## EMPTY BOXES 2023







#### 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:

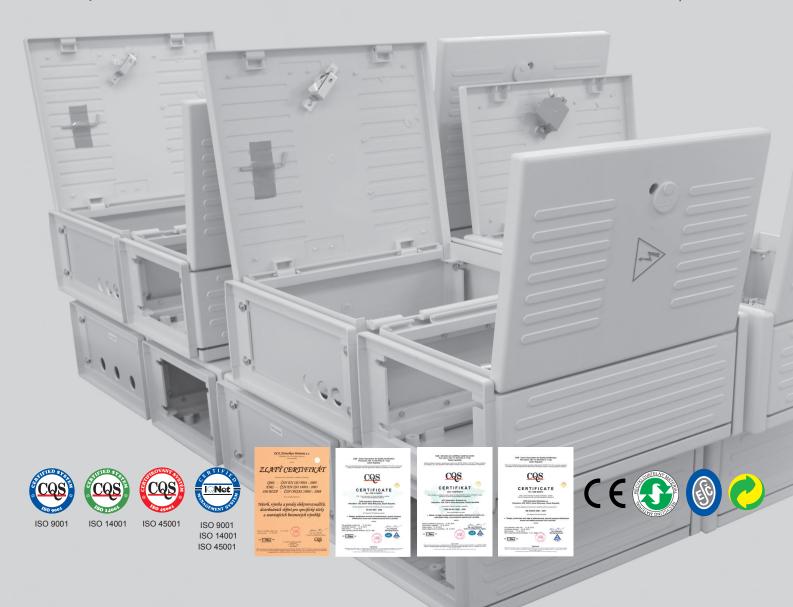
- N plastic switchboards made of glass fibre reinforced polyester (SMC)
- P plastic switchboards made of polycarbonate (PC)
- K concrete switchboards with plastic/stainless steel door

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 2023

... Future is our inspiration



### **SMC - THERMOSETIC PLASTIC**

## N

#### 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	1.75÷1.8 (a/cm³)
Electrical resistance of the surface – IEC 93	
Dielectric strength – IEC 243	25 (kV/mm)
Heat and fire retardancy – IEC 695	960 (°C)
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 waste, categories	ory "Other Waste"
Colour	RAL 7035

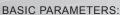




#### **POLYCARBONATE**

#### 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/cm³)
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 1Ó
Covering level	IP 44
Way of disposal	recycling
Colour	



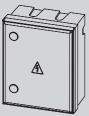
### CONCRETE

### 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.

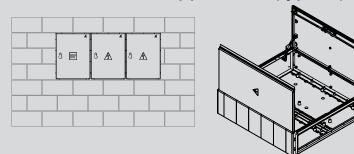
#### **BASIC PARAMETERS:**

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	
	,



#### **CONSTRUCTION SOLUTIONS**

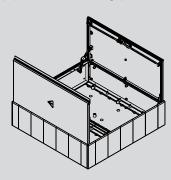
## **V** Wall recess application (type V)



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.

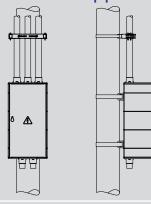
## N Wall-mounted application (type N)

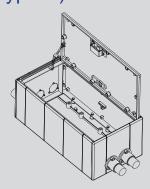




Boxes intended for application on a wall are supplied with full/closed bottom if not specified otherwise in ordering.

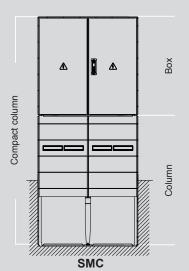
## S Pole application (type S)

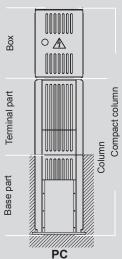




Empty boxes intended for application on electrical pole are supplied with full/closed bottom and equipped with 2 holders. According to the requirement can be supplied with cable glands. Different requirements need to be specified in ordering.

