## **SIEMENS**

Data sheet 3NP1161-1DA20

SENTRON, fuse switch disconnector 3NP1, 1-pole, NH3, 630 A, for assembly and installation on mounting plate, Box terminal, cover level 70mm



Model	
Product brand name	SENTRON
Product designation	3NP1 fuse switch disconnector
Design of the product	cover level 70 mm
Design of the safety monitoring	Without
Design of the operating mechanism	Cover handle
Design of the load switch / Strip form	No
Type of the driving mechanism / motor drive	No

General technical data				
Number of poles	1			
Type of device	For assembly and installation on mounting plate			
Size of disconnecting link	3 and 2			
Size of fuse link	NH2, NH3			
Operating current / at 35 °C / rated value	630 A			
Let-through current / with closed switch / maximum permissible	60 kA			
Power factor				
● at AC-22 B	0.65			
● at AC-23 B	0.35			

with capacitive load	-0.25
circuit-breaker / Design	3NP11
Mechanical service life (switching cycles) / typical	1 000
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
<ul> <li>with degree of pollution 2 / at AC / rated value</li> </ul>	1 000 V
Power factor / at AC-21 B	0.95
Surge voltage resistance / rated value	8 kV
Operating current / at AC / rated value	630 A
Operating voltage	
<ul><li>at AC / rated value / maximum</li></ul>	240 V
• at DC / rated value	120 V
• at DC / rated value / maximum	120 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]	
<ul> <li>with conventional rated thermal current / without fuse / per pole</li> </ul>	30 W
<ul> <li>with conventional rated thermal current / without fuse / per device</li> </ul>	30 W
<ul> <li>for rated value of the current / at AC / in hot operating state / per pole</li> </ul>	78 W
• of the fuse / per fuse / maximum	48 W
Current	
Operating current	
• at AC-23 B / at 240 V / rated value	630 A
• at AC-22 B / at 240 V / rated value	630 A
• at AC-21 B / at 240 V / rated value	630 A
• at DC-23 B / at 120 V / rated value	400 A
• at DC-22 B / at 120 V / rated value	630 A

