## **SIEMENS**

## Datasheet

## 3VA1040-3ED42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 100 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=40A OVERLOAD PROTECTION IR=40A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED BUSBAR 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	-	TM210			
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			

Protective function of the overcurrent release     LI       Switching capacity     Switching capacity class of the circuit breaker     N       Dissipation     Active power loss     N       Active power loss     • maximum     W     10.8       Electricity     Operating current / at 45 °C / Rated value     A     40       Continuous current     Rated value / maximum     A     100       Continuous current value current     A     40       Adjustable response value current     A     1       • of the current-dependent overload release / Full-scale value     A     10       value     value     A     10       Value     V     690     0       Main circuit     Operating voltage     V     690       • with AC / at 50K0 Hz / Rated value     V     690       • of the cared value     V     690       • of C / Rated value     A     40       • at 60 °C / Rated value     A     39       • at 65 °C / Rated value     A     39       • at 65 °C / Rated value     A     37       Auxiliary contacts     0     0       Suitability     system protection       • for uxaliary contacts     0	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     maximum       • maximum     W       10.8       Electricity       Operating current / at 45 °C / Rated value     A       • Rated value     A       • Continuous current / Atde Value / maximum     A       • Rated value     A       • Continuous current / Rated value / maximum     A       • of the current-dependent overload release / Full-scale value     A       • of the instantaneous short-circuit release / initial value     A       • of the current-dependent overload release / Full-scale value     A       • of the instantaneous short-circuit release / initial value     A       • of the instantaneous short-circuit release / initial value     A       • of the instantaneous short-circuit release / initial value     A       • of the instantaneous short-circuit release / initial value     A       • of the instantaneous short-circuit release / initial value     A       • of the instantaneous short-circuit release / initial value     A       • of the instantaneous short-circuit release / initial value     A       Operating uritert     G     B       • of DC / Rated value     A     40       • at 60 °C / Rated value     A     39       • at 60 °C / Rated value	Switching capacity		
Active power loss     W     10.8          • maximum      W     10.8           Electricity         Operating current / at 45 °C / Rated value       A      40           Continuous current         Rated value         A      40           Continuous current         Rated value         A      40           Adjustable response value current         A         40           Adjustable response value current         A         1           Adjustable response value current         g       1         200           Main circuit         A         4         A           Operating ourset         A			N
Active power loss     W     10.8          • maximum      W     10.8           Electricity         Operating current / at 45 °C / Rated value       A      40           Continuous current         Rated value         A      40           Continuous current         Rated value         A      40           Adjustable response value current         A         40           Adjustable response value current         A         1           Adjustable response value current         g       1         200           Main circuit         A         4         A           Operating ourset         A		_	
• maximum     W     10.8       Electricity     A     40       Continuous current / at 45 °C / Rated value     A     100       Continuous current / Rated value / maximum     A     100       Continuous current     A     40       Adjustable response value current     A     40       • 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     10       Operating voltage     V     6900       • full-scale value     A     40       • full-scale value     A     40       • for DC / Rated value     A     39       • at 65 °C / Rated value     A     39       • at 65 °C / Rated value     A     37       Auxiliary contacts     0       Suitability for use     system protection       • for auxiliary contacts     0		_	
Electricity     Production       Operating current / at 45 °C / Rated value     A     40       Continuous current     A     100       Continuous current     A     40       Adjustable response value current     A     40       Adjustable response value current     A     40       • 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 Operating voltage     V     690       • of DC / Rated value     V     690       • for DC / Rated value     A     40       • at 40 °C / Rated value     A     40       • at 50 °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     37       Auxiliary circuit     A     37       Number of CO contacts     0     0       Suitability     Suitability for use     system protection       Adjustable response value current     A     10       • of I-trip / Full-scale value     A     10		14/	10.9
Operating current / at 45 °C / Rated value     A     40       Continuous current / Rated value / maximum     A     100       Continuous current     A     40       Adjustable response value current     A     40       Adjustable response value current     A     40       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       • Net weight     g     1 200       Main circuit     A     40       Operating voltage     V     690       • with AC / at 50/60 Hz / Rated value     V     690       • of DC / Rated value     A     40       • at 40 °C / Rated value     A     40       • 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     37       Auxilary circuit     Xumber of CO contacts     0       • for auxiliary contacts     0     0	• maximum	VV	10.0
