## **SIEMENS**

## **Data sheet**



circuit breaker 3VA6 UL frame 150 breaking capacity class H 65kA @ 480V 4-pole, line protection ETU560, LSIG, In=40A overload protection Ir=16A...40A short-circuit protection Isd=0.6..10x In, Ii=1.5..12x In N conductor protection adjustable (OFF, up to 160%) ground-fault protection Ig=0.375...1 x In= tg=0.05-0.8s without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HDAE
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 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	2.4 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	0.8 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	14 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	9 800
electrical endurance (operating cycles) / at 480 V	14 000
electrical endurance (operating cycles) / at 600 V	9 800
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
ground-fault monitoring version	Summation current formation L + N-conductor
product function	
<ul> <li>communication function</li> </ul>	Yes
other measurement function	No
Net Weight	3.2 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	40 A
• at 45 °C	40 A
• at 50 °C	40 A
● at 55 °C	40 A
• at 60 °C	40 A
• at 65 °C	40 A
● at 70 °C	40 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	н
maximum short-circuit current breaking capacity (Icu)	

• at 240 V	110 kA
• at 415 V	85 kA
● at 690 V	2.5 kA
operating short-circuit current breaking capacity (Ics)	
• at 240 V	110 kA
● at 415 V	85 kA
● at 690 V	2.5 kA
short-circuit current making capacity (Icm)	
• at 240 V	242 kA
● at 415 V	187 kA
● at 690 V	3.8 kA
Switching capacity according to UL 489	
current breaking capacity	
• at 240 V	100 kA
• at 480 V	65 kA
• at 600 V	22 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
• minimum	16 A
• maximum	40 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	0.5 s
• maximum	25 s
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic	
• minimum	24 A
maximum	400 A
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic	
• minimum	24 A
maximum	400 A
adjustable response value delay time (tsd) / for S-tripping / with l0t characteristic	
• minimum	0.05 s
maximum	0.5 s
adjustable response value delay time (tsd) / for S-tripping / with l2t characteristic	
• minimum	0.05 s
maximum	0.5 s
adjustable response value setting current (li) / for I-tripping	
• minimum	60 A
• maximum	480 A
adjustable current response value current / for G-tripping / with standard characteristic	
• initial value	15 A
• full-scale value  adjustable response value delay time (tg) / for G-tripping / with	40 A
10t characteristic	0.05 o
• minimum	0.05 s
maximum  adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic	0.8 s
• minimum	15 A
• maximum	40 A
adjustable response value delay time (tg) / for G-tripping / with l2t characteristic	
• minimum	0.05 s
minimum     maximum	0.05 s 0.8 s
• maximum	
maximum  adjustable setting current (InN) / for N-tripping	0.8 s

