SIEMENS

Data sheet 3VA2116-7JQ46-0AA0

circuit breaker 3VA2 IEC Frame 160 breaking capacity class C Icu=110 kA @ 415 V 4-pole, line protection ETU560, LSIG, In=160 A overload protection Ir=63 A...160 A short-circuit protection Isd=0.6..10x In, Ii=1.5..10x 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 terminal connection

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	25.5 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	8.5 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
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	
● communication function	Yes
● other measurement function	No
Net Weight	3.2 kg
Current	
operational current	
● at 40 °C	160 A
● at 45 °C	160 A
● at 50 °C	160 A
● at 55 °C	160 A
● at 60 °C	160 A
● at 65 °C	160 A
● at 70 °C	160 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	C
maximum short-circuit current breaking capacity (Icu)	
● at 240 V	150 kA

● at 415 V	110 kA
● at 440 V	110 kA
● at 500 V	85 kA
● at 690 V	3 kA
operating short-circuit current breaking capacity (Ics)	
● at 240 V	150 kA
● at 415 V	110 kA
● at 440 V	110 kA
● at 500 V	85 kA
● at 690 V	2.5 kA
short-circuit current making capacity (Icm)	
● at 240 V	330 kA
● at 415 V	242 kA
● at 440 V	242 kA
● at 500 V	187 kA
● at 690 V	3.7 kA
Adjustable parameters	
product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
● minimum	64 A
● maximum	160 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
● minimum	0.5 s
● maximum	20 s
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic	
● minimum	96 A
● maximum	1 600 A
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic	
● minimum	96 A
● maximum	1 600 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	240 A
● maximum	1 600 A
adjustable current response value current / for G-tripping / with standard characteristic	
● initial value	32 A
● full-scale value	160 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	32 A
● maximum	160 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	32 A
● maximum	160 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
type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (25 - 185 mm²)
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	double-sided box terminal
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			Maritime application

Miscellaneous | Special Test Certificate | Type Test Certificates/Test Report

Maritime application	other

CCS (China Classification Society)

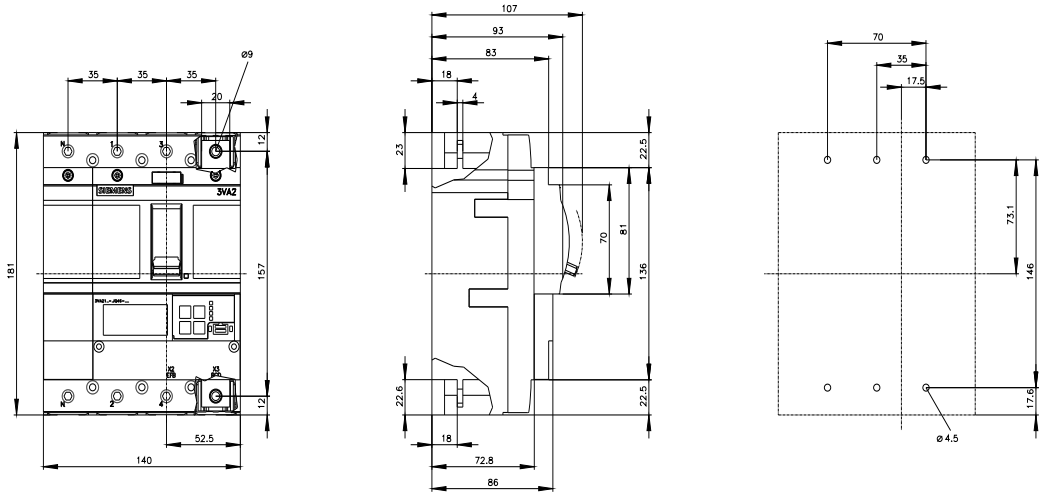
Miscellaneous

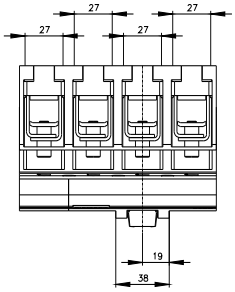
other			Dangerous goods	Environment	
Miscellaneous	Confirmation		Transport Information	Environmental Confirmations	

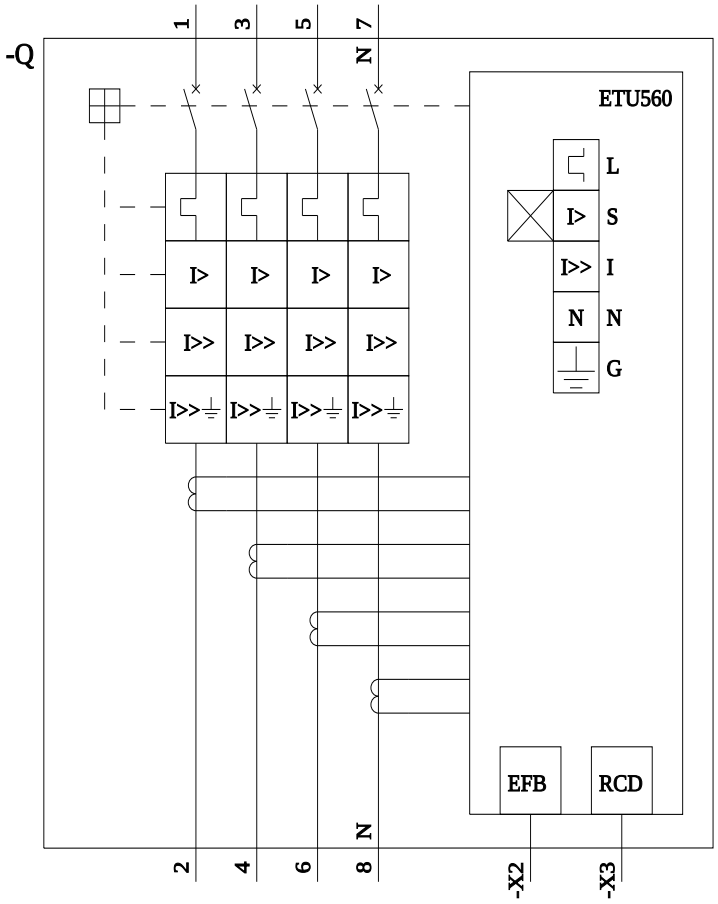
Environment	
Environmental Confirmations	

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=3VA2116-7JQ46-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA2116-7JQ46-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2116-7JQ46-0AA0
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>







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