# **SIEMENS**

## Datasheet

# 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

product brand nameSENTRONProduct designationMolded case circuit breakerDesign of the productLine protectionProduct variationsGeneral ApplicationsGround fault monitoring versionWithoutDesign of the auxiliary releaseWithout auxiliary releaseDesign of the auxiliary switchWithout	
Design of the productLine protectionProduct variationsGeneral ApplicationsGround fault monitoring versionWithoutDesign of the auxiliary releaseWithout auxiliary release	
Product variationsGeneral ApplicationsGround fault monitoring versionWithoutDesign of the auxiliary releaseWithout auxiliary release	
Ground fault monitoring version     Without       Design of the auxiliary release     Without auxiliary release	
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       1         value       1	
Trip class / of the L-trip / with I2t characteristic / Full-       1         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	

Protective function of the overcurrent release     L1       Switching capacity     N       Switching capacity class of the circuit breaker     N       Dissipation     Adve power loss          • maximum       W         14.6       Electricity         Operating current / at 45 °C / Rated value       A       50         Continuous current       A       50         • Rated value       A       50         Adjustable response value current       A       50         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         value       V       600       600         Operating voltage       V       600         • of the instantaneous short-circuit release / initial value       Y       600         Voltage value       Q       1200         Main circuit       Querent       V       600         • of the instantaneous short-circuit release / initial value       Y       600         Operating voltage       V       600       600         Operating voltage       V       600       600         Operating voltage       A       40       50	Protection class		
Switching capacity class of the circuit breaker     N       Dissipation     M       Active power loss	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker     N       Dissipation     M       Active power loss	Switching capacity		
Active power loss     W     14.6          • maximum      W     14.6           2 Operating current / at 45 °C / Rated value      A     50           Continuous current      • Rated value / maximum      A     160           Continuous current      • Rated value      A     50           Adjustable response value current      • Of the current-dependent overload release /      A     1           Full-scale value      • Of the instantaneous short-circuit release / initial       value      A     10           Met weight        g        1 2000             Main circuit                 Operating wortage   of the current-dependent value			N
Active power loss     W     14.6          • maximum      W     14.6           2 Operating current / at 45 °C / Rated value      A     50           Continuous current      • Rated value / maximum      A     160           Continuous current      • Rated value      A     50           Adjustable response value current      • Of the current-dependent overload release /      A     1           Full-scale value      • Of the instantaneous short-circuit release / initial       value      A     10           Met weight        g        1 2000             Main circuit                 Operating wortage   of the current-dependent value		_	
• maximumW14.6ElectricityOperating current / at 45 °C / Rated valueA50Continuous current / Rated value / maximumA160Continuous current / • Rated valueA50Adjustable response value current • of the current-dependent overload release / Full-scale valueA1• of the current-dependent overload release / Full-scale valueA1• of the instantaneous short-circuit release / initial valueA10Net weightg1 200Mein circuitV690Operating voltage • with AC / at 50/60 Hz / Rated valueV690Operating voltage • for DC / Rated valueV690Operating current • at 40 °C / Rated valueA50• at 55 °C / Rated valueA50• at 65 °C / Rated valueA46• at 65 °C / Rated valueA45Auxiliary circuitI0Suitability for useSystem protectionAdjustable parametersA10Adjustable parametersA10• for N-conductor protection / initial valueA10		_	
Electricity       Verticity         Operating current / at 45 °C / Rated value       A       50         Continuous current       A       160         Continuous current       A       50         Adjustable response value current       A       50         - of the current-dependent overload release / Full-scale value       A       1         - of the current-dependent overload release / Full-scale value       A       10         - of the instantaneous short-circuit release / initial value       B       10         Pot weight       g       1 200         Main circuit       Operating voltage       V         - with AC / at 50/60 Hz / Rated value       V       690         - for DC / Rated value       V       690         - of C / Rated value       A       50         - at 40 °C / Rated value       A       50         - at 50 °C / Rated value       A       48         - at 60 °C / Rated value       A       46         - at 60 °C / Rated value       A       45         Auxiliary contacts       0       0         Suitability       system protection       Adjustable parameters         Adjustable parameters       A       10         - of I-trip / Full		10/	14.6
Operating current / at 45 °C / Rated value     A     50       Continuous current / Rated value / maximum     A     160       Continuous current     A     50       Adjustable response value current     A     50       • of the current-dependent overload release / Full-scale value     A     1       • of the instantaneous short-circuit release / initial value     A     10       • of the instantaneous short-circuit release / initial value     A     10       Vet weight     g     1 200       Main circuit     V     690       Operating voltage     V     690       • with AC / at 50/60 Hz / Rated value     V     690       • of D / Rated value     A     50       • at 40 °C / Rated value     A     50       • at 40 °C / Rated value     A     50       • at 55 °C / Rated value     A     48       • at 65 °C / Rated value     A     46       • at 70 °C / Rated value     A     45       Auxiliary circuit     Number of CO contacts     0       • for auxiliary contacts     0     5       Suitability     for auxiliary contacts     0       • of I-trip / Full-scale value     A     10       • of I-trip / Full-scale value     A     10	• maximum	VV	14.0
