# **SIEMENS**

## Data sheet

## 3VA1150-6EE46-0AA0



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 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	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

Protective function of the overcurrent release  LI  Switching capacity Switching capacity class of the circuit breaker  H  Dissipation  Active power loss  • maximum  Electricity Confinuous current / Rated value / maximum	Protection class IP		IP40
Switching capacity Class of the circuit breaker H  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  Main circuit  Operating voltage  • 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 55 °C / Rated value A 50  • at 65 °C / Rated value A 48  • at 65 °C / Rated value A 46  • at 70 °C / Rated value A 46  • at 70 °C / Rated value A 46  • at 70 °C / Rated value A 45  Maxiliary circuit  Number of CO contacts / for auxiliary contacts  Ocultability  Suitability  Suitability or use  Adjustable response value current  • of I-trip / Full-scale value  • of I-trip / Full-scale value	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker    Dissipation   Active power loss   • maximum   W   14.6	Protective function of the overcurrent release		и
Switching capacity class of the circuit breaker    Dissipation   Active power loss   • maximum   W   14.6	Switching capacity		
Active power loss  • maximum    M			Н
Active power loss  • maximum    M	Dissipation		
Continuous current / Rated value / maximum	Active power loss		
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 value  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of or DC / Rated value  value  Operating current  at 40 °C / Rated value  A 50  of at 50 °C / Rated value  at 50 °C / Rated value  at 60 °C / Rated value  at 70 °C / Rated value  at 70 °C / Rated value  at 70 °C / Rated value  Addistable value  Addistable parameters  Adjustable parameters  Adjustable response value current  of 1-trip / Full-scale value  A 10	Electricity		
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  • 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 70 °C / Rated value  A 48  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	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     volume     of DC / Rated value     volume  Operating current      at 40 °C / Rated value     A 50     or / Rated value     at 55 °C / Rated value     at 55 °C / Rated value     at 60 °C / Rated value     at 70 °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 I-trip / Full-scale value  A 10	Continuous current / Rated value	А	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 50 °C / Rated value  • at 50 °C / Rated value  • 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  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Adjustable response value current		
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • to 7 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 65 °C / Rated value  • at 65 °C / Rated value  • at 670 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °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  A 10		Α	1
Operating voltage  • 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 55 °C / Rated value  • at 65 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 67 °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  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10		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 49     at 65 °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  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value     A 10	Main circuit		
for DC / Rated value         V 600  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 65 °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 I-trip / Full-scale value  A 10	Operating voltage		
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 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 for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 50  A 49  A 48  A 46  A 45	• 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 60 °C / Rated value  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   Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 50  A 49  A 48  A 46  A 46  A 45	• 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  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   Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 10	Operating current		
at 55 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  A 48  at 70 °C / Rated value  A 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  A 49  48  48  46  A 46  A 45	• at 40 °C / Rated value	Α	50
<ul> <li>at 60 °C / Rated value</li> <li>at 65 °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>A 10</li> </ul>	• at 50 °C / Rated value	Α	50
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 for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 46  A 45	● at 55 °C / Rated value	Α	49
at 70 °C / Rated value  A 45  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Suitable parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	• 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  A 10	• 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	• at 70 °C / Rated value	А	45
Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Auxiliary circuit		
Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10			0
Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Suitability		
Adjustable response value current  ● of I-trip / Full-scale value  A 10			system protection
Adjustable response value current  ● of I-trip / Full-scale value  A 10	Adjustable parameters		
• for N conductor protection / initial value	• of I-trip / Full-scale value	А	10
lor in-conductor protection / initial value	• for N-conductor protection / initial value	Α	0
• for N-conductor protection / Full-scale value A 0	• for N-conductor protection / Full-scale value	Α	0
Adjustable response value current / of the current- dependent overload release / initial value	-	А	0.7
Product details	Product details		
Product component			

		N
• 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
Draduat function		
Product function  Product function		
Intrinsic device protection		Yes
communication function		No
Phase failure detection		No
other measurement function		No
other measurement function		140
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1150-6EE46-0AA0
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• 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 (lcm)	kA	10
Short-circuit current making capacity (lcm)  • at 240 V / Rated value	kA	220
• at 240 V / Rated value	kA	220
<ul><li>at 240 V / Rated value</li><li>at 415 V / Rated value</li></ul>	kA kA	220 154
at 240 V / Rated value     at 415 V / Rated value     at 690 V / Rated value  Connections  Arrangement of electrical connectors / for main	kA kA	220 154
at 240 V / Rated value     at 415 V / Rated value     at 690 V / Rated value  Connections	kA kA	220 154 17

<ul> <li>of the round conductor terminal / str</li> </ul>	anded		1 x (1.5 - 70 mm²)	
Type of electrical connection / for main cu	ırrent circuit		Box 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	
<ul><li>during storage / maximum</li></ul>		°C	80	
Certificates				
Equipment marking				
• acc. to DIN EN 61346-2			Q	
• acc. to DIN EN 81346-2			Q	
General EMC	Declaration	n of S	Shipping Approval	other

## Further information

**Product** 

**Approval** 

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

other

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

Industry Mall (Online ordering system)
https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA11506EE460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11506EE460AA0/all

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

Conformity

EG-Konf.

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11506EE460AA0

**CAx-Online-Generator** 

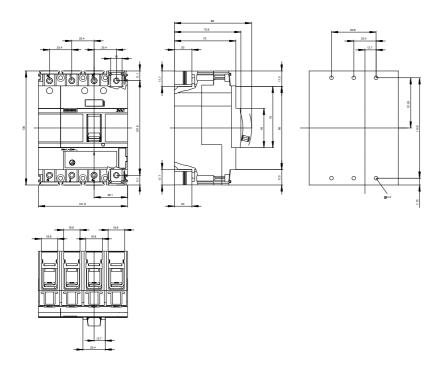
http://www.siemens.com/cax

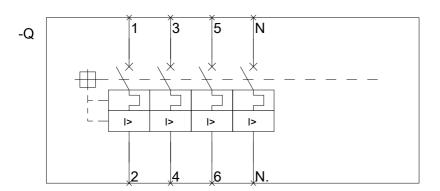
**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv

other

GL





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