



SIGNALLING 2015/2016

Edition 1.0

GROTHE
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.

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»Actually our chimes belong into the Charts.«



CHIMES AND RADIO CHIMES

The right one for all tastes!

GROTHER 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-programmed
- Safe 868.35 MHz transmission frequency

Since its market launch, the MISTRAL radio chime series has conquered 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.

Despite the high range of 500 m, it works with absolutely harmless transmitting 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.

The only wireless chime with a waterproof transmitter.

SET MISTRAL 600

LED-flashlight

17 polyphonic melodies

12 removeable design-inlays

crystal stable 500 m range

marking of nameplates

waterproof radio transmitter IP54

LED-flashlight

continuously adjustment of volume

four-level slide switch for call-signal-adjustment

SET MISTRAL 200

500 m

500 mJ-flashlight

500 m

BM 03.0 108° 15m

MISTRAL 400M
Mains-powered radio chime receiver with 17 polyphonic melodies, 500 m range



MISTRAL 600



MISTRAL 600E
here with an interchangeable motif



MISTRAL SE 03.0-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 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 500 m range • Transmitter with batteries
Extension possibilities / Accessories		
MISTRAL 600E	43401	Radio chime receiver • 17 melodies/flashing LED • Distance booster • 12 design inlays • Range 500 m depend. on transmitter • 8–12 V=~/~ / Batt. 4 x 1.5 V (not included in scope of delivery)
MISTRAL SE 03.1	43440	Radio transmitter • Colour: painted silver/anthracite • for all Mistral chimes made since 2003 • 500 m range, 868.35 MHz • Page forwarding • can be connected with a dry contact or 8-12 V triggering signal • LED function indicator • Incl. batt. 2 x 1.5 V (model LR03/AAA-alkaline) • IP 54
MISTRAL SE 03.1	43441	Radio transmitter • Colour: white plastic • for all Mistral chimes made since 2003 • 500 m range, 868.35 MHz • Page forwarding • can be connected with a dry contact or 8-12 V triggering signal • LED function indicator • Incl. batt. 2 x 1.5 V (model LR03/AAA-alkaline) • IP 54
MISTRAL BM03.0	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 • 500 m radio range outdoors; 868.35MHz • Adjustable delay time from 3 to 60 sec • Incl. curtain lens and volumetric lens
MISTRAL 300M(E) BM	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: 500 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)
- receiver: 150 x 115 x 38 mm, transmitter: 35 x 96 x 16 mm

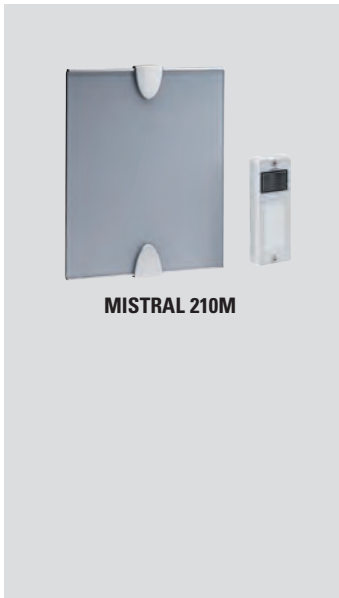
Model	Order no.	Description
MISTRAL 300M	43300	Radio chime set <ul style="list-style-type: none"> • White
MISTRAL 200M	43305	Radio chime set like MISTRAL 300 except: <ul style="list-style-type: none"> • No distance booster • 17 melodies • No flashing light • White • Range 500 m • 17 different paging signals • No input for 8–12 V=~/-
Accessories		
MISTRAL 300M E	43301	Radio chime receiver <ul style="list-style-type: none"> • 17 melodies/flashing light • Distance booster • Range 500 m • 8–12 V=~/- / Batt. 4 x 1.5 V • White
MISTRAL SE 03.0	43441	Radio Transmitter <ul style="list-style-type: none"> • For all MISTRAL chimes since 2003 • Range: 500 m, 868,35 MHz • Page forwarding • White • LED function indicator • 2x1,5V batt. incl. (LR03/AAA-Alkaline) • IP 54
NA 9V-GPE	43399	Mains adapter <ul style="list-style-type: none"> • Suitable for receiver MISTRAL 300 (E) and transmitter • Incl. suitable plug • 9 VDC • Max. 0.5 A (4.5 W) • 1.75 m lead
MISTRAL 300M ws	43142	Radio Chime set <ul style="list-style-type: none"> • like receiver MISTRAL 300 (E) • acrylic door color white
MISTRAL 300M sw	43143	Radio Chime set <ul style="list-style-type: none"> • like receiver MISTRAL 300 (E) • acrylic door color black
MISTRAL 300M si	43144	Radio Chime set <ul style="list-style-type: none"> • like receiver MISTRAL 300 (E) • acrylic door color silver
MISTRAL 300M rt	43145	Radio Chime set <ul style="list-style-type: none"> • like receiver MISTRAL 300 (E) • acrylic door color red
MISTRAL 300M gn	43146	Radio Chime set <ul style="list-style-type: none"> • like receiver MISTRAL 300 (E) • acrylic door color green
MISTRAL 300M ws-si	43372	Radio Chime set <ul style="list-style-type: none"> • like receiver MISTRAL 300 (E) • acrylic door color white-silver



Hear the melodies on www.grothe.de or scan the QR-code with your smartphone.

RADIO CHIMES

Radio chime MISTRAL 210



Model	Order no.	Description
MISTRAL 210M	43303	Radio chime set like MISTRAL 300 except: <ul style="list-style-type: none"> • No distance booster • 17 melodies • No flashing light • Range 500 m • No input for 8–12 V=~/- • White

Radio chime MISTRAL 400



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 LED 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

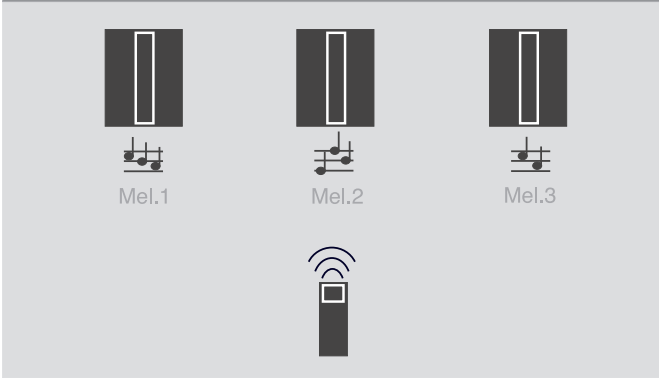
- Range: 500 m, transmission frequency: 868.35 MHz
- Walls, doors, metal parts etc. may significantly reduce the range!
- Use in conjunction with MISTRAL 300 and distance booster if necessary.
- Volume max. 80 dB(A) depending on tone sequence, now adjustable
- Receiver: 230 V~ / 50 Hz
- Transmitter: 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 <ul style="list-style-type: none"> • White
Accessories		
MISTRAL 400E	43311	Mains-powered radio chime receiver <ul style="list-style-type: none"> • 17 melodies/LED flashing light • 230V/Euro plug • Range: 500 m
MISTRAL SE 03.0	43441	Radio Transmitter <ul style="list-style-type: none"> • For all MISTRAL chimes since 2003 • Range: 500 m, 868,35 MHz • Page forwarding • White • LED function indicator • 2x1,5V batt. incl. (LR03/AAA-Alkaline) • IP 54

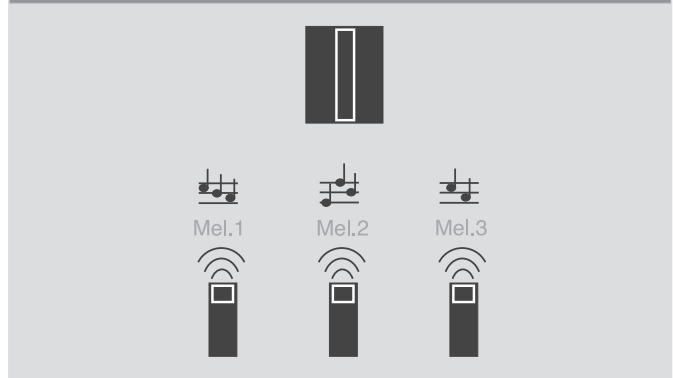
MISTRAL radio chime

Circuit overview

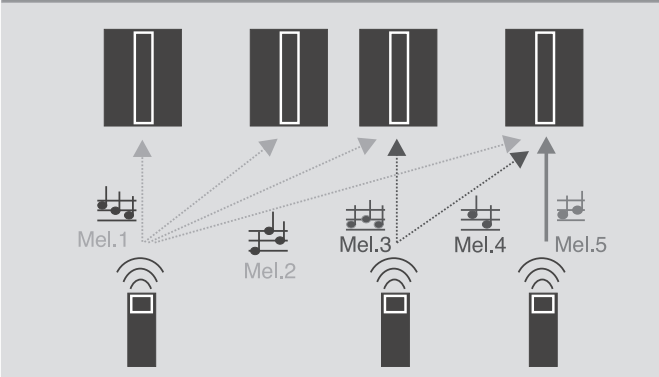
1. Central paging



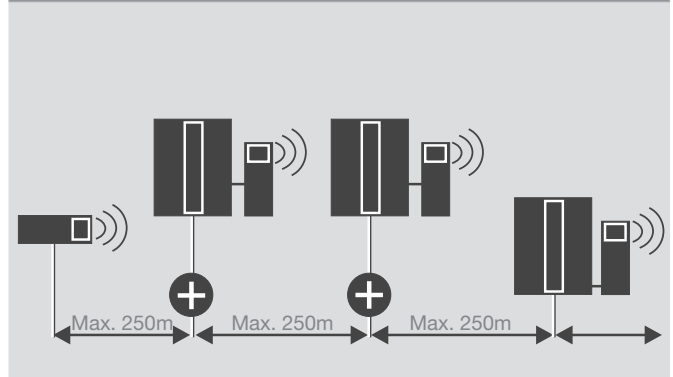
2. Individual paging



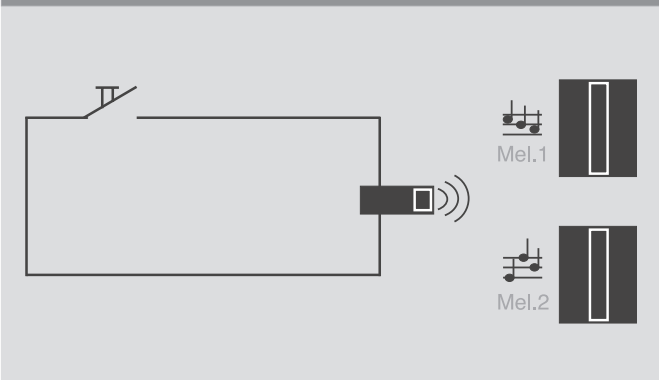
3. Matrix paging



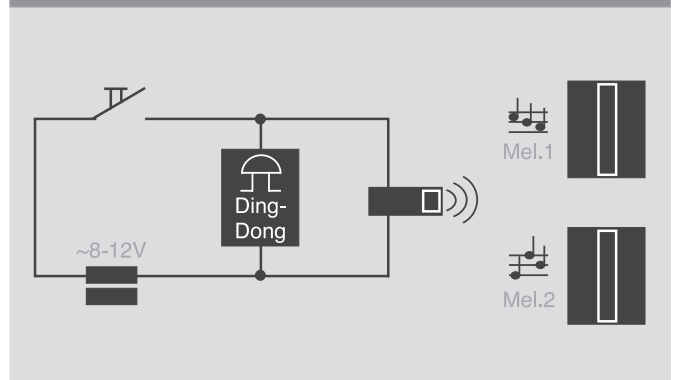
4. Call forwarding dry contact



5. Distance booster



6. Call forwarding AC



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

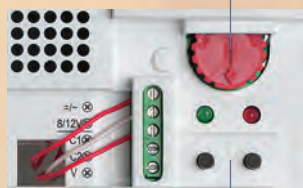


3 Melodies

CROMA 50

17 polyphonic
melodies

Volume control




easyTIP



CROMA 230A



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

CROMA 100A / 230A



CROMA 100A



CROMA 230A



CROMA 230A-a/w



CROMA 231A

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 electromechanical 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

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 electromechanical 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 electromechanical chimes possible

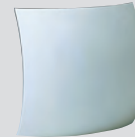
Technical data

- 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 ws	43152	Electronic chime • like CROMA 50 • acrylic door color white
CROMA 50 sw	43153	Electronic chime • like CROMA 50 • acrylic door color black
CROMA 50 si	43154	Electronic chime • like CROMA 50 • acrylic door color silver
CROMA 50 rt	43155	Electronic chime • like CROMA 50 • acrylic door color red
CROMA 50 gn	43156	Electronic chime • like CROMA 50 • acrylic door color green



CROMA 50



CHIME 225A



CROMA 50 ws



CROMA 50 sw



CROMA 50 si



CROMA 50 rt



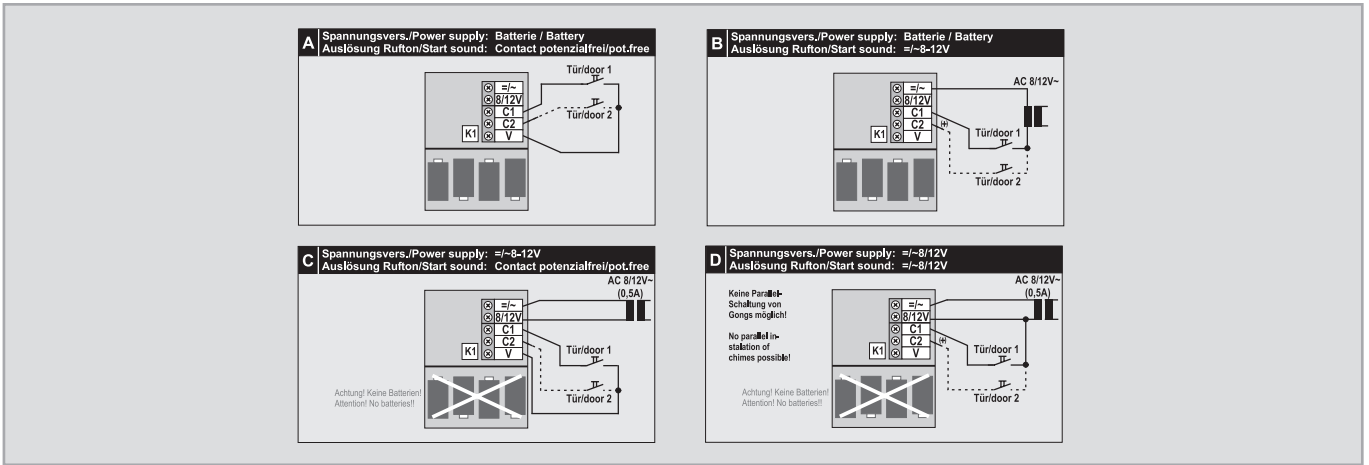
CROMA 50 gn



Hear the melodies on www.grothe.de or scan the QR-code with your smartphone.

