. piezo sound generator (simultaneous tone and flashing)
- Terminals for max. 1.5 mm<sup>2</sup>
- Replaceable xenon flash tubes
- Flashing frequency: approx. 65 flashes / minute
- Temperature range: -10 °C to 40 °C
- Protection rating: IP30 (protection class II)
- Dimensions: Ø 138 x 115 mm





#### **Combination flashing beacon**

Type: HBZ 8541 • Art. no. 38541

• Colour: orange

• Luminous intensity: 3360 Cd(p)

Volume: 80 dB(A)

• Power supply: 24 V DC (0.85 A)





#### **Combination flashing beacon**

Type: HBZ 8542 • Art. no. 38542

• Colour: red

• Luminous intensity: 1440 Cd(p)

Volume: 80 dB(A)

• Power supply: 24 V DC (0.85 A)





#### **Combination flashing beacon**

Type: HBZ 8571 • Art. no. 38571

• Colour: orange

• Luminous intensity: 3360 Cd(p)

Volume: 72 dB(A)

Power supply: 240 V AC (0.1 A)





#### **Combination flashing beacon**

Type: HBZ 8572 • Art. no. 38572

Colour: red

• Luminous intensity: 1440 Cd(p)

Volume: 72 dB(A)

• Power supply: 240 V AC (0.1 A)





# LARGE FLASHING BEACON

- Powerful warning effect thanks to xenon flash tubes (6 J) included
- Application area: hazardous areas, e.g. in industrial operations or alarm systems
- Light emission: 360°
- Excellent safeguarding against failure as there are no moving parts
- Terminals for max. 1.5 mm<sup>2</sup>
- Replaceable xenon flash tubes
- Flashing frequency: approx. 65 flashes / minute
- Temperature range: -30 °C to 40 °C
- Protection rating: IP55
- Dimensions: Ø 152 x 209 mm





#### Flashing beacon

Type: BLZ-R 7357 • Art. no. 37357

- Colour: orange
- Luminous intensity: 2650 Cd(p)
- Excellent light distribution thanks to special lens
- Power supply: 240 V AC (0.1 A)





#### Flashing beacon

Type: BLZ-R 7352 • Art. no. 37352

- Colour: red
- Luminous intensity: 2650 Cd(p)
- Excellent light distribution thanks to special lens
- Power supply: 240 V AC (0.1 A)





With a rotating light cone, our rotating beacons emit an optical signal in all directions.

# Optimal luminous efficacy

Halogen bulbs and commercially available incandescent bulbs emit a continuously visible optical signal, even in bright environments. 360° light emission.

#### Suitable for continuous use

Rotating beacons are ideal in areas that require a continuously signalling beacon.



## **ROTATING BEACONS**

- Powerful warning effect thanks to replaceable H1 halogen bulbs not included
- Application area: hazardous areas, e.g. in industrial operations or alarm systems
- Ball-bearing-mounted mirror made of corrosionresistant metal
- Durable gear drive with permanent lubrication
- Terminals for max. 1.5 mm<sup>2</sup>
- Mirror rotation speed: 160 rotations / minute
- Temperature range: -30 °C to 50 °C
- Protection rating: IP55
- Dimensions: Ø 145 x 193 mm





### **Rotating beacon**

Type: DSL 7307 • Art. no. 37307

• Colour: orange

(page 115)

- Luminous intensity: 10,000 Cd(p)
   Power supply: 12 24 V DC (4.8 / 3.1 A)
- Order halogen bulbs separately





### **Rotating beacon**

Type: DSL 7302 • Art. no. 37302

- Colour: red
- Luminous intensity: 10,000 Cd(p)
- Power supply: 12 24 V DC (4.8 / 3.1 A)
- Order halogen bulbs separately (page 115)





### **Rotating beacon**

Type: DSL 7327 • Art. no. 37327

- Colour: orange
- Luminous intensity: 10,000 Cd(p)
- Power supply: 240 V AC (0.2 A)
- Order halogen bulbs separately (page 115)





### **Rotating beacon**

Type: DSL 7322 • Art. no. 37322

- Colour: red
- Luminous intensity: 10,000 Cd(p)
- Power supply: 240 V AC (0.2 A)
- Order halogen bulbs separately (page 115)





## **ROTATING BEACONS**

- Good luminous efficacy with commercially available
   25-W incandescent bulbs (Ba15d) included
- Application area: hazardous areas, e.g. in industrial operations or alarm systems
- Ball-bearing-mounted mirror made of corrosionresistant metal
- Durable gear drive with permanent lubrication
- Terminals for max. 1.5 mm<sup>2</sup>
- Mirror rotation speed: 160 rotations / minute
- Temperature range: -30 °C to 50 °C
- Protection rating: IP55
- Dimensions: Ø 152 x 209 mm





### **Rotating beacon**

Type: DSL 7361 • Art. no. 37361

• Colour: orange

• Luminous intensity: 3000 Cd(p)

Volume: 80 dB(A)

• Power supply: 24 V AC (1.1 A)





### **Rotating beacon**

Type: DSL 7362 • Art. no. 37362

• Colour: red

• Luminous intensity: 3000 Cd(p)

Volume: 80 dB(A)

• Power supply: 24 V AC (1.1 A)





### **Rotating beacon**

Type: DSL 7337 • Art. no. 37337

• Colour: orange

• Luminous intensity: 400 Cd(p)

Volume: 72 dB(A)

Power supply: 240 V AC (0.11 A)





### **Rotating beacon**

Type: DSL 7332 • Art. no. 37332

• Colour: red

• Luminous intensity: 400 Cd(p)

Volume: 72 dB(A)

Power supply: 240 V AC (0.11 A)





# ACCESSORIES

# **MOUNTING ELEMENTS AND LIGHT SOURCES**

## **MOUNTING ELEMENTS FOR ROTATING BEACONS**







### Wall bracket

Type: DSZ 7395 • Art. no. 37395

- Vertical mounting (wall mounting)
- · Colour: grey
- Robust plastic design
- Dimensions: 185 x 100 x 190 mm

### **Push-on flange**

Type: DSZ 7391 • Art. no. 37391

- For DSL 7302 and 7307 only
- Tube diameter: 24 mm
- Compliant with DIN (base A)
- Robust PVC design
- Connection cables included
- Dimensions: Ø 150 x 58 mm

### **Protective cage**

Type: DSZ 7394 • Art. no. 37394

- For DSL 7302 and 7307 only
- Corrosion-proof metal
- Dimensions: Ø 189 x 206 mm

## **HALOGEN BULBS FOR ROTATING BEACONS**



### Halogen bulb

Type: DSZ 7381 • Art. no. 37381

- Power supply: 12 V (55 W)
- Base: H1
- Replacement light source for: DSL 730x and DSL 732x series
- Dimensions: Ø 24 x 55 mm

### Halogen bulb

Type: DSZ 7382 • Art. no. 37382

- Power supply: 24 V (70 W)
- Base: H1
- Replacement light source for: DSL 730x series
- Dimensions: Ø 24 x 55 mm

# XENON FLASH TUBES FOR FLASHING BEACONS BLZ-R, GBZ, HBZ



### Xenon tubes

Type: DSZ 7383 • Art. no. 37383

- Replacement light source for: BLZ-R 735x, GBZ 86xx and HBZ 85xx series
- Base: three-pin DIN base
- Output: 6 J
- Dimensions: 24 x 70 x 10 mm



