SIGNALLING 2012

Edition 1.0

GR⬤THE
URMET|GROUP

Dear customers and friends,

every time we put together a new catalogue, we have one thing in mind. And that is you. It's essential for us to give you the information you need on the quality that you expect for a price you appreciate.

Your feedback is highly welcome and needed. Only with your help we can make sure that our new catalogue contains the most useful information. And if you don't find the answer to all your questions, please don't hesitate to contact us. We will be happy to do our best to help you.

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

And now: enjoy the lecture. We are looking forward to hearing from you.

Your Export Team of Grothe

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CONTENT

»Actually our chimes belong into the Charts.«

CHIMES
AND RADIO CHIMES

The right one for all tastes!

GROTHE chimes sound good and look good. Choose your chime from a diverse product range – whether classically electromechanical, innovatively electronic or in combination with state-of-the-art wireless technology!

MISTRAL Series

Example: private picture

- ☐ Maximum reliability

- ☐ Signals for every taste

- ☐ Distance multiplier

- ☐ Movement monitor

- ☐ Flexible Installation

- ☐ Receiver-transmitter factory pre-program-med

- ☐ Safe 868.35 MHz transmission frequency

S ince its market launch, the MISTRAL radio chime series has conque-red the heart of the electricians, with its uncompromising quality and the most sophisticated technology.

With the new polyphonic ring tones, not only mobile phone freaks are amazed. With the tried and tested "System easyTIP" you can quickly and easily pick your favourite melody.

With the new power transmitter PSE 04.0-s you can calmly buy a large plot of land. It works everywhere - guaranteed.
Despite the high range of 500m, it works with absolutely harmless trans-mitting outputs.

The long battery life of the MISTRAL series, of 5 - 10 years, guarantees reliability and protects the environment. If the battery does become empty one day, then the MISTRAL transmitter and receiver give an early warning signal, both optically and acoustically.

SET MISTRAL 600

LED-flashlight

17 polyphonic melodies

12 removeable
design-inlays

crystal stable 500m/250m range

marking of
nameplates

waterproof radio transmitter
IP54

LED-flashlight

SET MISTRAL 200

250m

SET MISTRAL 300 BM

500 mJ-flashlight

200m

BM 03.0   108°

15m

continuously adjustment of volume

four-level slide switch for
call-signal-adjustment

NEW MISTRAL 400M
Mains-powered radio
chime receiver with
17 polyphonic melodies,
250m range

Radio chime MISTRAL 600 | Product overview

MISTRAL 600

**MISTRAL 600E
here with an interchangeable motif**

**MISTRAL SE 03.0-s
MISTRAL PSE 04.0-s**

MISTRAL SE 03.0

MISTRAL BM 03.0

MISTRAL 300M(E) BM

NA 9V-GPE

The deluxe radio chime with a huge range. Satisfies the utmost requirements for functionality and individual design

Functions
- 17 appealing polyphonic melodies (including 2/3 tone, Westminster, classical, pan pipes, kettledrum, bell, dog)
- User-friendly selection of melodies and two alternately flashing super-bright white LEDs. easyTIP system
- Alarm function with DIN emergency call tone for special situations
- Distance booster: any desired range can be achieved by linking several transmitter/receiver combinations
- Water-proof combination transmission button (IP54) with inscribable nameplate and LED transmission indicator
- 17 different paging signals for optimum access control, max. 20 transmitters can be memorised
- Central paging: several receivers can be controlled from a single transmitter
- Individual paging: each receiver can be controlled individually from additional transmitters
- Matrix paging: combined central and individual paging possible
- Transmitter/Receiver pre-programmed at the factory. Easy memorising of additional transmitters at the touch of a button. easyTIP system
- Optical and acoustic LowBatt display for the batteries of the receiver AND of the transmitter
- 4-stage slide switch for paging signal setting (1-melody/flashing; 2-melody only; 3-flashing only; 4-mute)
- Individual design via 12 supplied glossy motif covers or your own "creations" and high-quality acrylic sheet with real glass look

- Acrylic sheet lightly frosted on one side. According to installation, various effects can be obtained with this (depth of focus)

Installation
- Receiver: can be set up on a surface, hung up or screwed into place; transmitter: can be screwed into place or hung up with a clip
- Compatible with almost all intercom and doorbell systems (page forwarding as standard feature)
- Control unit easily accessible
- A neutral covering cap is enclosed for the transmitter especially for installation with page forwarding.

Technical data
- Range according to transmitter combination 500 m (with transmitter PSE 04.0) or 250 m (with transmitter SE 03.0), transmission frequency 868.35 MHz
- Walls, doors, metal parts etc. may significantly reduce the range!
- Where required, use distance booster through the installation of further radio sets
- Volume max. 83 dB(A), infinitely adjustable
- Receiver: batteries 4 x 1.5 V (alternatively, model LR14/C or with supplied adapter model LR6/AA, batteries not included in scope of delivery) or 8–12 V=/~ (via socket or terminal)
- Transmitter: batteries 2 x 1.5 V (model LR03/AAA, included in scope of delivery) or 8–12 V= (via terminal)
- Typical battery service life: transmitter: 5–10 years, receiver: 5–10 years (when using model LR14/C batteries, otherwise approx. 1–2 years)
- Dimensions: receiver: 180 x 140 x 50 mm, transmitter 36 x 100 x 17 mm

Model	Order no.	Description		
MISTRAL 600	43400	**Radio chime set** • See description above		• Incl. transmitter Mistral SE 03.0-s anthracite) and 250 m range • Transmitter with batteries
Extension possibilities / Accessories				
MISTRAL 600E	43401	**Radio chime receiver** • 17 melodies/flashing LED • Distance booster • 12 design inlays		• Range 500m or 250m depend. on transmitter • 8–12 V=/~ / Batt. 4 x 1.5 V (not included in scope of delivery)
MISTRAL SE 03.0-s	43440	**Radio transmitter** • Colour: painted silver/anthracite • for all Mistral chimes made since 2003 • 250 m range, 868.35 MHz • Page forwarding		• LED function indicator • Incl. batt. 2 x 1.5 V (model LR03/AAA-alkaline) • IP 54
MISTRAL SE 03.0	43441	**Radio transmitter** • Colour: white plastic • for all Mistral chimes made since 2003 • 250 m range, 868.35 MHz • Page forwarding		• LED function indicator • Incl. batt. 2 x 1.5 V (model LR03/AAA-alkaline) • IP 54
MISTRAL PSE 04.0-s	43450	**Power radio transmitter** • Colour: painted silver/anthracite • for all Mistral chimes made since 2003 • 500 m range, 868.35 MHz • Page forwarding		• LED function indicator • Incl. batt. 2 x 1.5 V (model LR03/AAA-alkaline) • IP 54
MISTRAL BM03.0 **NEW**	43445	**Radio movement detector** • incl. lithium battery 3V type CR123A or 8-12V≈/~ • For all Mistral Gongs made since 2003 • Max. surveillance range: 108° at 15m opt. range • Range can be precisely set using replaceable lenses (with articulated installation joint)		• Walking test with LED display • Colour: White plastic • 69(B) x 124(H) x 54(D)mm • 200m radio range outdoors; 868.35MH • Adjustable delay time from 3 to 60 sec • Incl. curtain lens and volumetric lens
MISTRAL 300M(E) BM **NEW**	43315	**Radio gong set (without hand transmitter)** • Incl. receiver Mistral 300ME • incl. movement detector BM03.0 • Movement detector with battery		• 69(B) x 153(H) x 54(D)mm • Indoor use only
NA 9V-GPE	43399	**Mains adapter** • Suitable for MISTRAL 600, 300 and transmitter • Incl. suitable plug		• 9 VDC • Max. 0.5 A (4.5 W) • 1.75 m lead

The deluxe radio chime for "unlimited" use
Functions
- Distance booster: You can get any range you like by linking several transmitter/receiver combinations
- 17 appealing polyphone melodies (2/3 tone, Westminster, pop, classical, special tone sequence for people with hearing difficulties etc.) and SILENCE function with LED indicator
- ALARM function with DIN emergency tone for special situations
- User-friendly selection of melodies and 500 mJ flashing light at the touch of a button. *easyTIP* system
- Water-proof combination transmitter button with nameplate and LED transmission indicator
- 17 different paging signals for optimum access control
- Central paging: several receivers can be controlled from a single transmitter
- Individual paging: each receiver can be controlled individually from additional transmitters
- Matrix paging: combined central, individual paging is possible
- Transmitter/Receiver pre-programmed at the factory.

Installation
- Receiver: can be set up on a surface, hung up or screwed into place; transmitter: can be screwed into place or hung up with a clip
- Compatible with almost all intercom and doorbell systems (page forwarding as standard feature)
- Control unit easily accessible

Technical data
- Range: 200/250 m, transmission frequency: 868.35 MHz
- Walls, doors, metal parts etc. may significantly reduce the range!
- Where required, use distance booster through the installation of further radio sets.
- Volume max. 86 dB(A), infinitely adjustable
- Receiver: 4 x 1.5V (model LR14/C, alkaline baby cell, not in scope of delivery) or 8–12 V=/~ (socket+terminal; reverse polarity protected)
- Transmitter: round cell, incl. in scope of delivery or terminal for 8–12 V=(LR03/AAA-Alkaline)
- receiver: 150 x 115 x 38 mm, transmitter: 35 x 96 x 16 mm

Model	Order no.	Description		
MISTRAL 300M	43300	**Radio chime set**	• White	
MISTRAL 200M	43305	**Radio chime set** like MISTRAL 300 except:	• White	
		• No distance booster	• Range 250 m	
		• 17 melodies	• 17 different paging signals	
		• No flashing light	• No input for 8–12 V=/~	
Accessories				
MISTRAL 300M E	43301	**Radio chime receiver**		
		• 17 melodies/flashing light	• Range 250 m	
		• Distance booster	• 8–12 V=/~ / Batt. 4 x 1.5 V	
			• White	
MISTRAL SE 03.0	43441	**Radio Transmitter**	• White	
		• For all MISTRAL chimes since 2003	• LED function indicator	
		• Range: 250 m, 868,35 MHz	• 2x1,5V batt. incl. (LR03/AAA-Alkaline)	
		• Page forwarding	• IP 54	
MISTRAL PSE 04.0-s	43450	**Power Radio Transmitter**	• Anthracite/Silver	
		• For all MISTRAL chimes since 2003	• LED function indicator	
		• Range: 500 m, 868,35 MHz	• 2x1,5V batt. incl. (LR03/AAA-Alkaline)	
		• Page forwarding	• IP 54	
NA 9V-GPE	43399	**Mains adapter**		
		• Suitable for receiver MISTRAL 300 (E) and transmitter	• 9 VDC	
		• Incl. suitable plug	• Max. 0.5 A (4.5 W)	
			• 1.75 m lead	
ACRYLIC DOOR white	43191	Acrylic door white aluminium	• similar to RAL 9006	
ACRYLIC DOOR green	43192	Acrylic door pastel green	• similar to RAL 6019	
ACRYLIC DOOR red	43193	Acrylic door flame red	• similar to RAL 3000	

MISTRAL 300M

MISTRAL 200M

Radio chime MISTRAL 210/211
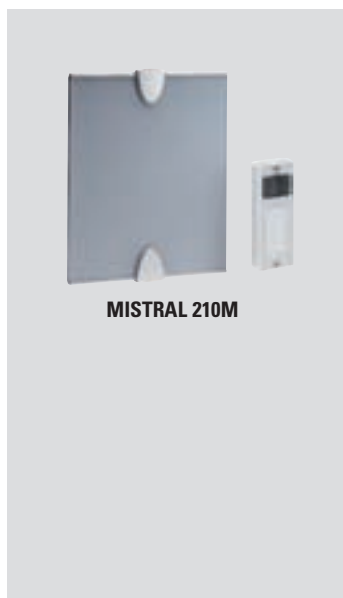
MISTRAL 210M

Model	Order no.	Description
MISTRAL 210M	43303	**Radio chime set** like MISTRAL 300 except: • No distance booster • Range 250 m • 17 melodies • 3 different paging signals • No flashing light • No input for 8–12 V=/~ • White

Radio chime MISTRAL 400

MISTRAL 400M

MISTRAL 400E

The deluxe 230 V radio chime is the mains-powered alternative for every room in your home.

Functions

- 17 appealing melodies (2/3 tone, Westminster, pop, classical, special tone sequence for people with hearing difficulties etc.) and SILENCE function with LED indicator
- ALARM function with DIN emergency tone for special situations
- User-friendly selection of melodies and 500 mJ flashing light at the touch of a button. *easyTIP* system
- Water-proof combination transmitter button with nameplate and LED transmission indicator
- 17 different paging signals for optimum access control
- Central paging: several receivers can be controlled from a single transmitter
- Individual paging: each receiver can be controlled individually from additional transmitters
- Matrix paging: combined central and individual paging is possible
- Transmitter/Receiver pre-programmed at the factory. Easy memorising of additional transmitters at the touch of a button. *easyTIP* system

Installation

- Receiver: can be plugged into EURO/earthed sockets; transmitter can be screwed into place or hung up with a clip
- Compatible with almost all intercom and doorbell systems (page forwarding as standard feature)

Technical data

- Range: 250 m, transmission frequency: 868.35 MHz
- Walls, doors, metal parts etc. may significantly reduce the range!
- Use in conjunction with MISTRAL 300 and distance booster if necessary.
- Volume max. 80 dB(A) depending on tone sequence, now adjustable
- Receiver: 230 V~ / 50 Hz
- Transmitter: 1 x 12 V (model A23, LR03/AAA-Alkaline, included in scope of delivery, replacement batt. e.g. VARTA V23GA or Duracell MN21 in specialised dealer) or terminal for 8–12 V=
- Dimensions: receiver: 127 x 62 x 78 mm, transmitter: 36 x 100 x 17 mm

Model	Order no.	Description
MISTRAL 400M	43310	**Mains-powered radio chime set** • White
Accessories		
MISTRAL 400E	43311	**Mains-powered radio chime receiver** • 17 melodies/flashing light • Range: 250 m • 230V/Euro plug

MISTRAL radio chime   **Circuit overview**

1. Central paging

Mel.1   Mel.2   Mel.3

2. Individual paging

Mel.1   Mel.2   Mel.3

3. Matrix paging

Mel.1   Mel.3   Mel.4   Mel.5
     Mel.2
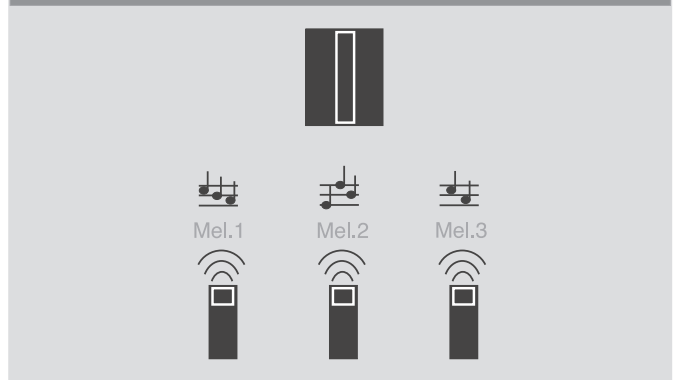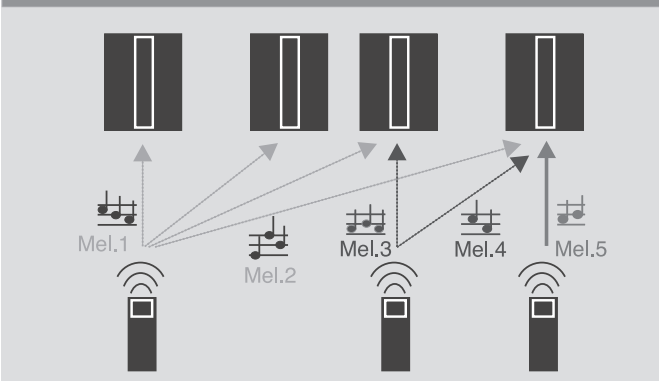
4. Call forwarding dry contact

Max. 250m   Max. 250m   Max. 250m

5. Distance booster

Mel.1

Mel.2
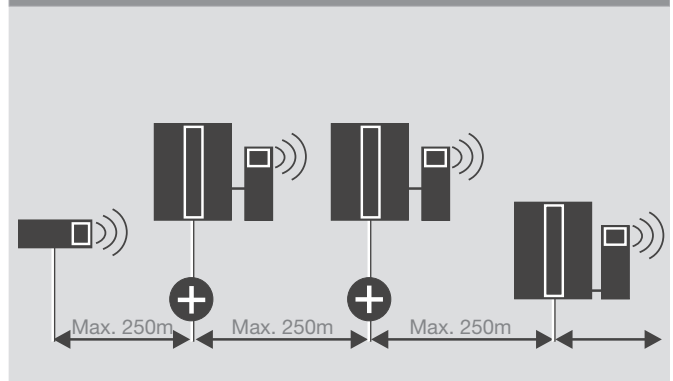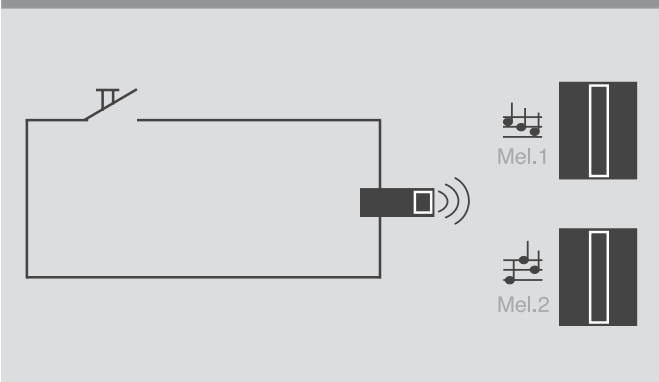
6. Call forwarding AC

Ding-
Dong

~8-12V

Mel.1

Mel.2
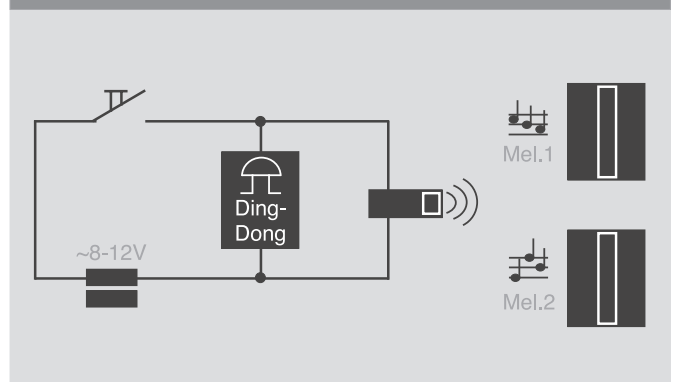
CROMA Serie

- □ User-friendly easyTIP control unit

- □ Optimal pre-assembly

- □ Multi-volt operation

- □ SILENCE function

In addition to the single tone "ding-dong" of the electromagnetic chimes, the electric chimes of the Croma series by Grothe offer you a large selection of melodies, so you can announce your guests in style. The call tones, the alarm function and also the silence function (single button muting) can be easily changed using the integrated easy-Tip unit behind the design element.

The 230V chime is ideal for mixed installations due to its integrated transformer, and also for installing during renovations, for example the present 230V installation in the hallway and from there to the front door a bell wire.

CROMA 100A

Multi-volt operation battery
4x 1.5V LR14 or 8-12V =/~

Chime with battery operation and standard function

3 Melodies

CROMA 50

Interchangeable designer doors from high
quality acrylic glass in three different
colours

17 polyphonic
melodies

Volume control
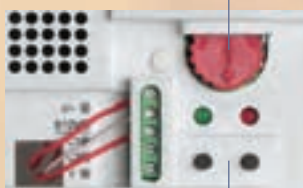
*easy*TIP

CROMA 230

Muli-volt operation 8/12V =/~ or 230V~
integrated transformer VDE-tested

CROMA 100A / 230A

CROMA 100A

The designer chime with a large selection of melodies and additional ALARM function – a "jewel" in any room!

Functions
- 17 brilliant polyphone sounds (2/3 tone, Westminster, pop, special tone seq. for people with hearing difficulties, classical etc.)
- Switchable from melody to ALARM tone (optimal for use in combination with movement detectors in a shop, for example, when a melody should sound during the day and an ALARM tone at night)
- Volume adjustable up to max. 86 dB(A)
- 2 different paging signals for optimum access control
- SILENCE function (one-button mute function) with LED indicator
- User-friendly *easyTIP* control unit for all functions (fold-up cover)

Installation
- Operated with 4 x 1.5 V batteries (model LR14/C, alkaline baby cell, not in scope of delivery) or 8–12 V~/= (250 mA)
- Safe ring tone activation with potential-free contact or with 8–12 V~/=

- Can also be used for mixed installations and renovation (e.g. existing 8 V power supply from a customer-supplied bell transformer and triggering with a potential-free contact)
- Optimum pre-assembly (screw distances correspond to flush-mounting box diameter)
- Parallel circuit to further CROMA chimes or to electro-mechanical chimes possible

Technical data
- Voltages/Currents: see above (minimal standby losses for long battery life — in normal use approx. 3 years incl. LowBatt display)
- Max. 86 dB(A)
- 191 x 163 x 51 mm
- Temperature range +5°C to +40°C
- VDE-tested
- Frosted semi-transparent 4 mm perspex pane; high-grade silver or grey-painted ABS plastic
- Protection rating IP 40

Model	Order no.	Description	
CROMA 100A	**43170**	**Electronic chime**	• Silver/Grey
NA 9V-GPE	**43399**	**Mains adapter** • Black • Disconnect angled plug and put 9 V directly to input terminal	• 9 V= (DC) • Max. 0.5 A (4.5 W) • With 1.75 m lead

CROMA 230A

CROMA 230A-a/w

CROMA 231A

The deluxe electronic chime with a large selection of melodies and additional ALARM function — multi-volt operation up to 230 V makes it particularly attractive

Functions
- 17 brilliant polyphone sounds (2/3 tone, Westminster, pop, special tone sequence for people with hearing difficulties, classical etc.)
- Switchable from melody to ALARM tone (optimal for use in combination with movement detectors in a shop, for example, when a melody should sound during the day and an ALARM tone at night)
- Volume adjustable up to max. 86 dB(A)
- 2 different paging signals for optimum access control
- SILENCE function (one-button mute function) with LED indicator
- User-friendly *easyTIP* control unit for all functions (fold-up cover)

Installations
- Multi-volt operation with 8–12 V~/= (250 mA) or 230 V~ (15 mA)
- Safe ring tone activation with potential-free contact or with 8–12 V~/= or 230 V~ (opto-coupler input for max. safety)
- Thanks to integrated transformer, can also be used for mixed installations and renovation (e.g. 230 V power supply and triggering over 8 V of an existing bell transformer)
- Optimum pre-assembly (screw distances correspond to flush-mounting box diameter)
- Parallel circuit to further CROMA chimes or to electro-mechanical chimes possible

Technical data
- Voltages/Currents: see above (ecologically sound operation due to minimal standby losses)
- Max. 86 dB(A)
- 150 x 115 x 45 mm
- Temperature range +5°C to +40°C
- VDE-tested
- High-grade, stable ABS plastic; white with silver-painted design
- Protection rating IP 40

Note
- If supplied with 230 V~ power, in accordance with the standard, an all-pole mains control switch must be provided in the building electrical installation!
- The integrated transformer is not suitable for this and is not designed for the operation of electrical door openers. If necessary, an additional transformer (e.g. GT 3148) must be supplied by the customer.
- When triggering with 230 V, use only suitable 230V buttons!

Model	Order no.	Description	
CROMA 230A	**43175**	**Electronic chime**	• White/Silver
CROMA 230A-a/w	**43190**	**Electronic chime** • function as above	• White/Silver
CROMA 231A	**43177**	**Electronic chime** • function as above	• Silver/Grey • 191 x 163 x 51 mm

Inexpensive battery-operated electronic chime with standard functions

Functions
• 3 sounds (2/3 tone, Westminster)
• Volume adjustable up to max. 83 dB(A)
• 3 different paging signals
• Continuous tone only in the case of continuous non-isolated impulse

Installation
• Operated with 4 x 1.5 V batteries (model LR14/C, alkaline baby cell, not in scope of delivery)

• Safe ring tone activation with potential-free contact or with 8–12 V~/=
• Optimum pre-assembly (screw distances correspond to flush-mounting box diameter)
• Parallel circuit to further CROMA chimes or to electro-mechanical chimes possible

Technical data
• Voltages/Currents: see above (minimal standby losses for long battery life - in normal use approx. 3 years)
• Max. 83 dB(A)
• Temperature range +5°C to +40°C

Model	Order no.	Description	
CROMA 50	43150	Electronic chime	
		• White ABS plastic with silver-grey design	• 150 x 115 x 40 mm
CHIME 225A	43225	Electronic chime	
		• Timeless design (ABS plastic cover)	• 160 x 160 x 65 mm

CROMA 50

CHIME 225A

ACCESSORIES FOR CROMA 50

Model	Order no.	Description	
Accessories			
ACRYLIC DOOR white	43191	Acrylic door white aluminium	• similar to RAL 9006
ACRYLIC DOOR green	43192	Acrylic door pastel green	• similar to RAL 6019
ACRYLIC DOOR red	43193	Acrylic door flame red	• similar to RAL 3000

CROMA 100 — Circuit overview

A
Spannungsvers./Power supply: Batterie / Battery
Auslösung Rufton/Start sound: Contact potenzialfrei/pot.free

=/~
8/12V
C1
C2
V
K1
Tür/door 1
Tür/door 2

B
Spannungsvers./Power supply: Batterie / Battery
Auslösung Rufton/Start sound: =/~8-12V

=/~
8/12V
C1
C2
V
K1
AC 8/12V~
Tür/door 1
Tür/door 2

C
Spannungsvers./Power supply: =/~8-12V
Auslösung Rufton/Start sound: Contact potenzialfrei/pot.free

=/~
8/12V
C1
C2
V
K1
AC 8/12V~ (0,5A)
Tür/door 1
Tür/door 2
Achtung! Keine Batterien! Attention! No batteries!!

D
Spannungsvers./Power supply: =/~8/12V
Auslösung Rufton/Start sound: =/~8/12V

Keine Parallel-Schaltung von Gongs möglich!
No parallel in-stalation of chimes possible!

=/~
8/12V
C1
C2
V
K1
AC 8/12V~ (0,5A)
Tür/door 1
Tür/door 2
Achtung! Keine Batterien! Attention! No batteries!!

CROMA 230 — Circuit overview

A
Spannungsvers./Power supply: =/~8-12V
Auslösung Rufton/Start sound: Contact potenzialfrei/pot.free

=/~
8/12V
C1
C2
V
K1
AC 8/12V~ (0,5A)
Tür/door 1
Tür/door 2

B
Spannungsvers./Power supply: =/~8/12V
Auslösung Rufton/Start sound: =/~8/12V

Keine Parallel-Schaltung von Gongs möglich!
No parallel in-stalation of chimes possible!

