EMPTY BOXES 2021







DCKHOLOUBKOVBOHEMIA, A.S.



Traditional Czech producer of low-voltage switchboards since 1953

DCK HOLOUBKOV BOHEMIA a.s.

ranks among the leading Czech producers and suppliers of outdoor low-voltage switchboards. DCK provide their customers with a wide range of solutions such as house connection boxes, meter boxes, gas-measurement boxes, disconnection boxes, public lighting, construction site boxes and their accessories.

The main production technologies:

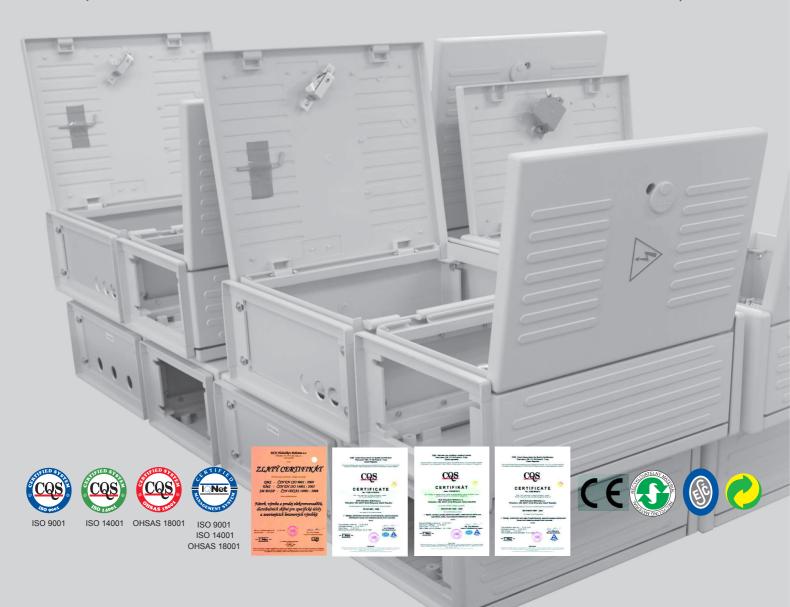
- N plastic switchboards made of glass fibre reinforced polyester (SMC)
- P plastic switchboards made of polycarbonate (PC)
- K concrete switchboards with plastic/stainless steel door

DCK multipurpose modular boxes are designed for application on a wall or a pole, into a wall recess or as standalone compact columns. DCK supplies both empty boxes and fully fitted switchboards according to our customers requirements. Our key customers are power distribution companies and wholesale companies specializing in wiring material. All our products are certified by EZÚ Prague and comply with the applicable European standards. Several technical designs of company's products are patent protected.

More than 60 years of tradition and plans for future strenghten our commitment to achieve a high technological level in our products and production processes, meet our customers' requirements and thus keep and develop our business position in the European market and achieve permanent prosperity.

January 2020

... Future is our inspiration



SMC - THERMOSETIC PLASTIC

Switchboards and columns made of thermoset - SMC

SMC (sheet moulding compound) is a thermoset glassfibre reinforced material based on unsaturated polyester resin. The material is stiff, health unexceptionable, resisting to static and dynamic strain, with uneasy flammability – category B flammability class HB40, V-O, it is self-extinguishing plastic according to UL 94–VO. A long exposure to weather conditions causes a removal of the outer resin layer and glass fibre disclosure. This change doesn't have any impact on mechanical strength or electrical properties of the material. The products are supplied in the basic color shade RAL 7035. Properties and technical parameters of the switchboards are in accordance with ČSN EN 62208 ed.2; ČSN EN 61439-5 ed.2 and certified by EZÚ Prague.

BASIC PARAMETERS:

| Specific weight – ISO 1183 | |
|---|--|
| Electrical resistance of the surface – IEC 93 | 10 ¹² ÷10 ¹³ (Ohm) |
| Dielectric strength – IEC 243 | |
| Heat and fire retardancy – IEC 695 | |
| Short-term heat resistance – IEC 216 | |
| Permanent heat resistance – IEC 216 | 155 (°C) |
| Protection level against outer mechanical clash impacts(-35°C /+40°C) | IK 10 |
| Covering level | IP 44 (IP 54) |
| Way of disposalcombustion or storage as industrial | |
| Colour | RAL 7035 |



