Switches
made of porcelain, bakelite and duroplast.

THPG

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

Our switching systemes are produced in Thuringia - porcelain covers and inner units - and in Westphalia - bakelite and duroplast (thermosetting plastic) covers, inner units and switching mechanisms).
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 and duroplast the material walls are at least 2,5 mm thick, whereas the porcelain covers are up to 12 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.

Note: We only supply our switch systems to certified specialist electrical goods dealers.

The internal structure: Ceramic switches.
Influenced by nautical electric engineering.
In some sectors, these types of turn-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. The insides of our switches originate from the company CAW Casp. Arn. Winkhaus in Halver near Lüdenscheid, which has been manufacturing electro-technical installation material since 1910.
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.

PATENT-URKUNDE

№ 241579.

AUF GRUND DER ANGEHEFTETEN PATENTSCHRIFT IST DURCH BESCHLUSZ DES KAISERLICHEN PATENTAMTES

an die Firma Casp. Arn. Winkhaus in Carthausen i. Westf.

EIN PATENT ERTEILT WORDEN.

GEGENSTAND DES PATENTES IST:

Elektrischer Drehschalter, bei dem die bewegliche Kontaktbrücke auf einer ringförmigen Bahn gleitet.

GESETZ V. 7 APRIL 1891

ANFANG DES PATENTES: 20. April 1910.

DIE RECHTE UND PFLICHTEN DES PATENTINHABERS SIND DURCH DAS PATENTGESETZ VOM 7. APRIL 1891 (REICHS-GESETZBLATT FÜR 1891 SEITE 79) UND DURCH DAS GESETZ VOM 6. JUNI 1911 (REICHS-GESETZBLATT FÜR 1911 SEITE 258) BESTIMMT.

ZU URKUND DER ERTEILUNG DES PATENTES IST DIESE AUSFERTIGUNG ERFOLGT.

KAISERLICHES PATENTAMT.

eingeg. 4/12.11

erled.

Letters patent from 1910

The faceplate.
Very simple: multiple combinations.
Switches and power outlets are delivered without outside faceplates. Faceplates are available for the white porcelain series 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.
For the black bakelite and white duroplast series are single round and square faceplates available. Additionally there are square double and triple faceplates for the bakelite and duroplast series.
The only exceptions for all three series are antennae, telephone and data jacks: an individual faceplate (with a slightly larger inner diameter) is always included in delivery. Upon request, we also deliver for the porcelain series purpose-built system faceplates in place of the individual faceplate. This system faceplate is designed as an external piece and will be placed external whithin a multiple combination. Porcelain system faceplates and porcelain, bakelite and duroplast double faceplates are consistent with standard spacing and can be easily used with existing installations. The switch systems fit in all standard concealed outlets.

Porcelain switch system

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: 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 turn-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 (thermosetting plastic).
For safety reasons, the inset of the porcelain power outlet is thermoformed in a matching colour duroplast. All switched and power outlets meet the safety regulations of the VDE Association for Electrical, Electronic & Information Technologies.

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).

OUTLET WITH SAFETY CONTACT PORCELAIN
16 A, AC 250V
Duroplast central insert. With spring clips.

Without integr. child protection Order-no. **173067**

With integrated child protection Order-no. **173068**

OUTLET WITH MIDDLE-SAFETY CONTACT PORCELAIN
(Designed for France)
With integrated child protection Order-no. **175835**

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 toggle.

Alternation switch Order-no. **173073**

Crossbar switch Order-no. **173074**

Control switch (On/Off) Order-no. **173075**

ROCKER BUTTON WITHOUT SYMBOL PORCELAIN
10 A, AC 250V
Porcelain central insert. Duroplast toggle.
Order-no. **173076**

Rocker button without symbol also available as an opener.

ROCKER BUTTON LIGHT PORCELAIN
10 A, AC 250V
Porcelain central insert. Duroplast toggle with light symbol. Order-no. **173077**

Glow lamp for buttons and control switch Order-no. **173066**

ROCKER BUTTON BELL PORCELAIN
10 A, AC 250V
Porcelain central insert. Duroplast toggle with bell symbol. Order-no. **173078**

ROCKER BUTTON DOOR OPENER PORCELAIN
10 A, AC 250V
Porcelain central insert. Duroplast toggle 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**

Other dimmers are available upon request.