# LED LIGHT SOURCE for a Ba15d fitting



### LED light source • Type: KSZ-LED 8661 • Art. no. 38661

- Colour: yellow-orange Power supply: 24 V AC / DC (45 mA)
- Dimensions: Ø 18 x 50 mm



### LED light source • Type: KSZ-LED 8651 • Art. no. 38651

- Colour: yellow-orange Power supply: 230 240 V AC (50 mA)
- Dimensions: Ø 18 x 50 mm





### LED light source • Type: KSZ-LED 8662 • Art. no. 38662

- Colour: red Power supply: 24 V AC / DC (45 mA)
- Dimensions: Ø 18 x 50 mm



### LED light source • Type: KSZ-LED 8652 • Art. no. 38652

- Colour: red Power supply: 230 240 V AC (50 mA)
- Dimensions: Ø 18 x 50 mm





### LED light source • Type: KSZ-LED 8664 • Art. no. 38664

- Colour: white Power supply: 24 V AC / DC (50 mA)
- Dimensions: Ø 18 x 50 mm



### LED light source • Type: KSZ-LED 8654 • Art. no. 38654

- Colour: white Power supply: 230 240 V AC (55 mA)
- Dimensions: Ø 18 x 50 mm





### LED light source • Type: KSZ-LED 8665 • Art. no. 38665

- Colour: blue Power supply: 24 V AC / DC (65 mA)
- Dimensions: Ø 18 x 50 mm



### LED light source • Type: KSZ-LED 8655 • Art. no. 38655

- Colour: blue Power supply: 230 240 V AC (70 mA)
- Dimensions: Ø 18 x 50 mm





### LED light source • Type: KSZ-LED 8666 • Art. no. 38666

- Colour: green Power supply: 24 V AC / DC (45 mA)
- Dimensions: Ø 18 x 50 mm



### LED light source • Type: KSZ-LED 8656 • Art. no. 38656

- Colour: green Power supply: 230 240 V AC (50 mA)
- Dimensions: Ø 18 x 50 mm



# LED light source

Colour-intensive LED light source with high light intensity and Ba15d base for diverse applications in industry and trade. LED light sources can be used in all of the T system beacons (TWL, TBL) as well as KWL and GWL beacons. It should be noted that the beacons of the KWL and GWL series emit light radially. Always order the LED light source in the same colour as the lens of the corresponding beacon. The LED light source of type KSZ-LED 8661 (yellow / orange) is suitable for use in both yellow and orange beacons. When the "KSZ-LEDxxxx" LED light sources are installed, their luminous intensity corresponds to the specified luminous intensities of the beacon modules.



# **INCANDESCENT BULBS** for a Ba15d fitting



### Incandescent bulb

Type: DSZ 7396 • Art. no. 37396

- Power supply: 24 V (25 W)
- Base: Ba15d
- For DSL 7361 and DSL 7362
- Dimensions: Ø 25 x 64 mm





### Incandescent bulb

Type: DSZ 7397 • Art. no. 37397

- Power supply: 240 V (25 W)
- Base: Ba15d
- For DSL 7332 and DSL 7337
- Dimensions: Ø 25 x 64 mm





### Incandescent bulb

Type: GSZ 8591 • Art. no. 38591

- Power supply: 12 V (25 W)
- Base: Ba15dFor GWL 85xx
- Dimensions: Ø 25 x 65 mm





### Incandescent bulb

Type: GSZ 8592 • Art. no. 38592

- Power supply: 24 V (25 W)
- Base: Ba15d
- For GWL 85xx
- Dimensions: Ø 25 x 65 mm





### Incandescent bulb

Type: GSZ 8593 • Art. no. 38593

- Power supply: 240 V (25 W)
- Base: Ba15d
- For GWL 85xx
- Dimensions: Ø 44 x 65 mm





### Incandescent bulb

Type: KSZ 8595 • Art. no. 38595

- Power supply: 12 V (5 W)
- Base: Ba15d
- For TWL 871x, TBL 87xx and KWL 810x
- Dimensions: Ø 16 x 35 mm





### Incandescent bulb

Type: KSZ 8596 • Art. no. 38596

- Power supply: 24 V (5 W)
- Base: Ba15d
- For TWL 871x, KWL 810x and TBL 87xx
- Dimensions: Ø 16 x 35 mm





### Incandescent bulb

Type: KSZ 8597 • Art. no. 38597

- Power supply: 240 V (5 W)
- Base: Ba15d
- For TWL 871x, KWL 810x and TBL 87xx
- Dimensions: Ø 16 x 35 mm







# WARNING TOWER SYSTEM TAND T-MINI



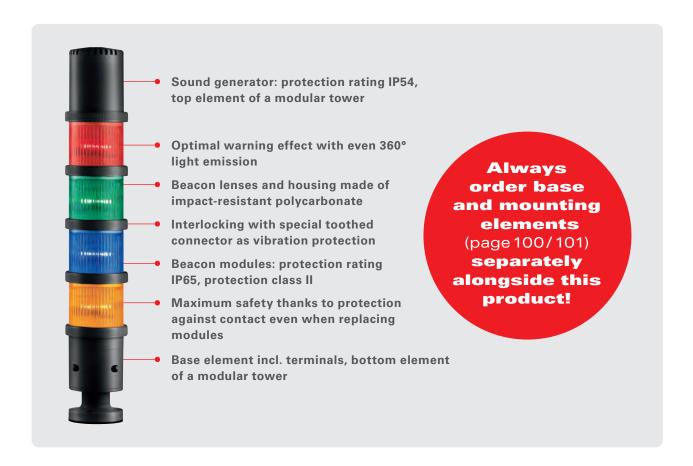
T SYSTEM



T-MINI SYSTEM



Compact, modular warning towers with innovative, durable LED technology and high light intensity. For diverse applications both indoors and outdoors. The modular design of the T system enables you to customise your warning tower so that it is optimally tailored to your application area.



### Up to five modules can be combined

In a warning tower of the T or T-Mini system, up to five modules (optical and acoustic) plus base elements can be combined to enable comprehensive signalling.

# 100% duty cycle

With a duty cycle of 100 percent, the LED beacons can be continuously active 24 hours a day, seven days a week.

# 360° light emission

The LED beacons of the T system and T-Mini system have an optimal warning effect thanks to even light distribution.

# Protection against contact

To increase safety during use and module replacement, all elements are fitted with protection against contact.

# Interlocking with special toothed connector

Even in the event of vibrations, the special toothed connector ensures that the warning tower remains stable and functions safely.

# Impact-resistant material

The beacon lenses and housing are made of impact-resistant polycarbonate that protects the warning tower from impacts.