=/~
8/12V
C1
C2
V
K1
AC 8/12V~ (0,5A)
Tür/door 1
Tür/door 2

C
Spannungsvers./Power supply: 230V~ (50Hz)
Auslösung Rufton/Start sound: Contact potenzialfrei/pot.free

=/~
8/12V
C1
C2
V
K1
Tür/door 1
Tür/door 2
CT 1
CT 2
N
L1
~230V/50Hz
K2

D
Spannungsvers./Power supply: 230V~ (50Hz)
Auslösung Rufton/Start sound: =/~8-12V

=/~
8/12V
C1
C2
V
K1
AC 8/12V~ (0,5A)
Tür/door 1
Tür/door 2
CT 1
CT 2
N
L1
~230V/50Hz
K2

E
Spannungsvers./Power supply: 230V~ (50Hz)
Auslösung Rufton/Start sound: 230V~ (50Hz)

=/~
8/12V
C1
C2
V
K1
Tür/door 1
Tür/door 2
CT 1
CT 2
N
L1
~230V/50Hz
K2
Achtung! Nur 230V-Taster! Attention! 230V-pushes only!

F
Spannungsvers./Power supply: 230V~
Auslösung Rufton/Start sound: =/~8-12V

Parallel-Installation:

=/~
8/12V
C1
C2
V
K1
AC 8/12V~ (0,5A)
Tür/door 2
CT 1
CT 2
N
L1
~230V/50Hz
K2

CROMA 50/Chime 225A — Circuit overview

A
Spannungsvers./Power supply: Batterie / Battery
Auslösung Rufton/Start sound: Contact potenzialfrei/pot.free

AC~
K1
Batt.
Tür/door 1   DingDongDoong

B
Spannungsvers./Power supply: Batterie / Battery
Auslösung Rufton/Start sound: Contact potenzialfrei/pot.free

AC~
K1
Batt.
Tür/door 3   Westminster
Tür/door 1   DingDongDoong
Tür/door 2   DingDong DingDong

C
Spannungsvers./Power supply: Batterie / Battery
Auslösung Rufton/Start sound: ~8-12V

AC~
K1
Batt.
AC 8/12V~   Transformator Transformer
Tür/door 1   DingDongDoong

D
Spannungsvers./Power supply: Batterie / Battery
Auslösung Rufton/Start sound: ~8-12V

AC~
K1
Batt.
AC 8/12V~   Transformator Transformer
Tür/door 3   Westminster
Tür/door 1   DingDongDoong
Tür/door 2   DingDong DingDong

Flush mounted series

□ Installed in a flush mounted unit

□ Integration in switch product ranges

□ Series with flush mounted chime, bell and buzzer

□ 8-12V =/~

The simple design of the flush mounted series chime, bell and buzzer can be integrated discretely with numerous products from leading manufacturers. Simply integrate flexibly on site.

With 17 polyphonic melodies, a volume of 83dB(A), double call differentiation as well as muting and melody selection on the front of the unit, the electronic flush mounted gong is a true sound and technological wonder. Everything that a "real" chime has in the smallest size!

flush mounted
bell

flush mounted
buzzer

bell up to
80 dB(A)@1m

buzzer up to
80 dB(A)@1m

flush mounted
chime

key for melody
selection and audio
muting

volume control

80 mm

43/48 mm

80 mm

17 polyphone ring tones
double call differentiation
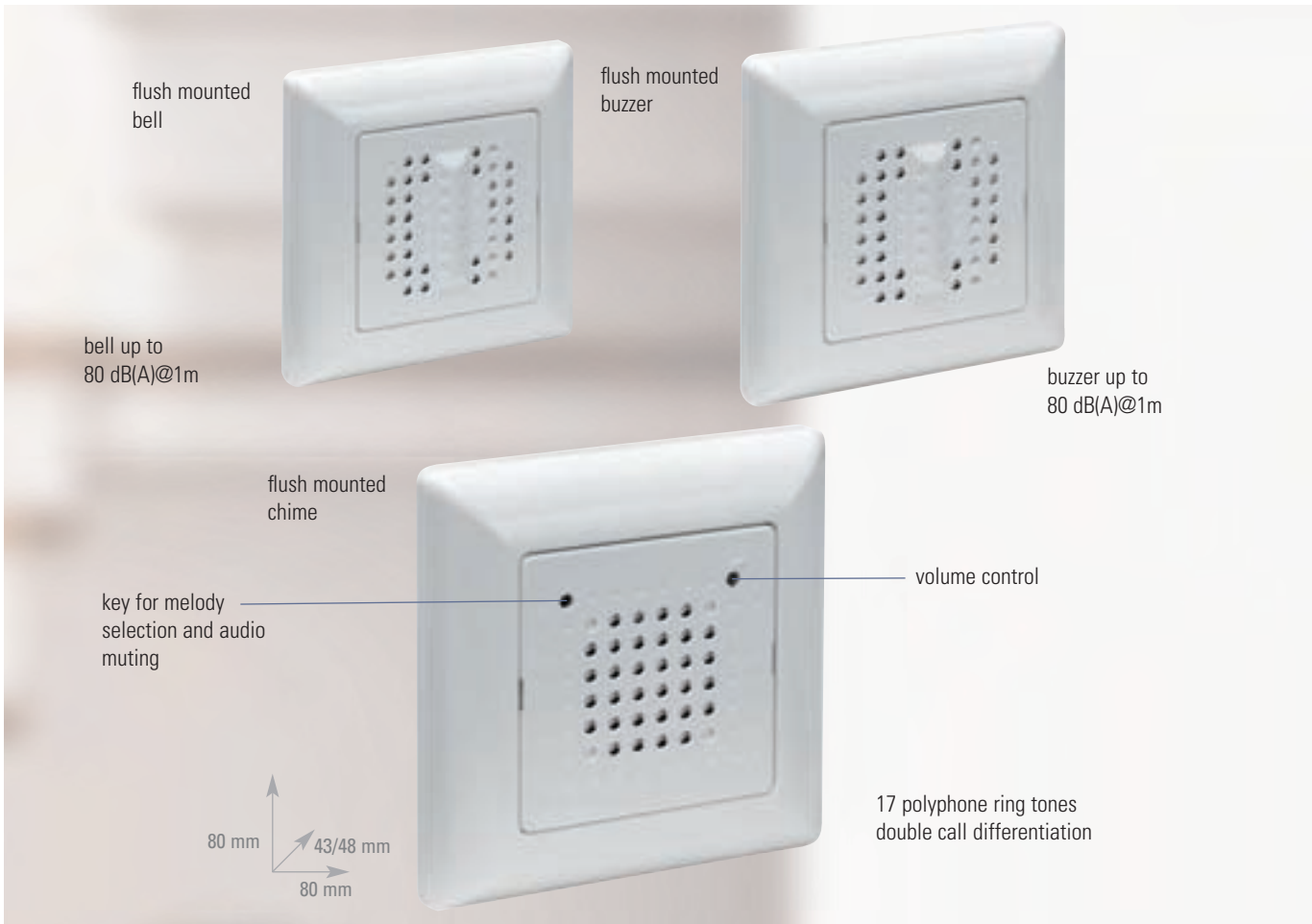
NEW

Flush-type electronic chime, bell and buzzer

Flush-type signalling:
Series consisting of flush-type chime, flush-type bell mecha-
nism and flush-type buzzer as single unit or for integration in
standard switch product ranges
(50x50 mm adapter frame of the switch manufacturer)

Product features (chime)
• 17 polyphone ring tones
• Integration in switch product range possible
Functions
• Double call differentiation
• Mute
• Continuous volume adjustment

Installation
• Installation in flush-type box
• Removable terminal makes installation easier
**Technical data**
• 50 x 50 x 50 mm (BXHXD)
• Chime volume up to 83 dB(A)
• volume LTW / SU up to 80 dB(A)
Note
• Recommendation: Use switch branching boxes (depth 60mm)
• Supplied including mounting plate and frame

UP CHIME 120WS

UP LTW 120WS

UP-SU 120WS

Model	Order no.	Description		
UP CHIME 120ws	**43701**	**Flush-type electronic chime**		
		• 17 polyphone ring tones	• 8-12V =/~ 0.280 A	
		• Mute	• up to 83 db(A)	
		• cont. volume adjustment	• 50 x 50 x 43 mm	
		• incl. mounting plate & frame	• Colour: white	
UP-LTW 120 ws	**43711**	**Flush-type bell mechanism**		
		• Small bell	• 8-12V =/~ / 0.320A	
		• up to 80 db(A)	• 50 x 50 x 48 mm	
		• incl. mounting plate & frame	• Colour: white	
UP-SU 120 ws	**43721**	**Flush-type buzzer**		
		• Small bell	• 8-12V =/~ / 0.210A	
		• up to 80 db(A)	• 50 x 50 x 48 mm	
		• incl. mounting plate & frame	• Colour: white	
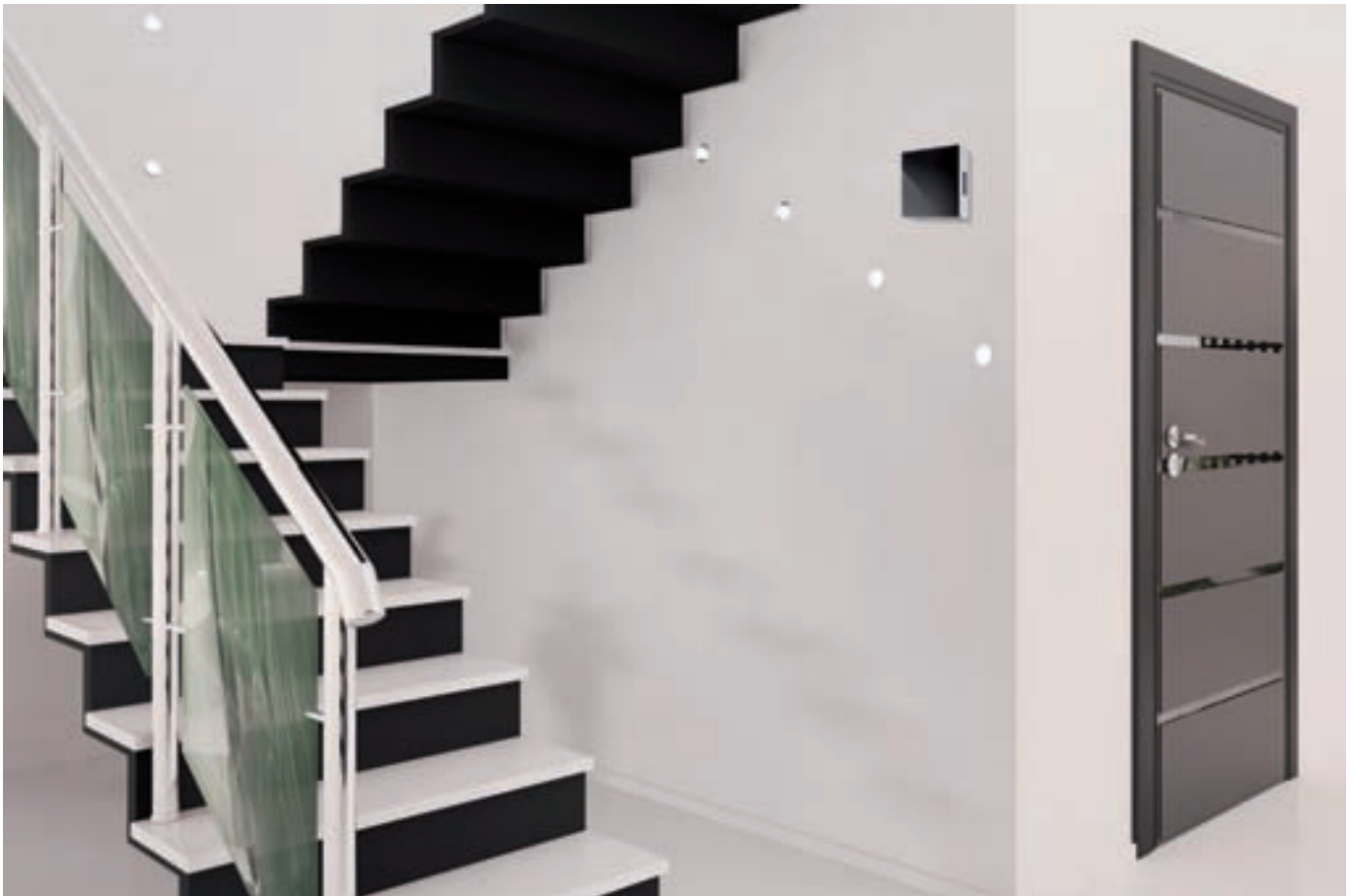
□ Two tone

□ Sound plates of real bell steel

□ Operation with external transformer

□ Battery casing for a 9V square battery

With its sound plates of real bell steel, the classical Grothe two-tone gong reliably ensures a clear, rich tone during signalling. Conventional technology with the highest quality and longest durability. The 8 - 12V gongs can be operated via a transformer, but now have an additional compartment for 9V square batteries as standard.

The 230V variations contain an additional transformer in order to save time during installation.
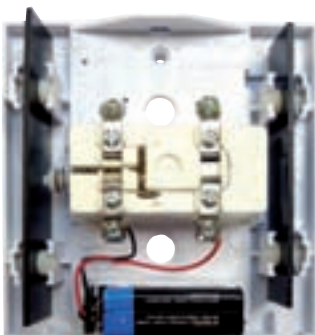
»Do not say, we would not have warned you.«

SOUND DEVICES: BELLS, BUZZERS, HORNS

The choice is yours: the classic bell for domestic use or the professional version for industry and commerce!

Whether as a friendly welcome signal for your visitors or as

a warning signal for enhanced security. GROTHE signal sys-

tems turn heads! Guaranteed! And when sheer volume is no

longer enough – then it's a job for the PSG 4.0, whose ultra-

bright xenon flashing beacon is impossible to oversee.

POWER SOUND GENERATOR 4.0

☐ High volume generated by the double pressure chamber loud speaker system

☐ Power booster up to 115 dB(A)

☐ Universal use in industry, commerce or in the home

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

Universally used sounder with a very high volume, many distinct signal tones and outstanding installation flexibility, for use both inside and outside (e. g. schools, airports, industrial premises, public buildings, etc). You can attach the PSG in whatever way you like: Either directly onto the wall or onto tables or ceilings using the accessories supplied. In the process, you can also set various angles of radiation.

And with regards to the wiring, you no longer need to consider which device variant you need this time. The PGS 230 can do everything: Supply with either 12/24 or 230V, activation with the same voltages or potential free or criss-cross (see the installation manual for the possible options).

PSG 4.0

Xenon flash

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

Up to 115 dB(A) with
an integrated power
booster system

Double call differentiation

158 mm

80 mm

243 mm

green standby display LED

Colour anthracite (RAL7016) with sturdy speaker
grill made of high quality anodised aluminium

Double pressure chamber
loud speaker system (up
to 115 dB(A)

Programmable tone
development

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

PSG 4.0

Model	Order no.	Description	
PSG 4.0-100	37410	Power sounder • Wiring options A, B, C	• 12–24 V=/~ (1.0 A)
PSG 4.0-230F	37430	Power sounder • Incl. xenon flashing light (1 joule) • Wiring options A, B, C, D, E, F, G, H	• 230 V~(0.1 A) + 12–24 V=/~ (1.0 A)

PSG 4.0-100

Circuit overview **PSG**

25
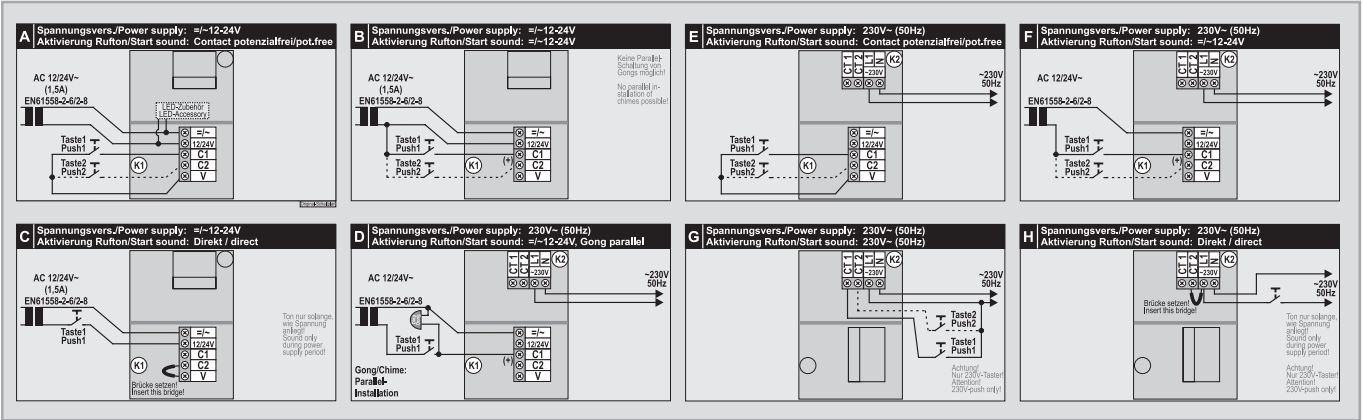
BELLS

- ☐ High volume

- ☐ Robust design

- ☐ Proven technology

The mechanical bells from Grothe are characterised by their excellent sound quality. The advantage in residential applications, when compared with the classical two-tone gong, is that the sound generation continues all the while the bell button is pressed.
In industrial applications, the bells come into their own as danger warnings or as break signals.

The national and international safety regulations regulate the compulsory necessary installation of appropriate warning signals in industry.
Grothe alarm bells or large bells can be used in cases of danger, alarm or emergency, in which the health or safety of the workforce is in danger.

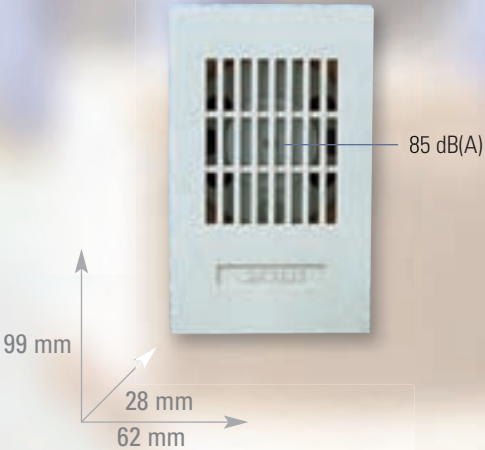Small bell LTW 4477A

148 mm

80 mm

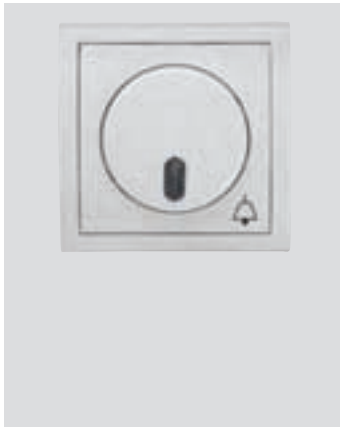70 mm

Tone shell
Ø 70mm

Adjustment screw for
the volume

85 dB(A)

Large bell 742/754

Impact-resistant
plastic casing

Trumpf bell LTW 1171A

85 dB(A)

99 mm

28 mm

62 mm

260 mm

100 mm

155 mm

105 dB(A)

27

Signaller SG 851

Universal-use flush-mounted signaller with electronic alpha tone in modern installation device design

Product features
• Electronic alpha tone with subdued volume
• White plastic housing

Installation
• Flush-mounted installation (expander claw fastening or screw fastening in flush-mounting boxes)
• Parallel connection of several signallers possible

• Parallel connection to electromechanical chimes with the same rated voltage possible

Technical data
• Approx. 70 dB(A)
• For voltage variants, see ordering overview
• IP 20
• Temperature range +5°C to 40°C
• 80 x 80 x 48 mm
• Duty cycle 100%

Model	Order no.	Description	
SG 851 8-12V AC	24012	Signaller	
			• 8–12 V~ / 50 Hz (0.45 VA)
SG 851 230V AC	24017	Signaller	
			• 230 V~ / 50 Hz (0.90 VA)

Trump buzzer SU 1170A / Trump bell LTW 1171A
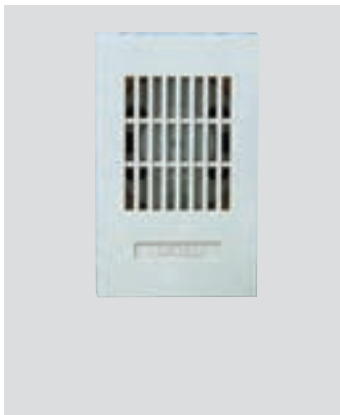
Product features
• White
• Flush-mounted installation

Technical data
• Max. 85 dB(A)
• Short-term load max. 10 s (KB 10 s)
• 99 x 62 x 28 mm

Model	Order no.	Description	
SU 1170A 8-12V	24052	Buzzer	
		• Reed-type buzzer with adjustable volume	• 8–12 V~ / 0.37 A
LTW 1171A 8V AC	24081	Bell	
			• 8 V~ / 0.83 A
LTW 1171A 12V AC	24082	Bell	
			• 12 V~ / 0.38 A
LTW 1171A 24V AC	24083	Bell	
			• 24 V~ / 0.17 A

Circular bell LTW 101A

Product features
• White plastic base
• Elegant tone shell

Technical data
• 85 dB(A)
• 8 V~ (0.86 A)
• Short-term load 10 s (KB 10 s)
• Shell diameter 70 mm
• 80 x 75 x 30 mm

Model	Order no.	Description	
LTW 101A 8V AC	24071	Circular bell	
			• 8 V~(0.86 A)

Record bell LTW 1101A

Product features
• White plastic housing
• Contents of packaging: 2 items (price quotation per item)

Technical data
• 84 dB(A)
• 8 V~ (0.86 A)
• Short-term load 10 s (KB 10 s)
• Shell diameter 70 mm
• 114 x 70 x 30 mm

Model	Order no.	Description		PU
LTW 1101A 8V AC	24075	Small bell		2
			• 8 V~(0.86 A)	

Colonia bell LTW 4471A

Product features
- White plastic housing
- Control screw for volume
- Contents of packaging: 2 items (price quotation per item)
- Flat shell

Technical data
- 80 dB(A)
- 8 V~ (1.0 A)
- Short-term load 10 s (KB 10 s)
- Shell diameter 70 mm
- 150 x 70 x 30 mm

Model	Order no.	Description		PU
LTW 4471A 8V AC	24111	Small bell		
			• 8 V~(1.0 A)	2

Colonia bell LTW 4477A

Product features
- White plastic casing
- Control screw for volume
- Contents of packaging: 2 items (price quotation per item)

Technical data
- 8 - 12V~ (AC)
- 0,08 - 0,12 A
- Shell diameter 70 mm

Model	Order no.	Description	
LTW 4477A 8V AC	24113	Small bell	
		• Shalm-shell	• 85 dB(A)
			• 148 x 70 x 80 mm

Dome bell LTW 3371A

Product features
- White plastic housing
- Control screw for volume
- Cover with screw fastening
- Double coil
- ÖVE-tested

Technical data
- 85 dB(A)
- 230 V~ (6 mA)
- Continuous operation
- 150 x 70 x 35 mm
- Shell diameter 70 mm

Model	Order no.	Description		PU
LTW 3371A 230V AC	24091	Small bell		
			• 230 V~(6 mA)	2

SOS alarm bell LTW 911A

Product features
- White plastic housing
- With watertight diaphragm-type grommet for cable insertion
- Tone shell made of painted steel

Technical data
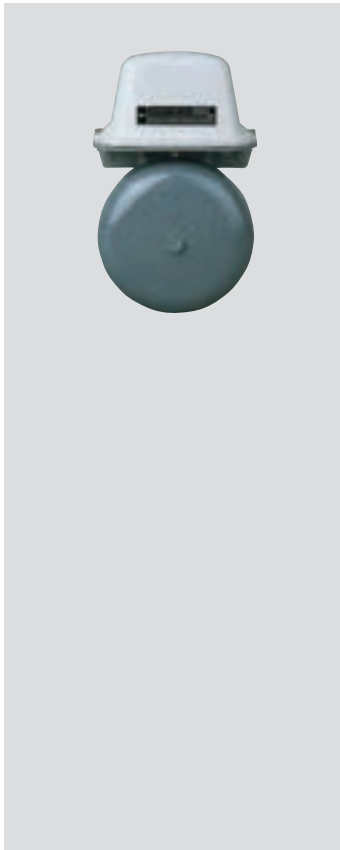- 98 dB(A)
- Short-term load 10 s (KB 10 s)
- 210 x 100 x 51 mm
- Shell diameter 100 mm
- Protection rating IP 54

| Model	Order no.	Description	
LTW 911A 8V AC F	24311	Bell	
			• 8 V (0.6 A)
LTW 911A 24V AC	24331	Bell	
			• 24 V (0.23 A)
LTW 911A 230V AC	24376	Bell	
		• With fine-wire fuse (0.05 A)	• 230 V (0.025 A)

Large bells 742 / 754

Product features
- Light-grey, impact-resistant, plastic housing
- With watertight diaphragm-type grommet for cable insertion
- Tone shell made of powder-coated cast steel, hammer finish

Technical data
- Protection rating IP 54 (outdoor use)
- 105 dB(A)
- 260 x 155 x 100 mm
- Shell diameter 150 mm
- Fastening hole spacing 136 mm

Model	Order no.	Description	
LTW 742 12V AC	**22512**	**Large bell**	
		• Continuous operation	• 12 V~ (1.2 A)
LTW 742 24V AC	**22513**	**Large bell**	
		• Continuous operation	• 24 V~ (0.6 A)
LTW 742 42V AC	**22514**	**Large bell**	
		• Continuous operation	• 42 V~ (0.5 A)
LTW 742 230V AC	**22517**	**Large bell**	
		• Continuous operation	• 230 V~ (0.05 A)
		• VDE-tested	• 50 Hz
LTW 754 12V/DC	**22540**	**Large bell**	
		• Not suitable for installation in new automobiles (from year of manufacture 2002) (for technical authorisation purposes, not suitable for vehicles manufactured from 2002 on)	• 12 V= (1.0 A)
		• Intermittent operation 5/5 min	
LTW 754 24V/DC	**22541**	**Large bell**	
		• Not suitable for installation in new automobiles (from year of manufacture 2002) (for technical authorisation purposes, not suitable for vehicles manufactured from 2002 on)	• 24 V= (0.9 A)
		• Intermittent operation 5/5 min	

Large bells 781 / 793
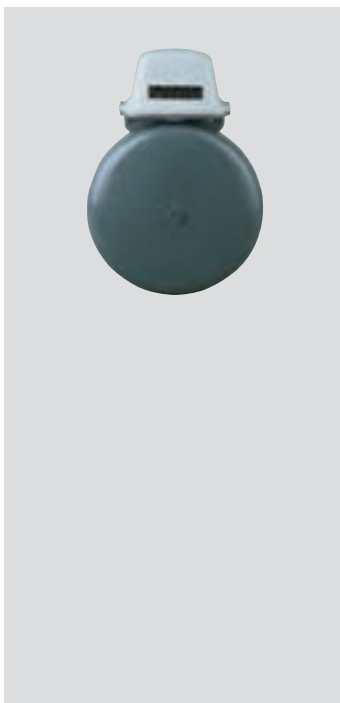
Product features
- Light-grey impact-resistant plastic cover
- Sturdy cast steel housing
- With watertight diaphragm-type grommet for cable insertion
- Tone shell made of powder-coated cast steel, hammer finish

Technical data
- Protection rating IP 54 (outdoor use)
- DIN VDE 0700 / EN 60335-tested
- 110 dB(A)
- 360 x 250 x 110 mm
- Shell diameter 250 mm
- Fastening hole spacing 132 mm

Model	Order no.	Description	
LTW 781 230V AC	**22557**	**Large bell**	
		• Continuous operation	• 230 V~ (0.05 A)
			• 50 Hz
LTW 793 12V/DC	**22580**	**Large bell**	
		• Not suitable for installation in new automobiles (from year of manufacture 2002) (for technical authorisation purposes, not suitable for vehicles manufactured from 2002 on)	• 12 V= (1.0 A)
		• Intermittent operation 5/5 min	
LTW 793 24V/DC	**22581**	**Large bell**	
		• Not suitable for installation in new automobiles (from year of manufacture 2002) (for technical authorisation purposes, not suitable for vehicles manufactured from 2002 on)	• 24 V= (0.9 A)
		• Intermittent operation 5/5 min	

Sound Devices:
Bell, Buzzers, Horns

HORNS

☐ Compact high volume horns for indoor and outdoor use

☐ Volume of up to 105 dB(A)

☐ Use in industry, commerce or home

☐ Integrated warning light in the combihorn

Horns are the ideal devices for danger signals in industrial application, alarm systems or in fire protection technology, due to their electrome-chanical sound production through a membrane. Using a funnel for optimal sound focussing, Grothe horns can achieve up to 105dB(A).

