



circuit breaker 3VA1 IEC Frame 160 breaking capacity class N Icu=25 kA @ 240 V
1-pole, line protection TM210, FTFM, In=20 A overload protection Ir=20 A
permanently set short-circuit protection Ii=16 x In nut keeper kit

Model	
product brand name	SETRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	TM210
protection function of the overcurrent release	LI
number of poles	1
General technical data	
insulation voltage / rated value	500 V
operating voltage / at DC / rated value	125 V
operating voltage / at AC / rated value	415 V
power loss [W] / maximum	4 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	9 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	6 300
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	368 g
Current	
operational current	
• at 40 °C	20 A
• at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	20 A
• at 60 °C	19 A
• at 65 °C	19 A
• at 70 °C	19 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	N
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	25 kA
• at 415 V	5 kA
operating short-circuit current breaking capacity (Ics)	
• at 240 V	25 kA
• at 415 V	5 kA

short-circuit current making capacity (I _{cm})	
• at 240 V	52.5 kA
• at 415 V	7.5 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter
Adjustable parameters	
product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
• minimum	20 A
• maximum	20 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (I _i) / for I-tripping	
• minimum	320 A
• maximum	320 A
adjustable setting current (I _N) / for N-tripping	
• minimum	0 A
• maximum	0 A
product function / grounding protection	No
Mechanical Design	
product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	5.12 in
height	130 mm
width [in]	1 in
width	25.4 mm
depth [in]	2.76 in
depth	70 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	12 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	17 x 6,5 mm
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	Silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Tin
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	No
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C
Environmental footprint	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO ₂ eq] / total	63.6 kg
global warming potential [CO ₂ eq] / during manufacturing	1.81 kg
global warming potential [CO ₂ eq] / during operation	62 kg

global warming potential [CO2 eq] / after end of life		-0.282 kg			
reference code / according to IEC 81346-2		Q			
Approvals / Certificates					
General Product Approval					
			Confirmation		Miscellaneous
General Product Approval		EMV	Test Certificates		
			Miscellaneous	Type Test Certificates/Test Report	Special Test Certificate
Maritime application			other		
		CCS (China Classification Society)		Confirmation	Miscellaneous
Environment					
		Environmental Confirmations	Environmental Confirmations		
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=3VA1120-3ED12-0AA0 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA1120-3ED12-0AA0 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1120-3ED12-0AA0 CAX-Online-Generator https://www.siemens.com/cax Tender specifications https://www.siemens.com/specifications					