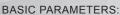


P

POLYCARBONATE

Switchboards and columns made of thermoplastic - PC

These are linear polyesters derived from carbonic acid and bisphenol A with flame retardant, UV filter and covering color RAL 7035. The material is flexible with excellent mechanical properties, heat resistance, dimension steadiness, with uneasy flammability – category B, flammability class HB40, V-O. It is self-extinguishing plastic according to UL 94-VO and toxic unexceptionable. The material is not attacked by mildews and micro-organisms. It has an increased stabilisation against weather conditions. UV radiation causes the coloring to get visibly yellow with no impact on the physical properties of the material. A surface finish of the switchboards with UV filter is used as the retardant of this process. Properties and technical parameters of the switchboards are in accordance with ČSN EN 62208 ed.2; ČSN EN 61439-1 ed.2; ČSN EN 61439-5 ed.2 and certified by EZÚ Prague.



| Specific weight ISO 1183 | 1,21 (g/cm ³) |
|---|---------------------------|
| Electrical resistance of the surface IEC 93 | |
| Dielectric strength IEC 243 | 34 (kV/mm) |
| Heat and fire retardancy IEC 695 | 960 (°C) |
| Short-term heat resistance IEC 216 | |
| Permanent heat resistance IEC 216 | 115 (°C) |
| Protection level against outer mechanical impacts (-35°C/+40°C) | IK 10 |
| Covering level | IP 44 |
| Way of disposal | recycling |
| Colour | RAL 7035 |



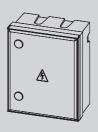
CONCRETE

Switchboards made of concrete + thermoplastic (PC) door

DCK offers also switchboards made of concrete + plastic door according to individual requirements of their customers. Also plastic frames + plastic door can be supplied separately if necessary (usually when customers provide the concrete body of the box on their own – export purposes mainly). Properties and technical parameters of the switchboards are in accordance with ČSN EN 62208 ed.2; ČSN EN 61439-1 ed.2; ČSN EN 61439-5 ed.2 and certified by EZÚ Prague.

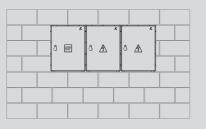
BASIC PARAMETERS:

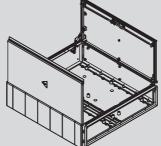
| Pressure strength – ČSN EN 12390-3 | ≥ 30 (N/mm²) |
|---|--------------|
| Frost resistance – ČSN 73 1322 | T = 25 |
| Frost resistance coefficient – ČSN EN 73 1322 | ≥ 0,75 |
| Weight activity according to Code of Law No. 18/1997 | |
| and Regulation 307/2002 C/L and 499/2005 C/L | I < 1 |
| Protection level against outer mechanical impacts (-35°C/+40°C) | IK 10 |
| Covering level | |
| <u> </u> | ` ′ |



CONSTRUCTION SOLUTIONS

V Wall recess application (type V)

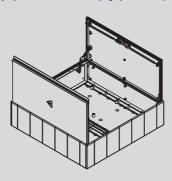




Boxes intended for application into a wall recess are supplied with open bottom if not specified otherwise in ordering. Open bottom is made by a special part called spacer - rail and enables also further application on a column.

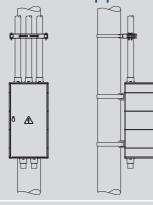
N Wall-mounted application (type N)

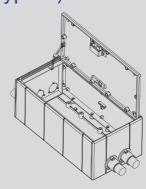




Boxes intended for application on a wall are supplied with full/closed bottom if not specified otherwise in ordering.

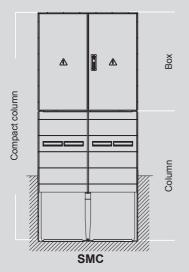
S Pole application (type S)

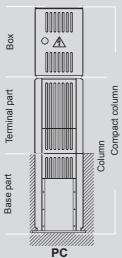




Empty boxes intended for application on electrical pole are supplied with full/closed bottom and equipped with 2 holders. According to the requirement can be supplied with cable glands. Different requirements need to be specified in ordering.

K Compact column (box + base = type K)





Material SMC: The terminal and base part of the column are compact and inseparable. Each column is stabilized by a stabilizing plate or at request by stabilizing strips. Both of them can be delivered in standard dimensions or with an overhang according to the customer's requirements.

Note: For separately ordered boxes and columns: To arrange compatibility with DCK columns it is necessary to order V type of construction solution with open bottom if boxes and columns are ordered separately. At request can the bottom be covered with a cover plate.