product component  • undervoltage release • voltage trigger • trip indicator No height [in] 7.8 in height width [in] 5.51 in width 140 mm  depth [in] 40 mm		_
maximum     design of the N-conductor protection     product function / grounding protection     ves     total break time / for G-tripping / with standard characteristic     initial value		
design of the N-conductor protection   adjustable OFF; 40% to 160%	• minimum	60 A
product function / grounding protection  total break time / for G-tripping / with standard characteristic  initial value  initial value  initial value  initial value  initial value  initial value  indexorbotage  initial value  indexorbotage release  voltage trigger  indexorbotage release  indexorbotage release  voltage trigger  indexorbotage release  voltage trigger  indexorbotage release  voltage trigger  indexorbotage release  voltage rel	• maximum	480 A
total break time / for G-tripping / with standard characteristic  initial value  ofull-scale value  oful scale v	design of the N-conductor protection	adjustable OFF; 40% to 160%
initial value  full-scale value  0.8 s  Mechanical Design  product component  undervoltage release  No  voltage trigger  it rip indicator  height [in]  7.8 in  height  width [in]  5.51 in  width [in]  4.40 mm  depth [in]  3.39 in  depth  depth as6 mm  Connections  arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  without extension / optional / motor drive  product extension / optional / motor drive  protection class IP / on the front  ambient temperature  during operation / maximum  during storage / minimum  during storage / maximum  during storage / maximum  eduring storage / maximum  during storage / maximum  eduring storage / maximum  during storage / maximum  eduring	product function / grounding protection	Yes
• full-scale value 0.8 s  Mochanical Dosign  product component • undervoltage release No • voltage trigger No • trip indicator No height [in] 7.8 in height 198 mm width [in] 5.51 in width (in] 3.39 in depth [in] 3.39 in depth [in] 3.39 in depth [in] 3.39 in depth (in] 486 mm  Connections  arrangement of electrical connectors / for main current circuit Without connection type of electrical connection / for main current circuit Without connection  The product extension / optional / motor drive Yes  product extension / optional / motor drive Yes  protection class IP / on the front P40 ambient temperature • during operation / maximum 70 °C • during storage / minimum 40 °C • during storage / minimum 50 °C  Certificate os  reference code / according to IEC 81346-2 Q  certificate os subballiky / as approval for NAVAL (no combat vessels) / supplement SB	total break time / for G-tripping / with standard characteristic	
Mechanical Design  product component	• initial value	0.05 s
product component  undervoltage release voltage trigger voltage triger voltage triger voltage triger voltage triger voltage triger voltage triger voltage trigger voltage trigger voltage trigger voltage triger voltage trigger voltage trigg	• full-scale value	0.8 s
• undervoltage release • voltage trigger • trip indicator No height [in] 7.8 in height 198 mm width [in] 5.51 in width depth 140 mm depth 161 3.3.9 in depth 8 mm  Connections  arrangement of electrical connectors / for main current circuit Without connection / tor main current circuit Without Auxiliary circuit number of CO contacts / for auxiliary contacts  product extension / optional / motor drive  Environmental conditions  protection class IP / on the front ambient temperature • during operation / maximum • during operation / maximum • during storage / minimum • during storage / maximum • during storage	Mechanical Design	
voltage trigger trip indicator No height [in] 7.8 in height 198 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 type of electrical connection / for main current circuit type of electrical connection / for main current circuit type of electrical connection / for main current circuit without  Auxiliary circuit number of CO contacts / for auxiliary contacts  product extension / optional / motor drive  Environmental conditions  protection class IP / on the front ambient temperature during operation / maximum during operation / maximum during operation / maximum during storage / minimum during storage / minimum during storage / maximum during storage / maximum during storage / maximum eduring storage / maximum during electricates  reference code / according to IEC 81346-2 Certificates  reference code / according to IEC 81346-2 Certificate / according to IEC 81346-2 Certificates	product component	
• trip indicator No height [in] 7.8 in height 198 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 Without connection type of electrical connection / for main current circuit Without Availiary 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 storage / minimum -70 °C • during storage / maximum -40 °C • during storage / maximum -40 °C • during storage / maximum -40 °C • certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	<ul> <li>undervoltage release</li> </ul>	No
height [in] 7.8 in height 198 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 Without connection type of electrical connector / for main current circuit Without 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	<ul> <li>voltage trigger</li> </ul>	No
height 198 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 Without connection type of electrical connection / for main current circuit Without  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 / maximum - 25 °C  • during storage / minimum - 40 °C  • during storage / minimum - 40 °C  • during storage / maximum - 80 °C  Certificates  reference code / according to IEC 81346-2  Certificates  reference code / according to IEC 81346-2  Certificates Supplement SB	trip indicator	No
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 Without connection type of electrical connection / for main current circuit Without  Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive Yes  Environmental conditions  protection class IP / on the front IP40  ambient temperature  • during operation / maximum • during operation / maximum • during storage / minimum • during storage / minimum • during storage / minimum • during storage / maximum 80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	height [in]	7.8 in
width 140 mm  depth [in] 3.39 in  depth 86 mm  Connections  arrangement of electrical connectors / for main current circuit Without connection  type of electrical connection / for main current circuit Without  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 storage / minimum -40 °C • during storage / maximum 80 °C  Certificates  reference code / according to IEC 81346-2 Q  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	height	198 mm
depth [in] 3.39 in  depth 86 mm  Connections  arrangement of electrical connectors / for main current circuit Without connection type of electrical connection / for main current circuit Without  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 / maximum -25 °C  during operation / maximum -70 °C  during storage / minimum -40 °C  during storage / maximum -80 °C  Certificates  reference code / according to IEC 81346-2 Q  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	width [in]	5.51 in
depth 86 mm  Connections  arrangement of electrical connectors / for main current circuit Without connection type of electrical connection / for main current circuit Without  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  • during operation / maximum  • during storage / minimum  • during storage / maximum  • cap °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	width	140 mm
arrangement of electrical connectors / for main current circuit Without connection type of electrical connection / for main current circuit Without  Auxiliary circuit  number of CO contacts / for auxiliary contacts  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  Certificates  reference code / according to IEC 81346-2 Q  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	depth [in]	3.39 in
arrangement of electrical connectors / for main current circuit  type of electrical connection / for main current circuit  Auxiliary circuit  number of CO contacts / for auxiliary contacts  product extension / optional / motor drive  Environmental conditions  protection class IP / on the front  ambient temperature  oduring operation / minimum  -25 °C  during operation / maximum  during storage / minimum  during storage / minimum  during storage / maximum  oduring storage / maximum  eduring storage / maximum  oduring storage / ma	depth	86 mm
type of electrical connection / for main current circuit  Auxillary circuit  number of CO contacts / for auxillary contacts  0  Accessories  product extension / optional / motor drive  Environmental conditions  protection class IP / on the front  ambient temperature  • during operation / minimum  -25 °C  • during operation / maximum  70 °C  • during storage / minimum  40 °C  • during storage / maximum  80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Connections	
Auxiliary circuit  number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Environmental conditions  protection class IP / on the front  ambient temperature  • during operation / minimum  -25 °C  • during operation / maximum  70 °C  • during storage / minimum  40 °C  • during storage / maximum  80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	arrangement of electrical connectors / for main current circuit	Without connection
number of CO contacts / for auxiliary contacts  Accessories  product extension / optional / motor drive  Yes  Environmental conditions  protection class IP / on the front  ambient temperature  • during operation / minimum  • during operation / maximum  • during storage / minimum  • during storage / maximum  • during storage / maximum  • during storage / maximum  • curificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	type of electrical connection / for main current circuit	Without
product extension / optional / motor drive  Environmental conditions  protection class IP / on the front  ambient temperature  • during operation / maximum  • during storage / minimum  • during storage / minimum  • during storage / maximum  80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Auxiliary circuit	
product extension / optional / motor drive  Environmental conditions  protection class IP / on the front  ambient temperature  • during operation / minimum  • during operation / maximum  70 °C  • during storage / minimum  40 °C  • during storage / maximum  80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	number of CO contacts / for auxiliary contacts	0
protection class IP / on the front  ambient temperature  during operation / minimum  during operation / maximum  during storage / minimum  during storage / maximum  during storage / maximum  eduring storage / maximum  during storage / maximum  eduring storage / maximum  during storage / maximum  eduring storage / max	Accessories	
protection class IP / on the front  ambient temperature  • during operation / minimum  • during operation / maximum  • during storage / minimum  • during storage / minimum  • during storage / maximum  80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	product extension / optional / motor drive	Yes
ambient temperature  • during operation / minimum  • during operation / maximum  70 °C  • during storage / minimum  • during storage / maximum  80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Environmental conditions	
<ul> <li>during operation / minimum</li> <li>during operation / maximum</li> <li>0 °C</li> <li>during storage / minimum</li> <li>during storage / maximum</li> <li>0 °C</li> <li>during storage / maximum</li> <li>0 °C</li> </ul> Certificates reference code / according to IEC 81346-2 <ul> <li>Q</li> <li>certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB</li> </ul> Yes	protection class IP / on the front	IP40
• during operation / maximum     • during storage / minimum     • during storage / maximum     80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB  CONTROL OF COMBAND STATE O	ambient temperature	
• during storage / minimum     • during storage / maximum     80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB  Page 140 °C  Q  Vessels / Supplement SB	<ul> <li>during operation / minimum</li> </ul>	-25 °C
o during storage / maximum     80 °C  Certificates  reference code / according to IEC 81346-2  certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB  Ves	<ul> <li>during operation / maximum</li> </ul>	70 °C
reference code / according to IEC 81346-2 Q certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	during storage / minimum	-40 °C
reference code / according to IEC 81346-2 Q certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB  Q	<ul><li>during storage / maximum</li></ul>	80 °C
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Certificates	
vessels) / supplement SB	reference code / according to IEC 81346-2	Q
General Product Approval		Yes
	General Product Approval	

