



switch disconnecter 3VA1 IEC frame 630 4-pole SD100, In=500A without overload protection w/o short-circuit protection nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
product version	General applications
design of the product	in MCCB design
number of poles	4
design of the auxiliary release	without
design of the auxiliary switch	Without
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	1 000 V
operating voltage / at AC / rated value	690 V
surge voltage resistance / rated value	8 kV
power loss [W] / maximum	191 W
mechanical service life (operating cycles) / typical	20 000
type of device	fixed mounting
suitability for use / switch disconnecter	Yes
suitability for use / main switch	Yes
suitability for use / safety switch	Yes
suitability for use / EMERGENCY OFF switch	Yes
suitability for use / maintenance/repair switch	Yes
product function / communication function	No
Net Weight	6.221 kg
Current	
short-time withstand current (I _{cw}) / at AC / limited to 0.5 s / rated value	6 kA
operational current / rated value	500 A
operational current	
• at 40 °C	500 A
• at 45 °C	500 A
• at 50 °C	500 A
• at 55 °C	487 A
• at 60 °C	473 A
• at 65 °C	458 A
• at 70 °C	442 A
let-through I _{2t} value / at AC-23 B	
• at 400 V / maximum permissible	3 820 000 A ² ·s
• at 500 V / maximum permissible	4 280 000 A ² ·s
• at 690 V / maximum permissible	1 780 000 A ² ·s

let-through current (Ic) / at AC-23 B	
<ul style="list-style-type: none"> • at 400 V / maximum permissible 	47 kA
<ul style="list-style-type: none"> • at 500 V / maximum permissible 	41 kA
<ul style="list-style-type: none"> • at 690 V / maximum permissible 	17 kA
Switching capacity according to IEC 60947	
short-circuit current making capacity (Icm) / with line-side fuse protection	
<ul style="list-style-type: none"> • at 690 V / by molded case circuit breaker / maximum 	17 kA
<ul style="list-style-type: none"> • at 415 V / by molded case circuit breaker / maximum 	242 kA
conditional short-circuit current (Iq) / rated value	6 000 A
conditional short-circuit current (Iq) / with line-side fuse protection	
<ul style="list-style-type: none"> • at 690 V / by molded case circuit breaker / rated value 	10 kA
<ul style="list-style-type: none"> • at 240 V / by LV HRC fuse link 3NA, 3ND (sizes 00/000, 1, 2, type gL/gG) / rated value 	200 kA
<ul style="list-style-type: none"> • at 415 V / by LV HRC fuse link 3NA, 3ND (sizes 00/000, 1, 2, type gL/gG) / rated value 	110 kA
Mechanical Design	
overvoltage category	III
fastening method	screw fixing
fastening method / 4-hole front mounting	Yes
fastening method / front mounting with central attachment	No
fastening method / rail mounting	No
product component	
<ul style="list-style-type: none"> • undervoltage release 	No
<ul style="list-style-type: none"> • voltage trigger 	No
<ul style="list-style-type: none"> • undervoltage release with leading contact 	No
<ul style="list-style-type: none"> • trip indicator 	No
product feature / interlock	No
height	248 mm
width	184 mm
depth	110 mm
display version / for switch position indicator	Handle switch position On, Trip, Off
design of the actuating element	toggle handle
type of the driving mechanism / motor drive	No
Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	busbar connection
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Silver
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
number of NC contacts / for auxiliary contacts	0
number of NO contacts / for auxiliary contacts	0
Accessories	
product extension / auxiliary switch	No
product extension / optional / motor drive	Yes
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
<ul style="list-style-type: none"> • during operation / minimum 	-25 °C
<ul style="list-style-type: none"> • during operation / maximum 	70 °C
<ul style="list-style-type: none"> • during storage / minimum 	-40 °C
<ul style="list-style-type: none"> • during storage / maximum 	80 °C
reference code / according to IEC 81346-2	Q
Approvals / Certificates	
General Product Approval	



[Miscellaneous](#)



[Confirmation](#)



General Product Approval	EMV	Test Certificates			Maritime application
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[Special Test Certificate](#)

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



Maritime application	other	Environment		
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[Miscellaneous](#)

[Confirmation](#)



[Environmental Confirmations](#)