Also available in the programme is the so-called combi-horn, which not only emits an acoustic signal, but also a visual signal.

HUPE 640 xx

White, impact-resistant plastic casing, with funnel

Protection IP 54
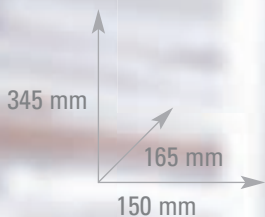
HUPE 680
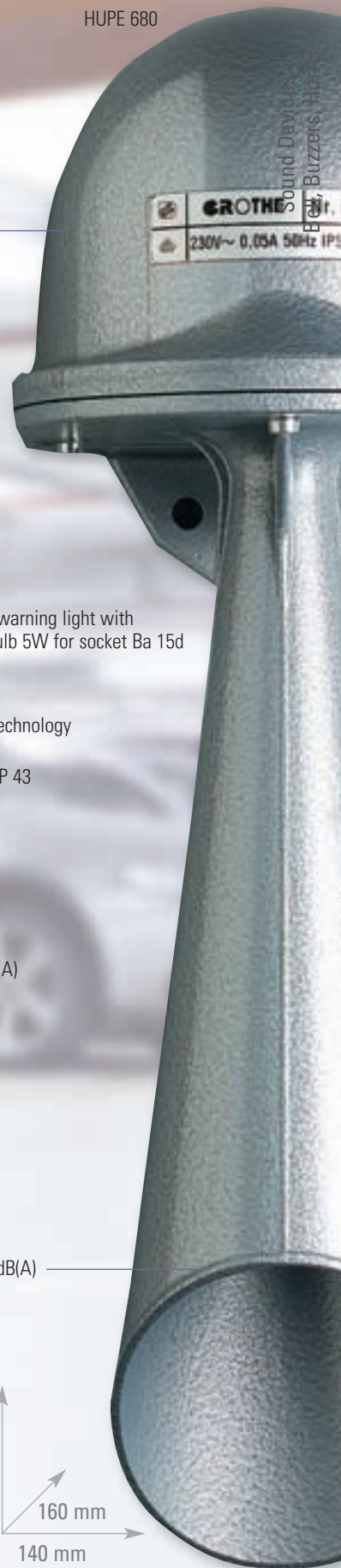
Aluminium casing with grey hammer finish

Protection IP 54

345 mm

165 mm

150 mm

105 dB(A)

HUPE WLxx

Integrated warning light with standard bulb 5W for socket Ba 15d

or

SMD LED technology

Protection IP 43

204 mm

74 mm

79 mm

from 92 dB(A)

HUPE 63x

Solid, light grey plastic casing

Protection IP 43

168 mm

74 mm

79 mm

92 dB(A)

105 dB(A)

440 mm

160 mm

140 mm

Horn 63x

HORN 630/631

Dimensions   **Dimensions**

Compact horn with high volume for indoors and outdoors

Product features
• Electromechanical sound generation with a steel diaphragm
• With bell mouth for optimum sound concentration
• Sturdy light-grey plastic housing (ABS, self-extinguishing)

Installation
• Wall mounting (with bell mouth facing down)
• Terminals for max. 1.5 mm²

Technical data
• Duty cycle 100%
• Protection rating IP 43, protection class II
• -30°C to +50°C
• 168 x 79 x 74
• Weight 0.2 kg

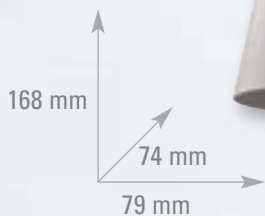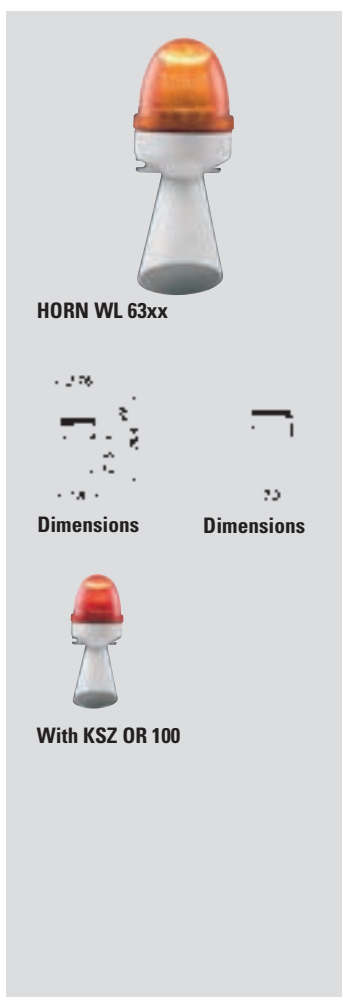| Model	Order no.	Description
For alternating current (~/AC)		
HORN 630 8V AC	31041	**Horn**
		• 8 V~ (0.7 A), 92 dB(A)
HORN 630 24V AC	31043	**Horn**
		• 24 V~ (0.13 A), 92 dB(A)
HORN 630 110V AC	31045	**Horn**
		• 110 V~ (0.05 A), 92 dB(A)
HORN 630 240V AC	31047	**Horn**
		• 240 V~ (0.03 A), 92 dB(A)
For direct current (=/DC)		
HORN 631 12V DC	31052	**Horn**
		• 12 V= (0.05 A), 96 dB(A)
HORN 631 24V DC	31053	**Horn**
		• 24 V= (0.04 A), 96 dB(A)

Horn WL 63xx

HORN WL 63xx

Dimensions   **Dimensions**

With KSZ OR 100

Compact horn with high volume and an additional visual signaller for indoors and outdoors

Product features
• Electromechanical sound generation with a steel diaphragm
• With integrated warning light
• Orange lens made of impact-resistant polycarbonate PC (red lens as accessory 31101)
• Duration of optical/acoustic signals as long as voltage applied (use an additional relay if required); operation of the optical signal independently of the acoustic signal possible
• With bell mouth for optimum sound concentration
• Sturdy light-grey plastic housing (ABS, self-extinguishing)

Installation
• Wall mounting (with bell mouth facing down)
• Terminals for max. 1.5 mm²

Technical data
• Duty cycle 100%
• Incl. 5W bulb for Ba15d socket
• Protection rating IP 43, protection class II
• -30°C to +50°C
• 204 x 79 x 76
• Weight 0.25 kg
Attention:
• Please order LED-lamps seperately

Model	Order no.	Description		
HORN WL 6301 240V AC	31371	**Combi horn**		
			• 240 V~ (0.05 A), 92 dB(A)	
HORN WL 6311 24V DC	31341	**Combi horn**		
			• 24 V= (0.25 A), 96 dB(A)	
Accessories/Spare parts				
KSZ 8596	38596	**Bulb**		
		• For Ba15d socket	• 24 V (5 W)	
KSZ 8597	38597	**Bulb**		
		• For Ba15d socket	• 240 V (5 W)	
KSZ OR 100	31101	**Lens**		
		• Red		

LED light				
for 24 V~/= (AC/DC)				
KSZ-LED 8661	38661	**LED light**	Yellow-orange	24 V~/= (45 mA)
KSZ-LED 8662	38662	**LED light**	Red	24 V~/= (45 mA)
for 240 V~ (AC)				
KSZ-LED 8651	38651	**LED light**	Yellow-orange	230/240 V~ (50 mA)
KSZ-LED 8652	38652	**LED light**	Red	230/240 V~ (50 mA)

full

Horn BZ 63xx

Compact horn with high volume and an additional visual signaller for indoors and outdoors

Product features
- High warning effect thanks to xenon flash tube (included in scope of delivery)
- Orange lens made of impact-resistant polycarbonate PC (red lens as accessory 31101)
- High failure safety of the optical signaller as there are no moved parts
- Field of application: industrial hazard areas/alarm systems
- Electromechanical sound generation with a steel diaphragm
- Duration of optical/acoustic signals as long as voltage applied (use an additional relay if required); operation of the optical signal only possible together with acoustic signal

- With bell mouth for optimum sound concentration
- Sturdy light-grey plastic housing (ABS, self-extinguishing)

Installation
- Wall mounting (with bell mouth facing down)
- Terminals for max. 1.5 mm²

Technical data
- Duty cycle 100%
- Replaceable xenon tube 2 j
- Flash frequency: dual flash, 2x65 flashes/min.
- Protection rating IP 43, protection class II
- -30°C to +40°C
- 204 x 79 x 76
- Weight 0.25 kg

HORN BZ 63xx

Dimensions   **Dimensions**

With KSZ OR 100

Model	Order no.	Description	
HORN BZ 6301 240V AC	**31271**	**Combi horn**	
			• 240 V~ (0.07 A)
			• 92 dB(A)
HORN BZ 6311 24V DC	**31241**	**Combi horn**	
			• 24 V= (0.35 A)
			• 96 dB(A)
Accessories/Spare parts			
KSZ 8598	**38598**	**Xenon tube**	
			• 2 J
KSZ OR 100	**31101**	**Lens**	
		• Red	
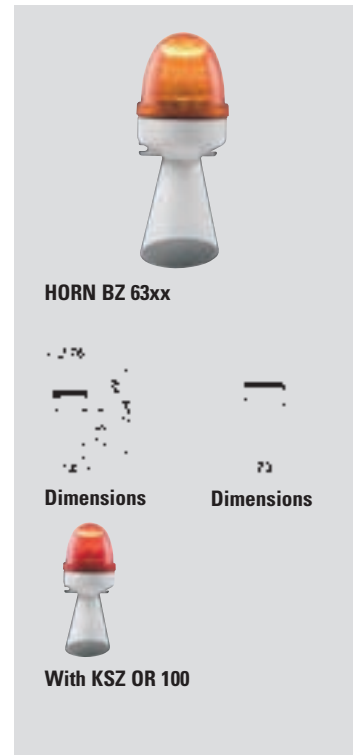
Horn 640 / 651

Product features
- White impact-resistant plastic housing, with bell mouth
- With watertight diaphragm-type grommet for cable insertion

Technical data
- 105 dB(A)
- 345 x 150 x 165 mm
- Protection rating IP 54 (outdoor use)
- -10°C to + 50°C

Model	Order no.	Description	
HORN 640 12V AC	**32012**	**Large horn**	
		• Continuous operation	• 12 V~ (1.2 A)
HORN 640 24V AC	**32013**	**Large horn**	
		• Continuous operation	• 24 V~ (0.6 A)
HORN 640 42 V AC	**32014**	**Large horn**	
		• Continuous operation	• 42 V~ (0.5 A)
HORN 640 230V AC	**32017**	**Large horn**	
		• Continuous operation/DIN 0700-tested	• 230 V~ (0.05 A) (50 Hz)
HORN 651 12V/DC	**32122**	**Large horn**	
		• Intermittent operation 5/5 min	• 12 V= (1.0 A)
HORN 651 24V/DC	**32123**	**Large horn**	
		• Intermittent operation 5/5 min	• 24 V= (0.9 A)

Horn 680

Product features
- Light-metal housing with grey hammer finish
- Suppressed
- With bell mouth
- With watertight diaphragm-type grommet for cable insertion

Technical data
- 230 V~ (0.05 A)
- 50 Hz (60 Hz on request)
- 105 dB(A)
- Continuous operation
- Protection rating IP 54 (outdoor use)
- DIN VDE 0700 / EN 60335-tested
- 440 x 140 x 160 mm
- -10°C to + 50°C

Model	Order no.	Description
HORN 680 230V AC	**33017**	**Large horn**

»Here simply a signal had to be set.«
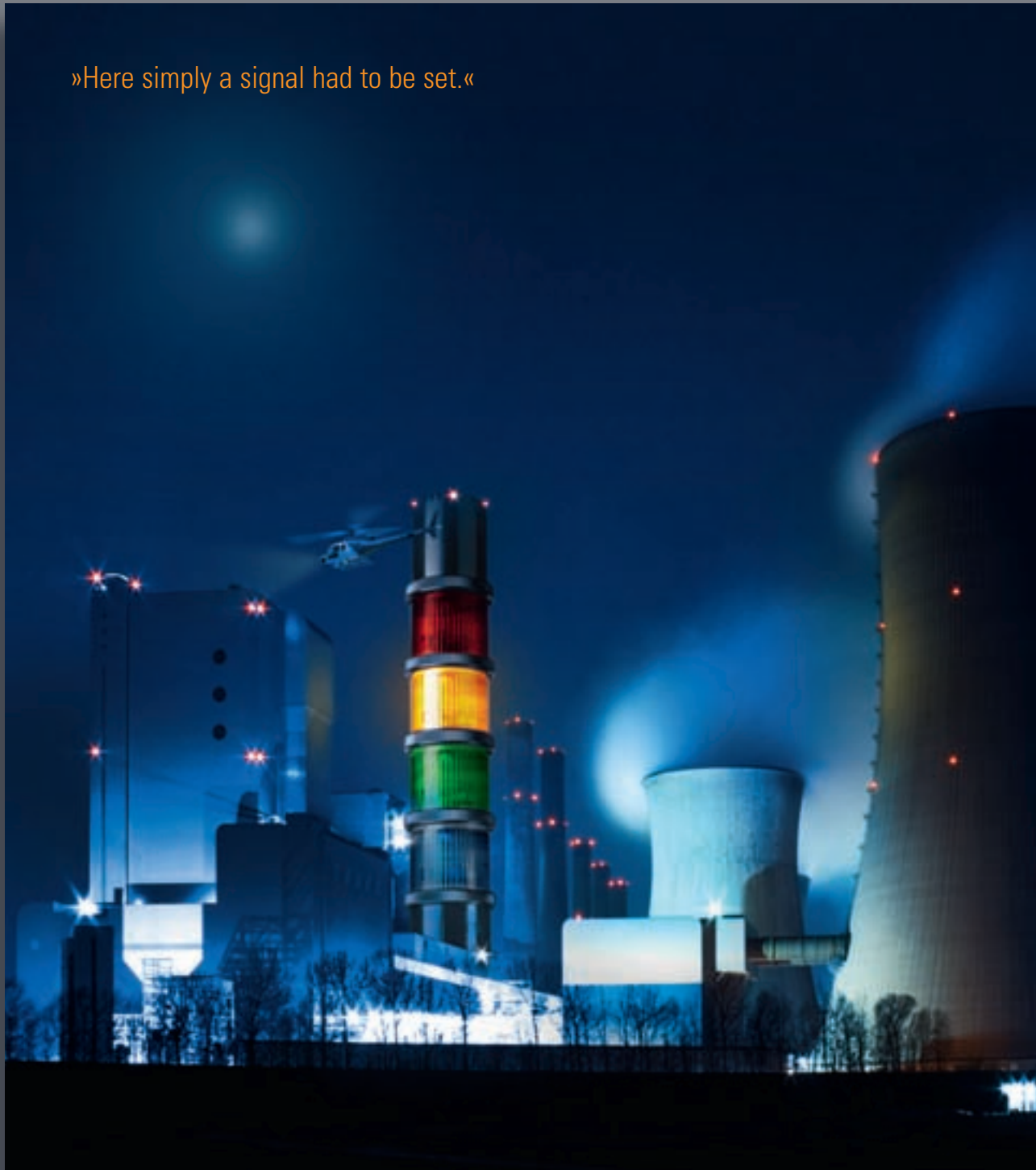
OPTICAL
AND ACOUSTIC
SIGNALLING DEVICES

Can be ideally adapted for use in industrial and commercial conditions and combined to suit!

In addition to this, the optical acoustic combinations "System T" and "System T-Mini" are, as modular systems, also quick to install and fit extremely well in the modern industrial environment. The universally applicable rotating mirror beacons with a wide selection of different light sources round off the program perfectly.

☐ Module system T

☐ Module system T-mini

☐ Warning and strobe lights

☐ Rotating mirror lights

☐ Rotating beacons

Define the appropriate signal for each (dangerous) situation and combine them with different colours and light combinations according to taste with the visual and acoustic signal devices from the Grothe company.

Whether you would like to install an individual warning light, or a column system, or rotating mirror light on the wall or a flat surface: You will always find the matching accessory.

System T (Ø 75 mm) / System T-mini (Ø 48 mm)

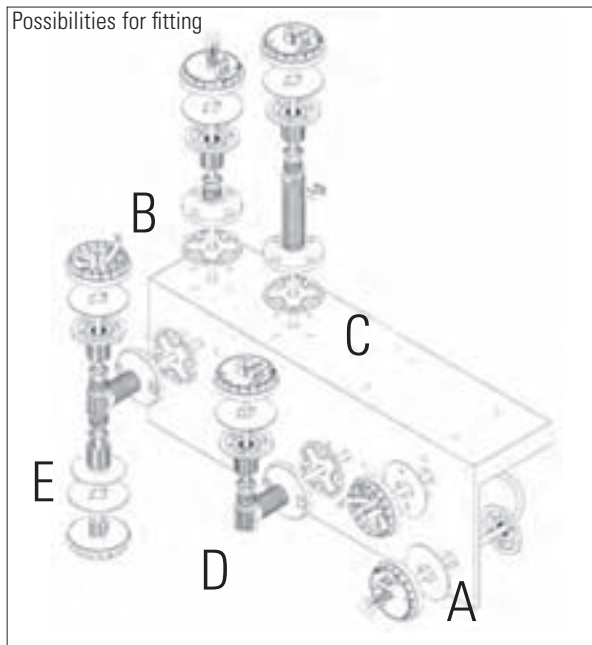Compact modular beacon post with innovative, long-life LED technology and high light intensity for many applications for indoor and outdoor use.

Small warning and flashing light (Ø 76 mm)

Small cheap warning light for use with standard bulb in standard operating environments

Can be fitted to assembly bracket KSZ 8604/8605

Possibilities for fitting

B

C

E

D

A

Sound module, protection IP 54, top element of a modular post

Optimal warning effect with all around sound emission (360°)

Light glass and housing from impact-resistant polycarbonate

Special interlocking teeth for vibration protection

Light module Protection type IP 65 / protection class II

Maximum safety thanks to full contact protection, even during module exchange

Base element incl. connecting terminals in the lowest element of a module tower

up to 5 modules can be combined

A = direct fixation of the base element onto horizontal or vertical surfaces
B = fixation with additional mounting base on vertical surfaces
C = as B, but with an additional extension tube
D = fixation onto vertical surfaces
E = as D, but with 2 connections

Large warning and strobe light (Ø 138 mm)

Mid-sized strobe light (Ø 96 mm)

Rotating mirror beacon (Ø 145 -152 mm)

High quality rotating mirror beacon especially for use in vehicles, with a halogen system for optimal light yield

Fixation onto horizontal surfaces

Ball-bearing mounted reflector made of corrosion resistant metal

Long-life gearwheel drive with life time seal

Optimal light yield with halogen, xenon or standard bulbs

Protection type IP 55 / protection class II

Fixation onto horizontal or vertical surfaces

Including mounting seal

Protection type IP 54 / protection class II

Optical and Acoustic Signalling Devices

SystemT	Basic unit

TSZ 8600

Product features
- The bottom unit of a stacking beacon
- Incl. cover for the top unit
- Incl. EPDM seal for IP 65 rating
- Incl. base seal
- Black housing made from impact-resistant polycarbonate PC; circuit board: FR4
- Weight 0.12 kg

Installation
- Incl. 6-way terminal for max. 2.5 mm²
- The basic unit can be screwed directly onto horizontal surfaces or combined with mounting accessories

Model	Order no.	Description
TSZ 8600	**38600**	**Basic unit**

SystemT	Mounting parts

KSZ 8601

KSZ 8603

KSZ 8604

KSZ 8605

Product features
- For mounting on horizontal or vertical surfaces
- Incl. O ring for IP 65 rating
- Material: Plastic PA 66

Installation
- Mounting base with 4 fixing holes for a strong hold and base seal

Model	Order no.	Description	
KSZ 8601	**38601**	**Mounting base** • For horizontal mounting	• Male thread • Weight 0.03 kg
KSZ 8603	**38603**	**Extension tube** • 100 mm extension	• Diameter 25 mm • Weight 0.03 kg
KSZ 8604	**38604**	**Mounting bracket** • For vertical mounting • (wall mounting)	• 1 connection • Weight 0.04 kg
KSZ 8605	**38605**	**Mounting bracket** • Vertical mounting	• 2 connections • Weight 0.05 kg

SystemT	LED flashing light

NEW
with 4 functions

TLB 88xx

Colour variations

Extremely reliable flashing light module with high luminosity

LED-multiblink light
- orange
- integrated super bright SMD LEDs
- highest reliability
- Functions: Permanent light, simple, double (xenon effect) or triple strobe adjustable using the DIP switch
- Maintenance-free, low power consumption

- 5 Cd(p)
- 24V~/= (0,09A)
- Switch on time ED 100%
- Blink frequency approx. 150/min
- -30°C to +60°C
- Diameter 75 x 79 mm
- Weight 0,1 kg

Model	Order no.	Description	
for 24 V~/= (AC/DC)			
TLB 8831	**38831**	**LED flashing light** • Orange	• 24 V~/= (0.09 A)
TLB 8832	**38832**	**LED flashing light** • Red	• 24 V~/= (0.09 A)
TLB 8834	**38834**	**LED flashing light** • Clear	• 24 V~/= (0.08 A)
TLB 8835	**38835**	**LED flashing light** • Blue	• 24 V~/= (0.08 A)
TLB 8836	**38836**	**LED flashing light** • Green	• 24 V~/= (0.08 A)
TLB 8837	**38837**	**LED flashing light** • Yellow	• 24 V~/= (0.08 A)

LED flashing light   SystemT

Model	Order no.	Description	
for 240 V~ (AC)			
TLB 8841	**38841**	**LED flashing light**	
		• Orange	• 240 V~ (0.02 A)
TLB 8842	**38842**	**LED flashing light**	
		• Red	• 240 V~ (0.02 A)
TLB 8844	**38844**	**LED flashing light**	
		• Clear	• 240 V~ (0.02 A)
TLB 8845	**38845**	**LED flashing light**	
		• Blue	• 240 V~ (0.02 A)
TLB 8846	**38846**	**LED flashing light**	
		• Green	• 240 V~ (0.02 A)
TLB 8847	**38847**	**LED flashing light**	
		• Yellow	• 240 V~ (0.02 A)

Colour options   **Colour options**
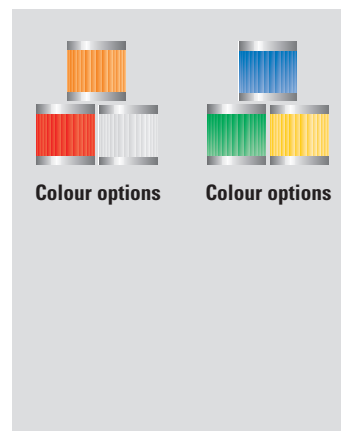
Caution: Please always order the basic unit (Order No. 38600) and mounting parts separately!

Warning light   SystemT

An inexpensive warning light module for standard applications

Product features
• Good warning effect with even, all-round visibility (360°)
• Accepts 12 to 240 V (5 W) filament bulbs and LED lights
• Lenses and housing made from impact-resistant polycarbonate PC (self-extinguishing); circuit board: FR4

Installation
• Incl. bayonet closure with special interlocking teeth to prevent vibration
• Maximum safety thanks to full contact protection (even when modules are replaced)

Technical data
• Max. ~/= 240 V (5 W)
• Socket: Ba15d
• Duty cycle 100%
• Protection rating IP 65, protection class II
• -30°C to +60°C
• Diameter 75 mm x 79 mm
• Weight 0.09 kg

Note
• Please order filament bulbs and LED lights separately!

TWL 87xx

Colour options   **Colour options**

Model	Order no.	Description	
TWL 8711	**38711**	**Warning light**	
		• Orange	• 3 Cd(p)
TWL 8712	**38712**	**Warning light**	
		• Red	• 1 Cd(p)
TWL 8714	**38714**	**Warning light**	
		• Clear	• 3 Cd(p)
TWL 8715	**38715**	**Warning light**	
		• Blue	• 1 Cd(p)
TWL 8716	**38716**	**Warning light**	
		• Green	• 1 Cd(p)
TWL 8717	**38717**	**Warning light**	
		• Yellow	• 3 Cd(p)

Caution: Please always order the basic unit (Order No. 38600) and mounting parts separately!

Optical and Acoustic
Signalling Devices

OPTICAL AND ACOUSTIC SIGNALLING DEVICES
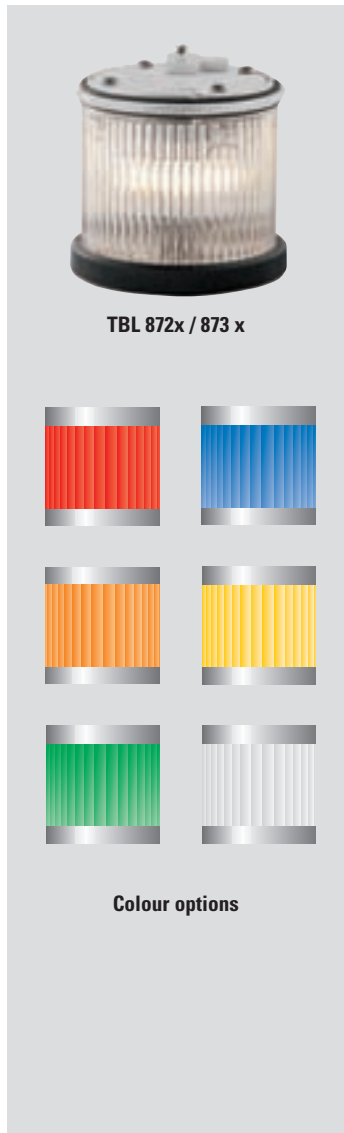
TBL 872x / 873 x

Colour options

An inexpensive flashing light module for standard applications

Product features
- Good warning effect with even, all-round visibility (360°)
- Accepts filament bulbs (5 W) and LED lights
- Lenses and housing made from impact-resistant polycarbonate PC (self-extinguishing); circuit board: FR4

Installation
- Incl. bayonet closure with special interlocking teeth to prevent vibration
- Maximum safety thanks to full contact protection (even when modules are replaced)

Technical data
- For voltages see ordering overview
- Socket: Ba15d
- Flash frequency approx. 110/min.
- Duty cycle 100%
- Protection rating IP 65, protection class II
- -30°C to +60°C
- Diameter 75 mm x 79 mm
- Weight 0.1 kg

Note
- Please order filament bulbs and LED's separately!