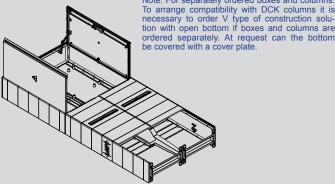
## **K** Compact column (box + base = type K)





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



















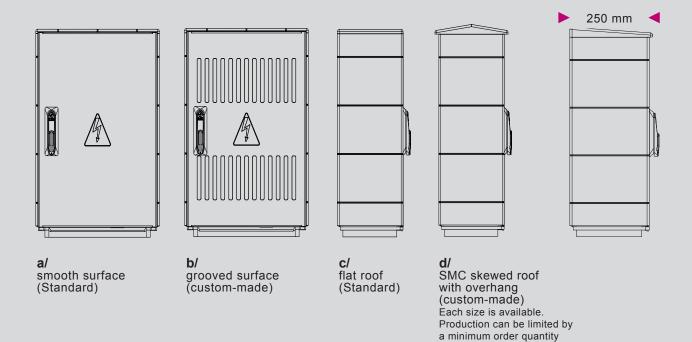






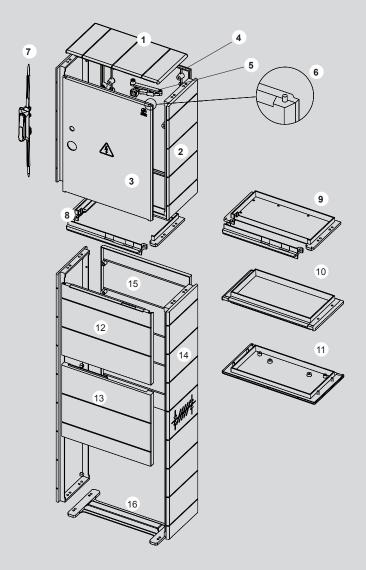


## Design variants of model series N



## 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

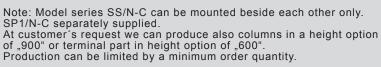


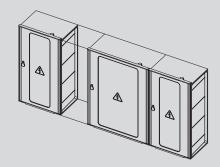


## SMC N-C Switchboards and columns made of thermoset

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.

Туре	SP1/N-C		
SP	325 x 290 x 120		
Туре	SS1/N-C	SS2/N-C	SS3/N-C
SS			
Туре	320 x 600 x 220 PP1N-C	470 x 600 x 220 PP2/N-C	640 x 600 x 220 PP3/N-C
PP	320 x 1210 x 220	470 x 1210 x 220	640 x1210 x 220
Туре	KD1/N-C	KD2/N-C	KD3/N-C
KD			
	320 x 600 x 220	470 x 600 x 220	640 x 600 x 220





Easy connecting of boxes and columns into assemblies



## **NEW** design line

SMC N-DIN
Switchboards and columns made of thermoset

DIN	DIN 00 / N	DIN 0 / N	DIN 1 / N	DIN 2 / N
Туре	460 x 860 x 320 PP 00 / NO - DIN	595 x 860 x 320 PP 0 / NO - DIN	790 x 860 x 320 PP 1 / NO - DIN	1120 x 860 x 320 PP 2 / NO - DIN
DIN				
	460 x 930 (1230) x 320	595 x 930 (1230) x 320	790 x 930 (1230) x 320	1120 x 930 (1230) x 320

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.





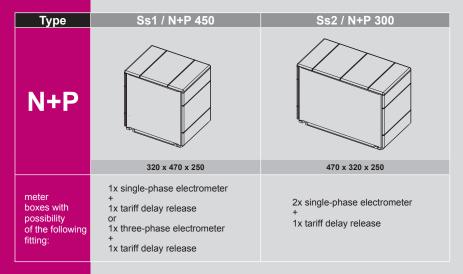
## N

## **SMC**Empty boxes with transparent inside door

Туре	SS1/N_2D_450	SS2/N_2D	SD3/N_2D	
SS SD "2D"				
	N, S 320 x 470 x 250	N, S 470 x 620 x 250	N, S 620 x 920 x 250	
Intended for meter boxes with possibility of the following fitting:	1x single-phase electrometer + 1x tariff delay release	2x single-phase electrometer + 1x tariff delay release or 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 mould.

## SMC/PC N+P Switchboards with transparent door





These SMC boxesare 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.