# T SYSTEM: LED MULTI-FLASHING BEACON

- Integrated extra-bright SMD LEDs
- Optimal safeguarding against failure
- Functions: continuous light or single, double (xenon effect) or triple flashing, set via DIP switch
- Maintenance free, low energy consumption
- Power supply: 24 V AC / DC (0.09 A)

- Continuous operation
- Flashing frequency: approx. 150/minute
- Temperature range: -30 °C to 60 °C
- Protection rating: IP65
- Dimensions: Ø 75 x 79 mm





### LED multi-flashing beacon

Type: TLB 8831 • Art. no. 38831

- Colour: orange
- Luminous intensity: 5 Cd(p)





### LED multi-flashing beacon

Type: TLB 8832 • Art. no. 38832

- · Colour: red
- Luminous intensity: 3 Cd(p)





### LED multi-flashing beacon

Type: TLB 8834 • Art. no. 38834

- Colour: transparent
- Luminous intensity: 11 Cd(p)





### LED multi-flashing beacon

Type: TLB 8835 • Art. no. 38835

- Colour: blue
- Luminous intensity: 1 Cd(p)





### LED multi-flashing beacon

Type: TLB 8836 • Art. no. 38836

- Colour: green
- Luminous intensity: 7 Cd(p)





### LED multi-flashing beacon

Type: TLB 8837 • Art. no. 38837

- Colour: yellow
- Luminous intensity: 5 Cd(p)





# T SYSTEM: LED MULTI-FLASHING BEACON

- Integrated extra-bright SMD LEDs
- Optimal safeguarding against failure
- Functions: continuous light or single, double (xenon effect) or triple flashing, set via DIP switch
- Maintenance free, low energy consumption
- Power supply: 240 V AC (0.02 A)

- Continuous operation
- Flashing frequency: approx. 150/minute
- Temperature range: -30 °C to 60 °C
- Protection rating: IP65
- Dimensions: Ø 75 x 79 mm





### LED multi-flashing beacon

Type: TLB 8841 • Art. no. 38841

- Colour: orange
- Luminous intensity: 5 Cd(p)





### LED multi-flashing beacon

Type: TLB 8842 • Art. no. 38842

- · Colour: red
- Luminous intensity: 3 Cd(p)





### LED multi-flashing beacon

Type: TLB 8844 • Art. no. 38844

- Colour: transparent
- Luminous intensity: 11 Cd(p)





### LED multi-flashing beacon

Type: TLB 8845 • Art. no. 38845

- Colour: blue
- Luminous intensity: 1 Cd(p)





### LED multi-flashing beacon

Type: TLB 8846 • Art. no. 38846

- Colour: green
- Luminous intensity: 7 Cd(p)





### LED multi-flashing beacon

Type: TLB 8847 • Art. no. 38847

- Colour: yellow
- Luminous intensity: 5 Cd(p)





# T SYSTEM: WARNING BEACON

- Equipped for incandescent bulbs and LED light sources 12 240 V (5 W) not included
- 360° light emission
- Circuit board: made of FR4 material
- Power supply: max. 240 V AC / DC (5 W)
- Fitting: Ba15d
- Temperature range: -30 °C to 60 °C
- Protection rating: IP65
- Dimensions: Ø 75 x 79 x mm





### Warning beacon

Type: TWL 8711 • Art. no. 38711

- Colour: orange
- Luminous intensity: 3 Cd(p)
- Order incandescent bulb or LED light source separately (page 116/117)





### Warning beacon

Type: TWL 8712 • Art. no. 38712

- Colour: red
- Luminous intensity: 1 Cd(p)
- Order incandescent bulb or LED light source separately (page 116/117)





### Warning beacon

Type: TWL 8714 • Art. no. 38714

- Colour: transparent
- Luminous intensity: 3 Cd(p)
- Order incandescent bulb or LED light source separately (page 116/117)





### Warning beacon

Type: TWL 8715 • Art. no. 38715

- Colour: blue
- Luminous intensity: 1 Cd(p)
- Order incandescent bulb or LED light source separately (page 116/117)





### Warning beacon

Type: TWL 8716 • Art. no. 38716

- Colour: green
- Luminous intensity: 1 Cd(p)
- Order incandescent bulb or LED light source separately (page 116/117)





### Warning beacon

Type: TWL 8717 • Art. no. 38717

- Colour: yellow
- Luminous intensity: 3 Cd(p)
- Order incandescent bulb or LED light source separately (page 116/117)





## T SYSTEM: **SOUND GENERATORS** TSG8781 & TSG8782

- 32 tone sequences, set via DIP switch
- Reliable tone generation via magneto-dynamic loudspeakers
- High sound pressure at low current consumption
- Continuation of signal as long as power is supplied
- Adjustable volume / volume progression
- Volume: max. 100 dB(A)
- Temperature range: -30 °C to 60 °C
- Protection rating: IP54
- Dimensions: Ø 75 x 116 x mm





### Sound generator

Type: TSG 8781 • Art. no. 38781

• Power supply: 12 – 24 V AC / DC (0.335 – 1.06 A)



### Sound generator

Type: TSG 8782 • Art. no. 38782

• Power supply: 240 V AC (0.060 A)



## T SYSTEM: **SOUND GENERATORS** TSG8785 & TSG8786

- · Six tone sequences, set via DIP switch
- Tone sequences: continuous tone, slowly pulsing, quickly pulsing
- Reliable tone generation via magneto-dynamic loudspeaker
- Continuation of signal as long as power is supplied
- Adjustable volume
- Volume: max. 81 dB(A)
- Temperature range: -30 °C to 60 °C
- Protection rating: IP54
- Dimensions: Ø 75 x 116 x mm





### Sound generator

Type: TSG 8785 • Art. no. 38785

• Power supply: 12 – 48 V AC / DC (3 – 13 mA)



### Sound generator

Type: TSG 8786 • Art. no. 38786

• Power supply: 240 V AC (max. 8 mA)



# T SYSTEM: BASE ELEMENT

Always include this product in your order!



### Base element for T system

Type: TSZ 8600 • Art. no. 38600

- For horizontal mounting or tube mounting
- The base element can be screwed directly onto horizontal surfaces or combined with mounting accessories
- Cover for closing the top element included
- Base seal included
- Material: impact-resistant polycarbonate (PC)
- EPDM seal for protection rating IP65 included
- Six-pin terminal for max. 2.5 mm² included
- Dimensions: Ø 68 x 68 mm



# T-MINI SYSTEM: LED WARNING & FLASHING BEACON

- Integrated SMD LEDs
- Optimal safeguarding against failure
- Either a warning beacon or a flashing beacon
- Maintenance free, low energy consumption
- Power supply: 24 V AC / DC (30 mA)
- Continuous operation
- Flashing frequency: approx. 110 / min (± 20)
- Temperature range: -30 °C to 50 °C
- Protection rating: IP65
- Dimensions: Ø 48 x 48 mm





### LED warning / flashing beacon

Type: MWB 8621 • Art. no. 38621

- Colour: yellow-orange
- Luminous intensity: 3 Cd(p)





### LED warning / flashing beacon

Type: MWB 8622 • Art. no. 38622

- Colour: red
- Luminous intensity: 1 Cd(p)





### LED warning / flashing beacon

Type: MWB 8624 • Art. no. 38624

- Colour: transparent
- Luminous intensity: 3 Cd(p)





### LED warning / flashing beacon

Type: MWB 8625 • Art. no. 38625

- Colour: blue
- Luminous intensity: 1 Cd(p)





### LED warning / flashing beacon

Type: MWB 8626 • Art. no. 38626

- Colour: green
- Luminous intensity: 1 Cd(p)





# T-MINI SYSTEM: LED WARNING & FLASHING BEACON

- Integrated SMD LEDs
- Optimal safeguarding against failure
- Either a warning beacon or a flashing beacon
- Maintenance free, low energy consumption
- Power supply: 240 V AC (55 mA)

- Continuous operation
- Flashing frequency: approx. 110 / min (± 20)
- Temperature range: -30 °C to 50 °C
- Protection rating: IP65
- Dimensions: Ø 48 x 48 mm





### LED warning / flashing beacon

Type: MWB 8631 • Art. no. 38631

- Colour: yellow-orange
- Luminous intensity: 3 Cd(p)