Model	Order no.	Description	
for 12–48 V= (DC)			
TBL 8721	38721	**Flashing light** • Orange, 3 Cd(p)	• 12–48 V= (0.43/0.21 A)
TBL 8722	38722	**Flashing light** • Red, 1 Cd(p)	• 12–48 V= (0.43/0.21 A)
TBL 8724	38724	**Flashing light** • Clear, 3 Cd(p)	• 12–48 V= (0.43/0.21 A)
TBL 8725	38725	**Flashing light** • Blue, 1 Cd(p)	• 12–48 V= (0.43/0.21 A)
TBL 8726	38726	**Flashing light** • Green, 1 Cd(p)	• 12–48 V= (0.43/0.21 A)
TBL 8727	38727	**Flashing light** • Yellow, 3 Cd(p)	• 12–48 V= (0.43/0.21 A)
for 24 V/240 V~ (AC)			
TBL 8731	38731	**Flashing light** • Orange, 3 Cd(p)	• 24/240 V~ (0.21/0.021 A)
TBL 8732	38732	**Flashing light** • Red, 1 Cd(p)	• 24/240 V~ (0.21/0.021 A)
TBL 8734	38734	**Flashing light** • Clear, 3 Cd(p)	• 24/240 V~ (0.21/0.021 A)
TBL 8735	38735	**Flashing light** • Blue, 1 Cd(p)	• 24/240 V~ (0.21/0.021 A)
TBL 8736	38736	**Flashing light** • Green, 1 Cd(p)	• 24/240 V~ (0.21/0.021 A)
TBL 8737	38737	**Flashing light** • Yellow, 3 Cd(p)	• 24/240 V~ (0.21/0.021 A)

Caution: Please always order the basic unit (Order No. 38600) and mounting parts separately!

TSG 8785/6

An inexpensive sounder for standard applications

Product features
- 6 tone sequences selectable by DIP switch
- Tone sequences: continuous, slow pulsed or rapid pulsed tone
- Reliable magneto-dynamic system for sound generation

Installation
- Incl. bayonet closure with special interlocking teeth to prevent vibration
- Maximum safety thanks to full contact protection (even when modules are replaced)
- The top unit of a stacking beacon (so 1 sounder per beacon is possible)

- Duration of acoustic signals as long as voltage applied (use an additional relay if required)

Technical data
- For voltages see ordering overview
- Max. 81 dB(A)
- Duty cycle 100%
- Protection rating IP 54, protection class II
- -30°C to +60°C
- Diameter 75 mm x 116 mm
- Weight 0.13 kg
- Adjustable volume

Model	Order no.	Description	
TSG 8785	38785	**Sounder**	• 12-48V~/=(3-13mA)
TSG 8786	38786	**Sounder**	• 24-240V~ (max. 8mA)

Sounder TSG 8781/2 — System T

A multifunction sounder with extremely high volume

Product features
- 32 tone sequences selectable by DIP switch
- Tone sequences/frequencies: see table below
- Reliable magneto-dynamic system for sound generation
- High acoustic pressure with low current consumption

Installation
- Incl. bayonet closure with special interlocking teeth to prevent vibration
- Maximum safety thanks to full contact protection (even when modules are replaced)
- The top unit of a stacking beacon (so 1 sounder per beacon is possible)

- Duration of acoustic signals as long as voltage applied (use an additional relay if required)

Technical data
- For voltages see ordering overview
- Max. 100 dB(A)
- Duty cycle 100%
- Protection rating IP 54, protection class II
- -30°C to +60°C
- Diameter 75 mm x 116 mm
- Weight 0.24 kg
- Adjustable volume and volume progression

TSG 8781/2

Model	Order no.	Description
TSG 8781	**38781**	**Sounder**
		• 12 V/24 V~/= (0.4/1.0 A)
TSG 8782	**38782**	**Sounder**
		• 240 V~(0.044 A)

TSG 8781/2 / Tone table — System T

Tone	Volume at 24 V	Frequency	Tone	Volume at 24 V	Frequency
Linear			**Multitone**		
Type A	94 dB(A)	1000 Hz	Normal	98 dB(A)	1000–1700 Hz
Type A	96 dB(A)	2850 Hz	Rapid Type A	95 dB(A)	800–970 Hz
Type A	95 dB(A)	500 Hz	Slow Type A	95 dB(A)	800–970 Hz
Type A	92 dB(A)	300 Hz	Rapid Type B	97 dB(A)	2400–2850 Hz
2-tone			Slow Type B	99 dB(A)	2400–2850 Hz
Normal	97 dB(A)	600/700 Hz	Intermittent	95 dB(A)	500–1200 Hz
Rapid	94 dB(A)	800/970 Hz	Falling	94 dB(A)	1200–500 Hz
Type A	97 dB(A)	2400/2850 Hz	Buzzer	96 dB(A)	800–970 Hz
Type B	96 dB(A)	800/970 Hz	Buzzer	97 dB(A)	2400–2850 Hz
Type C	94 dB(A)	440/550 Hz	**Evacuation**		
Type D	96 dB(A)	600/700 Hz	Type A	94 dB(A)	440/560 Hz
with pause	96 dB(A)	600/700 Hz	**Intermittent**		
with pause	99 dB(A)	1200/1700 Hz	Slow intermittent A	95 dB(A)	970 Hz
with pause	100 dB(A)	2400/2850 Hz	Slow intermittent A	93 dB(A)	660 Hz
Modulating			Rapid intermittent B	97 dB(A)	2850 Hz
Type A	99 dB(A)	1000–1700 Hz	Rapid intermittent B	96 dB(A)	2850 Hz
Type B	99 dB(A)	1400–1600 Hz	Type C	95 dB(A)	970 Hz
			Type D	91 dB(A)	660 Hz
			Type E	93 dB(A)	660 Hz

Optical and Acoustic
Signalling Devices

OPTICAL AND ACOUSTIC SIGNALLING DEVICES

Compact, modular warning posts with innovative, long-life LED technology and high light intensity for a variety of applications indoors and outdoors

Product features
- Optimum warning effect due to super-bright LEDs with even, all-round visibility (360°) and reliable sounders
- High failure safety even in harsh industrial environments
- Maintenance-free
- Low power consumption and low heat generation
- Lenses and housing made from impact-resistant polycarbonate PC, FR4 circuit board
- Flashing light or warning light function that can be adjusted with a switch inside each individual module
- Housing colour black

Installation
- Incl. bayonet closure with special interlocking teeth to prevent vibration
- Maximum safety thanks to contact protection (even when modules are replaced)

MSZ 8610

KSZ 8603

KSZ 8604

KSZ 8605

Product features
- The basic unit can be screwed onto horizontal surfaces using the supplied base or combined with KSZ... mounting accessories
- Material/colour: impact-resistant polycarbonate, black

Model	Order no.	Description	
for 24 V~/= (AC/DC)			
MSZ 8610	38610	**Basic unit** • Incl. base, cover and all required seals for IP 65 protection rating • The bottom unit of a stacking beacon	• Incl. 6-way terminal for max. 1.5 mm^2 • Weight 0.1 kg
KSZ 8603	38603	**Extension tube** • 100 mm extension • Incl. O ring for IP 65 rating	• Diameter 25 mm • Weight 0.03 kg
KSZ 8604	38604	**Mounting bracket** • For vertical mounting/wall mounting • Incl. O ring for IP 65 rating	• 1 connection • Weight 0.04 kg
KSZ 8605	38605	**Mounting bracket** • For vertical mounting/wall mounting • Incl. O ring for IP 65 rating	• 2 connections • Weight 0.04 kg

MSG 86X0

Product features
- 1 non-adjustable tone sequence (alternating frequency 800/1000 Hz)
- Reliable tone generation due to magneto-dynamic loudspeaker

Installation
- The top unit of a stacking beacon (1 sounder per beacon possible)
- Duration of acoustic signals as long as voltage applied (use an additional relay if required)

Technical data
- For voltages see ordering overview
- Max. 77 dB(A)
- Duty cycle 100%
- Protection rating IP 54, protection class II
- -30°C to +50°C
- Diameter 48 mm x 61 mm
- Weight 0.18 kg

Model	Order no.	Description	
MSG 8620	38620	**Sounder**	• 24 V~/= (130 mA)
MSG 8630	38630	**Sounder**	• 240 V~(15 mA)

Warning/flashing lights System T-Mini

Technical data
- For voltages see ordering overview
- Flash frequency approx. 110/min +/- 20.
- Duty cycle 100%
- Protection rating IP 65, protection class II

- -30°C to +50°C
- Lens diameter 48 mm, height of each module when installed 48 mm
- Weight of each lens module approx. 0.05 kg

Model	Order no.	Description	
for 24 V~/= (AC/DC)			
MWB 8621	38621	**LED warning/flashing light** • Yellow-orange	• 24 V~/= (30 mA)
MWB 8622	38622	**LED warning/flashing light** • Red	• 24 V~/= (30 mA)
MWB 8624	38624	**LED warning/flashing light** • White	• 24 V~/= (30 mA)
MWB 8625	38625	**LED warning/flashing light** • Blue	• 24 V~/= (30 mA)
MWB 8626	38626	**LED warning/flashing light** • Green	• 24 V~/= (30 mA)
for 240 V~ (AC)			
MWB 8631	38631	**LED warning/flashing light** • Yellow-orange	• 240 V~(55 mA)
MWB 8632	38632	**LED warning/flashing light** • Red	• 240 V~(55 mA)
MWB 8634	38634	**LED warning/flashing light** • White	• 240 V~(55 mA)
MWB 8635	38635	**LED warning/flashing light** • Blue	• 240 V~(55 mA)
MWB 8636	38636	**LED warning/flashing light** • Green	• 240 V~(55 mA)

MWB 86X1

MWB 86X2

MWB 86X5

MWB 86X6

MWB 86X4

Optical and Acoustic Signalling Devices

Mounting parts Small warning/flashing beacon

Product features
- For mounting on horizontal or vertical surfaces
- Incl. O ring for IP 65 rating
- Material: Plastic PA 66

Installation
- Mounting base with 4 fixing holes for a strong hold and base seal

Note
- The adapter base KSZ 8602 is needed if you wish to combine the beacon with the KSZ 8601/3/4/5 accessories!

Model	Order no.	Description	
KSZ 8602	38602	**Adapter base** • Is screwed directly to beacon to enable combination with the remaining accessories	• Female thread • Weight 0.01 kg
KSZ 8601	38601	**Mounting base** • For horizontal mounting	• Male thread • Weight 0.03 kg
KSZ 8603	38603	**Extension tube** • 100 mm extension	• Diameter 25 mm • Weight 0.03 kg
KSZ 8604	38604	**Mounting bracket** • For vertical mounting (wall mounting)	• 1 connection • Weight 0.04 kg
KSZ 8605	38605	**Mounting bracket** • Vertical mounting	• 2 connections • Weight 0.05 kg

KSZ 8602

KSZ 8601

KSZ 8603

KSZ 8604

KSZ 8605

OPTICAL AND ACOUSTIC SIGNALLING DEVICES

Small warning beacon KWL

KWL 8106

KWL 8101   KWL 8102

A small inexpensive beacon for filament bulb operation and standard applications

Product features
- Good warning effect with even, all-round visibility (360°)
- Accepts 12 to 240 V (5 W or 10 W) filament bulbs + LED
- Lens in impact-resistant polycarbonate PC and PA housing (self-extinguishing)

Installation
- The beacon can be screwed directly onto horizontal surfaces or combined with mounting accessories (see above)
- Special interlocking teeth counter vibration

- Terminals for max. 1.5 mm²

Technical data
- Max. ~/= 240 V (5 W)
- Socket: Ba15d
- Duty cycle 100%
- Protection rating IP 65, protection class II
- -30°C to +50°C
- Diameter 76 mm x 86 mm
- Weight 0.15 kg

Note
- Please order filament bulbs and LED lights separately!

Model	Order no.	Description	
KWL 8101	**38101**	**Warning light**	
		• Orange	• 3–5 Cd(p)
KWL 8102	**38102**	**Warning light**	
		• Red	• 1–2 Cd(p)
KWL 8106	**38106**	**Warning light**	
		• Green	• 1 Cd(p)

Small LED flashing beacon KBZ for 12/24V~/=(AC/DC)

NEW with 4 functions

KBZ 8211

KBZ 8212

Model	Order no.	Description	
KBZ 8211	**38211**	**LED-multistrobe lamp**	
		• Orange	• 20 Cd(p)
		• Integrated super bright SMD LEDs	• 12/24V~/= (0,09A)
		• Highest reliability	• Switch on time (ED) 100%
		• Functions: Permanent light, simple, double (xenon effect) or triple strobe adjustable using the DIP switch	• Blink frequency approx. 150/min
			• -30°C to +60°C
			• Diameter 75 x 79 mm
		• Maintenance-free, low power consumption	• Weight 0.1 kg
KBZ 8212	**38212**	**LED-multistrobe lamp**	
		• red	• 8 Cd(p)

Small LED flashing beacon KBZ for 90-240V~ (AC)

NEW with 4 functions

KBZ 8221

KBZ 8222

Model	Order no.	Description	
KBZ 8221	**38221**	**LED-multistrobe lamp**	
		• Orange	• 20 Cd(p)
		• Integrated super bright SMD LEDs	• 90-240V~ (0,02A)
		• Highest reliability	• Switch on time (ED) 100%
		• Functions: Permanent light, simple, double (xenon effect) or triple strobe adjustable using the DIP switch	• Blink frequency approx. 150/min
			• -30°C to +60°C
			• Diameter 75 x 79 mm
		• Maintenance-free, low power consumption	• Weight 0.1 kg
KBZ 8222	**38222**	**LED-multistrobe lamp**	
		• red	• 8 Cd(p)

Middle LED flashing beacon KBZ for 12/24V~/=(AC/DC)

Typ	Best.-Nr.	Beschreibung	
MBZ 8411	**38411**	**LED-multistrobe lamp**	
		• Orange	• 22 Cd(p)
		• Integrated super bright SMD LEDs	• 12/24V~/= (0,09A)
		• Highest reliability	• Switch on time (ED) 100%
		• Functions: Permanent light, simple,	• Blink frequency approx. 150/min
		double (xenon effect) or triple strobe	• -30°C to +60°C
		adjustable using the DIP switch	• Diameter 96 x 83 mm
		• Maintenance-free, low power consumption	• Weight 0.1 kg
MBZ 8412	**38412**	**LED-multistrobe lamps**	
		• red	• 13 Cd(p)

NEW with 4 functions

MBZ 8411
MBZ 8421

Middle LED flashing beacon KBZ for 90-240V~ (AC)

Typ	Best.-Nr.	Beschreibung	
MBZ 8421	**38421**	**LED-multistrobe lamps**	
		• Orange	• 22 Cd(p)
		• Integrated super bright SMD LEDs	• 90-240V~ (0,02A)
		• Highest reliability	• Switch on time (ED) 100%
		• Functions: Permanent light, simple	• Blink frequency approx. 150/min
		double (xenon effect) or triple strobe	• -30°C to +60°C
		adjustable using the DIP switch	• Diameter 96 x 83 mm
		• Maintenance-free, low power consumption	• Weight 0.1 kg
MBZ 8422	**38422**	**LED-multistrobe lamps**	
		• red	• 13 Cd(p)

NEW with 4 functions

MBZ 8412
MBZ 8422

Large warning beacon GWL

A large warning beacon for filament operation with a prominent signal effect

Product features
• Good warning effect with even, all-round visibility (360°)
• Accepts 12 to 240 V (25 W max.) filament bulbs) + LED
• Rugged black plastic housing made from PA (self-extinguishing) and lens in impact-resistant polycarbonate PC

Installation
• The beacon can be screwed directly onto horizontal surfaces or combined with mounting accessories (see above)
• Incl. base seal
• Terminals for max. 1.5 mm²

Technical data
• Max. ~/= 240 V (25 W)
• Socket: Ba15d
• Duty cycle 100%
• Protection rating IP 54, protection class II
• -30°C to +50°C
• Diameter 138 mm x 115 mm
• Weight 0.3 kg

Note
• Please order filament bulbs and LED lights separately!

GWL 8512

Model	Order no.	Description	
GWL 8511	**38511**	**Warning light**	
		• Orange	• 56 Cd(p)
GWL 8512	**38512**	**Warning light**	
		• Red	• 24 Cd(p)
GWL 8516	**38516**	**Warning light**	
		• Green	• 10 Cd(p)

GWL 8511   GWL 8516

Optical and Acoustic
Signalling Devices

OPTICAL AND ACOUSTIC SIGNALLING DEVICES

Large flashing beacon GBZ

GBZ 8601

GBZ 8602

High-performance xenon flashing beacon with good signal effect

Product features
- High warning effect thanks to xenon flash tube (included in scope of delivery)
- High failure safety as there are no moved parts
- Field of application: industrial hazard areas/alarm systems
- Rugged black plastic housing made from PA (self-extinguishing) and lens in impact-resistant polycarbonate PC

Installation
- The beacon can be screwed directly onto horizontal surfaces or combined with mounting accessories (see above)
- Incl. base seal
- Terminals for max. 1.5 mm²

Technical data
- For voltages see ordering overview
- Duty cycle 100%
- Replaceable xenon tube 6J
- Flash frequency: 65 flashes/min.
- Protection rating IP 54, protection class II
- -10°C to +40°C
- Diameter 138 x 115 mm
- Weight 0.38 kg

Model	Order no.	Description	
GBZ 8601	38531	**Flashing light**	
		• Orange / 3360 Cd(p)	• 12/24~/= (1.8/0.85 A)
GBZ 8602	38532	**Flashing light**	
		• Red / 1440 Cd(p)	• 12/24~/= (1.8/0.85 A)
GBZ 8611	38551	**Flashing light**	
		• Orange / 3360 Cd(p)	• 240 V~(0.1 A)
GBZ 8612	38552	**Flashing light**	
		• Red / 1440 Cd(p)	• 240 V~(0.1 A)

Combi flashing light HBZ 85XX

HBZ 8541

HBZ 8542

DSZ 7395

A heavy-duty xenon flashing beacon with built-in sounder

Product features
- High warning effect via xenon flashtube (included in scope of delivery)
- High failure safety of the opt. signalling device as there are no moved parts
- Field of application: industrial hazard areas/alarm systems
- Incl. piezo sounder (sounds at the same time as the flash)
- Duration of optical/acoustic signals as long as voltage applied (use an additional relay if required)
- Rugged black plastic housing made from PA (self-extinguishing) and lens in impact-resistant polycarbonate PC

Installation
- The beacon can be screwed directly onto horizontal surfaces or combined with mounting accessories (see above)
- Incl. base seal
- Terminals for max. 1.5 mm²

Technical data
- For voltages see ordering overview
- Duty cycle 100%
- Replaceable xenon tube 6J
- Flash frequency: 65 flashes/min.
- Protection rating IP 30, protection class II
- -10°C to +40°C
- Diameter 138 x 115 mm
- Weight 0.4 kg

Model	Order no.	Description	
HBZ 8541 24 V DC	38541	**Combi flashing light**	
		• Orange	• 24 V= (0.85 A)
			• 80 dB(A)
HBZ 8542 24 V DC	38542	**Combi flashing light**	
		• Red	• 24 V= (0.85 A)
			• 80 dB(A)
HBZ 8571 240 V AC	38571	**Combi flashing light**	
		• Orange	• 240 V~(0.1 A)
			• 72 dB(A)
HBZ 8572 240 V AC	38572	**Combi flashing light**	
		• Red	• 240 V~(0.1 A)
			• 72 dB(A)
DSZ 7383	37383	**Xenon tube**	
			• 6 J
Accessories/spare parts			
DSZ 7395	37395	**Wall bracket**	
		• Vertical mounting (wall mounting)	• Rugged plastic construction
		• Black	• Weight 0.2 kg

High-quality rotating mirror beacon specially for use in vehicles with a halogen system to maximise light yield

Product features
- Maximum light yield through the use of halogen H1 lamps (not included in scope of delivery)
- Field of application: with homologation for road traffic vehicles or for industrial hazard areas/alarm systems
- Housing made from glass-fibre reinforced polyamide PA; lens made from impact-resistant PMMA
- Ball-bearing mounted reflector made from corrosion-resistant metal
- Durable toothed gear drive, sealed for life

Installation
- Can be mounted on horizontal surfaces or on vertical surfaces using accessory kit DSZ 7395 (wall mounting) or with cage guard or push-fit flange
- Terminals for max. 1.5 mm²

Technical data
- 12/24 V= (4.6 / 2.9 A)
- Duty cycle 100%
- Flash rate: 160/min.
- Protection rating IP 55, protection class II
- -30°C to +50°C
- Diameter 145 x 193
- Weight 0.6 kg

DSL 7307

Model	Order no.	Description
DSL 7302	37302	**Rotating mirror beacon** • Red
DSL 7307	37307	**Rotating mirror beacon** • Orange

A high-quality rotating mirror beacon with a halogen system to maximise light yield

Product features
- Maximum light yield through the use of halogen H1 lamps (included in scope of delivery)
- Field of application: industrial hazard areas/alarm systems
- Body made from glass-fibre reinforced polyamide PA; lens made from impact-resistant polycarbonate PC
- Ball-bearing mounted reflector made from corrosion-resistant metal
- Durable toothed gear drive, sealed for life

Installation
- Can be mounted on horizontal surfaces or on vertical surfaces using accessory kit DSZ 7395 (wall mounting)
- Terminals for max. 1.5 mm²

Technical data
- 240 V~ (0.2 A)
- Duty cycle 100%
- Flash rate: 160/min.
- Protection rating IP 55, protection class II
- -30°C to +50°C
- Diameter 152 x 209 mm
- Weight 1.5 kg

DSL 7322

DSL 7327

Model	Order no.	Description
DSL 7322	37322	**Rotating mirror beacon** • Red
DSL 7327	37327	**Rotating mirror beacon** • Orange

Optical and Acoustic
Signalling Devices

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OPTICAL AND ACOUSTIC SIGNALLING DEVICES

Rotating mirror beacon DSL (standard)

DSL 73X1

DSL 73X2

Inexpensive rotating mirror beacon with standard commercial bulb for standard use

Product features
- Good light yield using standard commercial bulbs (included in scope of delivery)
- Field of application: industrial hazard areas/alarm systems
- Body made from glass-fibre reinforced polyamide PA; lens made from impact-resistant polycarbonate PC
- Ball-bearing mounted reflector made from corrosion-resistant metal
- Durable toothed gear drive, sealed for life

Installation
- Can be mounted on horizontal surfaces or on vertical surfaces using accessory kit DSZ 7395 (wall mounting)
- Terminals for max. 1.5 mm^2

Technical data
- For voltages see ordering overview
- Duty cycle 100%
- Flash rate: 160/min.
- Protection rating IP 55, protection class II
- -30°C to +50°C
- Diameter 152 mm x 209 mm
- For weight, see ordering overview

Attention:
- Please order filament bulbs and LED lights separately!

Model	Order no.	Description	
for 24 V~ (AC)			
DSL 7362	37362	**Rotating mirror beacon** • Red • Bulb 25 W (Ba15d socket)	• 24 V~(1.1 A) • Weight: 0.82 kg
DSL 7361	37361	**Rotating mirror beacon** • Orange • Bulb 25 W (Ba15d socket)	• 24 V~(1.1 A) • Weight: 0.82 kg
for 240 V~ (AC)			
DSL 7332	37332	**Rotating mirror beacon** • Red • Bulb 25 W (Ba15d socket)	• 240 V~(0.11 A) • Weight: 0.92 kg
DSL 7337	37337	**Rotating mirror beacon** • Orange • Bulb 25 W (Ba15d socket)	• 240 V~(0.11 A) • Weight: 0.92 kg

Xenon rotating beacon

BLZ-R 7352

BLZ-R 7357

High-grade xenon flashing beacon with optimum warning effect

Product features
- Optimum warning effect is produced by a powerful xenon flash tube (included in scope of delivery)
- The special optical system creates excellent light distribution, including upwards and downwards
- High failure safety as there are no moved parts
- Field of application: industrial hazard areas/alarm systems
- Housing made from glass-fibre reinforced polyamide PA; lens made from impact-resistant polycarbonate PC

Installation
- Can be mounted on horizontal surfaces or on vertical surfaces using accessory kit DSZ 7395 (wall mounting)
- Terminals for max. 1.5 mm^2

Technical data
- 240 V~(0.1 A)
- Duty cycle 100%
- Replaceable xenon tube 6J
- Flash frequency: 65 flashes/min.
- Protection rating IP 55, protection class II
- -30°C to +40°C
- Diameter 152 mm x 209 mm
- Weight 0.79 kg

Model	Order no.	Description
BLZ-R 7352	37352	**Xenon rotating beacon** • Red
BLZ-R 7357	37357	**Xenon rotating beacon** • Orange

Mounting parts/accessories for DSL

DSZ 7395

DSZ 7391   **DSZ 7394**

Model	Order no.	Description	
Accessories/spare parts			
DSZ 7395	37395	**Wall bracket** • Vertical mounting (wall) • Black	• Rugged plastic construction • Weight 0.2 kg
DSZ 7391	37391	**Push-fit flange** • Rugged plastic construction • DIN-compliant (Base A) • Black	• Tube diameter 24 mm • Incl. connection leads • Weight 0.1 kg
DSZ 7394	37394	**Basket protector** • Stainless steel	• Weight 0.27 kg

Colour-intensive LED light with high light intensity and standard commercial Ba15d base for a variety of uses in industry and commerce

Product features

• Optimum warning effect through 4 super-bright LEDs that achieve an even, all-round visibility (360°) in combination with suitable light optics
• Extremely high failure safety even in harsh industrial environments (vibration resistance in accordance with DIN 40046), with cyclical operation (constant ON/OFF switching) and voltage fluctuations of up to 20%
• Maintenance-free, service life approx. min. 100,000 hours (compared to only approx. 2000 hours with traditional bulbs)
• Low power consumption and low heat generation (max. 30°C at 230 V~ continuous power)

Installation

• Any mounting position possible due to the low heat generation
• LED lights can be used in all of the lights of the following series: SystemT (TWL, TBL), KWL, GWL. With the lights in the KWL and GWL series, the fact that the light only radiates horizontally must be taken into account. Of course, they can also be used with the Ba15d base in the standard commercial lights of other suppliers

Technical data

• See ordering overview

Note

• Please always order the LED light in the same colour as the optical system of the corresponding light
• The LED light KSZ-LED 86X1 (yellow-orange) is suitable for use in both yellow and orange lights

Model	Order no.	Description		
for 24 V~/= (AC/DC)				
KSZ-LED 8661	38661	**LED light**	Yellow-orange	24V~/= (45mA)
KSZ-LED 8662	38662	**LED light**	Red	24V~/= (45mA)
KSZ-LED 8664	38664	**LED light**	White	24V~/= (50mA)
KSZ-LED 8665	38665	**LED light**	Blue	24V~/= (65mA)
KSZ-LED 8666	38666	**LED light**	Green	24V~/= (45mA)
for 240 V~ (AC)				
KSZ-LED 8651	38651	**LED light**	Yellow-orange	230/240V~ (50mA)
KSZ-LED 8652	38652	**LED light**	Red	230/240V~ (50mA)
KSZ-LED 8654	38654	**LED light**	White	230/240V~ (55mA)
KSZ-LED 8655	38655	**LED light**	Blue	230/240V~ (70mA)
KSZ-LED 8656	38656	**LED light**	Green	230/240V~ (50mA)

Note: Please order the LED-lamps always in the same colour as the optics of the respective light.

The LED-lamp of the KSZ-LED 86X1 (yellow/orange) is suitable for both the yellow and the orange lights.

The intensity of the LED-lamp "KSZ-LEDxxxx" when fitted is consistent with the stated light intensity of the light modules.