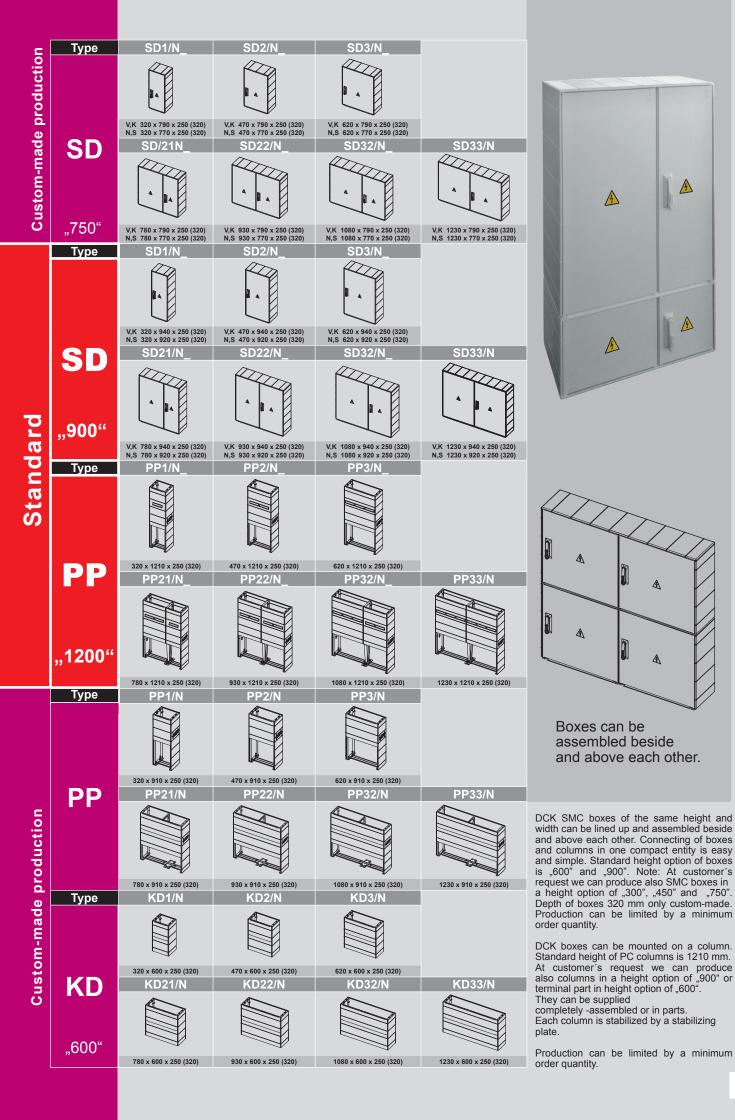
## N

## SMC Switchboards and columns made of thermoset

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/21N	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
production	SR			A DA	
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	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
	SR				
	"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	<b>SS</b> "600"	V,K 320 x 640 x 250 (320) N,S 320 x 620 x 250 (320)	V.K. 470 x 640 x 250 (320) N,S 470 x 620 x 250 (320)	V,K 620 x 640 x 250 (320) N,S 620 x 620 x 250 (320)	
u u	Type	SR21/N_	SR22/N_	SR32/N_	SR33/N_
Sta	<b>SR</b> "600"				

V,K 1080 x 640 x 250 (320) N,S 1080 x 620 x 250 (320) 4



## P

### **POLYCARBONATE**

## Switchboards and columns made of thermoplastic

Model series Type SP2/P SP SS1/P SS2/P Туре SS 0 1 1 Type **SR11/P** SR21/P SR22/P **A A** 0 0 🛦 0 0 🛦 0 4 V,K 858 x 570 x 242 N,S 858 x 590 x 242 SR SR111/P SR211/P SR221/P SR222/P A 0 0 1 0 1 4 A 0 0 1 A 0 1 A 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 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 Type EP1/P EP2/P EP22/P 0 🛦 0 A **A** 0 0 1 EP 0 A 0 🛦 A 0 ⚠ 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 SD3/P SD33/P Type SD V,K 540 x 1050 x 320 N,S 540 x 1070 x 320 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.

1342 x 602 x 242

1232 x 602 x 242

1122 x 602 x 242

1452 x 602 x 242



## **CONCRETE**

## Switchboards made of concrete + thermoplastic (PC) door

It is possible to supply only plastic frame and door.