Continuous current	• at DC-21 B / at 120 V / rated value	630 A
• at 40 °C / rated value	Continuous current	
• at 45 °C / rated value 575 A • at 50 °C / rated value 555 A • at 50 °C / rated value 550 A • at 55 °C / rated value 530 A  Let-through current / with high-speed activation / maximum permissible  Main circuit  Operating current • rated value 630 A • with capacitive load / at 400 V / rated value 72 A • with capacitive load / at 500 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 NC contacts / for auxiliary contacts 0  Suitability  Suitability  Suitability  Find the contacts / for auxiliary contacts 0  EMERGENCY OFF switch No • switch disconnector 9es • Main switch No • safety switch 9es • maintenance/repair switch 9es • Product details  Product details  Product feature / interlock 9es • Product component / Trip indicator No • Product component / undervoltage release No • Product cession / Auxiliary switch 9es  Product extension / Auxiliary switch 9es  Product extension / optional • locking capability 9es • Coloring capability 9es • Voltage trigger • Voltage trigger	• rated value	630 A
at 50 °C / rated value at 55 °C / rated value 530 A  Let-through current / with high-speed activation / maximum permissible  Main circuit Operating current rated value are with capacitive load / at 400 V / rated value with capacitive load / at 500 V / rated value with capacitive load / at 500 V / rated value with capacitive load / at 500 V / rated value with capacitive load / at 500 V / rated value with capacitive load / at 500 V / rated value with capacitive load / at 500 V / rated value standard contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  No suitability  Suitability  Suitability or use  Main switch switch switch witch disconnector  EMERGENCY OFF switch No safety switch yes  Product details  Product feature / interlock Pes Product teature / interlock Product feature / interlock Product feature / interlock Product component / Trip indicator Product feature / interlock Product component / undervoltage release No Product component / undervoltage release No Product catension / Auxiliary switch Yes  Product extension / Auxiliary switch No Phase failure monitoring No Phase failure monitoring No Phase failure monitoring Yes Voltage trigger	• at 40 °C / rated value	610 A
• at 55 °C / rated value	• at 45 °C / rated value	575 A
Let-through current / with high-speed activation / maximum permissible  Main circuit  Operating current  • rated value • with capacitive load / at 400 V / rated value • with capacitive load / at 500 V / rated value  55 A  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts  No  • Main switch  • Main switch  • Switability  Suitability  Suitability for use  • Main switch  • Switch disconnector  • EMERGENCY OFF switch  • Safety switch  • safety switch  • safety switch  • real contact / repair switch  Product dealure / interlock  • Product dealure / interlock  • Product component / Trip indicator  • Product feature / interlock  • Product component / undervoltage release  • No  • Product component / undervoltage release with leading contact  Product component / undervoltage release with leading contact  Product cature / sealable  • Product extension / Auxiliary switch  • Yes  Product extension / Auxiliary switch  • Yes  Product extension / Jopional  • locking capability  • motor drive  • Phase failure monitoring  • Voltage trigger  No	• at 50 °C / rated value	555 A
maximum permissible  Main circuit  Operating current  • rated value • with capacitive load / at 400 V / rated value • with capacitive load / at 500 V / rated value  • with capacitive load / at 500 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  Suitability  Suitability  Suitability  - Main switch  • Main switch • Switch disconnector • EMERGENCY OFF switch • maintenance/repair switch  • maintenance/repair switch  Product feature / interlock  • Product component / Trip indicator • Product component / Trip indicator • Product component / Trip indicator • Product component / undervoltage release with leading contact  Product feature / sealable • Product extension / Auxiliary switch  Product extension / Jopional • locking capability • Yes • motor drive • Phase failure monitoring • fuse monitoring • fuse monitoring • Voltage trigger	• at 55 °C / rated value	530 A
Operating current  • rated value • with capacitive load / at 400 V / rated value • with capacitive load / at 500 V / rated value • with capacitive load / at 500 V / rated value • with capacitive load / at 500 V / rated value  • with capacitive load / at 500 V / rated value  • with capacitive load / at 500 V / rated value  • with capacitive load / at 500 V / rated value  • with capacitive load / at 500 V / rated value  • Number of NC contacts / for auxiliary contacts  • Number of NC contacts / for auxiliary contacts  • No  • Suitability  • Main switch  • No  • safety switch  • real repair switch  Product details  Product details  Product details  Product component / Trip indicator  • Product component / Indervoltage release  • Product component / undervoltage release with leading contact  Product component / undervoltage release with leading contact  Product feature / sealable  • Product extension / Auxiliary switch  Product extension / Auxiliary switch  Product extension / Auxiliary switch  • Product extension / Optional  • locking capability  • motor drive  • No  • Phase failure monitoring  • fuse monitoring  • Voltage trigger		50 kA
rated value     with capacitive load / at 400 V / rated value     with capacitive load / at 500 V / rated value     with capacitive load / at 500 V / rated value     55 A  Auxiliary circuit  Number of NC contacts / for auxiliary contacts     0  Number of NC contacts / for auxiliary contacts     0  Number of NC contacts / for auxiliary contacts     0  Suitability  Product desconnector  Yes  Product desconnector  Yes  Product details  Product details  Product feature / interlock  Product function / Phase failure monitoring  Product component / undervoltage release with leading contact  Product component / undervoltage release with leading contact  Product feature / sealable  Product extension / Auxiliary switch  Yes  Product extension / Auxiliary switch  Yes  Product extension / Auxiliary switch  Yes  Product extension / Auxiliary switch  No  Phase failure monitoring  No  Phase failure monitoring  No  Fuse monitoring  Yes  Voltage trigger  No	Main circuit	
