SIEMENS

Data sheet

5SY4220-6

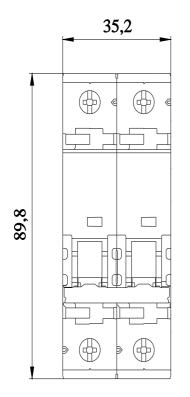


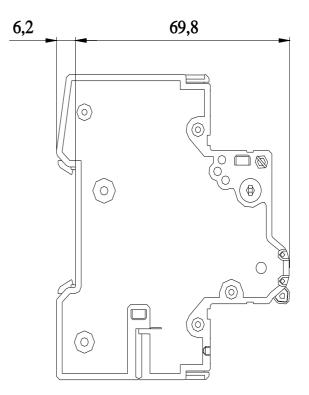
Miniature circuit breaker 400 V 10kA, 2-pole, B, 20 A, D=70 mm

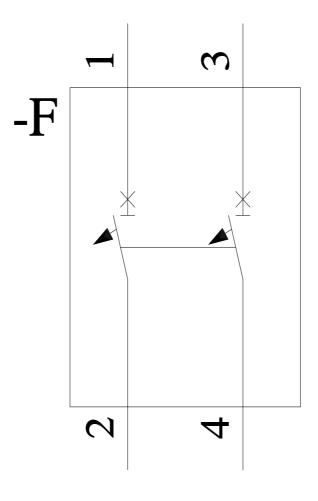
product brand name SENTRON product designation Ministure circuit breaker Censeral technical data ************************************	Model	
General technical data number of poles 2 design of pole 2P tripping characteristic class B mechanical service life (operating cycles) typical 10 000 overvoitage category III degree of pollution 3 Voltage Voltage type of voltage of the operating voltage insultation voltage (UI) 440 V • with single-phase operation at AC rated value 440 V • with single-phase operation at AC rated value 440 V • with single-phase operation at AC rated value 230 V supply voltage 400 V • at AC rated value 400 V value 9 supply voltage with single-phase operation at AC rated value 400 V value 9 supply voltage 10 Crated value supply voltage 400 V value 900 V supply voltage at DC rated value 400 V value 9 supply voltage at DC rated value 100 C poerating voltage at DC rated value 100 C switching capacity current 15 kA • at	product brand name	SENTRON
number of poles 2 design of pole 2P tripping characteristic class B mechanical service life (operating cycles) typical 10 000 overvoltage category III degree of pollution 3 Voltage type of voltage of the operating voltage insulation voltage (Ui) AC • with single-phase operation at AC rated value 440 V • with multi-phase operation at AC rated value 440 V supply voltage 400 V supply voltage 400 V value 400 V supply voltage at DC rated value maximum 72 V Protection class IP IP20, with connected conductors switching capacity current 15 kA • at DC according to IEC 60947-2 rated value 15 kA • according to IEC 60947-2 rated value 10 kA • according to IEC 60947-2 rated value 10 kA • according to IEC 60947-2 rated value 22 W	product designation	Miniature circuit breaker
design of pole 2P tripping characteristic class B mechanical service life (operating cycles) typical 0000 overvoltage category III degree of pollution 3 Voltage type of voltage of the operating voltage insulation voltage (Ui) AC • 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 230 V value 3 Supply voltage • at AC rated value 440 V value 440 V supply voltage - • at AC rated value 400 V value range of the supply voltage frequency 50/60 Hz operating voltage at DC rated value maximum 72 V Protection class P protection class IP IP20, with connected conductors Switching capacity Side rated value • at DC according to EC 60947-2 rated value 15 kA • according to EC 60947-2 rated value 20 kA • according to EC 60947-2 rated value 20 kA energy limitation class 3 Dissipation 22 W operating state per pole U	General technical data	
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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 single-phase operation at AC rated value 440 V • with multi-phase operation at AC rated value 440 V • with multi-phase operation at AC rated value 440 V supply voltage 230 V • at AC rated value 400 V value 50/60 Hz Supply voltage at DC rated value maximum 72 V Protection class IP IP20, with connected conductors Switching capacity 50/60 Hz switching capacity 50 KA • at DC according to EC 60947-2 rated value 15 kA • according to EC 60947-2 rated value 10 kA • according to EC 60947-2 rated value 20 kA • according to EC 60947-2 rated value 20 kA • according to EC 60947-2 rated value 3 Dissipation 2.2 W operating state per pole 20 A • at 35 °C rated value 20 A • at 40 °C rated value 18.78 A • at 40 °C rated value 18.78 A • at 40 °C rated value 18.78 A • at 4	tripping characteristic class	В
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insulation voltage (Ui)	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 with single-phase operation at AC rated 230 V supply voltage at AC rated value 400 V value range of the supply voltage frequency 50/60 Hz operating voltage at DC rated value maximum 72 V Protection class IP IP20, with connected conductors Switching capacity switching capacity current at Co fact of value according to IEC 60947-2 rated value to KA 		AC
with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage e at AC rated value 400 V value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP IP20, with connected conductors switching capacity current e at DC according to IEC 60947-2 rated value 10 kA e according to IEC 60947-2 rated value 10 kA e according to IEC 60947-2 rated value 20 kA energy limitation class J power loss [W] for rated value of the current at AC in hot operations state per pole Current operational current e at 35 °C rated value 18.78 A et 3C °C rated value 17.48 A	insulation voltage (Ui)	