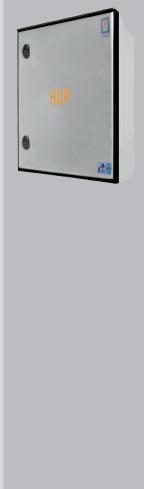
	Туре	SS1/K	SS2/K	SS3/K	
SS		<u> </u>			
		410 x 510 x 250	540 x 510 x 250	410 x 610 x 250	
	Type	SR3/K	SR4/K	SR5/K	
	SR	A A	A O		
		815 x 510 x 250	1065 x 510 x 250	1320 x 510 x 250	

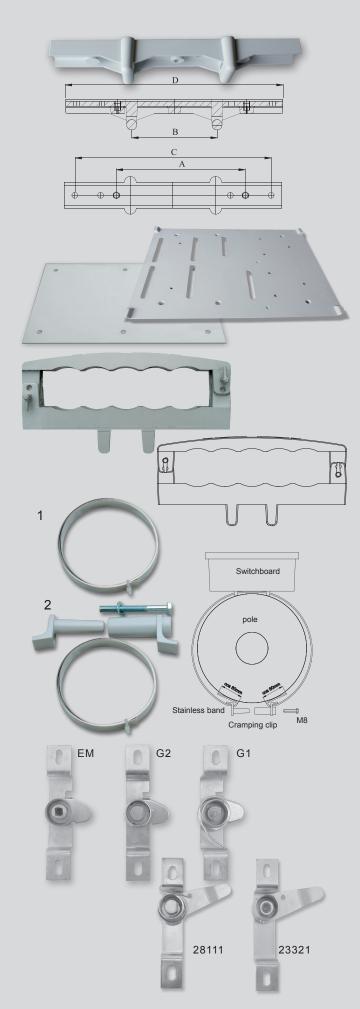


### **XCLUSIVE** door

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 <b>UNI</b>	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

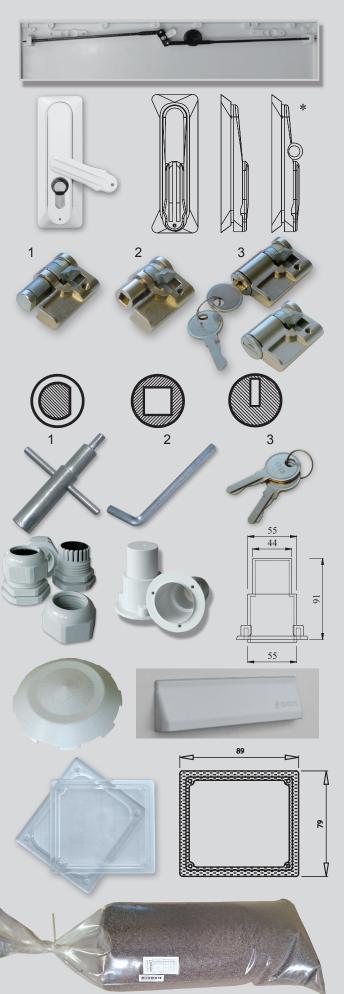
#### 1) One point locking system

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 = 150mm<sup>2</sup>

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.

# 40 24 16 V-clamp 10-240 mm2 10-70 mm<sup>2</sup> 95-240 mm<sup>2</sup>

#### **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 mm<sup>2</sup>.

#### V-clamp NT/95

This V-clamp enables clamping of a wire within the range of 10-95 mm<sup>2</sup>.

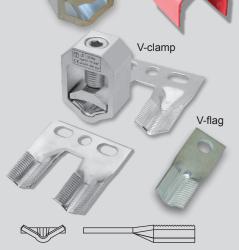
#### V-clamp plastic cover

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.