Continuous current / Rated value / maximum       A       100         Continuous current       A       40         Adjustable response value current       A       40         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         • Net weight       g       1 200         Main circuit       Operating voltage       V       690         • of the C / at 50/60 Hz / Rated value       V       690       600         Operating current       V       600       600         Operating current       A       40       40         • at 40 °C / Rated value       V       690       600         Operating current       A       40       40         • at 50 °C / Rated value       A       39       31         • at 60 °C / Rated value       A       38       31         • at 60 °C / Rated value       A       37       33         • at 60 °C / Rated value       A       37       37         Auxiliary circuit       Number of CO contacts       0       0         • for N-conductor p			
Continuous current       A       40         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       g       1 200         Operating voltage       V       690         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       600         Operating current       V       600         • at 40 °C / Rated value       A       40         • at 50 °C / Rated value       A       39         • at 65 °C / Rated value       A       39         • at 65 °C / Rated value       A       39         • at 65 °C / Rated value       A       38         • at 70 °C / Rated value       A       37         Auxiliary contacts       0       0         Solitability       system protection         • for auxiliary contacts       0       0         Adjustable response value current       A       10         • of I-trip / Full-scale value       A       0   <	Operating current / at 45 °C / Rated value	А	40
• Rated valueA40Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial valueA1• of the instantaneous short-circuit release / initial valueA10• of the instantaneous short-circuit release / initial valueA10• Net weightg1 200Main circuitG690• Operating voltage • for DC / Rated valueV690• of DC / Rated valueV690• of DC / Rated valueA40• at 40 °C / Rated valueA40• at 50 °C / Rated valueA39• at 65 °C / Rated valueA39• at 65 °C / Rated valueA39• at 65 °C / Rated valueA37Auxiliary circuitVsystem protectionNumber of CO contacts • for auxiliary contactso• of auxiliary contactso• of I-trip / Full-scale valueA10• of I-trip / Full-scale valueA10	Continuous current / Rated value / maximum	А	100
Adjustable response value current       A       1         • of the current-dependent overload release / Full-scale value       A       10         • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       A       0         Operating voltage       V       690         • for DC / Rated value       V       690         • for DC / Rated value       V       600         Operating current       4       40         • at 40 °C / Rated value       A       39         • at 60 °C / Rated value       A       39         • at 65 °C / Rated value       A       37         Auxiliary circuit       A       37         Auxiliary contacts       0       0         Suitability       • system protection         • for auxiliary contacts       0         Adjustable response value current       A       10         • for I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       0	Continuous current		
• of the current-dependent overload release /       A       1         Full-scale value       • of the instantaneous short-circuit release / initial value       A       10         Net weight       g       1 200         Main circuit       Generation of the component of	Rated value	А	40
Full-scale value       A       10         value       g       1 200         Main circuit       g       1 200         Main circuit       Secondary Secondar	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 Structure         • with AC / at 50/60 Hz / Rated value       V       690         • for DC / Rated value       V       690         • for DC / Rated value       V       600         Operating current       Image: Circuit Addition of the context of the cont		А	1
value     g     1 200       Main circuit     g     1 200       Operating voltage     690       • with AC / at 50/60 Hz / Rated value     V     690       • for DC / Rated value     V     600       Operating current     400       • at 40 °C / Rated value     A     40       • at 50 °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     39       • at 60 °C / Rated value     A     38       • at 60 °C / Rated value     A     37       Auxiliary circuit     V     Suitability for use     system protection       Suitability     • for auxiliary contacts     0       Suitability for use     system protection       Adjustable response value current     A     10       • of I-trip / Full-scale value     A     10       • of I-trip / Full-scale value     A     0	Full-scale value		
Net weight     g     1 200       Main circuit       Operating voltage       • with AC / at 50/60 Hz / Rated value     V     690       • for DC / Rated value     V     600       Operating current		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 valueA40• at 50 °C / Rated valueA40• at 50 °C / Rated valueA39• at 60 °C / Rated valueA37Auxiliary circuitA37Number of CO contacts0• for auxiliary contacts0Suitability-system protectionAdjustable parametersA10• for I-trip / Full-scale valueA0	Main circuit		