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• at AC rated value 400 V value range of the supply voltage frequency 50/60 Hz operating voltage at DC rated value maximum 72 V Protection class IP20, with connected conductors switching capacity IP20, with connected conductors switching capacity current 15 kA • at DC according to IEC 60947-2 rated value 15 kA • according to EC 60947-2 rated value 10 kA • according to IEC 60947-2 rated value 20 kA energy limitation class 3 Dissipation 2.2 W operating state per pole 2.2 W operating state per pole 2.2 W operating state per pole 18.78 A • at 40 °C rated value 18.14 A • at 50 °C rated value 18.14 A • at 50 °C rated value 18.14 A	Supply voltage	
value range of the supply voltage frequency operating voltage at DC rated value maximum50/60 Hz 72 VProtection classProtection class IPIP20, with connected conductorsswitching capacityIP20, with connected conductorsswitching capacity current • at DC according to IEC 60947-2 rated value15 kA• at DC according to EC 60947-2 rated value10 kA• according to EC 60947-2 rated value20 kA• according to IEC 60947-2 rated value2.2 W• according to IEC 60947-2 rated value2.2 W• according to IEC 60947-2 rated value2.2 W• at 35 °C rated value of the current at AC in hot operational current2.2 W• at 35 °C rated value18.78 A• at 40 °C rated value18.14 A• at 45 °C rated value18.14 A• at 50 °C rated value18.14 A	supply voltage	
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Protection class IP20, with connected conductors 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 EN 60898 rated value 10 kA • according to IEC 60947-2 rated value 20 kA • according to IEC 60947-2 rated value 20 kA energy limitation class 3 Dissipation 2.2 W corrent corrent operational current 20 A • at 35 °C rated value 20 A • at 40 °C rated value 18.78 A • at 45 °C rated value 18.14 A • at 50 °C rated value 18.14 A • at 50 °C rated value 17.48 A		50/60 Hz
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 EN 60898 rated value 10 kA • according to IEC 60947-2 rated value 20 kA • according to IEC 60947-2 rated value 20 kA • according to IEC 60947-2 rated value 20 kA energy limitation class 3 Dissipation 2.2 W power loss [W] for rated value of the current at AC in hot operating state per pole 2.2 W Operational current at 35 °C rated value 20 A • at 40 °C rated value 18.78 A 4.44 • at 45 °C rated value 18.14 A 4.14 A • at 50 °C rated value 17.48 A 5.44	operating voltage at DC rated value maximum	72 V
Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value • power loss [W] for rated value of the current at AC in hot operating state per pole Current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 45 °C rated value • at 45 °C rated value • at 50 °C rated value	Protection class	
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 according to IEC 60947-2 rated value energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current at 35 °C rated value at 40 °C rated value at 45 °C rated value at 50 °C rated value at 50 °C rated value at 50 °C rated value 	5	15 kA
energy limitation class3Dissipation2.2 Wpower loss [W] for rated value of the current at AC in hot operating state per pole2.2 WCurrent2.2 Woperational current • at 35 °C rated value20 A• at 40 °C rated value18.78 A• at 45 °C rated value18.14 A• at 50 °C rated value17.48 A	 according to EN 60898 rated value 	10 kA
Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole 2.2 W Current operational current 20 A • at 35 °C rated value 18.78 A • at 45 °C rated value 18.14 A • at 50 °C rated value 17.48 A	 according to IEC 60947-2 rated value 	20 kA
power loss [W] for rated value of the current at AC in hot operating state per pole 2.2 W Current • operational current • • at 35 °C rated value 20 A • at 40 °C rated value 18.78 A • at 45 °C rated value 18.14 A • at 50 °C rated value 17.48 A	energy limitation class	3
operating state per pole Current operational current • at 35 °C rated value 20 A • at 40 °C rated value 18.78 A • at 45 °C rated value 18.14 A • at 50 °C rated value 17.48 A	Dissipation	
operational current20 A• at 35 °C rated value20 A• at 40 °C rated value18.78 A• at 45 °C rated value18.14 A• at 50 °C rated value17.48 A		2.2 W
• at 35 °C rated value20 A• at 40 °C rated value18.78 A• at 45 °C rated value18.14 A• at 50 °C rated value17.48 A	Current	
 at 40 °C rated value at 45 °C rated value at 50 °C rated value 17.48 A 	operational current	
 at 45 °C rated value at 50 °C rated value 17.48 A 	 at 35 °C rated value 	20 A
• at 50 °C rated value 17.48 A	 at 40 °C rated value 	18.78 A
	 at 45 °C rated value 	18.14 A
• at 55 °C rated value 16.8 A	 at 50 °C rated value 	17.48 A
	• at 55 °C rated value	16.8 A

