

**Switches** made of porcelain, Bakelite® and glass.







## Quality inside and out. A cut above the rest. Our light switching systems.

Our switching systems made of porcelain and Bakelite® have been developed by our in-house specialists. They are produced in Thuringia (porcelain covers and central inserts), in Westphalia (Bakelite® covers, central inserts and switching mechanisms) and in Bavaria (glass covers). These materials even have experts taking a second look: At trade fairs we regularly see architects tapping and feeling the material to see whether it really is genuine. Which it is, of course, and not only superficially, but through and through - for covers made of Bakelite® the material walls are at least 2.5 mm thick, glass covers 4 mm and the porcelain covers are 13 mm thick. The inner workings are made to match: The main units for the rotary, rocker and toggle switches are made of ceramic material. And: Our rotary switches are still true rotary switches in which the contacts are opened and closed through rotation. These days, that is not always the case, many other rotary switches are really rocker switches which are operated via a turning knob. The difference can be both felt and heard.

The following pages contain detailed information about the systems and components which we supply. If you require further information or cannot find the part which you need, please do not hesitate to contact us. We shall be glad to advise you, your architects, planners and fitters on any queries you might have.

## The internal structure: Ceramic switches. Influenced by nautical electric engineering.

In some sectors, these types of rotary switches have survived until today – this is generally the case where dependability and durability are a top priority and where relying on the robust mechanical operation of switches is critical despite frequent use of co-current electricity: this is the case in shipbuilding and industrial applications. Our switches' mechanisms are produced by CAW (Casp. Arn. Winkhaus) in Halver near Lüdenscheid; they have been making electrotechnical installation products since 1910, and we have developed our switch series in close cooperation with them. The over-centre device of the ceramic switch which consists of 42 parts is the result of great mechanical precision: it keeps consistent switch contact regardless of the speed of the turning motion and is closed with a loud clicking noise - it not only sounds great, but it also protects the material, since it prevents the harmful arc effect, which can also arise with alternating currents, and damage switch contacts in the long-term. The over-centre device is also galvanised to ensure safe operation.



All products of this catalogue have the VDE test mark if testing applies.



**C E** The CE mark is applied to the packaging label and any products subject to the CE directive.



## Covers and combination options. Single, double and multiple combinations.

Switches and power outlets are delivered without outside faceplates. For the inserts of the white porcelain series faceplates are available as single and double covers as well as system faceplates. Thanks to these system faceplates, various combinations of different elements (for example, a power outlet and a switch) or identical elements (for example three power outlets) can be combined and mounted. All porcelain switches and power outlets can be combined with one another. The only exception are data and telephone jacks, antennae outlets and speaker wall sockets which cannot be mounted in the porcelain double cover.

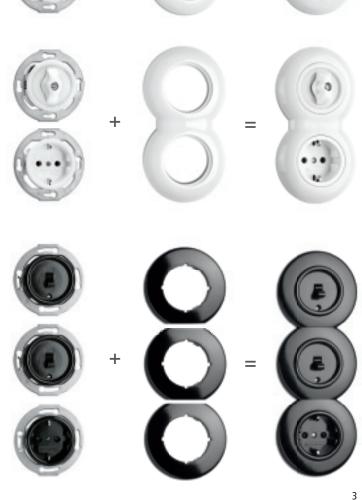
For the inserts of the black and white Bakelite® series are single round and square faceplates available, round system faceplates as well as square double, triple and quadruple faceplates.

For the black and white Bakelite® inserts for the glass series are round single and system faceplates available.

## The white »Bakelite®«

Bakelite® is a registered trademark of Momentive Specialty Chemicals Inc. The white Bakelite® series is formed from the same material as the black one. However, the white material is produced by a different manufacturer. Strictly speaking, it should therefore not be called by the brand name Bakelite®, but by the generic name duroplast. To make it easier to distinguish items, we use the designation Bakelite® for items from black series, and duroplast for white ones.

Installation note: The distances of the inserts in all multiple and system coverings are consistent with the standard spacing of 71 mm and can be easily used with existing installations. The switch systems fit in all standard concealed outlets.



## From nuisance to pleasure: The porcelain switch system

From the beginning of the electrical age and several decades to follow, the porcelain and ceramics industry was the most important provider of electrical technology: Casings, switch pieces and housings were made from this attractive material that, apart from its aesthetic qualities, has tangible technical benefits: it insulates and is extremely tough.

It is hard to understand why today's porcelain material for electrical switch systems can generally only be found in industrial use. This fact can only be explained by the dominant business mentality "more, faster, cheaper".

The producers of technical porcelain – based primarily in the Bavarian Forest and in Thuringia - are desperately searching for new fields in which to apply their highly-developed skills. We have brought together a producer of electro-technical switches from Westphalia and a producer of electro-technical porcelain from Thuringia. The result is this porcelain switch system what is shortly for twenty years established on the market. It is both functional and pleasant in three ways: to the eye, to the touch and to the ear (thanks to the enjoyable "klack" sound of the rotary switch).

## The faceplate and the pushbutton: electro-technical porcelain...

All porcelain parts originate from Schierschnitz in Thuringia, where electro-technical porcelain has been produced since 1913. The porcelain is moulded under a pressure of 35-40 MPa into metal mouldings, then glazed and sintered at a temperature of 1320-1330°C. (The porcelain used, type C 110, also meets standards for material characteristics defined in DIN VDE 0335 part 3.)

## ... and duroplast.

For safety reasons, the insert of the porcelain power outlet is thermoformed in a matching colour duroplast.

### Recommended:

The porcelain switch system was rated "recommendable" by consumer rights organisation Öko-Test. For background information, see to the magazine Öko-Haus (4/2000).



All switches and power outlets meet the safety regulations of the VDE Association for Electrical, Electronic & Information Technologies.



# Porcelain switch system at a glance







OUTLET WITH SAFETY CONTACT PORCELAIN

16 A, AC 250V

Duroplast central insert. With spring clips.

Without integrated child protection

Order no. 173067

With integrated child protection

Order no. 173068





OUTLET WITH MIDDLE-SAFETY CONTACT PORCELAIN

16 A, AC 250V.

Duroplast central insert. With spring clips. French version.

