## **SIEMENS**

Data sheet 3NP1124-1CA20



SENTRON, fuse switch disconnector 3NP1, 4-pole, NH000, 160 A, for assembly and installation on mounting plate, box terminal, cover level 45 mm

Model					
product brand name	SENTRON				
product designation	3NP1 fuse switch disconnector				
design of the product	cover level 45 mm				
design of the safety monitoring	Without				
design of the actuating element	Cover handle				
design of the load switch / strip form	No				
type of the driving mechanism / motor drive	No				
General technical data					
number of poles	4				
type of device	For assembly and installation on mounting plate				
size of disconnecting link	000				
size of fuse link	NH000				
let-through current / with closed switch / maximum permissible	15 kA				
mechanical service life (switching cycles) / typical	2 000				
power factor					
• at AC-22 B	0.65				
• at AC-23 B	0.45				
with capacitive load	-0.25				
fuse system	LV HRC fuse				
degree of pollution	3				
Voltage					
insulation voltage					
rated value	690 V				
<ul> <li>with degree of pollution 3 / at AC / rated value</li> </ul>	690 V				
with degree of pollution 2 / at AC / rated value	1 000 V				
power factor / at AC-21 B	0.95				
surge voltage resistance / rated value	8 kV				
operating voltage					
<ul><li>at AC / rated value / maximum</li></ul>	690 V				
<ul><li>at DC / rated value</li></ul>	440 V				
at DC / rated value / maximum	440 V				
Protection class					
protection class IP					
<ul> <li>with closed switch / with cover or cable lug cover</li> </ul>	IP40				
<ul> <li>with closed switch / without cover or cable lug cover</li> </ul>	IP30				
• on the front	IP40				

• open	IP20
Dissipation	
power loss [W]	
with conventional rated thermal current / without fuse / per pole	5 W
<ul> <li>with conventional rated thermal current / without fuse / per device</li> </ul>	20 W
<ul> <li>for rated value of the current / at AC / in hot operating state / per pole</li> </ul>	14 W
of the fuse / per fuse / maximum	9 W
Current	
operational current	
<ul> <li>at 35 °C / rated value</li> </ul>	160 A
<ul> <li>at 40 °C / rated value</li> </ul>	150 A
<ul> <li>at 45 °C / rated value</li> </ul>	140 A
at 50 °C / rated value	130 A
at 55 °C / rated value	120 A
at AC / rated value	160 A
at AC-23 B / at 690 V / rated value	25 A
at AC-23 B / at 500 V / rated value	40 A
• at AC-23 B / at 400 V / rated value	160 A
<ul> <li>at AC-23 B / at 240 V / rated value</li> <li>at AC-22 B / at 690 V / rated value</li> </ul>	160 A
	50 A
• at AC-22 B / at 500 V / rated value	125 A
<ul><li>at AC-22 B / at 400 V / rated value</li></ul>	160 A
<ul><li>at AC-22 B / at 240 V / rated value</li></ul>	160 A
<ul><li>at AC-21 B / at 690 V / rated value</li></ul>	160 A
<ul><li>at AC-21 B / at 500 V / rated value</li></ul>	160 A
<ul><li>at AC-21 B / at 400 V / rated value</li></ul>	160 A
<ul><li>at AC-21 B / at 240 V / rated value</li></ul>	160 A
<ul><li>at DC-23 B / at 440 V / rated value</li></ul>	25 A
<ul> <li>at DC-23 B / at 240 V / rated value</li> </ul>	80 A
<ul> <li>at DC-23 B / at 120 V / rated value</li> </ul>	80 A
<ul> <li>at DC-22 B / at 440 V / rated value</li> </ul>	50 A
<ul><li>at DC-22 B / at 240 V / rated value</li></ul>	100 A
<ul><li>at DC-22 B / at 120 V / rated value</li></ul>	100 A
at DC-21 B / at 440 V / rated value	100 A
• at DC-21 B / at 240 V / rated value	160 A
at DC-21 B / at 120 V / rated value	160 A
let-through current / with high-speed activation / maximum permissible	10 kA
Main circuit	
operational current	
• rated value	100 A
with capacitive load / at 400 V / rated value	72 A
with capacitive load / at 400 V / rated value	55 A
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
number of NC contacts / for auxiliary contacts	0
number of NO contacts / for auxiliary contacts	0
Suitability	
suitability for use  • main switch	No
	No
switch disconnector     FMEROENOV OFF witch	Yes
EMERGENCY OFF switch	No
safety switch	Yes
maintenance/repair switch	Yes
Product details	