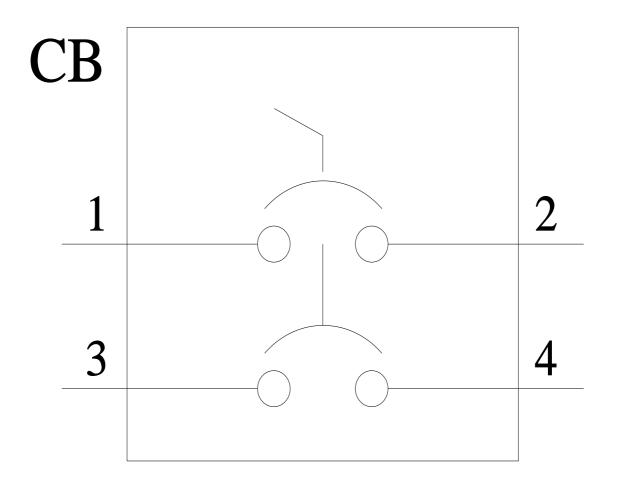
at 60 °C rated value	16.08 A
at AC rated value	20 A Mechanical engineering / industry
suitability for operation	Mechanical engineering / industry
Product details	
product component	N .
combined terminal top	Yes
combined terminal bottom	Yes
neutral conductor switching	No
 product feature properties for main switches in accordance with EN 	Yes
60204-1	165
halogen-free	Yes
• sealable	Yes
silicon-free	Yes
product extension installable supplementary devices	Yes
Short circuit	
short-circuit current breaking capacity (Icn)	
• at AC according to UL 1077 and CSA C22.2 No.235	5 kA
Connections	
connectable conductor cross-section solid	
minimum	0.75 mm²
• 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 mm²
• maximum	25 mm²
AWG number as coded connectable conductor cross	
section	10
• minimum	18
maximum tightening terminole	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	, uij
	00 mm
height width	90 mm 36 mm
depth	76 mm
installation depth	70 mm
number of modular width units	2
fastening method	2 Quick assembly system
mounting position	any
net weight	318 g
Environmental conditions	
	max 95% to 55°C max 55% to 70°C max 35% to 75°C
influence of the surrounding temperature standard	max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C IEC / EN 60898-1, IEC / EN 60947-2 / UL1077
vibration resistance according to IEC 60068-2-6	± 1 mm at 5 to 25Hz; 50m/s ² 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 according to IEC 60068-2-30	6
Certificates	
reference code	

 according to E according to IE General Product A 	EC 81346-2	F			
CCC	<u>Confirmation</u>	K	SAN UR	VDE	<u>Miscellaneous</u>
General Product Approval		EMC	Declaration of Conformity		Test Certificates
EHC	<u>Miscellaneous</u>	RCM	C C EG-Konf.	UK CA	<u>Special Test Certific-</u> <u>ate</u>
Test Certificates	Marine / Shipping				
<u>Miscellaneous</u>	ABS	B UREAU VERITAS	Lloyds Register urs	RINA	DIVIGE DIVIGE
other		Railway			
<u>Miscellaneous</u>	Environmental Con- firmations	<u>Confirmation</u>	Vibration and Shock		









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