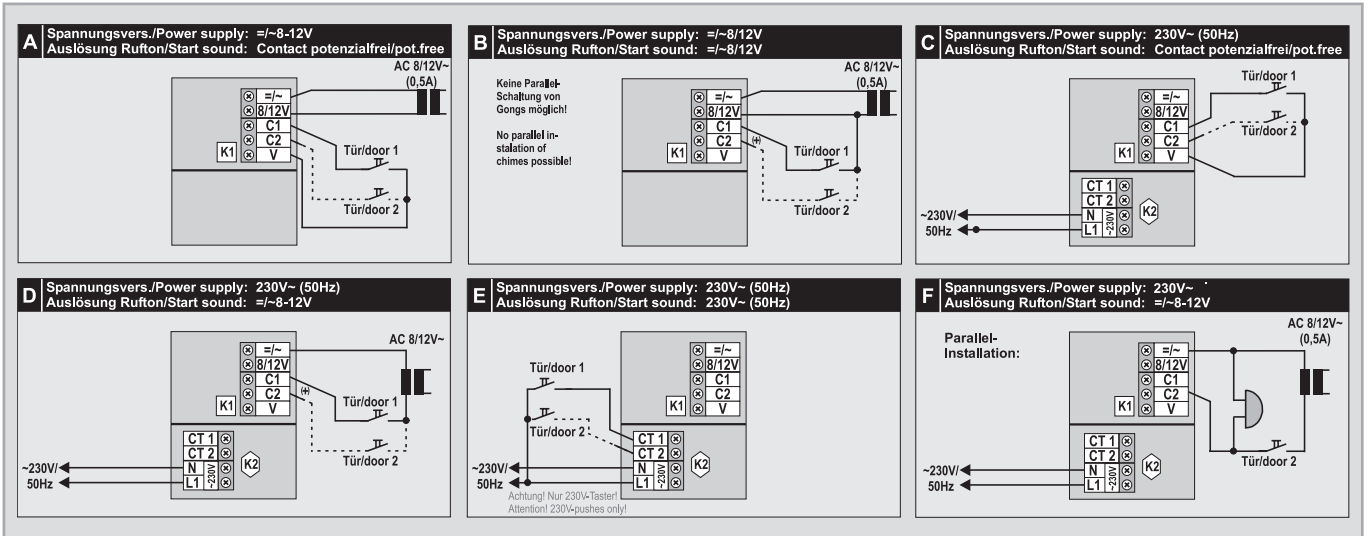
CROMA 100

Circuit overview



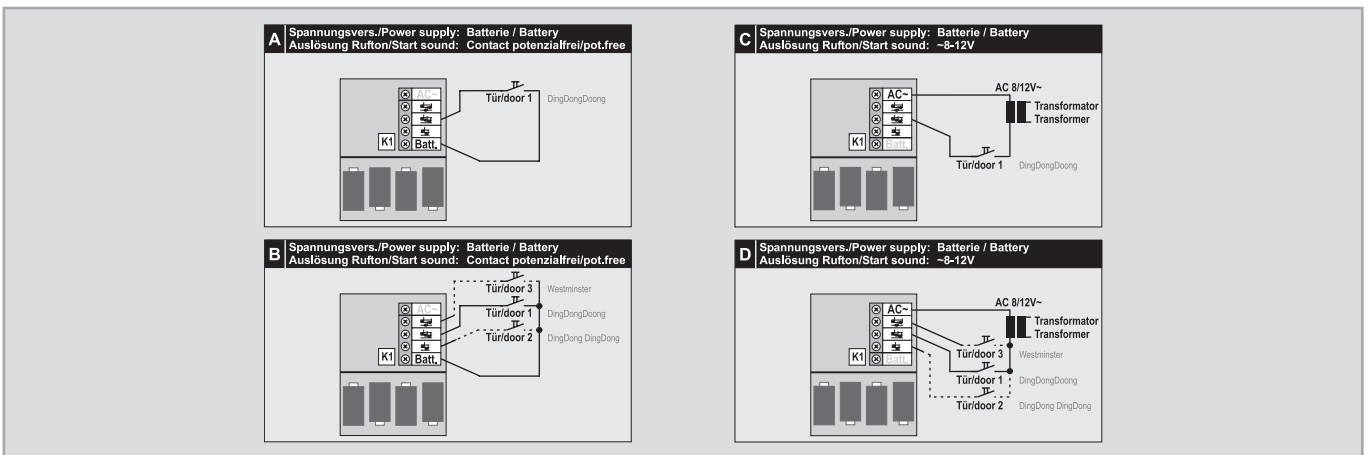
CROMA 230

Circuit overview



CROMA 50/Chime 225A

Circuit overview



Flush mounted series



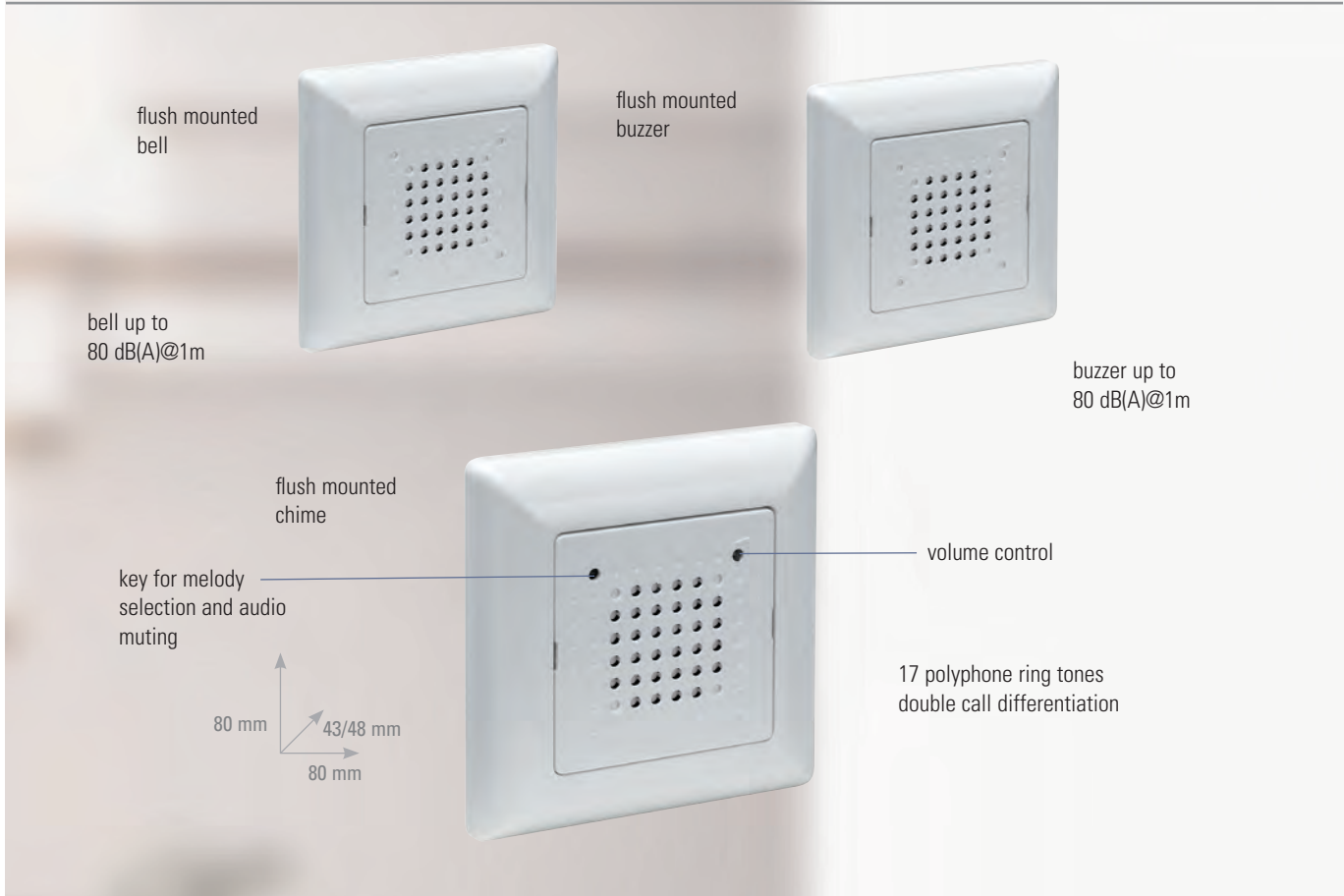
- Installed in a flush mounted unit
- Integration in switch product ranges
- Series with flush mounted chime, bell and buzzer
- 8-12 V= \sim , 230 V
(permanent voltage)

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!



Hear the melodies on www.grothe.de or scan the QR-code with your smartphone.



Flush-type electronic chime, bell and buzzer

Flush-type signalling:

Series consisting of flush-type chime, flush-type bell mechanism 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

Model	Order no.	Description
UP CHIME 120ws	43701	Flush-type electronic chime <ul style="list-style-type: none"> • 17 polyphone ring tones • Mute • cont. volume adjustment • incl. mounting plate & frame <ul style="list-style-type: none"> • 8-12V +/- 0.280 A/permanent voltage • up to 83 db(A) • 50 x 50 x 43 mm • Colour: white
UP CHIME 230ws	43706	Flush-type electronic chime <ul style="list-style-type: none"> • as 43701 <ul style="list-style-type: none"> • but: 230V~, 50Hz / 0.080 A/permanent voltage
UP-LTW 120 ws	43711	Flush-type bell mechanism <ul style="list-style-type: none"> • Small bell • up to 80 db(A) • incl. mounting plate & frame <ul style="list-style-type: none"> • 8-12V~ / 0.320A/permanent voltage • 50 x 50 x 48 mm • Colour: white
UP-LTW 230 ws	43716	Flush-type bell mechanism <ul style="list-style-type: none"> • as 43711 <ul style="list-style-type: none"> • but: 230V~, 50Hz / 0.045 A/permanent voltage
UP-SU 120 ws	43721	Flush-type buzzer <ul style="list-style-type: none"> • Small bell • up to 80 db(A) • incl. mounting plate & frame <ul style="list-style-type: none"> • 8-12V~ / 0.210 A/permanent voltage • 50 x 50 x 48 mm • Colour: white
UP-SU 230 ws	43726	Flush-type buzzer <ul style="list-style-type: none"> • as 43721 <ul style="list-style-type: none"> • but: 230V~, 50Hz / 0.036 A/permanent voltage

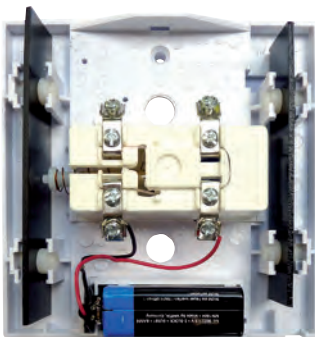




- Two tone
- Sound plates of real bell steel
- Operation with external transformer
- Battery casing for a 9V square battery

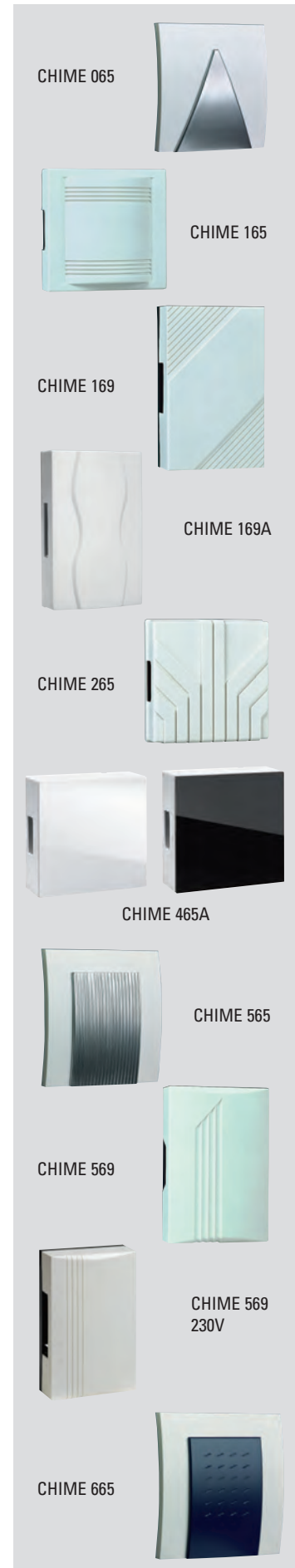
With its sound plates of real bell steel, the classical Grothe two-tone gong reliably ensures a clear, rich tone during signalling. Conventional technology with the highest quality and longest durability. The 8 - 12V gongs can be operated via a transformer, but now have an additional compartment for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

The 230V variations contain an additional transformer in order to save time during installation.



Product overview

Model	Order no.	Description
CHIME 065 w/sim	44065	Chime <ul style="list-style-type: none"> • Additionally with insertion slot for compound battery • 8 V~ (4 VA) • Or 9 V= • 9 V (model ALKALINE) • Battery not in scope of delivery
CHIME 165 w	44165	Chime <ul style="list-style-type: none"> • With insertion slot for compound battery • 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery • 9 V (model ALKALINE)
CHIME 169 w	44169	Chime <ul style="list-style-type: none"> • Additionally with insertion slot for 4 batteries (4 x 1.5 V) • 8 V~ (4 VA) • Or 6 V= • White • alkaline baby cell
CHIME 169 DKw	44171	Chime <ul style="list-style-type: none"> • Dual tone • Cycle frequency approx. 2–3 Hz • Dual tone with repet. (continuous tone) • White
CHIME 169 A TRw	44172	Chime <ul style="list-style-type: none"> • Integrated transformer • Prim: 230 V~ • White • 8 V~ (4 VA)
CHIME 265 w	44265	Chime <ul style="list-style-type: none"> • With insertion slot for compound battery • 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery • 9 V (model ALKALINE)
CHIME 465A Bw/sw	44465	Chime <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Additionally with insertion slot for compound battery • 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery • 9 V (model ALKALINE)
CHIME 569 w	44569	Chime <ul style="list-style-type: none"> • Additionally with insertion slot for 4 batteries (4 x 1.5 V) • 8 V~ (4 VA) • Or 6 V= • Battery not in scope of delivery • alkaline baby cell
CHIME 569-230V	44179	Chime <ul style="list-style-type: none"> • White housing with black base • 230V~ (0,06A) • Additionally with insertion slot for compound battery • max. 80 dB(A) • 9 V (model ALKALINE) • 170 x 105 x 50 mm
CHIME 665 w/bl	44665	Chime <ul style="list-style-type: none"> • Additionally with insertion slot for compound battery 9 V (model ALKALINE) • 8 V~ (4 VA) • Or 9 V= • Battery not in scope of delivery



Note: Batteries are not included in the delivery

short-term load max.20s (KB20s)



»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 systems 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).



Hear the melodies on www.grothe.de or scan the QR-code with your smartphone.



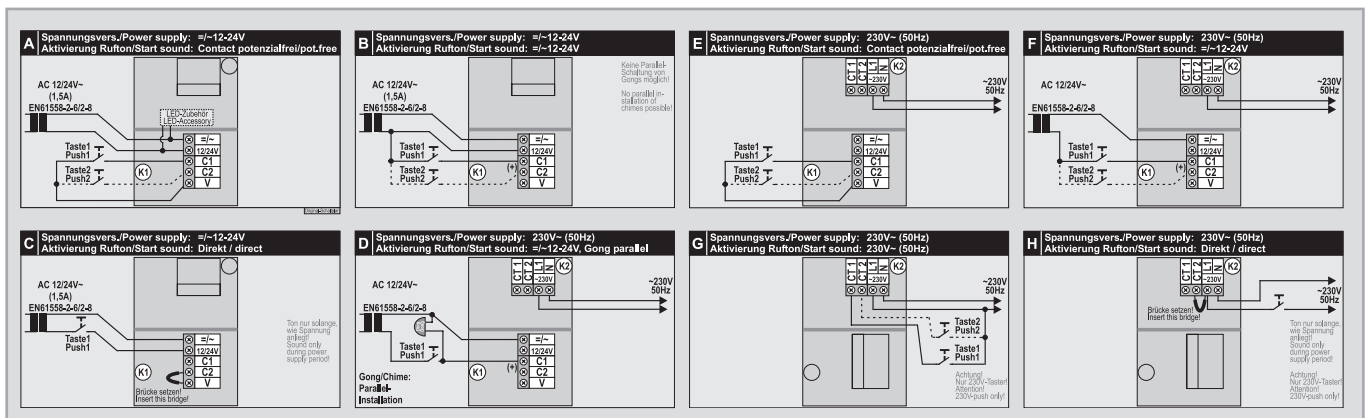
PSG 4.0

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)



Circuit overview

PSG



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.

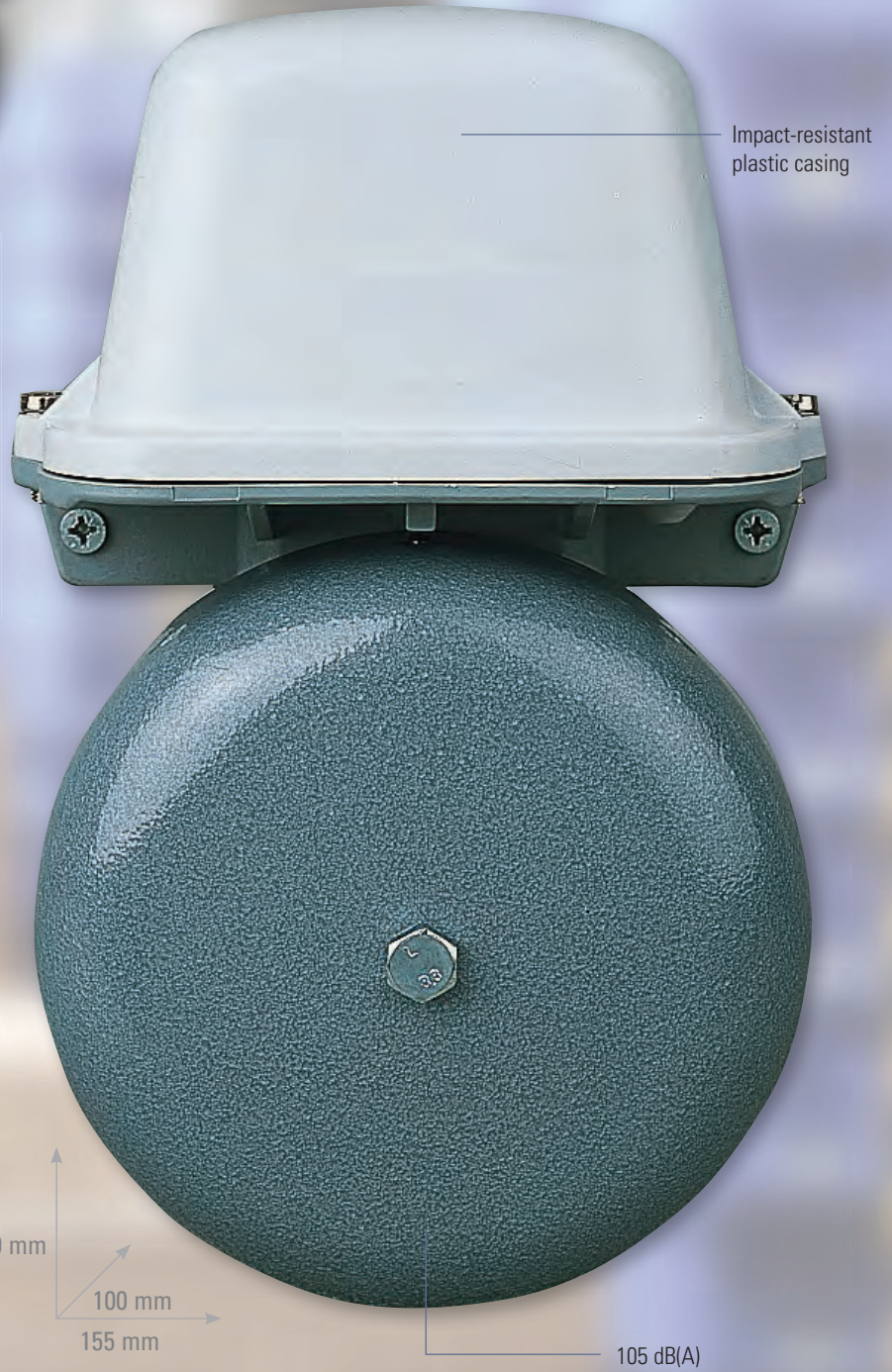
In industrial applications, the bells come into their own as danger warnings or as break signals.

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.

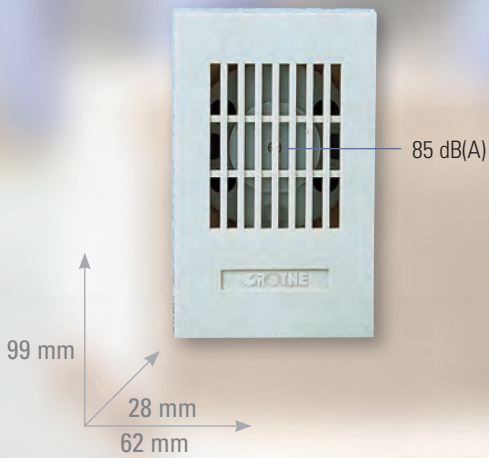
Small bell LTW 4477A



Large bell 742/754



Trumpf bell LTW 1171A



BELLS/BUZZERS for domestic use

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)

Flush-type electronic chime, bell and buzzer



Model	Order no.	Description
UP-LTW 120 ws	43711	Flush-type bell mechanism • Small bell • up to 80 dB(A) • incl. mounting plate & frame • 8-12V~ / 0.320A/permanent voltage • 50 x 50 x 48 mm • Colour: white
UP-LTW 230 ws	43716	Flush-type bell mechanism • as 43711 • but: 230V~, 50Hz / 0.045 A/permanent voltage
UP-SU 120 ws	43721	Flush-type buzzer • Small bell • up to 80 dB(A) • incl. mounting plate & frame • 8-12V~ / 0.210 A/permanent voltage • 50 x 50 x 48 mm • Colour: white
UP-SU 230 ws	43726	Flush-type buzzer • as 43721 • but: 230V~, 50Hz / 0.036 A/permanent voltage

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
- 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	2
			• 8 V~(1.0 A)



Colonia bell LTW 4477A

Product features

- White plastic casing
- 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	PU
LTW 4477A 8V AC	24113	Small bell	2
		• Small-shell	
			• 85 dB(A)
			• 148 x 70 x 80 mm



Dome bell LTW 3371A

Product features

- White plastic housing
- 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	2
			• 230 V~(6 mA)



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

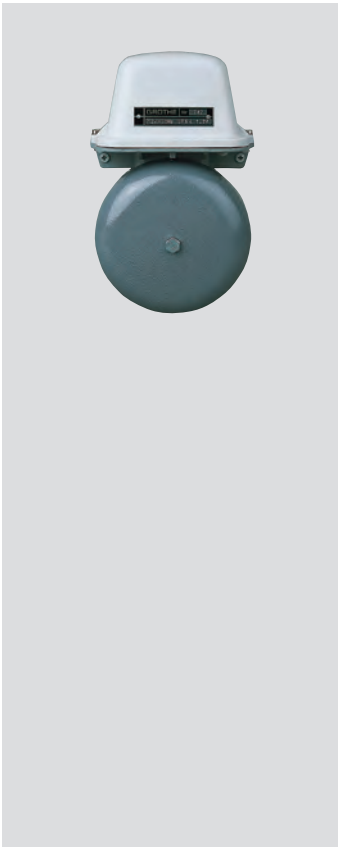
- 98 dB(A)
- Short-term load 10 s (KB 10 s)
- 210 x 100 x 51 mm
- Shell diameter 100 mm
- Protection rating IP 54

Model	Order no.	Description	PU
LTW 911A 8V AC F	24311	Bell	2
			• 8 V (0.6 A)
LTW 911A 24V AC	24331	Bell	2
			• 24 V (0.23 A)
LTW 911A 230V AC	24376	Bell	2
		• With fine-wire fuse (0.05 A)	
			• 230 V (0.025 A)



BELLS/BUZZERS for industrial use

Large bells 742 / 754



Product features

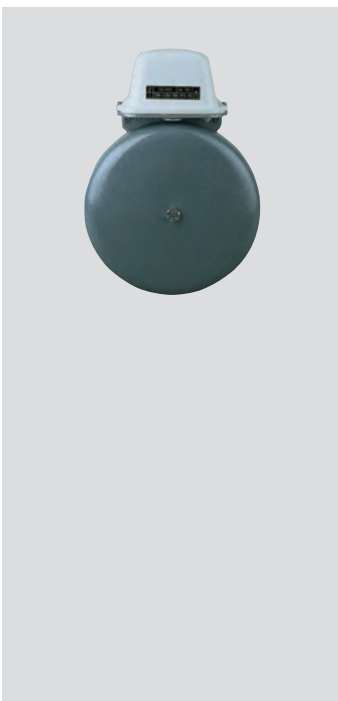
- Light-grey, impact-resistant, plastic housing
- With watertight diaphragm-type grommet for cable insertion
- Tone shell made of powder-coated cast steel, hammer finish

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 • VDE-tested • 230 V~ (0.05 A) • 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) • Intermittent operation 5/5 min • 12 V= (1.0 A)
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) • Intermittent operation 5/5 min • 24 V= (0.9 A)

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) • Intermittent operation 5/5 min • 12 V= (1.0 A)
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) • Intermittent operation 5/5 min • 24 V= (0.9 A)

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

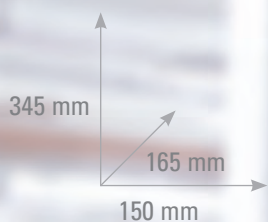
Horns are the ideal devices for danger signals in industrial application, alarm systems or in fire protection technology, due to their electromechanical sound production through a membrane. Using a funnel for optimal sound focussing, Grothe horns can achieve up to 105dB(A).

