



MCB 5SY5 CRH 220V DC 10KA 1P B3

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
design of the product	For railway applications
General technical data	
number of poles	1
design of pole	1P
tripping characteristic class	B
mechanical service life (operating cycles) typical	10 000
overvoltage category	3
degree of pollution	3
Voltage	
type of voltage of the operating voltage	DC
insulation voltage (Ui)	
• at DC rated value	220 V
• operational current	
— at 40 °C rated value	2.78 A
— at 50 °C rated value	2.53 A
— at 55 °C rated value	2.4 A
— at 60 °C rated value	2.26 A
• operational current at AC rated value	3 A
Supply voltage	
supply voltage	
• at AC	230 V
• at DC rated value	220 V
operating voltage at DC rated value maximum	250 V
Protection class	
protection class IP	IP20, with connected conductors
Breaking Capacity	
switching capacity current	
• at DC according to IEC 60947-2 rated value	10 kA
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	1.8 W
suitability for operation	Infrastructure / Industry / Mobility
Product details	
product feature touch protection	Yes
product component	

• combined terminal top	Yes
• combined terminal bottom	Yes
• neutral conductor switching	No
product feature properties for main switches in accordance with EN 60204-1	Yes
product feature halogen-free	Yes
product feature sealable	Yes
product feature silicon-free	Yes
product extension installable supplementary devices	Yes

Connections

connectable conductor cross-section solid	
• minimum	0.75 mm ²
• maximum	35 mm ²
connectable conductor cross-section stranded	
• minimum	0.75 mm ²
• maximum	35 mm ²
connectable conductor cross-section finely stranded with core end processing	
• minimum	0.75 mm ²
• maximum	25 mm ²
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	Consider polarity

Mechanical Design

height	90 mm
width	18 mm
depth	76 mm
installation depth	70 mm
number of modular width units	1
fastening method	DIN rail
mounting position	any
Net Weight	0.14 kg

Environmental conditions

influence of the surrounding temperature	max. 95% RH up to 55°C, max. 55% RH up to 70°C, max. 35% RH up to 75°C
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25 Hz; 50 m/s ² at 25 to 150 Hz and 60 m/s ² at 35 Hz (4 sec)
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 according to IEC 60068-2-30	28

Approvals Certificates

Environment	General Product Approval
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[Environmental Con-
firmations](#)

[Environmental Con-
firmations](#)



[Miscellaneous](#)

General Product Approval	Maritime application	other
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[Confirmation](#)



EG-Konf.



[CCS \(China Classification Society\)](#)

[Confirmation](#)

other	Railway	Dangerous goods
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[Confirmation](#)

[Transport Information](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

<https://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SY5103-6CC12>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5103-6CC12>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5103-6CC12

CAX-Online-Generator

<https://www.siemens.com/cax>

Tender specifications

<https://www.siemens.com/specifications>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





