## **SIEMENS**

Data sheet 5SY5213-7



Dvärgbrytare Allström, 440V DC, 400V AC, 10kA, 2-polig, C, 13A

product brand name product designation Miniature circuit breaker   Ceneral technical data  number of poles	Model	
General technical data number of poles 2 number of poles 2 number of poles 2 number of poles 2 pripping characteristic class C mechanical service life (switching cycles) / typical 10 000 overvoltage category III degree of pollution 3  Voltage insulation voltage • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value 440 V  Supply voltage type of voltage operational current / at AC / rated value 13 A supply voltage • at AC / rated value 440 V  supply voltage • at AC / rated value 440 V  operational current / at AC / rated value 440 V  supply voltage • at AC / rated value 440 V  operational current / at AC / rated value 50/60 Hz  Protection class   P  protection class   P  IP20, with connected conductors  witching capacity current • at DC / acc. to IEC 60947-2 / rated value 15 kA • acc. to EN 60898 / rated value 10 kA energy limitation class  Dissipation  power loss [M] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  product details  product function / neutral conductor switching  No	product brand name	SENTRON
number of poles / note	product designation	Miniature circuit breaker
number of poles / note  tripping characteristic class C mechanical service life (switching cycles) / typical overvoltage category III degree of pollution  Voltage insulation voltage • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value  * with multi-phase operation / at AC / rated value  * with multi-phase operation / at AC / rated value  * with ovoltage  type of voltage  type of voltage  operational current / at AC / rated value  * at AC / rated value • at AC / rated value • at AC / rated value • at DC / rated value  * at AC / rated value  * at AC / rated value  * at AC / rated value  * at CD / rated value  * at DC / rated value  * bow V  * supply voltage frequency / rated value  * folion Hz  Protection class  protection class IP  IP20, with connected conductors  **Switching capacity  switching capacity  switching capacity  switching capacity current  * at DC / race, to IEC 60947-2 / rated value  * acc. to EN 60898 / rated value  * acc. to EN 60898 / rated value  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  universal current  Product details  product function / neutral conductors switching  No	General technical data	
tripping characteristic class mechanical service life (switching cycles) / typical overvoltage category degree of pollution  Voltage insulation voltage • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value  Supply voltage type of voltage  operational current / at AC / rated value  at AC / rated value • at AC / rated value  13 A  supply voltage • at AC / rated value • at AC / rated value • at DC / rated value • at DC / rated value • at DC / rated value  • at DC / rated value • at DC / rated value  • at DC / rated value  • at DC / rated value  • at DC / rated value  • at DC / rated value    Solie Hz   Protection class   P	number of poles	2
mechanical service life (switching cycles) / typical overvoltage category degree of pollution  7 voltage insulation voltage • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • AC/DC operational current / at AC / rated value  13 A supply voltage • at AC / rated value • at DC / rated value • at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  protection class  protection class  protection class IP  Switching capacity switching capacity switching capacity switching capacity switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60988 / rated value  15 kA • acc. to EN 60988 / rated value  10 kA energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  Product details product function / neutral conductor switching  No	number of poles / note	2P
overvoltage category degree of pollution 3  Voltage insulation voltage • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value  * with multi-phase operation / at AC / rated value  type of voltage type of voltage operational current / at AC / rated value  * at AC / rated value • at AC / rated value • at DC / rated value  * operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  * operating voltage / at DC / rated value  * operating voltage / at DC / rated value  * protection class  protection class IP  Switching capacity  switching capacity  switching capacity current • at DC / acc. to IEC 60947-2 / rated value  * acc. to EN 60988 / rated value  * operating limitation class  * operating state / per pole  suitability for operation  * product details  * product function / neutral conductor switching  * No	tripping characteristic class	C
degree of pollution  Voltage  insulation voltage  • at DC / rated value  • with single-phase operation / at AC / rated value  • with multi-phase operation / at AC / rated value  440 V  Supply voltage  type of voltage  operational current / at AC / rated value  • at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value / maximum  supply voltage frequency / rated value / moximum  supply voltage frequency / rated value / 50/60 Hz  Protection class  protection class IP  Switching capacity  switching capacity current  • at DC / acc. to IEC 60947-2 / rated value  • acc. to EN 60898 / rated value  • acc. to EN 6	mechanical service life (switching cycles) / typical	10 000
Insulation voltage  • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value  Supply voltage  type of voltage  operational current / at AC / rated value  13 A  supply voltage • at AC / rated value • at DC / rated value • at DC / rated value • at DC / rated value / MAC / value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value / maximum  supply voltage frequency / rated value / 50/60 Hz  Protection class  protection class IP  Switching capacity  switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  universal current  Product details  product function / neutral conductor switching  No	overvoltage category	
insulation voltage  • at DC / rated value • with single-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value • with multi-phase operation / at AC / rated value  Supply voltage  type of voltage  operational current / at AC / rated value  13 A  supply voltage • at AC / rated value • at DC / rated value • at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  protection class  protection class IP  Protection class IP  IP20, with connected conductors  Switching capacity  switching capacity current • at DC / acc. to IEC 60947-2 / rated value • at DC / acc. to IEC 60947-2 / rated value  acc. to EN 60998 / rated value  10 KA  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  universal current  Product details  product function / neutral conductor switching  No	degree of pollution	3
at DC / rated value  with single-phase operation / at AC / rated value  with multi-phase operation / at AC / rated value  type of voltage  type of voltage  AC/DC  operational current / at AC / rated value  be at DC / rated value  at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  protection class  protection class  protection class IP  IP20, with connected conductors  witching capacity  switching capacity current  at DC / acc. to IEC 60947-2 / rated value  at DC / acc. to IEC 60947-2 / rated value  be acc. to EN 60898 / rated value  at DC / acc. to IEC 60947-2 /	Voltage	
with single-phase operation / at AC / rated value     with multi-phase operation / at AC / rated value      with multi-phase operation / at AC / rated value      supply voltage     type of voltage	insulation voltage	
