



circuit breaker 3VA1 IEC frame 160 breaking capacity class N Icu=25kA @ 415V 4-pole, line protection TM210, FTFM, In=160A overload protection Ir=160A fixed short-circuit protection Ii=10 x In N conductor unprotected clamp connection shunt trip (STL) 12-30V DC; 24V AC 50/60Hz 2 auxiliary switches HQ

Model	
product brand name	SETRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	TM210
protection function of the overcurrent release	LI
number of poles	4
Auxiliary contact version	2 auxiliary switches HQ
General technical data	
rated insulation voltage Ui	800 V
Max. rated operational voltage Ue with DC	600 V
power loss [W] / maximum	38 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	12.67 W
mechanical service life (switching cycles) / typical	20 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	9 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	6 300
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	1,468 kg
Current	
Max. rated operational current of the frame size	160 A
Courant permanent assigné Iu	16 A
operational current	
• at 40 °C	160 A
• at 45 °C	160 A
• at 50 °C	160 A
• at 55 °C	158 A
• at 60 °C	155 A
• at 65 °C	153 A
• at 70 °C	150 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	N
breaking capacity maximum short-circuit current (Icu)	
• at 240 V	36 kA

• at 415 V • at 440 V • at 500 V • at 690 V	25 kA 16 kA 7 kA 7 kA
breaking capacity operating short-circuit current (Ics) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	36 kA 25 kA 16 kA 5 kA 5 kA
short-circuit current making capacity (Icm) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	75.6 kA 52.5 kA 32 kA 11.9 kA 11.9 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	
Adjustable response value current / li min.	320 A
Adjustable response value current / li max.	320 A
Ground fault protection / tripping switchable / I2t=ON/OFF	No
Mechanical Design	
height [in]	5.12 in
Height	130 mm
width [in]	4 in
Width	101.6 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	box terminal on both sides
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (1.5 - 70 mm²)
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	
product component • undervoltage release • voltage trigger • undervoltage release with leading contact • trip indicator	No Yes No No
number of CO contacts / for auxiliary contacts	2
Accessories	
product extension / optional / motor drive	Yes
manufacturer's article number • of the supplied basic switch • of the integrated auxiliary switch/alarm switch • of the integrated auxiliary trip unit	3VA11163ED460AA0 3VA9988-0AA12 3VA9688-0BL30
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature • during operation / minimum • during operation / maximum • during storage / minimum • during storage / maximum	-25 °C 70 °C -40 °C 80 °C

Certificates

reference code / acc. to IEC 81346-2

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General Product Approval

EMC

Declaration of
Conformity



[Miscellaneous](#)



EG-Konf.

Declaration of
Conformity

Test Certificates

Marine / Shipping

[UK Declaration of
Conformity](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



Marine / Shipping

other



[CCS / China Classification Society](#)

[Miscellaneous](#)

[Miscellaneous](#)

Further information

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=3VA1116-3ED46-0HC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1116-3ED46-0HC0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1116-3ED46-0HC0

CAX-Online-Generator

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

Tender specifications

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