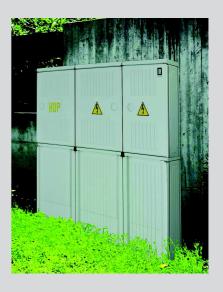






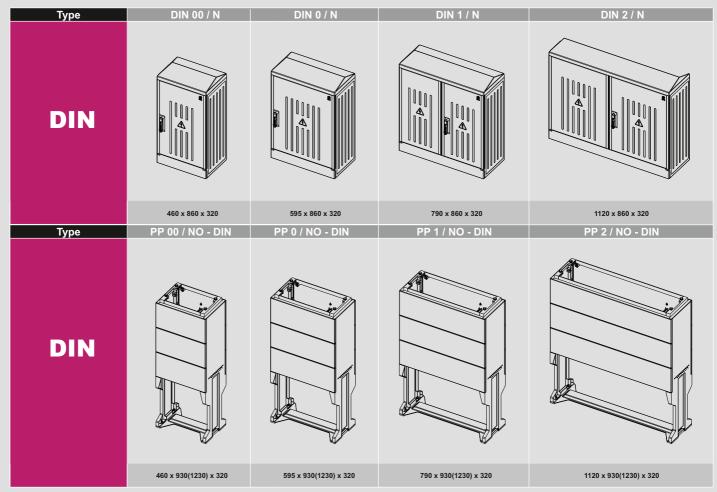






SMC N-DIN Switchboards and columns made of thermoset

NEW design line



Standard size of box and pillar is DIN00 according to the standards DIN 43629. Standardly supplied with open bottom. Boxes can be mounted on a column. Boxes intended for application on a wall or on electrical pole are supplied with full/closed bottom. At customer's request they can be supplied completely assembled or in parts. Production can be limited by a minimum order quantity.





SMC N-C Switchboards and columns made of thermoset

These are monolithic plastic switchboards with an easy way of installation without any assembling. Usually supplied with open bottom. Closed/full bottom custom made only.

Model series SP **Type**

SS

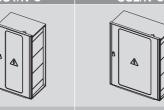
Type

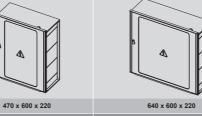
PP

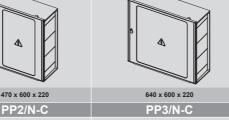
Type

KD

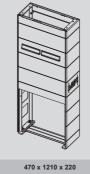










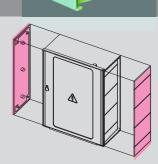


KD2/N-C









Easy connecting of boxes and columns into assemblies

Note: Model series SS/N-C can be mounted beside each other only. SP1/N-C separately supplied.

At customer's request we can produce also columns in a height option of "900" or terminal part in height option of "600"

Production can be limited by a minimum order quantity.

SMC N-C Covering side panels

These design covering boards are intended as a tasteful element for N-C type of SMC boxes only.

Mounting is easy, each panel is clipped to the box and fixed with 3 screws.

Empty boxes with transparent inside door

Model series



Intended for

boxes with

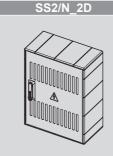
possibility

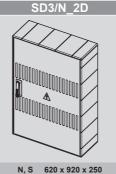
of the following

meter

fitting:







| N, S | 320 | x 470 | x 250 |
|------|-----|-------|-------|

1x single-phase electrometer + 1x tariff delay release 2x single-phase electrometer + 1x tariff delay release or

N, S 470 x 620 x 250

1x three-phase electrometer + 1x sigle-phase electrometer + 1x tariff delay release

6x single-phase electrometer + 1x tariff delay release or 4x single-phase electrometer and 1x three-phase electrometer +

1x tariff delay release or 2x three-phase electrometer + 1x tariff delay release

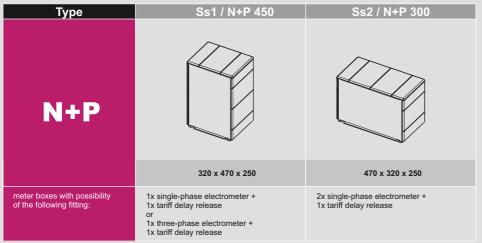


These boxes are standardly supplied

with transparent inside door. This new model series are intended for use as electrometer boxes. These boxes can be equipped according to the customer's request. Production can be limited by

a minimum order quantity. Note: Location of the space for a circuit breaker is given by a construction of

SMC/PC N+P Switchboards with transparent door



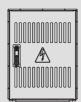


These SMC boxes are standardly supplied with transparent door from polycarbonate. This new model series are intended for use as electrometer boxes. These boxes can be equipped according to the customer's request. Production can be limited by a minimum order quantity.

