SIEMENS

Data sheet

3VA1150-3GE46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=50A OVERLOAD PROTECTION IR=35A ...50A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 100% 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	TM220

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 N Dissipation Active power loss • maximum W 14.6 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / A 50 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 • for DC / Rated value • of the OP C / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 70 °	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker N Dissipation	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum M	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum M	Switching capacity		
Active power loss			N
Active power loss	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 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 2 Rated value • at 40 °C / Rated value • at 40 °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 67 °C / Rated value • at 67 °C / Rated value • at 68 °C / Rated value • at 69 °C / Rated value • at 70 °C / Rated			
Continuous current / Rated value / maximum Continuous current / Rated value A 50 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 of or DC / Rated value V 690 Operating current at 40 °C / Rated value A 50 at 55 °C / Rated value A 50 at 60 °C / Rated value A 48 at 60 °C / Rated value A 48 at 60 °C / Rated value A 46 at 65 °C / Rated value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts Osultability Suitability Suitability Full-scale value of or N-conductor protection / Full-scale value for N-conductor protection / Full-scale value of or N-conductor protection / Full-scale value A 100 Adjustable response value current of the current-	• maximum	W	14.6
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 current-of the cur	Electricity		
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-ci	Continuous current / Rated value / maximum	А	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 of DC / Rated value v 600 Operating current at 40 °C / Rated value at 55 °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 67 °C / Rated value at 68 °C / Rated value at 67 °C / Rated value at 68 °C / Rated value	Continuous current / Rated value	Α	50
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 • at 40 °C / Rated value • at 40 °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 70 °C / Rated value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitable parameters Adjustable parameters Adjustable response value current • 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-	Adjustable response value current		
Main circuit		Α	1
Operating voltage		Α	10
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 60 °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 value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitable 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 Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current-	Main circuit		
for DC / Rated value V 600 Operating current at 40 °C / Rated value A 50 at 50 °C / Rated value A 50 at 55 °C / Rated value A 49 at 60 °C / Rated value A 48 at 65 °C / Rated value A 46 at 65 °C / Rated value A 45 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 A 10 e for N-conductor protection / initial value A 100 Adjustable response value current / of the current- A 0.7			
Operating current • at 40 °C / Rated value A 50 • at 50 °C / Rated value A 49 • at 55 °C / Rated value A 48 • at 60 °C / Rated value A 46 • at 70 °C / Rated value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value A 10 • for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 0.7	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value At 48 at 70 °C / Rated value At 45 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 for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current-	• for DC / Rated value	V	600
at 50 °C / Rated value 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 At 48 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 A 10 of or N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current of N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current- A 0.7	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value At 48 At 46 at 70 °C / Rated value At 45 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 of rN-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current-	• at 40 °C / Rated value	Α	50
at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 46 at 70 °C / Rated value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability Suitabile 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 Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current- A 0.7	• at 50 °C / Rated value	Α	50
at 65 °C / Rated value at 70 °C / Rated value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts 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 Adjustable response value current / of the current- Adjustable response value current / of the current- A 0.7	• at 55 °C / Rated value	Α	49
at 70 °C / Rated value A 45 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability for use 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-	• at 60 °C / Rated value	Α	48
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- Adjustable response value current / of the current-	• at 65 °C / Rated value	Α	46
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- Adjustable response value current / of the current-	• at 70 °C / Rated value	Α	45
Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 for N-conductor protection / initial value A 100 for N-conductor protection / Full-scale value A 100 Adjustable response value current / of the current- A 0.7	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 Adjustable response value current / of the current- Adjustable response value current / of the current-			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 Adjustable response value current / of the current- Adjustable response value current / of the current-	Suitability		
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- A 0.7	· · · · · · · · · · · · · · · · · · ·		system protection
 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- A 0.7 	Adjustable parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 0.7 	Adjustable response value current		
 ◆ for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 0.7 	• of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- A 0.7	• for N-conductor protection / initial value	А	100
	• for N-conductor protection / Full-scale value	Α	100
	•	A	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		3VA1150-3GE46-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• at 240 V / Rated value	kA	36
● at 415 V / Rated value	kA	25
• at 440 V / Rated value	kA	16
• at 500 V / Rated value	kA	8
at 690 V / Rated value	kA	5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	36
● at 415 V / Rated value	kA	25
• at 440 V / Rated value	kA	16
• at 500 V / Rated value	kA	8
• at 690 V / Rated value	kA	7
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	75.6
• at 415 V / Rated value	kA	52.5
• 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 condu	uctor terminal / stra	anded			1 x (1.5 - 70 mm²)	
Type of electrical conne	ection / for main cu	rrent circuit			Box terminal	
Mechanical Design						
Height			mm		130	
Width			mm		101.6	
Depth			mm		70	
Mounting type					fixed mounting	
Environmental condition	ons					
Ambient temperature						
during operation /	minimum		°C		-25	
during operation /	maximum		°C		70	
during storage / m	ninimum		°C		-40	
during storage / m	naximum		°C		80	
Certificates						
Equipment marking						
• acc. to DIN EN 61346-2				Q		
• acc. to DIN EN 81346-2				Q		
General E	EMC	Declaration	n of	Ship	pping Approval	other



Product

Approval

other



Conformity





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/3VA11503GE460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11503GE460AA0/all

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

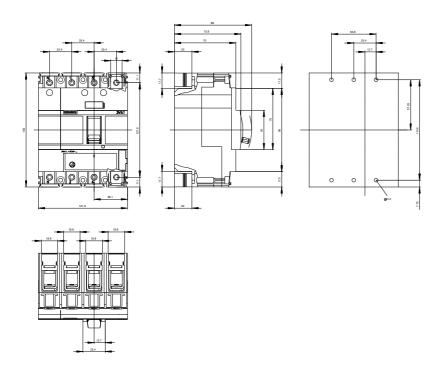
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11503GE460AA0

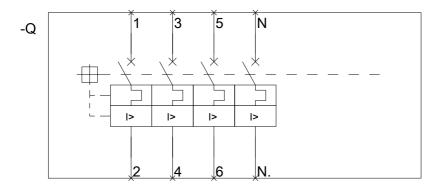
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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