SIEMENS

Data sheet 3VA6140-5JQ31-0AA0

Siemens EcoTech

circuit breaker 3VA6 UL Frame 150 breaking capacity class M 35 kA @ 480 V 3-pole, line protection ETU560, LSIG, In=40 A overload protection Ir=16 A...40 A short-circuit protection Isd=0.6..10x In, Ii=1.5..12x In neutral conductor protection optionally with external current transformer, 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	MDAE
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	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/retrofittable / short-circuit and overload proof	Yes
ground-fault monitoring version	Summation current formation L-conductor
product function	
● communication function	Yes
● other measurement function	No
Net Weight	2.5 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	M
maximum short-circuit current breaking capacity (Icu)	
● at 240 V	85 kA
● at 415 V	55 kA
● at 690 V	2.5 kA
operating short-circuit current breaking capacity (Ics)	
● at 240 V	85 kA
● at 415 V	55 kA
● at 690 V	2.5 kA
short-circuit current making capacity (Icm)	
● at 240 V	187 kA
● at 415 V	121 kA
● at 690 V	3.8 kA
Switching capacity according to UL 489	
current breaking capacity	
● at 240 V	100 kA
● at 480 V	35 kA
● at 600 V	18 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
● minimum	15 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 I0t characteristic	
● minimum	0.05 s
● maximum	0.5 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic	
● minimum	0.05 s
● maximum	0.5 s
adjustable response value setting current (Ii) / 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 (tg) / for G-tripping / with I0t characteristic	
● minimum	0.05 s
● maximum	0.8 s
adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic	
● minimum	15 A
● maximum	40 A
adjustable response value delay time (tg) / for G-tripping / with I2t characteristic	

● minimum	0.05 s
● maximum	0.8 s
adjustable setting current (InN) / for N-tripping	
● minimum	0 A
● maximum	0 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	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 operation / maximum	70 °C
● during storage / minimum	-40 °C
● during storage / maximum	80 °C
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
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

CCC EG-Konf. Confirmation UKCA UL UL

General Product Approval				EMV	Test Certificates
VDE	Miscellaneous	EAC		RCM	Type Test Certific-ates/Test Report