Bulbs for Ba15d socket

Model	Order no.	Description	
DSZ 7396	37396	**Bulb** • 24V (25W)	• for DSL 7361 and 7362
DSZ 7397	37397	**Bulb** • 240V (25W)	• for DSL 7332 and 7337
GSZ 8591	38591	**Bulb** • 12V (25W)	• for GWL 85xx
GSZ 8592	38592	**Bulb** • 24V (25W)	• for GWL 85xx
GSZ 8593	38593	**Bulb** • 240V (25W)	• for GWL 85xx
KSZ 8595	38595	**Bulb** • 12V (5W)	• for TWL 871x, TBL 87xx and KWL 810x
KSZ 8596	38596	**Bulb** • 24V (5W)	• for TWL 871x, TBL 87xx and KWL 810x
KSZ 8597	38597	**Bulb** • 240V (5W)	• for TWL 871x, TBL 87xx and KWL 810x

Model	Order no.	Description	
Accessories/spare parts			
DSZ 7381	37381	**Halogen lamp** • H1	• 12 V (55 W) • Weight 0.01 kg
DSZ 7382	37382	**Halogen lamp** • H1	• 24 V (70 W) • Weight 0.01 kg

»If secret visitors are uncanny to you...«

MOTION
SENSORS

The new McGuard generation offers you lots of benefits including easy installation, convenient use and reliability in everyday use.

McGuard - the professional development for energy management, convenience and security. Movement detectors can be used to individually control light, heating, air conditioning and alarm systems, individually to requirements. Resources are spared and a pleasant and secure environment is created.

McGUARD Series

☐ McGuard movement detector

☐ McGuard mini

☐ McGuard professional

☐ McGuard Halo

☐ McGuard LED floodlight

☐ McGuard smoke detector

☐ McGuard twilight switch

The McGuard family is now made up of 7 different series models, each is specialised in its own area and functionally compatible with the others.

The units combine the usual Grothe reliability in daily use with being very easy to install and to use.

NEW LED floodlight
McGuard PIR BM LED light

Spotlight rotates horizontally and swivels vertically

Power Consumption: 45w
Average life expectancy 30,000 h
Colour temperature: neutral
Alternative to 300w halogen

McGuard movement detector

PIR (passive infrared) movement detector

Surveillance range 360° at an installation height of 6m

Surface mounted

Light intensity adjustable from 5 - 1000 lux
Timer adjustable from 3 sec. to 15 min.
Surveillance range adjustable from 6 - 12 m
Surveillance angle: 240°

NEW McGuard smoke detector

Surveillance range 40 m²

McGuard Halogen floodlight

Die-cast aluminium housing
Floodlight can be swivelled horizontally and vertically

NEW McGuard twilight switch

Adjustable from 1 - 8 hours or dimming till dawn

Energy-saving mode by automatic switch-off

IR movement detector

Motion Sensors

55

McGuard

PM-APws

PM-EINws

BM110ws

BM110sw

BM120ws

BM120sw

universal angle

Movement Detector

Model	Order no.	Description	
PM-APws	94500	**McGuard PM-APws** • Passive infrared movement detector • Colour: white • Surveillance range 360° at 6m • On time of 5 sec. to 12Min. • Sensitity continuously adjustable	• 2 outputs non-floating; 1x floating • Switching capacity: Bulbs max. 2300W • HV halogen lamps max. 1000W • Fluorescent lamps max. 400W • IP40 • 113( ) x X39(D)mm • Supply voltage: 230V AC; 50Hz
PM-EINws	94501	**McGuard PM-EINws** • Passive infrared movement detector • Colour: white • incl. control box • Surveillance range 360° at 6m • On time from 5 sec. to 12Mi. • Sensitity continuously adjustable • Control box: 110(B) x 53(H) x 30(D)mm	• 2 outputs non-floating; 1x floating • Switching capacity: Bulbs max. 2300W • HV halogen lamps max. 1000W • Fluorescent lamps max. 400W • IP40 • Presence detector: 78 x 50 mm • Supply voltage: 230V AC; 50Hz

Mini

Model	Order no.	Description	
BM110ws	94510	**McGuard mini BM110ws** • Passive infrared movement detector • Colour: white • Surveillance range 110° at 12m • On time from 5 sec. to 12Min. • Sensitity continuously adjustable • Supply voltage: 230V AC; 50Hz	• Switching capacity: Bulbs max. 1000W; • Energy saving or fluorescent lamps • max. 400W • IP44 • 64(B) x 98(H) x 87(D)mm
BM110pw	94511	**McGuard mini BM110pw** • like McGuard mini BW110ws, but colour: perly white	
BM110sw	94512	**McGuard mini BM110sw** • like McGuard mini BW110ws, but colour: black	
BM180ws	94513	**McGuard mini BM180ws** • Passive infrared movement detector • Surveillance range 180° at 12m	• like McGuard mini BW110ws, but • Colour: white (RAL 9003)
BM180pw	94514	**McGuard mini BM180pw** • like McGuard BW180ws, but colour: perly white	
BM180sw	94515	**McGuard mini BM180sw** • like McGuard BW180ws, but colour: black	

Professional

Model	Order no.	Description	
BM120ws	94530	**McGuard professional BM120ws** • Passive infrared movement detector • Colour: white • Ceiling, wall and corner installation (incl. universal angle) • Surveillance range 120° at 12m • Crawl under protection radius 1m • On time from 3 sec. to 12Min.	• Switching capacity: Bulbs max. 1000W; • Energy saving lamps max. 500VA • Fluorescent lamps max. 250W • IP55 (suitable for outdoor area) • 84(B) x 78(H) x 120(D)mm • Supply voltage: 230V AC; 50Hz • Sensitivity continuously adjustable
BM240ws	94531	**McGuard professional BM240ws** • like McGuard professional BM120ws, but surveillance range 240°	
BM360ws	94532	**McGuard professional BM360ws** • like McGuard professional BM120ws, but surveillance range 360°	
BM120sw	94533	**McGuard professional BM120sw** • Passive infrared movement detector • Colour: black • Ceiling, wall and corner installation (incl. universal angle) • Surveillance range 120° at 12m • Crawl under protection radius 1m • On time from 3 sec. to 12Min.	• Switching capacity: Bulbs max. 1000W; • Energy saving lamps max. 500VA • Fluorescent lamps max. 250W • IP55 (suitable for outdoor area) • 84(B) x 78(H) x 120(D)mm • Supply voltage: 230V AC; 50Hz • Sensitivity continuously adjustable
BM240sw	94534	**McGuard professional BM240sw** • like McGuard professional BM120sw, but surveillance range 240°	
BM360sw	94535	**McGuard professional BM360sw** • like McGuard professional BM120sw, but surveillance range 360°	

Halogen-floodlight spots

Model	Order no.	Description	
Halo120	**94550**	**McGuard Halo120**	
		• Halogen floodlight spots	• Supply voltage: 230V AC; 50Hz
		• Reflector made from polished aluminium	• incl. halogen lamp 120W (Class C)
			• IP44 (suitable for outdoor use)
			• 154(B) x 220(H) x 195(T) mm
Halo120BM180	**94551**	**McGuard Halo120BM180**	
		• Halogen floodlight spot with infrared movement detector	• incl. halogen lamp 120W (Class C)
			• External switching capacity: 500W/VA
		• Reflector made from polished aluminium	• IP44 (suitable for outdoor use)
		• Surveillance range 180° at 12m	• 154(B) x 265(H) x 195(T) mm
			• Supply voltage: 230V AC; 50Hz
			• On time from 5 sec. to 12 Min.
			• Sensitivity continuously adjustable
Halo400	**94552**	**McGuard Halo400**	
		• Halogen floodlight spot incl. halogen lamp 400W (Class C)	• Supply voltage: 230V AC; 50Hz
			• IP44 (suitable for outdoor use)
		• Reflector made from polished aluminium	• 198(B) x 290(H) x 265(T)mm
Halo400BM180	**94553**	**McGuard Halo400BM180**	
		• Halogen floodlight spot with infrared movement detector	• incl. halogen lamp 400W (Class C)
			• External switching capacity: 500W/VA
		• Reflector made from polished aluminium	• IP44 (suitable for outdoor use)
		• Sensitivity continuously adjustable	• 198(B) x 335(H) x 265(T) mm
			• Supply voltage: 230V AC; 50Hz
			• Surveillance range 180° at 12m
			• On time from 5 sec. to 12 Min.

LED-floodlight spots

Model	Order no.	Description	
LED RL300Aws	**94555**	**McGuard LED floodlight**	
		• LED floodlight with infrared movement detector	• Colour: white
			• Supply voltage 230V AC, 50Hz
		• IP 44 (suitable for outside)	• Einschaltzeit: 3 sek.-15 min.
		• 15 integrated high power LEDs	• 225 x 250 x 170mm
		• Die-cast aluminium housing with V2A screws	• Sensitivity: continuous
		• Vertical installation	
		• Surveillance range 180° at 12m	
LED RL300Asw	**94556**	**McGuard LED floodlight**	• Farbe: schwarz

Smoke detector

Model	Order no.	Description	
RWM 9V L Starting from summer 2012	**94570**	**McGuard Smoke detector**	
		• Visual smoke detector	• Power supply:
		• Ceiling installation	9V DC square battery, lithium
		• Surveillance area 40 m² inside a room	(included in delivery) with up to 10
		• Signal volume: approx. 85 dB(A) @ 3m	years life expectancy
		• Tested according to DIN EN 14604:2005, VdS, CE	• Weight: 85g
		• Low battery warning	• ø 102 x 35 mm
		• Silent function: suppression of false alarms for up to 10 minutes	
		• Battery-interrupt function when the detector is removed from the mounting	
RWM 9V A Starting from summer 2012	**94571**	**McGuard Smoke detector**	
		• like above, but	• Power supply:
		• without Battery-interrupt function	9V DC square battery, lithium
		• without Silent function	with up to 3 years life expectancy

Twilight switch

Model	Order no.	Description	
DS-APgr	**94502**	**McGuard Twilight Switch**	
		• Surface mounted installation	• Colour: Grey
		• Energy-saving mode through timed switching off of load	• IP 55 (suitable for outdoor)
			• Voltage supply: 230V AC, 50Hz
		• Status display LED	• Delay time: approx. 60 sec.
		• Load: max. 10A (cosφ = 1) Standard bulb: max. 2000W Halogen bulb: max. 1000W Fluorescent bulb: max. 500VA (uncompensated)	

Halo120
Halo120BW180
Halo400
Halo400BW180
NEW LED RL300Aws
LED RL300Asw
NEW **Starting from summer 2012** RWM 9V L / RWM 9V A
NEW DS-APgr

Motion Sensors

»Do not underestimate our small ones.«

TRANSFORMERS
SERIES INSTALLATION
UNITS

For optimum performance and all conventional voltages!

In all matters pertaining to environmental compatibility and safety GROTHE transformers are trend-setting. The transformers protected by patent law are not only the core of a reliable bell system, but also, because of the high standards involved, they also represent an ideal solution for the industrial sector.

☐ Installation in current distribution board

☐ Compact dimensions

☐ Comply with the highest environmental protection regulations

Grothe transformers "Made in Germany" bell transformers are optimised for the short term use in residential applications such as door bells, gongs, alarm bells and door openers and safety transformers in continuous use.

Grothe bell and safety transformers are protected with a PTC, which switches the transformer off on short circuit and overload on the primary side. On switching of the PTC through overload or short circuit, the transformer needs to be taken off the load for at least 1 minute in order for it to be put back into service.

All transformers comply with the highest environmental protection regulations, are checked according to EN61558 and are certified according to VDE and KEMA (with ENEC mark for use in Europe).

ENEC

Inspection stations:

Nr.	Name	Country
01	AENOR	Spain
02	CEBEC	Belgium
03	IMQ	Italy
04	IPQ	Portugal
05	KEMA	Netherlands
06	NSAI	Ireland
07	SEE	Luxembourg

| Nr.	Name	Country		Nr.	Name	Country
08	UTE	France		15	DEMKO	Denmark
09	ELOT	Greece		16	FIMKO	Finland
10	VDE	Germany		17	NEMKO	Norway
11	ÖVE	Austria		18	MEEI	Hungary
12	BSI	UK		19	BEAB	UK
13	SEV	Switzerland		20	ASTA	UK
14	SEMKO	Sweden		21	EZU	Czech Republ.

GROTHE Bell transformers

For short term load
Tested according to EN 61558
Short circuit proof through PTC (except GT50810)

S-version with
unipolar line switch

Surface-mounted

Covers

Clamping rail

Fitting kit
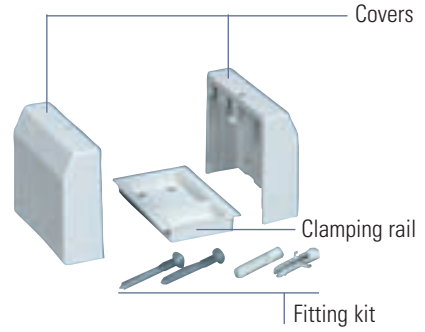
GROTHE Safety transformers

Suitable for permanent load
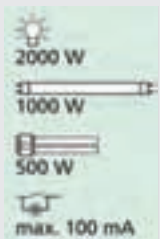Tested according to EN 61558
Short circuit proof through PTC

Transformers

GROTHE Stair case light timer

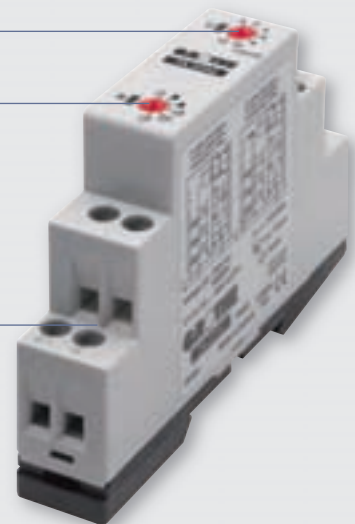Timer setting: continuously adjustable to up to 12 min.

Switch-off advance warning according to DIN

Switching capacity:
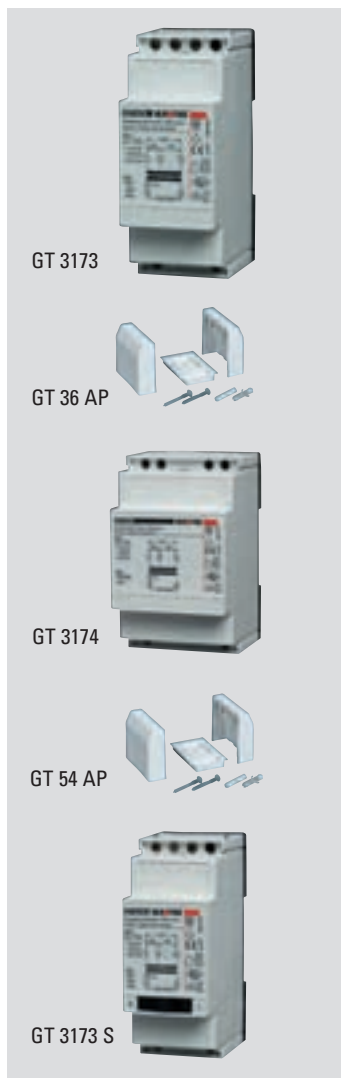
2000 W   Bulbs

1000 W   Fluorescent tubes

500 W   Energy saving bulbs

max. 100 mA   Low voltage neon-glow lamp

For 3 or 4 wire circuits

Standard bell transformers

GT 3173

GT 36 AP

GT 3174

GT 54 AP

GT 3173 S

up to 18 VA

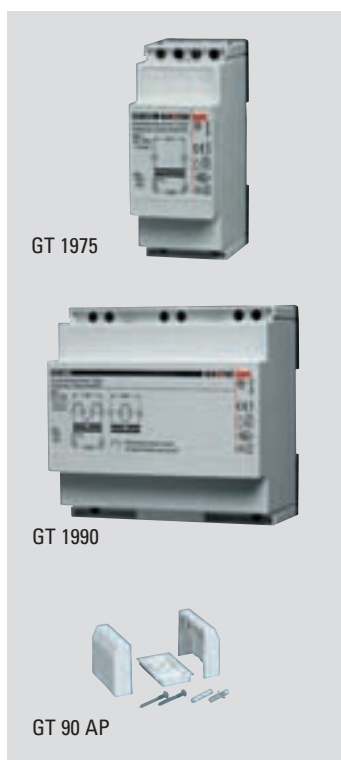| Model	Order no.	Description		
GT 3148	14201	**Bell transformer** • Primary: 230-240V~ (50 Hz)	• 8V~ (1,0A) • 90 x 36 x 55 mm (corresponds to 2 installation modules)	
GT 3139	14039	**Bell transformer** function as above, but	• 8/12V~ (1,5/1,0A)	
GT 3158	14058	**Bell transformer** function as above, but	• 12V~ (1,0A)	
GT 3173	14073	**Bell transformer** function as above, but	• 4/8/12V~ (2,0/2,0/1,5A)	
GT 3182	14082	**Bell transformer** function as above, but	• 8/12/24V~ (2,0/1,3/0,6A)	
GT 50810	14207	**Bell transformer Fail-safe** • in case of wrong use permanent damage possible	• 8V~ (1,0A)	
GT 36 AP	14936	**Surface-mount installation set**		

up to 24 VA

Model	Order no.	Description	
GT 3174	14074	**Bell transformer** •Primary: 230-240V~ (50 Hz)	• 4/8/12V~ (3,0/2,0/2,0A) • 90 x 54 x 55 mm (corresponds to 3 installation modules)
GT 54 AP	14954	**Surface-mount installation set**	

with power switch

Model	Order no.	Description	
GT 3148 S	14211	**Bell transformer** • Primary: 230-240V~ (50 Hz)	• 8V~ (1.0A) 90 x 36 x 55 mm (corresponds to 2 installation modules)
GT 3139 S	14049	**Bell transformer** function as above, but	• 8/12V~ (1,5/1,0A)
GT 3173 S	14083	**Bell transformer** function as above, but	• 4/8/12V~ (2,0/2,0/1,5A)
GT 36 AP	14936	**Surface-mount installation set**	

Safety transformers

GT 1975

GT 1990

GT 90 AP

up to 18 VA

Model	Order no.	Description	
GT 1965	14102	**Safety transformer** • Primary: 230-240V~ (50 Hz)	• 8V~ (2,0A) 90 x 36 x 55 mm (corresponds to 2 installation modules)
GT 1975	14101	**Safety transformer** function as above, but	• 12V~ (1,5A)
GT 36 AP	14936	**Surface-mount installation set**	

up to 25 VA

Model	Order no.	Description	
GT 1973	14034	**Safety transformer** • Primary: 230-240V~ (50 Hz)	• 8/12V~ (2,0/2,0A) • 90 x 54 x 55 mm (corresponds to 3 installation modules)
GT 54 AP	14954	**Surface-mount installation set**	

up to 63 VA

Model	Order no.	Description	
GT 1980	14140	**Safety transformer** • Primary: 230-240V~ (50 Hz)	• 12/16/24/32V~ (3,3/2,5/1,6/1,2A) • 90 x 90 x 55 mm (corresponds to 3 installation modules)
GT 1990	14160	**Safety transformer** function as above, but	• 12/24V~ (5,2/2,6A)
GT 90 AP	14990	**Surface-mount installation set**	

Description

- Electronic control
- Time setting: Continuously variable up to 12 min
- For 3/4-lead circuits (automatic detection)
- 3/4-lead circuits delayed switching capacity/switching time extension (3-lead circuit for unit replacement in existing installations only)
- Installation in electrical distributor (standard rail)
- Switch-off advance warning in accordance with DIN 18015-2, 1996-08 (approx. 30 seconds before time expiry; flickers several times)
- Switch-off advance warning can be disabled
- Adjustable continuous light function on the light switch or on the staircase light time switch
- Contact switch in the zero point to protect contacts and lamps
- Separate movement detector input

Technical data

- Operating voltage (230 V~/50 Hz)
- Contact load: 16 A, (one normally open contact)
- Control voltage: 8–230 V~/= and 230 V~
- Glow lamp current max. 100 mA
- Max. load capacity: Filament bulbs 2000 W, energy-saving bulbs 500 W, fluorescent tubes 750/1000 W (compensated/uncompensated).
- Temperature range -25°C to +55°C
- 82 x 18 x 58 mm (1 module width)
- Staircase light controlled via light switch (230 V~):
  - Press light switch repeatedly for < 1 sec: Extension of the lighting period by set time (additive)
  - Press light switch for switch > 1 sec: Continuous "On"/Continuous "Off" (Auto "Off" after 1 hr)

Model	Order no.	Description
TA 220d	94022	Staircase light time switch

❶ 4-wire circuit, control voltage 230V

❷ 4-wire circuit, control voltage 8-230V
- additional trigger with 8/230V, isolated input

❸ 3-wire circuit, control voltage 230V
Nur für Ersatz-Installation! Replacement-installation only!

❹ 4-wire circuit, control voltage 8-230V
Nur für Ersatz-Installation! Replacement-installation only!
- additional trigger with 8/230V, isolated input

❺ 4-wire circuit, replace TA22 / TA23
alt/old:
neu/new:

❻ 3-wire circuit, replace TA22 / TA23
alt/old:
neu/new:

Installation replacement of previous models TA 22/TA 23:

The configuration of the terminals is to be changed according to the installation instructions.

When replacing units and changing the on-site installation, ensure the wires have been labelled correctly in terms of colour.

Transformers

BELL BUTTONS AND CONTACTS

»Around our worldwide contacts
we are often envied«

The visitor's card of a host company!

Add interesting features to the entrance area! The standard

product range alone caters for every taste and requirement.

Naturally we can also make bell panels to suit your indi-

vidual wishes.

☐ Innovative ringer buttons

☐ Attractive designs

☐ Flush as well as surface mounted varieties

☐ Maximum reliability

Protact: The innovative ringer button by Grothe with its noble metal switching contacts and time saving wiring technology for fitting in door stations or for industrial purposes.

The ringer buttons are characterised by their optimal switching performance with tactile feedback and short bounce times and are ideal for use in bus units.

Ringer button, front plates:
Whether ringer buttons in stainless steel, brass, aluminium, bronze or weatherproof plastic, Grothe offers a multitude of design possibilities for your entrance area.

Protact
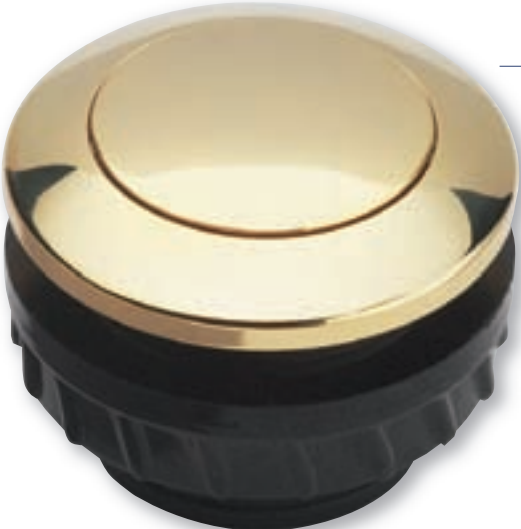
5V - 24V

LED-light

LED-module
for direct
connection
to 8/12V~

Gilded switching contacts
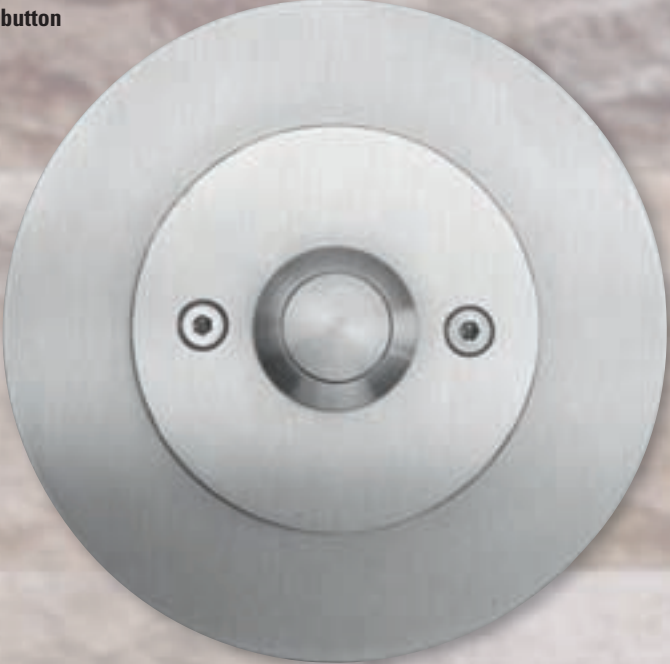Tactile feedback
Through snapping effect

Fast installation - no screwing
Two connectors each for simple in-line wiring

Rubber seal for protection of the
switching contacts

Ringbutton

Bell Buttons
and Contacts

PROTACT

PROTACT 150 VA

PROTACT 140 GO

PROTACT 110 AL

PROTACT 210 AL

PROTACT 340 GO PROTACT 371 NI

PROTACT 370 NI PROTACT 310 AL

PROTACT 360 CR

Series 1xx

Type	Order no.	Description		PU
PROTACT 150 VA	62000	**Bell button** • Button stainless steel V2A • Button collar stainless steel V2A	• Diameter of button 14.5 mm • Diameter of button collar 22.0 mm	5
PROTACT 140 GO	62001	**Bell button** • Button gold-plated brass • Button collar gold-plated brass	• Diameter of button 14.5 mm • Diameter of button collar 22.0 mm	5
PROTACT 110 AL	62002	**Bell button** • Button aluminium • Button collar aluminium	• Diameter of button 14.5 mm • Diameter of button collar 22.0 mm	5

Series 2xx

Type	Order no.	Description		PU
PROTACT 210 AL	62045	**Bell button** • Button aluminium • Button collar aluminium	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5
PROTACT 260 CR	62054	**Bell button** • Button chrome-plated brass • Button collar chrome-plated brass	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5

Series 3xx

Type	Order no.	Description		PU
PROTACT 340 GO	62025	**Bell button** • Button gold-plated brass • Button collar gold-plated brass	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5
PROTACT 370 NI	62026	**Bell button** • Button nickel-plated brass • Button collar nickel-plated brass	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5
PROTACT 371 NI	62034	**Bell button** • Button nickel-plated brass • Button collar nickel-plated brass	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5
PROTACT 310 AL	62032	**Bell button** • Button aluminium • Button collar aluminium	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5
PROTACT 360 CR	62033	**Bell button** • Button chrome-plated brass • Button collar chrome-plated brass	• Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm	5

Series 4xx

Type	Order no.	Description		PU
PROTACT 450 VA	62006	**Bell button**		5
		• Button stainless steel V2A	• Diameter of button button 11.5 mm	
		• Button collar stainless steel V2A	• Diameter of button collar 20.0 mm	
PROTACT 420 AL-KS	62013	**Bell button**		5
		• Button black plastic	• Diameter of button button 11.5 mm	
		• Button collar aluminium R14	• Diameter of button collar 20.0 mm	
PROTACT 410 AL	62016	**Bell button**		5
		• Button aluminium	• Diameter of button button 11.5 mm	
		• Button collar aluminium	• Diameter of button collar 20.0 mm	

Series 5xx

Type	Order no.	Description		PU
PROTACT 550 VA	62060	**Bell button**		5
		• Button stainless steel V2A	• Diameter of button button 16.8 mm	
		• Button collar stainless steel V2A	• Diameter of button collar 22.0 mm	
PROTACT 510 AL	62061	**Bell button**		5
		• Button aluminium	• Diameter of button button 16.8 mm	
		• Button collar aluminium	• Diameter of button collar 22.0 mm	