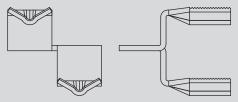


Straight type - R



V-flag forms





Multi-tier type - P

#### 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.

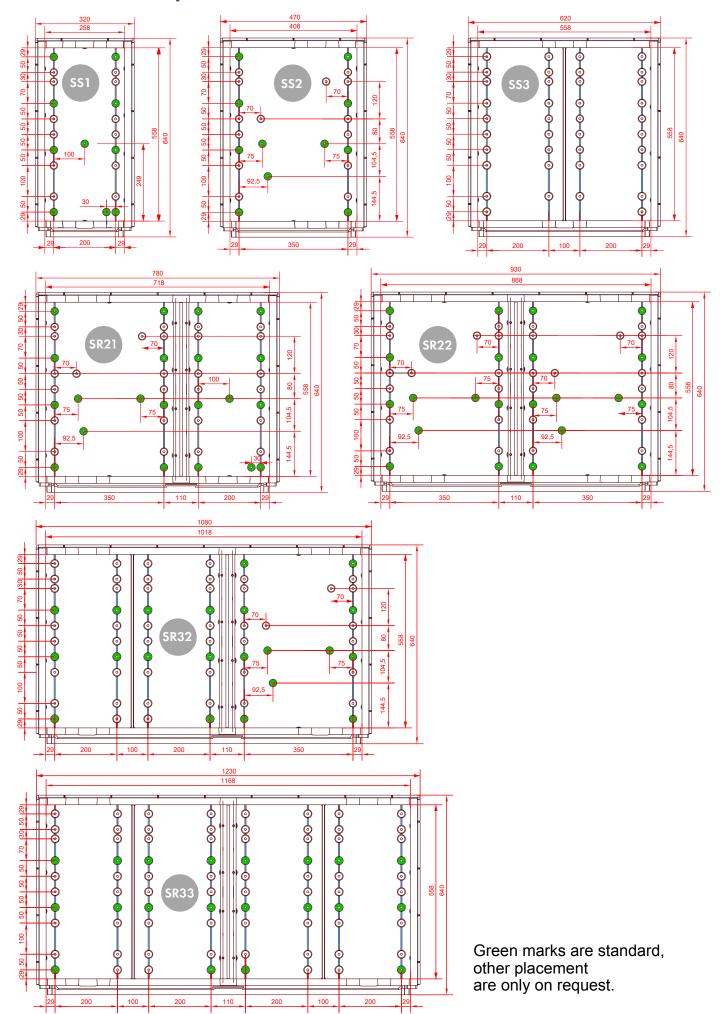
The base is made of a composite providing good mechanical strength and thermal resistance. Optional accessories: contact cover.

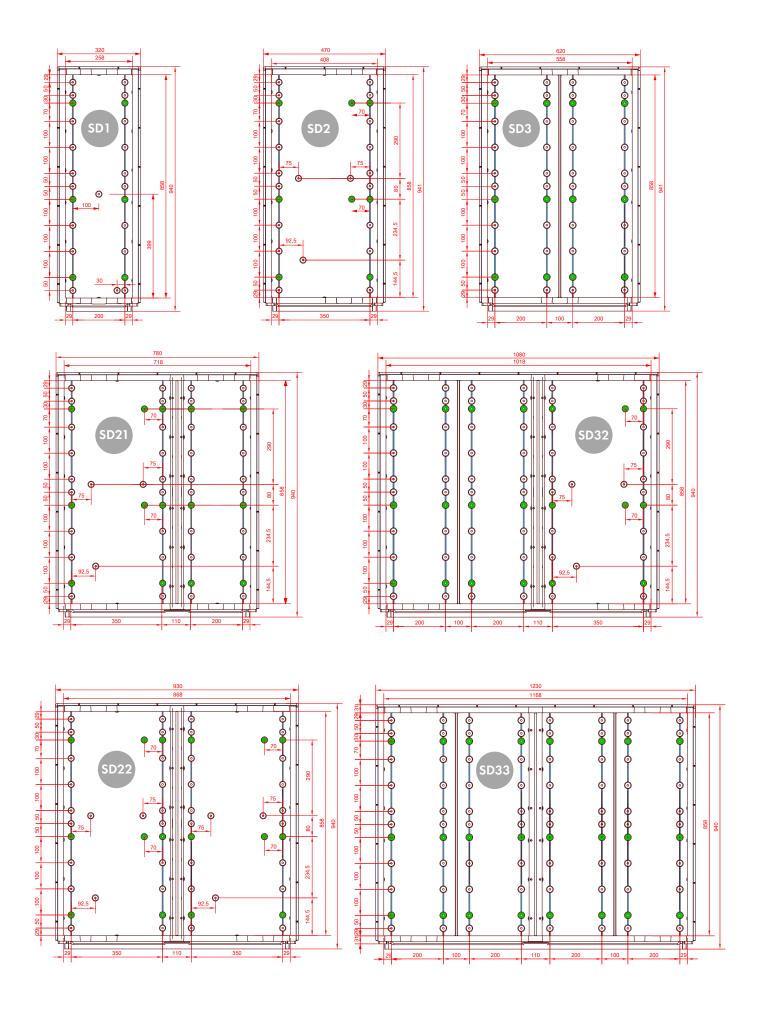
Terminal connection types:

- **H** H-type clamp for direct connection of one or two wires up to 50mm² 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



## Placement of pressnuts - standard "N" series of switchboards







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