### LED warning / flashing beacon

Type: MWB 8632 • Art. no. 38632

- Colour: red
- Luminous intensity: 1 Cd(p)





### LED warning / flashing beacon

Type: MWB 8634 • Art. no. 38634

- Colour: transparent
- Luminous intensity: 3 Cd(p)





### LED warning / flashing beacon

Type: MWB 8635 • Art. no. 38635

- Colour: blue
- Luminous intensity: 1 Cd(p)





### LED warning / flashing beacon

Type: MWB 8636 • Art. no. 38636

- Colour: green
- Luminous intensity: 1 Cd(p)





# T-MINI SYSTEM: **SOUND GENERATORS** MSG 8620 & MSG 8630

- One fixed tone sequence (alternating frequency 800/1000 Hz)
- Reliable tone generation via magnetodynamic loudspeakers
- Continuation of signal as long as power is supplied
- Volume: max. 77 dB(A)
- Temperature range: -30 °C to 50 °C
- Protection rating: IP65
- Dimensions: Ø 48 x 61 mm





### Sound generator

Type: MSG 8620 • Art. no. 38620

Power supply:24 V AC / DC (90 mA)



### Sound generator

Type: MSG 8630 • Art. no. 38630

Power supply: 240 V AC (15 mA)



## T-MINI SYSTEM: BASE ELEMENT



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### Base element for T system

Type: MSZ 8610 • Art. no. 38610

- For horizontal mounting or tube mounting
- The base element can be screwed directly onto horizontal surfaces or combined with mounting accessories
- Bottom element of a modular tower
- Material: impact-resistant polycarbonate (PC)
- Six-pin terminal for max. 1.5 mm² included
- Colour: black
- Protection rating: IP65
- Dimensions: Ø 55 x 97 mm



# MOUNTING ELEMENTS

# FOR THE T AND T-MINI SYSTEMS

## **ALWAYS INCLUDE MOUNTING ELEMENTS IN YOUR ORDER!**



### **Mounting base**

Type: KSZ 8601 • Art. no. 38601

- For horizontal mounting
- Material: PA 66 plastic
- Male thread
- Dimensions: Ø 68 x 35 mm



### **Extension tube**

Type: KSZ 8603 • Art. no. 38603

- 100-mm extension
- Material: PA 66 plastic
- O-ring seal for protection rating IP65 included
- Dimensions: Ø 25 x 117 mm



### Mounting bracket

Type: KSZ 8604 • Art. no. 38604

- For vertical mounting / wall mounting
- Material: PA 66 plastic
- O-ring seal for protection rating IP65 included
- One connection
- Dimensions: Ø 69 x 85 mm



### **Mounting bracket**

Type: KSZ 8605 • Art. no. 38605

- For vertical mounting / wall mounting
- Material: PA 66 plastic
- O-ring seal for protection rating IP65 included
- Two connections
- Dimensions: Ø 69 x 83 mm



# McGuard - enlarge your comfort zone.

McGuard - the professional advancement in energy management, comfort and safety. Motion detectors enable you to control light, heating and climate individually and as needed. Meanwhile, resources are conserved and a pleasant and safe environment created.



luminaires offer high luminous intensity and create a safe atmosphere in particularly dark areas.



# Professional motion detectors

Angled motion detectors from McGuard offer a wide range of advantages. The key benefits of choosing this type of motion detector are its detection range, precision, flexibility and unobtrusive appearance.







### Standard motion detectors

Reliable motion detectors are particularly important in day-to-day applications.

The McGuard standard range is high in quality and designed for indoor use. Both flush-mounted and surface-mounted versions are available, giving you flexibility when it comes to installation.

# Motion detectors for installation in luminaires, false ceilings and walls

So, you want to attach the lamp's motion detector in such a way that it won't be visible? A clever solution from McGuard makes this possible. The motion detector for installation in luminaires has a detection angle of 360° and a range of up to 10 m. The switch-on time and brightness can be adjusted to maximise comfort in your living space.





# McGuard mini motion detectors

Passive infrared motion detectors for wall mounting. The response sensitivity is infinitely adjustable.





# McGuard LED floodlight with IR motion detector



# McGuard LED floodlight with IR motion detector

Type: LED RL692JV ws • Art. no. 94559

- LED floodlight with infrared motion detector
- Colour: white
- Mounting: vertical
- Monitoring range: 240° for 10 m at a mounting height of 2.2 m
- Beam angle: 90°
- Switch-on time: from 3 s to 15 min
- 4x high-power LEDs, 13 W
- Aluminium die-cast housing with V2A screws
- Infinitely adjustable response sensitivity
- Protection rating: IP55 (suitable for outdoor use)
- Daylight white: 5000 K
- Power supply: 230 V AC
- Operating temperature: -20 °C to 40 °C
- Dimensions: 340 x 205 x 150 mm



Combined, a motion detector and bright light create the ideal lighting for pathways outside.

# McGuard LED floodlight with IR motion detector



# McGuard LED floodlight with IR motion detector

Type: McGuard Mantis • Art. no. 94560

- LED floodlight with infrared motion detector
- Two adjustable heads with integrated high-power LEDs
- Colour: white / grey
- Mounting: vertical
- Monitoring range: 180° for 9 m to the front and 3 m across at a mounting height of 2.5 m
- Beam angle: 90°
- Switch-on time: from 10 s to 15 min
- 2x high-power LEDs, 6.5 W
- Infinitely adjustable response sensitivity
- Protection rating: IP44 (suitable for outdoor use)
- Daylight white: 5000 K
- Power supply: 230 V AC
- Operating temperature: -20 °C to 40 °C
- **Dimensions**: 180 x 150 x 110 mm





# **PROFESSIONAL**

# Precise - flexible - unobtrusive

# MCGUARD PROFESSIONAL motion detectors

- · Passive infrared motion detectors
- Universal bracket included
- Ceiling, wall and corner mounting
- Creep zone protection radius: 1 m
- Output: non-isolated
- Switch-on time: from 3 s to 20 min
- Suitable for switching low loads
- Infinitely adjustable response sensitivity

- Protection rating: IP55 (suitable for outdoor use)
- Switching capacity:
- Incandescent bulbs: 1000 W
- Energy-saving bulbs: 250 W
- Fluorescent lamps: 250 W
- LED lamps: 200 W
- Power supply: 230 V AC
- **Dimensions**: 84 x 78 x 120 mm



### McGuard professional BM120ws

Type: BM120ws • Art. no. 94530

- · Colour: white
- Monitoring range: 120° for 12 m at a mounting height of 3 m

### McGuard professional BM240ws

Type: BM240ws • Art. no. 94531

- · Colour: white
- Monitoring range: 240° for 12 m at a mounting height of 3 m

### McGuard professional BM360ws

Type: BM360ws • Art. no. 94532

- Colour: white
- Monitoring range: 360° for 12 m at a mounting height of 3 m



### McGuard professional BM120sw

Type: BM120sw • Art. no. 94533

- Colour: black
- Monitoring range: 120° for 12 m at a mounting height of 3 m

### McGuard professional BM240sw

Type: BM240sw • Art. no. 94534

- Colour: black
- Monitoring range: 240° for 12 m at a mounting height of 3 m

### McGuard professional BM360sw

Type: BM360sw • Art. no. 94535

- · Colour: black
- Monitoring range: 360° for 12 m at a mounting height of 3 m



The McGuard professional motion detectors can be angled, giving you flexibility in terms of the mounting position. As a result, you can create better monitoring angles and install the detector somewhere unobtrusive.

