



Circuit breaker 230/400 V D=70 mm 25 kA according to EN 60947-2, 1P, D20

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	1
design of pole	1P
tripping characteristic class	D
mechanical service life (operating cycles) typical	10 000
overvoltage category	III
degree of pollution	3
Voltage	
type of voltage of the operating voltage	AC
insulation voltage (U _i)	
• with single-phase operation at AC rated value	440 V
• with multi-phase operation at AC rated value	440 V
supply voltage with single-phase operation at AC rated value	230 V
Supply voltage	
supply voltage	
• at AC rated value	400 V
• at DC rated value	60 V
value range of the supply voltage frequency	50/60 Hz
operating voltage at DC rated value maximum	72 V
Protection class	
protection class IP	IP20, with connected conductors
Switching capacity	
switching capacity current	
• at DC according to IEC 60947-2 rated value	15 kA
• according to IEC 60947-2 rated value	30 kA
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	1.6 W
Current	
operational current	
• at 45 °C rated value	20 A
• at 50 °C rated value	19.38 A
• at 55 °C rated value	18.74 A
• at AC rated value	20 A
suitability for operation	Mechanical engineering / industry
Product details	

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
• halogen-free	Yes
• sealable	Yes
• silicon-free	Yes
product extension installable supplementary devices	Yes

Short circuit

short-circuit current breaking capacity (I _{cn})	
• at AC according to UL 1077 and CSA C22.2 No.235	5 kA

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
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	Any

Mechanical Design

height	90 mm
width	18 mm
depth	76 mm
installation depth	70 mm
number of modular width units	1
fastening method	Quick assembly system
mounting position	any
net weight	165 g

Environmental conditions

influence of the surrounding temperature standard	max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C IEC / EN 60947-2 / UL1077
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s ² at 25 to 150Hz
ambient temperature during operation	
• minimum	-25 °C
• maximum	55 °C
ambient temperature during storage	
• minimum	-40 °C
• maximum	75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6

General Product Approval

Declaration of Conformity

[Confirmation](#)



[Miscellaneous](#)



other

[Environmental Confirmations](#)

[Confirmation](#)

[Miscellaneous](#)

Further information

Information on the packaging

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

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=5SY8120-8>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY8120-8>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY8120-8

CAX-Online-Generator

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

Tender specifications

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





