SIEMENS

Data sheet

3VA1116-4EF36-0AA0

circuit breaker 3VA1 IEC frame 160 breaking capacity class S Icu=36kA @ 415V 3-pole, line protection TM240, ATAM, In=160A overload protection Ir=112A...160A short-circuit protection Ii=5...10 x In clamp connection

product form a name	Model	
product designation Molded case circuit breaker design of the product Line protection design of the product Line protection TM240		CENTRON
design of the product		
Design of the overcurrent release		
Drotection function of the overcurrent release Li		·
Insulation voltage / rated value		
Insulation voltage / rated value		
Insulation voltage / rated value		3
Operating voltage / at DC / rated value		
poperating voltage / at AC / rated value		
power loss [W] / maximum		
mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / at AC-1 / at 380/415 V 9 000 electrical endurance (operating cycles) / at AC-1 / at 690 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version Without product function No • communication function No • other measurement function No Net Weight operational current • at 40 °C 160 A • at 45 °C 160 A • at 55 °C 155 A • at 65 °C 155 A • at 65 °C 153 A • at 65 °C 150 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker S maximum short-circuit current breaking capacity (Icu) • at 240 V 25 kA • at 415 V 36 kA • at 500 V 7 kA • at 415 V 36 kA • at 500 V 7 kA • at 415 V 36 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 415 V 36 kA • at 415 V 36 kA • at 540 V 55 kA • at 540 V 55 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 440 V 25 kA • at 415 V 36 kA • at 440 V 25 kA • at 500 V 5 kA • at 690 V 5 kA • at 690 V 5 kA		
electrical endurance (operating cycles) / at AC-1 / at 380/415 V 9 000		
electrical endurance (operating cycles) / at AC-1 / at 690 V 6 300		
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version • communication function • other measurement function No Net Weight Current operational current • at 40 °C • at 45 °C • at 45 °C • at 50 °C • at 65 °C • at 60 °C • at 65 °C • at 70 °C • at 70 °C Switching capacity according to IEC 60947 switching capacity class of the circuit breaker • at 440 °V • at 440 °V • at 440 °V • at 55 °C • at 65 °C • at 70 °C Switching capacity class of the circuit breaker sixthching capacity class of the circuit breaker • at 440 °V • at 440 °V • at 440 °V • at 440 °V • at 500 °V • at 690 °V operating short-circuit current breaking capacity (Ics) • at 240 °V • at 690 °V • 55 kA • at 440 °V • at 440 °V • at 500 °V • at 690 °V • 55 kA • at 440 °V • at 440 °V • at 500 °V • at 440 °V • at 500 °V • 50		
ground-fault monitoring version product function		
product function		No
	·	Without
● other measurement function No Net Weight 1.061 kg Current operational current ● at 40 °C 160 A ● at 45 °C 160 A ● at 55 °C 160 A ● at 60 °C 155 A ● at 60 °C 155 A ● at 70 °C 150 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker S maximum short-circuit current breaking capacity (Icu) ● at 240 V 55 kA ● at 450 V 7 kA ● at 690 V 7 kA operating short-circuit current breaking capacity (Ics) ● at 240 V 55 kA ● at 440 V 55 kA	·	
Net Weight		
Current operational current at 40 °C 160 A e at 45 °C 160 A e at 50 °C 160 A e at 55 °C 158 A e at 60 °C 155 A e at 65 °C 153 A e at 70 °C 150 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker S maximum short-circuit current breaking capacity (Icu) 55 kA e at 415 V 36 kA e at 440 V 25 kA e at 690 V 7 kA operating short-circuit current breaking capacity (Ics) 55 kA e at 440 V 55 kA e at 440 V 36 kA e at 440 V 55 kA e at 440 V 55 kA e at 440 V 55 kA e at 500 V 5 kA e at 690 V 5 kA		
operational current • at 40 °C • at 45 °C • at 50 °C • at 55 °C • at 60 °C • at 60 °C • at 60 °C • at 60 °C • at 70 °C Switching capacity according to IEC 60947 switching capacity class of the circuit breaker switching capacity class of the circuit breaker switching capacity class of the circuit breaker switching capacity class of the circuit breaker sharimum short-circuit current breaking capacity (Icu) • at 240 V • at 415 V • at 440 V • at 690 V operating short-circuit current breaking capacity (Ics) • at 240 V • at 690 V operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 415 V • at 415 V • at 415 V • at 440 V • at 690 V 55 kA • at 440 V • at 690 V • 55 kA • at 4500 V • at 690 V • 55 kA • at 690 V		1.061 kg
• at 40 °C • at 45 °C • at 50 °C • at 50 °C • at 60 °C • at 70 °C Switching capacity according to IEC 60947 switching capacity class of the circuit breaker switching capacity c	Current	
	operational current	