Continuous current / Rated value / maximum       A       160         Continuous current       A       50         Adjustable response value current       A       50         Adjustable response value current       A       1         • of the current-dependent overload release / Initial value       A       10         • of the instantaneous short-circuit release / Initial value       A       10         • of the instantaneous short-circuit release / Initial value       A       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       A       50         • at 40 °C / Rated value       A       50         • at 50 °C / Rated value       A       50         • at 50 °C / Rated value       A       46         • at 65 °C / Rated value       A       46         • at 65 °C / Rated value       A       45         Auxiliary circuit       Auxiliary circuit       A         Number of CO contacts       0       0         • for auxiliary contacts       0       Sultability         • Suitability for use       system protection       Adjustable response value current         • of I-trip / Full-scale val			
Continuous current       A       50         Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       A       10         • Net weight       g       1 200         Main circuit       P       690         • of n CC / Rated value       V       690         • for DC / Rated value       V       600         Operating current       V       600         • at 40 °C / Rated value       A       50         • at 50 °C / Rated value       A       50         • at 55 °C / Rated value       A       48         • at 65 °C / Rated value       A       46         • at 65 °C / Rated value       A       45         Auxiliary circuit       A       46         Number of CO contacts       0       0         Suitability       System protection       A         • for auxiliary contacts       0       0         Suitability       system protection       A         • for Auxiliary contacts       0       10	Operating current / at 45 °C / Rated value	А	50
• Rated value       A       50         Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         • of the instantaneous short-circuit release / initial value       G       10         • Net weight       g       1 200         Main circuit       G       690         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       600         Operating current       V       600         • at 40 °C / Rated value       A       50         • at 50 °C / Rated value       A       49         • at 65 °C / Rated value       A       46         • at 65 °C / Rated value       A       45         Auxiliary circuit       A       45         Auxiliary contacts       0       0         Soltability       system protection         • for auxiliary contacts       is system protection         Adjustable response value current       A       10         • of I-trip / Full-scale value       A       10	Continuous current / Rated value / maximum	А	160
Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       A       0         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating ourent       V       600         • at 40 °C / Rated value       A       50         • at 50 °C / Rated value       A       48         • at 60 °C / Rated value       A       48         • at 65 °C / Rated value       A       45         Auxiliary circuit       A       45         Number of CO contacts       0       0         • for auxiliary contacts       0       0         Suitability       system protection       A         • Suitability for use       system protection       A         • of I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       100 <td>Continuous current</td> <td></td> <td></td>	Continuous current		
• of the current-dependent overload release / Full-scale value       A       1         • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       G       G         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       -       -         • at 40 °C / Rated value       A       50         • at 50 °C / Rated value       A       49         • at 60 °C / Rated value       A       46         • at 65 °C / Rated value       A       45         Auxiliary circuit       A       45         Number of CO contacts • for auxiliary contacts       0         Suitability       -       system protection         • Suitability for use       system protection         Adjustable response value current • of 1-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       100	Rated value	А	50
Full-scale value       A       10         Net weight       g       1 200         Main circuit       g       1 200         Main circuit       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       4       50         • at 40 °C / Rated value       A       50         • at 50 °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       A       45         Auxiliary circuit       D       0         Suitability       system protection         • for auxiliary contacts       0         Suitability for use       system protection         Adjustable response value current       A       10         • for N-conductor protection / initial value       A       100	Adjustable response value current		
• of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       Operating voltage       Image: Circuit AC / at 50/60 Hz / Rated value       V       690         • with AC / at 50/60 Hz / Rated value       V       690       600         Operating current       V       600         • at 40 °C / Rated value       A       50         • at 40 °C / Rated value       A       50         • at 50 °C / Rated value       A       50         • at 50 °C / Rated value       A       49         • at 60 °C / Rated value       A       46         • at 60 °C / Rated value       A       45         Auxiliary circuit       A       45         Number of CO contacts       0       0         • for auxiliary contacts       0       0         Suitability       System protection       4         • Adjustable response value current       A       10         • for N-conductor protection / initial value       A       100		А	1
value     g     1 200       Main circuit     g     1 200       Operating voltage     690       or D C / Rated value     V     690       or D C / Rated value     V     600       Operating current     7       at 40 °C / Rated value     A     50       at 50 °C / Rated value     A     50       at 50 °C / Rated value     A     49       at 60 °C / Rated value     A     48       at 65 °C / Rated value     A     45       Auxiliary circuit     O     Suitability for use     System protection       Suitability for use     system protection     A       Adjustable response value current     A     10       of I-trip / Full-scale value     A     100	Full-scale value		
