## Beauty is in details...



 developed from a smali craft workshop into
modern European company which employs 150
workers with constant tendency of growth and development.
Running a successful business, continuous
quality improvement of both products and working processes, extension of product range
and introduction of new products into market, as
well as innovative and modern product design well as innovative and modern product design
make Metalka Majur recognizable on the market.
Metalka Majur is a market leader in production of
electrical installation material in four markets of South-East Europe. Products from Metalka Maju product range are present on many European
markets (Russia, Kazakhstan, Latvia, Sweden Island, France, slovakia, Czech Republic, Greece,
Hungary, Bulgaria, Romania, Croatia, Slovenia,
Montenegro). Furthermore, we are continuously
striving to win some new markets as well, which
is one of the most important strategic goals in
is one of the most important strategic goals in
further growth and development of the company.
Production range of Metalka Majur can be divided
in several groups:
mevalgorps.
-Switches and socket-outlets for flush
assembling
(Status, Premijer plus, assembling (Status, Premijer plus, Royal,
Emporio, Royal Exclusive, Happy)
-Switches and socket-outlets for surface
assembling (Set OOG, minioG)
-Modular program of switches and socket-outlets

- Modular LED lighting (KOMBO LED)
- Distribution panels for MCBs
- Junction boxes
- Portable socket outlets
- Electrical accessories

Metalka Majur's vision is to be the most important
regional company in South-East Europe regional company in South-East Europe,
operationally exceptional, long-lasting, operationally exceptional, long-lasting,
profitale and recognizable with respect to its
superb design and European quality standards. Superb design and European quality standards.
Mission of Metalka Majur is contained in the
quality and beauty of detail which serve to the quality and beauty of detaril which serve to the
customer to trigger his sources of energy, heat customer to trigger his sources of energy, heat
and light.

Standards represent technical language which is used in business for production of goods, providing services and
creation of system. Economical cooperation with European Union is possible only with acceptance of technical requirements of its internal market. Technical regulations, directives and European standards dictate the requirement concerning safety aspects of products and impose their fulfillment on the producer. Concept of "Quality" has become a
general concern of European Union. The goal is to make producers offer only high quality products and services on the general concern of European Union. The goal is to make producers offer only high quality products and services on the
European Union market. European Union market.
By applying European standards in complete process of making products, Metalka Majur has obtained a good starting
position for competing on the European market. As the confirmation of quality, there are many quality certificates postion tor competing on the European market. AS the confirmation of quanity, there are many quanty certificates
issued by European certification bodies: GOST (Russia), Croatia (Koncar Institute and ZIK) and Serbia (Institute for issued by European ce
Nuclear Sciences Vinca).
Quality, stability and reliability of products which meet the adequate European standards have created the base for
making profit and visions of long term business success. Metalka Majuri's management is determined in applying strategy and quality policy which are orientated towards continuous increase of customersí satisfaction, improvement of product quality, launching new products, introduction
of new technologies and professional ltraining and education of the employees. Although we live in environment where
ot the relation between quantitative and qualitative requirements has been out of balance, position of Metalika Majur on
market has proved that this strategy has been applied on a high level, which makes both customers and companyis employees satisfied.


Results of putting development of Metalka Majur in function of creating high quality products are signs of quality:

$\Delta \mathbf{A}$
$\boldsymbol{\Delta} \boldsymbol{P}$
$\square$
Serbian mark of conformity

Quality mark confirmed the institute "Rostest", Russia;

Quality mark confirmed in the Department of quality testing ZIK and Electrical
Engineering Institute Končar Croatia; Engineering Institute Končar, Croatia;
CE mark on a product means that the product meets requirements of EU directives and that it undergoes procedures of compliance controls.
Quality system certificates (YUQS, IQNet) confirm the repeatability of quality.

## C $\in$ ISO 9001

One of the results of our dedication to quality is the award The best from Serbia which Metalka Majur
received in 2005 and 2008 , which promotes the best Serbian brands based on financial and market results, business growth and consumersí perception. Metalka Majur has acquired the right to promote its products all over the world through the slogan The best from Serbia, which makes a special honor for us, but also obligation to keep our excellence in the future, as well.

## PREMIJER PLUS



- Recognizable design of rounded lines
- Easily fits into different types of interior
- Protection level: IP 20
- Economical solution- best relationship of quality and price
- Complete range of products
- Long tradition
- Quality mechanism guarantees a long operating life
- Switches are made with screw and screwless connection

Production program Premijer Plus has been present on the market for present on the market for 15 years. It has become the most sold program of electrical installation material in Balkan region. In the same time Premijer Plus has made Metalka Majur famous producer in this field and contributed to fast growth of the company.

The recognizable round design of the button has found its application primarily for the first mounting, as the best combination of quality, product range and design which nicely and easily fits into different premises from the ordinary to the luxurious ones. Since 2004 luxurious ones. Since 2004 subassemlies which has subassemies which has onsiderably improved the quality.

However, the design has remained unchanged and it still successfully lasts.





In the Premijer Plus program the same frame is used for horizontal or vertical mounting, while in other programs the frames (due to product design) are different for horizontal and vertical mounting.
The use of multiple decorative frames includes previously mounted in-line mounting boxes (in catalogue item number 05.00.001 under "Distribution boxes"), because it is necessary to achieve 71 mm distance between products. After this, mounting of products into multipl frame is easy and simple.
burthermore, thus mounted products leave much better visual effect than several individual Furthermore, thus mounted products leave much better visual effect than several individual products.
The mounting of Premijer Plus multiple decorative frames requires individual products and multipl frame. The outer part of the decorative frame is dismounted from individual products, while the intermediate frame and button (or cover of the socket-outtet, depending on product) are mounted into
nultiple frame together with the sub-assembly.

$$
\square+0+\square O=\square
$$

## Status

- High quality
- Simple and fast assembly
- Protection level: IP 20
- Complete range of products
- Multiple frames for mounting of 2 to 5 products together
- Manufactured in line with European standards
- Possibility to personalize - decorative frames in different colours
- Switches are made with screw and screwless connection

Status has been the most sold Metalka Majur's program for two years both on domestic and export on domestic and export
markets. In very short time markets. In very short time,
since its sale started in 2005 , since its sale started in 2005, Status has positioned itseff as a logic choice of great number of users.

Status has been designed as a modern program characterized by sharp lines and modern design. The quality has been based on long lasting experience and acceptance of European standards.

It has also been confirmed by many international certificates issued by renowned institutes in charge of product quality certification.

The additional advantage which gives possibility of which gives possibing the status program with the colors of program with the colors of the walls and other detains of the interiors is changing mounting frames in different colors.




- Bell push-button
IEC 60669-1, IP 20



Bell push-button
with piloo light with piliot light
IEC 60669-1, IP 20



Push-button
Push-buman latel
with illuminated labe! $\underset{\text { IEC 60669-1, IP } 20}{ }$

| Article No: |
| :--- |
| $10 \mathrm{~A} / 250 \mathrm{~V}$ |
| 14.01 .017 (screwless connection) |
| 14.01 .037 |
| $16 A 1200 \mathrm{~V}$ (comnection with screws) |
| 14.01 .637 (connection with screws) |
| Pack: |
| 20 pcs. |



SOS push-button with


$$
\begin{aligned}
& \text { Article No:: } \\
& 110 / 2500 \\
& 14.01 .015 \text { (screwesest connection) } \\
& 11.01 .0535 \text { ( (connection with screws) } \\
& 144 / 2501.635 \text { (connection with screws) } \\
& \text { 14.01) } \\
& \text { Pack: }
\end{aligned}
$$

$$
\begin{aligned}
& \text { Pack: } \\
& 20 \text { pcs. } \\
& \hline
\end{aligned}
$$



Cat6
IP 20



Single-pole switch with tumbler switch and pilot light

Article No::
$16 \mathrm{AX} / 250 \mathrm{~V}$ 14.01.045 (ceramic body)

Pack:
20 pcs. $\qquad$
pcs.


