SIEMENS

Data sheet 3VA2040-7HM46-0AA0

Siemens EcoTech

circuit breaker 3VA2 IEC Frame 100 breaking capacity class C Icu=110 kA @ 415 V 4-pole, line protection ETU330, LIG, In=40 A overload protection Ir=16 A...40 A short-circuit protection Ii=1.5...12 x In neutral conductor protection adjustable (OFF, 100%) ground-fault protection Ig=0.4...1 x In= tg=0.1/0.3s terminal connection

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	ETU330
protection function of the overcurrent release	LIG
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	1.2 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	0.4 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	15 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	10 500
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	No
● other measurement function	No
Net Weight	3.2 kg
Current	
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 (Icu)	
● at 240 V	150 kA

● at 415 V	110 kA
● at 440 V	110 kA
● at 500 V	85 kA
● at 690 V	2 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 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 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	16 A
● maximum	40 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
● minimum	0.5 s
● maximum	17 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	16 A
● full-scale value	40 A
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic	
● minimum	0.1 s
● maximum	0.3 s
adjustable setting current (InN) / for N-tripping	
● minimum	16 A
● maximum	40 A
design of the N-conductor protection	adjustable OFF; 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 (6 - 120 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

CCC VDE Miscellaneous EAC Confirmation

General Product Approval	EMV	Test Certificates			Maritime application
EG-Konf.	RCM	Miscellaneous	Special Test Certificate	Type Test Certificates/Test Report	ABS

Maritime application				other	
BUREAU VERITAS	DNV	LRS	CCS (China Classification Society)	Miscellaneous	Miscellaneous

other		Dangerous goods	Environment		
Confirmation	产品合格 QC PASS	Transport Information	Environmental Confirmations	Siemens EcoTech	Environmental Confirmations

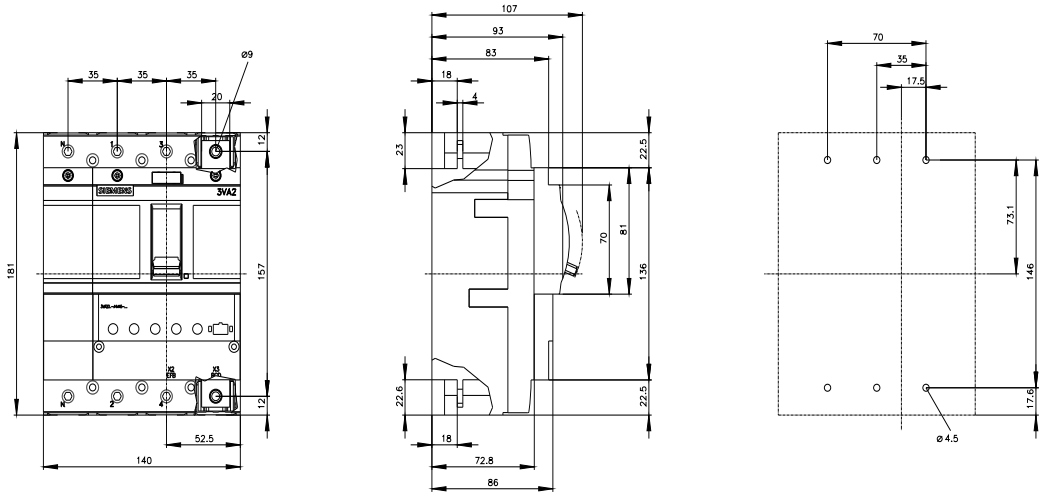
Environment

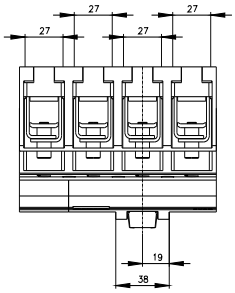
EPD

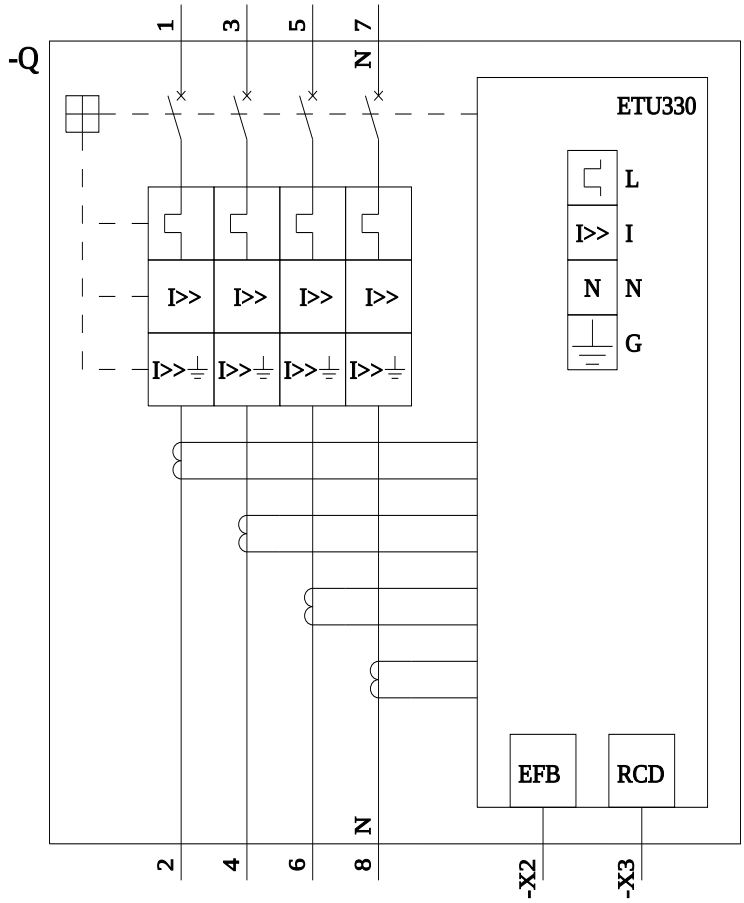
Further information

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=3VA2040-7HM46-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA2040-7HM46-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2040-7HM46-0AA0
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>







last modified: 4/3/2025