Design variants of model series N



smooth surface (Standard)



b/ grooved surface (custom-made)



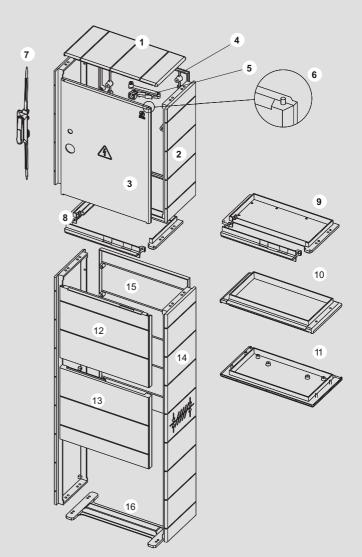
c/ flat roof (Standard)



d/
SMC skewed roof with overhang (custom-made)
Each size is available.
Production can be limited by a minimum order quantity

Standard box assembly

| Position | Description |
|----------|--|
| 1 | Roof (standard flat) |
| 2 | Box side wall |
| 3 | Door |
| 4 | Back wall |
| 5 | Door stopper |
| 6 | Door hinges |
| 7 | 3-point locking system |
| 8 | Spacer with rail (for application into a wall recess or for assembly of a compact column - open cable space) Construction type: V, K |
| 9 | Spacer with rail + plastic cover (for assembly of a compact column - closed cable space / 2 separate areas) Construction type: K |
| 10 | Solid spacer (for assembly of 2 boxes in vertical way) |
| 11 | Bottom cover (for application on a wall and on a pole) Construction type: N, S |
| 12 | Base front cover (upper part) |
| 13 | Base front cover (lower part) |
| 14 | Base side wall |
| 15 | Base back wall |
| 16 | Stabilizing plate |
| | |



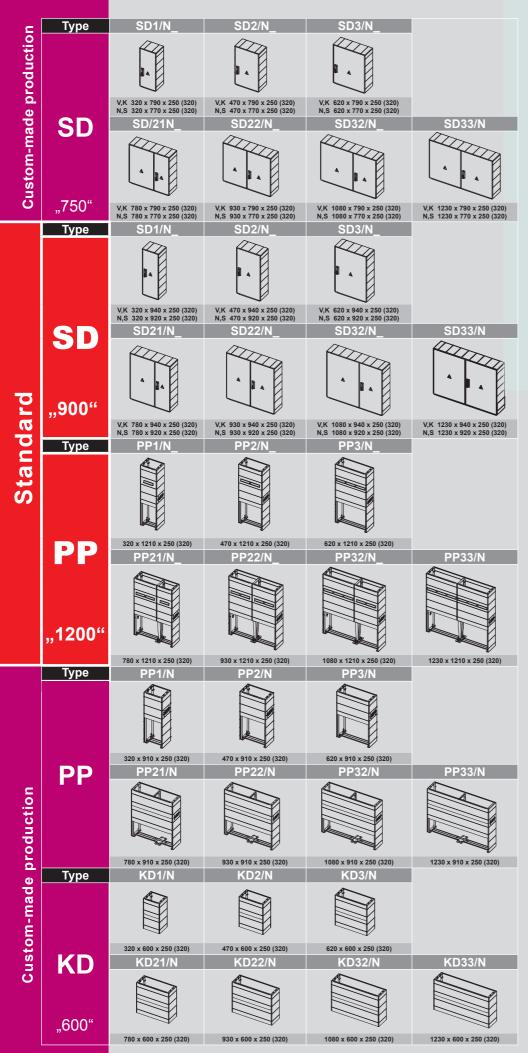
N

SMC Switchboards and columns made of thermoset

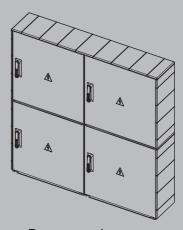
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Depth of boxes 250 or 320 mm