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

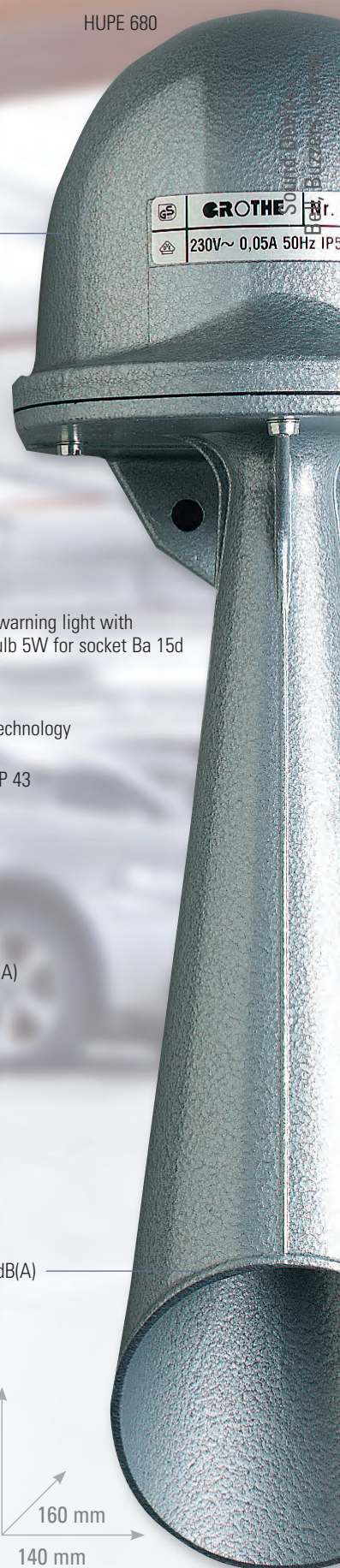


White, impact-resistant plastic casing, with funnel
Protection IP 54



105 dB(A)

HUPE 680



Aluminium casing with grey
hammer finish
Protection IP 54

HUPE WLxx



Integrated warning light with
standard bulb 5W for socket Ba 15d
or
SMD LED technology
Protection IP 43

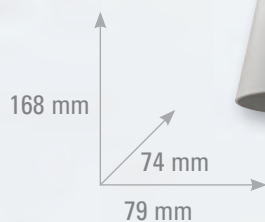


from 92 dB(A)

HUPE 63x

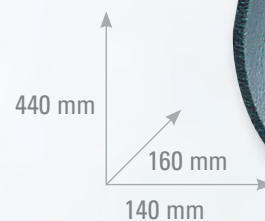


Solid, light grey plastic casing
Protection IP 43



92 dB(A)

105 dB(A)



Horn 63x



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

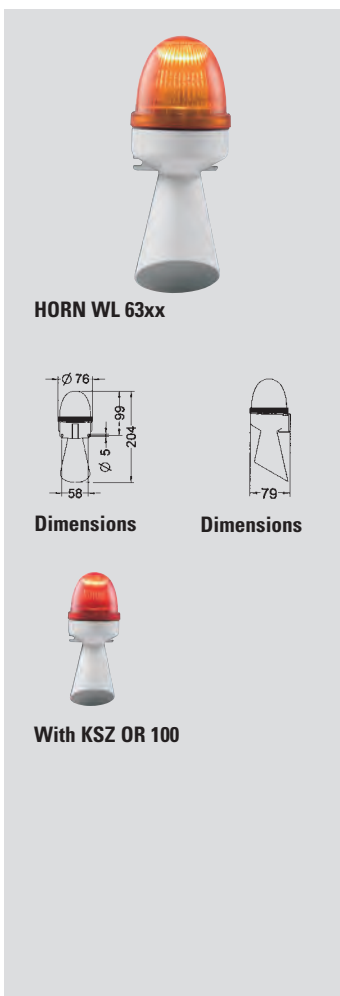
- Wall mounting (with bell mouth facing down)
- Terminals for max. 1.5 mm²

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



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 separately

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)

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)

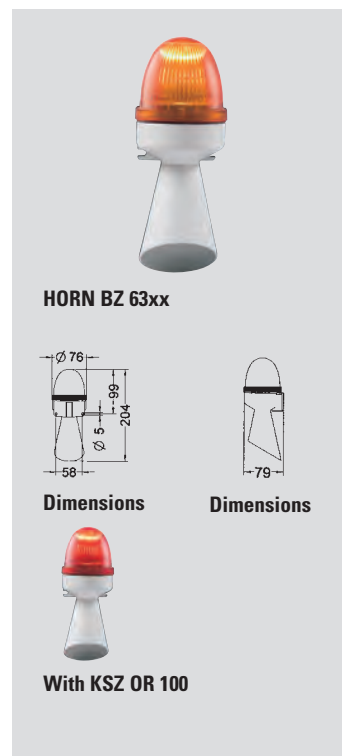
Installation

- 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

Model	Order no.	Description
HORN BZ 6301 240V AC	31271	Combi horn <ul style="list-style-type: none"> • 240 V~ (0.07 A) • 92 dB(A)
HORN BZ 6311 24V DC	31241	Combi horn <ul style="list-style-type: none"> • 24 V= (0.35 A) • 96 dB(A)
Accessories/Spare parts		
KSZ 8598	38598	Xenon tube <ul style="list-style-type: none"> • 2 J
KSZ OR 100	31101	Lens <ul style="list-style-type: none"> • Red



Sound Devices:
Bell, Buzzers, Horns

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 <ul style="list-style-type: none"> • Continuous operation • 12 V~ (1.2 A)
HORN 640 24V AC	32013	Large horn <ul style="list-style-type: none"> • Continuous operation • 24 V~ (0.6 A)
HORN 640 42 V AC	32014	Large horn <ul style="list-style-type: none"> • Continuous operation • 42 V~ (0.5 A)
HORN 640 230V AC	32017	Large horn <ul style="list-style-type: none"> • Continuous operation/DIN 0700-tested • 230 V~ (0.05 A) (50 Hz)
HORN 651 12V/DC	32122	Large horn <ul style="list-style-type: none"> • Intermittent operation 5/5 min • 12 V= (1.0 A)
HORN 651 24V/DC	32123	Large horn <ul style="list-style-type: none"> • 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

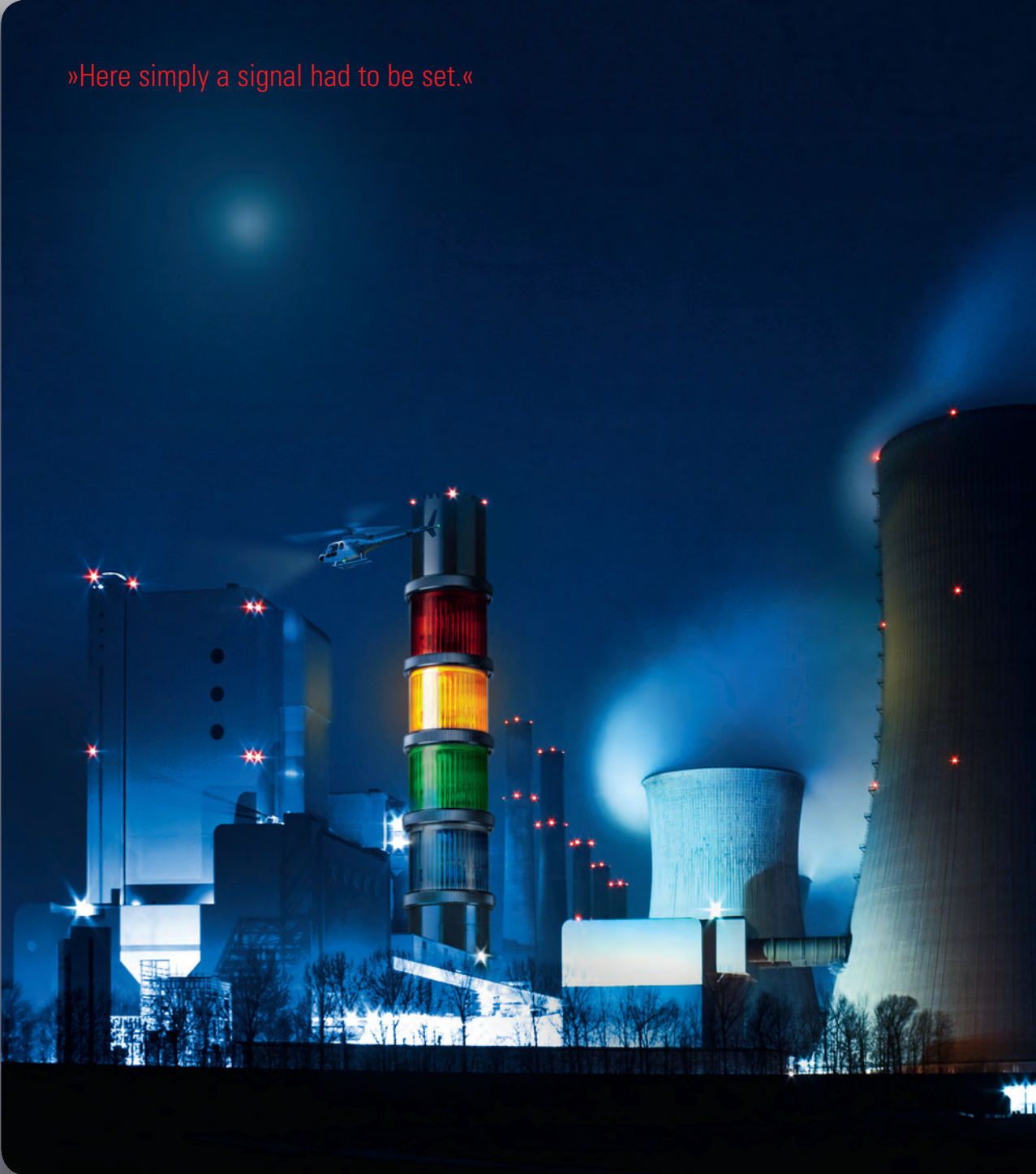
Technical data

- 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

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.

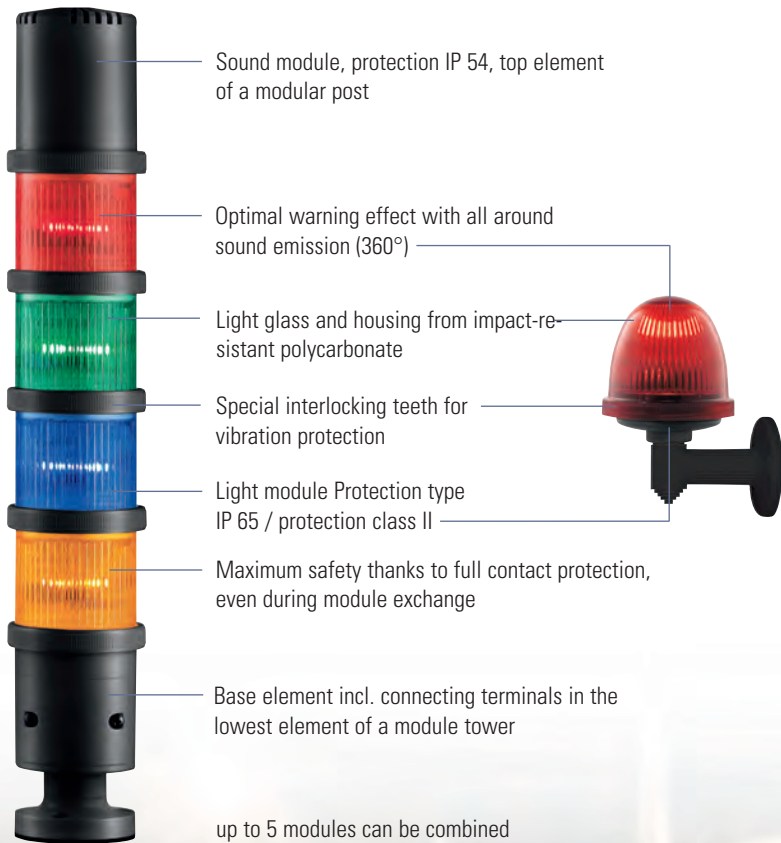
System T (Ø 75 mm) / System T-mini (Ø 48 mm)

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



System M (Ø 92 mm)

System M is a compact, modular system consisting of basic modules, lighting and sound generators, which with its high optical performance and powerful sound makes the system a solution for all demanding applications. With the Sound module for very high protection (IP65), System M is ideal for outdoor applications.

The multi-stage technology allows the execution of different alert levels with a single device. This is the choice between different sounds, lights and flash.

Sound module, IP rating IP65



Sound module based on module for wall mounting, IP rating IP65



LED-combi-module on based module (flat) for surface mounting, IP rating IP65



LED warning light on based module (deep) for surface mounting, IP rating IP65



Large warning and strobe light (Ø 138 mm)



Mid-sized strobe light (Ø 96 mm)



Fixation onto horizontal or vertical surfaces
Including mounting seal
Protection type IP 54 / protection class II

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

SystemT **Basic unit**



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**



Product features

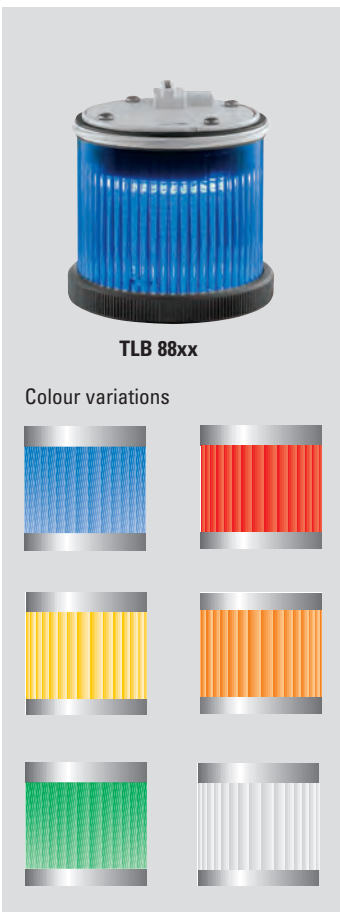
- For mounting on horizontal or vertical surfaces
- Incl. O ring for IP 65 rating
- Material: Plastic PA 66

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**



Extremely reliable flashing light module with high luminosity

LED-multiblink light

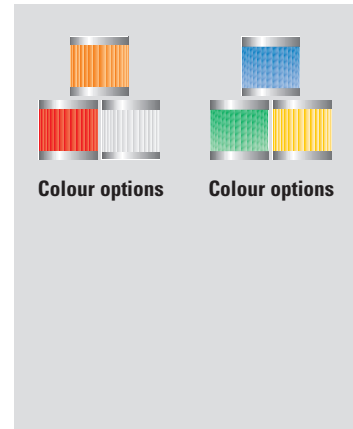
- orange
- integrated super bright SMD LEDs
- highest reliability
- Functions: Permanent light, simple, double (xenon effect) or triple strobe adjustable using the DIP switch
- Maintenance-free, low power consumption
- 5 Cd(p)
- 24V~/= (0,09A)
- Switch on time ED 100%
- Blink frequency approx. 150/min
- -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)



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. \pm 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!

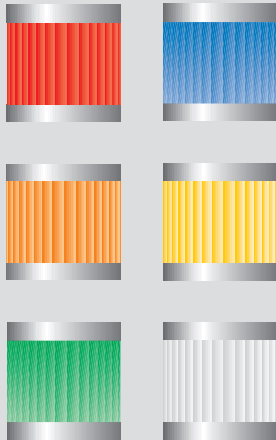
Model	Order no.	Description
TWL 8711	38711	Warning light • Orange • 3 Cd(p)
TWL 8712	38712	Warning light • Red • 1 Cd(p)
TWL 8714	38714	Warning light • Clear • 3 Cd(p)
TWL 8715	38715	Warning light • Blue • 1 Cd(p)
TWL 8716	38716	Warning light • Green • 1 Cd(p)
TWL 8717	38717	Warning light • Yellow •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



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



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
<i>for 12–48 V= (DC)</i>		
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)
<i>for 24 V/240 V~ (AC)</i>		
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

System T-Mini **General features**



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)

System T-Mini **Mounting parts**



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
<i>for 24 V~/= (AC/DC)</i>		
MSZ 8610	38610	Basic unit <ul style="list-style-type: none"> • Incl. base, cover and all required seals for IP 65 protection rating • The bottom unit of a stacking beacon
KSZ 8603	38603	Extension tube <ul style="list-style-type: none"> • 100 mm extension • Incl. O ring for IP 65 rating
KSZ 8604	38604	Mounting bracket <ul style="list-style-type: none"> • For vertical mounting/wall mounting • Incl. O ring for IP 65 rating
KSZ 8605	38605	Mounting bracket <ul style="list-style-type: none"> • For vertical mounting/wall mounting • Incl. O ring for IP 65 rating

System T-Mini **Sounder module**



Product features

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

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

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)

Model	Order no.	Description
MSG 8620	38620	Sounder <ul style="list-style-type: none"> • 24 V~/= (130 mA)
MSG 8630	38630	Sounder <ul style="list-style-type: none"> • 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)



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

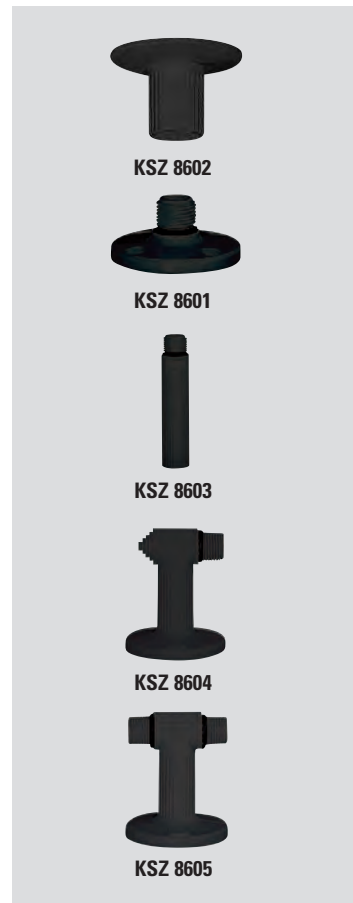
- The adapter base KSZ 8602 is needed if you wish to combine the beacon with the KSZ 8601/3/4/5 accessories!