DATA JACK PORCELAIN
Porcelain single covering.
Duroplast central insert.
82 mm Ø.
For 2 network adapters RJ45 (real.Cat.6a).
Order-no. **181975**

TELEPHONE JACK PORCELAIN
TAE 3x6 NFN
Porcelain single covering.
Duroplast central insert.
82 mm Ø.
For 1 telephone and 2 additional devices or data terminals.
3 x 6 pole, 6 screwed contacts. Order-no. **150118**

ANTENNAE OUTLET PORCELAIN
Porcelain single covering.
Duroplast central insert.
82 mm Ø.
HF-resistant metal housing. BZT-authorisation.

Radio and television adapter for systems with amplifiers or cable.
Passage and terminal box. Order-no. **150120**

Radio and television adapter for systems with amplifiers. according DIN 45330 with additional satellite outlet (F-adapter).
Terminal box, digitally compatible. Order-no. **154910**

SINGLE COVERING PORCELAIN
For assembly of components with central insert.
82 mm Ø. Order-no. **173085**

For assembly of telephone and antennae outlets.
(Included in delivery, must not be ordered separately.)
Order-no. **173086**

SYSTEM COVERING WAIST PORCELAIN
For assembly of components with central insert.
82 mm Ø. Order-no. **173087**

EXTERNAL SYSTEM COVERING PORCELAIN
For assembly of components with central insert.
82 mm Ø. Order-no. **173088**

EXTERNAL SYSTEM COVERING PORCELAIN
For assembly of telephone and data jacks and antennae outlets. (Any covers for phone/antennae sockets not required are not dispatched and credited.)
82 mm Ø. Order-no. **173089**

DOUBLE COVERING PORCELAIN
For assembly of components with central insert.
External dimension 153 x 82 mm. Order-no. **173090**

Bakelite switch system

The second switch system: black and bakelite.
Porcelain and bakelite coexisted harmoniously for many years, and both switch colours, white porcelain and black bakelite, were equally popular. The synthetic resin bakelite 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. Its functional superiority is due to its internal mechanics and it is aesthetically superior in three ways: to the eye, to the touch and to the ear (due to the pleasant "klack" sound of the turn-switch).

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.

Bakelite is a registered trademark of Hexion Specialty Chemicals AG.

OUTLET WITH SAFETY CONTACT BAKELITE
16 A, AC 250V
Bakelite central insert. With spring clips.

Without integr. child protection Order-no. **173038**

With integrated child protection Order-no. **174527**

OUTLET WITH MIDDLE-SAFETY CONTACT BAKELITE
(Designed for France)
With integrated child protection Order-no. **175833**

ROTARY SWITCH BAKELITE
10 A, 10 AX, AC 250V
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 250V
Bakelite central insert and toggle.

Alternation switch Order-no. **173043**

Crossbar switch Order-no. **173044**

CONTROL SWITCH (ON/OFF) BAKELITE
10 A, 10 AX, AC 250V
Bakelite central insert and toggle.
Order-no. **173047**

ROCKER BUTTON WITHOUT SYMBOL BAKELITE
10 A, AC 250V
Bakelite central insert and toggle.
Order-no. **173054**

Rocker button without symbol also available as an opener.

ROCKER BUTTON LIGHT BAKELITE
10 A, AC 250V
Bakelite central insert and toggle
with lamp symbol. Order-no. **173055**

Glow lamp for buttons
and control switch Order-no. **173066**

ROCKER BUTTON BELL BAKELITE
10 A, AC 250V
Bakelite central insert and toggle
with bell symbol. Order-no. **173056**

ROCKER BUTTON DOOR OPENER BAKELITE
10 A, AC 250V
Bakelite central insert and toggle
with key symbol. Order-no. **173057**

DIMMER BAKELITE
AC 230V, 50Hz
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
Pressure alternation Order-no. **173062**

Other dimmers are available upon request.

DATA JACK BAKELITE
Complete covering made of bakelite.
82 mm Ø.
For 2 network adapters RJ45 (real.Cat.6a).
Order-no. **181976**

TELEPHONE JACK BAKELITE
TAE 3x6 NFN
Complete covering made of bakelite.
82 mm Ø.
For 1 telephone and 2 additional devices or data terminals.
3 x 6 pole, 6 screwed contacts. Order-no. **154824**

ANTENNAE OUTLET BAKELITE
Complete covering made of bakelite.
82 mm Ø.
HF-resistant metal housing. BZT-authorisation.