with capacitive load / at 400 V / rated value     with capacitive load / at 500 V / rated value     with capacitive load / at 500 V / rated value     So 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  Yes  EMERGENCY OFF switch  No  • switch disconnector  • Mo  • switch disconnector  • Mo  • switch disconnector  • Product despair switch  Yes  Product details  Product feature / interlock  • Product feature / interlock  • Product component / Trip indicator  • Product component / undervoltage release  No  • Product component / undervoltage release  No  • Product component / undervoltage release  No  • Product feature / sealable  Product extension / Auxiliary switch  Yes  Product extension / Auxiliary switch  Yes  Product extension / Auxiliary switch  • Locking capability  • Locking capability  • Locking capability  • Roter of CO contacts  No  • Phase failure monitoring  • Locking capability  • Locking ca	Operating current	
with capacitive load / at 500 V / rated value  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Number of NO contacts / for auxiliary contacts   Suitability  Yes  EMERGENCY OFF switch  No  Safety switch  Yes  Product details  Product details  Product details  Product details  Product details  Product component / Trip indicator  Product component / Indervoltage release  No  Product component / Undervoltage release  No  Product component / Undervoltage release with leading contact  Product component / Undervoltage release with leading contact  Product extension / Auxiliary switch  Yes  Product extension / Optional  Ioking capability  Yes  Product extension / Optional  Ioking capability  Yes  Product component on the component of the compone	• rated value	630 A
Auxiliary circuit  Number of CO contacts / for auxiliary contacts 0  Number of NC contacts / for auxiliary contacts 0  Number of NC contacts / for auxiliary contacts 0  Suitability  Suitability  Suitability  Suitability for use  • Main switch No • switch disconnector Yes • EMERGENCY OFF switch No • safety switch Yes • maintenance/repair switch Yes  Product details  Product details  Product feature / interlock Yes • Product component / Trip indicator No • Product component / undervoltage release No • Product component / undervoltage release with leading contact  Product feature / sealable Yes  Product extension / Auxiliary switch Yes  Product extension / Auxiliary switch Yes  Product extension / optional • locking capability Yes • motor drive No • Phase failure monitoring No • Insert of the product of the	<ul> <li>with capacitive load / at 400 V / rated value</li> </ul>	72 A
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 Suitability for use  Main switch No switch disconnector Yes EMERGENCY OFF switch No safety switch Yes maintenance/repair switch Yes  Product details  Product details  Product component / Trip indicator No Product component / Inip indicator No Product details No Product details No Product details No Product component / Inip indicator No Product details No Product component / Inip indicator No Product details No Product component / Inip indicator No Product teature / Sealable No Product eature / Sealable Yes Product extension / Auxiliary switch Yes Product extension / Optional Locking capability Yes motor drive No Phase failure monitoring No Inip indicator No No Phase failure monitoring Yes Voltage trigger	• with capacitive load / at 500 V / rated value	55 A
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 Suitability for use  • Main switch No • switch disconnector Yes • EMERGENCY OFF switch No • safety switch Yes • maintenance/repair switch Yes  Product details  Product details  Product component / Trip indicator No • Product component / In principal no No • Product component / undervoltage release No • Product component / undervoltage release No • Product cature / sealable Yes  Product eature / sealable Yes  Product extension / Auxiliary switch Yes  Product extension / Optional • locking capability Yes • motor drive No • Phase failure monitoring No • Phase failure monitoring No • Phase failure monitoring No • Product extension / Optional • locking capability Yes • motor drive No • Phase failure monitoring Yes • Voltage trigger	Auxiliary circuit	
Number of NO contacts / for auxiliary contacts  Suitability  Suitability  • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch  Product details  Product details  Product feature / interlock • Product component / Trip indicator • Product function / Phase failure monitoring • Product component / undervoltage release • Product component / undervoltage release with leading contact  Product feature / sealable  Product extension / Auxiliary switch  Product extension / optional • locking capability • motor drive • Phase failure monitoring • fuse monitoring • fuse monitoring • fuse monitoring • Voltage trigger		0
Suitability Suitability Suitability for use  • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • safety switch • maintenance/repair switch  Product details  Product feature / interlock • Product function / Phase failure monitoring • Product component / Irrip indicator • Product component / undervoltage release • Product component / undervoltage release with leading contact  Product feature / sealable Product extension / Auxiliary switch  Product extension / Apuxiliary switch  Product extension / optional • locking capability • motor drive • motor drive • Phase failure monitoring • fuse monitoring • fuse monitoring • Voltage trigger	Number of NC contacts / for auxiliary contacts	0
Suitability for use  Main switch  Switch disconnector  EMERGENCY OFF switch  Safety switch  Maintenance/repair switch  Product details  Product details  Product feature / interlock  Product function / Phase failure monitoring  Product component / undervoltage release  Product component / undervoltage release with leading contact  Product feature / sealable  Product extension / Auxiliary switch  Product extension / Optional  locking capability  motor drive  Phase failure monitoring  No  Phase failure monitoring  No  Phase failure monitoring  No  Phase failure monitoring  Yes  Voltage trigger  No	Number of NO contacts / for auxiliary contacts	0
Main switch switch disconnector switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch  Product details  Product details  Product feature / interlock Product function / Phase failure monitoring Product component / Undervoltage release Product component / undervoltage release Product feature / sealable Product teature / sealable Product component / undervoltage release with leading contact  Product extension / Auxiliary switch  Product extension / optional locking capability motor drive Phase failure monitoring No Phase failure monitoring Fuse monitoring Ves Voltage trigger No	Suitability	