• at 50 °C • at 55 °C • at 60 °C • at 60 °C • at 65 °C • at 65 °C • at 65 °C • at 70 °C Switching capacity according to IEC 60947 switching capacity class of the circuit breaker s maximum short-circuit current breaking capacity (Icu) • at 240 V • at 415 V • at 450 V • at 690 V operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 440 V • at 440 V • at 440 V • at 440 V • at 450 V • at 450 V • at 4500 V • at 4500 V • at 4690 V • 55 kA • at 4690 V • 56 kA • at 690 V • 56 kA	• at 40 °C	160 A
 at 55 °C at 60 °C at 65 °C at 70 °C 153 A at 70 °C switching capacity according to IEC 60947 switching capacity class of the circuit breaker maximum short-circuit current breaking capacity (Icu) at 240 V at 415 V at 440 V at 500 V at 690 V 7 kA at 690 V operating short-circuit current breaking capacity (Ics) at 240 V at 440 V 55 kA at 690 V 55 kA at 690 V 55 kA at 440 V at 440 V 55 kA at 450 V 55 kA 56 kA 	• at 45 °C	160 A
 at 60 °C at 65 °C at 70 °C 153 A at 70 °C 150 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker maximum short-circuit current breaking capacity (Icu) at 240 V at 415 V at 440 V at 500 V at 690 V 7 kA at 690 V at 240 V at 240 V at 690 V 55 kA at 445 V at 690 V 55 kA at 440 V at 25 kA at 240 V at 240 V at 240 V at 415 V at 415 V at 440 V at 440 V at 440 V at 500 V at 500 V at 690 V 5 kA at 690 V 5 kA at 690 V 5 kA 	• at 50 °C	160 A
 at 65 °C at 70 °C 150 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker maximum short-circuit current breaking capacity (Icu) at 240 V at 415 V at 440 V at 500 V at 690 V operating short-circuit current breaking capacity (Ics) at 240 V at 415 V at 415 V at 240 V at 440 V at 415 V at 415 V at 440 V at 440 V at 440 V at 500 V at 690 V 5 kA at 690 V at 690 V 	● at 55 °C	158 A
at 70 °C Switching capacity according to IEC 60947 switching capacity class of the circuit breaker switching capacity class of the circuit breaker at 240 V at 240 V at 415 V at 500 V at 690 V operating short-circuit current breaking capacity (Ics) at 240 V at 240 V 55 kA 55 kA 55 kA 6 kA 55 kA 6 at 690 V 55 kA 6 at 440 V 6 5 kA 6 at 440 V 7 kA 6 at 690 V 6 5 kA 6 kA 6 at 690 V 6 5 kA 6 at 690 V 7 kA 6 skA	• at 60 °C	155 A
Switching capacity according to IEC 60947 switching capacity class of the circuit breaker maximum short-circuit current breaking capacity (Icu) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V Operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 690 V S5 kA • at 440 V • at 690 V 55 kA • at 45 V • at 690 V 55 kA • at 450 V • at 690 V 55 kA • at 690 V 55 kA	● at 65 °C	153 A
switching capacity class of the circuit breaker maximum short-circuit current breaking capacity (Icu) at 240 V at 415 V at 440 V at 55 kA at 500 V at 690 V operating short-circuit current breaking capacity (Ics) at 440 V at 415 V street at 440 V operating short-circuit current breaking capacity (Ics) at 240 V at 415 V at 440 V 55 kA at 4500 V 55 kA street 5 kA street 5 kA	• at 70 °C	150 A
maximum short-circuit current breaking capacity (Icu) 55 kA • at 240 V 55 kA • at 415 V 36 kA • at 500 V 7 kA • at 690 V 7 kA operating short-circuit current breaking capacity (Ics) 55 kA • at 240 V 55 kA • at 415 V 36 kA • at 440 V 25 kA • at 500 V 5 kA • at 690 V 5 kA	Switching capacity according to IEC 60947	
 at 240 V at 415 V at 440 V at 500 V at 690 V operating short-circuit current breaking capacity (Ics) at 240 V at 415 V at 415 V at 440 V at 440 V at 500 V at 690 V 5 kA at 690 V 	switching capacity class of the circuit breaker	S
 at 415 V at 440 V at 500 V at 690 V 7 kA operating short-circuit current breaking capacity (Ics) at 240 V at 415 V at 440 V at 440 V at 500 V at 690 V 5 kA 	maximum short-circuit current breaking capacity (Icu)	
 at 440 V at 500 V at 690 V 7 kA operating short-circuit current breaking capacity (Ics) at 240 V at 415 V at 440 V at 440 V at 500 V at 690 V 5 kA 	• at 240 V	55 kA
 at 500 V at 690 V 7 kA operating short-circuit current breaking capacity (Ics) at 240 V at 415 V at 440 V at 4500 V at 500 V at 690 V 5 kA 	• at 415 V	36 kA
	• at 440 V	25 kA
operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 55 kA 5 kA	• at 500 V	7 kA
 at 240 V at 415 V at 440 V at 500 V at 690 V 55 kA 5 kA 	• at 690 V	7 kA
 at 415 V at 440 V at 500 V at 690 V 5 kA 	operating short-circuit current breaking capacity (Ics)	
 at 440 V at 500 V at 690 V 5 kA 	• at 240 V	55 kA
at 500 V at 690 V 5 kA 5 kA	• at 415 V	36 kA
● at 690 V 5 kA	• at 440 V	25 kA
	• at 500 V	5 kA
short-circuit current making capacity (lcm)	• at 690 V	5 kA
	short-circuit current making capacity (lcm)	
• at 240 V 121 kA	• at 240 V	121 kA
• at 415 V 75.6 kA	• at 415 V	75.6 kA
• at 440 V 52.5 kA	• at 440 V	52.5 kA
• at 500 V 11.9 kA	● at 500 V	11.9 kA