Radio and television adapter for systems with amplifiers or cable.
Passage and terminal box. Order-no. **155099**

Radio and television adapter for systems with amplifiers. according DIN 45330 with additional satellite outlet (F-adapter).
Terminal box, digitally compatible. Order-no. **155241**

SINGLE COVERING BAKELITE
For assembly of components with central insert excluding dimmer.
82 mm Ø. Order-no. **173063**

Single covering for dimmer Order-no. **174940**

SINGLE COVERING SQUARE BAKELITE
For assembly of components with central insert excluding dimmer.
82 x 82 mm. Order-no. **119328**

Single covering for dimmer Order-no. **119327**

DOUBLE COVERING BAKELITE
For assembly of components with central insert and dimmer.
External size 157 x 82 mm Order-no. **173064**

TRIPLE COVERING BAKELITE
For assembly of components with central insert and dimmer.
External size 228 x 82 mm Order-no. **173065**

Bakelite is a registered trademark of Hexion Specialty Chemicals AG.

Duroplast switch system

Technically, the duroplast series corresponds to the black series. However, it is white in colour – which is more popular for modern switches and outlets – while offering a low-cost alternative to the porcelain series. The white duroplast series is formed from the same material as the black bakelite series. However, the white material is produced by a different manufacturer. That is why it does not carry the bakelite brand name, but rather the generic duroplast (thermosetting plastic) name. All cover plates, switch buttons and outlet elements in the new series are made of lightfast white duroplast. Naturally, these switches and outlets also meet VDE safety regulations.

OUTLET WITH SAFETY CONTACT DUROPLAST
16 A, AC 250V
Duroplast central insert. With spring clips.

Without integr. child protection Order-no. **176400**

With integrated child protection Order-no. **180810**

OUTLET WITH MIDDLE-SAFETY CONTACT DUROPLAST
(Designed for France)
With integrated child protection Order-no. **184728**

ROTARY SWITCH DUROPLAST
10 A, 10 AX, AC 250V
Duroplast central insert and locking bolt.
With spring clips.

Alternation switch Order-no. **186886**

Crossbar switch Order-no. **186887**

Multi-circuit switch Order-no. **186885**

Blind switch Order-no. **186896**

TOGGLE SWITCH DUROPLAST
10 A, 10 AX, AC 250V
Duroplast central insert and toggle.

Alternation switch Order-no. **176405**

Crossbar switch Order-no. **176406**

CONTROL SWITCH (ON/OFF) DUROPLAST
10 A, 10 AX, AC 250V
Duroplast central insert and toggle. Order-no. **176407**

ROCKER BUTTON WITHOUT SYMBOL DUROPLAST
10 A, AC 250V
Duroplast central insert and toggle. Order-no. **176408**

Rocker button without symbol also available as an opener.

ROCKER BUTTON LIGHT DUROPLAST
10 A, AC 250V
Duroplast central insert and toggle
with lamp symbol. Order-no. **176409**

Glow lamp for buttons
and control switch Order-no. **173066**

ROCKER BUTTON BELL DUROPLAST
10 A, AC 250V
Duroplast central insert and toggle
with bell symbol. Order-no. **176410**

ROCKER BUTTON DOOR OPENER DUROPLAST
10 A, AC 250V
Duroplast central insert and toggle
with key symbol. Order-no. **176411**

DIMMER DUROPLAST
AC 230V, 50Hz
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 Order-no. **176417**

Other dimmers are available upon request.

DATA JACK DUROPLAST
Complete covering made of duroplast.
82 mm Ø.
For 2 network adapters RJ45 (real.Cat.6a).
Order-no. **181977**

TELEPHONE JACK DUROPLAST
TAE 3x6 NFN
Complete covering made of duroplast.
82 mm Ø.
For 1 telephone and 2 additional devices or data terminals.
3 x 6 pole, 6 screwed contacts. Order-no. **176412**

ANTENNAE OUTLET DUROPLAST
Complete covering made of duroplast.
82 mm Ø.
HF-resistant metal housing. BZT-authorisation.