| | Туре | SS1/N_ | SS2/N_ | SS3/N_ | |
|------------------------|------------------------|---|--|---|--|
| | SS | | | | |
| | "300" Type | V,K 320 x 340 x 250 (320) N,S 320 x 320 x 250 (320) SR/21 N | V,K 470 x 340 x 250 (320) N,S 470 x 320 x 250 (320) SR22/N | V,K 620 x 340 x 250 (320) N,S 620 x 320 x 250 (320) SR32/N | SR33/N_ |
| oduction | SR | | | | |
| e pr | "300" Type | V,K 780 x 340 x 250 (320) N,S 780 x 320 x 250 (320) SS1/N | V,K 930 x 340 x 250 (320) N,S 930 x 320 x 250 (320) SS2/N | V,K 1080 x 340 x 250 (320) N,S 1080 x 320 x 250 (320) SS3/N | V,K 1230 x 340 x 250 (320) N,S 1230 x 320 x 250 (320) |
| Custom-made production | SS | | | | |
| | "450" Type | V,K 320 x 490 x 250 (320) N,S 320 x 470 x 250 (320) SR21/N | V,K 470 x 490 x 250 (320) N,S 470 x 470 x 250 (320) SR22/N | V,K 620 x 490 x 250 (320) N,S 620 x 470 x 250 (320) SR32/N | SR33/N |
| | .,,,, | ~ | \sim | | |
| | SR | | | | |
| | "450" | V,K 780 x 490 x 250 (320) N,S 780 x 470 x 250 (320) SS1/N | V,K 930 x 490 x 250 (320) N,S 930 x 470 x 250 (320) | V,K 1080 x 490 x 250 (320) N,S 1080 x 470 x 250 (320) | |
| ard | | V,K 780 x 490 x 250 (320) N,S 780 x 470 x 250 (320) SS1/N | V,K 930 x 490 x 250 (320) N,S 930 x 470 x 250 (320) SS2/N | V,K 1080 x 490 x 250 (320) N,S 1080 x 470 x 250 (320) SS3/N | |
| ndard | "450" Type | V,K 780 x 490 x 250 (320) N,S 780 x 470 x 250 (320) SS1/N_ | V,K 930 x 490 x 250 (320) N,S 930 x 470 x 250 (320) SS2/N_ | V,K 1080 x 490 x 250 (320) N,S 1080 x 470 x 250 (320) SS3/N | V,K 1230 x 490 x 250 (320) N,S 1230 x 470 x 250 (320) |
| Standard | "450" Type \$\$ "600" | V,K 780 x 490 x 250 (320) N,S 780 x 470 x 250 (320) SS1/N | V,K 930 x 490 x 250 (320) N,S 930 x 470 x 250 (320) SS2/N | V,K 1080 x 490 x 250 (320) N,S 1080 x 470 x 250 (320) SS3/N V,K 620 x 640 x 250 (320) N,S 620 x 620 x 250 (320) | V,K 1230 x 490 x 250 (320) N,S 1230 x 470 x 250 (320) |







Boxes can be assembled beside and above each other.

DCK SMC boxes of the same height and width can be lined up and assembled beside and above each other. Connecting of boxes and columns in one compact entity is easy and simple. Standard height option of boxes is "600" and "900". Note: At customer's request we can produce also SMC boxes in a height option of "300", "450" and "750". Depth of boxes 320 mm only custom-made. Production can be limited by a minimum order quantity.

DCK boxes can be mounted on a column. Standard height of PC columns is 1210 mm. At customer's request we can produce also columns in a height option of "900" or terminal part in height option of "600". They can be supplied

completely -assembled or in parts. Each column is stabilized by a stabilizing plate.

Production can be limited by a minimum order quantity.