## L




- Vertical bathroom switch with two-pole socket-outlet IEC 6066-1; IP 20
Two-pole socket-outlet wo-pole socket-outlet: 16A/250V (ceramic body)
Tumbler switches: $16 \mathrm{AX} / 250 \mathrm{~V}$

pack:
Pack:
$7 \mathrm{pcs}$.




Triple decorative frame - horizontal


Quadruple decorative frame - vertical
$\begin{array}{ll}\text { Article No.: } & \text { Pack: } \\ \text { 14.01.367 } & 10 \text { pcs }\end{array}$



Double decorative frame - vertical
Article No.:
14.01.365
Pack:
30 pcs


Two-pole socket-outlet with cover "F" type
(French standard) (French standard)
IEC $60884-1$, CEET
$1641250 V: ~ I P ~$ 16A/250V; IP
Atricle No.: policarbonate bod

Pack:
20 pcs.
Two-pole socket-outlet
with cover and protection " F " type (French standard) IEC 60888-1, CEET
$164 / 250 \mathrm{~V}$ : | 20
Article No::
14.01.079
(policarbonate body)

Pack:
20 pcs.

|  | For <br> basic <br> articles | Pack. | For <br> double two-pole <br> socket-outlet | Pack. | For <br> thee-pole <br> socket-outlet | Pack. | For <br> batirizontal | Pack. | For <br> verical <br> bathroom switch | Pack. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grey | 14.02 .352 | $5 / 240$ | 14.02 .355 | $5 / 200$ | 14.02 .359 | $5 / 240$ | 14.02 .395 | $5 / 160$ | 14.02 .396 | $5 / 105$ |
| Light grey | 14.03 .352 | $5 / 240$ | 14.03 .355 | $5 / 200$ | 14.03 .359 | $5 / 240$ | 14.03 .395 | $5 / 160$ | 14.03 .396 | $5 / 105$ |
| Cream | 14.05 .352 | $5 / 240$ | 14.05 .355 | $5 / 200$ | 14.05 .359 | $5 / 240$ | 14.05 .395 | $5 / 160$ | 14.05 .396 | $5 / 105$ |
| Dark red | 14.06 .352 | $5 / 240$ | 14.06 .355 | $5 / 200$ | 14.06 .359 | $5 / 240$ | 14.06 .395 | $5 / 160$ | 14.06 .396 | $5 / 105$ |
| Blue | 14.07 .352 | $5 / 240$ | 14.07 .355 | $5 / 200$ | 14.07 .359 | $5 / 240$ | 14.07 .395 | $5 / 160$ | 14.07 .396 | $5 / 105$ |
| Dark blue | 14.08 .352 | $5 / 240$ | 14.08 .355 | $5 / 200$ | 14.08 .359 | $5 / 240$ | 14.08 .395 | $5 / 160$ | 14.08 .396 | $5 / 105$ |
| Yellow | 14.09 .352 | $5 / 240$ | 14.09 .355 | $5 / 200$ | 14.09 .359 | $5 / 240$ | 14.09 .395 | $5 / 160$ | 14.09 .396 | $5 / 105$ |
| Light green | 14.10 .352 | $5 / 240$ | 14.10 .355 | $5 / 200$ | 14.10 .359 | $5 / 240$ | 14.10 .395 | $5 / 160$ | 14.10 .396 | $5 / 105$ |

## POYAL



- High quality mechanism of switches and sockets
- Protection level: IP 20
- Attractive design with curved surfaces
- Decorative frames in different colours
- Multiple frames for mounting of 2 to 5 products together
- Complete range of products
- Possibility of choice sockets with a body made of ceramic and polycarbonate
- Switches are made with screw and screwless connection

Modern design, round form and wide range of colors of mounting frames are main characteristics of the Royal program.

Additional advantage of the Royal program is wide range of products which includes different models of sockets, switches, buttons, bathroom switches and communication switches.

The idea has been to make the program which will offer the program which will offer everything what a customer needs. Decorative frames can be changed and mounted in different colors, which additionally emphasizes color as an element to be matched with the color of the interior.

This program also offers multiple frames in different colors, for mounting from 2 to 5 products in a common frame, which makes the offer even more attractive.





## 2OYAL <br> exclusive





## EMP®RI®

PURE STYLE. pure forma. PURE BEAUTY.

- High quality range of products with modern design
- Protection level: IP 20
- Production in line with European standards
- Fast and intuitive assembly
- Basic version of products is in white colour
- Transparent decorative frame allows personalization of products
- Matt surface of decorative frames and buttons
- The switches are manufactured with screwless connection

Emporio production program s featured by its recognizable design, two-layer decorative frame and opaque surface of the decorative frame

It is intended for the clients who want somewhat different, but modern design. t easily matches with both t easily matches with both facilities.

It is delivered as a complete product in white color, but there is a possibility of substituting
decorative frame if there is need for it. Decorative frames are available in ten different colors.

Our offer of decorative frames also includes transparent rames which give our cirients oossibility of complete personalization of the produc appearance. Namely, a paper with printed or drawn details, part of the photo or similar can e put under the frame, which makes the product unique.



## Happy

- Switches and sockets designed for the space in which children's reside
- All sockets have a built-in protection against touching
- Manufactured in line with European standards
- Protection level: IP 20
- Exterior plastic parts have color constancy - do not fade
- Four different, for children attractive product shapes
- Wide variety of colour combinations, for girls and boys
- The switches are manufactured with screwless connection

Happy production program is designed with intention to make children rooms, kinder gardens, schools and other premises where children spend their time more amusing and interesting.

There are four different shapes within Happy production program:sun, flower, star and sunny side up egg.

There are also different combinations of colors, for girls and boys. Having in min specific application of this product line, Metalka Maju pays special attention to safety issue in developing safety issue in developing these products.

Therefore, all socket outlets are touch protected, which guarantees complete security of children. Paints used for painting plastics are absolutely harmless.


## Haəaр

(J) METALKA MAUR



## kombo

- Production in line with European standards
- High quality materials for production
- Protection level: IP 20
- All switches are manufactured for rated current of 16 AX
- Simple assembly
- User selects modules and frames in accordance with his
- All elements (modules, frames, mounting frames, mounting boxes)
- All modules are produced in white, black and gold
- Wide range of decorative frames, in several price categories
- Complete offer for Hotels of higher categories
- Constantly expanding of range with new
- Switches are manufactured with screw connection

Kombo modular program of high quality switches and socket outlets is characterized by elegant and very modern design. It is made of the most quality materials following the European standards.