With integrated child protection Order no. 175835

**OUTLET SWISS VERSION PORCELAIN** 

16 A, AC 250V

Duroplast central insert. With spring clips.

For installation in DIN 49073-certified installation units. Order no. 100873



**ROTARY SWITCH PORCELAIN** 

10 A, 10 AX, AC 250V

Porcelain central insert and locking bolt. With spring clips.

Alternation switch Order no. 186880
Crossbar switch Order no. 186881
Multi-circuit switch Order no. 186879
Blind switch Order no. 186894



**TOGGLE SWITCH PORCELAIN** 

10 A, 10 AX, AC 250V

Porcelain central insert. Duroplast compensator.

Alternation switch Order no. 173073
Crossbar switch Order no. 173074
Control switch Order no. 173075





ROCKER BUTTON WITHOUT SYMBOL PORCELAIN

10 A, AC 250V

Porcelain central insert. Duroplast compensator.

With illuminated compensator\*

Order no. 173076

Order no. 100977

Rocker button without symbol also available as an opener.





#### **ROCKER BUTTON LIGHT PORCELAIN**

10 A, AC 250V

Porcelain central insert. Duroplast compensator

with light symbol. Order no. 173077

With illuminated compensator\* Order no. 100978

Glow lamp for buttons and control switch

The lower screw is replaced by the glow lamp.

Order no. 173066





### **ROCKER BUTTON BELL PORCELAIN**

10 A. AC 250V

Porcelain central insert. Duroplast compensator

with bell symbol. Order no. 173078
With illuminated compensator\* Order no. 100979

\* There are illuminated pigments integrated in the compensators which charge up by absorbing light energy and glow in the dark. They contain no radioactive materials.





Order no. 100980

ROCKER BUTTON DOOR OPENER PORCELAIN

10 A, AC 250V

Porcelain central insert. Duroplast compensator

With illuminated compensator\*

with key symbol. Order no. 173079

### DIMMER PORCELAIN

AC 230V, 50Hz

Porcelain central insert and dimming knob.

For 60-600 W light bulbs

Pressure alternation Order no. 173080

For low voltage halogen lamps with electronic transformer

and 20–315 W light bulbs.

Pressure alternation Order no. 173082

For low voltage halogen lamps with magnetic transformer 20–500 VA and 20–500 W light bulbs.

Pressure alternation Order no. 173084

For LED lamps 7-110 W

Pressure alternation Order no. 100270

Other dimmers are available upon request.



## **DATA JACK PORCELAIN**Duroplast central insert.

For 2 network adapters RJ45 (real.Cat.6a).

Order no. 181978

**Note:** We recommend concealed sockets with increased socket volume for easy data socket installation.



## TELEPHONE JACK PORCELAIN

Duroplast central insert. TAE 3x6 NFN

For 1 telephone and 2 additional devices or data terminals. 3 x 6 pole, 6 screwed contacts. Order no. **150117** 





## ANTENNAE OUTLET PORCELAIN

Duroplast central insert.

HF-resistant metal housing. BZT-authorisation.

Radio and television adapter for systems with amplifiers or cable. Passage and terminal box. Order no. 150121

Radio and television adapter for systems with amplifiers according DIN 45330 with additional satellite outlet (F-adapter). Terminal box, digitally compatible.

Order no. **154911** 



### SINGLE COVERING PORCELAIN

82 mm Ø. For assembly of all components with central insert excluding data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173085

For assembly of data and telephone jack, antennae outlets and speaker wall sockets. Order no. 173086



### **DOUBLE COVERING PORCELAIN**

External dimension 153 x 82 mm. For vertical and horizontal assembly of all components with central insert excluding data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173090



## **EXTERNAL SYSTEM COVERING PORCELAIN**

82 mm Ø. For vertical and horizontal assembly of all components with central insert excluding data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173088

For vertical and horizontal assembly of data and telephone jack, antennae outlets and speaker wall sockets.

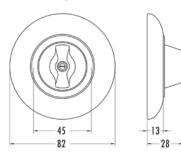
Order no. 173089

## SYSTEM COVERING WAIST PORCELAIN

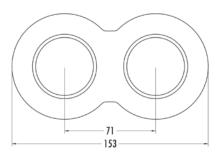
82 mm Ø. For vertical and horizontal assembly of all components with central insert excluding data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173087

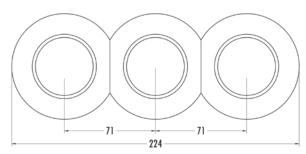
### Dimensioning in mm



Rotary switch with single cover porcelain

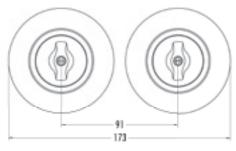


Double covering porcelain



Triple system covering porcelain

**Installation note**: The distances of the inserts in all multiple and system coverings are consistent with the standard spacing of 71 mm and can be easily used with existing installations. The porcelain switch system fits in all standard concealed outlets.



For the vertical and horizontal installation of several devices into individual covers, we recommend a pitch of 91 mm for optical reasons.





# The black Bakelite® switch system

## The second switch system: black and Bakelite®.

Porcelain and Bakelite<sup>®</sup> coexisted harmoniously for many years, and both switch colours, white porcelain and black Bakelite<sup>®</sup>, were equally popular. The synthetic resin Bakelite<sup>®</sup> was found to be an ideal material for electro-technical applications: its stability was unmatched and its temperature resistance and insulation were tremendous.

The material remained common in light switches and power outlets into the 1960's, but then Bakelite® was replaced by cheaper synthetic materials. With the spread of thermoplastic as the new switch material, Bakelite® virtually disappeared from the scene. However, there is no comparison between Bakelite® and thermoplastic: Bakelite® is much heavier and more pleasant to the eye and to the touch. This is due to its production. Instead of being produced using the injection-moulding procedure, Bakelite® is moulded directly from its raw form using the "matrix method". With the successful development of the porcelain switch system, we have set out to restore this harmonious coexistence. In close cooperation with the company CAW, we have brought the lost moulds and tools back into production and have found material manufacturers who are masters at processing Bakelite® - a skill which can no longer be taken for granted. The result is the Bakelite® switch system: just like its porcelain counterpart, it is both functionally and aesthetically superior to other synthetic mouldings.

