

Siemens
EcoTech



circuit breaker 3VA5 UL Frame 125 breaking capacity class S 25 kA @ 277 V 1-pole, line protection TM210, FTFM, $I_n=45$ A overload protection $I_r=45$ A permanently set short-circuit protection $I_i=10 \times I_n$ nut keeper kit on two sides



Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	SEAS
design of the product	System protection
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type)	Yes
design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)	No
design of the overcurrent release	TM210
protection function of the overcurrent release	LI
number of poles	1
General technical data	
insulation voltage / rated value	500 V
operating voltage / at DC / rated value	125 V
operating voltage / at AC / rated value	415 V
power loss [W] / maximum	3.8 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	3.8 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
electrical endurance (operating cycles) / at 480 V	8 000
electrical endurance (operating cycles) / at 600 V	4 000
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
product function	
• communication function	No
• other measurement function	No
Net Weight	0.407 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	45 A
• at 45 °C	44 A

• at 50 °C • at 55 °C • at 60 °C • at 65 °C • at 70 °C	44 A 43 A 42 A 42 A 41 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	S
maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V • at 415 V	25 kA 5 kA
operating short-circuit current breaking capacity (I _{cs})	
• at 240 V • at 415 V	25 kA 5 kA
short-circuit current making capacity (I _{cm})	
• at 240 V • at 415 V	52.5 kA 7.5 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter
Switching capacity according to UL 489	
current breaking capacity	
• at 120 V • at 277 V • at 347 V	65 kA 25 kA 14 kA
Adjustable parameters	
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
• minimum • maximum	45 A 45 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
• minimum • maximum	1 s 1 s
adjustable response value setting current (I _i) / for I-tripping	
• minimum • maximum	450 A 450 A
adjustable setting current (I _{nN}) / for N-tripping	
• minimum • maximum	0 A 0 A
product function / grounding protection	No
Mechanical Design	
product component	
• undervoltage release • voltage trigger • trip indicator	No No No
height [in]	5.51 in
height	140 mm
width [in]	1 in
width	25.4 mm
depth [in]	3.01 in
depth	76.5 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front connection
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	12 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	17 x 6.5 mm
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0

Accessories	
product extension / optional / motor drive	No
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
reference code / according to IEC 81346-2	Q
Approvals / Certificates	
General Product Approval	



[Miscellaneous](#)

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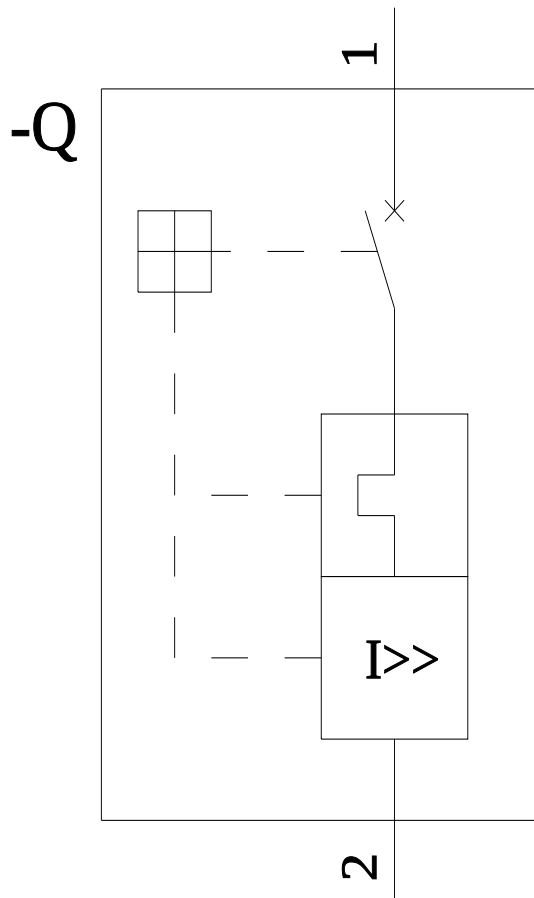
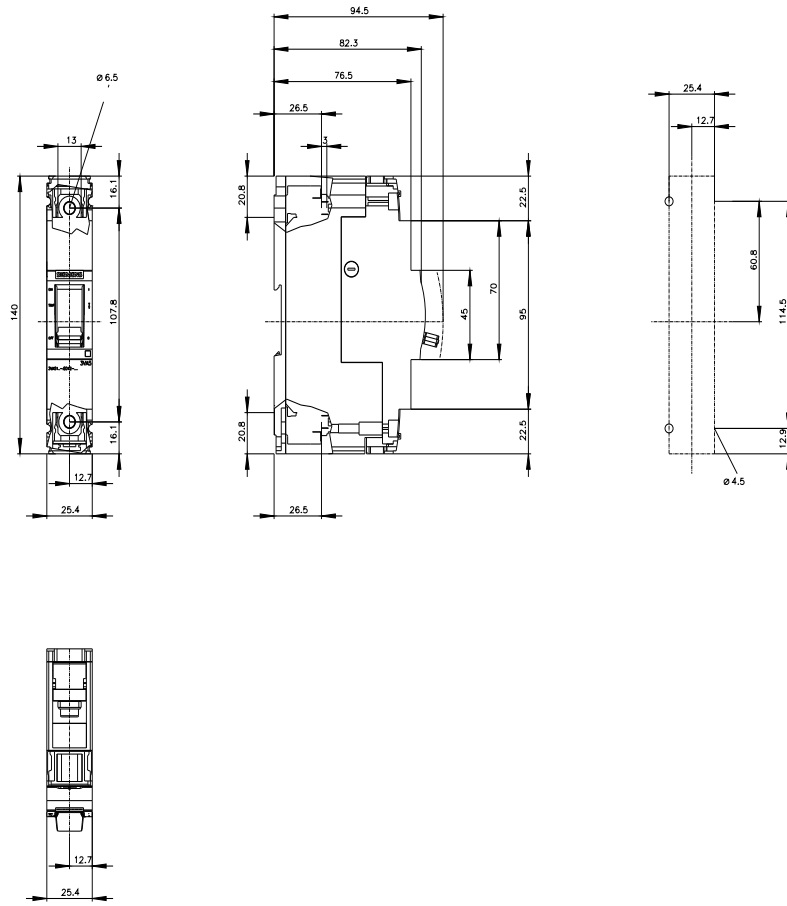