Kombo is developed in accordance with the needs of modern customers who want to modern customers who want to have the full autonomy in choosing equipment and combination of colors including possibility of installation of as much equipment as possible in a small space. This program also fulfills their expectations in respect of the equipment's quality which guarantees long life and comfortable application of switches and socket outlets.

Wide range of modules and decorative frames is developed in order to fulfill customers' needs. Decorative frames are divided in three price groups so that different groups of customers could have possibility of choice in respect of prices. All modules can be in white, black and gold color, while the switches have one more important characteristic in the mportant characteristic in the sense of being construct

More possibilities.
More possidit
More style.
More s


## What is your combination?

Modular program range offers to user possibility to choose a combination of modules, where each one controls a specific function in low voltage electrical installations, and to place them according to their wishes, on the much smaller space compared to conventional programs.
Each function is controlled by a separate "module" which is significantly smaller dimensions than the standard one, and is assembled in the mounting frame with other modules. Way of assembling allows modules to be small dimensions.

Modular program has a number of advantages. The most obvious advantage is the area occupied by the modular switiches and sockets, because it is much smaller than standard programs. In addition, with standard programs, in multiple decorative frames mostly is possible to
place a maximum five products, whereas in modular programs in the decorative frame is possible to place seven modules.

Modular programs allow the user to select and combine the necessary modules and arrange them into decorative frame as he wants. Easy
replacement of modules is possible, in case of changed needs of user, where only replacement of module is necessary. Also it is possible to replace just decorative frame, thereby product adapts to new colours in the interior with a small investment.

Installation of modular switches and sockets is faster and easier compared with conventional program and the aesthetic appearance of
modular rogram is on much higher level than standard switches and sockets. Larger are also installation options in the parapet systems and easier to mount in them.


For a complete assembly of modular switches and sockets you need the following: mounting box, mounting frame, matching module and decorative frame. Kombo program offers the possibility of assembling following number of modules: $1,2,3,4$ and 7 modules.


Mounting boxes for solid walls


Mounting boxes for cavity (gypsum) walls

In case that mounting boxes are already installed in wall, decorative frames $2 \times 2 \mathrm{M}$ or $3 \times 2 \mathrm{M}$ can be used, because correspond to these mounting boxes.


Mounting frame serves as a base for assembling of modules and decorative frame. For mounting box is connected with screws (provided with mounting frame)
or metal claw (at mounting frame for 1 and 2 modules).
Decorative frame must match to number of modules for which mounting frame is mounted. It's mounting by pressing on mounting frame, and can be eas removed with screwdriver, pressing on the side notches.
How to choose an appropriate combination? First thing the user needs to do is to perceive it's real (or future) needs for each connection place, and accordingly determines the number of modules

## MODULES $\underset{\text { in }}{ } \mathbb{S}$ COIOIS



Buttons for switches and push buttons can be 1 M or 2 M width and are
available in white Bavilable in white and black colour. Some modules can be purchased without
buttons, which can be later bought and assembled buttons, which can be later bought and assembled. Button which is two
modules width 2 IM is sasembled if that is an eesthetic client's request or if
there is a blank place in decorative frame and s maske lo modules width (2M) is assembled if that is an aesthetic client's request or if
there is a blank place in decorative frame and is masked on this way. Another
way of masking the empty place in decorative frame is to put an empty way of masking the empty place in deacrative frame is to put an empty
modue, which actually represent a cover for the gap. If needed, the client can replace just buttons and geta new, visually different $-100 k$, of switches and sockets.


In modules of switches and buttons with pilot light, lamp is installed (easy to insert into the provided holes), there are several colors to offer, so the color
of signal ights may vary for difterent groups of consumers. When instaling
lamps it is important to pay attention that lamp is assembled below the hole lompsitisal lights.



1M Single pole switch
${ }^{\text {- }}$ 21.1.15. 1221 (black $\square_{\text {21.71.621 ( } \text { (gold) })}^{21.01 .121 \text { (te) }}$ Pack:


IM Intermediate switch

| $\begin{aligned} & \text { Article No.: } \\ & \text { 21.15.626 (black) } \\ & \text { 21.01.626 (white) } \\ & \text { 21.71.626 (gold) } \end{aligned}$ | $\begin{aligned} & \text { Article No.: } \\ & \text { 21.15.622 (black) } \\ & \text { 21.01.62 (white) } \\ & \text { 21.71.622 (gold) } \end{aligned}$ |
| :---: | :---: |
| Pack: 20 pcs. | Pack: 20 pcs. |



1M Bell push button diffuser
$16 \mathrm{~A} / 250 \mathrm{~V}$

Pack:
20 pcs.

${ }_{-}^{\text {Article No.: }}$ 21.15.628 (black)
21.15.628 (black) 21.71 .628 (gold)
${ }_{20 \mathrm{pes}}^{\substack{\text { Pack } \\ 20}}$



> Article No.i
21.1.5.623 (black)
21.07.
> ${ }^{21.71 .623 \text { (gold) }}$
> ${ }_{20 \text { pess. }}^{\substack{\text { Pack } \\ 2}}$


1M SO
push button diffuser 16A/250V


Pack:
20 pcs.




1M Two way switc without button
$16 \mathrm{~A} / 250 \mathrm{~V}$

Article No.
21.00.725

Pack:
20 pcs.


1M Single pole switch without button with zero contact
$16 \mathrm{~A} / 250$

Article No.,
21.00.746


2M 2P+E schuko socket shuttered (green)

Article No
22.14.052 (green)

Pack:


1M Intermediate without button

Article No,
21.00.726

Pack:
20 pcs.

2M 2P +E schuko socket
22.15.051 (black)
22.01.051 (blatite)
22.71 .051 (gold)

Pack:
20 pcs.


2M 2P +E schuko socket shuttered (orange)
${ }_{-}^{\text {Article No.: }}$ 22.04.052 (orange)
Pack:
20 pcs.







In Kombo production program there are mounting frames for $1,2,3,4$ and
7 modules.
7 modules.
Mounting frames 1 M and 2 M (for mounting one and two modules) are delivered Mounting is possible via claws and screw from the claws, if the existing mounting Mounting is possible via claws and screw from the claws, if the existing mounting
box has the openings for screws. box has the openings for screw
Mounting frames 3 M and 4 M are delivered with two screws which are used for
mounting into mounting boxes, while the mounting frame 7 M is delivered with four mounting into mounting boxes, while the mounting frame $7 M$ is delivered with fou
screws owing to its size and in order to prevent mounting frame from twisting. Way of packaging mounting frames prevents screws from falling out during
transportation transportation and manipulation in sales outlets.
It is important to mention that the design of modules and mounting frames of Kombo production program makes possible mounting and dismounting from the front side when the mounting frame is aready mounted into mounting box. This
option enables quick and easy mounting and dismounting. also including more option enables quick and easy mounting and dismounting, also including mor
comfortable work with installations.

Mounting frames in Kombo program are compatible with mounting boxes produced by other manufacturers, so the clients who have already mounted
mounting boxes by other producers can without any problems.