## Information about Bakelite®.

When Leo H. Baekeland registered the patent for the production of the first completely synthetic material in 1908, he was aware of the hardships faced by the electronic industry, which was in dire need of a substitute material for the expensive material shellac. His Bakelite, the first-ever thermosetting synthetic material, made it possible to manufacture items for daily use at relatively low cost using pressing moulds. The new material was quickly adopted for the production of many household products: starting with knobs and switches, then moving to radios, telephones and even typewriters.

All switches and power outlets meet the safety regulations of the VDE Association for Electrical, Electronic & Information Technologies.



Bakelite® switch system with round coverings at a glance



Bakelite® switch system with square coverings at a glance







**OUTLET WITH SAFETY CONTACT BAKELITE®** 16 A, AC 250 V

Bakelite® central insert. With spring clips.

Without integrated child protection Order no. 173038 With integrated child protection Order no. 174527





### **OUTLET WITH MIDDLE-SAFETY CONTACT BAKELITE®** 10 A, AC 250 V.

Bakelite® central insert. With spring clips. French version. With integrated child protection Order no. 175833

#### OUTLET SWISS VERSION BAKELITE®

10 A, AC 250 V. Bakelite® central insert. With spring clips. For installation in DIN 49073-certified installation units. Order no. 100940



**ROTARY SWITCH BAKELITE®** 

10 A, 10 AX, AC 250 V

Bakelite® central insert and locking bolt. With spring clips

Alternation switch	Order no. 186883
Crossbar switch	Order no. 186884
Multi-circuit switch	Order no. 186882
Blind switch	Order no. 186895





## TOGGLE SWITCH BAKELITE®

10 A, 10 AX, AC 250 V Bakelite® central insert and toggle.

Alternation switch Order no. 173043 Crossbar switch Order no. 173044

## **DOUBLE TOGGLE SWITCH BAKELITE®**

10 A, 10 AX, AC 250 V

Bakelite® central insert and two toggle.

Multi-circuit switch Order no. 100571





### CONTROL SWITCH BAKELITE®

10 A, 10 AX, AC 250 V

Bakelite® central insert and compensator.

Order no. 173047

#### **ROCKER BUTTON WITHOUT SYMBOL BAKELITE®** 10 A, AC 250 V

Bakelite® central insert and compensator. Order no. 173054

With illuminated compensator\* Order no. 100973

Rocker without symbol also available as an opener.





#### **ROCKER BUTTON LIGHT BAKELITE®**

10 A, AC 250 V

Bakelite® central insert and compensator

with lamp symbol. Order no. 173055

With illuminated compensator\* Order no. 100974

Glow lamp for buttons and control switch.

The lower screw is replaced by the glow lamp.

Order no. 173066





## **ROCKER BUTTON BELL BAKELITE®**

10 A, AC 250 V

Bakelite® central insert and compensator

with bell symbol Order no. 173056 Order no. 100975

pensators which charge up by absorbing light energy and

glow in the dark. They contain no radioactive materials.

With illuminated compensator\*

\* There are illuminated pigments integrated in the com-





## ROCKER BUTTON DOOR OPENER BAKELITE®

10 A, AC 250 V

Bakelite® central insert and compensator

Order no. 173057 with key symbol.

Order no. 100976 With illuminated compensator\*



## **DIMMER BAKELITE®**

AC 230 V, 50 Hz

Bakelite® central insert and dimming knob.

For 60-600 W light bulbs

Pressure alternation Order no. 173058

For low voltage halogen lamps with electronic transformer

and 20-315 W light bulbs.

Pressure alternation Order no. 173060

For low voltage halogen lamps with magnetic transformer

20-500 VA and 20-500 W light bulbs.

Order no. 173062 Pressure alternation

For LED lamps 7-110 W

Pressure alternation Order no. 100274

Other dimmers are available upon request.



## DATA JACK BAKELITE®

Bakelite central insert.

For 2 network adapters RJ45 (real.Cat.6a)

Order no. 100722

Note: We recommend concealed sockets with increased socket volume for easy data socket installation.



### **TELEPHONE JACK BAKELITE®**

Bakelite central insert. TAF 3x6 NFN

For 1 telephone and 2 additional devices or data terminals.

3 x 6 pole, 6 screwed contacts. Order no. 100721





## ANTENNAE OUTLET BAKELITE®

Bakelite® central insert.

HF-resistant metal housing. BZT-authorisation.

Radio and television adapter for systems with amplifiers or cable. Passage and terminal box.

Order no. 100723

Radio and television adapter for systems with amplifiers according DIN 45330 with additional satellite outlet (F-adapter). Terminal box, digitally compatible.

Order no. 100724



## SINGLE COVERING BAKELITE®

82 mm Ø. For assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets. Order no. 173063

For assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets. Order no. 174940



## SINGLE COVERING SQUARE BAKELITE®

82 x 82 mm. For assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets. Order no. 119328

For assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets. Order no. 119327





## **EXTERNAL SYSTEM COVERING BAKELITE®**

82 mm Ø. For vertical and horizontal assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173092

## EXTERNAL SYSTEM COVERING FOR DIMMER BAKELITE $^{\circledR}$

82 mm Ø. For vertical and horizontal assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173094

#### SYSTEM COVERING WAIST BAKELITE®

82 mm Ø. For vertical and horizontal assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets. Order no. 173093

## SYSTEM COVERING WAIST FOR DIMMER BAKELITE®

82 mm Ø. For vertical and horizontal assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173095



### **DOUBLE COVERING BAKELITE®**

External size 157 x 82 mm. For vertical and horizontal assembly of all components with central insert including dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173064



### TRIPLE COVERING BAKELITE®

External size 228 x 82 mm. For vertical and horizontal assembly of all components with central insert including dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

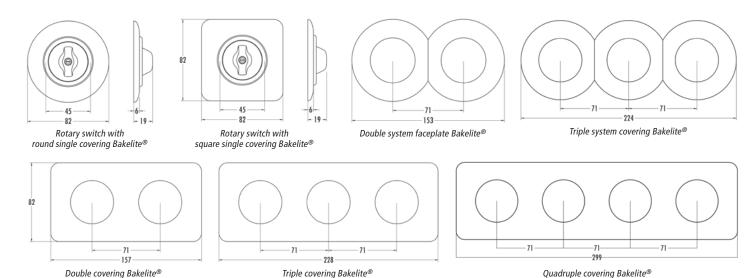
Order no. 173065

### QUADRUPLE COVERING BAKELITE®

External size 299 x 82 mm. For vertical and horizontal assembly of all components with central insert including dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 173091

## Dimensioning in mm



**Installation note**: The distances of the inserts in all multiple and system coverings are consistent with the standard spacing of 71 mm and can be easily used with existing installations. The Bakelite® switch systems fit in all standard concealed outlets.