# MCGUARD PROFESSIONAL motion detectors

- · Passive infrared motion detectors
- Universal bracket included
- Ceiling, wall and corner mounting
- Creep zone protection radius: 1 m
- Output: non-isolated
- Switch-on time: from 3 s to 20 min
- Suitable for switching low loads
- Infinitely adjustable response sensitivity

- Protection rating: IP55 (suitable for outdoor use)
- Switching capacity:
- Incandescent bulbs: 1000 W
- Energy-saving bulbs: 250 W
- Fluorescent lamps: 250 W
- LED lamps: 200 W
- Power supply: 230 V AC
- **Dimensions**: 84 x 78 x 120 mm



### McGuard professional BM240iws

Type: BM240iws • Art. no. 94536

- Colour: white
- Monitoring range: 240° for 12 m at a mounting height of 3 m
- Controllable from a distance with the McGuard infrared remote control (IR FB, art. no. 94538) – not included – order separately
- Switch-on time: from 3 s to 15 min

# McGuard infrared remote control



### McGuard infrared remote control

Type: IR FB • Art. no. 94538

- For motion detector BM240iws (94536)
- Range: 6 m
- Colour: anthracite
- Power supply: CR2025 battery, 3 V
- Dimensions: 55 x 90 x 7 mm



# **MCGUARD PM** motion detectors

- Passive infrared motion detectors
- · Colour: white
- Suitable for switching low loads

- · Infinitely adjustable response sensitivity
- Power supply: 230 V AC



### **McGuard PM-APws**

Type: PM-APws • Art. no. 94500

- Surface mounting on the ceiling
- Monitoring range: 360° for up to 6 m at a mounting height of 2.4 m
- 2 outputs: 1 x non-isolated, 1 x isolated
- Switch-on time: T1 from 6 s to 12 min T2 from 10 s to 30 min
- Protection rating: IP40
- Switching capacity:
- Incandescent bulbs: 2300 W Halogen bulbs: 1000 W
- Fluorescent lamps: 400 W LED lamps: 250 W
- Operating temperature: -10 °C to 45 °C
- Dimensions: 113 (Ø) x 39 mm



### **McGuard PM-EINBws**

Type: PM-EINBws • Art. no. 94501

- Flush mounting on the ceiling
- Monitoring range: 360° for up to 6 m at a mounting height of 6 m
- 2 outputs: 1 x non-isolated, 1 x isolated
- Switch-on time: T1 from 6 s to 12 min T2 from 10 s to 30 min
- Protection rating: IP40
- Switching capacity:
- Incandescent bulbs: 2300 W Halogen bulbs: 1000 W
- Fluorescent lamps: 400 W LED lamps: 250 W
- Operating temperature: -10 °C to 45 °C
- Dimensions:
- Motion detector: 75 (Ø) x 50 mm, installation depth 40 mm
- Power box: 110 x 53 x 30 mm



### McGuard PM-AP HR

Type: PM-AP HR • Art. no. 94503

- Surface mounting on the ceiling
- Monitoring range: 360° for up to 16 m at a mounting height of 10 m
- Output: non-isolated
- Switch-on time: from 5 s to 30 min
- Protection rating: IP54 (suitable for outdoor use)
- Switching capacity:
- Incandescent bulbs: 2000 W Halogen bulbs: 1000 W
- Fluorescent lamps: 600 W LED lamps: 400 W
- Operating temperature: 0°C to 45°C
- Dimensions: 115 (Ø) x 45 mm



The high-quality McGuard standard range is designed for indoor use. To give you flexibility when it comes to installation, both flush-mounted and surface-mounted versions are available.

# **MCGUARD BM** motion detectors

- Passive infrared motion detectors
- Colour: white
- Output: non-isolated

- Suitable for switching low loads
- · Infinitely adjustable response sensitivity
- Power supply: 230 V AC



### **McGuard BM-DAV**

Type: BM-DAV • Art. no. 94504

- Surface mounting on the ceiling
- Monitoring range: 360° for up to 7 m radius at a mounting height of 2.5 m
- Switch-on time: from 30 s to 20 min
- Option to set retriggering by noises
- Protection rating: IP20
- Switching capacity:
- Incandescent bulbs: 1000 W Fluorescent lamps: 500 W
- Energy-saving bulbs: 500 W LED lamps: 250 W
- Operating temperature: -20°C to 40°C
- Dimensions: 120 (Ø) x 25 mm



### McGuard BM-DE-PB

Type: BM-DE-PB • Art. no. 94506

- Flush mounting on the ceiling
- Monitoring range: 360° for up to 8 m at a mounting height of 2.5 m
- Switch-on time: from 30 s to 30 min
- Protection rating: IP20
- Switching capacity:
- Incandescent bulbs: 2000 W Fluorescent lamps: 500 W
- Halogen bulbs: 1000 W Energy-saving bulbs: 500 W
- LED lamps: 500 W
- Operating temperature: -20 °C to 40 °C
- Dimensions:
- Motion detector: 50 (Ø) x 68 mm, installation depth 55 mm
- Power box: 130 x 25 x 28 mm



### McGuard BM-UP

Type: BM-UP • Art. no. 94522

- Flush mounting in switch boxes
- Monitoring range: 180° for up to 6 m at a mounting height of 1.2 m
- Switch-on time: from 10 s to 30 min
- Option to set retriggering by noises
- Protection rating: IP40
- Switching capacity:
- Incandescent bulbs: 2000 W Fluorescent lamps: 900 W
- Halogen bulbs: 1000 W Energy-saving bulbs: 400 W
- LED lamps: 400 W
- Operating temperature: 0°C to 45°C
- Dimensions: 80 x 80 x 52 mm



# The invisible detector.

The motion detector for invisible installation in luminaires has a detection angle of 360° and a range of up to 10 m.

The switch-on time and brightness can be adjusted to maximise comfort in your living space.

For installation in luminaires false ceilings and walls.

# MCGUARD BM-HF-EB motion detectors



### McGuard BM-HF-EB

Type: BM-HF-EB • Art. no. 94520

- High-frequency motion detector
- Installation in luminaires
- Colour: white
- Monitoring range: 360° for up to 10 m at a mounting height of 2.5 m
- Switch-on time: from 5 s to 30 min
- Suitable for switching low loads
- Infinitely adjustable response sensitivity
- Frequency: 5.8 GHz
- Protection rating: IP20
- Power supply: 230 V AC
- Switching capacity:
- Incandescent bulbs: 1000 W Halogen bulbs: 200 W
- Fluorescent lamps: 150 W LED lamps: 150 W
- Energy-saving bulbs: 100 W
- Operating temperature: 0 °C to 45 °C
- Dimensions:  $90 \times 51 \times 31 \text{ mm}$





# **MCGUARD MINI** motion detectors

- Passive infrared motion detectors
- Wall mounting
- Monitoring range: 180° for up to 12 m at a mounting height of 2.5 m
- Output: non-isolated
- Switch-on time: from 5 s to 12 min
- Suitable for switching low loads
- Infinitely adjustable response sensitivity

- Protection rating: IP44 (suitable for outdoor use)
- Switching capacity:
- Incandescent bulbs: 1000 W
- Fluorescent lamps: 400 W
- Energy-saving bulbs: 400 W
- LED lamps: 250 W
- Power supply: 230 V AC
- **Dimensions**: 98 x 64 x 87 mm



### McGuard BM180ws

Type: BM180ws • Art. no. 94513 • Colour: white (similar to RAL 9003)



### McGuard BM180sw

Type: BM180sw • Art. no. 94515

• Colour: black

# ACCESSORIES

# AND REPLACEMENT PARTS

# **ADD-ON MODULE**

## FLUSH-MOUNTED WIRELESS TRANSMITTER INSTALLATION

The flush-mounted wireless modules provide practical options for extending and modernising existing doorbell systems using modern wireless technology. Easy to install in flush-mounted boxes.