Series 38x

Type	Order no.	Description		PU
PROTACT 380 KS	61031	**Bell button**		5
		• Button white-grey plastic	• Diameter of button button 11.5 mm	
		• Button collar black plastic	• Diameter of button collar 20.0 mm	
PROTACT 381 KS	61032	**Bell button**		5
		• Button white-grey plastic	• Diameter of button button 11.5 mm	
		• Button collar white-grey plastic	• Diameter of button collar 20.0 mm	

Serie 68x

Type	Order no.	Description		PU
PROTACT 681 KS	61045	**Bell button**		5
		• Button black plastic	• Button 13.5 x 16.0 mm	
		• Button collar black plastic	• Button collar 20.0 x 22.0 mm	
PROTACT 680 KS	61047	**Bell button**		5
		• Button white-grey plastic	• Button 13.5 x 16.0 mm	
		• Button collar white-grey plastic	• Button collar 20.0 x 22.0 mm	

PROTACT 450 VA   PROTACT 410 AL

PROTACT 420 AL-KS

PROTACT 550 VA

PROTACT 510 AL

PROTACT 380 KS

PROTACT 381 KS

PROTACT 681 KS

PROTACT 680 KS

Bell Buttons and Contacts

PROTACT

PROTACT 101 LED

PROTACT 102 LED

PROTACT 100 LED

PROTACT 105 LED

with illumination

Type	Order no.	Description		PU
PROTACT 101 LED	63022	**Bell button** • Button red plastic • Button collar aluminium	• Diameter of button 14.6 mm • Diameter of button collar 22.0 mm	3
PROTACT 100 LED	63032	**Bell button** • Button red plastic • Button collar black aluminium	• Diameter of button 14.6 mm • Diameter of button collar 22.0 mm	3
PROTACT 102 LED	63042	**Bell button** • Button red plastic • Button collar gold-plated brass	• Diameter of button 14.6 mm • Diameter of button collar 22.0 mm	3
PROTACT 105 LED	63052	**Bell button** • Button red plastic • Button collar stainless steel V2A	• Diameter of button 14.6 mm • Diameter of button collar 22.0 mm	3

Panel button KKO 2112

Description
• Plastic, rectangular
• Illumination-capable panel button
• Can be used optionally as bell button or light button

Technical data
• 21 x 70 x 17 mm
• Plate thickness 2.5 mm

• Plate punch-out 19.5 x 68 mm
• Switching capacity: Max. 24V~ (5mA–1.5A/24VA)
• Switching capacity: Max. 24V= (5mA–1.0A/12W)

Note
• Order tubular bulb 2130 separately!
  See chapter Access Controls & Accessories

W. Neuss

LICHT

Type	Order no.	Description	PU
KKO 2112 BR	51006	**Panel button**	3

24 carat high polish gilds

Description
- Prestigious stainless steel housing in solid design
- Bell contact with a noble look; stainless steel; extremely resistant to vandalism thanks to the smooth contours and precise button guidance
- Surface mounting with pre-mounting panel

- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- Ø 80 x 16 mm
- IP 40
- Incl. PROTACT 150 VA

Type	Order no.	Description
ETA S 100	**55540**	**Storey plate**

Description
- Prestigious stainless steel housing in solid design
- Bell contact with a noble look; stainless steel; extremely resistant to vandalism thanks to the smooth contours and precise button guidance
- Surface mounting with pre-mounting panel

- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- 82 x 82 x 16 mm
- IP 40
- Incl. PROTACT 150 VA

Type	Order no.	Description
ETA S 200	**55541**	**Storey plate**

Description
- Surface-mounted installation
- Incl. PROTACT 340 GO
- Brushed brass surface
- Cable insertion at side or rear
- For cable gland M16

Technical data
- Temperature range: -20 to +50°C
- IP 44 (for use outdoors)
- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- Diameter 68 mm, depth 30 mm

Type	Order no.	Description
TORK 2060	**64151**	**Gate contact**

Description
- Bell plates with a noble look
- Modern and prestigious design in shape, colour and material
- Stainless steel and stainless steel-acrylic variants
- Mounting panel for perfect alignment
- Incl. neoprene sealing on rear for both sealing and compensating unevenness

Technical data
- Max. 24V=/~ (1.5A/24VA)
- Min. 5V (1mA)
- IP 44
- Incl. PROTACT 150 VA

Type	Order no.	Description	
ETA S 102	**55912**	**Storey plate 4 mm** • Material: stainless steel (V2A)	• Dimensions: D 90 mm • Shape: round
ETA S 202	**55922**	**Storey plate 4 mm** • Material: stainless steel (V2A)	• Dimensions: 75 x 75 mm • Shape: square
ETA S 302	**55932**	**Storey plate 4 mm** • Material: stainless steel (V2A)	• Dimensions: 150 x 60 mm • Shape: oval
ETA S 402	**55942**	**Storey plate 4 mm** • Material: stainless steel (V2A)	• Dimensions: 95 x 65 mm • Shape: rectangular

ETA S 102

ETA S 202

ETA S 302

ETA S 402

Bell Buttons and Contacts

BUTTONS AND STOREY PLATES

Contact shells KS 2070-2084

KS 2071 MS-BRÜN

KS 2074 WS

KS 2075   KS 2076

Description
- Sturdy metal shell
- Flush-mounted installation
- Incl. PROTACT button
- Large selection of surfaces
- Mounting on commercially-available flush-mounting box possible (screw distance 60 mm)
- Incl. PROTACT button
- Colour-coordinated countersunk wood screws included in scope of delivery
- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)

Type	Order no.	Description	
KS 2070 MS-GEB	**64131**	**Contact shell** • Brushed brass	• 70 mm x 28 mm
KS 2071 MS-BRÜN	**64132**	**Contact shell** • Burnished brass	• 70 mm x 28 mm
KS 2074 WS	**64141**	**Contact shell** • White-painted brass	• 70 mm x 28 mm
KS 2075	**64143**	**Contact shell** • Matt chrome-plated brass	• 70 mm x 28 mm
KS 2076	**64144**	**Contact shell** • Shiny chrome-plated brass	• 70 mm x 28 mm

Cast brass button 2310/2312

ETA 2310   ETA 2312

Description
- Surface-mounted installation
- 1 bell button
- Incl. Protact button

Technical data
- Temperature range: -20 to +50°C
- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- 65 x 35 x 10 mm

Type	Order no.	Description
ETA 2310	**55595**	**ETA cast brass** • Brushed brass
ETA 2312	**55597**	**ETA cast brass** • Textured and burnished brass

Cast bronze storey plates

ETA 502 G

Type	Order no.	Description	
ETA 501 G	**55511**	**Storey plate** • Cast bronze/1 bell button • Surface-mounted installation • Recessed and burnished small brass frame • incl. PROTACT 420 AL-KS	• 38 x 98 x 15 mm • Temperature range: -20 bis +50°C • max. 24V~ (5 mA - 1,5 A / 24 VA) • max. 24V= (5 mA - 1,0 A / 12 W)
ETA 502 G	**55512**	**Storey plate** • Cast bronze / 2 bell button • functions as above	• 62 x 98 x 15 mm

Cast aluminium storey plates

ETA 502 GA

Type	Order no.	Description	
ETA 501 GA	**55531**	**Storey plate** • Aluminium/silver anod. EV1 1 bell button • Surface-mounted installation • Recessed small aluminium frame • incl. PROTACT 410 AL	• 38 x 98 x 15 mm • Temperature range: -20 to +50°C • max. 24V~ (5 mA - 1,5 A / 24 VA) • max. 24V= (5 mA - 1,0 A / 12 W)
ETA 502 GA	**55532**	**Storey plate** • Aluminium/silver anod. EV1 2 bell buttons	• 62 x 98 x 15 mm • functions as above
ETA 503 GA	**55533**	**Storey plate** • Aluminium/silver anod. EV1 3 bell buttons	• 86 x 98 x 15 mm • functions as above

Description
- Aluminium, silver anodised
- Flush-mounted installation
- Can be illuminated
- For number of panel buttons, see ordering overview
- Incl. 1 light sign (red)
- Weatherproof

Technical data
- Temperature range: -20 to +50°C
- Tubular bulb 17V/0.1A
- Max. 24V~ (5mA–1.5A/24 VA), max. 24V= (5mA–1.0A/12W)
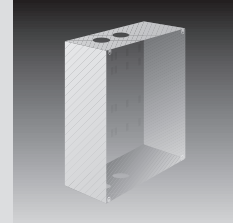- Fixing holes: 16 mm from outer edge in each case

Note
- Order tubular bulbs separately
- Order flush-mounted box (galvanized sheet iron) separately

ETA 803 EV1

UPK 805

Type	Order no.	Description		PU
ETA 801 EV1	55801	**Storey plate** • 1 button panel	• 72 x 121 mm	
ETA 802 EV1	55802	**Storey plate** • 2 buttons panel	• 96 x 121 mm	
ETA 803 EV1	55803	**Storey plate** • 3 buttons panel	• 120 x 121 mm	
ETA 804 EV1	55804	**Storey plate** • 4 buttons panel	• 144 x 121 mm	
ETA 805 EV1	55805	**Storey plate** • 5 buttons panel	• 168 x 121 mm	
ETA 806 EV1	55806	**Storey plate** • 6 buttons panel	• 192 x 121 mm	
ETA 807 EV1	55807	**Storey plate** • 7 buttons panel	• 216 x 121 mm	
ETA 808 EV1	55808	**Storey plate** • 8 buttons panel	• 240 x 121 mm	
ETA 809 EV1	55809	**Storey plate** • 9 buttons panel	• 264 x 121 mm	
Accessories				
UPK 801	55881	**Flush-mounted box** • For 1 button panel	• 52 x 103 x 50 mm	
UPK 802	55882	**Flush-mounted box** • For 2 buttons panel	• 76 x 103 x 50 mm	
UPK 803	55883	**Flush-mounted box** • For 3 buttons panel	• 100 x 103 x 50 mm	
UPK 804	55884	**Flush-mounted box** • For 4 buttons panel	• 124 x 103 x 50 mm	
UPK 805	55885	**Flush-mounted box** • For 5 buttons panel	• 148 x 103 x 50 mm	
UPK 806	55886	**Flush-mounted box** • For 6 buttons panel	• 172 x 103 x 50 mm	
UPK 807	55887	**Flush-mounted box** • For 7 buttons panel	• 196 x 103 x 50 mm	
UPK 808	55888	**Flush-mounted box** • For 8 buttons panel	• 220 x 103 x 50 mm	
UPK 809	55889	**Flush-mounted box** • For 9 buttons panel	• 244 x 103 x 50 mm	
TUBULAR BULB 2130	51016	**Replacement tubular bulb**	• 17V / 0,1A	10

Aluminium storey plates ETA 833–867 double row

ETA 856 EV1
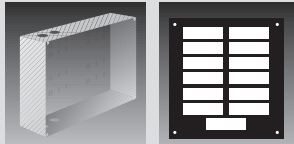
UPK 845/855   **Max.**

Description
- Aluminium, silver anodised
- Flush-mounted installation
- Can be illuminated
- For number of panel buttons, see below
- Incl. 1 light sign (red)
- Weatherproof

Technical data
- Temperature range: -20 to +50°C
- Tubular bulb 17V/0.1A
- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- Fixing holes: 16 mm from outer edge in each case

Note
- Order tubular bulbs separately
- Order flush-mounted box (galvanized sheet iron) separately

Type	Order no.	Description		PU
ETA 833 EV1	**55826**	**Storey plate** • 6 buttons panel	• 120 x 202 mm	
ETA 834 EV1	**55827**	**Storey plate** • 7 buttons panel	• 144 x 202 mm	
ETA 844 EV1	**55828**	**Storey plate** • 8 buttons panel	• 144 x 202 mm	
ETA 845 EV1	**55829**	**Storey plate** • 9 buttons panel	• 168 x 202 mm	
ETA 855 EV1	**55830**	**Storey plate** • 10 buttons panel	• 168 x 202 mm	
ETA 856 EV1	**55831**	**Storey plate** • 11 buttons panel	• 192 x 202 mm	
ETA 866 EV1	**55832**	**Storey plate** • 12 buttons panel	• 192 x 202 mm	
ETA 867 EV1	**55833**	**Storey plate** • 13 buttons panel	• 216 x 202 mm	
Accessories				
UPK 833	**55893**	**Flush-mounted box** • For 6 buttons panel	• 100 x 185 x 50 mm	
UPK 834/844	**55894**	**Flush-mounted box** • For 7/8 buttons panel	• 124 x 185 x 50 mm	
UPK 845/855	**55895**	**Flush-mounted box** • For 9/10 buttons panel	• 148 x 185 x 50 mm	
UPK 856/866	**55896**	**Flush-mounted box** • For 11/12 buttons panel	• 172 x 185 x 50 mm	
UPK 867	**55897**	**Flush-mounted box** • For 13 buttons panel	• 196 x 185 x 50 mm	
TUBULAR BULB 2130	**51016**	**Replacement tubular bulb**	• 17V /0,1A	10

We can make customised products based on the styles of our standard product range (delivery times available on request, generally 15–20 working days)

We are happy to advise you on the assembly and installation of the door station. Contact our Service hotline:

Tel.: +49 (0) 22 42 88 90-56
Fax: +49 (0) 22 42 88 90-37
service@grothe.de

Please specify the following planning features. We recommend you use the inquiry form at the end of the catalogue for this purpose: (see side 85)

Storey plate:
• Dimensions of the storey plate
• Arrangement of the contacts on the storey plate
• Surface or flush-mounted installation
• Fold-out front plate with hinge fixture
• With and without nameplate illumination

Contacts:
• Type and number of contacts required
• Colour of the contacts within the framework of the delivery product range
• Version with separate light button

Bell Buttons and Contacts

75
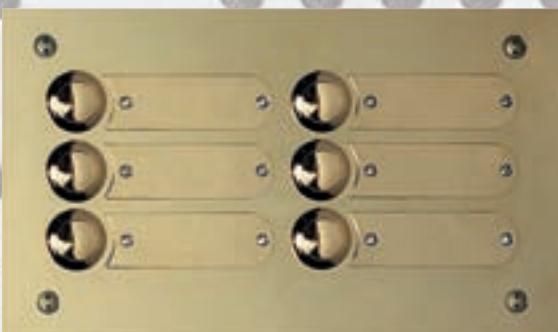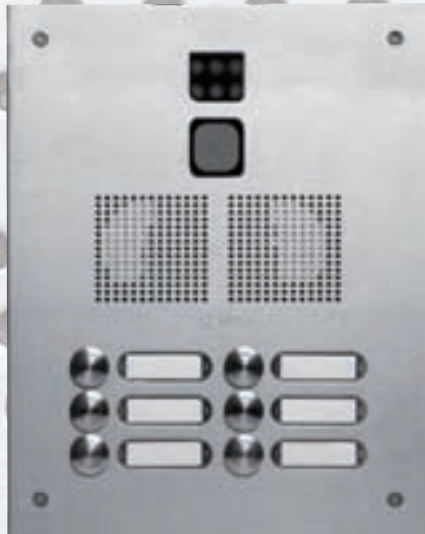
BUTTONS AND STOREY PLATES

Montilux

Description
- Surface-mounted installation
- 1 bell button
- Screwless arrangement in rows possible (connector clips included in scope of delivery)
- Modern design
- White (RAL 9010)
- Illuminated (bulb included in scope of delivery)

- Easy mounting with terminal clamp (max. 0.8 mm)
- Weatherproof plastic housing
- Durable special contacts with precious metal coating

Technical data
- Temperature range: -20 to +50°C
- Max. 12V~/= (AC/DC) 5mA–1.5A
- 32 x 90 x 18.5 mm

Type	Order no.	Description	PU
MONTILUX	**51011**	**Montilux**	10
Lux bulb	**98191**	**Replacement bulb**	10

Combifix II/Combilux
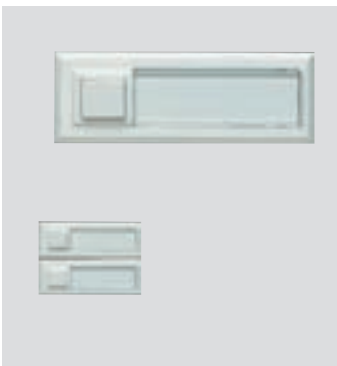
Description
- Surface-mounted installation
- For lighting, see ordering overview
- 1 bell button (friction contact)
- Arrangement in rows possible (connector clips included in scope of delivery)

- White
- Weatherproof

Technical data
- Temperature range: -20 to +50°C
- Max. 12V~/= (5mA–1.5A)
- 32 x 90 x 18 mm

Type	Order no.	Description		PU
ETA 2132	**51015**	**Combilux**		10
		• Illuminated	• LED included	
ETA 2122	**51014**	**Combifix II**		10
TUBULAR BULB 2130	**51016**	**Replacement tubular bulb**	• 17V	10

Combifix

Description
- Surface-mounted installation
- 1 bell button
- Arrangement in rows possible (connector clips included in scope of delivery)
- White

- Weatherproof

Technical data
- Temperature range: -20 to +50°C
- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- 32 x 90 x 18 mm

COMBIFIX

Type	Order no.	Description	PU
ETA 2121	**51013**	**Combifix**	10

KKO/Golf button

Description
- Surface-mounted installation
- Modern, attractive design
- Large selection of colours and metallic effects
- Weatherproof plastic housing
- Durable special contacts with precious metal coating

Technical data
- Temperature range: -20 to +50°C
- Max. 24V~ (5mA–1.5A/24VA)
- Max. 24V= (5mA–1.0A/12W)
- 65 x 25 x 20 mm

WS/WS

SIM/SW

Type	Order no.	Description		PU
KKO 2001 WS/WS	**64032**	**Golf bell button**		10
		• White		
KKO 2001 WS/WS	**64090**	**Golf bell button**		
		• White	• Contents of packaging: 1 item (blister)	
KKO 2001 SIM/SW	**64094**	**Golf bell button**		
		• Silver/black	• Contents of packaging:	
		• Precious metal surface	1 item (blister)	

Description
- Surface-mounted installation
- LED illumination (wear-free)
- Modern, attractive design
- Large selection of colours and metallic effects (button transparent in each case)
- Weatherproof plastic housing
- Durable special contacts with precious metal coating
- Type of packaging: 1 item/blister

Technical data
- Temperature range: -20 to +50°C
- 8–24V~ (1.5A/24VA)
- LED approx. (20 mA)
- 65 x 25 x 20 mm

Note
- Not suitable for bell systems with electronic chimes, as the contact and LED are connected in parallel!

Type	Order no.	Description
KKO L 2001 WS/T	64070	**Fashion bell button** • White
KKO L 2001 SIM/T	64074	**Fashion bell button** • Matt silver • Precious metal surface
KKO 2005	64035	**Fashion bell button** • Black
KKO 2005W	64036	**Fashion bell button** • White

SIM/T

WS/T

KKO 2005W   KKO 2005

Description
- Surface-mounted installation
- 1 bell button
- Modern, attractive design
- Illuminated (bulb included in scope of delivery)
- Easy mounting with terminal clamp (max. 0.8 mm)
- Weatherproof plastic housing
- Durable special contacts with precious metal coating

Technical data
- Temperature range: -20 to +50°C
- Max. 12V~/= (AC/DC) 5mA–1.5A
- 90 x 90 x 18.5 mm

Type	Order no.	Description	PU
DOMOLUX WS/SW	51103	**Domolux** • White/black (RAL 9010/9005)	
DOMOLUX SIM/SW	51113	**Domolux** • Matt silver/black (RAL 9005) • Precious metal coating	
Lux bulb	98191	**Replacement bulb**	10

WS/SW

Description
- Surface-mounted installation
- 2 bell buttons
- Modern, attractive design
- Illuminated (bulb included in scope of delivery)
- Easy mounting with terminal clamp (max. 0.8 mm)
- Weatherproof plastic housing
- Durable special contacts with precious metal coating

Technical data
- Temperature range: -20 to +50°C
- Max. 12V~/= (AC/DC) 5mA–1.5A
- 90 x 90 x 18.5 mm

Type	Order no.	Description	PU
DOMOLUX DUO WS/SW	51203	**Domolux Duo** • White/black (RAL 9010/9005)	
DOMOLUX DUO SIM/SW	51213	**Domolux Duo** • Matt silver/black (RAL 9005) • Precious metal coating	
Lux bulb	98191	**Replacement bulb**	10

WS/SW

Bell Buttons and Contacts

BUTTONS AND STOREY PLATES

Classic storey plate

ETA 634 WS

Description
• Surface-mounted installation
• Can be illuminated (order tubular bulb separately)
• Weatherproof plastic
• White

• Panel button with nameplate in accordance with post-office recommendations

Technical data
• Temperature range: -20 to +50°C
• Max. 12V~/=(AC/DC) 5mA–1.5A
• Tubular bulb 17V/0.1A

Type	Order no.	Description		PU
ETA 631 WS	55631	**Classic storey plate** • 1 panel button	• 48 x 100 x 25 mm	
ETA 632 WS	55632	**Classic storey plate** • 2 panel buttons	• 72 x 100 x 25 mm	
ETA 633 WS	55633	**Classic storey plate** • 3 panel buttons	• 96 x 100 x 25 mm	
ETA 634 WS	55634	**Classic storey plate** • 4 panel buttons	• 120 x 100 x 25 mm	
TUBULAR BULB 2130	51016	**Classic storey plate**		10

Flush-mounted storey plate ETA 1321

Description
• Flush-mounted installation
• 1 contact
• White cover plate
• For screw or expander clamp fastening in flush-mounted boxes (55 mm)

Technical data
• 80 x 80 x 30 mm
• Max. 24V~ (5mA–1.5A/24VA)
• Max. 24V= (5mA–1.0A/12W)

Type	Order no.	Description
ETA 1321	51018	**Flush-mounted storey plate**

Button KKO 5050

Description
• white plastic
• Self-cleaning friction contact
• Max. 24V~ (5mA–1.5A/24VA)

• Max. 24V= (5mA–1.0A/12W)
• Round
• 50 mm x 20 mm

Type	Order no.	Description	PU
KKO 5050	64025	**Button**	10

Bell suspended button

Description
• white plastic
• Operator-friendly shape (hospital bell button)
• With collar as button protection

• Self-cleaning friction contacts
• Max. 24V~ (5mA–1.5A/24VA)
• Max. 24V= (5mA–1.0A/12W)
• ø 36 x 67 mm

Type	Order no.	Description	PU
KKO 3736A	64063	**Bell suspended button**	10

Sliding contact

Description
• Insulating duct edge shield
• Bronze springs
• Silver contacts

Technical data
• 32 x 80 x 14 mm
• Max. 24V~ (5mA–1.5A/24VA)
• Max. 24V= (5mA–1.0A/12W)

Type	Order no.	Description	PU
KKO 152	64114	**Sliding contact**	10

We can make customised products based on the styles of our standard product range (delivery times available on request, generally 4 to 6 weeks)
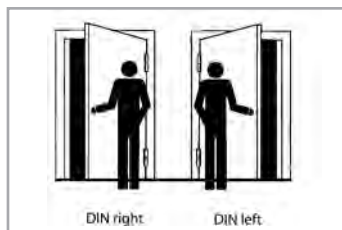
Bell Buttons and Contacts

ACCESS CONTROL
AND ACCESSORIES

»Your entrance to amazing control solutions.«

Arresting/Releasing

Function of (impermanent) arrester

When the door opener button is pressed the lock installed in the door opener is overridden for a specified period of time to enable the door to be opened a single time.

If the door closes again, the mechanical lock function is automatically activated again.

Advisable for direct-current operation, as here the electrical release is not audible in contrast to the alternating current mode (humming noise).

Function of (permanent) release mechanism

The mechanical release mechanism installed in the door opener enables the door to be kept open for as long as required or to return it to its normal function simply by moving a small lever or turning an adjusting screw (depending on model).

This is advisable in buildings with restricted office hours (doctor's practice etc.).

Standard door opener with large box

TO 511x

TO 5300

Description
- For type of function, see ordering overview
- DIN links — (can be used asymmetrically on the right and left)
- Compact design
- Perforated closing panel

Technical data
- 8–12V~/= (0.8A) (except for TO 5300, see ordering overview)
- Closing panel 250 x 25 x 3 mm
- Latch length 46 mm
- Box dimensions 28 (depth) x 90 x 20 mm (except for TO 5300)
- Short-term load 20 sec.

Type	Order no.	Description	
TO 5110	93012	**Door opener** • Standard	
TO 5111	93013	**Door opener** • with arrester mechanism	
TO 5112	93014	**Door opener** • with release mechanism	
TO 5113	93015	**Door opener** • with arrester and release mechanisms	
TO 5300	93011	**Door opener** • adjustable latch	• 6–12V~/=(0,75A-1A) • Box: 28 (depth) x 70 x 20 mm • 1.0A (at 12V)

Standard door opener with small box

TO 54xx

Description
- For type of function, see ordering overview
- Symmetric design (can be used on the right and left)
- Compact design
- Perforated closing panel

Technical data
- 8–12V~/= (0.7A)
- Closing panel 250 x 25 x 3 mm
- Latch length 46 mm
- Box dimensions 28 (depth) x 70 x 20 mm
- Short-term load 20 sec.

Type	Order no.	Description
TO 5400	93081	**Door opener** • adjustable latch
TO 5411	93082	**Door opener** • adjustable latch • with arrester mechanism
TO 5412	93083	**Door opener** • adjustable latch • with release mechanism
TO 5413	93084	**Door opener** • adjustable latch • with release mechanism • with arrester mechanism

Door opener for use outdoors

TO 5900x

Description
- Protected against water and dust penetration (IP54)
- DIN left, DIN right
- Perforated closing panel

Technical data
- 12V~/=20 Ohm

- Closing panel 250 x 25 x 3 mm
- Latch length 44 mm
- Box 35 (depth) x 99 x 20 mm
- Short-term load 20 sec.

Note
- Not suitable for combination with angled closing panel!

Type	Order no.	Description	
TO 5900-L	93090	**Door opener** with arrester mechanism	• DIN left
TO 5900-R	93091	**Door opener** with arrester mechanism	• DIN right

Description
- Compact door opener with short closing panel
- DIN links — (can be used asymmetrically on the right and left)
- Perforated closing panel

Technical data
- 8–12V~/=(0.8A) 0.8A (at 12V)

- Box 28 (depth) x 90 x 20 mm
- Closing panel 160 x 25 x 3 mm
- Latch length 46 mm
- Short-term load 20 sec.

Note
- Not suitable for combination with angled closing panel!

Type	Order no.	Description	
TO 5116	93114	Door opener	• grey
TO 5117	93115	Door opener	• brown

TO 5116

Description
- Ideal for business premises, doctor's practices etc.
- Release of latch through sustaining voltage (during visiting hours, the door can be opened or closed as often as desired without pressing a button)
- Normal door opener function when sustaining voltage switched off

- DIN links — (can be used asymmetrically on the right and left)
- Perforated closing panel

Technical data
- =8V (0.2A)
- Box 28 (depth) x 90 x 20 mm
- Closing panel 250 x 25 x 3 mm
- Latch length 44 mm

Type	Order no.	Description
TO 5110 E	93071	Door opener

TO 5110 E

Description
- Ideal, e.g. for escape doors
- Release of latch if power supply malfunctions
- Locking of latch if power supply switched on
- DIN links — (can be used asymmetrically on the right and left)
- Perforated closing panel

Technical data
- 24V= (0.11A)
- Box 29 (depth) x 99 x 20 mm
- Closing panel 250 x 25 x 3 mm
- Latch length 47 mm
- Up to 1000 kg pressure force

Type	Order no.	Description
TO 5134	93061	No-load current door opener

TO 5134

Description
- Ideal for box-type and screwed-on locks
- Can be used on the right and left
- Perforated closing panel

Technical data
- 12V ~/= 30 Ohm

- Closing panel 132 x 52 x 3 mm
- Latch length 44 mm
- Box 62 (depth) x 132 x 24 mm
- Short-term load 20 sec.

