SIEMENS

Data sheet

3VA1140-4EF46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=40A OVERLOAD PROTECTION IR=28A ...40A SHORT CIRCUIT PROTECTION II=5...10 X IN NEUTRAL UNPROTECTED CABLE CONNECTION

Figure similar

Model	
product brand name	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Product variations	General Applications
Ground fault monitoring version	Without
Design of the auxiliary release	Without auxiliary release
Design of the auxiliary switch	Without
Design of the operating mechanism	toggle handle
Type of the driving mechanism / motor drive	No
Design of the overcurrent release	TM240

General technical data			
Number of poles		4	
Trip class / of the L-trip / with I2t characteristic / initial value		1	
Trip class / of the L-trip / with I2t characteristic / Full-scale value		1	
Electrical endurance (switching cycles)			
• at AC-1 / at 380/415 V / at 50/60 Hz		8 000	
circuit-breaker / Design		3VA	
Mechanical service life (switching cycles) / typical		15 000	

Voltage		
Insulation voltage / Rated value	V	800

Protection class

Protection class IP / on the front Protective function of the overcurrent release Switching capacity Switching capacity Switching capacity class of the circuit breaker S Discipation Active power loss • maximum W 10.8 Electricity Continuous current / Rated value / maximum Active power loss • maximum W 10.8 Electricity Continuous current / Rated value / maximum Adjustable response value current • of the current-dependent overload release / A 1 Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value Operating voltage • with AC / at 50/60 Hz / Rated value • v 600 Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 70 °C / R	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 10.8 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / A 1 Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of DPC / Rated value • of DPC / Rated value • of DPC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C /	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 10.8 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / A 1 Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 10.8 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • of the data value • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 70 °	Switching capacity		
Active power loss • maximum Electricity Confinuous current / Rated value / maximum A 160 Continuous current / Rated value • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the firstantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the instantaneous short-circuit release / initial value • of the current Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • of 40 °C / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated			S
Active power loss • maximum Maximum Maxi	Dissipation		
Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial A 5 value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated val			
Continuous current / Rated value / maximum Continuous current / Rated value Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value of the current-circuit release / initial value of the instantaneous short-circuit release / initial value of the current-circuit release / initial value	• maximum	W	10.8
Continuous current / Rated value Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value of the instantaneous short-circuit release / initial value Main circuit Operating voltage with AC / at 50/60 Hz / Rated value of rD C / Rated value of rD C / Rated value A 40 of 20 of Rated value of 39 of 40 of 50 Operating current of 40 of 50 Operating current of 40 of 50 Operating current of 60 of 70 of Rated value of 60 of 70 of Rated value of 60 of 70 of Rated value A 39 of 60 of 70 of Rated value A 38 of 70 of 70 of Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts of 1-trip / Full-scale value of 1-trip / Full-scale val	Electricity		
Adjustable response value current of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial A of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial A full-scale value of the instantaneous short-circuit release / initial value of the current-dependent overload release / initial value of the current-dependent overload release / initial value of the current-dependent overload release / initial value	Continuous current / Rated value / maximum	Α	160
of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value Main circuit Operating voltage with AC / at 50/60 Hz / Rated value v 690 for DC / Rated value v 690 Operating current at 40 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 60 °C / Rated value at 70 °C / Rated valu	Continuous current / Rated value	Α	40
Full-scale value of the instantaneous short-circuit release / initial value Main circuit Operating voltage with AC / at 50/60 Hz / Rated value of cr DC / Rated value V 690 Operating current at 40 °C / Rated value A 40 at 55 °C / Rated value A 40 at 65 °C / Rated value A 39 at 60 °C / Rated value A 39 at 65 °C / Rated value A 38 at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0.7	Adjustable response value current		
Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value A 39 • at 65 °C / Rated value A 38 • at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use System protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / Full-scale value • for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value		Α	1
Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value V 690 Operating current • at 40 °C / Rated value A 40 • at 50 °C / Rated value A 39 • at 60 °C / Rated value A 39 • at 60 °C / Rated value A 39 • at 60 °C / Rated value A 39 • at 60 °C / Rated value A 38 • at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitable parameters Adjustable parameters Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value A 0.7		Α	5
with AC / at 50/60 Hz / Rated value for DC / Rated value v 600 Operating current at 40 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value at 65 °C / Rated value at	Main circuit		
for DC / Rated value Operating current at 40 °C / Rated value at 50 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value A 39 at 60 °C / Rated value A 39 at 65 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of or N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value of Adjustable response value current / of the current-dependent overload release / initial value A 0.7	Operating voltage		
Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value A 38 • at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value A 40 at 55 °C / Rated value A 39 at 60 °C / Rated value A 39 at 60 °C / Rated value A 38 at 65 °C / Rated value A 38 at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 for N-conductor protection / initial value of or N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• for DC / Rated value	V	600
at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value At 38 at 70 °C / Rated value At 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability for use system protection Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value At 0.7	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 38 at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• at 40 °C / Rated value	Α	40
at 60 °C / Rated value at 65 °C / Rated value A 38 at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• at 50 °C / Rated value	Α	40
at 65 °C / Rated value at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value Adjustable response value current / of the current- dependent overload release / initial value A 0.7	• at 55 °C / Rated value	Α	39
at 70 °C / Rated value A 37 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current Adjustable response value current / of the current-dependent overload release / initial value A 0.7	• at 60 °C / Rated value	Α	39
Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value	• at 65 °C / Rated value	Α	38
Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value 0 System protection A 10 0 0 0 0 0 0 0 0 0 0 0 0	• at 70 °C / Rated value	Α	37
Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value 0 System protection A 10 A 0 0 0 0 0 0 0 0 0 0 0 0 0	Auxiliary circuit		
Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value system protection A 0 0 0 0 0 0 0 0 0 0 0 0 0			0
Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value system protection A 0 0 0 0 0 0 0 0 0 0 0 0 0	Suitability		
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of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value A 10 A 0 A 0 A 0 A 0.7			
 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0 0.7	Adjustable response value current		
• for N-conductor protection / Full-scale value Adjustable response value current / of the current- dependent overload release / initial value A 0 0.7	● of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- dependent overload release / initial value	• for N-conductor protection / initial value	Α	0
dependent overload release / initial value	• for N-conductor protection / Full-scale value	Α	0
Draduat dataila	•	Α	0.7
Product details	Product details		
Product component			