• for DC / Rated value       V       600         Operating current       -         • at 40 °C / Rated value       A       40         • at 50 °C / Rated value       A       40         • at 55 °C / Rated value       A       39         • at 60 °C / Rated value       A       39         • 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       0       0         soltability       -       -         • for auxiliary contacts       0       -         Adjustable parameters       -       -         Adjustable response value current       -       -         • of I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       0	Operating voltage		
Operating current     A     40       • at 40 °C / Rated value     A     40       • at 50 °C / Rated value     A     40       • at 55 °C / Rated value     A     39       • at 60 °C / Rated value     A     39       • at 65 °C / Rated value     A     38       • at 65 °C / Rated value     A     37	<ul> <li>with AC / at 50/60 Hz / Rated value</li> </ul>	V	690
• at 40 °C / Rated valueA40• at 50 °C / Rated valueA39• at 55 °C / Rated valueA39• at 60 °C / Rated valueA39• at 65 °C / Rated valueA38• at 70 °C / Rated valueA37Auxiliary circuitNumber of CO contacts • for auxiliary contacts0SuitabilityoSuitabilitysystem protectionAdjustable parametersAAdjustable response value current • of I-trip / Full-scale valueAA10• for N-conductor protection / initial valueA	<ul> <li>for DC / Rated value</li> </ul>	V	600
eat 50 °C / Rated value       A       40         eat 55 °C / Rated value       A       39         eat 65 °C / Rated value       A       38         eat 65 °C / Rated value       A       38         eat 70 °C / Rated value       A       37         Auxiliary circuit         Number of CO contacts         e for auxiliary contacts       0         Suitability for use         Adjustable parameters         Adjustable response value current       A       10         e for N-conductor protection / initial value       A       0	Operating current		
• at 55 °C / Rated value       A       39         • at 60 °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       A       37         Auxiliary circuit       O       O         Suitability       O       O         • for auxiliary contacts       O       O         Suitability for use       system protection         Adjustable parameters       Adjustable response value current       A         • of I-trip / Full-scale value       A       10         • for N-conductor protection / initial value       A       0	• at 40 °C / Rated value	А	40
eat 60°C / Rated value       A       39         • at 60°C / Rated value       A       38         • at 65°C / Rated value       A       37         Auxiliary circuit       A       37         Auxiliary circuit       0       0         Suitability       0       0         Suitability       5       5         Adjustable parameters       A       10         Adjustable response value       A       10         • for N-conductor protection / initial value       A       0	• at 50 °C / Rated value	А	40
• at 65 °C / Rated valueA38• at 70 °C / Rated valueA37Auxiliary circuitA37Number of CO contacts • for auxiliary contacts0• for auxiliary contacts0Suitabilitysystem protectionAdjustable parametersAdjustable response value current • of I-trip / Full-scale valueA• for N-conductor protection / initial valueA10• for N-conductor protection / initial valueA0	• at 55 °C / Rated value	А	39
• at 70 °C / Rated value       A       37         Auxiliary circuit       Image: Auxiliary circuit       Image: Auxiliary circuit         Number of CO contacts       0       0         • for auxiliary contacts       0       Image: Auxiliary circuit         • for auxiliary contacts       0       Image: Auxiliary circuit         • for auxiliary contacts       0       Image: Auxiliary circuit         • Suitability       Image: System protection       Image: System protection         Adjustable parameters       Adjustable response value current       Image: Auxiliary contacts       Image: Auxiliary contacts         • of I-trip / Full-scale value       A       10       Image: Auxiliary contacts       Image: Auxiliary contacts         • for N-conductor protection / initial value       A       0       Image: Auxiliary contacts       Image: Auxiliary contacts	● at 60 °C / Rated value	А	39
Auxiliary circuit         Number of CO contacts       0         • for auxiliary contacts       0         Suitability       • Suitability for use         • Suitabile parameters       system protection         Adjustable parameters       A         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	● at 65 °C / Rated value	А	38
Number of CO contacts       0         • for auxiliary contacts       0         Suitability       0         • Suitability for use       system protection         • Adjustable parameters       Adjustable parameters         Adjustable response value current       A         • of I-trip / Full-scale value       A         • for N-conductor protection / initial value       A	• at 70 °C / Rated value	А	37
Number of CO contacts       0         • for auxiliary contacts       0         Suitability       0         • Suitability for use       system protection         • Adjustable parameters       Adjustable parameters         Adjustable response value current       A         • 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 valueA0		_	
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       10         • of I-trip / Full-scale value       A       0         • for N-conductor protection / initial value       A       0	Suitability for use		system protection
• of I-trip / Full-scale valueA10• for N-conductor protection / initial valueA0	Adjustable parameters		
for N-conductor protection / initial value     A     0	Adjustable response value current		
·····	<ul> <li>of I-trip / Full-scale value</li> </ul>	А	10
for N-conductor protection / Full-scale value     A     0	<ul> <li>for N-conductor protection / initial value</li> </ul>	А	0
	<ul> <li>for N-conductor protection / Full-scale value</li> </ul>	А	0