For the vertical and horizontal installation of several devices into individual covers, we recommend a pitch of 91 mm for optical reasons.



## The white Bakelite® switch system - duroplast

The white duroplast series corresponds technically to the black Bakelite series. All cover plates, switch buttons and outlet elements in the series are made of lightfast white duroplast.

Like in all other series, the insides of these switches originate from CAW. As early as in 1910, CAW was granted a patent for an electric rotary switch with a movable contact bridge on an annular track



Of course, all of our products have the VDE test mark if testing applies.



Letters patent from 1910.



# Duroplast switch system with round coverings at a glance



# Duroplast switch system with square coverings at a glance







**OUTLET WITH SAFETY CONTACT DUROPLAST** 16 A, AC 250 V

Duroplast central insert. With spring clips.

Without integrated child protectionOrder no. 176400 With integrated child protection Order no. 180810





OUTLET WITH MIDDLE-SAFETY CONTACT DUROPLAST

10 A, AC 250 V.

Duroplast central insert. With spring clips. French version. With integrated child protection Order no. 184728

### **OUTLET SWISS VERSION DUROPLAST**

10 A, AC 250 V. Duroplast central insert. With spring clips. For installation in DIN 49073-certified installation units.

Order no. 100969



ROTARY SWITCH DUROPLAST

10 A, 10 AX, AC 250 V

Duroplast central insert and locking bolt. With spring clips.

Order no. 186886 Alternation switch Order no. 186887 Crossbar switch Multi-circuit switch Order no. 186885 Blind switch Order no. 186896





#### **TOGGLE SWITCH DUROPLAST**

10 A, 10 AX, AC 250 V

Duroplast central insert and toggle.

Alternation switch Order no. 176405 Order no. 176406 Crossbar switch

## **DOUBLE TOGGLE SWITCH DUROPLAST**

10 A, 10 AX, AC 250 V

Duroplast central insert and two toggle.

Multi-circuit switch Order no. 100572





### CONTROL SWITCH DUROPLAST

10 A, 10 AX, AC 250 V

Duroplast central insert and compensator.

Order no. 176407

## **ROCKER BUTTON WITHOUT SYMBOL DUROPLAST**

10 A, AC 250 V

Duroplast central insert and compensator. Order no. 176408

With illuminated compensator\* Order no. 100981

Rocker button without symbol also available as an opener.





### **ROCKER BUTTON LIGHT DUROPLAST**

10 A, AC 250V

Duroplast central insert and compensator

with light symbol. Order no. 176409

With illuminated compensator\* Order no. 100982

Glow lamp for buttons and control switch.

The lower screw is replaced by the glow lamp.

Order no. 173066





## **ROCKER BUTTON BELL DUROPLAST**

10 A. AC 250 V

Duroplast central insert and compensator Order no. 176410 with bell symbol.

With illuminated compensator\* Order no. 100983

\* There are illuminated pigments integrated in the compensators which charge up by absorbing light energy and glow in the dark. They contain no radioactive materials.





Order no. 100984

## ROCKER BUTTON DOOR OPENER DUROPLAST

10 A, AC 250 V

Duroplast central insert and compensator

With illuminated compensator\*

Order no. 176411 with key symbol.



## DIMMER DUROPLAST

AC 230 V, 50 Hz

Duroplast central insert and dimming knob.

For 60-600 W light bulbs

Pressure alternation Order no. 176413

For low voltage halogen lamps with electronic transformer

and 20-315 W light bulbs

Pressure alternation Order no. 176415

For low voltage halogen lamps with magnetic transformer

20-500 VA and 20-500 W light bulbs Pressure alternation

For LED lamps 7-110 W

Order no. 100308 Pressure alternation

Other dimmers are available upon request.



### **DATA JACK DUROPLAST**

Duroplast central insert.

For 2 network adapters RJ45 (real.Cat.6a)

Order no. 100726

Note: We recommend concealed sockets with increased socket volume for easy data socket installation.



## TELEPHONE JACK DUROPLAST

Duroplast central insert.

TAE 3x6 NFN

For 1 telephone and 2 additional devices or data terminals. 3 x 6 pole, 6 screwed contacts. Order no. 100725





Order no. 176417

### ANTENNAE OUTLET DUROPLAST

Duroplast central insert.

HF-resistant metal housing. BZT-authorisation.

Radio and television adapter for systems with amplifiers or cable. Passage and terminal box.

Order no. 100727

Radio and television adapter for systems with amplifiers according DIN 45330 with additional satellite outlet (F-adapter). Terminal box, digitally compatible.

Order no. 100728



### SINGLE COVERING DUROPLAST

82 mm Ø. For assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 176421

For assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 181997



## SINGLE COVERING SQUARE DUROPLAST

82 x 82 mm. For assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 119330

For assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 119329





### **EXTERNAL SYSTEM COVERING DUROPLAST**

82 mm Ø. For vertical and horizontal assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 176425

## EXTERNAL SYSTEM COVERING FOR DIMMER DUROPLAST

82 mm Ø. For vertical and horizontal assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets. Order no. 176427

## SYSTEM COVERING WAIST DUROPLAST

82 mm Ø. For vertical and horizontal assembly of all components with central insert excluding dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 176426

## SYSTEM COVERING WAIST FOR DIMMER DUROPLAST

82 mm Ø. For vertical and horizontal assembly of dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 176428



## DOUBLE COVERING DUROPLAST

External size 157 x 82 mm. For vertical and horizontal assembly of all components with central insert including dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 176422



## TRIPLE COVERING DUROPLAST

External size 228 x 82 mm. For vertical and horizontal assembly of all components with central insert including dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

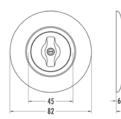
Order no. 176423

## QUADRUPLE COVERING DUROPLAST

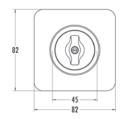
External size 299 x 82 mm. For vertical and horizontal assembly of all components with central insert including dimmer, data and telephone jack, antennae outlets and speaker wall sockets.