# Wireless transmitter for installation in switch boxes and devices

Type: MISTRAL SE06 • Art. no. 43443

- Colour: black
- Use: indoors only
- For all wireless doorbells of the MISTRAL, ECHO and CALIMA series
- Wireless range: 150 m
- Function control: LED
- Frequency: 868.35 MHz
- Operating temperature: -10 °C to 50 °C
- Protection rating: IP20
- Power supply: 12 V DC or 1x CR 2450 battery
- **Dimensions:** 20 x 37 x 42 mm

# LIGHT SOURCES

### **SOFFITTE IN COMBINATION WITH FITTING 98017**



### **Replacement Soffitte**

Type: SOFFITTE 2130 • Art. no. 51016

- Package contents: 10 pc.
- In combination with fitting 98017
- 17 V / 0.1 A



### Replacement Soffitte LED

Type: SOFFITTE 2030 LED • Art. no. 51037

- Package contents: 5 pc.
- In combination with fitting 98017
- 8-12 V AC/DC (7 mA at 12 V)

### **LUX INCANDESCENT BULB**



### Lux incandescent bulb

Type: Glühlampe Lux • Art. no. 98191

- Replacement incandescent bulb for MONTILUX or DOMOLUX with incandescent bulbs
- Package contents: 10 pc.

# RECTANGULAR BUTTONS AND NAME PLATES

### **REPLACEMENT PARTS: ILLUMINATION**



### Red "LICHT" (LIGHT) sign

Type: LICHT-SCHILD • Art.-no. 51026 • PU: 10 pieces (price / pc.)

- For rectangular buttons
- KKO 2112 BR (art. no. 51006)



### **Fitting**

Type: FASSUNG 2130 • Art.-no. 98017 • PU: 2 pieces (price / pc.)

- For Soffitte 2130 (art. no. 51016) and Soffitte 2030 LED (art. no. 51037)
- For installation in special door stations

### REPLACEMENT PARTS: DOORBELL OR LIGHT BUTTON



### **Rectangular button**

Type: KKO 2112 BR • Art. no. 51006

- Package contents: 3 pc.
- · Can be used as either a doorbell button or a light button
- "LICHT" (LIGHT) sign can be ordered separately: art. no. 51026
- Not suitable for bus intercoms
- **Dimensions**: 21 x 70 x 17 mm
- Panel thickness: 2.5 mm
- Panel hole: 19.5 x 68 mm
- Switching capacity: max. 12 V AC (5 mA -1.5 A)
- Switching capacity: max. 12 V DC (5 mA -1.0 A)
- Note: Order Soffitte 2130 or 2030 (LED) separately!

# **REPLACEMENT PARTS: NAME PLATES**



### **LED** name plates

4 x blue LEDs Type: NSH LED 100 BL • Art. no. 98065 • PU: 1 piece (price / pc.)

4 x white LEDs Type: NSH LED 100 WS• Art. no. 98056 • PU: 1 piece (price / pc.)

- Vandal proof, IP54
- 8-16 V AC / DC (0.02-0.04 A)
- Dimensions: 23 x 61 x 14 mm (name plate 13 x 43 mm)



### Name plates

Type: TSZ 1148/100 • Art.-no. 74898

- Suitable for button panels of the SINTHESI S2 series
- PU: 10 pc.
- Dimensions: 12.5 x 67 mm



# FRAMES AND ENGRAVING PLATES

# **REPLACEMENT PARTS: FRAMES**



#### **Frame**

Type: RÄHMCHEN 500-1 EV1 • Art.-no. 98009 • PU: 10 pieces (price / pc.)

- Anodised silver With protective window / screws
- Dimensions: 20 x 58 mm (text field 13 x 43 mm)



#### Frame

Type: RÄHMCHEN 500-1 V2A • Art.-no. 98010 • PU: 5 pieces (price / pc.)

- Brushed stainless steel With protective window / screws
- Dimensions: 20 x 58 mm (text field 13 x 43 mm)



#### Frame

Type: RÄHMCHEN 500-1 R14 • Art.-no. 98012 • PU: 10 pieces (price / pc.)

- Anodised brown With protective window / screws
- Dimensions: 20 x 58 mm (text field 13 x 43 mm)



#### Frame

Type: RÄHMCHEN 500-2 EV1 • Art.-no. 98002 • PU: 10 pieces (price / pc.)

- Anodised silver With protective window / screws
- Dimensions: 20 x 58 mm (text field 13 x 43 mm)



### Frame

Type: RÄHMCHEN 500-2 R14 • Art.-no. 98005 • PU: 10 pieces (price / pc.)

- Anodised brown With protective window / screws
- Dimensions: 20 x 58 mm (text field 13 x 43 mm)



### Clip frame

Type: RÄHMCHEN 600 GRAU • Art.-no. 98023 • PU: 10 pieces (price / pc.)

- Grey clip frame
- Dimensions: 20 x 57.5 mm (text field 13 x 48 mm)



### Clip frame

Type: RÄHMCHEN 600 SCH • Art.-no. 98025 • PU: 10 pieces (price / pc.)

- Black clip frame
- Dimensions: 20 x 57.5 mm (text field 13 x 48 mm)



### Clip frame

Type: RÄHMCHEN 600 WS • Art.-no. 98054 • PU: 10 pieces (price / pc.)

- White clip frame
- Dimensions: 20 x 57.5 mm (text field 13 x 48 mm)



## **REPLACEMENT PARTS: ENGRAVING PLATES**



### **Engraving plate**

Type: GRAV.SCH.500-8 EV1 • Art.-no. 98035 • PU: 10 pieces (price / pc.)

- Anodised silver With screws
- Dimensions: 20 x 58 mm



### **Engraving plate**

Type: GRAV.SCH.500-9 EV1 • Art.-no. 98013 • PU: 10 pieces (price / pc.)

- Anodised silver With screws
- Dimensions: 20 x 58 mm



### **Engraving plate**

Type: GRAV.SCH.500-10 EV1 • Art.-no. 98061 • PU: 10 pieces (price / pc.)

- Anodised silver With screws
- Dimensions: 20 x 62 mm



### **Engraving plate**

Type: GRAV.SCH.500-10 V2A • Art.-no. 98062 • PU: 5 pieces (price / pc.)

- Brushed stainless steel With screws
- Dimensions: 20 x 62 mm



### **Engraving plate**

Type: GRAV.SCH.500-10 GO • Art.-no. 98063 • PU: 5 pieces (price / pc.)

- Polished stainless steel With screws
- Dimensions: 20 x 62 mm



### **Engraving plate**

Type: GRAV.SCH.500-10 R14 • Art.-no. 98064 • PU: 5 pieces (price / pc.)