## Mounting of mounting frame



## - il

Distance element $f$ mounting boxes PM

Article No.
20.00.207
Article No.
20.co..000

Pack:
$50 / 700$ pcs.
${ }_{\substack{\text { pack. } \\ 6,114 \\ \text { pes. }}}$
-
Netaka Majur's Kombo prat mounting boxes both for solid and cavity (gypsum) walls.
Mounting frames for sizes 3M, 4M and 7M are chosen for adequate to standard module, while combinations 1M and 2M are mounted into standard mounting boxes of 60 mm in diameter.
Mounting box for multiple decoration frames is used for mounting
modules into decoration frames $2 \times 2$ and $3 \times 2$. This box secures 71 modules into decoration frames $2 \times 2$.
$m \mathrm{~m}$ distance between the products.
Protective cover for solid wall mounting boxes makes a separate item. The cover is used after installation of mounting box, but before mounting module and decorative frame in order to protect interior of
the mounting box and wires from getting dirty during plastering and smoothing. After plastering the cover is removed and final mounting of module and frame is performed.
Another important item is a joint element for solid wall mounting
boxes. The joint element has two fixed lengths one of which fits to boxes. The joint element has two fixed lengths one of which fits
horizontal, while the other fits to the vertical mounting of sever decorative frames which after mounting should be positioned next too
each other at fixed distance This provides an excellent visual effect each other at fixed distance. This provides an excellent visual effect
of the mounted decorative frames when one place requires more than 7 modules. At vertical mounting the joint element can be used only for the
decorative frames of the same size (i.e. for the same number of decorative frames of the same size (i.e. for the same number
modulus), while at horizontal mounting it possible to join decorative modutes, while at horizontal mounting it possibe to oin decorative
frames of different size. The complete ooin element is sud for
horizontal mounting while for vertical mounting the element should
horizontal mounting while for vertical mounting the element should
be broken and only longer parti s used.

(3) METALKA MAJUR


Exclusive decorative frames made of true wood and Corian DuPont make Kombo program additionally attractive. This part of program is Exclusive decorative frames made of true wood and Corian DuPont make Kombo program additionally attractive. This part of prog
specially designed for the most luxurious buildings with intention to meet the esthetic requirements of the most demanding customers.
MAPLE
Scientific Name: Acer Saccharum; Countries of Origin: Balcan area
Appearance: The sapwood of maple is lovely creamy, while the heartwood ranger from creamy white to light reddish brown. This wood had a closet, subdued grain and uniform texture, with
medium figuring. The figuring is variously described as quilted, curly, bird's-eye, and "fiddle back". medium figuring. The figuring is variously described as quited, curly, bird's-eye, and fidade back ${ }^{\prime}$.
During the granding process, interestingly figure boards are often culled from the group and sold at a premium. Due to its light color and durability, maple is popular choice when a "contemporary" look
is desired. is desired.
Properties: Maple is classified as hardwood, and it has a high crushing strength. It is stiff, strong, dense
wear.


Scientific Name: Prunus Serotina; Country of Origin: Italy
Appearence: Cherry wood is prized for its rich color and fine graining. The fine, sanità texture of the wood is uniform and frequently wavy, with distinctive gum veins and pockets. The Lustrous heartwood ranger from light to dark reddish brown, constisting sharply with the
vood, which may be light brown to pale with a light pinkish tone; however, between boards sapwood, which may be light brown to pale with a light pinkish tone; however, between boards
there may be significant color variations. Properties: Cherry works well, saws cleanly, planes excellently and takes all kinds of finishes very well. It has a strong but moderately hard wood with excellent shock resistance.

## NATI ONAL WALNUT

Scientific Name: Junglans; Country of Origin: Italy
Appearance: There is a distinct difference in color between the nearly white sapwood of walnut and the heartwood, which ranger in color from a deep, rich dark, almost chocolate brown to a
purplish black. The wood often has a purplish cast with dark streaks. However, there is a wide purpish black. The wood often has a purplish cast with dark streaks. However, there is a wide
variation of color, figure, and grade within the species. The grain of walnut is mostly straight and open, though some boards may have a grain pattern that is burled or curly. In fact, the wood is especially valued for its wavy, curly and mottles figures.
Properties: This prized wood is heavy, hard and stiff and has excellent dimensional stability. It is moderately dense, but very strong, win good shock resistance. Walnut is one of the most


Corian DuPont
Artificial material which is mixture of plastics and tiny crystals of the true quartz provides marvelous visual effect very much similar to marble. The material was invented and patented by DuPont, a world giant in the field of technical materials,
has found broad application in interior decoration being relatively easy for processing and extremely long lasting and decorative.

All Kombo items have attractive individual packaging. Modules of switches and socket outlets are packed in blister pack which protects the product from mechanical damaging. In the same time blister pack provides the complete view of the product form the front side, the subassembly and contacts from the back side. Packaging includes information on producer, wiring diagram and other important data.




Kombo6a

Kombo 60 is a special series of modular articles, reduced flat surface, with original design of buttons, in line with trends of interior equipping, quality, reliability and long
using life. using life.
Kombo 60 Kombo 60 is a final product, made in basic white color. Characterized by a fast and
simple assembly, is mounted in a standard $\varnothing 60 \mathrm{~mm}$ mounting box, while the indicators are buying with already mounted box. All switches are manufactured fo rated current of 16 AX , connection is with screws, reliable contact for live parts and long service life.
 Bathroom switch 3M with indication for boiierlight and heater
6 AX/250V Article No.:
21.01 .096 (white) Pack:
8 pcs.


2M Two way switch with button
$16 \mathrm{~A} / 250 \mathrm{~V}$ ${ }_{\text {Article No.: }}^{\text {24.01.625 (white) }}$ Pack:
20 pcs.


2M Two pole socket $2 \mathrm{P}+\mathrm{E}$ 16A/250V Article No.:
24.01.051 Pack:
20 pcs.

## kombo LED

MODULAR LED LIGHTING

Metalka Majur has supplemented its modular program of sockets and switches KOMBO with the new sources of light in LED tehnoligy. The modules are standard size: $2 \mathrm{M}, 3 \mathrm{M}$ and 4 M and can be installed in the existing junction boxes with a wide range of decorative frames. Each module of the KOMBO LED program, can be bought separately so that it leaves open the pšossibility to the customer that, depending on his needs he can make his own combination.


2M LED lighting
Article No.:
2300- 21.ci.102 (230V/50Hz)

Pack:
20 pcs.


3M LED lightin
3M LED ligh
Kombo LED


Pack:
20 pcs.


Depending on the supply voltage produced by the two types of modules. The first type of module is the supply voltage of $230 \mathrm{~V} / 50 \mathrm{~Hz}$ and the other type is for supply voltage of $12 \mathrm{~V} / 50 \mathrm{~Hz}$. Kombo LED modules can be combined with other modules of the KOMBO program, so that in one place you can have: a light source, a switch and socket. Kombo LED modules have no UV and IR radiation, they have low power consumption and provide high intensity with a little heat and low light weakening.