switch disconnector     switch disconnector     EMERGENCY OFF switch     safety switch     safety switch     maintenance/repair switch  Product details  Product feature / interlock     Product component / Trip indicator     Product function / Phase failure monitoring     Product component / undervoltage release     Product component / undervoltage release     Product feature / sealable     Product feature / sealable  Product extension / Auxiliary switch  Product extension / optional     locking capability     motor drive     No     Phase failure monitoring     No     fuse monitoring     Yes     Voltage trigger	Suitability for use	
EMERGENCY OFF switch     safety switch     safety switch     maintenance/repair switch  Product details  Product feature / interlock     Product component / Trip indicator     Product function / Phase failure monitoring     Product component / undervoltage release     Product component / undervoltage release with leading contact  Product feature / sealable  Product extension / Auxiliary switch  Product extension / Optional     locking capability     motor drive     notor drive     Phase failure monitoring     No     fuse monitoring     Voltage trigger  No  No  Ves  Polutage trigger  No	Main switch	No
safety switch     maintenance/repair switch  Product details  Product feature / interlock Product component / Trip indicator Product function / Phase failure monitoring Product component / undervoltage release Product component / undervoltage release Product component / undervoltage release with leading contact  Product feature / sealable Product extension / Auxiliary switch Product extension / optional Indicate the sealable of the seala	<ul><li>switch disconnector</li></ul>	Yes
maintenance/repair switch  Product details  Product feature / interlock Product component / Trip indicator Product function / Phase failure monitoring Product component / undervoltage release Product component / undervoltage release with leading contact  Product feature / sealable Product extension / Auxiliary switch Product extension / optional  locking capability Phase failure monitoring Phase failure monitoring Fuse monitoring Ves Voltage trigger  No	<ul> <li>EMERGENCY OFF switch</li> </ul>	No
Product details  Product feature / interlock  Product component / Trip indicator Product function / Phase failure monitoring Product component / undervoltage release Product component / undervoltage release with leading contact  Product feature / sealable Product extension / Auxiliary switch  Product extension / optional	<ul><li>safety switch</li></ul>	Yes
Product feature / interlock  Product component / Trip indicator  Product function / Phase failure monitoring  Product component / undervoltage release  Product component / undervoltage release with leading contact  Product feature / sealable  Product extension / Auxiliary switch  Product extension / optional  locking capability  motor drive  Phase failure monitoring  fuse monitoring  Ves  No  Voltage trigger	maintenance/repair switch	Yes
<ul> <li>Product component / Trip indicator</li> <li>Product function / Phase failure monitoring</li> <li>Product component / undervoltage release</li> <li>Product component / undervoltage release with leading contact</li> <li>Product feature / sealable</li> <li>Product extension / Auxiliary switch</li> <li>Product extension / optional</li> <li>locking capability</li> <li>motor drive</li> <li>Phase failure monitoring</li> <li>fuse monitoring</li> <li>Voltage trigger</li> <li>No</li> </ul>	Product details	
Product function / Phase failure monitoring Product component / undervoltage release Product component / undervoltage release with leading contact  Product feature / sealable Product extension / Auxiliary switch  Product extension / optional  I ocking capability  motor drive Phase failure monitoring  fuse monitoring  Ves  No  Voltage trigger		Yes
Product component / undervoltage release Product component / undervoltage release with leading contact  Product feature / sealable Product extension / Auxiliary switch  Product extension / optional  I locking capability  motor drive Phase failure monitoring  fuse monitoring  Voltage trigger  No  No  No  No  No  No  Voltage trigger	<ul> <li>Product component / Trip indicator</li> </ul>	No
<ul> <li>Product component / undervoltage release with leading contact</li> <li>Product feature / sealable</li> <li>Product extension / Auxiliary switch</li> <li>Product extension / optional</li> <li>locking capability</li> <li>motor drive</li> <li>Phase failure monitoring</li> <li>fuse monitoring</li> <li>Voltage trigger</li> <li>No</li> </ul>	<ul> <li>Product function / Phase failure monitoring</li> </ul>	No
leading contact  Product feature / sealable  Product extension / Auxiliary switch  Product extension / optional  • locking capability  • motor drive  • Phase failure monitoring  • fuse monitoring  • Voltage trigger  Yes  Yes  No	<ul> <li>Product component / undervoltage release</li> </ul>	No
Product extension / Auxiliary switch  Product extension / optional  I locking capability  I motor drive  I motor drive  I how the phase failure monitoring  I how the phase failure monitoring monitorin		No
Product extension / optional  I locking capability  Mo  motor drive  Phase failure monitoring  fuse monitoring  Ves  Voltage trigger  No	Product feature / sealable	Yes
<ul> <li>locking capability</li> <li>motor drive</li> <li>No</li> <li>Phase failure monitoring</li> <li>fuse monitoring</li> <li>Voltage trigger</li> <li>No</li> </ul>	Product extension / Auxiliary switch	Yes
<ul> <li>motor drive</li> <li>Phase failure monitoring</li> <li>fuse monitoring</li> <li>Voltage trigger</li> <li>No</li> </ul>	Product extension / optional	
<ul> <li>Phase failure monitoring</li> <li>fuse monitoring</li> <li>Voltage trigger</li> <li>No</li> <li>Yes</li> <li>No</li> </ul>	<ul> <li>locking capability</li> </ul>	Yes
<ul> <li>fuse monitoring</li> <li>Voltage trigger</li> <li>No</li> </ul>	• motor drive	No
• Voltage trigger No	<ul> <li>Phase failure monitoring</li> </ul>	No
	• fuse monitoring	Yes
Overvoltage protection monitoring     No	<ul> <li>Voltage trigger</li> </ul>	No
	<ul> <li>Overvoltage protection monitoring</li> </ul>	No