Installation

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

Note

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



OPTICAL AND ACOUSTIC SIGNALLING DEVICES

Small warning beacon KWL



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. \sim /= 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)



Model	Order no.	Description
KBZ 8211	38211	LED-multistrobe lamp • 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 • 20 Cd(p) • 12/24V~/(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
KBZ 8212	38212	LED-multistrobe lamp • red • 8 Cd(p)

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



Model	Order no.	Description
KBZ 8221	38221	LED-multistrobe lamp • 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 • 20 Cd(p) • 90-240V~ (0,02A) • Switch on time (ED) 100% • Blink frequency approx. 150/min • -30°C to +60°C • Diameter 75 x 79 mm • 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 <ul style="list-style-type: none"> • 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
		<ul style="list-style-type: none"> • 22 Cd(p) • 12/24V~/=(0,09A) • Switch on time (ED) 100% • Blink frequency approx. 150/min • -30°C to +60°C • Diameter 96 x 83 mm • Weight 0.1 kg
MBZ 8412	38412	LED-multistrobe lamps <ul style="list-style-type: none"> • red
		<ul style="list-style-type: none"> • 13 Cd(p)



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

Typ	Best.-Nr.	Beschreibung
MBZ 8421	38421	LED-multistrobe lamps <ul style="list-style-type: none"> • 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
		<ul style="list-style-type: none"> • 22 Cd(p) • 90-240V~ (0,02A) • Switch on time (ED) 100% • Blink frequency approx. 150/min • -30°C to +60°C • Diameter 96 x 83 mm • Weight 0.1 kg
MBZ 8422	38422	LED-multistrobe lamps <ul style="list-style-type: none"> • red
		<ul style="list-style-type: none"> • 13 Cd(p)



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!

Model	Order no.	Description
GWL 8511	38511	Warning light <ul style="list-style-type: none"> • Orange
		<ul style="list-style-type: none"> • 56 Cd(p)
GWL 8512	38512	Warning light <ul style="list-style-type: none"> • Red
		<ul style="list-style-type: none"> • 24 Cd(p)
GWL 8516	38516	Warning light <ul style="list-style-type: none"> • Green
		<ul style="list-style-type: none"> • 10 Cd(p)



Large flashing beacon GBZ



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)

Large flashing beacon GBZ - Ø 138 mm



Model	Order no.	Description
GBZ 8621	38553	Flashing light • orange • High warning effect thanks to xenon-flash tube (included) • Field of application: industrial hazard areas/alarm systems • excellent light distribution by special optics • High failure safety as there are no moved parts • M16 screw fitting • 2650 Cd(p) • 240V (0,9A) • Replaceable xenon tube 6J • Flash frequency: 85/min. • -30°C to +40°C • Diameter 130 x 138,5mm • IP54
GBZ 8622	38554	Flashing light • red • High warning effect thanks to xenon-flash tube (included) • Field of application: industrial hazard areas/alarm systems • excellent light distribution by special optics • High failure safety as there are no moved parts • M16 screw fitting • 2650 Cd(p) • 240V (0,9A) • Replaceable xenon tube 6J • Flash frequency: 85/min. • -30°C to +40°C • Diameter 130 x 138,5mm • IP54

Combi flashing light HBZ 85XX

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) • Black • Rugged plastic construction • Weight 0.2 kg

Rotating mirror beacon DSL (12/24 V / halogen)

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

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



Rotating mirror beacon DSL (240 V halogen)



DSL 7322



DSL 7327

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

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

Sirens

Model	Order no.	Description
SIR 8901RT	38901	<p>Electronic siren</p> <ul style="list-style-type: none"> • 2 functions (warning, alarm) • Independent control through different contacts • Warning : 12 tones selectable by DIP switch • Alarm : fixed tone <ul style="list-style-type: none"> • Flush mounted installation • 12V/24V~/=; 215-250mA • max. 105dB(A) • Switch-on-time 100% ED • Material : Red Plastic • -30°C to +50°C • Diameter 92 x 102mm • IP65
SIR 8902WS	38902	<p>Electronic siren</p> <ul style="list-style-type: none"> • 2 functions (warning, alarm) • Independent control through different contacts • Warning : 12 tones selectable by DIP switch • Alarm : fixed tone <ul style="list-style-type: none"> • Flush mounted installation • 12V/24V~/=; 215-250mA • max. 105dB(A) • Switch-on-time 100% ED • Material : White Plastic • -30°C to +50°C • Diameter 92 x 102mm • IP65
SIR 8903RT	38903	<p>Electronic siren</p> <ul style="list-style-type: none"> • 2 functions (warning, alarm) • Independent control through different contacts • Warning : 12 tones selectable by DIP switch • Alarm : fixed tone <ul style="list-style-type: none"> • Flush mounted installation • 90-240V~; 35-60mA • max. 105dB(A) • Switch-on-time 100% ED • Material : Red Plastic • -30°C to +50°C • Diameter 92 x 102mm • IP65
SIR 8904WS	38904	<p>Electronic siren</p> <ul style="list-style-type: none"> • 2 functions (warning, alarm) • Independent control through different contacts • Warning : 12 tones selectable by DIP switch • Alarm : fixed tone <ul style="list-style-type: none"> • Flush mounted installation • 90-240V~; 35-60mA • max. 105dB(A) • Switch-on-time 100% ED • Material : White Plastic • -30°C to +50°C • Diameter 92 x 102mm • IP65
BMF 8911	38911	<p>Basic module flat</p> <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • M20 screw connection <ul style="list-style-type: none"> • Flush mounted installation • 12V/24V~/= • Plastic material PC black • 30°C to +50°C • Diameter 92 x 22 mm
BMT 8912	38912	<p>Basic module low</p> <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • M20 screw connection <ul style="list-style-type: none"> • Flush mounted installation • 12V/24V~/= • Plastic material PC black • 30°C to +50°C • Diameter 92 x 22 mm
BMW 8913	38913	<p>Basic module wall</p> <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode <ul style="list-style-type: none"> • wall mounted installation • 12V/24V~/= • Plastic material PC black • -30°C to +50°C • 100 x 61 x 115mm
BMT 8914	38914	<p>Basic module deep</p> <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • M20 screw connection <ul style="list-style-type: none"> • Flush mounted installation • 90-240V~ • Plastic material PC black • -30°C to +50°C • Diameter 92 x 47mm
BMW 8915	38915	<p>Basic module wall</p> <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode <ul style="list-style-type: none"> • wall mounted installation • 90-240V~ • Plastic material PC black • -30°C to +50°C • 100 x 61 x 115mm



SIR 8901RT
SIR 8903RT



SIR 8902WS
SIR 8904WS



BMF 8911



BMT 8912
BMT 8914



BMW 8913
BMW 8915

System M



BDW 8916
BDW 8917



BMF 8991



BMT 8992
BMT 8994



BME 8993
BME 8995

Model	Order no.	Description
BDW 8916	38916	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • 100 x 95 x 115 mm • On wall installation <ul style="list-style-type: none"> • 12V/24V ~/= • Black PC plastic material • -30°C bis +50°C
BDW 8917	38917	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • 100 x 95 x 115 mm • On wall installation <ul style="list-style-type: none"> • 90 - 240V ~ • Black PC plastic material • -30°C bis +50°C
BMF 8991	38991	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • diameter 92 x 22 mm • On wall installation <ul style="list-style-type: none"> • 12V/24V ~/= • White PC plastic material • -30°C bis +50°C
BMT 8992	38992	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • diameter 92 x 47 mm • On wall installation <ul style="list-style-type: none"> • 12V/24V ~/= • Black PC plastic material • -30°C bis +50°C
BMT 8993	38993	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • 100 x 95 x 115 mm • suspended ceilings installation <ul style="list-style-type: none"> • 12V/24V ~/= • White PC plastic material • -30°C bis +50°C • M20 screw connection
BMW 8994	38994	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • diameter 145 x 70 mm • On wall installation • suspended ceilings installation <ul style="list-style-type: none"> • 12V/24V ~/= • White PC plastic material • -30°C bis +50°C • Flush mounted installation
BMT 8995	38995	Basic module wall <ul style="list-style-type: none"> • For all types 389xx • Multi-volt-mode • diameter 145 x 70 mm • suspended ceilings installation <ul style="list-style-type: none"> • 90-240V ~ • White PC plastic material • -30°C bis +50°C • Flush mounted installation

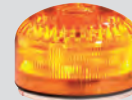
System M

Sirens

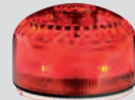
Model	Order no.	Description
MSG 8921	38921	Module sounder <ul style="list-style-type: none"> • For Multi-volt-basic-modules • 2 functions (alarm 1, alarm 2) • Independent control through different contacts • Alarm 1: 64 tones selectable by DIP switch A • Alarm 2: 64 tones selectable by DIP switch B <ul style="list-style-type: none"> • Multi-volt-mode • max. 105dB(A) • Switch-on-time 100 % • Material Black Plastic • -30°C to +50°C • Diameter 92 x 63mm • IP65
MHZ 8931	38931	Module-multistrobe-LED Lamp <ul style="list-style-type: none"> • For Multi-volt-basic-modules • Orange • 3 functions (warning, alarm 1 and alarm 2) • Independent control through different contacts • Warning: triple stroboscope flash effect • Alarm 1: triple stroboscope flash effect and 64 tones selectable by DIP switch A • Alarm 2: powerful warning light and 64 tones selectable by DIP switch B <ul style="list-style-type: none"> • Multi-volt-mode • 15Cd(p) • Flash frequency ca. 85/min • max. 105dB(A) • -30°C to +50°C • Diameter 92 x 63mm • IP65
MHZ 8932	38932	Module-multistrobe-LED Lamp <ul style="list-style-type: none"> • Red <ul style="list-style-type: none"> • 10Cd(p)
MHZ 8933	38933	Module-multistrobe-LED Lamp <ul style="list-style-type: none"> • Green <ul style="list-style-type: none"> • 20Cd(p)
MHZ 8934	38934	Module-multistrobe-LED Lamp <ul style="list-style-type: none"> • Blue <ul style="list-style-type: none"> • 5Cd(p)
MWL 8941	38941	Module-warning-LED Lamp <ul style="list-style-type: none"> • For Multi-volt-basic-modules • Orange • 3 functions (continuous, rotating and flash) • Independent control through different contacts <ul style="list-style-type: none"> • Multi-volt-mode • 20Cd(p) • Flash frequency ca. 85/min • Rotation frequency ca. 140/min • Switch-on-time 100 % • -30°C to +50°C • Diameter 92 x 126mm • IP65
MWL 8942	38942	Module-warning-LED Lamp <ul style="list-style-type: none"> • Red <ul style="list-style-type: none"> • 13Cd(p)
MWL 8943	38943	Module-warning-LED Lamp <ul style="list-style-type: none"> • Green <ul style="list-style-type: none"> • 16Cd(p)
MWL 8944	38944	Module-warning-LED Lamp <ul style="list-style-type: none"> • Blue <ul style="list-style-type: none"> • 5Cd(p)
MWL 8951	38951	Module warning LED lamp <ul style="list-style-type: none"> • For multi volt basic modules • Multi volt mode • orange • 3 functions (permanent, flash, double flash) • Independent control through different contacts <ul style="list-style-type: none"> • 20 Cd(p) • Flash frequency ca 140/min • Switch on time 100% • -30°C - + 50°C • IP65 • diameter 92 x 43 mm
MWL 8952	38952	Module-warning-LED Lamp <ul style="list-style-type: none"> • like 38951, but red
MWL 8953	38953	Module-warning-LED Lamp <ul style="list-style-type: none"> • like 38951, but green
MWL 8954	38954	Module-warning-LED Lamp <ul style="list-style-type: none"> • like 38951, but blue
MML 8961	38961	Module-warning-LED Lamp <ul style="list-style-type: none"> • like 38951, but with integrated colours, red, orange, green
MML 8943	38962	Module-warning-LED Lamp <ul style="list-style-type: none"> • like 38961, but with integrated colours, red, orange, green



MSG 8921



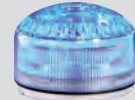
MSG 8931



MSG 8932



MSG 8933



MSG 8934



MWL 8941



MWL 8942



MWL 8943



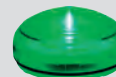
MWL 8944



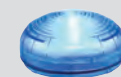
MWL 8951



MWL 8952



MWL 8953



MWL 8954



MML 8961



MML 8962

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 surfa-

- ces using accessory kit DSZ 7395 (wall mounting)
- Terminals for max. 1.5 mm²

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 mm²

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			
<i>for 24 V~/= (AC/DC)</i>					
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)	
<i>for 240 V~ (AC)</i>					
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

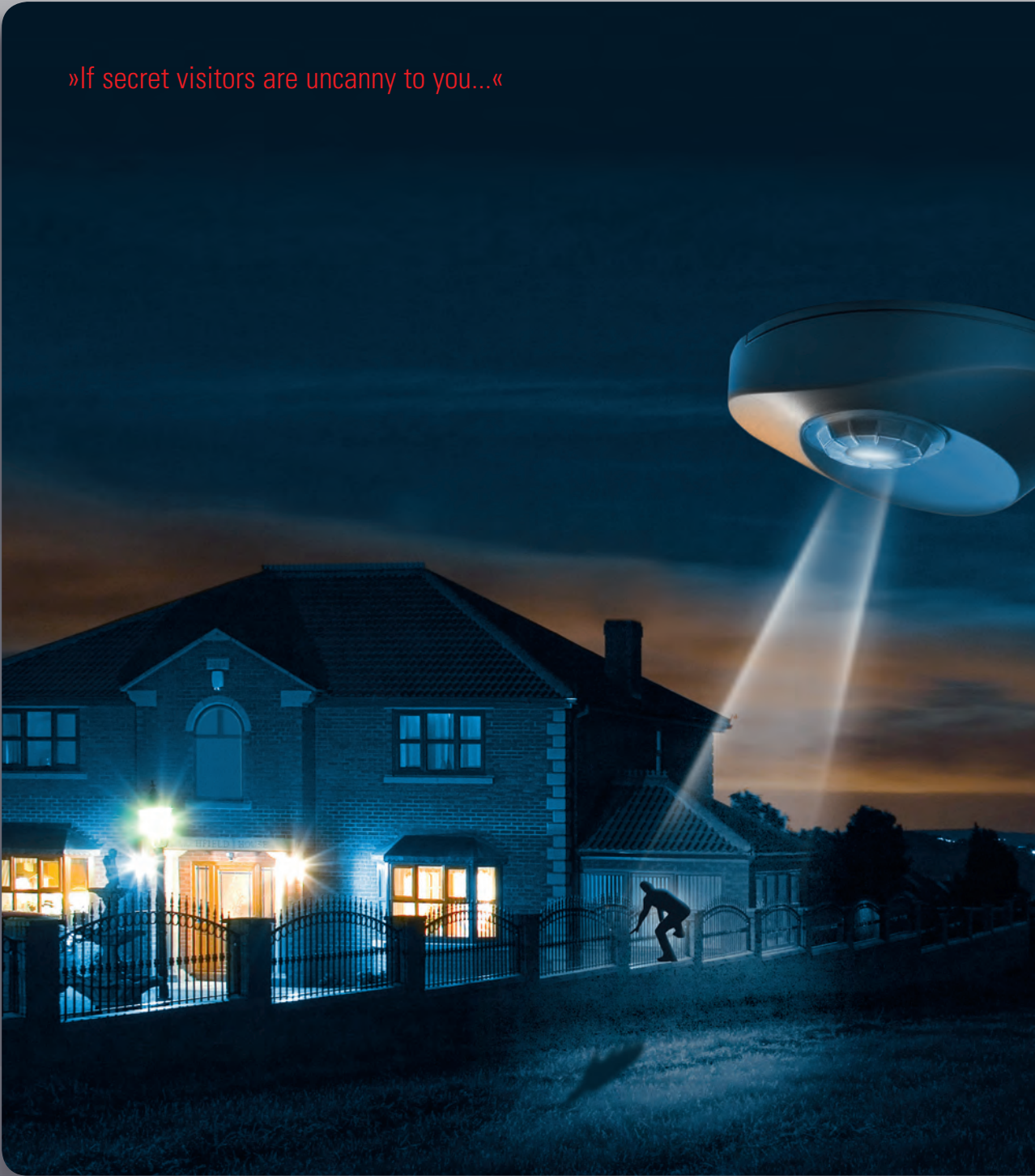
Model	Order no.	Description		
DSZ 7396	37396	Bulb	• 24V (25W)	• for DSL 7361 and 7362
DSZ 7397	37397	Bulb	• 240V (25W)	• for DSL 7332 and 7337
GSZ 8591	38591	Bulb	• 12V (25W)	• for GWL 85xx
GSZ 8592	38592	Bulb	• 24V (25W)	• for GWL 85xx
GSZ 8593	38593	Bulb	• 240V (25W)	• for GWL 85xx
KSZ 8595	38595	Bulb	• 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		
<i>Accessories/spare parts</i>				
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
DSZ 7383	37383	Xenon light		• 6 J



Optical and Acoustic Signalling Devices

»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

The McGuard family is now made of more than 10 different 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.