## kombo LeD 2M

| Type <br> Standar <br> Angle <br> Rendered index <br> Light colour <br> Ligh temperature <br> Power Voltage <br> Voltage <br> Number of LEDs <br> LeD light source <br> Material <br> Installation <br> Lifetime |
| :---: |



kombo LeD 3M


| KOMBO LED/3M <br> EN 60598, CE <br> $120^{\circ}$ 80 <br> Nature white <br> 4000K <br> max 1,5W <br> $230 \mathrm{~V} / 50 \mathrm{~Hz}, 12 \mathrm{~V} / 50 \mathrm{~Hz}$ <br> 6 <br> Samsung <br> Polycarbonate <br> Into a wall and pla <br> $50,000 \mathrm{~h}$ of continuous oper |
| :---: |




## KOmbo LED 4M

| Type | KOMBO LED/4M |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Standard | ${ }_{120}^{\text {EN }} 120598$, CE |  |  |  |  |
| Rendered index | ${ }^{80}$ Nature white | T- |  |  |  |
| Light temperature | 4000 K |  | \& |  |  |
| Power |  |  |  |  |  |
| Number of LEDs | ${ }_{8}^{203}$ | $\square$ |  |  |  |
| LeD light source | Samsung |  |  |  |  |
| Materias | Polycarbonate | \|-23,4-9,3 |  |  | 88 |
| (nstalation |  |  |  |  |  |

The montage of the module and the decorative frame is very simple
be done manually by pressing.



Tightening of the conductors is provided by a realiable and secure screw by a realiable and secure screw
connection for conductors with crosssections up to $2,5 \mathrm{~mm}^{2}$.

Dismantling of KOMBO LED module is also simple.

1) In the first step, it is necessary to remove the decorative frame by a gentle
pull. 2) pull. 2) In the second step, a screwdriver Should be placed as shown in the picture, with a gentle downward push.

Kombo LED has been applied in the modern interior decorative lighting today (corridors, stairwells, light duty) Kombo LED can be built into the parapet divorce with the width of the opening of 80 mm .


The colors of decorative frame:


## SET Q OG



- Surface mounting
- Quality and robust products, for long lasting and frequent use
- Reliability and durability
- Manufactured in line with European standards
- Protection level: IP 44 (protection against splashing water)
- Complete range in white and gray colour
- Recognizable and modern design
- Switches are made with screw and screwless connection

Set Q OG is production program of switches and socket-outlets, intended for socket-outiets, intended for surface mounting and it is used where the installation is carried ut on the wall, from residential , pross faciltis, including the production halls, storages, garages, basements, etc

Set Q OG has the widest product range among the surface mounting programs in the region. The complete product range is available in white and grey color.

The protection level is IP44 (protection against splashing water).
set Q OG program has been designed by young Bachelor of Applied Arts (Industrial Desian Section) who won the internal competition for the best desian ompetition for the best design f switches and socket outlets organized by Metalka Majur with intention both to help young talented people and mprove design of its products in the same time.
(3) METALKA MAJUR



## $\operatorname{mini} \mathbf{O G}$



- Surface mounting
- High quality of sockets and switches subassembly
- Simple and fast assembly, even in poorly accessible places

Protection level: IP 44

- Small dimensions (basis is a dimension $60 \times 70 \mathrm{~mm}$ )
- Manufactured in line with European standards
- Common choice of electrical installers
- Switches are made with screw and screwless connection

Within a year from the beginning of selling product range of switches and sockets for surface mounting, Mini OG, has become a common choic for many buyers.

Replacing of old Apollo OG
Replacing of old Apollo OG program, with program of similar characteristics, but with a modern design and qualit

Protection level is
protion level is IP44 (protection against splashing water), and range of products in Min OG program includes only the most frequent items which also proves to be correct development decision.

Customers very fast recognized the greates benefit of Mini OG program -small dimensions (base of - smail dimensions (base of dimension of $60 \times 70 \mathrm{~mm}$ ) which allows installation in which allows instaliation in inaccessible places and everywhere where space is an problem. This separates the "Mini competing programs


## mive OG

## 



\section*{| Single-pole switch |
| :---: |
| IEC $60669-1,1 P$ |
| 14 | <br> IEC $60669-1$ IP 44

Surface assembling}

Article No:
10 A 人250V
18.01.001 (screwless connection)
18.01.021 (connection with csems
18.01.021 (coonection with screw
18.01.621 (connection with screws)

Pack:
24 pcs.


Two-circuit switch
IEC $60669-1 . \mid P 44$ IEC 60669-1, IP 44
Surface assembling

Article No.:
10 ANX 250 V 18.01.004 (screwless connection)
18.01.024 (cconnection with screws $16 \mathrm{AX} / 250 \mathrm{~V} \mathrm{c}$ 18.01.624 (connection with screws) Pack:
24 pcs.


Two-way switch
IEC $60669-1,1 p$. 44
Surface assembling
Article No.
$10 \mathrm{~A} \times / 250 \mathrm{~V}$
${ }^{18.01 .005 \text { (screwless connection) }}$ 18.01.025 (sonnection with serl 18.01 .025 (connection with screws
$16 \mathrm{~A} \mid 250 \mathrm{~V}$ 18.01.625 (connection with screws) Pack:
24 pcs.


Double-pole switch Surface assembling

## Light push-button IEC 6069 -

Surface assembling

| 10AX/250V <br> 18.01.002 (screwless connection) 18.01.022 (connection with screws) 16AX/250V <br> 18.01.622 (connection with screws) Pack: |  |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Article No
$10 \mathrm{~A} / 250 \mathrm{~V}$
8.01.011 18.01.031 (connection with screws ${ }_{18.01 .631}$
Pack:
24 pcs.



Bell push-button
IEC $6066-$-1. IP 44 IEC 60669-1, IP 44
Surface assembling

Article No.
$10 \mathrm{Cl} / 250 \mathrm{~V}$
18
18.01.010 (screwless conection)
18.01.030 18.01 .030 (comnection with screws ${ }_{18.01 .630}$
Pack:
24 pcs.
ck:
pcs.


Intermediate switch
IEC $60669-1$, IP 44 EC 60669-1, IP 44

Article No::
$10 \mathrm{AX} / 250 \mathrm{~V}$
8.01 .006 (screwess connection)
. $A \times 1250 \mathrm{~V}$ (connection with screens
${ }_{18.01 .626}^{164 \times 1 / 250 V}$ (connection with screws
Pack:
24 pcs.


Blind control button EC 60669-1, IP 44

Article No.:
Article Novo
8.01.018 (screwless conection)
18.01 .038 (connection with screws $16 \mathrm{~A} / 250 \mathrm{~V}$
Pack:
24 pcs.

Letter code
Letter code
(international protection)
First characteristic numeral (number 0 to 6 or letter X)
Second characteristic numeral (number 0 to 8 or letter X)
When is not required to specify the characteristic number, number is replaced with the letter X .