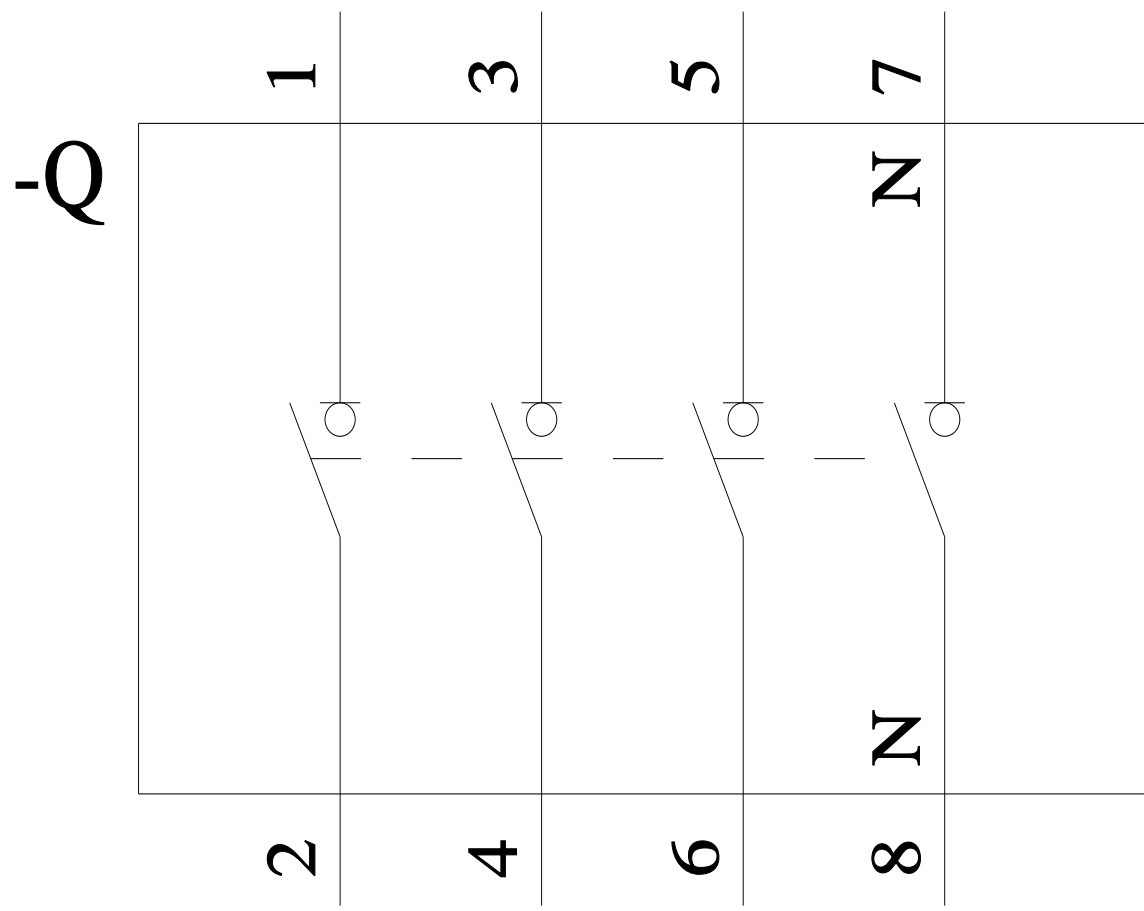
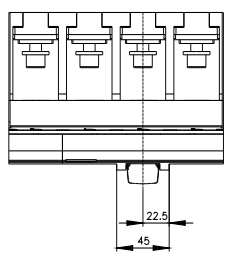
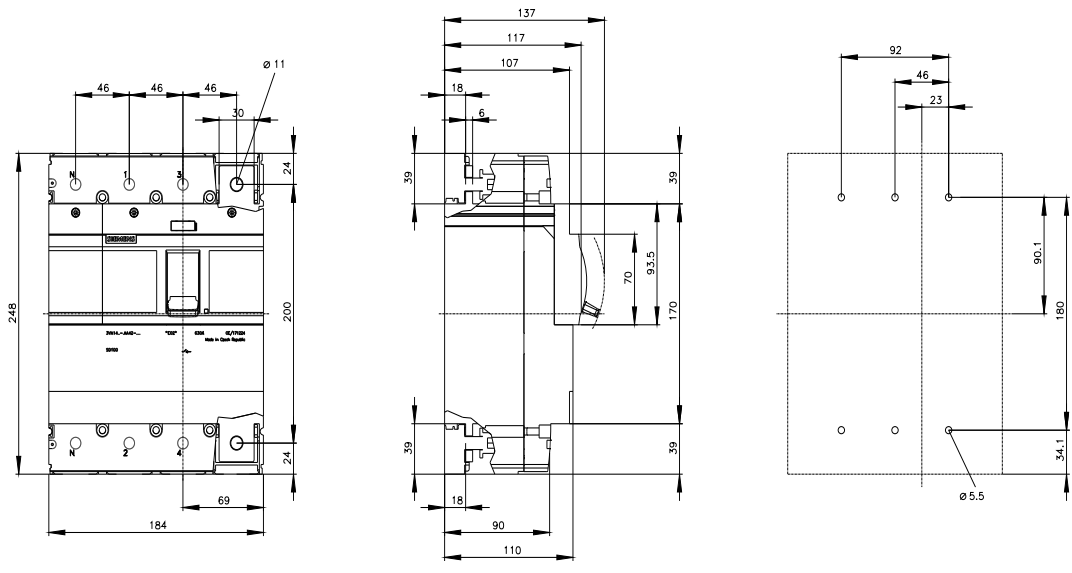
[Environmental Confirmations](#)

Environment



Further information

- Information on the packaging
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
- Information for data generation and storage
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- Information- and Downloadcenter (Catalogs, Brochures,...)
<https://www.siemens.com/lowvoltage/catalogs>
- Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1450-1AA42-0AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3VA1450-1AA42-0AA0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1450-1AA42-0AA0
- CAX-Online-Generator
<https://www.siemens.com/cax>
- Tender specifications
<https://www.siemens.com/specifications>
- Characteristic curves
[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



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