



Miniature circuit breaker 230/400 V 15kA, 1-pole, D, 20 A, D=70 mm

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 (Ui)	
• 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
operational current	
• at 40 °C rated value	18.78 A
• at 50 °C rated value	17.48 A
• at 55 °C rated value	16.8 A
• at 60 °C rated value	16.08 A
• at AC rated value	20 A
Supply voltage	
supply voltage	
• at AC	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
Breaking Capacity	
switching capacity current	
• at DC according to IEC 60947-2 rated value	15 kA
• according to EN 60898 rated value	15 kA
• according to IEC 60947-2 rated value	25 kA
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	1.6 W
suitability for operation	Infrastructure / Industry

Product details	
product feature touch protection	Yes
product component	
<ul style="list-style-type: none"> • combined terminal top 	Yes
<ul style="list-style-type: none"> • combined terminal bottom 	Yes
<ul style="list-style-type: none"> • neutral conductor switching 	No
product feature	
<ul style="list-style-type: none"> • properties for main switches in accordance with EN 60204-1 	Yes
<ul style="list-style-type: none"> • halogen-free 	Yes
<ul style="list-style-type: none"> • sealable 	Yes
<ul style="list-style-type: none"> • silicon-free 	Yes
product extension installable supplementary devices	Yes
Product function	
set values setting current (Ii) for I-tripping	14
reference value setting current (Ii) for I-tripping	x I _n
Short circuit	
short-circuit current breaking capacity (I_{cn})	
<ul style="list-style-type: none"> • at AC according to UL 1077 and CSA C22.2 No.235 	5 kA
Connections	
connectable conductor cross-section solid	
<ul style="list-style-type: none"> • minimum 	0.75 mm ²
<ul style="list-style-type: none"> • maximum 	35 mm ²
connectable conductor cross-section stranded	
<ul style="list-style-type: none"> • minimum 	0.75 mm ²
<ul style="list-style-type: none"> • maximum 	35 mm ²
connectable conductor cross-section finely stranded with core end processing	
<ul style="list-style-type: none"> • minimum 	0.75 mm ²
<ul style="list-style-type: none"> • maximum 	25 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • minimum 	18
<ul style="list-style-type: none"> • maximum 	4
tightening torque [lbf·in] with screw-type terminals	
<ul style="list-style-type: none"> • minimum 	22 lbf·in
<ul style="list-style-type: none"> • maximum 	31 lbf·in
tightening torque with screw-type terminals	
<ul style="list-style-type: none"> • minimum 	2.5 N·m
<ul style="list-style-type: none"> • 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	
standard	IEC / EN 60898-1, 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	
<ul style="list-style-type: none"> • minimum 	-40 °C
<ul style="list-style-type: none"> • maximum 	70 °C
ambient temperature during storage	
<ul style="list-style-type: none"> • minimum 	-40 °C
<ul style="list-style-type: none"> • maximum 	75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6

Approvals Certificates

General Product Approval



General Product Approval

EMV

Test Certificates

Marine / Shipping

[Miscellaneous](#)



[Miscellaneous](#)



[Special Test Certificate](#)



Marine / Shipping

other



[Miscellaneous](#)

[Confirmation](#)

Railway

Environment

[Special Test Certificate](#)

[Confirmation](#)

[Environmental Conformations](#)

[Environmental Conformations](#)

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=5SY7120-8>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY7120-8>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY7120-8

CAX-Online-Generator

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

Tender specifications

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



CB



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