| IP code elements and their meaning |  |  |
| :---: | :---: | :---: |
| $\begin{gathered} \text { First } \\ \text { characteristic } \\ \text { numeral } \end{gathered}$ | Brief description | Definition |
| 0 | Non-protected | 1 |
| 1 | Protected against access to hazardous parts with back of hand | The object probe, sphere of $\varnothing 50 \mathrm{~mm}$ shall not fully penetrate |
| 2 | Protected against access to hazardous parts with finger | The object probe, sphere of $\varnothing 12,5 \mathrm{~mm}$, shall not fully penetrate in housing |
| 3 | Protected against access to hazardous parts with tool | The object probe, sphere of $\varnothing 2,5 \mathrm{~mm}$, shall not penetrate in housing |
| 4 | Protected against access to hazardous parts with wire | The object probe, sphere of $\varnothing 1,0 \mathrm{~mm}$, shall not penetrate at all in housing |
| 5 | Protected against access to hazardous parts with wire | Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety |
| 6 | Protected against access to hazardous parts with wire | No ingress of dust |


| $\begin{gathered} \text { Second } \\ \text { characteristic } \\ \text { numeral } \end{gathered}$ | Brief description | Definition |
| :---: | :---: | :---: |
| 0 | Non-protected | 1 |
| 1 | Protected against vertically falling water drops | Vertically falling drops shall have no harmful effects |
| 2 | Protected against vertically falling water drops when enclosure tilted up to $15^{\circ}$ | Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to $15^{\circ}$ on either side of the vertical |
| 3 | Protected against spraying water | Water sprayed at an angle up to $60^{\circ}$ on either side of the vertical shall have no harmful effects |
| 4 | Protected against splashing water | Water splashed against the enclosure from any direction shall have no harmful effects |
| 5 | Protected against water jets | Water projected in jets against the enclosure from any direction shall have no harmful effects |
| 6 | Protected against powerful water jets | Water projected in powerful jets against the enclosure from any direction shall have no harmful effects |
| 7 | Protected against the effects of temporary immersion in water | Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time |
| 8 | Protected against the effects of continuous immersion in water | - Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions which shall be agreed between manufacturer and user but which are more severe than for numeral 7 |

MOUNTING INSTRUCTIONS


Switches

## Distribution panels



- Distribution panels for wall and flush mounting
- Protection level: IP 44
- Manufactured in line with European standards
- DIN rail and terminal blocks are supplied with the distribution pane
- White or transparent door
- Models for 4, 8, 12, 24 or 36 miniature circuit breakers
- Each row of circuit breakers has a separate door
- Modern design - easily fits into different types of interior

By developing and introducing production of the complete range of distribution boards for miniature circuit breakers, Metalka Majur has completed its range.

Our offer includes both wall and flush mounting models or $4,8,12,24$ or 36 miniature circuit breakers.

All distribution boards are produced with white or transparent doors.

Protection level of distribution boards is IP40, while their mounting is fast and very simple, since the box provides enough space or introducing and connecting wires.

Each distribution board is made in accordance with IEC orms. It is also supplied with adequate number of DIN rails and terminal blocks.




Distribution panel MAT
Distribution panel
Surface assembling Surface assembing
No. of modules (MCBS): No. of DIN rails: 1
No of terminal blocks $6 \times 9 \times 49$ distribution panel: 2
IEC 60670; CEI EN 60529
IP 40
Dimensions: $156 \times 240 \times 100 \mathrm{~mm}$
Article No.:
05.69 .81 (transparent door
05.69 .11 (white doo

Pack: 24 pcs.



Pack: 12 pcs.





Switches: Premijer plus, Status, Royal, Royal Exclusive, Emporio, Happy
Used for households and similar applications.
-Flush assembling.
-Assembling to mounting boxes $\varnothing 60 \mathrm{~mm}$.
Application for alternating current with voltage up to 250 V and electric current u
to 10 A or 16 A .

## switches: Set Q OG, mini OG

- Owing to its level protection secured by housing (IP44), they are used both in
ndustry and households. Surface assembling.

Application for alternating current with voltage up to 250 V and electric current up
to 10 A or 16 A .

Switches: Kombo
Used for households and similar applications.
Flush assembling
-They are built into installation boxes for modular programs; Width combinations IM and 2 M (one and two modules) can be mounted in instalation boxes $\mathbf{6} 0 \mathrm{~mm}$ Kombo product range is compatible for mounting into installation boxes of othe

Application for alternative currents with voltage up to 250 V and electric curren
Socket-outlets: Premijer plus, Status, Royal, Royal Exclusive, Emporio Happy

- Used for households and similar applications.

Flush assembling.

- Assembling to mounting boxes $\varnothing 60 \mathrm{~mm}$.
- Application for alternating current with voltage up to 250 V and electric current up
to 16 A .

Socket-outlets: Set Q OG, mini OG
Owing to its level protection secured by housing (IP44), they are used both in industry and households.

- Surface assembling.
- Application for alternating current with voltage up to 250 V and electric currentup to 16 A .


## Socket-outlets: Kombo

Used for households and similar applications.
Flush assembling.
They are built into installation boxes for modular programs; Width ombinations 1 M and 2 M (one and two modules) can be mounted in mounting into installation boxes of other producers.

Application for alternating current with voltage up to 250 V and electric
urrent up to 16 A .


Dimmers 2M: Premijer plus, Status, Royal, Royal Exclusive, Emporio,
They are used for light power control of bulbs of alternating current 230V, power .

- Flush assembling

Assembling to mounting boxes ø60m

## Dimmers 1M: Kombo

-They are used for light power control of bulbs of alternating current 230 V , power
$100-500 \mathrm{~W}$ in households and similar spaces.
Flush assembling.

- They are built into installation boxes for modular programs; Width combinations IM and $2 M$ (one and two modules) can be mounted in instalation boxes $\varnothing 60 \mathrm{~mm}$. Kombo product range is compatible for mounting into installation boxes of othe producers.
- When mounting several dimmers 1 M in the same mounting box, an empty
module should be mounted between two dimmers in order to reduce heating of the housing as much as possible.



## Portable socket-outlets

Used for households and similar applications.
16A/250V; Maximum power 3500W
Cable diameter: $1,5 \mathrm{~mm}^{2}$

- Plug head is cast on the cable.



## Distribution panels

-They are used for multi-floor distribution of electrical installation in households and similar spaces.
Flush assembling (MUT) and surface assembling (MAT)
Dimensions of boards are related to number of miniature circuit breakers:
models of its distribution panels in two options - with white and transparent doors.

## Installation boxes

Mounting boxe
 onnectors and different types of assemblies and flush mounting socket outtets.
unction boxes
unction boxes
Installation bo
tt joint locations.
Made of thermo
Made of thermoplast, with different dimensions.


Right choice of insulation material for making buttons, covers, frames, housings and other plastic elements secures complete protection of users against electric shocks.
Flammability of plastic materials
Test based on standard UL 94 show the burning behavior of material, speed of burning as
well as possisibl Test is perfor by
Test is performed by heating the plastic material sample by use of Bunsen burner.
cotton mat is placed under the sample so that its behavior could be monitored while the melted material drips on $i$.


Halogen free" materials - materials which do not contain halogen elements.
The halogens are five non-metallic elements which belong to the 17th group of the periodic table (fluorine, chlorine, bromine, iodine, and astatine). However, the
halogens in plastic materials are their compounds which are added as flame retarding additives. Nevertheless in case of burning material, i.e. in case of fire, these compounds can lead to release of toxic gases and huge amount of smoke. Some of these compounds have been forbidden by EU directives (WEE directive and ROHS directive), but generally European and world market increasingly expels all materials containing halogen elements. This has led to the latest tendency
called, non-halogenated flame retarding additives to the plastic materials (without presence of halogen elements), i.e. . 1 alogen free materials are used

## Continuous service temperature

The working temperature is the highest or the lowest temperature at which material is suitable for long term application. Actually these temperatures reveal the
material resistance to prolonged exposure to certain temperature. These are usually given by producertogether with conditions under whichthe material is tested


## SOCKET-OUTLETS WITH POLI CARBONATE/ CERAMIC BODY

(1)European Union directives

All plastic materials used for making products by Metalka Majur meet all EU directives which contain general safety reauirements, such as
1.EU Directive 2002/95/EC - ROHS directive - Restriction of the use of certain hazardous substances in electrical and electronic equipement: max $0.1 \%$ by weight $P$,
2.EU Directive 2002/96/EC - WEE directive - Waste electrical and electronic equipement - The treatment, recovery and recycling of electric and electronic equipment without dangerous for environment.
3.EU Directive 20033111/EC - Restrictions on the marketing and use of certain dangerous substances and preparations : pentabromodiphenyl ethe octabromodiphenyl ether
4.EU Directive 2006/122/EC - Restrictions on the marketing and use of certain dangerous substances and preparations: perfluorooctane sulfonates.
5.ECological EU Directive: $67 / 548 /$ /EEC; 1999/45/EEC; 76/769/EEC - Laws, regulations and administrative provisions relating to the classification, packaging and
labelling of dangerous substances. labeling of dangerous substances.