Note
- Not suitable for combination with angled closing panel!

Type	Order no.	Description
TO 5600	93021	Box-type door opener

TO 5600

Description
- For box-type locks with pull button
- Can be used on the right and left
- Included in the delivery specification: chain (approx. 1 m), clamping device, adjusting screw, 4 S-hooks

Technical data
- 8–12V~ (8 Ohm)
- Box 62 (depth) x 120 x 25 mm
- Short-term load 20 sec.

Type	Order no.	Description
TO 5200	93031	Chain pull door opener

TO 5200

Type	Order no.	Description	
TO WSB DIN L	93098	Angled closing panel	
		• For left-hand arresters	• Length 250 mm
TO WSB DIN R	93099	Angled closing panel	
		• For right-hand arresters	• Length 250 mm

TO WSB DIN L

Access Control
and Accessories

Spare parts for door stations
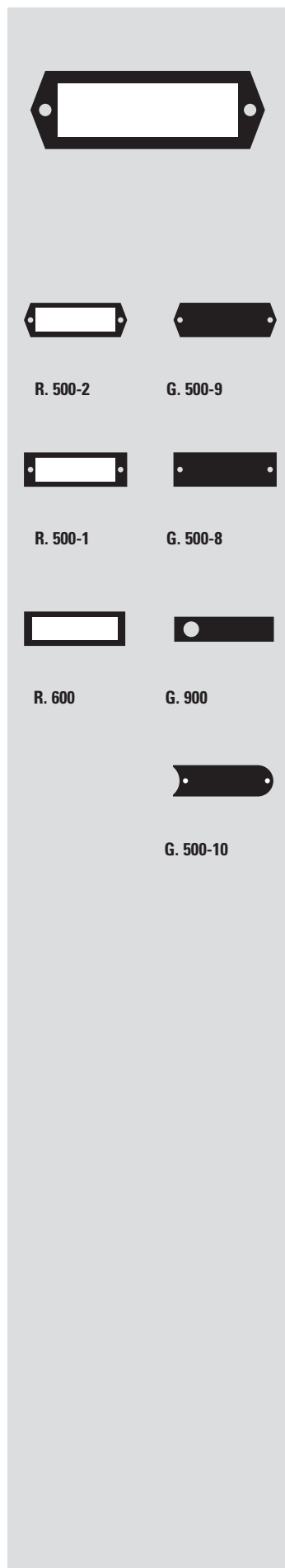
R. 500-2   **G. 500-9**

R. 500-1   **G. 500-8**

R. 600   **G. 900**

G. 500-10

Type	Order no.	Description		PU
SMALL FRAME 500-1EV1	98009	**Small frame** • silver anodised • with protection plate/screws	• 20 x 58 mm, Protection plate 13 x 43 mm	10
SMALL FRAME 500-1V2A	98010	**Small frame** • Brushed stainless steel • with protection plate/screws	• 20 x 58 mm, Protection plate 13 x 43 mm	5
SMALL FRAME 500-1 R14	98012	**Small frame** • brown anodised • with protection plate/screws	• 20 x 58 mm, Protection plate 13 x 43 mm	10
ENGRAVED PLATE 500-8 EV1	98035	**Engraved plate** • silver anodised • with screws	• 20 x 58 mm	10
SMALL FRAME 500-2 EV1	98002	**Small frame** • silver anodised • with protection plate/screws	• 20 x 58 mm, Protection plate 13 x 43 mm	10
SMALL FRAME 500-2 R14	98005	**Small frame** • brown anodised • with protection plate/screws	• 20 x 58 mm, Protection plate 13 x 43 mm	10
ENGRAVED PLATE 500-9 EV1	98013	**Engraved plate** • silver anodised • with screws	• 20 x 58 mm	10
SMALL FRAME 600 BLACK	98025	**Small frame** • Clamped small frame, black	• 20 x 57.5 mm, Protection plate 13 x 48 mm	10
SMALL FRAME 600 GREY	98023	**Small frame** • Clamped small frame, grey	• 20 x 57.5 mm, Protection plate 13 x 48 mm	10
SMALL FRAME 600	98054	**Small frame** • Clamped small frame, white	• 20 x 57.5 mm, Protection plate 13 x 48 mm	10
LED nameplate NSH LED 100 WS	98056	**LED nameplate** • 4x LED white • resistant to vanalism, IP54	• 8-16V=/~ (0,02-0,04A)	1
ENGRAVED PLATE 500-10 EV1	98061	**Engraved plate** • silver anodised • rwith screws	• 20 x 62 mm	10
ENGRAVED PLATE 500-10 V2A	98062	**Engraved plate** • Brushed stainless steel • with screws	• 20 x 62 mm	5
ENGRAVED PLATE 500-10 GO	98063	**Engraved plate** • Gold-plated brass • with screws	• 20 x 62 mm	5
ENGRAVED PLATE 500-10 R14	98064	**Engraved plate** • brown anodised • with screws	• 20 x 62 mm	10
ENGRAVED PLATE 900 EV1	98032	**Engraved plate** • silver anodised • for ROBUSTA 900 Series	• 20 x 77 mm, Protection plate 12 x 53 mm	5
LED nameplate	98056	**LED nameplate** • 4 x LED white • resistant to vandalism, IP54	• 8-16V=/~ (0,02-0,04A) • Name plate 13x43 mm, 23x61x14 mm	
LED nameplate	98065	**LED nameplate** • 4 x LED blue • resistant to vandalism, IP54	• 8-16V=/~ (0,02-0,04A) • Name plate 13x43 mm, 23x61x14 mm	
BULB 1327	98020	**Bulb** • Replacement lamp for signal button SIT 1325S • Operating voltage: 12V~/=	• Characteristics: 24V/50mA • Socket E10	10
Bulb lux	98191	**Replacement bulb** • Package contents:10 units • (price quoted per item)	• 17V	10
LIGHT SIGN	51026	**Light sign, red** • for panel button • KKO 2112 BR (Order no. 51006)		10

GENERAL DATA

Inquiry no. ____

Targetdate ____

Date ____

Sender: please fill out completely or use stamp

Company _____
Person responsible _____
Street _____
Postcode, City _____
Tel.: _____
Fax _____
e-mail _____

To.

GROTHE GmbH
Angebotsabteilung
Löhestraße 22

D-53773 Hennef
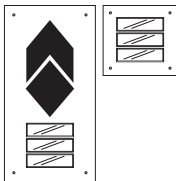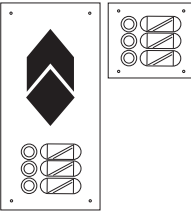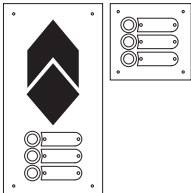
FAX + 49 22 42 - 88 90 - 35
TEL + 49 22 42 - 88 90 - 56

STYLE

Style

☐ doorstation / front plate
(already prepared for fitting
loudspeaker of all current producers)

☐ Storey plate / Bell plate

Fixation

☐ plate with flush-mounted box

   ☐ dimensions flush-mounted
box (if fixed)

height: mm
width: mm

Colour / Material

☐ Aluminium

   ☐ EV1 - silver anodized
   ☐ R14 - brown anodized

☐   V2A - stainless steel brushed
☐   GO - brass gold-plated

☐ plate with finery box
(flush-mounted box with particular facing,
only EV1, R14, V2A)

Finery box is backwards always
closed

Overall dimension

height: mm
width: mm

☐ plate without box

   ☐ with drill holes

inside micrometer:
height: mm
width: mm

   ☐ without drill
holes

☐ Mark with a cross where applicable

LAYOUT

Standard series (individual set on page 2)

☐ Series 800

☐ ROBUSTA LED

☐ RobustaPlus

Assembly of push buttons

Quantity of push
buttons in total: ....

vertical assembly:

☐ one line
☐ two lines

☐ three lines
☐ ...... lines

horizontal assembly:

push buttons in 1 st. line...............
push buttons in 2 nd. line..............
push buttons in 3 rd. line...............
more   ....

Access Control
and Accessories

Inquiry no. ____

Targetdate _____

Date _____

Company _____

Person responsible _____

Address _____

MOUNTING

Individual arrangement
Buttons

- ☐ PROTACT 150 VA
- ☐ PROTACT 140 GO
- ☐ PROTACT 110 AL
- ☐ PROTACT 450 VA
- ☐ PROTACT 410 AL
- ☐ PROTACT 420 AL-KS
- ☐ others ....

- ☐ KKO 2112 BR
- ☐ PROTACT 310 AL
- ☐ PROTACT 340 GO
- ☐ PROTACT 360 CR
- ☐ PROTACT 510 AL

Small Frames / Name Plates   Material

		Material
☐ engraved plate 500-8		EV1, R14
☐ engraved plate 500-9		EV1, R14
☐ engraved plate 500-10		EV1, R14, V2A, GOLD
☐ small frame 500-1		EV1, R14, V2A
☐ small frame 500-2		EV1, R14
☐ LED name plate		plastic
☐ clamped frame 600		black/grey/white

Tubular bulb

- ☐ without
- ☐ PROTACT LED (100,101,102 ,105)
- ☐ like button
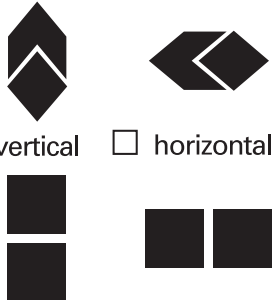
Illumination name plates

- ☐ without illumination
- ☐ back illumination with bulb or LED nameplate

GRATING

Grating with universal fixation for fitting loudspeaker
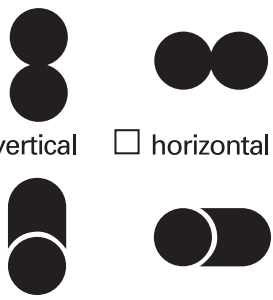
Type and System grating with holes, square

- ☐ vertical
- ☐ horizontal
- ☐ vertical
- ☐ horizontal

Type and System grating with holes, round

- ☐ vertical
- ☐ horizontal
- ☐ vertical
- ☐ horizontal

GRAVURES

Gravures

- ☐ on plate
  - └ number of signs   ....
  - └ type size in mm   ....
  - └ typeface   ....

- ☐ typeface as gravures on name plates
  - └ number of signs (per plate) ....
  - └ typeface   ....
  - (size is stated)

Typeface and sizes

type

   1 = **Helvetica**
   2 = standard-middle
     more typefaces on request

LAYOUT OR GRAVURETEXT

Information: if you need further space for your wishes please use an additional sheet. If you have further questions, please give us your telephone number. We will call you immediately.

Telephone number: ....

☐ Mark with a cross where applicable

technical changes reserved

General terms and conditions of sale, delivery and payment

As at 01.01.2012

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 to 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 150, shipping is charged at EUR 8. For net order values over EUR 150, 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 purchaser.

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

MODEL LIST
SIGNALLING 2012

Order no.	Type	Description	PU	DC	Page
14034	GT 1973	Safety transformer, 8/12V~ (2.0/2.0A), width 3 HP	1	I	62
14039	GT 3139	Bell transformer, 8/12V~ (1.5/1.0A), STL 20 sec., width 2 HP	1	I	62
14049	GT 3139 S	Bell transformer, 8/12V~ (1.3/1.0A), STL 20 sec., width 2 HP	1	I	62
14058	GT 3158	Bell transformer, 12V~ (1.0A), STL 20 sec., width 2 HP	1	I	62
14073	GT 3173	Bell transformer, 4/8/12V~ (2.0/2.0/1.5A), STL 20 sec., w. 2 HP	1	I	62
14074	GT 3174	Bell transformer, 4/8/12V~ (3.0/2.0/2.0A), STL 20 sec., w. 3 HP	1	I	62
14082	GT 3182	Bell transformer, 8/12/24V~ (2.0/1.3/0.6A), STL 20 sec., w. 2 HP	1	I	62
14083	GT 3173 S	Bell transformer, 4/8/12V~ (2.0/2.0/1.5A), STL 20 sec., w. 2 HP	1	I	62
14101	GT 1975	Safety transformer, 12V~ (1.5A), width 3 HP	1	I	62
14102	GT 1965	Safety transformer, 8V~ (2.0A), width 2 HP	1	I	62
14140	GT 1980	Safety transformer, 12/16/24/32V~, (3.3/2.5/1.6/1.2A), w. 5 HP	1	I	62
14160	GT 1990	Safety transformer, 12/24V~ (5.2/2.6A), width 5 HP	1	I	62
14201	GT 3148	Bell transformer, 8V~(1.0A), STL 20 sec., width 2 HP	1	I	62
14207	GT 50810	Bell transformer, 8V~(1.0A), fail-safe short circuit res., width 2 HP	1	I	62
14211	GT 3148 S	Bell transformer, 8V~(1A), STL 20 sec., width 2 HP	1	I	62
14936	GT 36 AP	Surface mounting set, width 36 mm, incl. 2 covering caps for IP 20, width 2 HP	1	I	62
14954	GT 54 AP	Surface mounting set, width 54 mm, incl. 2 covering caps for IP 20, width 3 HP	1	I	62
14990	GT 90 AP	Surface mounting set, width 90 mm, incl. 2 covering caps for IP 20, width 5 HP	1	I	62
22512	LTW 742 12V AC	Large alarm bell, 12V~(1.2A), 105 dB(A), shell Ø150 mm/IP 66	1	I	30
22513	LTW 742 24V AC	Large alarm bell, 24V~(0.6A), 105 dB(A), shell Ø100 mm/IP 66	1	I	30
22514	LTW 742 42V AC	Large alarm bell, 42V~(0.5A), 105 dB(A), shell Ø150 mm/IP 66	1	I	30
22517	LTW 742 230V AC	Large alarm bell, 230V~(0.5A) 50Hz, 105 dB(A), shell Ø150 mm/IP 66	1	I	30
22540	LTW 754 12V DC	Large alarm bell, 12V=(1.0A), 105 dB(A), shell Ø150 mm/IP 66	1	I	30
22541	LTW 754 24V DC	Large alarm bell, 24V=(0.9A), 105 dB(A), shell Ø150 mm/IP 66	1	I	30
22557	LTW 781 230V AC	Large alarm bell, 230V~(0.05A), 110 dB(A), shell Ø250 mm	1	I	30
22580	LTW 793 12V DC	Large alarm bell, 12V=(1.0A), 110 dB(A), shell Ø250 mm	1	I	30
22581	LTW 793 24V DC	Large alarm bell, 24V=(0.9A), 110 dB(A), shell Ø250 mm	1	I	30
24012	SG 851 8-12V AC	Signalling device, 8-12V~/50Hz (0.45VA), 70dB(A), IP20	1	I	28
24017	SG 851 230V AC	Signalling device, 230V~/50Hz (0.90VA), 70dB(A), IP20	1	I	28
24052	SU 1170A 8-12V AC	Buzzer, 8-12V~ AC (0.37A), 85 dB(A), STL 10 sec.	1	I	28
24071	LTW 101A 8V AC	Bell mechanism, 8V~ AC (0.86A), 85 dB(A), STL 10 sec.	1	I	28
24075	LTW 1101A 8V AC	Bell mechanism, 8V~ AC (0.86A), 84 dB(A), STL 10 sec.	2	I	28
24081	LTW 1171A 8V AC	Bell mechanism, 8V~ AC (0.83A), 85 dB(A), STL 10 sec.	1	I	28
24082	LTW 1171A 12V AC	Bell mechanism, 12V~ AC (0.38A), 85 dB(A), STL 10 sec.	1	I	28
24083	LTW 1171A 24V AC	Bell mechanism, 24V~ AC (0.17A), 85 dB(A), STL 10 sec.	1	I	28
24091	LTW 3371A 230V AC	Bell mechanism, 230V~ AC (0.006A), 85 dB(A), shell Ø70 mm	1	I	29
24111	LTW 4471A 8V AC	Bell mechanism, 8V~ AC (1.0A), 80 dB(A), STL 10 sec.	2	I	29
24113	LTW 4477A 8V AC	Bell mechanism, 87 dB(A), shell Ø70 mm	1	I	29
24311	LTW 911A 8V AC F	Bell mechanism, 8V~ AC (0.60A), 98 dB(A), STL 10 sec.	1	I	29
24331	LTW 911A 24V AC	Bell mechanism, 24V~ AC (0.23A), 98 dB(A), STL 10 sec.	1	I	29
24376	LTW 911A 230V AC	Bell mechanism, 230V~ AC (0.025A), 98 dB(A), STL 10 sec.	1	I	29
31041	HORN 630 8V AC	Small horn, 8V~ (0.65A), 92 dB(A), cont. op., dutycyc. 100%, IP 43	1	I	34
31043	HORN 630 24V AC	Small horn, 24V~ (0.13A), 92 dB(A), IP 43	1	I	34
31045	HORN 630 110V AC	Small horn, 110V AC (0.05A), 92 dB(A), IP 43	1	I	34
31047	HORN 630 240V AC	Horn, 240V~ (0.03A), 92 dB(A), IP 43	1	I	34

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Order no.	Type	Description	PU	DC	Page
31052	HORN 631 12V DC	Small horn, 12V= (0.05A), 96 dB(A), IP 43	1	I	34
31053	HORN 631 24V DC	Small horn, 24V= (0.04A), 96 dB(A), cont. op., dutycyc. 100%, IP 43	1	I	34
31101	KSZ OR 100	Lens, for KXX, horn 63XX, red	1	II	34
31241	HORN BZ 6311 24V DC	Combi horn, 24V= (0.35A), 96 dB(A), IP 43	1	I	35
31271	HORN BZ 6301 240V AC	Combi horn, 240V~ (0.07A), 92 dB(A), IP 43	1	I	35
31341	HORN WL 6311 24V DC	Combi horn, 24V= (0.25A), 96 dB(A), IP 43	1	I	34
31371	HORN WL 6301 240V AC	Combi horn, 240V~ (0.05A), 92 dB(A), IP 43	1	I	34
32012	HORN 640 12V AC	Large horn, 12V~ (1.2A), 105 dB(A), IP 54	1	I	35
32013	HORN 640 24V AC	Large horn, 24V~ (0.6A), 105 dB(A), IP 54	1	I	35
32014	HORN 640 42V AC	Large horn, 42V~ (0.5A), 105 dB(A), IP 54	1	I	35
32017	HORN 640 230V AC	Large horn, 230V~ (0.05A), 105 dB(A), IP 54	1	I	35
32122	HORN 651 12V DC	Large horn, 12V= (1.0A), 105 dB(A), IP 54	1	I	35
32123	HORN 651 24V DC	Large horn, 24V= (0.9A), 105 dB(A), IP 54	1	I	35
33017	HORN 680 230V AC	Large horn, 230V~ (0.05A), 105 dB(A), IP 54	1	I	35
37302	DSL 7302	Rotating mirror beacon, 12V/24V= (4.6/2.9A), red, for H1, IP 55	1	II	49
37307	DSL 7307	Rotating mirror beacon, 12V/24= (4.6/2.9A), orange, for H1, IP 55	1	II	49
37322	DSL 7322	Rotating mirror beacon, 240V~ (0.2A), red, incl. H1, IP 55	1	II	49
37327	DSL 7327	Rotating mirror beacon, 240V~ (0.2A), orange, incl. H1, IP 55	1	II	49
37332	DSL 7332	Rotating mirror beacon, 240V~ (0.2A), red, incl. GL 25W (Ba15d), IP 55	1	II	50
37337	DSL 7337	Rotating mirror beacon, 240V~ (0.2A), orange, incl. GL 25W (Ba15d), IP 55	1	II	50
37352	BLZ-R 7352	Xenon flashing beacon, 240V~ (0.1A), red, 6 Joules, IP 55	1	II	50
37357	BLZ-R 7357	Xenon flashing beacon, 240V~ (0.1A), orange, 6 Joules, IP 55	1	II	50
37361	DSL 7361	Rotating mirror beacon, 24V~ (2.1A), orange, incl. GL 25W (Ba15d), IP 55	1	II	50
37362	DSL 7362	Rotating mirror beacon, 24V~ (2.1A), red, incl. GL 25W (Ba15d), IP 55	1	II	50
37381	DSZ 7381	Halogen lamp,12V, 55W, H1	1	II	51
37382	DSZ 7382	Halogen lamp, 24V, 70W, H1	1	II	51
37383	DSZ 7383	Xenon tube for BLZ-R, 6 Joules	1	II	51
37391	DSZ 7391	Push-fit flange, for DSL 7302/7, tube Ø24, black	1	II	50
37394	DSZ 7394	Cage card, for DSL 7302/7, stainless steel	1	II	50
37395	DSZ 7395	Wall bracket, vertical assembly, black	1	II	50
37396	DSZ 7396	Bulb, 24V, 25W, for Ba15d	1	II	50
37397	DSZ 7397	Bulb, 240V, 25W, for Ba15d	1	II	50
37410	PSG 4.0-100	Power sounder, 12-24V=/~(1A)	1	IV	25
37430	PSG 4.0-230 F	Power sounder, 230V~(0.1A)/12-24V=/~(1A)	1	IV	25
38101	KWL 8101	Warning light, 12-240V~/=, orange, 3-5 Cd(p)/max. 10W, IP 65	1	II	46
38102	KWL 8102	Warning light, 12-240V~/=, red, 1-2 Cd(p)/max. 10W, IP 65	1	II	46
38106	KWL 8106	Warning light,12-240V~/=, green, 1 Cd(p)/max. 10W, IP 65	1	II	46
38211	KBZ 8211	Flashing light, 24V~/= (0.3A), orange, 2J/210 Cd(p)	1	II	46
38212	KBZ 8212	Flashing light, 24V~/= (0.3A), red, 2J/90 Cd(p)	1	II	46
38221	KBZ 8221	Flashing light, 240V~ (0.05A), orange, 2J/147 Cd(p)	1	II	46
38222	KBZ 8222	Flashing light, 240V~ (0.05A), red, 2J/63 Cd(p)	1	II	46
38411	MBZ 8411	Strobe light 12/24V~/= (1.8/0.85A), red 1440 Cd(p)	1	II	47
38412	MBZ 8412	Strobe light 12/24V~/= (1.8/0.85A), orange 1440 Cd(p)	1	II	47
38421	MBZ 8421	Strobe light 90-230V~, red 1440 Cd(p)	1	II	47
38422	MBZ 8422	Strobe light 90-230V~, orange 1440 Cd(p)	1	II	47

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38511	GWL 8511	Warning light,12-240V~/=, orange, 56Cd (240V) - 350Cd (24V), IP 54	1	II	47
38512	GWL 8512	Warning light,12-240V~/=, red, 24Cd (240V) - 150Cd (24V), IP 54	1	II	47
38516	GWL 8516	Warning light,12-240V~/=, green, 10Cd (240V) - 60Cd (24V), IP 54	1	II	47
38531	GBZ 8601	Flashing light, 12/24V~/= (1.8/0.85A), orange, 6J/3360 Cd(p), IP 54	1	II	48
38532	GBZ 8602	Flashing light, 12/24V~/= (1.8/0.85A), red, 6J/1440 Cd(p), IP 54	1	II	48
38541	HBZ 8541 24V DC	Combi flashlight, 24V= (0.85A), orange, 80 dB(A)/6J, IP 30	1	II	48
38542	HBZ 8542 24V DC	Combi flashlight, 24V= (0.85A), red, 80 dB(A)/6J, IP 30	1	II	48
38551	GBZ 8611	Flashing light, 240V~ (0.1A), orange, 6J/3360 Cd(p), IP 54	1	II	48
38552	GBZ 8612	Flashing light, 240V~ (0.1A), red, 6J/1440 Cd(p), IP 54	1	II	48
38571	HBZ 8571 240V AC	Combi flashlight, 240V~ (0.1A), orange, 72 dB(A)/6J, IP 30	1	II	48
38572	HBZ 8572 240V AC	Combi flashlight, 240V~ (0.1A), red, 72 dB(A)/6J, IP 30	1	II	48
38591	GSZ 8591	Bulb, 12V, 25W, for Ba15d	1	II	51
38592	GSZ 8592	Bulb, 24V, 25W, for Ba15d	1	II	51
38593	GSZ 8593	Bulb, 240V, 25W, for Ba15d	1	II	51
38595	KSZ 8595	Bulb, 12V, 5W, for Ba15d	1	II	51
38596	KSZ 8596	Bulb, 24V, 5W, for Ba15d	1	II	51
38597	KSZ 8597	Bulb, 240V, 5W, for Ba15d	1	II	51
38598	KSZ 8598	Xenon tube for KBZ, 2 Joules	1	II	51
38600	TSZ 8600	Base element, for system TXX, black, IP 65	1	II	40
38601	KSZ 8601	Mounting base, horiz. assembly, plastic PA 6.6, black	1	II	40
38603	KSZ 8603	Extension tube,100 mm, plastic PA 6,6, black	1	II	40
38604	KSZ 8604	Mounting bracket, vertical assembly, 1 connection, black	1	II	40
38605	KSZ 8605	Mounting bracket, vertical assembly, 2 connections, black	1	II	40
38610	MSZ 8610	Base element, for system MXX, colour black, IP 65	1	II	44
38620	MSG 8620	Sounder, 24V~/= (90mA), max. 76 dB(A), 1 sound, IP 54	1	II	44
38621	MWB 8621	LED warning/flashing light, 24V~/= (25mA), orange-yellow, IP 65	1	II	45
38622	MWB 8622	LED warning/flashing light, 24V~/= (25mA), red, IP 65	1	II	45
38624	MWB 8624	LED warning/flashing light, 24V~/= (25mA), clear, IP 65	1	II	45
38625	MWB 8625	LED warning/flashing light, 24V~/= (25mA), blue, IP 65	1	II	45
38626	MWB 8626	LED warning/flashing light, 24V~/= (25mA), green, IP 65	1	II	45
38630	MSG 8630	Sounder, 240V~ (13mA), max. 76 dB(A), 1 sound, IP 54	1	II	44
38631	MWB 8631	LED warning/flashing light, 240V~ (50mA), orange-yellow, IP 65	1	II	45
38632	MWB 8632	LED warning/flashing light, 240V~ (50mA), red, IP 65	1	II	45
38634	MWB 8634	LED warning/flashing light, 240V~ (50mA), clear, IP 65	1	II	45
38635	MWB 8635	LED warning/flashing light, 240V~ (50mA), blue, IP 65	1	II	45
38636	MWB 8636	LED warning/flashing light, 240V~ (50mA), green, IP 65	1	II	45
38651	KSZ-LED 8651	LED illuminant, 230/240V AC, yellow-orange, 50mA, socket Ba15d	1	II	51
38652	KSZ-LED 8652	LED illuminant, 230/240V AC, red, 50mA, socket Ba15d	1	II	51
38654	KSZ-LED 8654	LED illuminant, 230/240V AC,white, 55mA, socket Ba15d	1	II	51
38655	KSZ-LED 8655	LED illuminant, 230/240V AC, blue, 70mA, socket Ba15d	1	II	51
38656	KSZ-LED 8656	LED illuminant, 230/240V AC, green, 50mA, socket Ba15d	1	II	51
38661	KSZ-LED 8661	LED illuminant, 24V AC/DC, yellow-orange, 45mA, socket Ba15d	1	II	51
38662	KSZ-LED 8662	LED illuminant, 24V AC/DC, red, 45mA, socket Ba15d	1	II	51
38664	KSZ-LED 8664	LED illuminant, 24V AC/DC, clear, 50mA, socket Ba15d	1	II	51
38665	KSZ-LED 8665	LED illuminant, 24V AC/DC, blue, 65mA, socket Ba15d	1	II	51