Order no. 176424

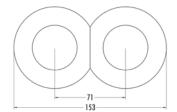
## Dimensioning in mm



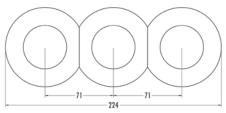
Rotary switch with round single covering Duroplast



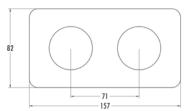
Rotary switch with square single covering Duroplast



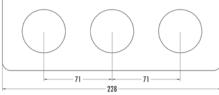
Double system covering Duroplast



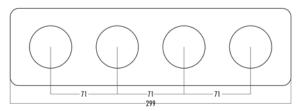
Triple system covering Duroplast



Double covering Duroplast



Triple covering Duroplast



Quadruple covering Duroplast

**Installation note:** The distances of the inserts in all multiple and system coverings are consistent with the standard spacing of 71 mm and can be easily used with existing installations. The Duroplast switch systems fit in all standard concealed outlets.

For the vertical and horizontal installation of several devices into individual covers, we recommend a pitch of 91 mm for optical reasons.





## The glass switch series: cut glass and Bakelite®.

Light switches with glass covers — as used in our other series — have already existed before, in the 1930s. With our glass covers, manufactured from a special, highly transparent glass, switches are rendered almost invisible. In addition, pretreatment makes the glass resistant to any splintering at the edges. It is beveled at a 45° angle and lavishly polished to ensure the perfect optical finish. The switch can even be easily papered over. It does require some extra attention during installation, but the outstandingly subtle look certainly compensates the extra effort. Our covers are available in six variations and can be used with all rotary switches and central inserts from our black and white Bakelite® series. There are particular models that have been tailored to work with the glass covers.

A specialist company from Bavaria manufactures the glass components. The four-millimeter thick glass plates are thermally hardened. The Optiwhite glass used sets them apart from comparable covers through its superior transparency. You will hardly see these covers.

As with all of our series, the electrical components are produced in the Sauerland region and have the VDE test mark if testing applies.

Installation note: The mounting of our switches to glass covers requires a different installation sequence than the usual one: The electrician installs the internal components and the acrylic glass ring that was included in delivery. After that, the completely connected switch is wallpapered over and then the covers are attached. The wallpaper may have a maximum thickness of 0.5 mm to observe all regulations and standards of the German Association for Electrical, Electronic & Information Technologies (VDE). For this reason, the hollow wall sockets must be mounted cleanly so that the 1mm-thick acrylic glass plate is flush with the wall. In addition, white cardboard form plates have been included with the glass covers. These form plates fit precisely directly beneath the glass cover. The cardboard covers can be wallpapered over or painted in the desired wall colour. After a possible disassembly of the switches (e.g., for technical inspection), these covers guarantee that the original, uniform appearance of the wall is retained.

If several individual covers are to be mounted next to each other, this circumstance must be taken into consideration when the sockets are placed; for this purpose, spacer fittings with 20 mm are required. When mounting system covers, observe a precise mean size of 71 mm.



Glass switch system with Bakelite® inserts at a glance



Glass switch system with Duroplast inserts at a glance







## **OUTLET WITH SAFETY CONTACT FOR GLASS**

16 A, AC 250 V. Bakelite® or Duroplast central insert. With spring clips.

Without integrated child protection

**Bakelite®** Order no. 100638 Order no. 100663 Duroplast

With integrated child protection

**Bakelite®** Order no. 100639 Order no. 100664 Duroplast





## **OUTLET WITH MIDDLE-SAFETY CONTACT FOR GLASS**

10 A, AC 250 V. Bakelite® or Duroplast central insert. With spring clips. French version.

With integrated child protection

**Bakelite®** Order no. 100640 Order no. 100665 Duroplast

**OUTLET SWISS VERSION FOR GLASS COVERING** 

10 A, AC 250 V. Bakelite® or Duroplast central insert. With spring clips.

For installation in DIN 49073-certified installation units. Bakelite<sup>®</sup> Order no. 100997 Duroplast Order no. 100998



#### **ROTARY SWITCH FOR GLASS COVERING**

10 A, 10 AX, AC 250 V. Bakelite® or Duroplast locking bolt. With spring clips.

Alternation switch

**Bakelite®** Order no. 100641 Duroplast Order no. 100666

Crossbar switch

**Bakelite®** Order no. 100642 Duroplast Order no. 100667

Multi-circuit switch

Bakelite<sup>®</sup> Order no. 100643 Duroplast Order no. 100668

Blind switch

**Bakelite®** Order no. 100644 Duroplast Order no. 100669



## ROTARY SWITCH WITH CENTRAL INSERT FOR GLASS

10 A, 10 AX, AC 250 V. Bakelite® or Duroplast central insert and locking bolt. With spring clips.

Alternation switch

Bakelite <sup>®</sup>	Order no. 100645
Duroplast	Order no. 100670
Crossbar switch	
Bakelite <sup>®</sup>	Order no. 100646
Duroplast	Order no. 100671
Multi-circuit switch	
Bakelite <sup>®</sup>	Order no. 100647

**Bakelite®** Duroplast Order no. 100672 Blind switch

Order no. 100648 **Bakelite®** Duroplast Order no. 100673



### TOGGLE SWITCH FOR GLASS COVERING

10 A, 10 AX, AC 250 V. Bakelit® or Duroplast central insert and toggle. With spring clips.

Alternation switch

Bakelite <sup>®</sup>	Order no. 100649
Duroplast	Order no. 100674

Crossbar switch

**Bakelite**® Order no. 100650 Duroplast Order no. 100675

**DOUBLE TOGGLE SWITCH FOR GLASS COVERING** 10 A, 10 AX, AC 250 V. Bakelite® or Duroplast central insert and two toggle. With spring clips.