P

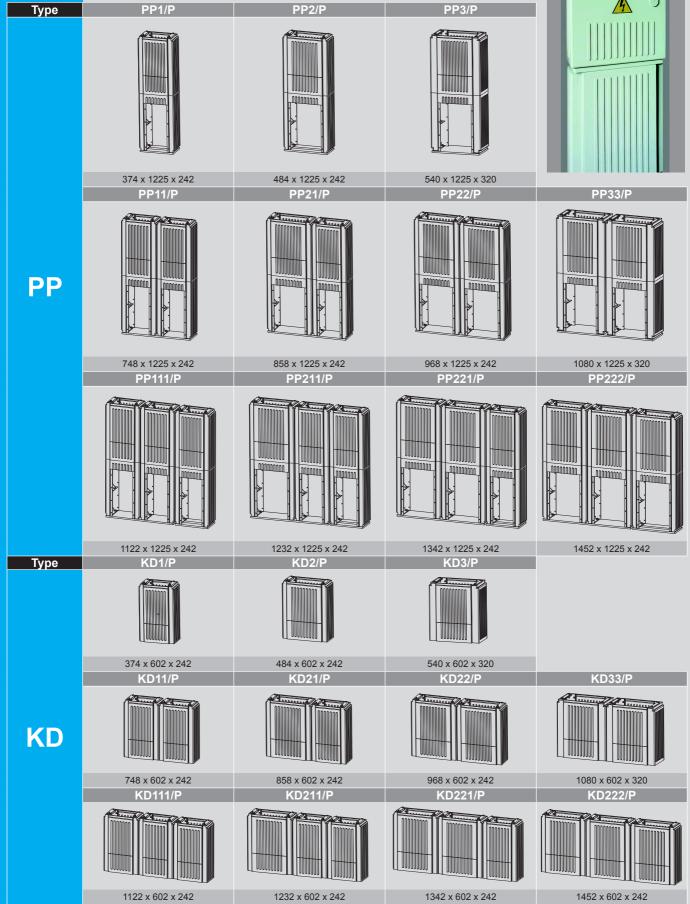
POLYCARBONATE

Switchboards and columns made of thermoplastic

Model series Type SP2/P_ SP V 315 x 280 x120 N,S 315 x 280 x120 SS1/P Type SS2/P SS 0 1 Type SR21/P A 0 A 0 0 1 0 1 V,K 858 x 570 x 242 N,S 858 x 590 x 242 V,K 968 x 570 x 242 N,S 968 x 590 x 242 SR SR111/P SR211/P SR221/P SR222/P A 0 A 0 0 1 0 1 A 0 A 0 A 4 0 1 4 V,K 1452 x 570 x 242 N,S 1452 x 590 x 242 V,K 1122 x 570 x 242 N,S 1122 x 590 x 242 V,K 1232 x 570 x 242 N,S 1232 x 590 x 242 V,K 1342 x 570 x 242 N,S 1342 x 590 x 242 Type EP1/P EP2/P EP22/P 0 1 0 1 A 0 0 A EP 0 A 0 1 A 0 0 \triangle V,K 484 x 1150 x 242 N,S 484 x 1170 x 242 V,K 968 x 1150 x 242 N,S 968 x 1170 x 242 Type SD3/P SD33/P SD A V,K 1080 x 1050 x 320 N,S 1080 x 1070 x 320

DCK PC boxes of the same height and width can be lined up and assembled beside and above each other. Connecting of boxes and columns in one compact entity is easy and simple. At customer's request they can be supplied completely assembled or in parts. Production can be limited by a minimum order quantity.

Note: SP2/P; SS/P-C and EP/P-C can be mounted in vertical way only. SP1/P supplied separately.



DCK boxes can be mounted on a column. Standard height of PC columns is 1225 mm. At customer's request we can produce also terminal part 602 mm hight. According to the requirement they can be supplied completely assembled or in parts. Each column is stabilized by a stabilizing plate or strips. Both of them can be delivered in standard dimensions or with an overhang. Production can be limited by a minimum order quantity.



CONCRETE

Switchboards made of concrete + thermoplastic (PC) door

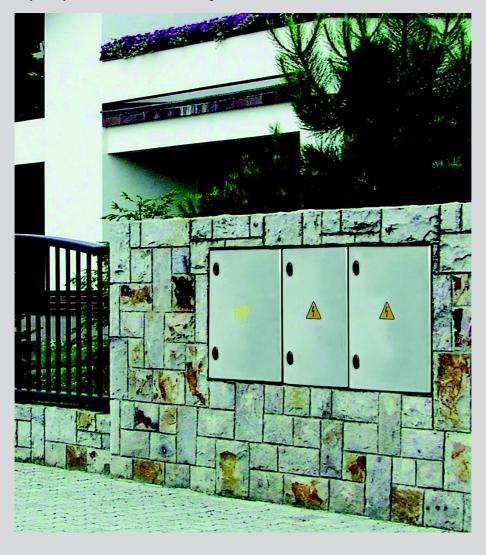
It is possible to supply only plastic frame and door.

| Type | SS1/K | SS2/K | SS3/K |
|------|-----------------|------------------|------------------|
| SS | | | |
| | 410 x 510 x 250 | 540 x 510 x 250 | 410 x 610 x 250 |
| Type | SR3/K | SR4/K | SR5/K |
| SR | | | |
| | 815 x 510 x 250 | 1065 x 510 x 250 | 1320 x 510 x 250 |