Safety
Metalka Majur's products have been construed and designed to secure reliable, safe and environment friendly use. Parts under voltage are not making huttons, covers, frames, housings and other plastic elements secures complete protection of users against electric shocks.

Connections
he characteristics of both types of connections for switches and socket outlets (screw and spring) are as follows:

| Product | Rated current | Type of connection | Type of conductor | Diameter of conductor |
| :---: | :---: | :---: | :---: | :---: |
| Switches | 10A | Screw | - rigid single-core conductor rigid multi-core conductor | (1 12 2,5) $\mathrm{mm}^{2}$ |
|  | 10A | Spring | - rigid single-core conductor <br> rigid multi-core conductor | $(1,5 \div 2,5) \mathrm{mm}^{2}$ |
|  | 16A | Screw | - rigid single-core conducto <br> - rigid multi-core conductor | $(1,5 \div 4) \mathrm{mm}^{2}$ |
| Socket-outlet | 16A | Screw | -rigid single-core conductor rigid multi-core conductor | (1;4) $\mathrm{mm}^{2}$ |



Advantages of screw connections
he right choice of materials of appropriate chemical composition secures excellen nechanical strength, electrical conductivity and conductor's resistance against

Possibility of damages during installation is avoided due to mechanical strength of the screw and nut. This damage would affect the further exploitation of the screw connection (damage of threads, damage of flutes on the screw head, etc).

Advantages of screwless connections
Simplicity of connecting and disconnecting conductors. When conecting the conductor, it is necessary to remove insulation from it and insert it into appropriate connection spot without using tools (screw driver). Disconnecting is quite simple by pressing the push button above the conductor which we want to disconnect. It means
that there are no additional operations in either case (tightening or loosening screws) which makes mounting/dismounting faster. Easy determination of phase: The connection under the red push button is used for
connecting the phase (upstream) conductor. Separate introduction of two conductors connecting the phase tupstream) conductor. Separate introduction of two conductors
nto same connection. Screw-less connection makes possible for inserting two conductors "one after another". This makes installation of switch easier especially
when more complicated switches are mounted lintermediate switch, two-way twowhen more complicated switches are mounted (intermediate switch, two-way two-
pole switch, double two-way switch...). This system of separate introduction cannot be poot switch, doubie two way switc...). This system of separate introduction cannot be
applied in case of screw connection where both conductors must be inserted in the
the
Sufficient and constant pressure without damaging conductor: Appropriate design
Sufficient and constant pressure without damaging conductor:
allows for secure connection between conductor and flexible spring



#### Abstract

Switches and socket outlets are designed and made to withstand electrical, mechanical and thermal stresses which occur during regular exploitation, without being worn out or damaged in some other way. Switches (10A and 16A) have the appropriate power of switching on and off in more demanding conditions than regular use: - Voltages equal to 1.1 , times indicated voltage (1.1Un) - Current 1,25 times indicated current (1,25In), - Phase shift cos $\varnothing=0,3$ witches (10A and 16A) are projected in order to endure 40.000 position changes at indicated voltage and indicated current with phase shift cos $=0,6$. Switch operation does not produce permanent electrical arc. It also does not lead to loosening electrical and mechanical connections, damage of housing, excessive wearing out of contacts, welding of contacts, etc. housing, excessive wearing out of contacts, welding of contacts, etc. witches ( 10 A and 16 A ) are labeled as 10 AX and 16 AX . Label X means that the switches can be used and loaded with fluorescent bulbs. They are () resistant to tensions occurring in electrical circuits of capacitive character with power factor $\cos \varnothing=0,9$.

Socket outlets 16A have appropriate interrupting power in more demanding conditions than regular use: Voltages equal to 1,25 times indicated voltage ( $1,25 \mathrm{Un}$ ) Current 1,25 times indicated current (1,251n) Phase shift $\cos \varnothing=0.6$ socket outlets 16A have been designed to perform at least 10.000 strokes at indicated voltage and indicated current with phase shift $\cos \varnothing=0,8$. The operation of the socket outlet does not produce permanent electrical arc. It also does not lead to loosening electrical and mechanical connections, damage of housing or damage of inlet holes for plug pins.


 plugging ins and outs. This means reliable contact joint between socket capsules and plugs.- Socket outlets with protection are designed in such a way so that the
protection element should hide the parts under voltage when the plug is
taken out. ken out.
Protection element of the socket outlet is made of wear resistant material. In pracict
plugs.
Protection element is moved by inserting the plug. If you approach it with tools or some objects it will not move and parts under voltage will remain hiddden and inaccessible. This is why socket outlets with protection find heir application in premises designed for children (schools, kinder gardens.

Screws for tightening covers on socket outlets are loss protected. After loosening the screw and removing covers, the screw remain tapped in the socket cover, thus being protected against loss in the process of socket mounting.
Metal frame is insulated against all parts under voltage
Metal structure of frame is adjusted for mounting into in-line boxes.


FIXING OF SUBASSEMBLIES INTO MOUNTING BOXES FOR MULTI PLE FRAMES
set Q OG switches are equipped with additional screw connector located inside, on lower box. It makes possible to continue other electrica ircuits (such as grounaing electrical circuit)

## Cable lead-in

Adequate design and right choice of material make it easy to insert the cable even when the environmental temperature is considerably higher or ower than the regular one $(-15 \div 70)^{\circ} \mathrm{C}$.
 inserted.
Double cable lead-in allows for fast and easy lining of switches and sockets into the multiples. By being precisely and reliably fitted into, it contributes to regular position of each switch and socket in line
Enough space between sub-assembly and housing, i.e. lower box is left, thus enabling a free passage for the conductor
By appropriate structure of protection housing, electrical equipment with increased protection level provides

- Protection of people against touching dangerous parts within housing:
Protection of equipment within housing against penetration of solid objects (first characteristic number)
Protection of equipment within housing against penetration of water (second characteristic number)
IP XX $\qquad$ First characteristic number
-Electric equipment with protection level IP 44 provides
IP 44

[^0]
## Mechanism <br> Mechanism of switches is made in such a way that movable contacts can have only "on" and "off"" positions. Operational mechanism cannot be set in some intermediate position. In this way, when slowly operating the mechanism does not appear. <br> Mechanism of the two-pole and three-pole switches makes possible for interrupting all poles of the switch simultaneously. This prevents overload of any <br> pole when switching on or off the switch.