Multi-circuit switch

Bakelite® Order no. 100573 Duroplast Order no. 100574



### CONTROL SWITCH FOR GLASS COVERING

10 A, 10 AX, AC 250 V. Bakelite® or Duroplast central insert and compensator.

Bakelite<sup>®</sup> Order no. 100651 Duroplast Order no. 100676

### ROCKER BUTTON WITHOUT SYMBOL FOR GLASS COVERING

10 A, AC 250 V. Bakelite® or Duroplast central insert and

compensator.

**Bakelite**® Order no. 100652 Duroplast Order no. 100677

With illuminated compensator\*

Order no. 100985 **Bakelite®** Duroplast Order no. 100989

Rocker button without symbol also available as an





### ROCKER BUTTON LIGHT FOR GLASS COVERING

10 A, AC 250 V. Bakelite® or Duroplast central insert and compensator with light symbol.

Bakelite® Order no. 100653 Duroplast Order no. 100678

With illuminated compensator\*

**Bakelite®** Order no. 100986 Order no. 100990 Duroplast

Glow lamp for buttons and control switch.

The lower screw is replaced by the glow lamp.

Order no. 173066





### ROCKER BUTTON LIGHT FOR GLASS COVERING

10 A, AC 250 V. Bakelite® or Duroplast central insert and compensator with bell symbol.

Bakelite® Order no. 100654 Order no. 100679 Duroplast

With illuminated compensator\*

**Bakelite**® Duroplast





## **ROCKER BUTTON DOOR OPENER FOR GLASS**

10 A, AC 250 V. Bakelite® or Duroplast central insert and compensator with key symbol.

Bakelite® Order no. 100655 Duroplast Order no. 100680

With illuminated compensator\*

Order no. 100988 **Bakelite®** Duroplast Order no. 100992



<sup>\*</sup> There are illuminated pigments integrated in the compensators which charge up by absorbing light energy and glow in the dark. They contain no radioactive materials.



#### DIMMER FOR GLASS COVERING

AC 230 V, 50 Hz. Bakelite® or Duroplast central insert and dimming knob.

For 60-600 W light bulbs. Pressure alternation

**Bakelite®** Order no. 100656 Duroplast Order no. 100681

For low voltage halogen lamps with electric transformer and 20-315 W light bulbs. Pressure alternation

Bakelite® Order no. 100657 Duroplast Order no. 100682

For low voltage halogen lamps with magnetic transformer 20-500 VA and 20-500 W light bulbs. Pressure alternation Bakelite® Order no. 100658 Order no. 100683 Duroplast

For LED-lamps 7–110 W. Pressure alternation

Bakelite<sup>®</sup> Order no. 100311 Order no. 100312 Duroplast

Other dimmers are available upon request.



**Bakelite®** 

Duroplast

**Bakelite®** 

Duroplast

DATA JACK FOR GLASS COVERING Bakelite® or Duroplast central insert.

For 2 network adaptors RJ45 (real.Cat.6a).

Note: We recommend concealed sockets with increased

TAE 3x6 NFN. For 1 telephone and 2 additional devices or

socket volume for easy data socket installation.

data terminals. 3 x 6 pole, 6 screwed contacts.

TELEPHONE JACK FOR GLASS COVERING

Bakelite® or Duroplast central insert.



Order no. 100659

Order no. 100684

Order no. 100660

Order no. 100685





### ANTENNAE OUTLET FOR GLASS COVERING

Bakelite or Duroplast central insert. HF-resistant Metalhousing. BZT-authorisation.

Radio- and television adaptor for systems with amplifiers or cable. Passage and terminal box.

**Bakelite®** Order no. 100661 Order no. 100686 Duroplast

Radio- and television adaptor for systems with amplifiers according DIN 45330 with additional satellite outlet. (F-adaptor).

Terminal box, digitally compatible.

Bakelite<sup>®</sup> Order no. 100662 Duroplast Order no. 100687













#### SINGLE COVERING GLASS

82 mm Ø. For assembly of all components with central insert. Order no. 100609

For assembly of rotary switch without central insert. Order no. 100608

### SYSTEM COVERING WAIST GLASS

82 mm Ø. For vertical and horizontal assembly of all Order no. 100611 components with central insert.

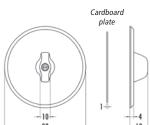
For vertical and horizontal assembly of rotary switch without central insert. Order no. 100610

### **EXTERNAL SYSTEM COVERING GLASS**

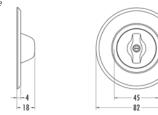
82 mm Ø. For vertical and horizontal assembly of all Order no. 100613 components with central insert.

For vertical and horizontal assembly of rotary switch without central insert. Order no. 100612

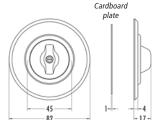
### Dimensioning in mm

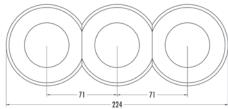


Single covering glass with rotary switch

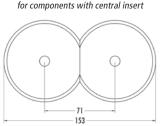


Single covering glass with rotary switch with central insert



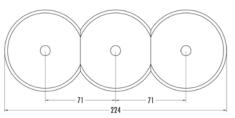


Triple system covering glass for components with central insert

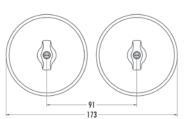


153 Double system covering glass

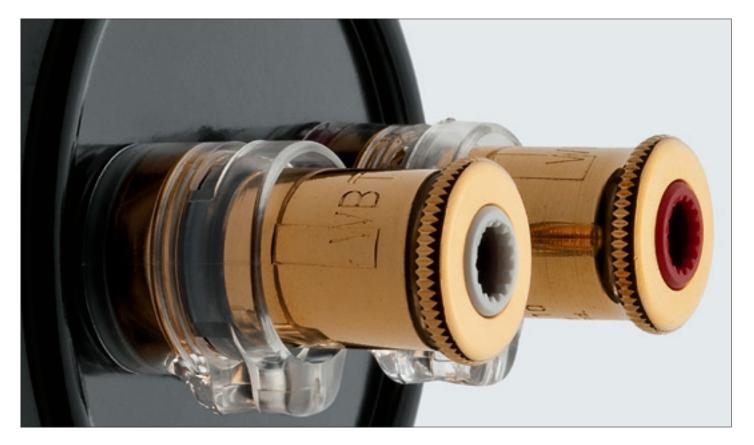
Glass double system covering for rotary switch without central insert



Glass triple system covering for rotary switch without central insert



For the vertical and horizontal installation of several devices into individual covers, we recommend a pitch of 91 mm for optical reasons.