		N
• Trip indicator		No
display		No
Voltage trigger		No
undervoltage release		No
 undervoltage release with leading contact 		No
Product property		
 for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof 		No
Product expansion / optional / motor drive		Yes
Product function		
Product function		
 Intrinsic device protection 		Yes
• communication function		No
Phase failure detection		No
 other measurement function 		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1140-4EF46-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• at 240 V / Rated value	kA	55
• at 415 V / Rated value	kA	36
• at 440 V / Rated value	kA	25
• at 500 V / Rated value	kA	15
• at 690 V / Rated value	kA	5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	55
● at 415 V / Rated value	kA	36
● at 440 V / Rated value	kA	25
• at 500 V / Rated value	kA	16
• at 690 V / Rated value	kA	7
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	121
• at 415 V / Rated value	kA	75.6
• at 690 V / Rated value	kA	7.5
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		

 of the round conductor terminal / stranded 		1 x (1.5 - 70 mm²)
Type of electrical connection / for main current circuit		Box terminal
Mechanical Design		
		100
Height	mm	130
Width	mm	101.6
Depth	mm	70
Mounting type		fixed mounting
Environmental conditions		
Ambient temperature		
during operation / minimum	°C	-25
during operation / maximum	°C	70
during storage / minimum	°C	-40
during storage / maximum	°C	80
Certificates		
Equipment marking		
• acc. to DIN EN 61346-2		Q
• acc. to DIN EN 81346-2		Q

General

Product

Approval

other

EMC



Declaration of

Conformity



Shipping Approval



other

other

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)
https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA11404EF460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11404EF460AA0/all

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

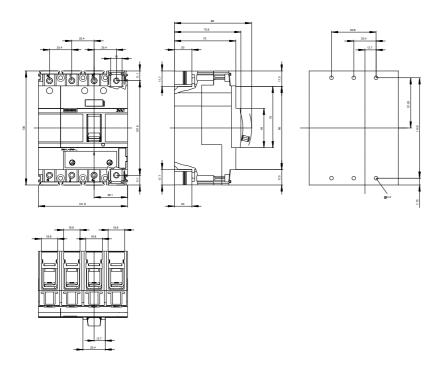
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11404EF460AA0

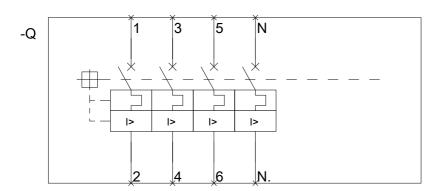
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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