Netweight         g         1 200           Main circuit            Operating voltage            • with AC / at 50/60 Hz / Rated value         V         690           • for DC / Rated value         V         690           • for DC / Rated value         V         690           • of DC / Rated value         V         600           Operating current             • at 40 °C / Rated value         A         50           • at 40 °C / Rated value         A         50           • at 50 °C / Rated value         A         40           • at 60 °C / Rated value         A         48           • at 60 °C / Rated value         A         46           • at 60 °C / Rated value         A         45           • at 60 °C / Rated value         A         45           • at 65 °C / Rated value         A         45           • bor of CO contacts         0         0           • for auxiliary contacts         0         0           Suitability for use         system protection           • Adjustable response value current         A         10           • of I-trip / Full-scale value         A         100		A	10
Main circuit         Operating voltage         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current			
Operating voltage       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current	Net weight	g	1 200
• with AC / at 50/60 Hz / Rated valueV690• for DC / Rated valueV600Operating current-• at 40 °C / Rated valueA50• at 50 °C / Rated valueA50• at 50 °C / Rated valueA49• at 60 °C / Rated valueA48• at 60 °C / Rated valueA46• at 60 °C / Rated valueA45• at 60 °C / Rated valueA45• at 60 °C / Rated valueA45• at 70 °C / Rated valueA45• for auxiliary contacts0• for auxiliary contacts0Suitability	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         • at 65 °C / Rated value       A       45         • at 70 °C / Rated value       A       45         Auxiliary circuit       D       D         Suitability       O       O         Suitability       System protection       A         • Suitability for use       System protection         Adjustable parameters       A       10         • of I-trip / Full-scale value       A       100	Operating voltage		
Operating current     A     50       • 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     46       • at 70 °C / Rated value     A     45       Auxiliary circuit     Distribution     Distribution       Auxiliary contacts     0     0       Suitability     System protection     A       • for auxiliary contacts     0     10       Adjustable response value current     A     100	<ul> <li>with AC / at 50/60 Hz / Rated value</li> </ul>	V	690
• at 40 °C / Rated valueA50• at 50 °C / Rated valueA50• at 55 °C / Rated valueA49• at 60 °C / Rated valueA48• at 65 °C / Rated valueA46• at 70 °C / Rated valueA45• at 70 °C / Rated valueA45• for auxiliary contacts0Suitabilityo• Suitability for usesystem protectionAdjustable parametersA10• of I-trip / Full-scale valueA100	<ul> <li>for DC / Rated value</li> </ul>	V	600
at 50 °C / Rated valueA50• at 50 °C / Rated valueA49• at 55 °C / Rated valueA48• at 60 °C / Rated valueA48• at 65 °C / Rated valueA46• at 70 °C / Rated valueA45Auxiliary circuitNumber of CO contacts • for auxiliary contacts• for auxiliary contacts0Suitability for useAdjustable parametersAdjustable response value current • of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA100	Operating current	-	
at 55 °C / Rated value       A       49         • at 55 °C / Rated value       A       48         • at 60 °C / Rated value       A       48         • at 65 °C / Rated value       A       46         • at 70 °C / Rated value       A       45         Auxiliary circuit       A       45         Auxiliary contacts       0       0         Suitability       System protection         Adjustable parameters       A       10         • for N-conductor protection / initial value       A       100	• at 40 °C / Rated value	А	50
e at 60 °C / Rated value       A       48         • at 60 °C / Rated value       A       46         • at 65 °C / Rated value       A       45         Auxiliary circuit       A       45         Auxiliary circuit       0       0         Suitability       0       0         Suitability       5       5         Adjustable parameters       A       10         • for N-conductor protection / initial value       A       100	• at 50 °C / Rated value	А	50
• at 65 °C / Rated valueA46• at 70 °C / Rated valueA45Auxiliary circuitA45Auxiliary circuit0Number of CO contacts • for auxiliary contacts0Suitability99• Suitability for usesystem protectionAdjustable parameters4Adjustable response value current • of I-trip / Full-scale valueA10Adjustable response valueA100	• at 55 °C / Rated value	А	49
• at 70 °C / Rated valueA45Auxiliary circuitImage: Auxiliary circuitNumber of CO contacts0• for auxiliary contacts0Suitability9• Suitability for usesystem protectionAdjustable parameters10Adjustable response value currentA• of I-trip / Full-scale valueA• for N-conductor protection / initial valueA10	● at 60 °C / Rated value	А	48
Auxiliary circuit         Number of CO contacts       0         • for auxiliary contacts       0         Suitability       •         • Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	● at 65 °C / Rated value	А	46
Number of CO contacts       0         • for auxiliary contacts       0         Suitability       0         • Suitability for use       system protection         • Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	● at 70 °C / Rated value	А	45
Number of CO contacts       0         • for auxiliary contacts       0         Suitability       0         • Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	Auviliant aircuit	_	
• for auxiliary contacts0SuitabilitySuitability for usesystem protection• Suitable parameterssystem protectionAdjustable parametersAdjustable response value current • of I-trip / Full-scale valueA• of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA100		_	
Suitability       system protection         • Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A			0
• Suitability for use       system protection         Adjustable parameters       Adjustable response value current         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	-		
Adjustable parameters       Adjustable response value current       • of I-trip / Full-scale value     A       • for N-conductor protection / initial value     A			
Adjustable response value current     A       • of I-trip / Full-scale value     A     10       • for N-conductor protection / initial value     A     100	Suitability for use		system protection
• of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA100	Adjustable parameters		
for N-conductor protection / initial value     A     100	Adjustable response value current		
	<ul> <li>of I-trip / Full-scale value</li> </ul>	А	10
for N-conductor protection / Full-scale value     A     100	<ul> <li>for N-conductor protection / initial value</li> </ul>	А	100
	<ul> <li>for N-conductor protection / Full-scale value</li> </ul>	А	100