## Free flowing music. Our audio wall sockets with WBT jacks.

High-end audiophilism has long left the ranks of unfounded theories - the differences are both measurable and perceptible. Often the weakest link is that, which has the most influence over the overall result. Up until a few years ago, this had usually been the plug connection that would rob the system and its expensive cables of its crisp sound. However, all this changed when the German company WBT redesigned its plugs and jacks according to audiophile principles. In the end, it is all about designing an interface between the cables and components that eliminates the possibility of physical phenomena that could disrupt or minimise performance. Since high purity and therefore softer metals are used for this purpose,

redesigning the basic structure of the supporting frame was also necessary. The transmitting systems have a minimalistic design. Direct comparisons demonstrated the crisp, powerful and crystal clear sound playback with this construction. That's why we wasted no time in installing them in the wall sockets of our switch series. This means that great sound is possible without having metres of cable running through the room. They can be concealed and create alternative locations for speakers or even junctions into neighbouring rooms. Our wall sockets can also be used as connection terminals for most speakers. For optimal results, these components should only be used in combination with WBT plugs and high-quality cables.



SPEAKER WALL SOCKET FOR PORCELAIN COVERING WBT NEXTGEN™



Order no. 100741 Order no. 100742



SPEAKER WALL SOCKET WBT BAKELITE® WBT NEXTGEN™ BAKELITE®



Order no. 100737 Order no. 100738



SPEAKER WALL SOCKET WBT DUROPLAST WBT NEXTGEN™DUROPLAST



Order no. 100739 Order no. 100740



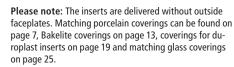
SPEAKER WALL SOCKET FOR GLASS COVERING WBT BAKELITE® WBT NEXTGEN™ BAKELITE®



Order no. 100688 Order no. 100689



SPEAKER WALL SOCKET FOR GLASS COVERING WBT DUROPLAST Order no. 100690 WBT NEXTGEN™ DUROPLAST Order no. 100691



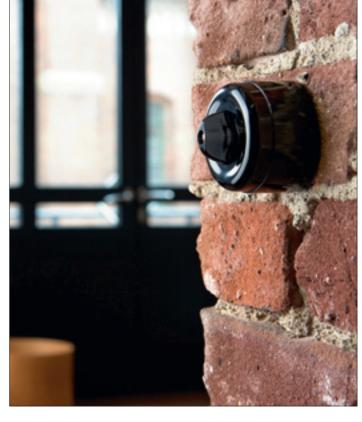
Speaker wall sockets can be combined with multiple coverings excluding the porcelain double covering, and with special system faceplates.

## Bakelite® surface mounted. IP20

To complement our tried and tested switch systems of porcelain and Bakelite® we have developed switches and sockets for surface mounting. Optically, their design is reminiscent of historical predecessors - whereby they do, of course, comply with all current standards and safety regulations. The robust 2,5 mm thick casings of Bakelite® and Duroplast are moulded in one piece and provide sufficient impact protection for the electrical contacts underneath. To allow cables to be laid to or through the units, the casing has lateral sections which can be broken out along predetermined lines. The casing is open at the back, so that the cabling can also be laid below the surface. The mechanical components fulfil the same standards in respect of durability and service life as the other switch series which have already proved themselves in manufacturing and shipbuilding. Installation: The inner components are mounted on the underlying surface and then connected with the cabling, after which the casing is put in place and screwed tight. Where the underlying surface is flammable, it should first be covered using a suitable layer of material, e.g. Pertinax. As part of the surface mounting product series we supply matching base plates made of Bakelite® and Duroplast.



Of course, these switches and sockets also have the VDE test













SURFACE-MOUNTED ROTARY SWITCH DUROPLAST 10 A, 10 AX, AC 250 V, IP20

62 mm Ø, height above surface incl. locking bolt 53 mm. Duroplast housing and locking bolt. With spring clip.

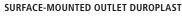
Alternation switch Order no. 186889 Crossbar switch Order no. 186890 Multi-circuit switch Order no. 186888



10 A, 10 AX, AC 250 V, IP20

62 mm Ø, height above surface incl. toggle 49 mm. Duroplast housing and toggle.

Alternation switch Order no. 184197 Crossbar switch Order no. 184206



16 A, AC 250 V, IP20

62 mm Ø, height above surface 49 mm. Duronlast housing with integrated child protection. With spring Order no. 184199

#### **OUTLET WITH MIDDLE-SAFETY CONTACT** DUROPLAST

With integrated child protection (French version).

Order no. 100062

**BASE PLATE DUROPLAST** 

62 mm Ø Order no. 184642











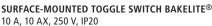


SURFACE-MOUNTED ROTARY SWITCH BAKELITE®

10 A, 10 AX, AC 250 V, IP20

62 mm Ø, height above surface incl. locking bolt 53 mm. Bakelite® housing and locking bolt. With spring clip

Alternation switch Order no. 186892 Crossbar switch Order no. 186893 Multi-circuit switch Order no. 186891



62 mm Ø, height above surface incl. toggle 49 mm. Bakelite® housing and toggle

Alternation switch Order no. 184198 Crossbar switch Order no. 184207

## SURFACE-MOUNTED OUTLET BAKELITE®

16 A, AC 250 V, IP20

62 mm Ø, height above surface 49 mm. Bakelite® housing with integrated child protection. With spring Order no. 184200

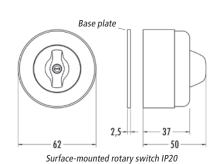
**OUTLET WITH MIDDLE-SAFETY CONTACT BAKELITE®** With integrated child protection (French version).

Order no. 100063

**BASE PLATE BAKELITE®** 

Order no. 184619 62 mm Ø

Dimensioning in mm



IP 20: Protected against foreign bodies > 12.5 mm. Not waterproof.