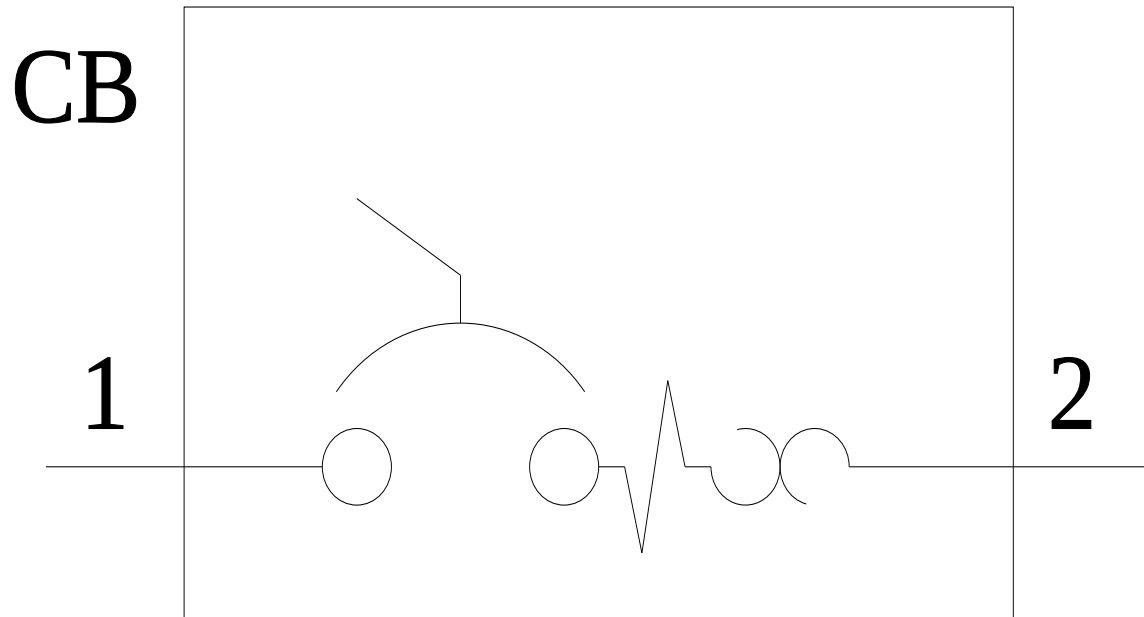
General Product Approval	EMV	Test Certificates
Confirmation  EG-Konf.	 CCC	 RCM

[Type Test Certificates/Test Report](#)

Test Certificates	Maritime application	other	Environment
Special Test Certificate  ABS	Miscellaneous	Confirmation	Environmental Conformations 

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=3VA5145-4ED12-0AA0 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA5145-4ED12-0AA0 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5145-4ED12-0AA0 CAx-Online-Generator https://www.siemens.com/cax Tender specifications https://www.siemens.com/specifications Characteristic curves <a href='https://curves.simar.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>'>https://curves.simar.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>





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