Radio and television adapter for systems with amplifiers or cable.
Passage and terminal box. Order-no. **176419**

Radio and television adapter for systems with amplifiers according DIN 45330 with additional satellite outlet (F-adapter).
Terminal box, digitally compatible. Order-no. **176420**

SINGLE COVERING DUROPLAST
For assembly of components with central insert excluding dimmer.
82 mm Ø. Order-no. **176421**

Single covering for dimmer Order-no. **181997**

SINGLE COVERING SQUARE DUROPLAST
For assembly of components with central insert excluding dimmer.
82 x 82 mm. Bestell-Nr. **119330**

Single covering for dimmer Bestell-Nr. **119329**

DOUBLE COVERING DUROPLAST
For assembly of components with central insert and dimmer.
External size 157 x 82 mm. Order-no. **176422**

TRIPLE COVERING DUROPLAST
For assembly of components with central insert and dimmer.
External size 228 x 82 mm. Order-no. **176423**

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. The company is now presenting some of the greatest technical innovations the industry has seen in a long time.
Their details have been studied intensively by the special interest media. 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. These high-quality connectors finally allow the sound system to show what it is capable of.

That's why we wasted no time in installing them in the wall sockets of our switch series. On the one hand, the materials used for the switches – porcelain, bakelite and duroplast – have always been ideal for electrical connections. On the other, 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. The possibilities allow electricians to come up with new creative ideas.
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 WBT PORCELAIN
82 mm Ø.
Order no. **100091**

SPEAKER WALL SOCKET WBT BAKELITE
82 mm Ø.
Order no. **100093**

SPEAKER WALL SOCKET WBT DUROPLAST
82 mm Ø.
Order no. **100095**

SPEAKER WALL SOCKET WBT NEXTGEN™ PORCELAIN
82 mm Ø.
Order no. **100092**

SPEAKER WALL SOCKET WBT NEXTGEN™ BAKELITE
82 mm Ø.
Order no. **100094**

SPEAKER WALL SOCKET WBT NEXTGEN™ DUROPLAST
82 mm Ø.
Order no. **100096**

Bakelite and Duroplast: Surface mounted.

To complement our tried and tested switch systems of porcelain, bakelite and duroplast we have now 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 or 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 or duroplast.

Bakelite is a registered trademark of Hexion Specialty Chemicals AG.

SURFACE-MOUNTED ROTARY SWITCH DUROPLAST
10 A, 10 AX, AC 250 V, IP 20
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**

SURFACE-MOUNTED TOGGLE SWITCH DUROPLAST
10 A, 10 AX, AC 250 V, IP 20
62 mm Ø, height above surface incl. toggle 49 mm.
Duroplast housing and toggle.

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

SURFACE-MOUNTED OUTLET DUROPLAST
16 A, AC 250 V, IP 20
62 mm Ø, height above surface 49 mm.
Duroplast housing with integrated child protection.
With spring clip. Order-no. **184199**

BASE PLATE DUROPLAST
62 mm Ø. Order-no. **184642**

SURFACE-MOUNTED ROTARY SWITCH BAKELITE
10 A, 10 AX, AC 250 V, IP 20
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**

SURFACE-MOUNTED TOGGLE SWITCH BAKELITE
10 A, 10 AX, 250 V, IP 20
62 mm Ø, height above surface incl. toggle 49 mm.
Bakelite housing and toggle.