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38666	KSZ-LED 8666	LED illuminant, 24V AC/DC, blue, 45mA, socket Ba15d	1	II	51
38711	TWL 8711	Warning light,12-240V~/=, orange, 3 Cd(p)/5W, IP 65	1	II	41
38712	TWL 8712	Warning light,12-240V~/=, red, 1 Cd(p)/5W, IP 65	1	II	41
38714	TWL 8714	Warning light,12-240V~/=, clear, 3 Cd(p)/5W, IP 65	1	II	41
38715	TWL 8715	Warning light,12-240V~/=, blue, 1 Cd(p)/5W, IP 65	1	II	41
38716	TWL 8716	Warning light,12-240V~/=, green, 1 Cd(p)/5W, IP 65	1	II	41
38717	TWL 8717	Warning light,12-240V~/=, yellow, 3 Cd(p)/5W, IP 65	1	II	41
38721	TBL 8721	Flashing light,12-48V= (0.43/0.21A), orange, 3 Cd(p)/5W, IP 65	1	II	42
38722	TBL 8722	Flashing light,12-48V= (0.43/0.21A), red, 1 Cd(p)/5W, IP 65	1	II	42
38724	TBL 8724	Flashing light,12-48V= (0.43/0.21A), clear, 3 Cd(p)/5W, IP 65	1	II	42
38725	TBL 8725	Flashing light,12-48V= (0.43/0.21A), blue, 1 Cd(p)/5W, IP 65	1	II	42
38726	TBL 8726	Flashing light,12-48V= (0.43/0.21A), green, 1 Cd(p)/5W, IP 65	1	II	42
38727	TBL 8727	Flashing light,12-48V= (0.43/0.21A), yellow, 3 Cd(p)/5W, IP 65	1	II	42
38731	TBL 8731	Flashing light, 24V/240V~ (0.21/0.021A), orange, 3 Cd(p)/5W, IP 65	1	II	42
38732	TBL 8732	Flashing light, 24V/240V~ (0.21/0.021A), red, 1 Cd(p)/5W, IP 65	1	II	42
38734	TBL 8734	Flashing light, 24V/240V~ (0.21/0.021A), clear, 3 Cd(p)/5W, IP 65	1	II	42
38735	TBL 8735	Flashing light, 24V/240V~ (0.21/0.021A), blue, 1 Cd(p)/5W, IP 65	1	II	42
38736	TBL 8736	Flashing light, 24V/240V~ (0.21/0.021A), green, 1 Cd(p)/5W, IP 65	1	II	42
38737	TBL 8737	Flashing light, 24V/240V~ (0.21/0.021A), yellow, 3 Cd(p)/5W, IP 65	1	II	42
38781	TSG 8781	Sounder, 12V/24V~/=(max.0.4/max.1.0A), 32 sounds, IP 54	1	II	43
38782	TSG 8782	Sounder, 240V~ (max. 0.044A), max. 100 dB(A), 32 sounds, IP 54	1	II	43
38785	TSG 8785	Sounder, 12/24V~/= (0.003/0.006A), 6 sounds, IP 54	1	II	42
38786	TSG 8786	Sounder, 240V~ (0.008A), max. 81 dB(A), 6 sounds, IP 54	1	II	42
38831	TLB 8831	LED flashing light, 24V~/= (0.09A), orange, IP 65	1	II	40
38832	TLB 8832	LED flashing light, 24V~/= (0.09A), red, IP 65	1	II	40
38834	TLB 8834	LED flashing light, 24V~/= (0.08A), clear, IP 65	1	II	40
38835	TLB 8835	LED flashing light, 24V~/= (0.08A), blue, IP 65	1	II	40
38836	TLB 8836	LED flashing light, 24V~/= (0.08A), green, IP 65	1	II	40
38837	TLB 8837	LED flashing light, 24V~/= (0.08A), yellow, IP 65	1	II	40
38841	TLB 8841	LED flashing light, 240V~ (0.02A), orange, IP 65	1	II	41
38842	TLB 8842	LED flashing light, 240V~ (0.02A), red, IP 65	1	II	41
38844	TLB 8844	LED flashing light, 240V~ (0.02A), clear, IP 65	1	II	41
38845	TLB 8845	LED flashing light, 240V~ (0.02A), blue, IP 65	1	II	41
38846	TLB 8846	LED flashing light, 240V~ (0.02A), green, IP 65	1	II	41
38847	TLB 8847	LED flashing light, 240V~ (0.02A), yellow, IP 65	1	II	41
43150	CROMA 50	Electronic chime, 3 sounds, batt. 4x1.5V, activ. button or 8/12V	1	I	15
43170	CROMA 100A	Electronic chime,18 sounds, batt. 4x1.5V or 8-12V=/~	1	I	14
43175	CROMA 230A	Electronic chime, 18 sounds, 230V~ or 8-12V=/~	1	I	14
43177	CROMA 231A	Electronic chime, 18 sounds, 230V~ or 8-12V=/~	1	I	14
43190	CROMA 230A Alu/white	Electronic chime, 17 sounds, 230V~ or 8-12V=/~, double call determination	1	I	14
43191	Acrylic door Alu/white	spare door for MISTRAL 200M/300M, design front acrylic, aluminium coloured	1	I	15
43192	Acrylic door Green	spare door for MISTRAL 200M/300M, design front acrylic, green	1	I	15
43193	Acrylic door Red	spare door for MISTRAL 200M/300M, design front acrylic, red	1	I	15
43225	CHIME 225A w	Electronic chime, 3 sounds, batt. 4x1.5V	1	I	15
43300	MISTRAL 300M	Radio chime set, range 200m, 6 melodies/flash. 86dB(A), 8-12V=/~	1	I	9

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43301	MISTRAL 300M E	Radio chime receiver, range 200m, 6 melodies/flash. 86dB(A)	1	I	9
43303	MISTRAL 210M	Radio chime set, range 200m, 3 melodies 86dB(A), 8-12V=/~	1	I	10
43305	MISTRAL 200M	Radio chime set, range 100m, 3 melodies 86dB(A), 8-12V=/~	1	I	9
43310	MISTRAL 400	Mains powered radio chime set, range 150m, 6 melodies/flashing light,	1	I	10
43311	MISTRAL 400E	Mains powered radio chime receiver, range 150m, 6 melodies/flashing light	1	I	10
43315	MISTRAL 300M(E) BM	Radio chime set, incl. MISTRAL 300ME & movement detector BM03.0	1	I	8
43399	NA 9V DC - GPE	Mains adapter, SEC: 9V=/max.0.5A (4.5VA), PRI: 230V~ (earthed/Euro)	1	I	8
43400	MISTRAL 600	Radio chime set, range 250m-868.35MHz, 17 melod./LED-flash XX dB,	1	I	8
43401	MISTRAL 600E	Radio chime rec., range 250 or 500m, 17 melod./LED flash XX dB,	1	I	8
43440	MISTRAL SE 03.0-s	Radio transmitter, range 250m-868.35MHz, incl. 2 batt. 1.5V (AAA	1	I	8
43441	MISTRAL SE 03.0	Radio transmitter, range 250m-868.35MHz, incl. 2 batt. 1.5V (AAA)	1	I	8
43445	MISTRAL BM03.0	Radio movement detector, incl. lithium battery 3V type CR123A	1	I	8
43450	MISTRAL PSE 04.0-s	Radio transmitter, range 250m-868.35MHz, incl. 2 batt. 1.5V (AAA)	1	I	8
43701	UP Gong 120ws	Flush-type electronic gong, 17 gong tones, up to 83 dB, 8-12V=/~ supply,	1	I	19
43711	UP-LTW 120ws	Flush-type bell mechanism, up to 80 dB, white, 8-12V=/~ supply, incl. frame	1	I	19
43721	UP-SU 120ws	Flush-type buzzer, up to 80 dB, white, 8-12V=/~ supply, incl. frame	1	I	19
44065	CHIME 065 w/sim	Electro-mechanical chime, 2soundpl.DingDong/83dB(A)	1	I	21
44165	CHIME 165 w	Electro-mechanical chime, 2soundpl.DingDong/83dB(A)	1	I	21
44169	CHIME 169 w	Electro-mechanical chime, 2soundpl.DingDong/85dB(A)	1	I	21
44171	CHIME 169 DKw	Electro-mechanical chime, dual tone with repetition	1	I	21
44172	CHIME 169 TRw	Electro-mechanical chime, 2soundpl.DingDong/85dB(A)	1	I	21
44174	CHIME 169 Bw	Electro-mechanical chime, 2soundpl.DingDong/85dB(A)	1	I	21
44179	CHIME 569-230V	Electro-mechanical chime, 2 sounding plates/80dB(A), 230V~ (0.06A)	1	I	21
44265	CHIME 265 w	Electro-mechanical chime, 2soundpl.DingDong/83dB(A)	1	I	21
44465	CHIME 465 A	Electro-mechanical chime, 2soundpl.DingDong, white and black	1	I	21
44466	CHIME 465 A	Electro-mechanical chime, 2soundpl.DingDong/83dB(A), white	1	I	21
44565	CHIME 565 w/sim	Electro-mechanical chime, 2soundpl.DingDong83dB(A), 8V~ (4VA)	1	I	21
44569	CHIME 569 w	Electro-mechanical chime, 2soundpl.DingDong85dB(A), 8V~ (4VA)	1	I	21
44665	CHIME 665 w/bl	Electro-mechanical chime, 2soundpl.Ding/Dong83dB(A), 8V~ (4VA)	1	I	21
51006	KKO 2112 BR	Panel button, Luran S ASA/brown, max.24V~(1.5A)/24V=(1.0A)	3	I	70
51011	MONTILUX 2154	Montilux, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	10	I	76
51013	ETA 2121	Combifix,weatherproof, plastic, max.24V~(1.5A)/24V=(1.0A)	10	I	76
51014	ETA 2122	Combifix II, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	10	I	76
51015	ETA 2132	Combilux, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	10	I	76
51016	TUBULAR BULB 2130	Replacement tubular bulb, packaging content: 10 items, (price quoted per item)	10	I	76
51018	ETA 1321	Flush-mounted storey plate, white, max.24V~(1.5A)/24V=(1.0A)	1	II	78
51026	LIGHT SIGN	Red light sign, for panel button, KKO 2112 BR (51006)	10	I	84
51103	DOMOLUX WS/SW 2151	Domolux, max. 12V~/= (AC/DC)1.5A, surf.mount. white/black	1	I	77
51113	DOMOLUX SIM/SW 2151	Domolux, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	1	I	77
51203	DOMOLUX DUO WS/SW 2152	Domolux Duo, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	1	I	77
51213	DOMOLUX DUO SIM/SW 2152	Domolux Duo, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	1	I	77
55511	ETA 501 G	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	72
55512	ETA 502 G	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 2 ring tones	1	I	72
55531	ETA 501 GA	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	72
55532	ETA 502 GA	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 2 ring tones	1	I	72

MODEL LIST

Order no.	Type	Description	PU	DC	Page
55533	ETA 503 GA	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 3 ring tones	1	I	72
55540	ETA S 100	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	71
55541	ETA S 200	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	71
55595	ETA 2310	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	72
55597	ETA 2312	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	72
55631	ETA 631 WS	Classic storey plate, max. 12V~/= (AC/DC) 1.5A, surf.mount., 1 PB	1	I	78
55632	ETA 632 WS	Classic storey plate, max. 12V~/= (AC/DC) 1.5A, surf.mount., 2 PBs	1	I	78
55633	ETA 633 WS	Classic storey plate, max. 12V~/= (AC/DC) 1.5A, surf.mount., 3 PBs	1	I	78
55634	ETA 634 WS	Classic storey plate, max. 12V~/= (AC/DC) 1.5A, surf.mount., 4 PBs	1	I	78
55801	ETA 801 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 1 panel button	1	I	73
55802	ETA 802 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 2 panel buttons	1	I	73
55803	ETA 803 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 3 panel buttons	1	I	73
55804	ETA 804 EV1	Storey plate, max.24V~(1.5A)/24V=(1.5A), flushmount., 4 panel buttons	1	I	73
55805	ETA 805 EV1	Storey plate, max.24V~(1.5A)/24V=(1.5A), flushmount., 5 panel buttons	1	I	73
55806	ETA 806 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 6 panel buttons	1	I	73
55807	ETA 807 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 7 panel buttons	1	I	73
55808	ETA 808 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 8 panel buttons	1	I	73
55809	ETA 809 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 9 panel buttons	1	I	73
55826	ETA 833 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 6 panel buttons	1	I	74
55827	ETA 834 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 6 panel buttons	1	I	74
55828	ETA 844 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 8 panel buttons	1	I	74
55829	ETA 845 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 9 panel buttons	1	I	74
55830	ETA 855 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 10 panel buttons	1	I	74
55831	ETA 856 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 11 panel buttons	1	I	74
55832	ETA 866 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 12 panel buttons	1	I	74
55833	ETA 867 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 13 panel buttons	1	I	74
55881	UPK 801	Flush-mounted box for 1 panel button, single row	1	I	73
55882	UPK 802	Flush-mounted box for 2 panel buttons, single row	1	I	73
55883	UPK 803	Flush-mounted box for 3 panel buttons, single row	1	I	73
55884	UPK 804	Flush-mounted box for 4 panel buttons, single row	1	I	73
55885	UPK 805	Flush-mounted box for 5 panel buttons, single row	1	I	73
55886	UPK 806	Flush-mounted box for 6 panel buttons, single row	1	I	73
55887	UPK 807	Flush-mounted box for 7 panel buttons, single row	1	I	73
55888	UPK 808	Flush-mounted box for 8 panel buttons, single row	1	I	73
55889	UPK 809	Flush-mounted box for 9 panel buttons, single row	1	I	73
55893	UPK 833	Flush-mounted box for 6 panel button, double row	1	I	74
55894	UPK 834/844	Flush-mounted box for 7/8 panel buttons, double row	1	I	74
55895	UPK 845/855	Flush-mounted box for 9/10 panel buttons, double row	1	I	74
55896	UPK 856/866	Flush-mounted box for 11/12 panel buttons, double row	1	I	74
55897	UPK 867	Flush-mounted box for 13 panel buttons, double row	1	I	74
55912	ETA S 102	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	71
55922	ETA S 202	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	71
55932	ETA S 302	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	71
55942	ETA S 402	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	71
61031	PROTACT 380 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69

Order no.	Type	Description	PU	DC	Page
61032	PROTACT 381 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
61045	PROTACT 681 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
61047	PROTACT 680 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
62000	PROTACT 150 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62001	PROTACT 140 GO	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62002	PROTACT 110 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62006	PROTACT 450 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
62013	PROTACT 420 AL-KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm IP 54	5	I	69
62016	PROTACT 410 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
62025	PROTACT 340 GO	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62026	PROTACT 370 NI	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62032	PROTACT 310 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62033	PROTACT 360 CR	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62034	PROTACT 371 NI	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62045	PROTACT 210 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	68
62054	PROTACT 260 CR	Bell button, max. 24V~/= /AC/DC)/1.5A, Ø16mm, IP54	5	I	68
62060	PROTACT 550 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
62061	PROTACT 510 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	69
63022	PROTACT 101 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	3	II	70
63032	PROTACT 100 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	3	II	70
63042	PROTACT 102 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	3	II	70
63052	PROTACT 105 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	3	II	70
64025	KKO 5050	Button, plastic white/round, max.24V~(1.5A)/24V=(1.0A), surface	10	I	78
64032	KKO 2001 WS/WS	Golf bell button, white, max.24V~(1.5A)/24V=(1.0A), surface	10	I	76
64035	KKO 2005	Golf bell button, black	10	I	77
64036	KKO 2005W	Golf bell button, white	10	I	77
64063	KKO 3736A	Bell suspended button, plastic white, max.24V~(1.5A)/24V=(1.0A)	10	I	78
64070	KKOL 2001 WS/T	Fashion button, 8-24V~ (1.5A), LED approx. (20 mA)	1	I	77
64074	KKOL 2001 SIM/T	Fashion button, 8-24V~ (1.5A), LED approx. (20 mA)	1	I	77
64090	KKO 2001 WS/WS	Golf bell button, max.24V~(1.5A)/24V=(1.0A), surface	1	I	76
64094	KKO 2001 SIM/SW	Golf bell button, max.24V~(1.5A)/24V=(1.0A), surface	1	I	76
64114	KKO 152A	Sliding contact, insulating duct edge shield, max.24V~(1.5A)/24V=(1.0A)	10	I	78
64131	KS 2070 MS-GEB	Contact shell, brushed brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	72
64132	KS 2071 MS-BRÜN	Contact shell, burnished brass/round, max.24V~(1.5A)/24V=/1.0A)	1	I	72
64141	KS 2074 WS	Contact shell, brass painted white/round, max.24V~(1.5A)/24V=(1.0A)	1	I	72
64143	KS 2075	Contact shell, chrome-plated matt brass/round, max.24V~81.5A)/24V=(1.0A)	1	I	72
64144	KS 2076	Contact shell, chrome-plated polished brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	72
64151	TORK 2060	Door contact, brushed brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	71
93011	TO 5300	Door opener, 8V=(0.75A) or12V~(1.0A)	1	I	82
93012	TO 5110	Door opener, 8-12V~/=, box 28x90x20mm, perforated closing panel	1	I	82
93013	TO 5111	Door opener, 8-12V~/=, with arrester	1	I	82
93014	TO 5112	Door opener, 8-12V~/=, with release mechanism	1	I	82
93015	TO 5113	Door opener, 8-12V~/=, with arrester and rel. mech.	1	I	82
93021	TO 5600	Box-type door opener,12V~/= 30 Ohm (0.4A), perforated closing panel	1	I	83
93031	TO 5200	Chain pull door opener,12V~/= 8 Ohm (1.5A)	1	I	83

MODEL LIST

Order no.	Type	Description	PU	DC	Page
93061	TO 5134	No-load current door opener,24V= (0.11A)	1	I	83
93071	TO 5110 E	Door opener, 8V= (0.2A), electric release mechanism	1	I	83
93081	TO 5400	Door opener, 8-12V AC/DC 0.7A/14Ohm, 250x25x3mm	1	I	82
93082	TO 5411	Door opener, 8-12V AC/DC 0.7A/14Ohm, 250x25x3mm	1	I	82
93083	TO 5412	Door opener, 8-12V AC/DC 0.7A/14Ohm, 250x25x3mm	1	I	82
93084	TO 5413	Door opener, 8-12V AC/DC 0.7A/14Ohm, 250x25x3mm	1	I	82
93090	TO 5900-L	Door opener, 12V AC/DC 0.5A/20Ohm, 1000KG, 250x25x3/IP54	1	I	82
93091	TO 5900-R	Door opener, 12V AC/DC 0.5A/20Ohm, 1000KG, 250x25x3/IP54	1	I	82
93098	TO WSB DIN L	Angled closing panel, left-hand arrester, length 250mm	1	I	83
93099	TO WSB DIN L	Angled closing panel, right-hand arrester, length 250mm	1	I	83
93114	TO 5116	Door opener, 8V~/= to 12V~/=, box 28x90x20mm	1	I	83
93115	TO 5117	Door opener, 8V~/= to 12V~/=, box 28x90x20mm	1	I	83
94022	TA 220d	Staircase light time switch	1	I	63
94500	McGuard PM-APws	Motion sensor, AC 230V~ / IP 40, Surveillance range 360° at 6m	1	II	56
94501	McGuard PM-EINBws	Motion sensor, AC 230V~ / IP 40, Surveillance range 360° at 6m	1	II	56
94502	McGuard DS-APgr	Photoelectric lighting controller, surface mounted, AC 230V~ / IP 55	1	II	57
94510	McGuard mini BM110ws	Motion sensor, AC 230V~/1000W/400W(kap.), IP44,Surveillance range 110°	1	II	56
94511	McGuard mini BM110pw	Motion sensor, AC 230V~/1000W/400W(kap.), IP44,Surveillance range 110°	1	II	56
94512	McGuard mini BM110sw	Motion sensor, AC 230V~/1000W/400W(kap.), IP44,Surveillance range 110°	1	II	56
94513	McGuard mini BM180ws	Motion sensor, AC 230V~/1000W/400W(kap.), IP44,Surveillance range 180°	1	II	56
94514	McGuard mini BM180pw	Motion sensor, AC 230V~/1000W/400W(kap.), IP44,Surveillance range 180°	1	II	56
94515	McGuard mini BM180sw	Motion sensor, AC 230V~/1000W/400W(kap.), IP44,Surveillance range 180°	1	II	56
94530	McGuard professional BM120ws	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 120°	1	II	56
94531	McGuard professional BM240ws	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 240°	1	II	56
94532	McGuard professional BM360ws	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 360°	1	II	56
94533	McGuard professional BM120sw	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 120°	1	II	56
94534	McGuard professional BM240sw	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 240°	1	II	56
94535	McGuard professional BM360sw	Motion sensor, AC 230V~/1200VA/5000W(kap.), IP55, Surveillance range 360°	1	II	56
94550	McGuard Halo120	Halogen floodlight spots, AC230V~/120W, IP 44, C-Class	1	II	57
94551	McGuard Halo120BM180	Halogen floodlight spot with infrared movement detector, AC230V~/120W, IP 44	1	II	57
94552	McGuard Halo400	Halogen floodlight spots, AC230V~/400W, IP 44, C-Class	1	II	57
94553	McGuard Halo400BM180	Halogen floodlight spot with infrared movement detector, AC230V~/400W, IP 44	1	II	57
94555	McGuard LED RL300Aws	LED floodlight, movement sensor, 220-240V, IP44, LED,30 kh, RW 12m, H 2.5m, 240°	1	II	57
94556	McGuard LED RL300Asw	LED floodlight, movement sensor, 220-240V, IP44, LED,30 kh, RW 12m, H 2.5m, 240°	1	II	57
94570	RWM 9V L	Smoke alarm 9V lithium, Li, 85db@3m, test and mute function, batt.: 10 years	1	II	57
94571	RWM 9V A	Smoke alarm 9V alkaline, 85db@3m, test function, batt.:3 years	1	II	57
98002	SMALL FRAME 500-2 EV1	Small frame, silver anodised	10	III	84
98005	SMALL FRAME 500-2 R14	Small frame, brown anodised	10	III	84
98009	SMALL FRAME 500-1 EV1	Small frame, silver anodised	10	III	84
98010	SMALL FRAME 500-1 V2A	Small frame, Brushed stainless steel, with protection plate/screws	5	III	84
98012	SMALL FRAME 500-1 R14	Small frame, brown anodised, with protection plate/screws	10	III	84
98013	ENGR. PLATE 500-9 EV1	Engraved plate, silver anodised, 20x58mm	10	III	84
98020	BULB 1327	Bulb, 12V~/= (24V/50mA), Socket E10	10	III	84
98023	SMALL FRAME 600 GREY	Small frame, Clamped small frame, grey, 20 x 57.5 mm	10	III	84
98025	SMALL FRAME 600 BLACK	Small frame, Clamped small frame, black, 20 x 57.5 mm	10	III	84

Order no.	Type	Description	PU	DC	Page
98032	ENGR. PLATE 900 EV1	Engraved plate, silver anodised, 20 x 77 mm	5	III	84
98035	ENGR. PLATE 500-8 EV1	Engraved plate, silver anodised, 20 x 58 mm	5	III	84
98054	SMALL FRAME 600 WS	Small frame, Clamped small frame, white, 20 x 57.5 mm	10	III	84
98056	NSH LED 100 WS	LED nameplate, 4x LED white, resistant to vandalism IP54	1	III	84
98061	ENGR. PLATE 500-10 EV1	Engraved plate, silver anodised, 20 x 62 mm	10	III	84
98062	ENGR. PLATE 500-10 V2A	Engraved plate, Brushed stainless steel, 20 x 62 mm	5	III	84
98063	ENGR. PLATE 500-10 GO	Engraved plate, Gold-plated brass, 20 x 62 mm	5	III	84
98064	ENGR. PLATE 500-10 R14	Engraved plate, brown anodised, 20 x 62 mm	10	III	84
98065	LED nameplate	4 x LED blue, resistant to vandalism, IP54, 13x43 mm, 23x61x14 mm	1	I	84
98191	Bulb lux	Replacement bulb, 17V	10	III	84

Model	Order no.	Description	
CHIME 065 w/sim	44065	**Chime** • Additionally with insertion slot for compound battery 9 V (model ALKALINE) • Battery not in scope of delivery	• 8 V~ (4 VA) • Or 9 V=
CHIME 165 w	44165	**Chime** • With insertion slot for compound battery 9 V (model ALKALINE)	• 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery
CHIME 169 w	44169	**Chime** • Additionally with insertion slot for 4 batteries (4 x 1.5 V) alkaline baby cell	• 8 V~ (4 VA) • Or 6 V= • White
CHIME 169 DKw	44171	**Chime** • Dual tone • Dual tone with repet. (continuous tone)	• Cycle frequency approx. 2–3 Hz • White
CHIME 169 A TRw	44172	**Chime** • Integrated transformer • White	• Prim: 230 V~ • 8 V~ (4 VA)
CHIME 265 w	44265	**Chime** • With insertion slot for compound battery 9 V (model ALKALINE)	• 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery
CHIME 465A Bw/sw	44465	**Chime** • Electromechanical • 2 Sound plates (DingDong) • Sound plates made from real bell steel • Casing colour: white, Front: black • with insertion slot for battery	• 8 - 12 V~ (4VA) • Battery 9 V= Alkal.6LR61 • 118 x 118 x 47 mm
CHIME 465A Bw/w	44466	**Chime** • Electromechanical • 2 Sound plates (DingDong) • Sound plates made from real bell steel • Casing colour: white, Front: white • with insertion slot for battery	• 8 - 12 V~ (4VA) • Battery 9 V= Alkal.6LR61 • 118 x 118 x 47 mm • max 83 dbA • Battery not in scope of delivery
CHIME 565 w/sim	44565	**Chime** • Additionally with insertion slot for compound battery 9 V (model ALKALINE)	• 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery
CHIME 569 w	44569	**Chime** • Additionally with insertion slot for 4 batteries (4 x 1.5 V) alkaline baby cell	• 8 V~ (4 VA) • Or 6 V= • Battery not in scope of delivery
CHIME 569-230V	44179	**Chime** • White housing with black base • Additionally with insertion slot for compound battery 9 V (model ALKALINE)	• 230V~ (0,06A) • max. 80 dB(A) • 170 x 105 x 50 mm
CHIME 665 w/bl	44665	**Chime** • Additionally with insertion slot for compound battery 9 V (model ALKALINE) • Battery not in scope of delivery	• 8 V~ (4 VA) • Or 9 V=

CHIME 065
CHIME 165
CHIME 169
CHIME 169A
CHIME 265
CHIME 465A
CHIME 565
CHIME 569
CHIME 569 230V
CHIME 665

Note: Batteries are not included in the delivery   **short-term load max.20s (KB20s)**