with multi-phase operation / at AC / rated value  Supply voltage  type of voltage  Operational current / at AC / rated value  operating voltage / at DC / rated value / 440 V  operating voltage frequency / rated value / 50/60 Hz  Protection class  protection class IP  Switching capacity  switching capacity  switching capacity current  at DC / acc. to IEC 60947-2 / rated value / 15 kA  acc. to EN 60898 / rated value / 10 kA  energy limitation class / 3  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation universal current  Product details  product function / neutral conductor switching No	<ul><li>at DC / rated value</li></ul>	250 V
type of voltage operational current / at AC / rated value supply voltage • at AC / rated value • at DC / rated value operating voltage / at DC / rated value / maximum supply voltage frequency / rated value / moximum supply voltage frequency / rated value  Protection class protection class IP switching capacity switching capacity switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value energy limitation class  Dissipation power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  Product details product function / neutral conductor switching  No	<ul> <li>with single-phase operation / at AC / rated value</li> </ul>	440 V
type of voltage operational current / at AC / rated value 13 A  supply voltage • at AC / rated value • at DC / rated value operating voltage / at DC / rated value / maximum supply voltage frequency / rated value  Protection class protection class IP  Switching capacity switching capacity switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value  15 kA energy limitation class  Dissipation power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  Product details product function / neutral conductor switching  No	<ul><li>with multi-phase operation / at AC / rated value</li></ul>	440 V
operational current / at AC / rated value  supply voltage  at AC / rated value  at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  Protection class  protection class IP  IP20, with connected conductors  Switching capacity  switching capacity  switching capacity current  at DC / acc. to IEC 60947-2 / rated value  acc. to EN 60898 / rated value  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  Product details  product function / neutral conductor switching  No	Supply voltage	
supply voltage  • at AC / rated value  • at DC / rated value  • at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  Protection class  protection class IP  IP20, with connected conductors  Switching capacity  switching capacity  switching capacity current  • at DC / acc. to IEC 60947-2 / rated value  • acc. to EN 60898 / rated value  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  product details  product function / neutral conductor switching  No	type of voltage	AC/DC
at AC / rated value  at DC / rated value  at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  Protection class  protection class IP  IP20, with connected conductors  Switching capacity  switching capacity current  at DC / acc. to IEC 60947-2 / rated value  acc. to EN 60898 / rated value  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  product details  product function / neutral conductor switching  No	operational current / at AC / rated value	13 A
at DC / rated value  operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  Protection class  protection class IP  IP20, with connected conductors  Switching capacity  switching capacity current  at DC / acc. to IEC 60947-2 / rated value  acc. to EN 60898 / rated value  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  Product details  product function / neutral conductor switching  No	supply voltage	
operating voltage / at DC / rated value / maximum  supply voltage frequency / rated value  Frotection class  protection class IP  IP20, with connected conductors  Switching capacity  switching capacity current  • at DC / acc. to IEC 60947-2 / rated value  • acc. to EN 60898 / rated value  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  Product details  product function / neutral conductor switching  No	at AC / rated value	400 V
supply voltage frequency / rated value  Protection class  protection class IP  IP20, with connected conductors  Switching capacity  switching capacity current  • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value  energy limitation class  3  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  Product details  product function / neutral conductor switching  No	at DC / rated value	440 V
Protection class IP IP20, with connected conductors  Switching capacity  switching capacity current  • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  Product details product function / neutral conductor switching  No	operating voltage / at DC / rated value / maximum	500 V
protection class IP  Switching capacity  switching capacity current  • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value  energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  product details product function / neutral conductor switching  IP20, with connected conductors  15 kA  10 kA  11.4 W  1.4 W  1.4 W  1.5 kA  1.4 W  1.4 W  1.5 kA  1.5 kA  1.6 kA  1.7 kA  1.7 kA  1.8 kA  1.9 kA	supply voltage frequency / rated value	50/60 Hz
Switching capacity switching capacity current  • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value 10 kA energy limitation class 3  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  product details product function / neutral conductor switching No	Protection class	
switching capacity current  • at DC / acc. to IEC 60947-2 / rated value  • acc. to EN 60898 / rated value  10 kA  energy limitation class  3  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  product details  product function / neutral conductor switching  No	protection class IP	IP20, with connected conductors
<ul> <li>at DC / acc. to IEC 60947-2 / rated value</li> <li>acc. to EN 60898 / rated value</li> <li>lo kA</li> <li>energy limitation class</li> <li>Dissipation</li> <li>power loss [W] / for rated value of the current / at AC / in hot operating state / per pole</li> <li>suitability for operation</li> <li>universal current</li> <li>Product details</li> <li>product function / neutral conductor switching</li> <li>No</li> </ul>	Switching capacity	
acc. to EN 60898 / rated value     energy limitation class      Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  Product details product function / neutral conductor switching  No	switching capacity current	
energy limitation class  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation  Product details product function / neutral conductor switching  3  1.4 W  universal current  No	<ul> <li>at DC / acc. to IEC 60947-2 / rated value</li> </ul>	15 kA
Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  suitability for operation  Product details  product function / neutral conductor switching  No	acc. to EN 60898 / rated value	10 kA
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole suitability for operation universal current  Product details product function / neutral conductor switching No	energy limitation class	3
hot operating state / per pole suitability for operation universal current  Product details product function / neutral conductor switching No	Dissipation	
Product details product function / neutral conductor switching No		1.4 W
product function / neutral conductor switching No	suitability for operation	universal current
	Product details	
product feature / touch protection Yes	product function / neutral conductor switching	No
	product feature / touch protection	Yes