LED floodlight
McGuard PIR BM LED light

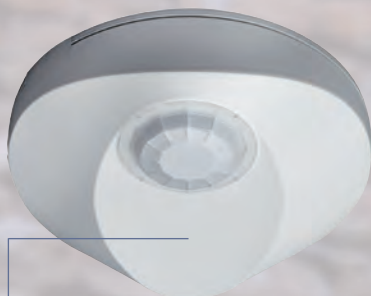


Spotlight rotates horizontally and swivels vertically

Power Consumption: 31w
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°

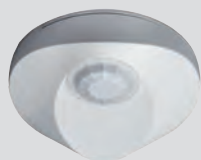
McGuard Halogen floodlight



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

IR movement detector

McGuard



PM-APws



PM-EINws



BM110ws



BM110sw

Presence Detector

Model	Order no.	Description
PM-APws	94500	<p>McGuard PM-APws</p> <ul style="list-style-type: none"> • Passive infrared movement detector • Colour: white • Surveillance range 360° at 6m • On time of 5 sec. to 12Min • Sensitivity continuously adjustable <ul style="list-style-type: none"> • 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	<p>McGuard PM-EINws</p> <ul style="list-style-type: none"> • Passive infrared movement detector • Colour: white • incl. control box • Surveillance range 360° at 6m • On time from 5 sec. to 12Mi • Sensitivity continuously adjustable • Control box: 110(B) x 53(H) x 30(D)mm <ul style="list-style-type: none"> • 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
BM180ws	94513	<p>McGuard mini BM180ws</p> <ul style="list-style-type: none"> • Passive infrared movement detector • Colour: white • Surveillance range 110° at 12m • On time from 5 sec. to 12Min. • Sensitivity continuously adjustable • Supply voltage: 230V AC; 50Hz <ul style="list-style-type: none"> • Switching capacity: Bulbs max. 1000W; • Energy saving or fluorescent lamps max. 400W • IP44 • 64(B) x 98(H) x 87(D)mm
BM180pw	94514	<p>McGuard mini BM180pw</p> <ul style="list-style-type: none"> • like McGuard BW180ws, but colour: perl white
BM180sw	94515	<p>McGuard mini BM180sw</p> <ul style="list-style-type: none"> • like McGuard BW180ws, but colour: black

Professional

Model	Order no.	Description
BM120ws	94530	McGuard professional BM120ws <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • like McGuard professional BM120ws, but surveillance range 240°
BM360ws	94532	McGuard professional BM360ws <ul style="list-style-type: none"> • like McGuard professional BM120ws, but surveillance range 360°
BM120sw	94533	McGuard professional BM120sw <ul style="list-style-type: none"> • 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 12 min. • 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 <ul style="list-style-type: none"> • like McGuard professional BM120sw, but surveillance range 240°
BM360sw	94535	McGuard professional BM360sw <ul style="list-style-type: none"> • like McGuard professional BM120sw, but surveillance range 360°

Professional remote control

Model	Order no.	Description
BM240iws	94536	McGuard professional BM240iws <ul style="list-style-type: none"> • as McGuard professional BM240ws, however with receiver for remote control McGuard IR FB (Art. 94538, to be ordered separately) • On time from 3 sec. to 15 min. • effective power: 1,1W
BM360iws	94537	McGuard professional BM360iws <ul style="list-style-type: none"> • as McGuard professional BM360ws, however with receiver for remote control McGuard IR FB (Art. 94538, to be ordered separately) • On time from 3 sec. to 15 min. • effective power: 1,1W
IR FB	94538	McGuard Infrared Remote <ul style="list-style-type: none"> • for the motion sensors • Range: ca. 6m • Colour: anthracite • Supply voltage: Battery CR 2025, 3V • 55 x 90 x 7 mm
MISTRAL BM03.0	43445	Radio movement detector <ul style="list-style-type: none"> • 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 • 500 m radio range outdoors; 868.35MHZ • Adjustable delay time from 3 to 60 sec • Incl. curtain lens and volumetric lens



McGuard

Halogen-floodlight spots

Model	Order no.	Description
Halo120BM180	94551	<p>McGuard Halo120BM180</p> <ul style="list-style-type: none"> • Halogen floodlight spot with infrared movement detector • Reflector made from polished aluminium • Surveillance range 180° at 12m <ul style="list-style-type: none"> • incl. halogen lamp 120W (Class C) • External switching capacity: 500W/VA • IP44 (suitable for outdoor use) • 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
Halo400BM180	94553	<p>McGuard Halo400BM180</p> <ul style="list-style-type: none"> • Halogen floodlight spot with infrared movement detector • Reflector made from polished aluminium • Sensitivity continuously adjustable <ul style="list-style-type: none"> • incl. halogen lamp 400W (Class C) • External switching capacity: 500W/VA • IP44 (suitable for outdoor use) • 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.



Halo120BW180



Halo400BW180

LED-floodlight spots

Model	Order no.	Description
LED RL300Aws	94555	<p>McGuard LED floodlight</p> <ul style="list-style-type: none"> • LED floodlight with infrared movement detector • IP 44 (suitable for outside) • 15 integrated high power LEDs, 35W • Die-cast aluminium housing with V2A screws • Vertical installation • Surveillance range 180° at 12m <ul style="list-style-type: none"> • Colour: white • Supply voltage 230V AC, 50Hz • Switch-on-time: 3 sek.-15 min. • 225 x 250 x 170mm • Sensitivity: continuous
LED RL300Asw	94556	<p>McGuard LED floodlight</p> <ul style="list-style-type: none"> • LED floodlight with infrared movement detector <ul style="list-style-type: none"> • Colour: black
LED LL300Aws	94557	<p>McGuard LED floodlight</p> <ul style="list-style-type: none"> • LED floodlight • IP 44 (suitable for outside) • 15 integrated high power LEDs, 35W • Die-cast aluminium housing with V2A screws • Vertical installation • Surveillance range 180° at 12m <ul style="list-style-type: none"> • Colour: white • Supply voltage 230V AC, 50Hz, 35W • Switch-on-time: 3 sek.-15 min. • 225 x 250 x 170mm • Sensitivity: continuous • 5600 ° Kelvin, daylight • Illuminance ca. 64lux@6m • LEDs: 1521 lumens
LED LL300Asw	94558	<p>McGuard LED-Strahler</p> <ul style="list-style-type: none"> • LED floodlight <ul style="list-style-type: none"> • Colour: black



LED RL300Aws



LED RL300Asw



LED LL300Aws



LED LL300Asw

»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.

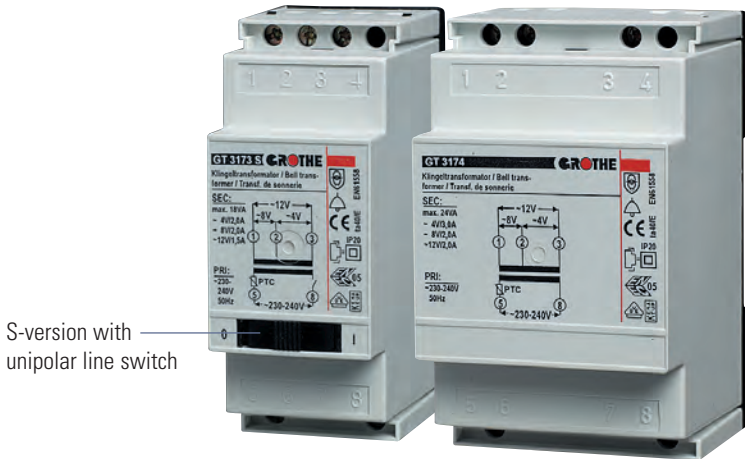
Grothe bell and safety transformers are protected with a PTC, which switches the transformer off on short circuit and overload on the primary side. On switching of the PTC through overload or short circuit, the transformer needs to be taken off the load for at least 1 minute in order for it to be put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

 <p>Inspection stations:</p>	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.

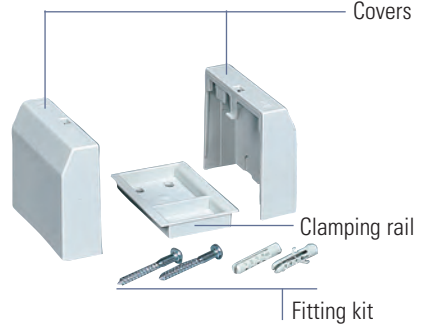
GROTHE Bell transformers

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



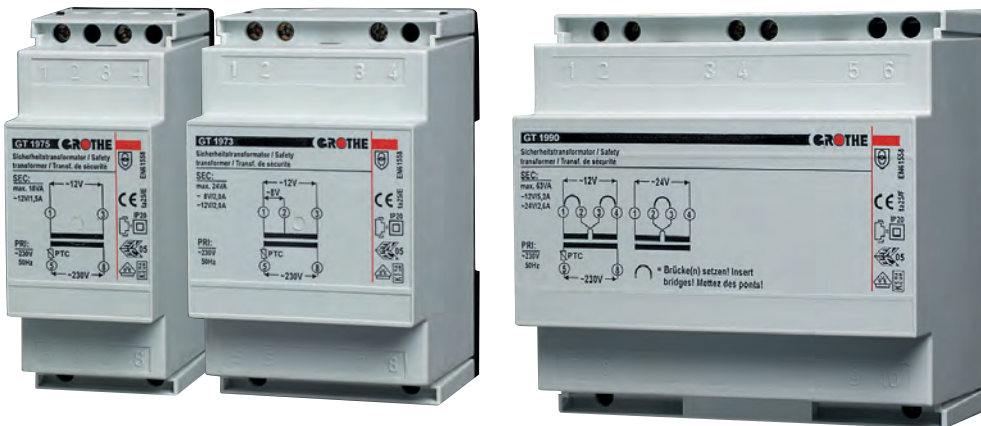
S-version with unipolar line switch

Surface-mounted



GROTHE Safety transformers

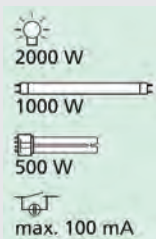
Suitable for permanent load
Tested according to EN 61558
Short circuit proof through PTC



Transformers

GROTHE Stair case light timer

Timer setting: continuously adjustable to up to 12 min.

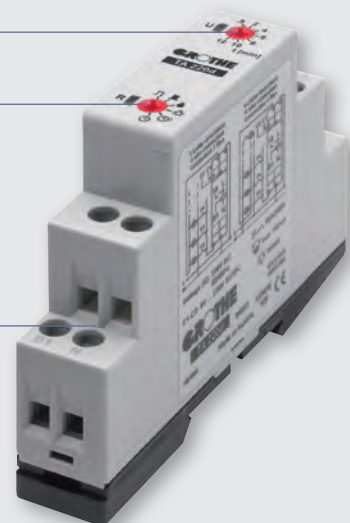


Switching capacity:

- Bulbs
- Fluorescent tubes
- Energy saving bulbs
- Low voltage neon-glow lamp

Switch-off advance warning according to DIN

For 3 or 4 wire circuits



TRANSFORMERS/SERIES INSTALLATION UNITS

Standard bell transformers



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



up to 18 VA

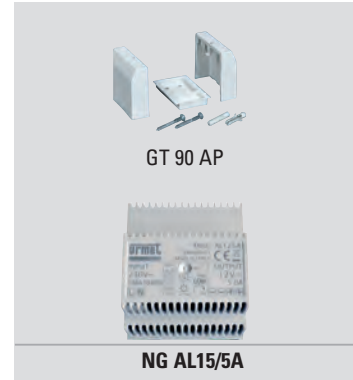
Model	Order no.	Description
GT 1965	14102	Safety transformer • Primary: 230-240V~ (50 Hz) • 8V~ (2,0A) • 90 x 36 x 55 mm (corresponds to 2 installation modules)
GT 1975	14101	Safety transformer function as above, but • 12V~ (1,5A)
GT 36 AP	14936	Surface-mount installation set

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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> • 12/24V~ (5,2/2,6A)
GT 90 AP	14990	Surface-mount installation set
NG AL15/5A	39340	Surface-mount installation set <ul style="list-style-type: none"> • Din rail use / on wall use • Primary 230V~AC, 50HZ • Secondary 12V= DC, max. 4A • Size 123 x 100 x 68 mm • LED indication for mains voltage



Staircase light time switch

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

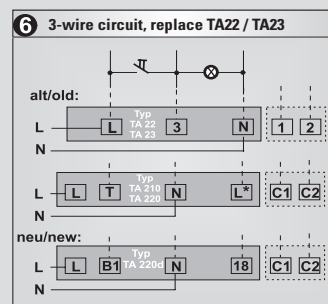
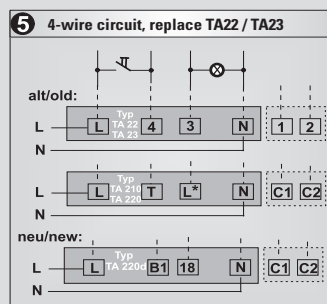
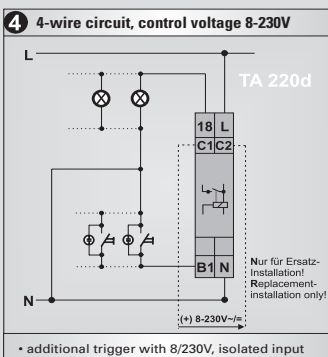
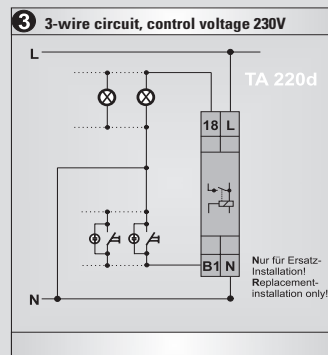
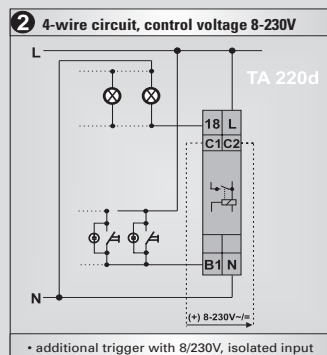
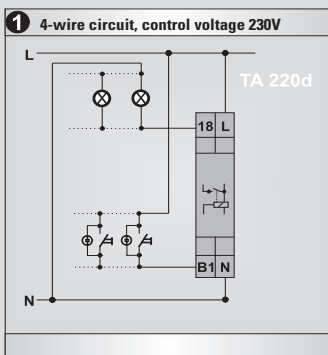
- Operating voltage (230 V~/50 Hz)
- Contact load: 16 A, (one normally open contact)
- Control voltage: 8–230 V~/= and 230 V~
- Glow lamp current max. 100 mA
- Max. load capacity: Filament bulbs 2000 W, energy-saving bulbs 500 W, fluorescent tubes 750/1000 W (compensated/uncompensated).
- Temperature 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 for > 1 sec: Continuous „On“/Continuous „Off“ (Auto „Off“ after 1 hr)



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

Function overview

Staircase light time switch



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.





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 individual wishes.



- Innovative ringer buttons
- Attractive designs
- Flush as well as surface mounted varieties
- Maximum reliability

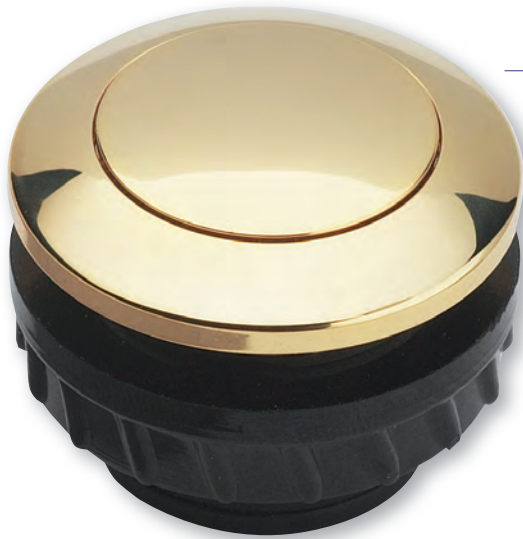
Protact: The innovative ringer button by Grothe with its noble metal switching contacts and time saving wiring technology for fitting in door stations or for industrial purposes.

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



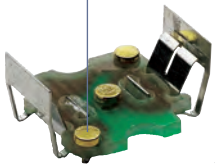
max. 12V (1,5A) , min. 5V (1mA)



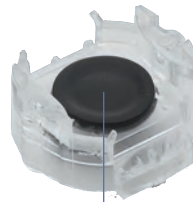
LED-light

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

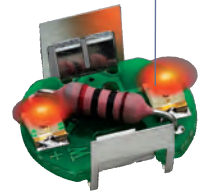
Gilded switching contacts
Tactile feedback
Through snapping effect



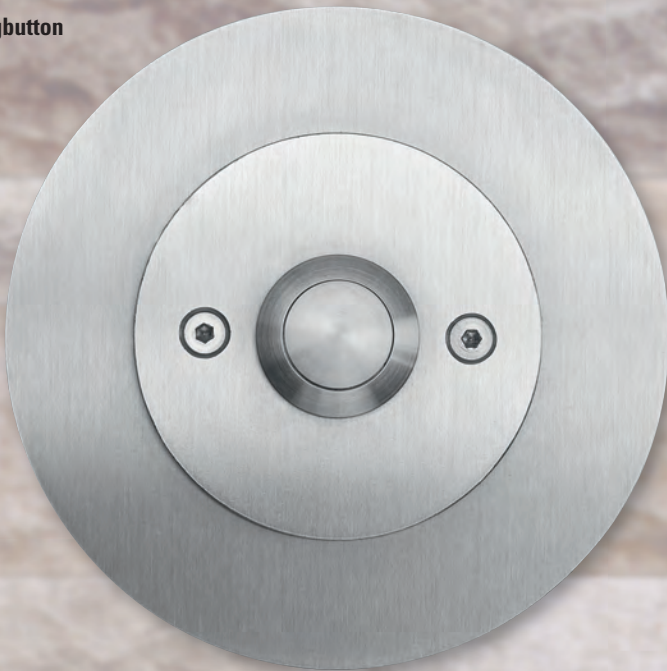
Fast installation - no screwing
Two connectors each for simple in-line wiring



Rubber seal for protection of the switching contacts



Ringbutton



CONTACTS FOR PROTECTIVE EXTRA-LOW VOLTAGE

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 <ul style="list-style-type: none"> • Button stainless steel V2A • Button collar stainless steel V2A 	<ul style="list-style-type: none"> • Diameter of button 14.5 mm • Diameter of button collar 22.0 mm 5
PROTACT 140 GO	62001	Bell button <ul style="list-style-type: none"> • Button gold-plated brass • Button collar gold-plated brass 	<ul style="list-style-type: none"> • Diameter of button 14.5 mm • Diameter of button collar 22.0 mm 5
PROTACT 110 AL	62002	Bell button <ul style="list-style-type: none"> • Button aluminium • Button collar aluminium 	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Button aluminium • Button collar aluminium 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 260 CR	62054	Bell button <ul style="list-style-type: none"> • Button chrome-plated brass • Button collar chrome-plated brass 	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Button gold-plated brass • Button collar gold-plated brass 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 370 NI	62026	Bell button <ul style="list-style-type: none"> • Button nickel-plated brass • Button collar nickel-plated brass 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 371 NI	62034	Bell button <ul style="list-style-type: none"> • Button nickel-plated brass • Button collar nickel-plated brass 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 310 AL	62032	Bell button <ul style="list-style-type: none"> • Button aluminium • Button collar aluminium 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 360 CR	62033	Bell button <ul style="list-style-type: none"> • Button chrome-plated brass • Button collar chrome-plated brass 	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Button stainless steel V2A • Button collar stainless steel V2A 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 420 AL-KS	62013	Bell button <ul style="list-style-type: none"> • Button black plastic • Button collar aluminium R14 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 410 AL	62016	Bell button <ul style="list-style-type: none"> • Button aluminium • Button collar aluminium 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5

Series 5xx

Type	Order no.	Description	PU
PROTACT 550 VA	62060	Bell button <ul style="list-style-type: none"> • Button stainless steel V2A • Button collar stainless steel V2A 	<ul style="list-style-type: none"> • Diameter of button button 16.8 mm • Diameter of button collar 22.0 mm 5
PROTACT 510 AL	62061	Bell button <ul style="list-style-type: none"> • Button aluminium • Button collar aluminium 	<ul style="list-style-type: none"> • Diameter of button button 16.8 mm • Diameter of button collar 22.0 mm 5

Series 38x

Type	Order no.	Description	PU
PROTACT 380 KS	61031	Bell button <ul style="list-style-type: none"> • Button white-grey plastic • Button collar black plastic 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5
PROTACT 381 KS	61032	Bell button <ul style="list-style-type: none"> • Button white-grey plastic • Button collar white-grey plastic 	<ul style="list-style-type: none"> • Diameter of button button 11.5 mm • Diameter of button collar 20.0 mm 5

Serie 68x

Type	Order no.	Description	PU
PROTACT 681 KS	61045	Bell button <ul style="list-style-type: none"> • Button black plastic • Button collar black plastic 	<ul style="list-style-type: none"> • Button 13.5 x 16.0 mm • Button collar 20.0 x 22.0 mm 5
PROTACT 680 KS	61047	Bell button <ul style="list-style-type: none"> • Button white-grey plastic • Button collar white-grey plastic 	<ul style="list-style-type: none"> • Button 13.5 x 16.0 mm • Button collar 20.0 x 22.0 mm 5
Protact 650 VA	62070	Bell button <ul style="list-style-type: none"> • Button white-grey plastic • Button collar white-grey plastic 	<ul style="list-style-type: none"> • Button 13.5 x 16.0 mm • Button collar 20.0 x 22.0 mm 5



