

Siemens
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circuit breaker 3VA2 IEC Frame 100 breaking capacity class L Icu=150 kA @ 415 V 4-pole, line protection ETU560, LSIG, In=100 A overload protection Ir=40 A...100 A short-circuit protection Isd=0.6..10x In, Ii=1.5..12x In neutral conductor protection adjustable (OFF, up to 100%) ground-fault protection, can be switched off Ig=0.2...1 x In= tg=0.05-0.8s nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	ETU560
protection function of the overcurrent release	LSIG
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	7.7 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	2.57 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	15 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	10 500
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Summation current formation L + N conductor
product function	
• communication function	Yes
• other measurement function	No
Net Weight	3.2 kg
Current	
operational current	
• at 40 °C	100 A
• at 45 °C	100 A
• at 50 °C	100 A
• at 55 °C	100 A
• at 60 °C	100 A
• at 65 °C	100 A
• at 70 °C	100 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	L
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	200 kA
• at 415 V	150 kA
• at 440 V	150 kA
• at 500 V	100 kA
• at 690 V	25 kA
operating short-circuit current breaking capacity (Ics)	
• at 240 V	200 kA
• at 415 V	150 kA
• at 440 V	150 kA
• at 500 V	100 kA
• at 690 V	18 kA
short-circuit current making capacity (Icm)	
• at 240 V	440 kA

• at 415 V	330 kA
• at 440 V	330 kA
• at 500 V	220 kA
• at 690 V	52.5 kA

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (I_r) / of the L-trip / with I_{2t} characteristic	
• minimum	40 A
• maximum	100 A
adjustable response value delay time (t_r) / for L-tripping / with I_{2t} characteristic	
• minimum	0.5 s
• maximum	25 s
adjustable response value setting current (I_{sd}) / of S-trip / with I_{0t} characteristic	
• minimum	60 A
• maximum	1 000 A
adjustable response value setting current (I_{sd}) / of S-trip / with I_{2t} characteristic	
• minimum	60 A
• maximum	1 000 A
adjustable response value delay time (t_{sd}) / for S-tripping / with I_{0t} characteristic	
• minimum	0.05 s
• maximum	0.5 s
adjustable response value delay time (t_{sd}) / for S-tripping / with I_{2t} characteristic	
• minimum	0.05 s
• maximum	0.5 s
adjustable response value setting current (I_l) / for I-tripping	
• minimum	150 A
• maximum	1 200 A
adjustable current response value current / for G-tripping / with standard characteristic	
• initial value	20 A
• full-scale value	100 A
adjustable response value delay time (t_g) / for G-tripping / with I_{0t} characteristic	
• minimum	0.05 s
• maximum	0.8 s
adjustable response value setting current (I_g) / for G-tripping / with I_{2t} characteristic	
• minimum	20 A
• maximum	100 A
adjustable response value delay time (t_g) / for G-tripping / with I_{2t} characteristic	
• minimum	0.05 s
• maximum	0.8 s
adjustable setting current (I_{nN}) / for N-tripping	
• minimum	20 A
• maximum	100 A
design of the N-conductor protection	adjustable OFF; 20% to 100%
product function / grounding protection	Yes

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	7.13 in
height	181 mm
width [in]	5.51 in

width	140 mm
depth [in]	3.39 in
depth	86 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	on both sides nut keeper kit
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	13 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	25 x 8 mm
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	tin
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	tin
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	Yes
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C
Environmental footprint	
global warming potential [CO2 eq] / total	61.814 kg
global warming potential [CO2 eq] / during manufacturing	14.6 kg
global warming potential [CO2 eq] / during operation	48.9 kg
global warming potential [CO2 eq] / after end of life	-2.2 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
reference code / according to IEC 81346-2	Q
Approvals / Certificates	
General Product Approval	



[Miscellaneous](#)



[Confirmation](#)

General Product Approval	EMV	Test Certificates		
			Miscellaneous	Special Test Certificate
	EG-Konf.			Type Test Certificates/Test Report

Maritime application					
					CCS (China Classification Society)
ABS	BUREAU VERITAS	DNV	LRS	RMRS	

other	Dangerous goods		Environment	
Miscellaneous	Miscellaneous	Confirmation		Transport Information
				Environmental Confirmations

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[Environmental Con-
firmations](#)



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=3VA2010-8JQ42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-8JQ42-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-8JQ42-0AA0

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='HAUPT'></mmp_prod_no>)

last modified:

5/25/2025 