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

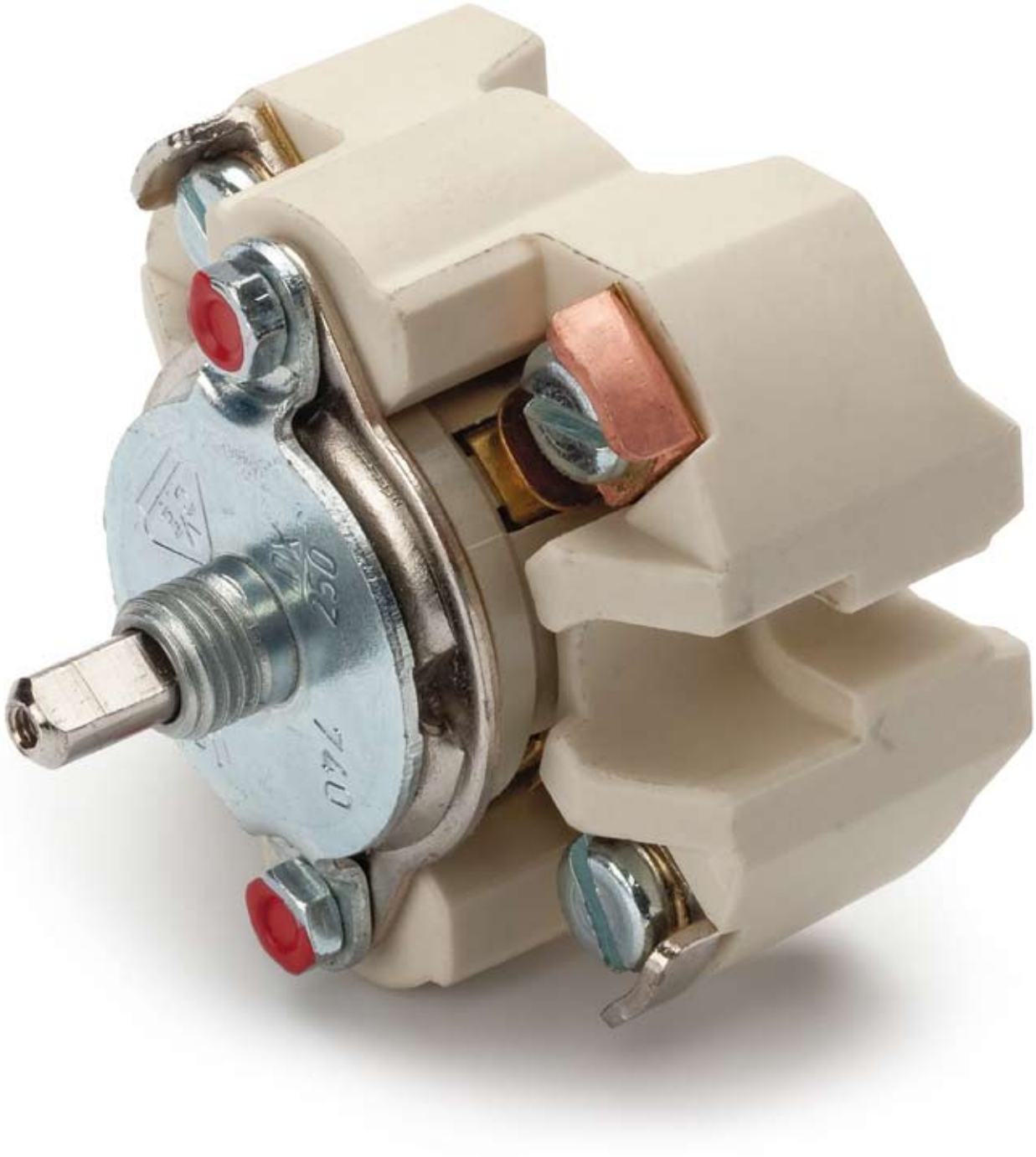
SURFACE-MOUNTED OUTLET BAKELITE
16 A, AC 250 V, IP 20
62 mm Ø, height above surface 49 mm.
Bakelite housing with integrated child protection.
With spring clip. Order-no. **184200**

BASE PLATE BAKELITE
62 mm Ø. Order-no. **184619**

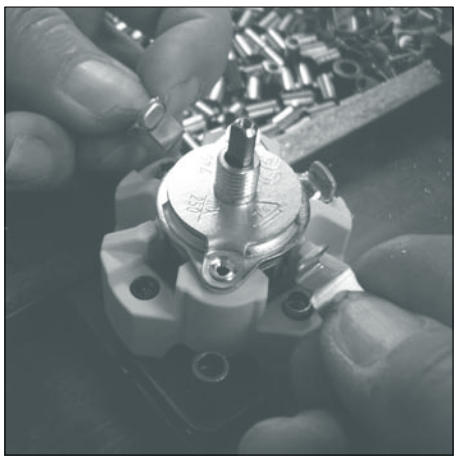
Porcelain switch system at a glance

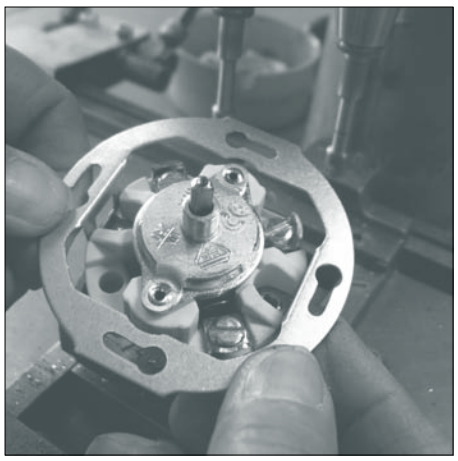
Bakelite switch system at a glance

Duroplast switch system at a glance



Nothing to hide: quality down to the last detail.





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