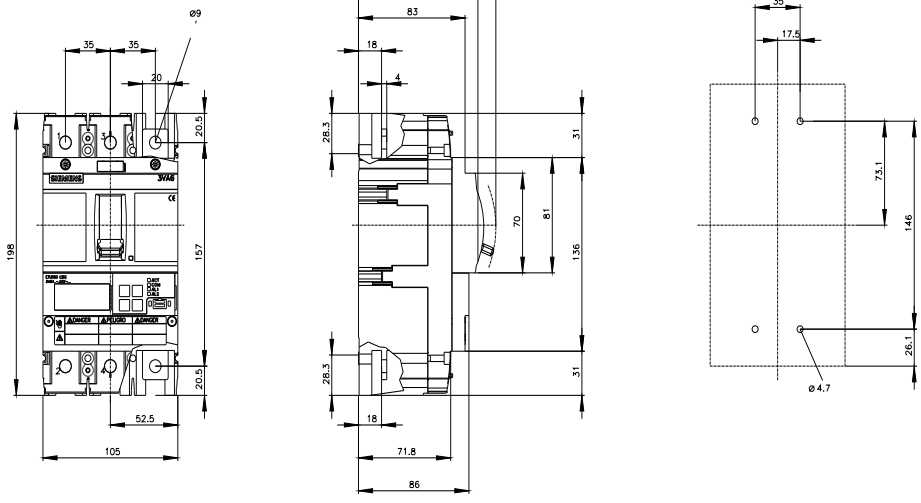
Maritime application	other

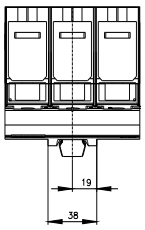
Confirmation

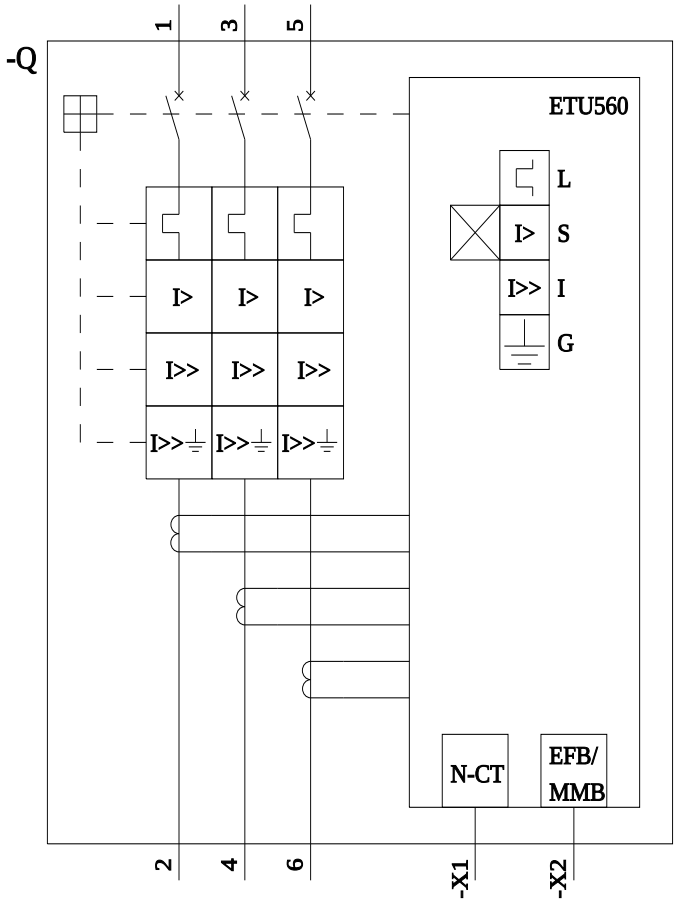
other	Dangerous goods	Environment
Miscellaneous	Transport Information	Environmental Confirmations

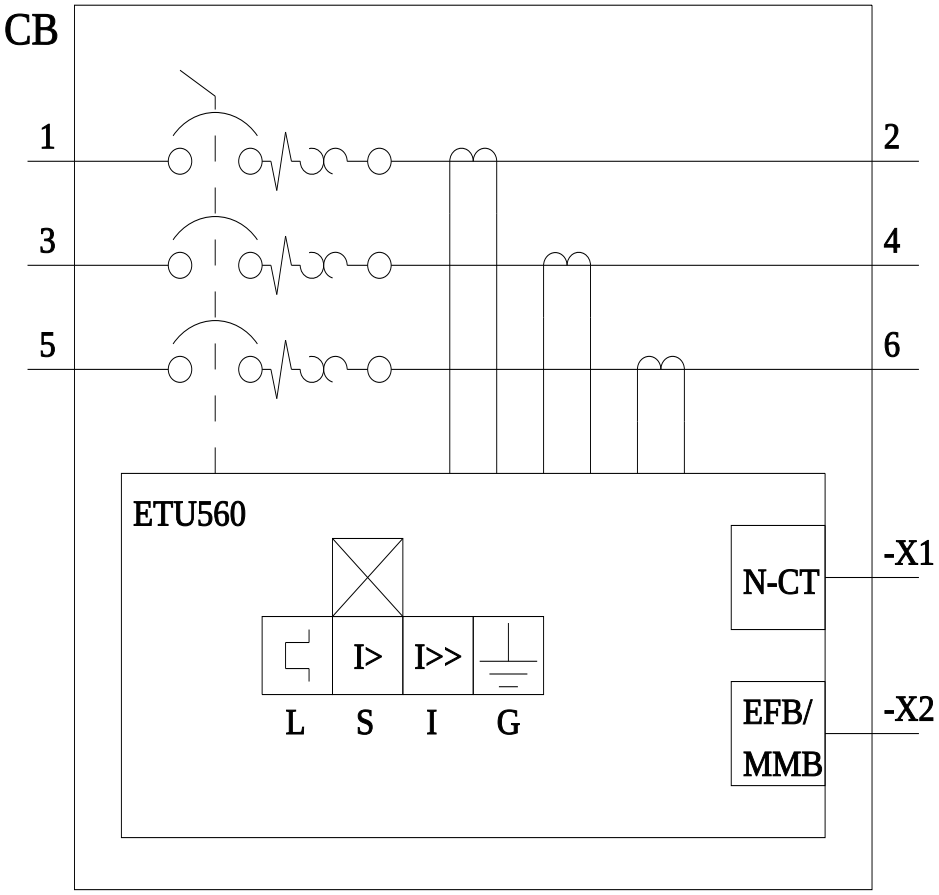
Further information

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=3VA6140-5JQ31-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-5JQ31-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6140-5JQ31-0AA0
CAx-Online-Generator
https://www.siemens.com/cax
Tender specifications
https://www.siemens.com/specifications









last modified: 5/2/2025