



SWITCH-DISCONNECTOR 500A, FRAME SIZE 3, 3-POLE FRONT
OPERATING CENTER BASIC UNIT WITHOUT HANDLE FLAT
TERMINAL

Model	
product brand name	SENTRON
product designation	3KD switch disconnector
design of the product	Switch
display version for switch position indicator door-coupling rotary operating mechanism	ON-OFF
design of the actuating element	Without handle
type of the driving mechanism	Front operating mechanism
type of the driving mechanism motor drive	No
General technical data	
number of poles	3
type of device	fixed mounting
size of switch disconnector	3
mechanical service life (operating cycles) typical	15 000
electrical endurance (operating cycles)	
• at AC-23 A at 690 V	1 000
• at DC-23 A at 440 V	1 000
I ² t value	
• with closed switch at 1000 V for combination switch +gG/aM SITOR fuse maximum	239 650 A ² ·s
• of the fuse at 500 V maximum permissible	2 700 000 A ² ·s
• of the gG fuse at 690 V maximum permissible	2 500 000 A ² ·s
• of the gG/aM SITOR fuse at 1000 V maximum permissible	260 000 A ² ·s
• of the molded case circuit breaker at 415 V maximum permissible	4 750 000 A ² ·s
position of the switch operating mechanism	after the first pole
overvoltage in percent relative to the operating voltage at AC at 400, 500, 690 V at 50/60 Hz	10 %
overvoltage category	IV
degree of pollution	3
Voltage	
operating voltage with current paths in series	
• with degree of pollution 2 at DC rated value	440 V / 3
• with degree of pollution 3 at DC rated value	440 V / 3
insulation voltage	
• rated value	1 000 V
surge voltage resistance rated value	12 kV
Protection class	
protection class IP	IP00
protection class IP	
• with closed switch with cover or cable lug cover	IP20

- on the front

IP00

Dissipation

power loss [W]

- with conventional rated thermal current per pole 17.2 W
- with conventional rated thermal current per device 51.6 W
- for rated value of the current at AC in hot operating state per pole 17.2 W

Current

operational current

- at 35 °C rated value 500 A
- at 40 °C rated value 500 A
- at 45 °C rated value 500 A
- at 50 °C rated value 500 A
- at 55 °C rated value 500 A
- at 60 °C rated value 500 A
- at 65 °C rated value 500 A
- at 70 °C rated value 475 A
- at AC rated value 500 A
- at AC-23 A at 690 V rated value 400 A
- at AC-23 A at 500 V rated value 400 A
- at AC-23 A at 400 V rated value 400 A
- at AC-22 A at 1000 V maximum 400 A
- at AC-22 A at 690 V rated value 400 A
- at AC-22 A at 500 V rated value 400 A
- at AC-22 A at 400 V rated value 500 A
- at AC-20 A at 1000 V maximum 400 A
- at AC-21 A at 500 V rated value 400 A
- at AC-21 A at 690 V rated value 400 A
- at DC-20 A at 1000 V maximum 500 A / 1
- at DC-23 A at 440 V rated value note 400 A / 3
- at DC-23 A at 220 V rated value note 400 A / 2
- at DC-22 A at 440 V rated value note 400 A / 3
- at DC-22 A at 220 V rated value note 400 A / 2
- at DC-21 A at 440 V rated value note 400 A / 3
- at DC-21 A at 220 V rated value 400 A / 2
- at DC-21 B at 750 V rated value maximum 400 A / 3

continuous current of upstream fuse at 500 V and 690 V rated value 500 A

continuous current of upstream fuse at 1000 V rated value 500 A

continuous current of upstream molded case circuit breaker at 415 V rated value 630 A

operational current at DC rated value 500 A

let-through current of the fuse at 500 V maximum permissible 54 800 A

let-through current of the gG fuse at 690 V maximum permissible 45 200 A

let-through current of the gG/aM SITOR fuse at 1000 V maximum permissible 21 500 A

let-through current of the molded case circuit breaker at 415 V maximum permissible 43 500 A

