



circuit breaker 3VA1 IEC frame 160 breaking capacity class M Icu=55kA @ 415V 4-pole, line protection TM220, ATFM, In=80A overload protection Ir=56A...80A short-circuit protection Ii=10 x In N conductor unprotected clamp connection

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	TM220
protection function of the overcurrent release	LI
number of poles	4
General technical data	
rated insulation voltage Ui	800 V
Max. rated operational voltage Ue with DC	600 V
power loss [W] / maximum	19.2 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	6.4 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	1.2 kg
Current	
Max. rated operational current of the frame size	160 A
Courant permanent assigné Iu	80 A
operational current	
• at 40 °C	80 A
• at 45 °C	80 A
• at 50 °C	80 A
• at 55 °C	78 A
• at 60 °C	77 A
• at 65 °C	75 A
• at 70 °C	74 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
breaking capacity maximum short-circuit current (Icu)	



<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	85 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	55 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	36 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	10 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	10 kA
breaking capacity operating short-circuit current (Ics)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	85 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	55 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	36 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	5 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	5 kA
short-circuit current making capacity (Icm)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	187 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	121 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	75.6 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	17 kA
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	17 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.	800 A
Adjustable response value current / li max.	800 A
design of the N-conductor protection	Without
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 mm ²)
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	Yes
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
<ul style="list-style-type: none"> • 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	Q
General Product Approval	EMC







Miscellaneous

KC



Declaration of Conformity		Test Certificates			Marine / Shipping
UK Declaration of Conformity	 EG-Konf.	Special Test Certificate	Miscellaneous	Type Test Certificates/Test Report	 ABS

Marine / Shipping				other
 BUREAU VERITAS	 LRS	 RMRS	CCS / China Classification Society	 DNV-GL
				Miscellaneous

other
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=3VA1180-5EE46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1180-5EE46-0AA0>

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

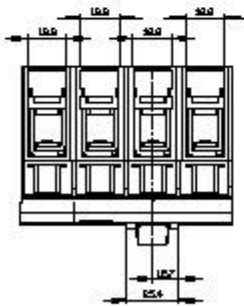
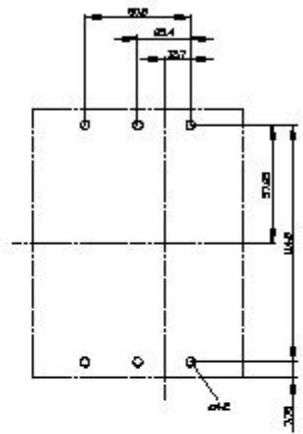
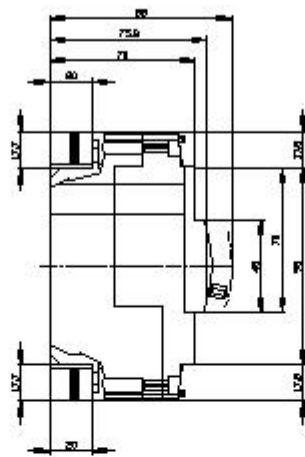
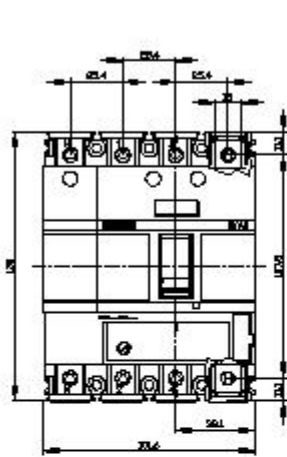
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1180-5EE46-0AA0

CAx-Online-Generator

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

Tender specifications

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





last modified:

8/10/2021 