## IP44 Bakelite® wall-mounted humidity-proof switch

They're a little piece of electrical industry history. Between the late 19th century and the mid-20th century, these switches featured in industrial complexes and also turned up in cellars and basements of ordinary homes. They had famous names — Siemens-Schuckert and Dr. Deisting — and their solid appearance made them electrical fittings which inspired absolute trust in their safety and stability. In Germany, people quipped that they were "thick-skinned", but there's no denying that the respect they earned was well-placed: even today, electrical specialists are regularly amazed by the reliability of even the oldest installations. This

is just one more reason why we've decided to produce our switches and outlets in the same designs as their hard-working predecessors. With Bakelite<sup>®</sup> walls 2.5 mm thick, these switches' authenticity is also underscored by their deeply satisfying acoustic qualities - no modern switch makes a click like these ones.



Of course, all of our products have the VDE test mark if testing applies

**Note:** Each outlet comes with an additional rubber ring. If applied to an IP44 plug as an additional seal, the outlet attains safety rating IP44.







## IP44 WALL-MOUNTED OUTLET BAKELITE®

16 A, AC 250 V, IP44. Length 8.5 cm, width 9.7 cm, height above surface 7 cm. Weight 160 g. Two-part case and lid made of Bakelite® with a single lateral input. Outlet with integrated child protection. With spring clips. Cable mounted on wall surface. Safety rating IP44 with sealed lid, rating IP20 when plug inserted.

Order no. 100828

## IP44 WALL-MOUNTED THROUGH OUTLET HORIZONTAL BAKELITE®

16 A, AC 250 V, IP44. Length 8.5 cm, width 9.7 cm, height above surface 7 cm. Weight 190 g. For horizontal layouts with two outlets, e.g. for two or more outlets at different locations in a single room. Two-part case and lid made of Bakelite® with adjacent in- and outputs. Outlet with integrated child protection. With spring clips. Cable mounted on wall surface. Safety rating IP44 with sealed lid, rating IP20 when plug inserted.

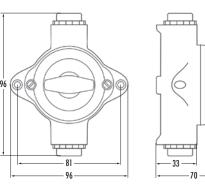
## IP44 WALL-MOUNTED THROUGH OUTLET VERTICAL BAKELITE®

16 A, AC 250 V, IP44. Length 11 cm, width 9.7 cm, height above surface 7 cm. Weight 190 g. For vertical layouts with two outlets. Two-part case and lid made of Bakelite® with non-adjacent in- and outputs. Outlet with integrated child protection. With spring clips. Cable mounted on wall surface. Safety rating IP44 with sealed lid, rating IP20 when plug inserted. Order no. 100829





### Dimensioning in mm



Surface-mounted rotary switch IP44

## IP44 WALL-MOUNTED ROTARY ALTERNATING SWITCH BAKELITE®

10 A, 10 AX, AC 250 V, IP44. Length 8.5 cm, width 9.7 cm, height above surface 6.5 cm. Weight 190 g. Two-part case and locking bolt made of Bakelite® with a single lateral input. With spring clips. Cable mounted on wall surface.

Order no. 100831

## IP44 WALL-MOUNTED THROUGH ROTARY ALTERNATING SWITCH, VERTICAL BAKELITE®

10 A, 10 AX, AC 250 V, IP44. Length 11 cm, width 9.7 cm, height above surface 6.5 cm. Weight 220 g. For vertical layouts with outlet and rotary switch. Two-part case and locking bolt made of Bakelite® with a single lateral input. With spring clips. Cable mounted on wall surface.

**IP 44:** Protected against foreign bodies > 1 mm. Protected against spray water on all sides.



residential spaces. However, this solution has one obvious disadvantage: today's wall-mounted cables are just so ugly. Though these cables meet regulatory standards, there's no way to prettify them - attempting to hide them in plastic cable covers just makes them even more of an eyesore. However, we have come up with a solution to this dilemma.



## An innovation: black cloth-covered cables for wall-mounting.

We hired experts to sheath a standardcompliant NHXMH-cable (5 x 1.5 mm<sup>2</sup>) in a tube of fabric, and the resulting product adds the perfect touch to interiors, even ones with high humidity levels, as well as being flameretardant.

### TEXTILE CABLE

NHXMH-cable (5 x 1.5 mm<sup>2</sup>) in a tube of fabric. Suitable for interiors, even ones with high humidity levels. Flameretardant. 10 m.

Order no. 100834 5 x 1,5 mm<sup>2</sup> 5 x 2,5 mm<sup>2</sup> Order no. 100294

## And the cable clamps...

Matching cable clamps made of black plastic are also available and come in pairs. They can be used to attach cables to walls and route wires; screws for securing the clamps are included.

### CABLE CLAMPS

Black plastic. For cables from 10 – 17 mm diameter. Length 3.5 cm, width 1.5 cm, height 2.4 cm, weight 10 g. Order no. 100825 Smallest pack size: 5 items.

# Bakelite® junction box

Fortunately, we were able to find the tool for this model, which must surely be more than 60 years old. After undergoing restoration and appropriate VDE testing, this junction box now fills a gap in our surfacemounted range and rounds it out in the most attractive and also functional design. Bakelite® housing in black or white with six knockout entries featuring rubber gaskets for various installation options.

## JUNCTION BOX

AC 400 V. For cables up to 4 x 2.5 mm. Breadth 9.5 cm, length 9.5 cm, height 4.5 cm. Weight: 140 g. IP 44.

Order no. 100922 Duroplast Order no. 100923











## Surface-mounted garage outlet

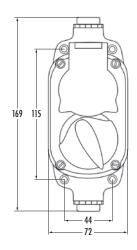
Switchable outlet via rotary switch lock. Electricity supply is only possible when outlet is locked (rotary switch in position I); the plug can only be pulled out in position 0. This outlet was originally designed for use in rooms such as garages and cellars, and on building sites, in order to avoid the danger of explosions related to possible flying sparks when a plug is pulled out. The casing is surface-mounted and is secured via four screw fittings on the sides. Cable inlet on surface.

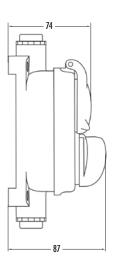


SURFACE-MOUNTED GARAGE OUTLET IP20 BAKELITE®

2-pole. 16 A, AC 250 V, IP 20. External size 72 x 151 mm, height above surface 87 mm. Bakelit® housing. With spring clips. Order no. **100295** 

## Dimensioning in mm





Surface-mounted garage outlet