Main circuit

operating power

- at AC-23 A at 500 V rated value 250 kW

operational current rated value 400 A

Auxiliary circuit

number of connected NC contacts for auxiliary contacts 0

number of connected NO contacts for auxiliary contacts 0

number of connected CO contacts for auxiliary contacts 0

number of CO contacts for auxiliary contacts 0

number of NC contacts for auxiliary contacts 6

number of NO contacts for auxiliary contacts 6

Suitability

suitability for use

- main switch Yes

• switch disconnecter • EMERGENCY OFF switch • safety switch • maintenance/repair switch	Yes Yes Yes Yes
Product details	
product component	
• trip indicator • voltage trigger • undervoltage release • undervoltage release with leading contact	No No No No
product extension auxiliary switch	Yes
product extension optional	
• motor drive • voltage trigger	No No
Short circuit	
short-time withstand current (I _{cw}) at 1000 V AC/440 V DC limited to 1 s rated value	13 kA
short-circuit current making capacity (I _{cm}) for switch disconnecter	
• at 1000 V AC without fuse link rated value minimum • at DC 440 V without fuse link rated value minimum • without fuse link rated value minimum	36 kA 36 kA 36 kA
conditional short-circuit current with line-side fuse protection	
• at 415 V by molded case circuit breaker rated value • at 500 V by gG fuse rated value • at 690 V by gG fuse rated value	65 kA 100 kA 100 kA
Connections	
type of connectable conductor cross-sections for aluminum conductor	
• stranded with lug	1x (25 ... 240 mm ²), 2x (25 ... 120 mm ²)
type of connectable conductor cross-sections	
• with combination of Al conductor+switch • for copper busbar	315A / 240 mm ² '1 x (30 x 10 mm ²)
type of connectable conductor cross-sections for copper conductor	
• stranded with lug according to DIN 46234 • stranded with lug according to DIN 46235	1x (6 ... 240 mm ²), 2x (6 ... 150 mm ²) 1x (16 ... 185 mm ²), 2x (16 ... 150 mm ²)
type of electrical connection for main current circuit	flat connector
Mechanical Design	
height	164 mm
width	190 mm
depth	93.5 mm
fastening method	screw fixing
fastening method	
• 4-hole front mounting • front mounting with central attachment • rail mounting	No No No
mounting position	any
net weight	2 894 g
Environmental conditions	
ambient temperature during operation	
• minimum • maximum	-25 °C 70 °C
ambient temperature during storage	
• minimum • maximum	-50 °C 80 °C
Certificates	
reference code according to IEC 81346-2	Q
General Product Approval	
Declaration of Conformity	

[Confirmation](#)



[Miscellaneous](#)



Declaration of Conformity	Marine / Shipping	other
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[Environmental Conformations](#)

[Miscellaneous](#)

[Confirmation](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3KD4430-0PE20-0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3KD4430-0PE20-0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