Bell Buttons and Contacts

CONTACTS FOR PROTECTIVE EXTRA-LOW VOLTAGE

PROTACT



with illumination

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

with illumination

Type	Order no.	Description	PU
PROTACT 101 LED	63222	Bell button • Button white plastic • Button collar aluminium	3
PROTACT 100 LED	63232	Bell button • Button blue plastic • Button collar aluminium	3
PROTACT 102 LED	63242	Bell button • Button white plastic • Button collar aluminium	3
PROTACT 105 LED	63252	Bell button • Button blue plastic • Button collar aluminium	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

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

BUTTONS AND STOREY PLATES

Stainless steel bell button, circular

Type	Order no.	Description
ETA S 100	55540	Storey plate <ul style="list-style-type: none"> 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 Max. 12V (1,5A) , min. 5V (1mA) Ø 80 x 16 mm IP 40 Incl. PROTACT 150 VA Surface mounting with pre-mounting panel
ETA S 100 LEDws	55542	Storey plate <ul style="list-style-type: none"> surface mounting incl. PROTACT 210 LED
ETA S 100 LEDbl	55543	Storey plate <ul style="list-style-type: none"> surface mounting incl. PROTACT 220 LED



Stainless steel bell button, cornered

Type	Order no.	Description
ETA S 200	55541	Storey plate <ul style="list-style-type: none"> like ETA S 100, but 82 x 82 x 16 mm
ETA S 200	55544	Storey plate <ul style="list-style-type: none"> like ETA S 100, but surface mounting 82 x 82 x 16 mm incl. PROTACT 210 LED
ETA S 200	55545	Storey plate <ul style="list-style-type: none"> like ETA S 100, but surface mounting 82 x 82 x 16 mm incl. PROTACT 220 LED



TORK 2060 gate contact

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. 12V (1,5A) , min. 5V (1mA)
- Diameter 68 mm, depth 30 mm

Type	Order no.	Description
TORK 2060	64151	Gate contact



Designer storey plates made of stainless steel

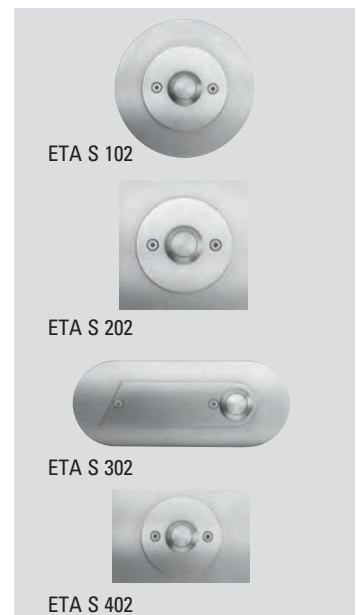
Description

- 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. 12V (1,5A) , min. 5V (1mA)
- IP 44
- Incl. PROTACT 150 VA

Type	Order no.	Description
ETA S 102	55912	Storey plate 4 mm <ul style="list-style-type: none"> Material: stainless steel (V2A) Dimensions: D 90 mm Shape: round
ETA S 202	55922	Storey plate 4 mm <ul style="list-style-type: none"> Material: stainless steel (V2A) Dimensions: 75 x 75 mm Shape: square
ETA S 302	55932	Storey plate 4 mm <ul style="list-style-type: none"> Material: stainless steel (V2A) Dimensions: 150 x 60 mm Shape: oval
ETA S 402	55942	Storey plate 4 mm <ul style="list-style-type: none"> Material: stainless steel (V2A) Dimensions: 95 x 65 mm Shape: rectangular



Mistral transmitter can be connected with a dry contact to get a wireless solution with a nice door button.

BUTTONS AND STOREY PLATES

Contact shells KS 2070-2084



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. 12V (1,5A) , min. 5V (1mA)

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



Description

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

- Temperature range: -20 to +50°C
- Max. 12V (1,5A) , min. 5V (1mA)
- 65 x 35 x 10 mm

Technical data

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



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. 12V (1,5A) , min. 5V (1mA)
ETA 502 G	55512	Storey plate • Cast bronze / 2 bell button • functions as above • 62 x 98 x 15 mm

Cast aluminium storey plates



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. 12V (1,5A) , min. 5V (1mA)
ETA 502 GA	55532	Storey plate • Aluminium/silver anod. EV1 2 bell buttons • functions as above • 62 x 98 x 15 mm
ETA 503 GA	55533	Storey plate • Aluminium/silver anod. EV1 3 bell buttons • functions as above • 86 x 98 x 15 mm

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

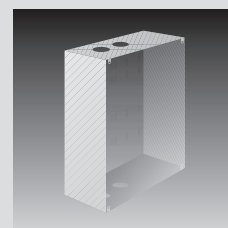
Note

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

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
Sofit	51037	Sofit • with replacement LED	5
KKO 2112 BR	51006	Panel button	3



ETA 803 EV1



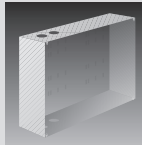
UPK 805

BUTTONS AND STOREY PLATES

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
Sofit	51037	Sofit • with replacement LED	5
KKO 2112 BR	51006	Panel button	3



We can make customised products based on the styles of our standard product range (delivery times available on request, generally 15–25 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:

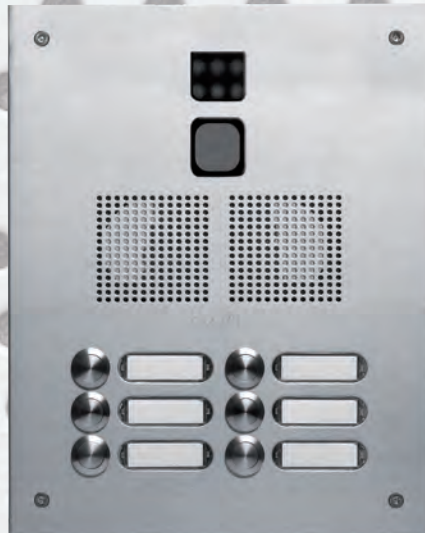
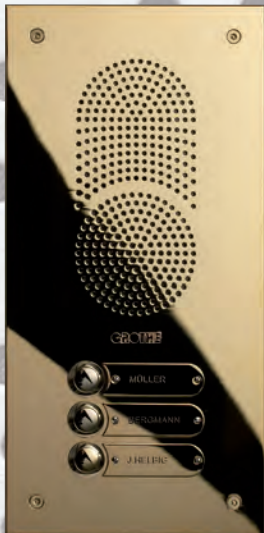
(see side 91)

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



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)

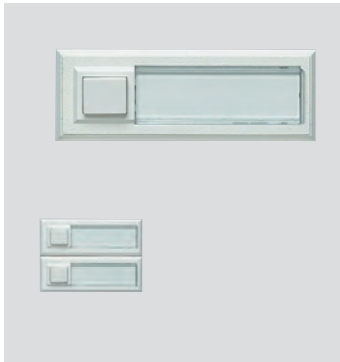
- Easy mounting with terminal clamp (max. 0.8 mm)
- Weatherproof plastic housing
- Durable special contacts with precious metal coating

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 • Illuminated	10
ETA 2122	51014	Combifix II	10
TUBULAR BULB 2130	51016	Replacement tubular bulb	10

Combifix



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

Type	Order no.	Description	PU
ETA 2121	51013	Combifix	10

KKO/Golf button



WS/WS

SIM/SW

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

Type	Order no.	Description	PU
KKO 2001 WS/WS	64032	Golf bell button • White	10
KKO 2001 WS/WS	64090	Golf bell button • White	• Contents of packaging: 1 item (blister)

KKO/Golf button



WS/WS

SIM/SW

Type	Order no.	Description	PU
KKO 2001 WS/WS	64032	Golf bell button • White	10
KKO 2001 WS/WS	64090	Golf bell button • White	• Contents of packaging: 1 item (blister)

KKO button with illumination/fashion

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 2005	64035	Fashion bell button • Black
KKO 2005W	64036	Fashion bell button • White



Domolux

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



Domolux Duo

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



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
Sofit	51037	Sofit • with replacement LED	5

Flush-mounted storey plate ETA 1321N



Description

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

- 80 x 80 x 40 mm
- Max. 230V~ (1,5 A)

Technical data

Type	Order no.	Description
ETA 1321N	51118	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



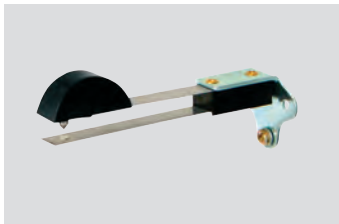
Description

- 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. 12V~ (5 mA - 1,0 A /12 VA)
- max. 12V= (5 mA - 1,0 A /12 W)

Type	Order no.	Description	PU
KKO 152B	64114	Sliding contact	1

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



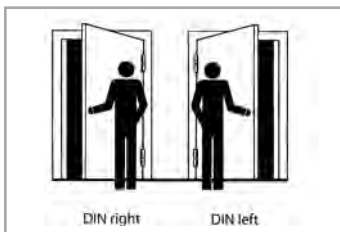


ACCESS CONTROL AND ACCESSORIES



Your entrance to amazing control solutions.«

Arresting/Releasing



Function of (impermanant) 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.

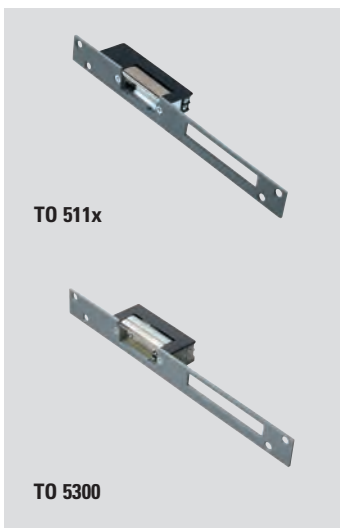
Advisable for direct-current operation, as here the electrical release is not audible in contrast to the alternating current mode (humming noise).

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



Description

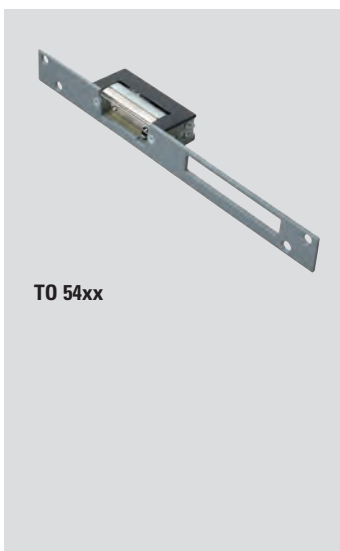
- For type of function, see ordering overview
- DIN links — (can be used asymmetrically on the right and left)
- Compact design
- Perforated closing panel

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



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



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

Compact door opener

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 <ul style="list-style-type: none">• grey
TO 5117	93115	Door opener <ul style="list-style-type: none">• brown



Door openers with electric release mechanism

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



No-load current door opener

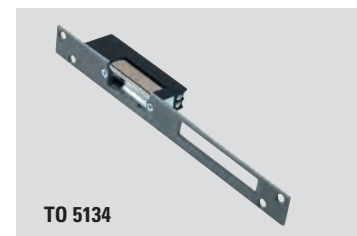
Description

- 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



Box-type door opener

Description

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

- 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.

Technical data

- 12V ~/= 30 Ohm

Note

- Not suitable for combination with angled closing panel!

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



Chain pull door opener

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

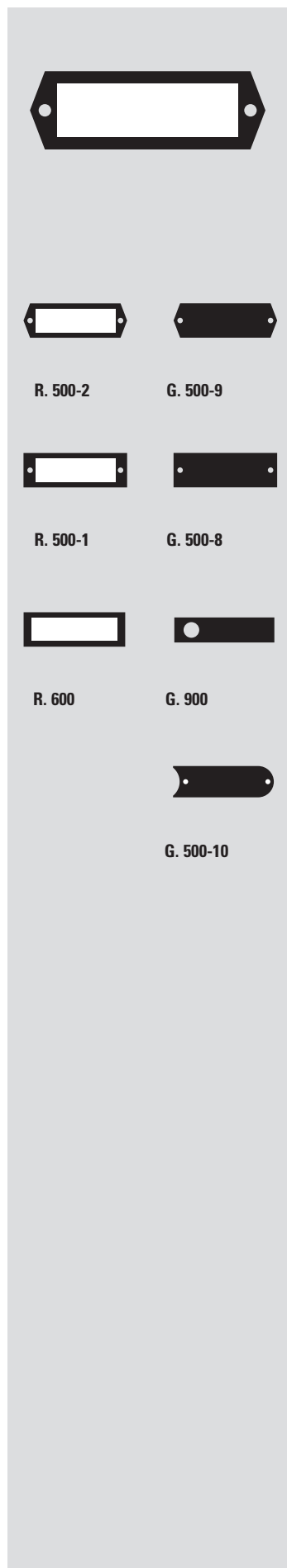


Angled closing panel

Type	Order no.	Description
TO WSB DIN L	93098	Angled closing panel <ul style="list-style-type: none">• For left-hand arresters <ul style="list-style-type: none">• Length 250 mm
TO WSB DIN R	93099	Angled closing panel <ul style="list-style-type: none">• For right-hand arresters <ul style="list-style-type: none">• Length 250 mm



Spare parts for door stations



Type	Order no.	Description	PU
SMALL FRAME 500-1EV1	98009	Small frame • silver anodised • with protection plate/screws	10 • 20 x 58 mm, Protection plate 13 x 43 mm
SMALL FRAME 500-1V2A	98010	Small frame • Brushed stainless steel • with protection plate/screws	5 • 20 x 58 mm, Protection plate 13 x 43 mm
SMALL FRAME 500-1 R14	98012	Small frame • brown anodised • with protection plate/screws	10 • 20 x 58 mm, Protection plate 13 x 43 mm
ENGRAVED PLATE 500-8 EV1	98035	Engraved plate • silver anodised • with screws	10 • 20 x 58 mm
SMALL FRAME 500-2 EV1	98002	Small frame • silver anodised • with protection plate/screws	10 • 20 x 58 mm, Protection plate 13 x 43 mm
SMALL FRAME 500-2 R14	98005	Small frame • brown anodised • with protection plate/screws	10 • 20 x 58 mm, Protection plate 13 x 43 mm
ENGRAVED PLATE 500-9 EV1	98013	Engraved plate • silver anodised • with screws	10 • 20 x 58 mm
SMALL FRAME 600 BLACK	98025	Small frame • Clamped small frame, black	10 • 20 x 57,5 mm, Protection plate 13 x 48 mm
SMALL FRAME 600 GREY	98023	Small frame • Clamped small frame, grey	10 • 20 x 57,5 mm, Protection plate 13 x 48 mm
SMALL FRAME 600	98054	Small frame • Clamped small frame, white	10 • 20 x 57,5 mm, Protection plate 13 x 48 mm
LED nameplate	98056	LED nameplate • 4 x LED white • resistant to vandalism, IP54	10 • 8-16V~/~ (0,02-0,04A) • Name plate 13x43 mm, 23x61x14 mm
ENGRAVED PLATE 500-10 EV1	98061	Engraved plate • silver anodised • with screws	10 • 20 x 62 mm
ENGRAVED PLATE 500-10 V2A	98062	Engraved plate • Brushed stainless steel • with screws	5 • 20 x 62 mm
ENGRAVED PLATE 500-10 GO	98063	Engraved plate • Gold-plated brass • with screws	5 • 20 x 62 mm
ENGRAVED PLATE 500-10 R14	98064	Engraved plate • brown anodised • with screws	10 • 20 x 62 mm
ENGRAVED PLATE 900 EV1	98032	Engraved plate • silver anodised • for ROBUSTA 900 Series	5 • 20 x 77 mm, Protection plate 12 x 53 mm
LED nameplate	98065	LED nameplate • 4 x LED blue • resistant to vandalism, IP54	10 • 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~/~	10 • Characteristics: 24V/50mA • Socket E10
Bulb lux	98191	Replacement bulb • Package contents:10 units • (price quoted per item)	10 • 17V
LIGHT SIGN	51026	Light sign, red • for panel button • KKO 2112 BR (Order no. 51006)	10
Sofit	51037	Sofit •	5 with replacement LED
KKO 2112 BR	51006	Panel button	3

Request for special panels

Side 1 of 2

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

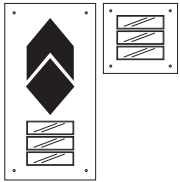
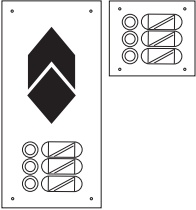
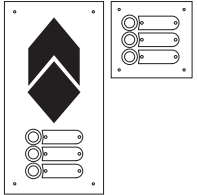
STYLE

<p>Style</p> <p><input type="checkbox"/> doorstation / front plate <small>(already prepared for fitting loudspeaker of all current producers)</small></p> <p><input type="checkbox"/> Storey plate / Bell plate</p> <p>Fixation</p> <p><input type="checkbox"/> plate with flush-mounted box <input type="checkbox"/> dimensions flush-mounted box (if fixed)</p> <p>height: mm width: mm</p>	<p>Colour / Material</p> <p><input type="checkbox"/> Aluminium</p> <p><input type="checkbox"/> EV1 - silver anodized <input type="checkbox"/> R14 - brown anodized</p> <p><input type="checkbox"/> V2A - stainless steel brushed <input type="checkbox"/> GO - brass gold-plated</p> <p><input type="checkbox"/> plate with finery box <small>(flush-mounted box with particular facing, only EV1, R14, V2A)</small></p> <p>Finery box is backwards always closed</p>	<p>Overall dimension</p> <p>height: mm width: mm</p> <p><input type="checkbox"/> plate without box</p> <p><input type="checkbox"/> with drill holes inside micrometer: height: mm width: mm</p> <p><input type="checkbox"/> without drill holes</p>
--	---	---

Mark with a cross where applicable

LAYOUT

Standard series (individual set on page 2)

<p><input type="checkbox"/> Series 800</p> 	<p><input type="checkbox"/> ROBUSTA LED</p> 	<p><input type="checkbox"/> RobustaPlus</p> 
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Assembly of push buttons

Quantity of push buttons in total:

vertical assembly:

one line three lines
 two 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

- | | |
|--|---|
| <input type="checkbox"/> PROTACT 150 VA | <input type="checkbox"/> KKO 2112 BR |
| <input type="checkbox"/> PROTACT 140 GO | <input type="checkbox"/> PROTACT 310 AL |
| <input type="checkbox"/> PROTACT 110 AL | <input type="checkbox"/> PROTACT 340 GO |
| <input type="checkbox"/> PROTACT 450 VA | <input type="checkbox"/> PROTACT 360 CR |
| <input type="checkbox"/> PROTACT 410 AL | <input type="checkbox"/> PROTACT 510 AL |
| <input type="checkbox"/> PROTACT 420 AL-KS | |
| <input type="checkbox"/> others | |

Small Frames / Name Plates

Material

- | | | |
|--|---|---------------------|
| <input type="checkbox"/> engraved plate 500-8 |  | EV1, R14 |
| <input type="checkbox"/> engraved plate 500-9 |  | EV1, R14 |
| <input type="checkbox"/> engraved plate 500-10 |  | EV1, R14, V2A, GOLD |
| <input type="checkbox"/> small frame 500-1 |  | EV1, R14, V2A |
| <input type="checkbox"/> small frame 500-2 |  | EV1, R14 |
| <input type="checkbox"/> LED name plate |  | plastic |
| <input type="checkbox"/> clamped frame 600 |  | black/grey/white |

Tubular bulb

- without
 PROTACT LED (100,101,102,105)
 like button

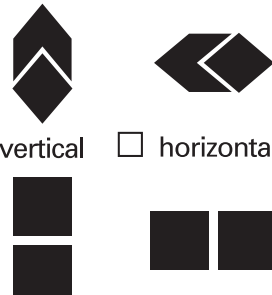
Illumination name plates

- without illumination
 back illumination with bulb or LED nameplate

Grating with universal fixation for fitting loudspeaker

Type and System
 grating with holes, square

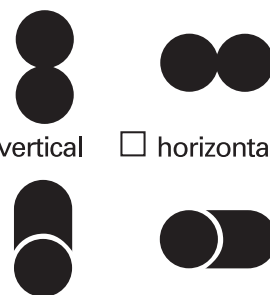
vertical horizontal



vertical horizontal

Type and System
 grating with holes, round

vertical horizontal



vertical horizontal

GRATING

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

GRAVURES

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

As at 01.01.2015

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 300, shipping is charged at EUR 8. For net order values over EUR 300, there is no charge for shipping (for shipping by haulier — free delivery, for shipping by rail — free delivery to recipient's railway station). The risk of carriage transfers to the purchaser as soon as we have delivered the sold goods to the haulier, freight carrier or any other person or agency charged with the task of delivery, including in cases where carriage-free delivery has been agreed. Any complaints with regard to damage during delivery are to be duly made by the purchaser or his nominated recipient to the Post Office, railway or haulier companies.

