# **SIEMENS**

## Data sheet

## 3VA1150-6GE42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 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% BUSBAR CONNECTION

Figure similar

Model		
product brand name	SENTRO	N
Product designation	Molded o	case circuit breaker
Design of the product	Line prot	tection
Product variations	General	Applications
Ground fault monitoring version	Without	
Design of the auxiliary release	Without a	auxiliary release
Design of the auxiliary switch	Without	
Design of the operating mechanism	toggle ha	andle
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  LI  Switching capacity Switching capacity class of the circuit breaker  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 / A 1  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 • 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	Protection class IP		IP40
Switching capacity  Switching capacity class of the circuit breaker  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 / 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  • for DC / Rated value  • of DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  •	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker  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  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the C / Rated value  • of DC / Rated value  • of DC / Rated value  • at 40 °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  • at 60 °C / Rated	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker  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  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the C / Rated value  • of DC / Rated value  • of DC / Rated value  • at 40 °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  • at 60 °C / Rated	Switching capacity		
Active power loss			Н
Active power loss  • maximum  Electricity  Continuous 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  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 65 °C / Rated val	Dissipation		
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  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 65 °C / Rated value  • at 67 °C / Rated value  • at 70 °C			
Continuous current / Rated value / maximum	• 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 va	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 sh	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     of or DC / Rated value     v 600  Operating current     at 40 °C / Rated value     A 50     at 55 °C / Rated value     A 50     at 55 °C / Rated value     A 49     at 66 °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 / for auxiliary contacts  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value     of or N-conductor protection / Full-scale 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  Operating current  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 55 °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  OSuitability  Suitable parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-  Adjustable response value current / of the current-	Adjustable response value current		
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  • 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 46  • at 70 °C / Rated value  A 45  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  Adjustable response value current / of the current-  Adjustable response value current / of the current-		Α	1
Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  A 48  • at 65 °C / Rated value  • at 65 °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  • 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-		Α	10
with AC / at 50/60 Hz / Rated value     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  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-	Main circuit		
for DC / Rated value  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 60 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 65 °C / Rated value     at 70 °C / Rated value     A 45  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     for N-conductor protection / initial value     of or N-conductor protection / Full-scale value  Adjustable response value current / of the current-  A 0.7	Operating voltage		
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 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  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of l-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	• with AC / at 50/60 Hz / Rated value	V	690
<ul> <li>at 40 °C / Rated value</li> <li>at 50 °C / Rated value</li> <li>at 55 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 45</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts <ul> <li>Suitability</li> <li>Suitability for use</li> <li>system protection</li> </ul> Adjustable parameters Adjustable response value current <ul> <li>of I-trip / Full-scale value</li> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> </ul> Adjustable response value current / of the current- <ul> <li>Adjustable response value current / of the current-</li> <li>Adjustable response value current / of the current-</li> </ul>	• for DC / Rated value	V	600
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 70 °C / Rated value At 46 at 70 °C / Rated value At 45  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-  Adjustable response value current / of the current-	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 At 45  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability  Suitable parameters  Adjustable parameters  Adjustable response value current of I-trip / Full-scale value of or N-conductor protection / initial value of or 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 40 °C / Rated value	Α	50
at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  A 46  A 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-  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  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-  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  of or 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 A 10  for N-conductor protection / initial value A 100  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 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  Adjustable response value current / of the current-  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
<ul> <li>of I-trip / Full-scale value</li> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> <li>A 0.7</li> </ul>	Adjustable parameters		
<ul> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> <li>A 0.7</li> </ul>	Adjustable response value current		
<ul> <li>◆ for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-</li> <li>A 0.7</li> </ul>	• of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- A 0.7	• for N-conductor protection / initial value	Α	100
	• for N-conductor protection / Full-scale value	Α	100
dependent overload release / initial value	-	Α	0.7
Product details	Product details		
Product component			

		NI
• Trip indicator		No
• display		No
Voltage trigger		No
undervoltage release		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		
Intrinsic device protection		Yes
communication function		No
Phase failure detection		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1150-6GE42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
• at 240 V / Rated value	kA	100
● at 415 V / Rated value	kA	70
● at 440 V / Rated value	kA	36
• 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	100
• at 415 V / Rated value	kA	70
• at 440 V / Rated value	kA	36
• at 500 V / Rated value	kA	20
• at 690 V / Rated value	kA	10
Short-circuit current making capacity (Icm)		
• at 240 V / Rated value	kA	220
• at 415 V / Rated value	kA	154
• at 690 V / Rated value	kA	17
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		

• for flat-bar terminal connection / minimum	12 x 0
• for flat-bar terminal connection / maximum	17 x 6.5
Type of electrical connection / for main current circuit	Lug terminal

Mechanical Design				
Height	mm	130		
Width	mm	101.6		
Depth	mm	70		
Mounting type		fixed mounting		

Environmental conditions					
Ambient temperature					
<ul><li>during operation / minimum</li></ul>	°C	-25			
<ul><li>during operation / maximum</li></ul>	°C	70			
<ul><li>during storage / minimum</li></ul>	°C	-40			
• during storage / maximum	°C	80			

C	er	tıtı	ca	tes	

**Equipment marking** 

acc. to DIN EN 61346-2acc. to DIN EN 81346-2

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





other



Q

Q





GL

### 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/3VA11506GE420AA0

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

http://support.automation.siemens.com/WW/view/en/3VA11506GE420AA0/all

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

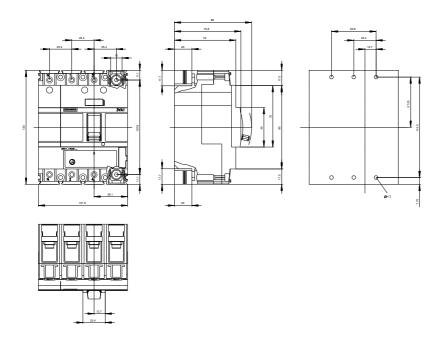
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11506GE420AA0

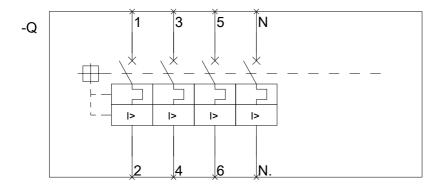
**CAx-Online-Generator** 

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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