● at 690 V	11.9 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter
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	112 A
maximum	160 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	1 s
maximum	1 s
adjustable response value setting current (li) / for I-tripping	
• minimum	800 A
• maximum	1 600 A
adjustable setting current (InN) / for N-tripping	
• minimum	0 A
maximum product function / grounding protection	0 A
product function / grounding protection	No
Mechanical Design	
product component	N-
undervoltage release	No
voltage trigger	No
• trip indicator	No .
height [in]	5.12 in
height	130 mm
width [in]	3 in
type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (1,5 - 70 mm²)
width	76.2 mm
depth [in]	2.76 in
depth	70 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	box terminal on both sides
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	Silver
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
	-25 °C 70 °C
during operation / minimum	
during operation / minimum during operation / maximum	70 °C
during operation / minimum during operation / maximum during storage / minimum during storage / maximum Environmental footprint	70 °C -40 °C
 during operation / minimum during operation / maximum during storage / minimum during storage / maximum 	70 °C -40 °C
during operation / minimum during operation / maximum during storage / minimum during storage / maximum Environmental footprint	70 °C -40 °C 80 °C
during operation / minimum during operation / maximum during storage / minimum during storage / maximum Environmental footprint Environmental Product Declaration(EPD)	70 °C -40 °C 80 °C
during operation / minimum during operation / maximum during storage / minimum during storage / maximum Environmental footprint Environmental Product Declaration(EPD) Global Warming Potential [CO2 eq] / total	70 °C -40 °C 80 °C Yes 190 kg
during operation / minimum during operation / maximum during storage / minimum during storage / maximum during storage / maximum Environmental footprint Environmental Product Declaration(EPD) Global Warming Potential [CO2 eq] / total Global Warming Potential [CO2 eq] / during manufacturing	70 °C -40 °C 80 °C Yes 190 kg 4.67 kg
during operation / minimum during operation / maximum during storage / minimum during storage / maximum during storage / maximum Environmental footprint Environmental Product Declaration(EPD) Global Warming Potential [CO2 eq] / total Global Warming Potential [CO2 eq] / during manufacturing Global Warming Potential [CO2 eq] / during operation	70 °C -40 °C 80 °C Yes 190 kg 4.67 kg 186 kg







Confirmation



Miscellaneous

General Product Approval

EMV

Test Certificates

<u>KC</u>





Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report

<u>Miscellaneous</u>

Marine / Shipping











CCS (China Classification Society)

other

Environment

Confirmation

Miscellaneous

Miscellaneous





Environmental Con-firmations

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=3VA1116-4EF36-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA1116-4EF36-0AA0

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1116-4EF36-0AA0

CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications

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