4. Delivery time, delays

4.1. The delivery time stated by us will be judged to have been adhered to if the goods were shipped or collected within the delivery period.

4.2. Delays in delivery and services owing to force majeure and events with causes outside our sphere of influence, entitle us to postpone the delivery or service for the duration of the impediment plus an appropriate start-up time. If the impediment lasts for longer than three months, both we and the purchaser are entitled to withdraw from the contract with regard to the part of the delivery which has not yet been fulfilled.

4.3. In the event that we default on our service, the purchaser is not entitled to claim damage compensation if the default did not infringe on any essential legally protected interests of the purchaser (life, health) or where the default is a consequence of intent or gross negligence. Here too, we shall only be liable for damages that are typical for such a contract and foreseeable. However, if the default is based on infringement of an essential contractual obligation, we shall be liable for any fault within the scope of damages that are typical for this type of contract and foreseeable. Partial deliveries and corresponding partial invoices are permissible unless it has been otherwise agreed in writing with the purchaser.

5. Guarantee

5.1. For material defects, we shall initially grant a guarantee of our choice in the form of rectification of defects or replacement. The nature of the goods is always deemed to be that as agreed in our product description. Any public statements, blurbs or advertising on our part do not constitute a contractual statement regarding the nature of the goods. Any irrelevant diminution of the value or suitability is out of the question. This also applies to damage or flaws, which are the consequence of natural wear or transportation damage or non-adherence to operating and assembly instructions. Any improper modification to the goods by the purchaser or a third party renders any claim for consequential damage null and void.

5.2. Rebukes due to incorrect delivery, incorrect quantities and obvious defects must be specified in writing by the purchaser immediately, or no later than 10 days from receipt of the goods. Latent faults are to be rebuked as soon as the fault becomes apparent. The deadline is deemed to be observed if sent off in good time. Any infringement of these obligations will preclude any claims against us. The purchaser will bear the full burden of proof for all eligibility criteria, in particular for the fault itself, for the point in time when the fault was detected and for notice of defects in good time.

5.3. Material defect claims expire under statute of limitations in 12 months. This does not apply in those cases where longer deadlines are prescribed by law (§ 438 I No. 2 Structures and Goods for Buildings; § 479 I claim under right of recourse; § 634a I No. 2 German Civil Code (BGB) Building faults) as well as in cases of injury to life, body or health, in the event of intentional or grossly negligent breach of duty and for fraudulent concealment of such fault.

5.4. In the event of notice of defects, payment by the purchaser may be withheld by an amount that is of a proportion in keeping with the material defects as detected. The purchaser is only entitled to withhold payment if a notice of defect is put forward, the justification of which cannot be disputed. If a notice of defect is deemed to be unjustified, we are entitled to demand that the purchaser compensate us for any expense incurred by us.

5.5. First of all, we are to be granted an opportunity for supplementary performance within a suitable timeframe. We are entitled to rectify defects or to redeliver several times over. Ownership of all replaced parts will pass to us.

5.6. In the event that any repair or replacement still does not rectify the fault, the purchaser has the option to withdraw from the contract or to reduce payment. All other claims, in particular damage claims, irrespective of the legal basis, are excluded, insofar as we cannot be held liable for intent

or gross negligence. Exemption from liability does not apply insofar as we have guaranteed a specific quality of the goods, which protects the purchaser from any consequential damage.

5.7. Claims under right of a recourse by the purchaser against us as under § 478 German Civil Code only exist insofar as the purchaser has not reached an agreement with his buyers which extends beyond that of statutory claims arising from defects.

5.8. Duly delivered goods can only be taken back with our prior permission. For goods returned with our prior permission we shall issue a credit note for 30% or more of the net amount invoiced, depending upon the condition of the goods, minus administrative costs, inspection and repackaging. Damaged goods and those that are no longer included in the currently valid catalogues and price lists shall not be credited. If a modification to a customised product is requested by the contractor, any costs that have been incurred up to such time must be reimbursed by the ordering party. In the event that an order is cancelled, the ordering party is bound to pay all expenses that have been incurred up to such time. Customised products that have already been delivered will not be taken back.

5.9. We reserve the right to make minor or improvement modifications to the products we supply. Details and illustrations in our catalogues, brochures, price lists, miscellaneous publications or estimates, as well as drawings, specifications and service descriptions of all kinds, dimensions, weights, consumption information etc., are by nature only approximations. They do not contain any information regarding composition or guarantees in any form whatsoever, as long as such statements have not been expressly confirmed by us in writing for an order.

6. Impossibility, contract adaptation

6.1. Insofar as a delivery becomes impossible, the purchaser is entitled to claim damage compensation, unless the reason for impossibility is not one for which we are responsible. However, the ordering party's claim for damages is restricted to 10% of the value of the part of the delivery, which cannot be put into useful service because of the impossibility involved. This restriction does not apply insofar as liability is mandatory in cases of intent, gross negligence or due to harm to life, body or health; this is not combined with any change in the burden of proof to the detriment of the purchaser. The right of the purchaser to withdraw from the contract remains unaffected.

6.2. Insofar as any unforeseen events considerably alter the economic significance or content of the delivery or exert a major influence on our operation, the contract will be suitably adapted taking good faith into consideration. Insofar as this is not economically feasible, we are entitled to withdraw from the contract. In the event that we wish to make use of this right of withdrawal, we shall immediately notify the purchaser of such intention after determining the consequence of the event in question. This includes cases when an extension of the delivery period was initially agreed with the 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 associa-

ted 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.

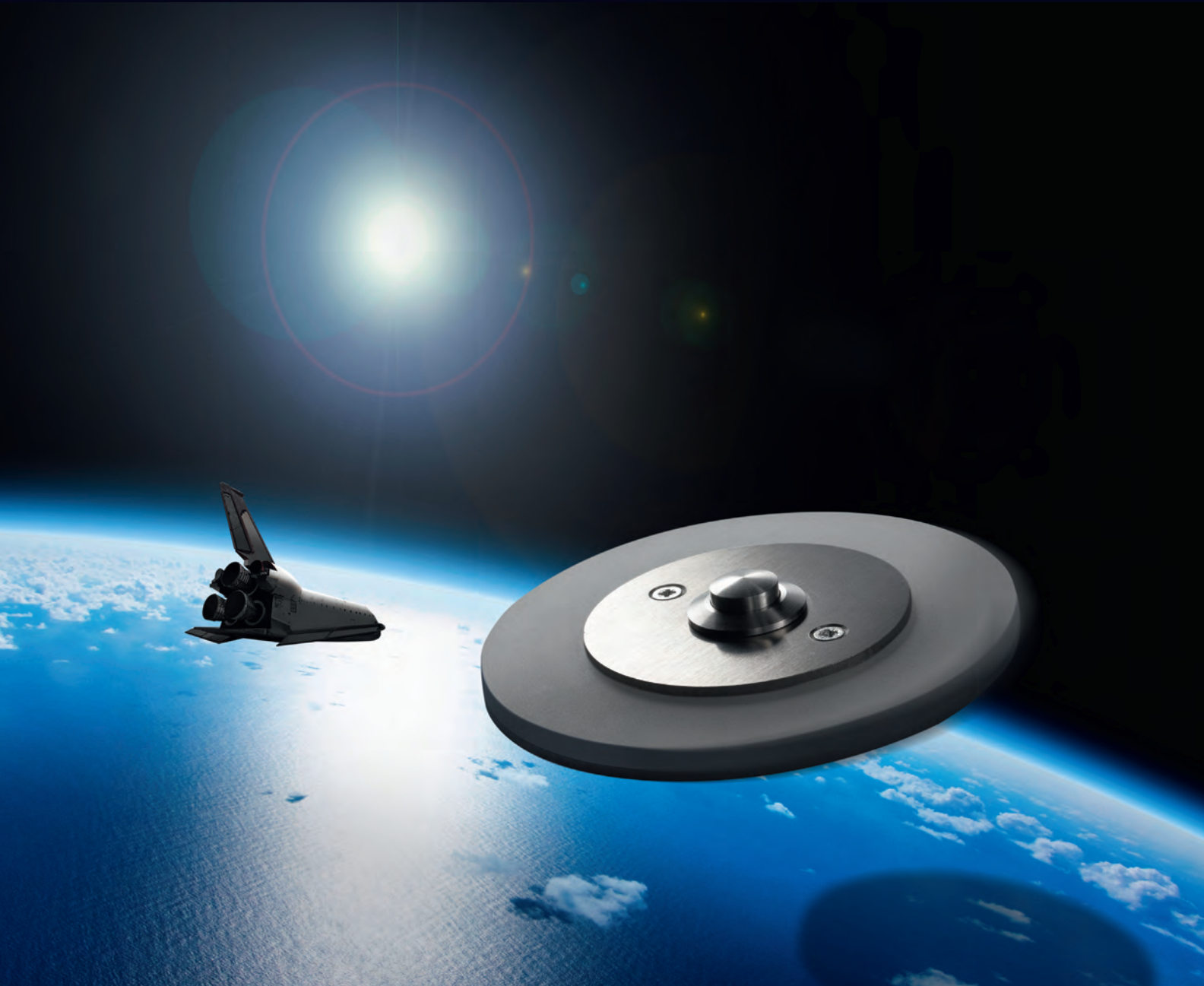
9. Place of fulfilment, court of jurisdiction, severability clause

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 2015/2016



MODEL LIST

Order no.	Type	Description	PU	DC	Page
14034	GT 1973	Safety transformer, 8/12V~ (2.0/2.0A), width 3 HP	1	I	68
14039	GT 3139	Bell transformer, 8/12V~ (1.5/1.0A), STL 20 sec., width 2 HP	1	I	68
14049	GT 3139 S	Bell transformer, 8/12V~ (1.3/1.0A), STL 20 sec., width 2 HP	1	I	68
14058	GT 3158	Bell transformer, 12V~ (1.0A), STL 20 sec., width 2 HP	1	I	68
14073	GT 3173	Bell transformer, 4/8/12V~ (2.0/2.0/1.5A), STL 20 sec., w. 2 HP	1	I	68
14074	GT 3174	Bell transformer, 4/8/12V~ (3.0/2.0/2.0A), STL 20 sec., w. 3 HP	1	I	68
14082	GT 3182	Bell transformer, 8/12/24V~ (2.0/1.3/0.6A), STL 20 sec., w. 2 HP	1	I	68
14083	GT 3173 S	Bell transformer, 4/8/12V~ (2.0/2.0/1.5A), STL 20 sec., w. 2 HP	1	I	68
14101	GT 1975	Safety transformer, 12V~ (1.5A), width 3 HP	1	I	68
14102	GT 1965	Safety transformer, 8V~ (2.0A), width 2 HP	1	I	68
14140	GT 1980	Safety transformer, 12/16/24/32V~, (3.3/2.5/1.6/1.2A), w. 5 HP	1	I	69
14160	GT 1990	Safety transformer, 12/24V~ (5.2/2.6A), width 5 HP	1	I	69
14201	GT 3148	Bell transformer, 8V~(1.0A), STL 20 sec., width 2 HP	1	I	68
14207	GT 50810	Bell transformer, 8V~(1.0A), fail-safe short circuit res., width 2 HP	1	I	68
14211	GT 3148 S	Bell transformer, 8V~(1A), STL 20 sec., width 2 HP	1	I	68
14936	GT 36 AP	Surface mounting set, width 36 mm, incl. 2 covering caps for IP 20, width 2 HP	1	I	68
14954	GT 54 AP	Surface mounting set, width 54 mm, incl. 2 covering caps for IP 20, width 3 HP	1	I	68
14990	GT 90 AP	Surface mounting set, width 90 mm, incl. 2 covering caps for IP 20, width 5 HP	1	I	69
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	29
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

MODEL LIST

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., duty cyc. 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	50
37327	DSL 7327	Rotating mirror beacon, 240V~ (0.2A), orange, incl. H1, IP 55	1	II	50
37332	DSL 7332	Rotating mirror beacon, 240V~ (0.2A), red, incl. GL 25W (Ba15d), IP 55	1	II	54
37337	DSL 7337	Rotating mirror beacon, 240V~ (0.2A), orange, incl. GL 25W (Ba15d), IP 55	1	II	54
37352	BLZ-R 7352	Xenon flashing beacon, 240V~ (0.1A), red, 6 Joules, IP 55	1	II	54
37357	BLZ-R 7357	Xenon flashing beacon, 240V~ (0.1A), orange, 6 Joules, IP 55	1	II	54
37361	DSL 7361	Rotating mirror beacon, 24V~ (2.1A), orange, incl. GL 25W (Ba15d), IP 55	1	II	54
37362	DSL 7362	Rotating mirror beacon, 24V~ (2.1A), red, incl. GL 25W (Ba15d), IP 55	1	II	54
37381	DSZ 7381	Halogen lamp, 12V, 55W, H1	1	II	55
37382	DSZ 7382	Halogen lamp, 24V, 70W, H1	1	II	55
37383	DSZ 7383	Xenon tube for BLZ-R, 6 Joules	1	II	55
37391	DSZ 7391	Push-fit flange, for DSL 7302/7, tube Ø24, black	1	II	54
37394	DSZ 7394	Cage card, for DSL 7302/7, stainless steel	1	II	54
37395	DSZ 7395	Wall bracket, vertical assembly, black	1	II	54
37396	DSZ 7396	Bulb, 24V, 25W, for Ba15d	1	II	54
37397	DSZ 7397	Bulb, 240V, 25W, for Ba15d	1	II	54
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

MODEL LIST

Order no.	Type	Description	PU	DC	Page
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	49
38542	HBZ 8542 24V DC	Combi flashlight, 24V= (0.85A), red, 80 dB(A)/6J, IP 30	1	II	49
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
38553	GBZ 8621	Flashing light, 240V AC, 90mA, orange, 6 Ws(J), 65Bl/min ±10	1	II	48
38554	GBZ 8622	Flashing light, 240V AC, 90mA, rot, 6 Ws(J), 65Bl/min ±10	1	II	48
38571	HBZ 8571 240V AC	Combi flashlight, 240V~ (0.1A), orange, 72 dB(A)/6J, IP 30	1	II	49
38572	HBZ 8572 240V AC	Combi flashlight, 240V~ (0.1A), red, 72 dB(A)/6J, IP 30	1	II	49
38591	GSZ 8591	Bulb, 12V, 25W, for Ba15d	1	II	55
38592	GSZ 8592	Bulb, 24V, 25W, for Ba15d	1	II	55
38593	GSZ 8593	Bulb, 240V, 25W, for Ba15d	1	II	55
38595	KSZ 8595	Bulb, 12V, 5W, for Ba15d	1	II	55
38596	KSZ 8596	Bulb, 24V, 5W, for Ba15d	1	II	55
38597	KSZ 8597	Bulb, 240V, 5W, for Ba15d	1	II	55
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	55
38652	KSZ-LED 8652	LED illuminant, 230/240V AC, red, 50mA, socket Ba15d	1	II	55
38654	KSZ-LED 8654	LED illuminant, 230/240V AC,white, 55mA, socket Ba15d	1	II	55
38655	KSZ-LED 8655	LED illuminant, 230/240V AC, blue, 70mA, socket Ba15d	1	II	55
38656	KSZ-LED 8656	LED illuminant, 230/240V AC, green, 50mA, socket Ba15d	1	II	55
38661	KSZ-LED 8661	LED illuminant, 24V AC/DC, yellow-orange, 45mA, socket Ba15d	1	II	55
38662	KSZ-LED 8662	LED illuminant, 24V AC/DC, red, 45mA, socket Ba15d	1	II	55
38664	KSZ-LED 8664	LED illuminant, 24V AC/DC, clear, 50mA, socket Ba15d	1	II	55

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38665	KSZ-LED 8665	LED illuminant, 24V AC/DC, blue, 65mA, socket Ba15d	1	II	55
38666	KSZ-LED 8666	LED illuminant, 24V AC/DC, blue, 45mA, socket Ba15d	1	II	55
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
38901	SIR 8901RT	Electronic Siren, 12-24V AC/DC, 250 mA, colour red, up to 105dB(A)	1	II	51
38902	SIR 8902WS	Electronic Siren, 12-24V AC/DC, 250 mA, colour white, up to 105dB(A)	1	II	51
38903	SIR 8903RT	Electronic Siren, 90-240V AC, 60mA, colour red, up to 105dB(A)	1	II	51
38904	SIR 8904WS	Electronic Siren, 90-240V AC, 60mA, colour white, up to 105dB(A)	1	II	51
38911	BMF 8911	BasicModule flat, 12-24V AC/DC, Multi-volt opration	1	II	51
38912	BMT 8912	BasicModule deep, 12-24V AC/DC, Multi-volt opration	1	II	51
38913	BMW 8913	BasicModule wall, 10-24V AC/DC, Multi-volt opration	1	II	51
38914	BMT 8914	BasicModule deep, 90-240V~,incl. Electronic, Multi-volt opration	1	II	51
38915	BMW 8915	BasicModule wall, 90-240V~, incl. Electronic, Multi-volt opration	1	II	51