Adjustable response value current / of the current-	A	1
dependent overload release / initial value		
ppearance		
Product details		
Product component		
Trip indicator		No
• display		No
Voltage trigger		No
<ul> <li>undervoltage release</li> </ul>		No
<ul> <li>undervoltage release with leading contact</li> </ul>		No
Product property	-	
• for neutral conductors /		No
upgradeable/retrofittable / Short-circuit and		
overload proof		
Product expansion		
optional		
— motor drive		No
Product function		
Product function		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
<ul> <li>communication function</li> </ul>		No
Phase failure detection		No
<ul> <li>other measurement function</li> </ul>		No
ccessories		
Manufacturer article number / of the supplied basic		3VA1040-3ED42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity (Ics)		
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
	kA	25
• at 415 V / Rated value		16
<ul> <li>at 415 V / Rated value</li> <li>at 440 V / Rated value</li> </ul>	kA	16 8
• at 415 V / Rated value		16 8 5

		75.6			
• at 240 V / Rated value	kA	75.6			
• at 415 V / Rated value	kA	52.5			
• at 690 V / Rated value	kA	7.5			
onnections					
Arrangement of electrical connectors					
<ul> <li>for main current circuit</li> </ul>		Front termin	al		
Type of connectable conductor cross-section					
<ul> <li>for flat-bar terminal connection / minimum</li> </ul>		12 x 0			
<ul> <li>for flat-bar terminal connection / maximum</li> </ul>		17 x 6.5			
Design of the electrical connection					
• for main current circuit		Lug termina	Lug terminal		
lechanical Design					
Height	mm	130			
Width	mm	101.6			
Depth	mm	70			
Mounting type		fixed mount	fixed mounting		
nvironmental 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			
ertificates					
Reference code					
• acc. to DIN EN 61346-2		Q			
• acc. to DIN EN 81346-2		Q			
General Product Approval EMC		eclaration of onformity	Shipping Approval	other	
	ner			other	
		E	GL		
	E				

Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/lowvoltage/catalogs

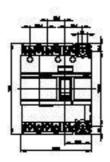
Industry Mall (Online ordering system) https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA10403ED420AA0

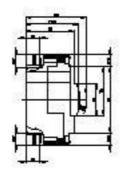
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA10403ED420AA0/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA10403ED420AA0

nup.//www.siemens.com/

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





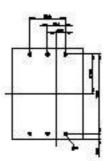




Figure similar

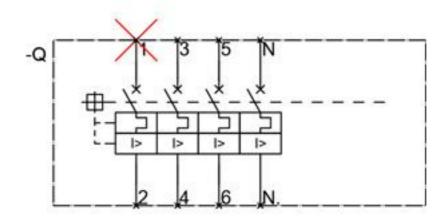


Figure similar

last modified:

21.10.2014