## **Product function** Product function No fuse monitoring No Overvoltage protection monitoring Short circuit Conditional short-circuit current (Iq) 50 kA • rated value 80 kA • at AC / at 240 V / with high-speed activation / rated value 100 kA • with closed switch / at AC / at 240 V / rated value Connections Arrangement of electrical connectors / for main other current circuit Connectable conductor cross-section / for main contacts 50 mm<sup>2</sup> • single or multi-stranded / minimum 300 mm<sup>2</sup> • single or multi-stranded / maximum 120 mm<sup>2</sup> • finely stranded / with core end processing / minimum 240 mm<sup>2</sup> • finely stranded / with core end processing / maximum • stranded / minimum 50 mm<sup>2</sup> stranded / maximum 300 mm<sup>2</sup> Tightening torque / with screw-type terminals 25 N·m • minimum 25 N·m • maximum Type of connectable conductor cross-sections / of the 32 x 20 mm laminated conductors / maximum Type of connection Box terminal Type of electrical connection / for main current circuit box terminal Mechanical Design Height 306 mm Width 89.4 mm Depth 138.5 mm Mounting type mounting plate Mounting type Yes • floor mounting No • front mounting No • front mounting with 4-hole attachment No • front mounting with central attachment rail mounting No

Mounting position		horizontal/vertica	al
Environmental condition	ıs		
Ambient temperature / du	uring operation		
• minimum		-25 °C	
<ul><li>maximum</li></ul>		55 °C	
Ambient temperature / du	uring storage		
• minimum		-50 °C	
• maximum		80 °C	
Certificates			
Reference code			
• acc. to DIN EN 613	46-2	Q	
• acc. to DIN EN 813	46-2	Q	
General Product	Declaration of Con-	Test Certificates	
Approval	formity		
Miscellaneous	CE	Type Test Certificates/Test Report	Special Test Certificate

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

EG-Konf.

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

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3NP1161-1DA20

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

https://support.industry.siemens.com/cs/ww/en/ps/3NP1161-1DA20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3NP1161-1DA20">http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3NP1161-1DA20</a>

**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** http://www.siemens.com/specifications