the suitable layer of silver is additionally applied on contacts in order to improve their electrical conductivity
$\qquad$

possibility
OF OFFSET AND ALIGNMENT OF METAL FRAMES


MARKS ON SWITCH'S COVER



MARKS ON SWITCH'S CONTACTS HOLDER


TV AERI AL SOCKETS (FEED THROUGH AND TERMINAL)


MARKS ON SWITCH'S CONTACTS HOLDER


WIRING OF TWO-POLE SOCKET-OUTLET


WIRING OF THREE-POLE SOCKET-OUTLET

Removing of decorative frame is easy and fast


FREE SPACE
IN MOUNTING BOX

Mounting instructions
Wring of a socket outlet is performed by screws. Wiring of a switch depends of
witch type (screwless or with screws), and is performed by screws or by simple Introduction of blanked wire end) (the end with removed insulation) into
appropriate gap, following the wiring scheme. In case that the wire should be ppropriate oap, following the wiring scheme. In case that the wire should be
isconnected from the screwless switch, it in necessary to pust the corresponding
fush-assembling switches

1. Switch off power supply (safety fuse, the mains);
2. Remove the push- button (s) and built-in, decorative frame; 5. Cunnect the pe prepared wires according to the given wiring scheme; 6. Mount both built-in, decorative frame and the push button(s);

Switch on power supply

## Ish-assembling socket-outlets

Switch off power supply (safiety fuse, the mains:

1. Unscrew the cover central screw end remove the cover;
2. Prepare the wires for connection (remove insulation in length of 10 mm );
3. Connect the orepared wires according to the given wiring scheme:
4. Put the socket subassembly into mounting box, evel it and fasten the screws;

Mount the socket cover;

Surface-assembling switches

1. Switch off power supply (safiety fuse, the mains);
Remove the push-button(s) and upoer switch cas

Make the opening at the cable leads accordino to the diameter of cable for
5ix the lower case to place intended for switch assembling:
Prepare the cabiesior connection
6. Connect the prepared wires according to the given wiring scheme;
7. If necessary use the screw from lower switch case for connection of protective
. Mount the upper case and push button(s)
sufface- assembing socket-outlets

1. Switch off power supply (safety fuse, the mains);
2. Make the opening at the cabple lease screws and according to to the diameter of cable for
3. Fix the lower case in place intended for socket-outlet assembling:
4. Prepare the cables for connection
remove insulation in lenoth of 10 mm )
5. Connect the prepared wires according to the given wiring scheme
6. If necessary use the screw for connection of protective wire:
7. Mount the eupper as as
8. Switch on ower sup

MPORTANT:
NSTALLATI ON CAN BE DONE ONLY BY PROFESSI ONALLY TRAINED PERSON




Two-circuit switch

$\xrightarrow{\bullet}$



Vertical bathroom switch with
Vertical bathroom switch with two-circuit

> Netriccal and pioom silot ligh

ertical bathroom switch

mounting instructions


Kombo LED - Two-way switch with diffuser + LED in the same mounting box


Kombo - wiring of lamps


Kombo LED - Two-way switch with diffuser + LED in
the different mounting boxes


Installation can be done only by professionally trained person

Mounting of horizontal decorative


Mounting box for multiple frames - deep


Mounting of vertical decorative frames


종․․․


80
30
0
$\xrightarrow{\mathrm{D}-66}$


Distribution panels
MUT


Switches have terminals which allow secure connection of copper conductors with the following rated surfaces:

| Rated current of a switch <br> (A) | Type of connection | Solid conductors (single-wire and multi-wire) |  |
| :---: | :---: | :---: | :---: |


| No. | Characteristic | Product | Standard | Data |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Insulation resistance | Switches 10A and 16A | IEC 60669-1 | >5M $\Omega$ at $500 \mathrm{Vdc}, 1 \mathrm{~min}$ |
|  |  | Socket-outlet 16A | IEC 60884-1 |  |
| 2 | Dielectric strength | $\begin{gathered} \text { Switches } \\ 10 \mathrm{~A} \text { and } 16 \mathrm{~A} \end{gathered}$ | IEC 60669-1 | 2000v at $50 \mathrm{~Hz}, 1 \mathrm{~min}$ |
|  |  | Socket-outlet 16A | IEC 60884-1 |  |
| 3 | Making and breaking capacity | Switches 10A | IEC 60669-1 | 100 cycles at $12,5 \mathrm{~A} ; 275 \mathrm{~V} ; \operatorname{cos\varphi }=0,3 \pm 0,05$ |
|  |  | Switches 16A | IEC 60669-1 | 100 cycles at 20A; 275V; cos? $=0,3 \pm 0,05$ |
| 4 | Breaking capacity | Socket-outlet 16A | IEC 60884-1 | 50 cycles at 20A; 275V; cos? $=0,6 \pm 0,05$ |
| 5 | Normal operation | Switches 10A | IEC 60669-1 | 20000 cycles at 10A; 250V; cos? $=0,6 \pm 0,05$ |
|  |  | Switches 16A |  | 20000 cycles at 16A; 250V; cos? $=0,6 \pm 0,05$ |
|  |  | Socket-outlet 16A | IEC 60884-1 | 5000 cycles at 16A; 250V; cos? $=0,8 \pm 0,05$ |
| 6 | Resistance to heat | Switches 10A and 16A | IEC 60669-1 | $100 \pm 2^{\circ} \mathrm{C}$, in a heating cabinet 1 h |
|  |  | Socket-outlet 16A | IEC 60884-1 |  |
| 7 | Ball pressure test | Switches 10A and 16A | IEC 60669-1 | $125^{\circ} \mathrm{C}$ - inside parts of insulating material $70^{\circ} \mathrm{C}$ - outer parts of insulating material |
|  |  | Socket-outlet 16A | IEC 60884-1 |  |
| 8 | Glow wire test | Switches 10A and 16A | IEC 60695-2-1 | $850^{\circ} \mathrm{C}$ - inside parts of insulating material <br> $650^{\circ} \mathrm{C}$ - outer parts of insulating material |
|  |  | Socket-outlet 16A |  |  |
| 9 | Resistance to tracking | Switches 10A and 16A | IEC 60112 | 175v, 30s 55 s |
|  |  | Socket-outlet 16A |  |  |
| 10 | Resistance to rusting | Switches 10A and 16A | IEC 60669-1 | Resistant |
|  |  | Socket-outlet 16A | IEC 60884-1 |  |



Following its endeavors to work as a modern European Following its endeavors to work as a modern European
company, Metalka Majur pays great attention to customer
satisfaction and contacats with its customers. We want o keep satisfaction and contacts with its customers. We want to keep the continuous interaction with our business partners and end
users of our products, by supplying them with all necessary users of our products, by supplying them with all necessary
information on: - Sales network of Metalka Majur - Price and discounts - Trade fair participations and specialty Presentations - Product features
Way of mounting

- Advantages of certain items in comparison with offers of other producers, etc The personnel of Metalka Majur's Marketing Department are completely at client's disposal.
They will respond to all clients' questions in the shortest They will respond to al clients questions in the shortest
period of time, either by themselves or by consulting other services of Metalka Majur.
Our end objective is a fully informed and satisfied client. We re expecting your questions, remarks and suggestions.


Contact for Client support center tehnicka.podrska@metalka-majur.com Tel: +381 35/ 200040

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[^0]:    $\rightarrow$ Protection of entrance of solid bodies diameter $\geq 1 \mathrm{~mm}$