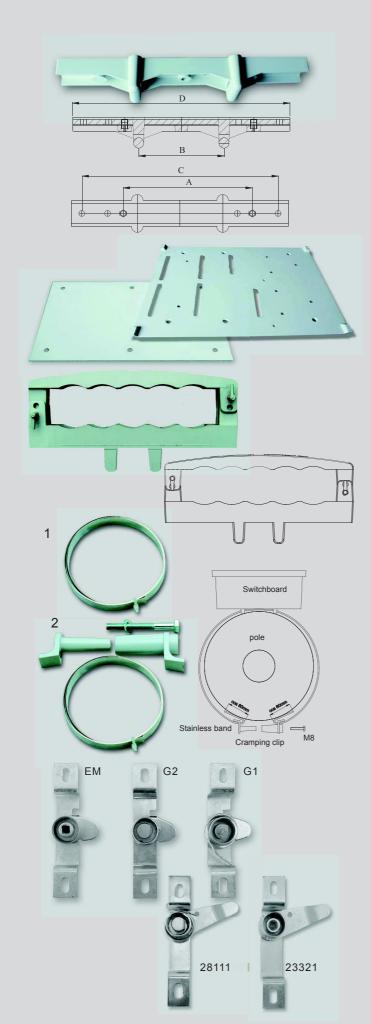


XCLUSIVE door

Stainless-steel door is intended for installation in historical buildings or in luxury housing development and due to their high quality they satisfy needs of the most demanding customers.







ACCESSORIES

Plastic holder

These are intended as a transition element for easy and quick fastening of boxes on a pole. Type must be specified in order. DCK provides their customers with following types of holders:

| Туре | A [mm] | B [mm] | C [mm] | D [mm] |
|-------------|--------|--------|--------|--------|
| Holder SP | 198 | 130 | 310 | 330 |
| Holder SV-C | 222 | 130 | - | 240 |
| Holder SV | 268 | 130 | 410 | 430 |
| Holder ER | 378 | 130 | 510 | 530 |
| Holder UNI | 130 | 65 | - | 160 |

Production of some types of holders can be limited by a minimum order quantity.

Mounting plates

These boards can be used in each type of box. In addition to standard DCK perforations, full plates can be supplied as well. At customer's request can be adjust according to a special requirements.

Plastic tube holder

The plastic universal holder is intended for easy fastening of cable tubes on a pole and design for one, two or three tubes is available.

Ways of fastening on electric pole

1) Stainless-steel tape

It's a 120 cm long stainless-steel band 1,6 cm wide. A special fastening tool is necessary for fastening with stainless-steel band.

2) DCK Installation set

This special installation set is intended for easy and quick fastening of cable boxes (type N-S) on a pole.

This set consists of a stainless band, a cramping clip and a screw.

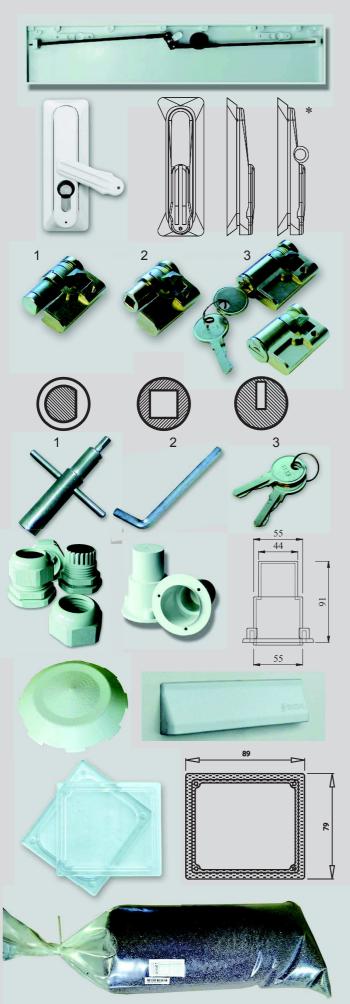
Locking systems

1) One point locking system

Standard energetic lock according to ČSN 35 9754. DCK provides their customers with 5 types of one point locks which enable to lock the box in one point.

| SMC and concrete boxes: | G1, G2, EM |
|-------------------------|--------------|
| PC boxes | 28111, 23321 |

Note: Using of one point lock by each type of boxes should be discussed. Delivery with box only. Keys are not parts of one point locks and must be ordered separately.



2) 3-point locking system with exchangeable cylinder

This system allows to lock the box in tree directions.

Note: Cylinders are not part of the locks and must be ordered separately.

* Option with a special loop for a padlock.