product feature / interlock	Yes			
<ul> <li>product component / trip indicator</li> </ul>	No			
<ul> <li>product function / phase failure monitoring</li> </ul>	No			
<ul> <li>product component / undervoltage release</li> </ul>	No			
<ul> <li>product component / undervoltage release with leading contact</li> </ul>	No			
product feature / sealable	Yes			
product extension / auxiliary switch	Yes			
product extension / optional	- 100			
locking capability	Yes			
motor drive	No			
phase failure monitoring	Yes			
fuse monitoring	Yes			
voltage trigger	No			
overvoltage protection monitoring	Yes			
Product function				
product function				
fuse monitoring	No			
overvoltage protection monitoring	No			
Short circuit				
conditional short-circuit current (Iq)				
• rated value	80 kA			
• at AC / at 240 V / with high-speed activation / rated value	80 kA			
• at AC / at 500 V / with high-speed activation / rated value	80 kA			
<ul> <li>at AC / at 690 V / with high-speed activation / rated value</li> </ul>	50 kA			
<ul> <li>with closed switch / at AC / at 240 V / rated value</li> </ul>	120 kA			
<ul> <li>with closed switch / at AC / at 500 V / rated value</li> </ul>	120 kA			
<ul> <li>with closed switch / at AC / at 690 V / rated value</li> </ul>	100 kA			
Connections				
Connections  arrangement of electrical connectors / for main current circuit	other			
arrangement of electrical connectors / for main current	other			
arrangement of electrical connectors / for main current circuit	other  1.5 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit connectable conductor cross-section / for main contacts				
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum	1.5 mm²			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing /	1.5 mm <sup>2</sup> 50 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing /	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup> 1.5 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup> 1.5 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup> 1.5 mm <sup>2</sup> 50 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup> 1.5 mm <sup>2</sup> 50 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup> 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 50 mm <sup>2</sup>			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts	1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 1.5 mm <sup>2</sup> 35 mm <sup>2</sup> 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> 3.5 N·m 4 N·m 8 x 8 mm			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the laminated conductors / maximum  type of connection technology	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal box terminal			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the laminated conductors / maximum  type of connection technology  type of electrical connection / for main current circuit  Mechanical Design  height	1.5 mm² 50 mm² 1.5 mm² 35 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal box terminal  141.7 mm 127.7 mm 74.1 mm			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the laminated conductors / maximum  type of connection technology  type of electrical connection / for main current circuit  Mechanical Design  height  width  depth  fastening method	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal box terminal box terminal			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the laminated conductors / maximum  type of connection technology  type of electrical connection / for main current circuit  Mechanical Design  height  width  depth  fastening method  fastening method	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal box terminal  141.7 mm 127.7 mm 74.1 mm mounting plate			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the laminated conductors / maximum  type of connection technology  type of electrical connection / for main current circuit  Mechanical Design  height  width  depth  fastening method  • floor mounting	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal box terminal  141.7 mm 127.7 mm 74.1 mm mounting plate  No			
arrangement of electrical connectors / for main current circuit  connectable conductor cross-section / for main contacts  • solid or stranded / minimum  • solid or stranded / maximum  • finely stranded / with core end processing / minimum  • finely stranded / with core end processing / maximum  • stranded / minimum  • stranded / maximum  tightening torque / with screw-type terminals  • minimum  • maximum  type of connectable conductor cross-sections / of the laminated conductors / maximum  type of connection technology  type of electrical connection / for main current circuit  Mechanical Design  height  width  depth  fastening method  fastening method	1.5 mm² 50 mm² 1.5 mm² 35 mm²  1.5 mm² 50 mm²  3.5 N·m 4 N·m 8 x 8 mm  Box terminal box terminal  141.7 mm 127.7 mm 74.1 mm mounting plate			

<ul> <li>rail mounting</li> </ul>		No			
mounting position		horiz	horizontal/vertical		
net weight		0.71 kg			
Environmental conditions					
ambient temperature / during operation					
• minimum		-25 °C			
• maximum		55 °C			
ambient temperature / during storage					
• minimum		-50 °C			
<ul><li>maximum</li></ul>		80 °C			
General Product Approval	Declaration of Conformity	f	Test Certificates	Marine / Shipping	other

**Miscellaneous** 





Special Test Certificate



**Miscellaneous** 

## Further information

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

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

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3NP1124-1CA20

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

https://support.industry.siemens.com/cs/ww/en/ps/3NP1124-1CA20

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

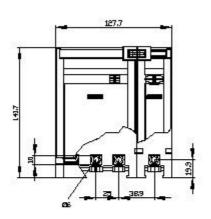
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3NP1124-1CA20

**CAx-Online-Generator** 

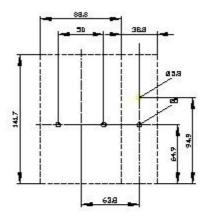
http://www.siemens.com/cax

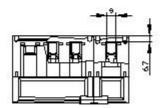
**Tender specifications** 

http://www.siemens.com/specifications









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