

Siemens  
EcoTech



circuit breaker 3VA6 UL Frame 150 breaking capacity class C 100 kA @ 480 V 3-pole, line protection ETU860, LSIG, In=40 A overload protection, 100% rated Ir=16 A ...40 A short-circuit protection Isd=0.6..10x In, Ii=1.5..12x In neutral conductor protection optionally with ext. CT; up to 160% ground-fault protection Ig=0.375...1x In, tg=0.05-0.8s nut keeper kit on two sides



Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	CDAE
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	ETU860
protection function of the overcurrent release	LSIG
number of poles	3
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/retrofitable / short-circuit and overload proof	Yes
ground-fault monitoring version	Summation current formation L-conductor
product function	
• communication function	Yes
• other measurement function	Yes
Net Weight	2.445 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
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	C
maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	150 kA
• at 415 V	110 kA
• at 690 V	2.5 kA
operating short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	150 kA
• at 415 V	110 kA
• at 690 V	2.5 kA
short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	330 kA
• at 415 V	242 kA
• at 690 V	3.8 kA

**Switching capacity according to UL 489**

current breaking capacity	
• at 240 V	200 kA
• at 480 V	100 kA
• at 600 V	35 kA

**Adjustable parameters**

adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic	
• minimum	15 A
• maximum	40 A
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	
• minimum	0.5 s
• maximum	25 s
adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>0t</sub> characteristic	
• minimum	24 A
• maximum	400 A
adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>2t</sub> characteristic	
• minimum	24 A
• maximum	400 A
adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>0t</sub> characteristic	
• minimum	0.05 s
• maximum	0.5 s
adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>2t</sub> characteristic	
• minimum	0.05 s
• maximum	0.5 s
adjustable response value setting current (I <sub>i</sub> ) / 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	40 A
adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>0t</sub> characteristic	
• minimum	0.05 s
• maximum	0.8 s
adjustable response value setting current (I <sub>g</sub> ) / for G-tripping / with I <sub>2t</sub> characteristic	
• minimum	15 A
• maximum	40 A
adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>2t</sub> characteristic	
• minimum	0.05 s
• maximum	0.8 s
adjustable setting current (I <sub>nN</sub> ) / for N-tripping	

• minimum	0.38 A
• maximum	1.6 A
design of the N-conductor protection	adjustable OFF; 40% to 160%
product function / grounding protection	Yes

### Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	7.8 in
height	198 mm
width [in]	4.13 in
width	105 mm
depth [in]	3.39 in
depth	86 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	13 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	25 x 8.5 mm

### Auxiliary circuit

number of CO contacts / for auxiliary contacts	0
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### Accessories

product extension / optional / motor drive	Yes
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### 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



[Confirmation](#)



General Product Approval	EMV	Marine / Shipping	other
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[Miscellaneous](#)



[Confirmation](#)

[Miscellaneous](#)

other	Dangerous goods	Environment
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## 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?mifb=3VA6140-7KQ32-2AA0>

## Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-7KQ32-2AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mifb=3VA6140-7KQ32-2AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mifb=3VA6140-7KQ32-2AA0)

## CAx-Online-Generator

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

## Tender specifications

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