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38916	BDW 8916	Basic module wall, Multi-volt-mode, 12V/24V ~/=	1	II	52
38917	BDW 8917	Basic module wall, Multi-volt-mode, 90 - 240V ~	1	II	52
38921	MSG 8921	Module Sounder, for Multi-volt Basicmodule, 100%ED, bis 105dB(A)	1	II	53
38931	MHZ 8931	Module combined light LED, for Multi-volt Basicmodule, colour orange, up to 105dB(A)	1	II	53
38932	MHZ 8932	Module combined light LED, for Multi-volt Basicmodule, colour red, up to 105dB(A)	1	II	53
38933	MHZ 8933	Module combined light LED, for Multi-volt Basicmodule, colour green, up to 105dB(A)	1	II	53
38934	MHZ 8934	Module combined light LED, for Multi-volt Basicmodule, colour blue, up to 105dB(A)	1	II	53
38941	MWL 8941	Module combined light LED, for Multi-volt Basicmodule, colour orange	1	II	53
38942	MWL 8942	Module combined light LED, for Multi-volt Basicmodule, colour red, IP65	1	II	53
38943	MWL 8943	Module combined light LED, for Multi-volt Basicmodule, colour green, IP65	1	II	53
38944	MWL 8944	Module combined light LED, for Multi-volt Basicmodule, colour blue, IP65	1	II	53
38951	MWL 8951	Module warning LED lamp, Multi volt mode, 20 CDd(p)	1	II	53
38952	MWL 8952	Module warning LED lamp, Multi volt mode, 20 CDd(p)	1	II	53
38953	MWL 8953	Module warning LED lamp, Multi volt mode, 20 CDd(p)	1	II	53
38954	MWL 8954	Module warning LED lamp, Multi volt mode, 20 CDd(p)	1	II	53
38961	MML 8961	Module warning LED lamp, Multi volt mode, 20 CDd(p)	1	II	53
38962	MML 8962	Module warning LED lamp, Multi volt mode, 20 CDd(p)	1	II	53
38991	BMF 8991	Basic module wall, Multi-volt-mode, 12V/24V ~/=	1	II	52
38992	BMF 8992	Basic module wall, Multi-volt-mode, 12V/24V ~/=	1	II	52
38993	BMF 8993	Basic module wall, Multi-volt-mode, 12V/24V ~/=	1	II	52
38994	BMF 8994	Basic module wall, Multi-volt-mode, 12V/24V ~/=	1	II	52
38995	BMF 8995	Basic module wall, Multi-volt-mode, 12V/24V ~/=	1	II	52
39340	NG AL15/5A	Surface-mount installation set, Primary 230V~AC, 50HZ, Secondary 12V= DC, max. 4A1		II	69
43142	MISTRAL 300M ws	Radio Chime set, 17 melodies/flashing light , 8-12 V=~/~ / Batt. 4 x 1.5 V	1	I	9
43143	MISTRAL 300M sw	Radio Chime set, 17 melodies/flashing light , 8-12 V=~/~ / Batt. 4 x 1.5 V	1	I	9
43144	MISTRAL 300M si	Radio Chime set, 17 melodies/flashing light , 8-12 V=~/~ / Batt. 4 x 1.5 V	1	I	9
43145	MISTRAL 300M rt	Radio Chime set, 17 melodies/flashing light , 8-12 V=~/~ / Batt. 4 x 1.5 V	1	I	9
43146	MISTRAL 300M gn	Radio Chime set, 17 melodies/flashing light , 8-12 V=~/~ / Batt. 4 x 1.5 V	1	I	9
43150	CROMA 50	Electronic chime, 3 sounds, batt. 4x1.5V, activ. button or 8/12V	1	I	15
43152	CROMA 50 ws	Electronic chime, 3 sounds, batt. 4x1.5V, activ. button or 8/12V	1	I	15
43153	CROMA 50 sw	Electronic chime, 3 sounds, batt. 4x1.5V, activ. button or 8/12V	1	I	15
43154	CROMA 50 si	Electronic chime, 3 sounds, batt. 4x1.5V, activ. button or 8/12V	1	I	15
43155	CROMA 50 rt	Electronic chime, 3 sounds, batt. 4x1.5V, activ. button or 8/12V	1	I	15
43156	CROMA 50 gn	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
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
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

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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	9
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 03.1-s	Radio transmitter, range 250m-868.35MHz, incl. 2 batt. 1.5V (AAA	1	I	8
43441	MISTRAL SE 03.1	Radio transmitter, range 250m-868.35MHz, incl. 2 batt. 1.5V (AAA)	1	I	9
43445	MISTRAL BM03.0	Radio movement detector, incl. lithium battery 3V type CR123A	1	I	8
43701	UP Gong 120ws	Flush-type electronic gong, 17 gong tones, up to 83 dB, 8-12V~/~ supply,	1	I	19
43706	UP-GONG 230ws	Flush-type electronic gong, 230V AC, 50Hz / 0,080A, 17 polyphone melodies	1	I	19
43711	UP-LTW 120ws	Flush-type bell mechanism, up to 80 dB, white, 8-12V~ supply, incl. frame	1	I	19
43716	UP-LTW 230ws	Flush-type bell mechanism, 230V AC, 50Hz / 0,045A	1	I	19
43721	UP-SU 120ws	Flush-type buzzer, up to 80 dB, white, 8-12V~ supply, incl. frame	1	I	19
43726	UP-SU 230ws	Flush-type buzzer, 230V AC, 50Hz / 0,036A	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
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	76
51011	MONTILUX 2154	Montilux, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	10	I	82
51013	ETA 2121	Combifix,weatherproof, plastic, max.24V~(1.5A)/24V=(1.0A)	10	I	82
51014	ETA 2122	Combifix II, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	10	I	82
51015	ETA 2132	Combilux, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	10	I	82
51016	TUBULAR BULB 2130	Replacement tubular bulb, packaging content: 10 items, (price quoted per item)	10	I	82
51018	ETA 1321	Flush-mounted storey plate, white, max.24V~(1.5A)/24V=(1.0A)	1	II	84
51026	LIGHT SIGN	Red light sign, for panel button, KKO 2112 BR (51006)	10	I	90
51037	Sofit	Sofit LED 8-12V AC/DC	5	I	79
51103	DOMOLUX WS/SW 2151	Domolux, max. 12V~/= (AC/DC)1.5A, surf.mount. white/black	1	I	83
51113	DOMOLUX SIM/SW 2151	Domolux, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	1	I	83
51118	ETA 1321N	Flush-mounted storey plate, white, max.230V~(1,5A)	1	II	84
51203	DOMOLUXDUO WS/SW2152	Domolux Duo, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	1	I	83
51213	DOMOLUXDUOSIM/SW2152	Domolux Duo, weatherproof, plastic, max. 12V~/= (AC/DC)1.5A	1	I	83
55511	ETA 501 G	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	78
55512	ETA 502 G	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 2 ring tones	1	I	78
55531	ETA 501 GA	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	78
55532	ETA 502 GA	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 2 ring tones	1	I	78
55533	ETA 503 GA	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 3 ring tones	1	I	78
55540	ETA S 100	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	77

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55541	ETA S 200	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	77
55542	ETA S 100 LEDws	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	77
55543	ETA S 100 LEDbl	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	77
55544	ETA S 200	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	77
55545	ETA S 200	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	II	77
55595	ETA 2310	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	78
55597	ETA 2312	Storey plate, max.24V~(1.5A)/24V=(1.0A), surf.mount., 1 ring tone	1	I	78
55631	ETA 631 WS	Classic storey plate, max. 12V~/=(AC/DC) 1.5A, surf.mount., 1 PB	1	I	84
55632	ETA 632 WS	Classic storey plate, max. 12V~/=(AC/DC) 1.5A, surf.mount., 2 PBs	1	I	84
55633	ETA 633 WS	Classic storey plate, max. 12V~/=(AC/DC) 1.5A, surf.mount., 3 PBs	1	I	84
55634	ETA 634 WS	Classic storey plate, max. 12V~/=(AC/DC) 1.5A, surf.mount., 4 PBs	1	I	84
55801	ETA 801 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 1 panel button	1	I	79
55802	ETA 802 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 2 panel buttons	1	I	79
55803	ETA 803 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 3 panel buttons	1	I	79
55804	ETA 804 EV1	Storey plate, max.24V~(1.5A)/24V=(1.5A), flushmount., 4 panel buttons	1	I	79
55805	ETA 805 EV1	Storey plate, max.24V~(1.5A)/24V=(1.5A), flushmount., 5 panel buttons	1	I	79
55806	ETA 806 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 6 panel buttons	1	I	79
55807	ETA 807 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 7 panel buttons	1	I	79
55808	ETA 808 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 8 panel buttons	1	I	79
55809	ETA 809 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 9 panel buttons	1	I	79
55826	ETA 833 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 6 panel buttons	1	I	80
55827	ETA 834 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 6 panel buttons	1	I	80
55828	ETA 844 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 8 panel buttons	1	I	80
55829	ETA 845 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 9 panel buttons	1	I	80
55830	ETA 855 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 10 panel buttons	1	I	80
55831	ETA 856 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 11 panel buttons	1	I	80
55832	ETA 866 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 12 panel buttons	1	I	80
55833	ETA 867 EV1	Storey plate, max.24V~(1.5A)/24V=(1.0A), flushmount., 13 panel buttons	1	I	80
55881	UPK 801	Flush-mounted box for 1 panel button, single row	1	I	79
55882	UPK 802	Flush-mounted box for 2 panel buttons, single row	1	I	79
55883	UPK 803	Flush-mounted box for 3 panel buttons, single row	1	I	79
55884	UPK 804	Flush-mounted box for 4 panel buttons, single row	1	I	79
55885	UPK 805	Flush-mounted box for 5 panel buttons, single row	1	I	79
55886	UPK 806	Flush-mounted box for 6 panel buttons, single row	1	I	79
55887	UPK 807	Flush-mounted box for 7 panel buttons, single row	1	I	79
55888	UPK 808	Flush-mounted box for 8 panel buttons, single row	1	I	79
55889	UPK 809	Flush-mounted box for 9 panel buttons, single row	1	I	79
55893	UPK 833	Flush-mounted box for 6 panel button, double row	1	I	80
55894	UPK 834/844	Flush-mounted box for 7/8 panel buttons, double row	1	I	80
55895	UPK 845/855	Flush-mounted box for 9/10 panel buttons, double row	1	I	80
55896	UPK 856/866	Flush-mounted box for 11/12 panel buttons, double row	1	I	80
55897	UPK 867	Flush-mounted box for 13 panel buttons, double row	1	I	80
55912	ETA S 102	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	77
55922	ETA S 202	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	77
55932	ETA S 302	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	77

MODEL LIST

Order no.	Type	Description	PU	DC	Page
55942	ETA S 402	Storey plate 4mm, max.24V~(1.5A)/24V=(1.0A), surf.mount.	1	II	77
61031	PROTACT 380 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
61032	PROTACT 381 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
61045	PROTACT 681 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
61047	PROTACT 680 KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
62000	PROTACT 150 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62001	PROTACT 140 GO	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62002	PROTACT 110 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62006	PROTACT 450 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
62013	PROTACT 420 AL-KS	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm IP 54	5	I	75
62016	PROTACT 410 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
62025	PROTACT 340 GO	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62026	PROTACT 370 NI	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62032	PROTACT 310 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62033	PROTACT 360 CR	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62034	PROTACT 371 NI	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62045	PROTACT 210 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	74
62054	PROTACT 260 CR	Bell button, max. 24V~/= /AC/DC)/1.5A, Ø16mm, IP54	5	I	74
62060	PROTACT 550 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
62061	PROTACT 510 AL	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
62070	Protact 650 VA	Bell button, max. 24V~/= (AC/DC)/1.5A, Ø16mm, IP 54	5	I	75
63022	PROTACT 101 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	1	II	76
63032	PROTACT 100 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	1	II	76
63042	PROTACT 102 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	1	II	76
63052	PROTACT 105 LED	Bell button, max. 24V~/= (AC/DC)/1.5A, LED: 12V~/0.02A, IP 54	1	II	76
64025	KKO 5050	Button, plastic white/round, max.24V~(1.5A)/24V=(1.0A), surface	10	I	84
64032	KKO 2001 WS/WS	Golf bell button, white, max.24V~(1.5A)/24V=(1.0A), surface	10	I	82
64035	KKO 2005	Golf bell button, black	10	I	83
64036	KKO 2005W	Golf bell button, white	10	I	83
64063	KKO 3736A	Bell suspended button, plastic white, max.24V~(1.5A)/24V=(1.0A)	10	I	84
64070	KKOL 2001 WS/T	Fashion button, 8-24V~ (1.5A), LED approx. (20 mA)	1	I	83
64090	KKO 2001 WS/WS	Golf bell button, max.24V~(1.5A)/24V=(1.0A), surface	1	I	82
64114	KKO 152A	Sliding contact, insulating duct edge shield, max.24V~(1.5A)/24V=(1.0A)	1	I	84
64131	KS 2070 MS-GEB	Contact shell, brushed brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	78
64132	KS 2071 MS-BRÜN	Contact shell, burnished brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	78
64141	KS 2074 WS	Contact shell, brass painted white/round, max.24V~(1.5A)/24V=(1.0A)	1	I	78
64143	KS 2075	Contact shell, chrome-plated matt brass/round, max.24V~81.5A)/24V=(1.0A)	1	I	78
64144	KS 2076	Contact shell, chrome-plated polished brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	78
64151	TORK 2060	Door contact, brushed brass/round, max.24V~(1.5A)/24V=(1.0A)	1	I	77
93011	TO 5300	Door opener, 8V=(0.75A) or12V~(1.0A)	1	I	88
93012	TO 5110	Door opener, 8-12V~/=, box 28x90x20mm, perforated closing panel	1	I	88
93013	TO 5111	Door opener, 8-12V~/=, with arrester	1	I	88
93014	TO 5112	Door opener, 8-12V~/=, with release mechanism	1	I	88
93015	TO 5113	Door opener, 8-12V~/=, with arrester and rel. mech.	1	I	88
93021	TO 5600	Box-type door opener,12V~/= 30 Ohm (0.4A), perforated closing panel	1	I	89

MODEL LIST

Order no.	Type	Description	PU	DC	Page
93031	TO 5200	Chain pull door opener, 12V~/= 8 Ohm (1.5A)	1	I	89
93061	TO 5134	No-load current door opener, 24V= (0.11A)	1	I	89
93071	TO 5110 E	Door opener, 8V= (0.2A), electric release mechanism	1	I	89
93081	TO 5400	Door opener, 8-12V AC/DC 0.7A/140hm, 250x25x3mm	1	I	88
93082	TO 5411	Door opener, 8-12V AC/DC 0.7A/140hm, 250x25x3mm	1	I	88
93083	TO 5412	Door opener, 8-12V AC/DC 0.7A/140hm, 250x25x3mm	1	I	88
93084	TO 5413	Door opener, 8-12V AC/DC 0.7A/140hm, 250x25x3mm	1	I	88
93090	TO 5900-L	Door opener, 12V AC/DC 0.5A/200hm, 1000KG, 250x25x3/IP54	1	I	88
93091	TO 5900-R	Door opener, 12V AC/DC 0.5A/200hm, 1000KG, 250x25x3/IP54	1	I	88
93098	TO WSB DIN L	Angled closing panel, left-hand arrester, length 250mm	1	I	89
93099	TO WSB DIN L	Angled closing panel, right-hand arrester, length 250mm	1	I	89
93114	TO 5116	Door opener, 8V~/= to 12V~/=, box 28x90x20mm	1	I	89
93115	TO 5117	Door opener, 8V~/= to 12V~/=, box 28x90x20mm	1	I	89
94022	TA 220d	Staircase light time switch	1	I	69
94500	McGuard PM-APws	Motion sensor, AC 230V~/ IP 40, Surveillance range 360° at 6m	1	II	60
94501	McGuard PM-EINBws	Motion sensor, AC 230V~/ IP 40, Surveillance range 360° at 6m	1	II	60
94513	McGuard mini BM180ws	Motion sensor, AC 230V~/1000W/400W(kap.), IP44, Surveillance range 180°	1	II	60
94514	McGuard mini BM180pw	Motion sensor, AC 230V~/1000W/400W(kap.), IP44, Surveillance range 180°	1	II	60
94515	McGuard mini BM180sw	Motion sensor, AC 230V~/1000W/400W(kap.), IP44, Surveillance range 180°	1	II	60
94530	McGuard professional BM120ws	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 120°	1	II	61
94531	McGuard professional BM240ws	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 240°	1	II	61
94532	McGuard professional BM360ws	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 360°	1	II	61
94533	McGuard professional BM120sw	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 120°	1	II	61
94534	McGuard professional BM240sw	Motion sensor, AC 230V~/500VA/250W(kap.), IP55, Surveillance range 240°	1	II	61
94535	McGuard professional BM360sw	Motion sensor, AC 230V~/1200VA/5000W(kap.), IP55, Surveillance range 360°	1	II	61
94536	McGuard professional BM240iws	Motion sensor, pro 240°i, AC 220V~/120VA/1000W, IP55, Surveillance range 360°	1	II	61
94537	McGuard professional BM360iws	Motion sensor, prof 360°i, AC 220V~/1200VA/2200W, IP55/Surveillance range	1	II	61
94538	McGuard IR FB	Remote control (IR-B24), usable for 94536, 94537, McGuard prof BMxxiws	1	II	61
94551	McGuard Halo120BM180	Halogen floodlight spot with infrared movement detector, AC230V~/120W, IP 44	1	II	62
94553	McGuard Halo400BM180	Halogen floodlight spot with infrared movement detector, AC230V~/400W, IP 44	1	II	62
94555	McGuard LED RL300Aws	LED floodlight, movement sensor, 220-240V, IP44, LED, 30 kh, RW 12m, H 2.5m, 240°	1	II	62
94556	McGuard LED RL300Asw	LED floodlight, movement sensor, 220-240V, IP44, LED, 30 kh, RW 12m, H 2.5m, 240°	1	II	62
94557	McGuard LED LL300Aws	LED floodlight, 220-240V, 50Hz, IP44, LED daylight white, 5600K	1	II	62
94558	McGuard LED LL300Asw	LED floodlight, 220-240V, 50Hz, IP44, LED daylight white, 5600K	1	II	62
98002	SMALL FRAME 500-2 EV1	Small frame, silver anodised	10	III	90
98005	SMALL FRAME 500-2 R14	Small frame, brown anodised	10	III	90
98009	SMALL FRAME 500-1 EV1	Small frame, silver anodised	10	III	90
98010	SMALL FRAME 500-1 V2A	Small frame, Brushed stainless steel, with protection plate/screws	5	III	90
98012	SMALL FRAME 500-1 R14	Small frame, brown anodised, with protection plate/screws	10	III	90
98013	ENGR. PLATE 500-9 EV1	Engraved plate, silver anodised, 20x58mm	10	III	90
98020	BULB 1327	Bulb, 12V~/= (24V/50mA), Socket E10	10	III	90
98023	SMALL FRAME 600 GREY	Small frame, Clamped small frame, grey, 20 x 57.5 mm	10	III	90
98025	SMALL FRAME 600 BLACK	Small frame, Clamped small frame, black, 20 x 57.5 mm	10	III	90
98032	ENGR. PLATE 900 EV1	Engraved plate, silver anodised, 20 x 77 mm	5	III	90

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Order no.	Type	Description	PU	DC	Page
98035	ENGR. PLATE 500-8 EV1	Engraved plate, silver anodised, 20 x 58 mm	5	III	90
98054	SMALL FRAME 600 WS	Small frame, Clamped small frame, white, 20 x 57.5 mm	10	III	90
98056	NSH LED 100 WS	LED nameplate, 4x LED white, resistant to vandalism IP54	1	III	90
98061	ENGR. PLATE 500-10 EV1	Engraved plate, silver anodised, 20 x 62 mm	10	III	90
98062	ENGR. PLATE 500-10 V2A	Engraved plate, Brushed stainless steel, 20 x 62 mm	5	III	90
98063	ENGR. PLATE 500-10 GO	Engraved plate, Gold-plated brass, 20 x 62 mm	5	III	90
98064	ENGR. PLATE 500-10 R14	Engraved plate, brown anodised, 20 x 62 mm	10	III	90
98065	LED nameplate	4 x LED blue, resistant to vandalism, IP54, 13x43 mm, 23x61x14 mm	1	I	90
98191	Bulb lux	Replacement bulb, 17V	10	III	90

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