- Anodised brown With screws
- Dimensions: 20 x 62 mm

# SPECIAL SCREWS FOR GROTHE DOOR STATIONS



### Two-hole screw

Type: ZS M4x15 • Art.-no. 98125 • PU: 5 pieces (price / pc.)

- EV1
- M4 x 15 mm



### Two-hole screw

Type: ZS M4x15 • Art.-no. 98126 • PU: 5 pieces (price / pc.)

- R14
- M4 x 15 mm



# LOUDSPEAKERS AND CONTACTS

## **ACCESSORIES: BUILT-IN DOOR LOUDSPEAKERS**



### Door loudspeaker with 2Voice technology

Type: TL 1083/8 • Art. no. 74761

- Coaxial video input
- For installation in special door stations
- Up to 64 buttons (with EM 1038/17)
- Dimensions: 75 x 128 x 28 mm



### Built-in door loudspeaker with 1+n technology

Type: TL 1035/67 • Art. no. 74300

- For installation in special door stations
- Infinitely adjustable volume of the door station and indoor telephones
- Order privacy device MHS 1145/74 alongside this product
- Dimensions: 78 x 129 x 26 mm



### Built-in door loudspeaker with 4+n technology

Type: TL 5150/53 • Art. no. 74301

- Replacement door loudspeaker for Grothe 4+n intercoms (e.g. TL 290, TL 290-12 or TL 2690)
- Infinitely adjustable volume
- For operation in intercoms with +8 V DC
- Dimensions: 75 x 111 x 30 mm



### Loudspeaker adapter

Type: Universal TLZ Adapter • Art. no. 98072

- For installing built-in door loudspeakers TL 1083/8, TL 1035/67, TL 5150/53
- Mounting with adhesive film
- Vertical or horizontal orientation
- Metal grille included
- Dimensions: 160 x 80 x 15 mm

## **MAGNETIC CONTACT AND SLIDING CONTACT**



### **MISTRAL** magnetic contact

Type: MISTRAL MK • Art. no. 43394

- Activates MISTRAL transmitters or electronic doorbells
- Compatible with: MISTRAL transmitter 03 / MISTRAL 650 / CROMA 50 / CROMA 100, 150, 230 / ECHO / UP-GONG 120 WS (with a DC voltage supply)
- 2-m connection cable
- Colour: white plastic
- Dimensions: 60 x 17 x 11 mm



### **Sliding contact**

Type: KKO 152B • Art. no. 64114

- Insulating sliding semicircle
- Spring steel
- Silver contacts
- Package contents: 1 pc.
- Power supply: max. 12 V AC (5 mA-1.0 A / 12 VA), max. 12 V DC (5 mA-1.0 A / 12 W)





#### As at 01.01.2016

#### 1. Validity clause

Our offers, order acknowledgements, sales, advice, deliveries and services to companies are made solely in accordance with the following conditions. We hereby expressly oppose the use and incorporation of any general terms and conditions of business of the purchaser.

#### 2. Prices, payment and default of the purchaser

- 2.1. The details contained in our price lists are always suggested recommendations and refer to the given number of items in each case. They do not include any statutory value added tax. In relation to the purchaser, the prices agreed upon by us in the order acknowledgement are authoritative; these prices also do not include value added tax. When the invoice is issued, value added tax will be quoted separately for the amount due on this particular day. This is based on the valid price list at the given time minus any discount agreed upon with the purchaser.
- 2.2. Unless agreed otherwise, payment is to be made within 30 days from the invoice date without any deduction or within 14 days of the invoice date with a 2% discount.
- 2.3. Acceptance of cheques or bills of exchange, the latter only with our express permission and for payment of discount charges, interest and other expenses and fees associated with the bill of exchange, is on account of payment only.
- 2.4. In the event that a payment date is exceeded, the purchaser is in default without any need for a reminder. Subject to assertion of extensive rights, default interest will be charged at 8 percentage points above the respective base rate.
- 2.5. The purchaser's right of retention is excluded. This does not apply where the right of retention is based on the same contractual relationship as our pecuniary claim or where it is based on stated, approved or undisputed claims that are legally binding or a gross breach of duty on our part.
- 2.6. Any offsetting by the purchaser is permissible only in conjunction with an undisputed or legally binding claim.
- 2.7. Should we receive information that makes the granting of credit Gto the purchaser for the order amount appear risky, or should facts come to light resulting in a deterioration of the purchaser's financial circumstances, if an application to initiate insolvency proceedings is filed, or if the purchaser proposes an out-of-court scheme of arrangement to his creditors, we are entitled to demand immediate payment of our outstanding money. We are also entitled to accelerate all outstanding monies that are not yet due and to demand their immediate payment. Furthermore, in such cases we can also demand advance payment for all as yet outstanding services.
- 2.8. We are entitled to call on the same rights if the purchaser defaults in part or wholly on a payment and where a purchaser's bill of exchange or a cheque is not cashed.

### 3. Dispatch, transfer of risks

Unless otherwise requested by the purchaser, goods weighing up to 30 kg are dispatched by parcel service, while goods weighing over 30 kg are dispatched by haulier as freight. Up to a net order value of EUR 300, shipping is charged at EUR 8. For net order values over EUR 300, there is no charge for shipping (for shipping by haulier — free delivery, for shipping by rail — free delivery to recipient's railway station). The risk of carriage transfers to the purchaser as soon as we have delivered the sold goods to the haulier, freight carrier or any other person or agency charged with the task of delivery, including in cases where carriage-free delivery has been agreed. Any complaints with regard to damage during delivery are to be duly made by the purchaser or his nominated recipient to the Post Office, railway or haulier companies.

### 4. Delivery time, delays

4.1. The delivery time stated by us will be judged to have been adhered to if the goods were shipped or collected within the delivery period.

- 4.2. Delays in delivery and services owing to force majeure and events with causes outside our sphere of influence, entitle us to postpone the delivery or service for the duration of the impediment plus an appropriate start-up time. If the impediment lasts for longer than three months, both we and the purchaser are entitled to withdraw from the contract with regard to the part of the delivery which has not yet been fulfilled.
- 4.3. In the event that we default on our service, the purchaser is not entitled to claim damage compensation if the default did not infringe on any essential legally protected interests of the purchaser (life, health) or where the default is a consequence of intent or gross negligence. Here too, we shall only be liable for damages that are typical for such a contract and foreseeable. However, if the default is based on infringement of an essential contractual obligation, we shall be liable for any fault within the scope of damages that are typical for this type of contract and foreseeable. Partial deliveries and corresponding partial invoices are permissible unless it has been otherwise agreed in writing with the purchaser.