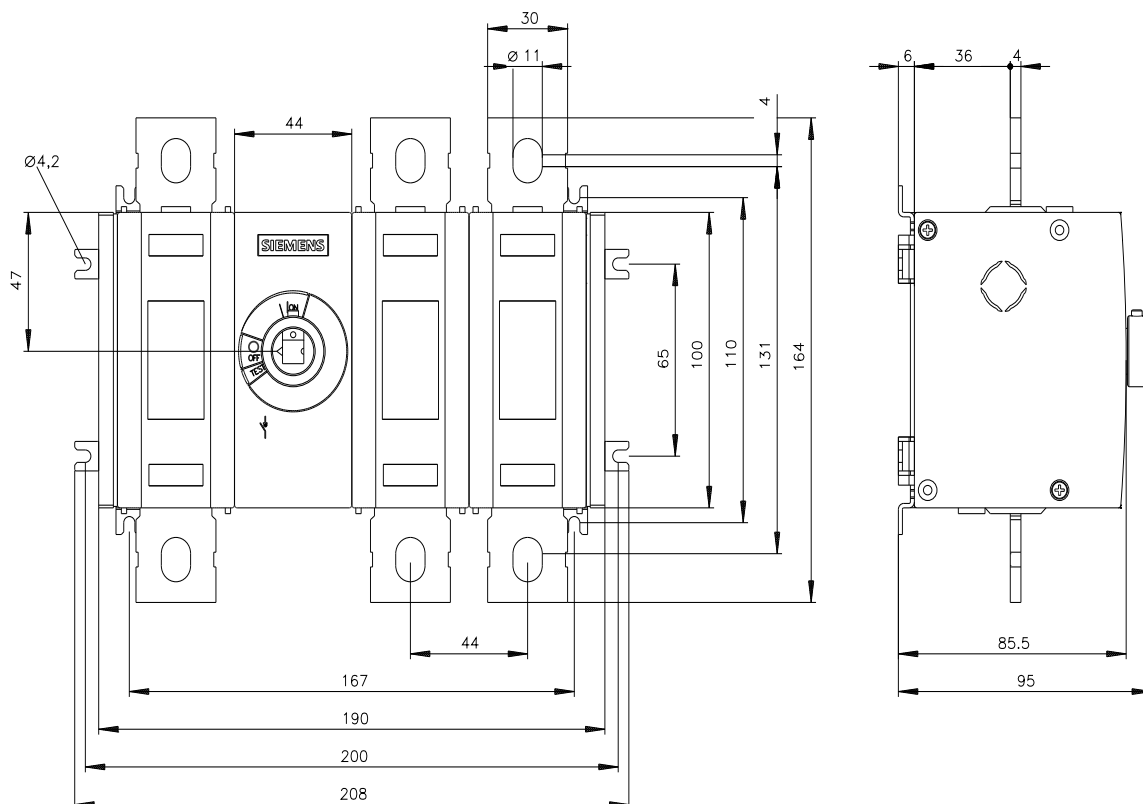
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3KD4430-0PE20-0

CAX-Online-Generator

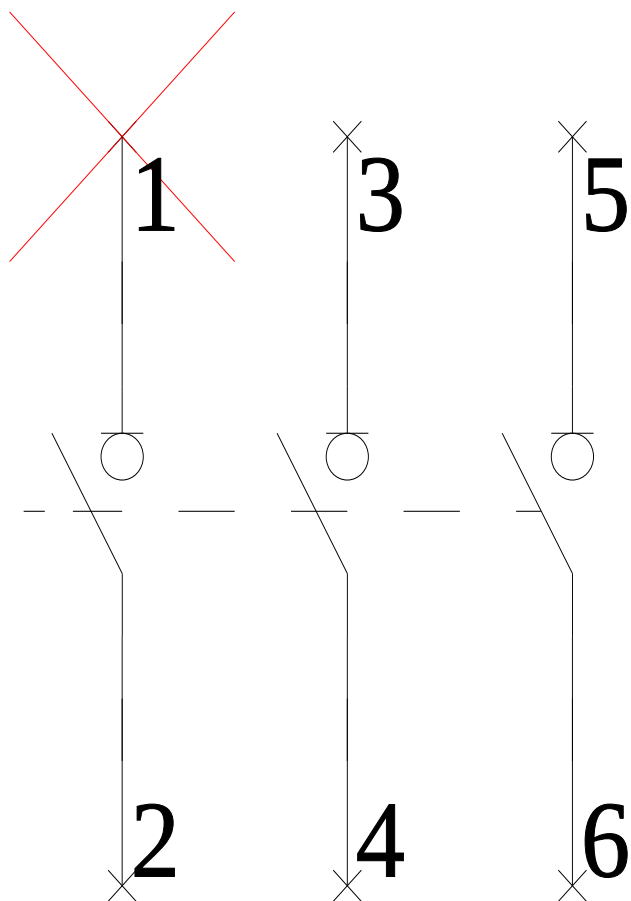
<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>



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