Confirmation









Miscellaneous

General Product Ap-

EMC

**Declaration of Conformity** 

Marine / Shipping













Marine / Shipping

other

**Miscellaneous** 

**Dangerous Good** 





**Miscellaneous** 

Confirmation

**Transport Information** 

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3VA6140-6JQ41-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-6JQ41-0AA0

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

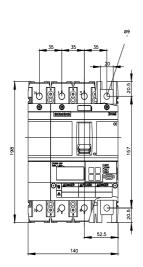
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA6140-6JQ41-0AA0

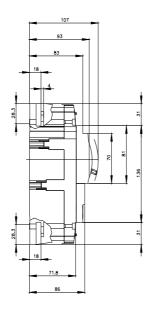
**CAx-Online-Generator** 

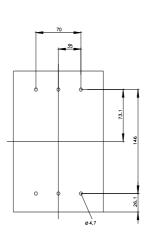
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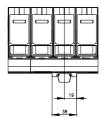
Tender specifications

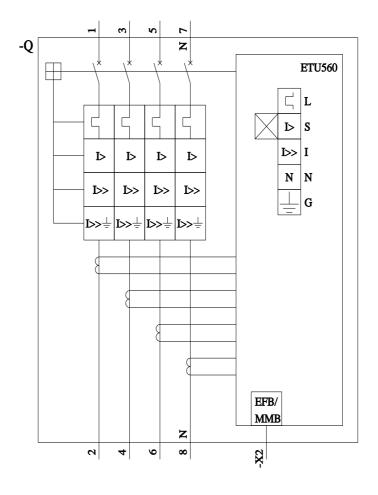
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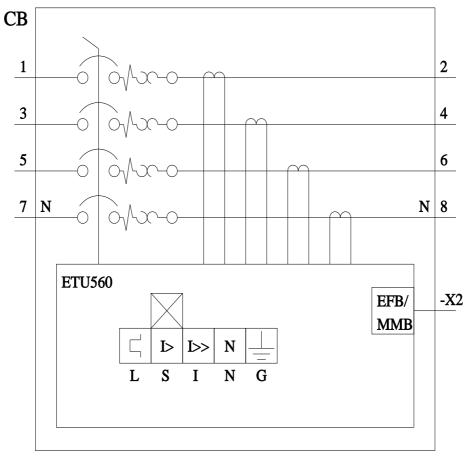












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**Authorized Distributor** 

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3VA61406JQ410AA0