#### 5. Guarantee

- 5.1 For material defects, we shall initially grant a guarantee of our choice in the form of rectification of defects or replacement. The nature of the goods is always deemed to be that as agreed in our product description. Any public statements, blurbs or advertising on our part do not constitute a contractual statement regarding the nature of the goods. Any irrelevant diminution of the value or suitability is out of the question. This also applies to damage or flaws, which are the consequence of natural wear or transportation damage or non-adherence to operating and assembly instructions. Any improper modification to the goods by the purchaser or a third party renders any claim for consequential damage null and void.
- 5.2. Rebukes due to incorrect delivery, incorrect quantities and obvious defects must be specified in writing by the purchaser immediately, or no later than 10 days from receipt of the goods. Latent faults are to be rebuked as soon as the fault becomes apparent. The deadline is deemed to be observed if sent off in good time. Any infringement of these obligations will preclude any claims against us. The purchaser will bear the full burden of proof for all eligibility criteria, in particular for the fault itself, for the point in time when the fault was detected and for notice of defects in good time.
- 5.3. Material defect claims expire under statute of limitations in 12 months. This does not apply in those cases where longer deadlines are prescribed by law (§ 438 I No. 2 Structures and Goods for Buildings; § 479 I claim under right of recourse; § 634a I No.2 German Civil Code (BGB) Building faults) as well as in cases of injury to life, body or health, in the event of intentional or grossly negligent breach of duty and for fraudulent concealment of such fault.
- 5.4. In the event of notice of defects, payment by the purchaser may be withheld by an amount that is of a proportion in keeping with the material defects as detected. The purchaser is only entitled to withhold payment if a notice of defect is put forward, the justification of which cannot be disputed. If a notice of defect is deemed to be unjustified, we are entitled to demand that the purchaser compensate us for any expense incurred by us.
- 5.5. First of all, we are to be granted an opportunity for supplementary performance within a suitable timeframe. We are entitled to rectify defects or to redeliver several times over. Ownership of all replaced parts will pass to us.
- 5.6. In the event that any repair or replacement still does not rectify the fault, the purchaser has the option to withdraw from the contract or to reduce payment. All other claims, in particular damage claims, irrespective of the legal basis, are excluded, insofar as we cannot be held liable for intent or gross negligence. Exemption from liability does not apply insofar as we have guaranteed a specific quality of the goods, which protects the purchaser from any consequential damage.
- 5.7. Claims under right of a recourse by the purchaser against us as under § 478 German Civil Code only

exist insofar as the purchaser has not reached an agreement with his buyers which extends beyond that of statutory claims arising from defects.

- 5.8. Duly delivered goods can only be taken back with our prior permission. For goods returned with our prior permission we shall issue a credit note for 30% or more of the net amount invoiced, depending upon the condition of the goods, minus administrative costs, inspection and repackaging. Damaged goods and those that are no longer included in the currently valid catalogues and price lists shall not be credited. If a modification to a customised product is requested by the contractor, any costs that have been incurred up to such time must be reimbursed by the ordering party. In the event that an order is cancelled, the ordering party is bound to pay all expenses that have been incurred up to such time. Customised products that have already been delivered will not be taken back.
- 5.9. We reserve the right to make minor or improvement modifications to the products we supply. Details and illustrations in our catalogues, brochures, price lists, miscellaneous publications or estimates, as well as drawings, specifications and service descriptions of all kinds, dimensions, weights, consumption information etc., are by nature only approximations. They do not contain any information regarding composition or guarantees in any form whatsoever, as long as such statements have not been expressly confirmed by us in writing for an order.

#### 6. Impossibility, contract adaptation

- 6.1. Insofar as a delivery becomes impossible, the purchaser is entitled to claim damage compensation, unless the reason for impossibility is not one for which we are responsible. However, the ordering party's claim for damages is restricted to 10% of the value of the part of the delivery, which cannot be put into useful service because of the impossibility involved. This restriction does not apply insofar as liability is mandatory in cases of intent, gross negligence or due to harm to life, body or health; this is not combined with any change in the burden of proof to the detriment of the purchaser. The right of the purchaser to withdraw from the contract remains unaffected.
- 6.2. Insofar as any unforeseen events considerably alter the economic significance or content of the delivery or exert a major influence on our operation, the contract will be suitably adapted taking good faith into consideration. Insofar as this is not economically feasible, we are entitled to withdraw from the contract. In the event that we wish to make use of this right of withdrawal, we shall immediately notify the purchaser of such intention after determining the consequence of the event in question. This includes cases when an extension of the delivery period was initially agreed with the nurchaser

### 7. Miscellaneous claims for damages

- 7.1. Claims for damages or compensation of expenditure by the purchaser (hereinafter referred to as: claims for damages), irrespective of the legal basis, in particular due to any infringement of obligations from the contractual obligation and from unlawful acts, are excluded.
- 7.2 This does not apply in instances of mandatory liability, e.g. in accordance with the Product Liability Act, in the event of intent, gross negligence, harm to life, body or health, or due to the infringement of essential contractual obligations. Claims for damages for the infringement of contractual obligations, however, are restricted to damage that is foreseeable and typical for the type of contract, insofar as no intent or gross negligence is present or liability exists due to injury to life, body or health. A change in the burden of proof to the detriment of the ordering party is not associated with the preceding regulations.
- 7.3. Insofar as the purchaser is entitled to claims for damages in accordance with this section, these will lapse with expiry of the statutes of limitations for claims for material defects in accordance with Section 5.3. In the event of claims for damages in accordance with the Product Liability Act, the legal statutes of limitation are binding.

#### 8. Retention of title

- 8.1. We retain title to the goods we supply until the purchaser has fulfilled all his requirements to us, on open account of each claim for payment of account balance. The purchaser may resell the delivered goods only in the course of normal business transactions and under his standard terms and conditions of business. During the sale, the purchaser agrees on a retention of title to the extent of the clauses 8.1 to 8.7 of these conditions.
- 8.2. The purchaser may process the delivered goods or combine them with other objects. Processing or combination with movables ensues for us in our role as manufacturer. The purchaser will hold the new item in custody for us with the due care and diligence of a responsible businessman. The processed or combined item is subject to retention of title.
- 8.3. If the purchaser acquires sole ownership through processing or combining goods, he shall assign co-ownership to us according to the value of our goods incorporated in the new item in proportion to the value of the other components in the new item at the time of installation.
- 8.4. In the event that the new item should be resold, the purchaser hereby assigns to us all claims from the resale against his buyers as well as all associated subsidiary rights by way of security in the amount that corresponds to the value as invoiced by us for the processed or combined goods. Satisfaction of the assigned claim element is of prime importance. The direct debit mandate and preconditions of their revocation are subject to Section 8.5. of these conditions.
- 8.5. The claims due to the purchaser from a resale, processing or an installation or any other legal basis (insurance, illegal act etc.) have been assigned to us by way of security. We authorise the purchaser until revoked, to collect the claims assigned to us on his account and in his own name. As soon as the purchaser fails to honour an obligation to us, or one of the circumstances stated in Section 5.9 above comes into effect, we are entitled to revoke the collection authorisation, notify the debtors of the assignment and to demand payment to us.
- 8.6. If the value of the securities in place for us exceeds our claims in a sustained manner by more than 15% in total, we shall release securities of our choice if called to do so by the purchaser.
- 8.7. In the event of attachments and confiscation of goods subject to retention of title or enforcements in claims assigned to us, the purchaser must refer to our rights; he must also immediately notify us of these measures and upon threat of default he has to take up, at his own expense, the required legal redress in order to secure our rights.

# 9. Place of fulfilment, court of jurisdiction, severability clause

- 9.1. Place of fulfilment is Hennef. Court of jurisdiction is Siegburg. The law of the Federal Republic of Germany is valid. Use of the United Nations Convention on Contracts for the International Sale of Goods is excluded.
- 9.2 In the event that individual provisions of the contract with the purchaser including these general terms and conditions of business are or become wholly or in part invalid, the validity of the remaining provisions shall remain unaffected by this. The wholly or partly ineffective ruling should be replaced by an effective ruling, the economic success of which is as close as possible the ineffective ruling.

### Grothe GmbH





# SIGNALLING DEVICES **2024**

### **Grothe GmbH**

Building technology from a single source from A for alarm to Z for access

### **Grothe GmbH**

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