Adjustable response value current / of the current- dependent overload release / initial value	А	0.7
-		
Appearance		
Product details		
Product component		
Trip indicator		No
• display		No
<ul> <li>Voltage trigger</li> </ul>		No
<ul> <li>undervoltage release</li> </ul>		No
<ul> <li>undervoltage release with leading contact</li> </ul>		No
Product property		
<ul> <li>for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof</li> </ul>		No
Product expansion	_	
• optional		
— motor drive		Yes
Product function	_	
Product function		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
<ul> <li>communication function</li> </ul>		No
<ul> <li>Phase failure detection</li> </ul>		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1150-3GE46-0AA0
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
	kA	16
<ul> <li>at 440 V / Rated value</li> </ul>		
<ul> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> </ul>	kA	8
<ul> <li>at 440 V / Rated value</li> <li>at 500 V / Rated value</li> <li>at 690 V / Rated value</li> </ul>		8 7

EHC		EG-Konf.		GL			
General Product Approval	EMC other	Declaration Conformity			oping roval	other	
acc. to DIN EN		_			Q		
<ul> <li>acc. to DIN EN</li> </ul>					Q		
Reference code							
Certificates							
<ul> <li>during storage</li> </ul>	/ maximum		°C		80		
<ul> <li>during storage / minimum</li> </ul>		°C		-40			
<ul> <li>during operation / maximum</li> </ul>		°C		70			
<ul> <li>during operation / minimum</li> </ul>		°C		-25			
Ambient temperature	•						
Environmental cond	itions						
Mounting type				fixed mounting			
Depth			mm		70		
Width			mm		101.6		
Mechanical Design Height			mm		130		
• for main curren					Box termina	I	
Design of the electric					1 X (1.0 - 70		
	conductor cross-sect				1 x (1.5 - 70 mm²)		
• for main curren		ion			Front terminal		
Arrangement of elect					<b>-</b>		
Connections			_				
• at 690 V / Rate	d value		kA		7.5		
• at 415 V / Rate	d value		kA		52.5		

### 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

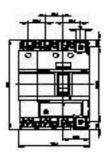
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11503GE460AA0/all

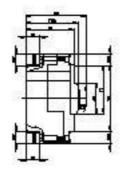
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11503GE460AA0

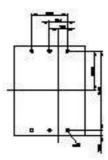
# CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications http://ausschreibungstexte.siemens.com/tiplv







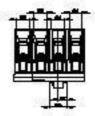


Figure similar

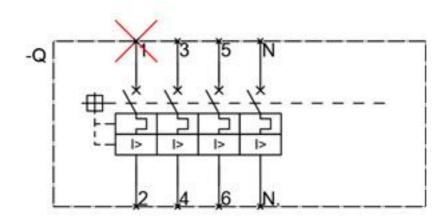


Figure similar

last modified:

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