product component	
<ul> <li>combined terminal top</li> </ul>	Yes
combined terminal bottom	Yes
product feature	
<ul> <li>properties for main switches in accordance with EN 60204-1</li> </ul>	Yes
<ul><li>halogen-free</li></ul>	Yes
• sealable	Yes
• silicon-free	Yes
product extension / installable / supplementary devices	Yes
Short circuit	
breaking capacity short-circuit current (Icn)	
<ul> <li>at DC / acc. to EN 60898-2</li> </ul>	10 kA
Connections	
connectable conductor cross-section / solid	
• minimum	0.75 mm²
• maximum	35 mm <sup>2</sup>
connectable conductor cross-section / stranded	
• minimum	0.75 mm²
• maximum	35 mm²
connectable conductor cross-section / finely stranded / with core end processing	
• minimum	0.75 mm²
• maximum	25 mm²
AWG number / as coded connectable conductor cross section	
• minimum	18
maximum	4
tightening torque [lbf·in] / with screw-type terminals	
• minimum	22 lbf·in
• maximum	31 lbf·in
tightening torque / with screw-type terminals	
• minimum	2.5 N·m
maximum	3.5 N⋅m
position / of power supply cord	AC as required, observe DC polarity
Mechanical Design	
height	90 mm
width	36 mm
depth	76 mm
installation depth	70 mm
number of modular width units	2
fastening method	Quick assembly system
mounting position	any
net weight	321 g
Environmental conditions	
influence of the surrounding temperature	max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C
vibration resistance / acc. to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz
ambient temperature / during operation	
• minimum	-40 °C
• maximum	70 °C
ambient temperature / during storage	
• minimum	-40 °C
• maximum	75 °C
number of test cycles / for environmental testing / acc. to IEC 60068-2-30	6
Certificates	
reference code	
• acc. to DIN EN 61346-2	F
• acc. to IEC 81346-2	F









**Miscellaneous** 





Test Certificates	Railway

<u>Miscellaneous</u> <u>Special Test</u> <u>Special Test</u> <u>Vibration and Shock</u> <u>Confirmation</u> <u>Certificate</u>

## 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=5SY5213-7

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

https://support.industry.siemens.com/cs/ww/en/ps/5SY5213-7

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SY5213-7

**Tender specifications** 

http://www.siemens.com/specifications