Lock insertions - Cylinders

1) Crescent shaped lock cylinder

Standard energetic lock cylinder in accordance with ČSN 35 9754.

2) Square shaped lock cylinder

Production can be limited by a minimum order quantity.

3) Half lock cylinder

Key is a part of half lock cylinder. Production can be limited by a minimum order quantity.

Other lock cylinder types

At customer's request can be made also other types of lock cylinders.

Note: Keys are not parts of cylinders and must be ordered separately.

Keys

1) Energetic UNI key

All types of one point locks can be opened with this universal key. This combined key enables to open not only crescent shaped locks and cylinders but also square shaped cylinders. Must be ordered separately.

2) Square shaped key

It is intended for square shaped cylinders. Must be ordered separately.

3) Half lock cylinder key

It is intended for standard Half lock cylinders. Key is a part of half lock cylinder.

Cable gland

Plastic cable glands are intended for cable inlet from cable tubes to the box. Maximum cable cross-section = 150mm².

At customer's request we can supply also cable glands type PG.

Ventilation grommet

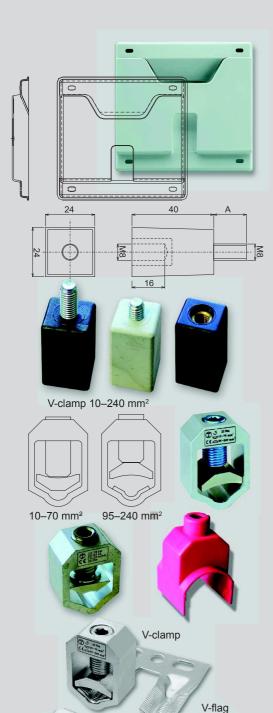
In case of extreme climatic conditions box can be equipped with additional ventilation grommet.

Transparent plastic window

This polycarbonate window is intended for application into door and enables for example to read the electrometer without door opening. Production can be limited by a minimum order quantity.

Backfill material

The backfill material (keramzit) is intended to be used for filling up the internal space of a compact pillar above the terrain level.



Straight type - R



Case for documents

Necessary documentation can be placed directly in switchboards owing to this box. Plastic case is made of thermoplastic. Can be fixed to the inner side of the box with screws or glue. Production can be limited by a minimum order quantity.

Supporting insulators

These are intended for mounting and fastening of busbars and conducting parts to the construction of electrical devices. Insulators are made of inflammable material and are designed for indoor use. We provide our customers with two types of insulators:

| Туре | PI 40-17 | PI 40-6 | PI 40 |
|----------------------------|------------|------------|------------|
| Screw length A [mm] | 17 | 6 | - |
| Supporting height [mm] | 40 | 40 | 40 |
| Weight [g] | 41 | 41 | 35 |
| Operating voltage [V] | do 1000 | do 1000 | do 1000 |
| Operating temperature [°C] | -40 ÷ +130 | -40 ÷ +130 | -40 ÷ +130 |
| Fire retardancy | HB40,V-O | HB40,V-O | HB40,V-O |

Production can be limited by a minimum order quantity.

V-clamp

V-clamps are intended for connection of wires to V-shaped terminal flags.

V-clamp NT/10-240

Internal rotating part of the V-clamp enables clamping of a wire within the range of 10-240 mm².

V-clamp NT/95

This V-clamp enables clamping of a wire within the range of 10-95 mm².

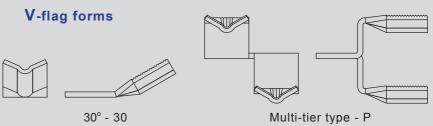
V-clamp plastic cover

This is not a part of V-clamp and must be ordered separately.

V-Flag

A V-shaped terminal flag forms together with the V-clamp a V-shaped connection clamping set. It enables clamping Cu, Al wires within the range of 10-240 mm² thanks to the V-clamps.

The V-shaped terminal flags are available as straight type or multi-tier type and for one or two conductors. Production of some types of V-flags can be limited by a minimum order quantity.



Fuse Bases Size 00

The single-pole 00-size fuse bases are designed for 00 and 000-size fuse blades. The rated current of the fuse base is 160A.

The base is made of a composite providing good mechanical strength and thermal resistance. Optional accessories: contact cover.

Terminal connection types:

- ${\bf H}$ H-type clamp for direct connection of one or two wires up to 50mm 2 in cross section
- **S** screw-type clamp for cable lug connection by means of M8 screw
- V − V-type clamp for wire connection with shackles (NT/95 type) up to 95mm² in cross section



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